WATER RESOURCES OF THE LUBBOCK DISTRICT, TEXAS

By

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With a section on Surface Runoff

By

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INTRODUCTION

An investigation of the supply of ground water available in the High Plains in Texas, including Lubbock County, was started in 1937, as part of a survey of the ground water in Texas, by the Geological Survey, United States Department of the Interior in cooperation with the Texas State Board of Water Engineers. These cooperative studies have been made possible through appropriations by the State Legislature and allocations of Federal funds to match them on an equal or nearly equal basis. Data obtained from the investigation have been summarized in seven mimeographed reports that have been released to the public, the first in 1938 and the last in 1945. Two mimeographed publications have been issued, giving a description of water wells in the county, one in October 1937 and the other in April 1945. The 1945 publication, included as an Appendix to this report, contains records of 891 wells and springs and chemical analyses of water from 292 wells and springs. The map, plate 1 (from the 1945 well publication), shows the location of all wells and springs in Lubbock County for which data are available.

All water for public, industrial and domestic uses in Lubbock County, and most of the stock water, is obtained from wells. The heaviest draft on the underground reservoir, however, is for irrigation, and this is rapidly increasing. In 1934 Lubbock County had only about 15 irrigation wells of large capacity. At the end of 1940 the number had increased to 230, and at the end of 1944 it had reached 535.

The population of the City of Lubbock was 31,853 in 1940, and according to an unofficial count it had increased to more than 45,000 in 1945. The municipal water supply has always been obtained from wells. In 1920 one well supplied the city, which then had a population of 4,051; by 1930 four additional wells had been installed; by 1940 the number had grown to 13; and now in the summer of 1945, 19 wells are required to serve the city, which still is growing rapidly. During 1943 the city used an average of about 4,500,000 gallons of water a day, the maximum daily consumption being 10 million gallons on August 6. In 1944, which was not as dry as 1943, an average of a little more than 4,000,000 gallons a day was used. The volume of water pumped for irrigation in Lubbock County in 1944 probably was between 160 and 175 million gallons a day.

The City officials anticipate a large increase in water requirements for both municipal and industrial uses, which may reach an average of about 20 million gallons a day within a few years. As the present city wells are taxed almost to capacity in order to meet the present maximum demand, and as the irrigation uses in the surrounding rural areas are rapidly increasing, the practicability of developing a city supply of at least 20 million gallons a day either from the Double Mountain Fork of Brazos River below Lubbock or from wells in such a manner as to cause the least interference with the irrigation supplies is a matter of vital concern to the residents of Lubbock and to the irrigators of Lubbock and the adjacent counties. Accordingly the investigation described herein was undertaken in 1944 with the support of interested citizens.

This investigation was conducted between September 1944 and March 1945, under the general direction of W. N. White, principal engineer of the Federal Geological Survey, who is in charge of the ground-water work in Texas. The writer is indebted to B. A. Barnes, engineer of the Texas Board of Water Engineers, for assistance in interpreting the electrical logs and pumping-test data, and who made many helpful suggestions concerning the writing of that section of the report; and to Penn Livingston, W. L. Broadhurst, and others of the Geological Survey for critical review of the report.

OCCURRENCE OF GROUND WATER

Most of the usable ground water in Lubbock County is found in the Ogallala formation, of Tertiary age, which lies at or near the surface throughout most of the county and ranges in thickness from more than 100 to almost 300 feet. The formation consists of sandy clay, silt, and fine sand with some coarse sand and gravel and porous caliche. The coarser sediments, which are usually very permeable, are in places present throughout the section, but are most prominent in the middle and lower parts of the formation. These sediments were deposited for the most part by streams but in part by the wind. The Ogallala rests on an uneven floor of older rocks that was eroded into valleys and ridges before the Ogallala was deposited. In some places this basement consists of Cretaceous limestones, shales, and sandstones, but in other places the Cretaceous rocks have been removed by erosion and the Ogallala rests on Triassic redbeds (see geologic section, fig. 1). In a few places in the county, particularly in the western,southwestern, and southern parts, irrigation wells draw both from the Ogallala formation and from the underlying Cretaceous rocks. Where tested in Lubbock County and indeed in most parts of the High Plains, the Triassic redbeds consist mainly of red and greenish-blue shales and siltstones that yield meager supplies of highly mineralized water to wells. In a few localities, however, they include sandstones and conglomerates that yield moderate supplies of water of good quality.

The water in the Ogallala formation is derived from the rain and snow that fall on the surface of the Plains and percolates downward into the ground-water reservoir. The water enters the formation (recharge) principally through depressions or sinks in the land surface occupied by intermittent ponds, sandy stream beds and adjacent sandy areas, and sand dune areas and areas of very sandy soils and subsoils. Conditions in the Lubbock district are favorable for ground-water recharge, especially in the shallow-water belts between Lubbock and Idalou and west and northwest of Lubbock.

TEST DRILLING

Preliminary investigation prior to test drilling

The writer made a preliminary investigation of ground-water conditions throughout Lubbock County during September, October, and November 1944, with a view to selecting the most promising areas for test drilling. Among other things, this investigation included a complete inventory of irrigation wells, the collection of water samples for chemical analyses where they were needed, and a few pumping tests. Two factors were given special consideration, (1) the quality of the water, and (2) the thickness and permeability of the water-bearing sands in areas outside the city limits. From these studies and from former investigations it was concluded that within a reasonable distance from Lubbock the ground water in the areas east and northeast of the city is softer and contains less total dissolved minerals than in other parts of the district; that the ground water west and southwest of Lubbock ranks second in these respects, and that the water in the belt along Yellowhouse Draw in which the present city wells are situated ranks third (see map, pl. 2). It was found that the fluoride is comparatively high in the water in the area west and northwest of Lubbock.

As to the permeability of the water-bearing beds, it was tentatively concluded from the limited information that was available that the sands along Yellowhouse Draw are the most permeable, that those east and northeast of Lubbock are second in that respect, and that in the area west of the city the sands are comparatively thin and of low permeability. It was thought, however, that in the last-named area the underlying basal sands of the Cretaceous rocks might be sufficiently thick and contain water of sufficiently low mineralization to warrant development, or that the Cretaceous limestones might include porous zones that would yield usable water. Southwest, south, and southeast of the city the sands of the Ogallala formation are thin. The irrigation wells in those localities usually have lower yields than those along Yellowhouse Draw and in the northeast quarter of the county.

In order to test the formation productivity and quality of the water of these various areas the City Commission carried on exploratory drilling in areas northeast of Lubbock and also west of the City, south of Yellowhouse Draw. No wells were drilled in the belt adjacent to Yellowhouse Draw because the water found there already was known to be undesirably hard.

Objectives of test drilling

Northeast of Lubbock, the main objectives of the drilling program were as follows: (1) to determine the thickness and character of the Ogallala sands and (2) to determine whether the upper part of the Triassic beds locally contains any sandstone that might yield usable water. Some of the test holes were cased for use as observation wells to record future water-level fluctuations produced by the combined withdrawals for irrigation and municipal use in the event that the area should be developed by the City. In the area west of Lubbock, between U. S. Highway 84 and State Highway 290, the main objectives were (1) to determine the thickness and character of the Ogallala sands, and (2) to determine whether or not the underlying Cretaceous rocks contain important aquifers.

The City of Lubbock carried out the program of exploratory drilling in February and March 1945. Altogether 10 test wells were completed, nine of which were drilled into the Triassic redbeds. One test well, number 3, was discontinued at a depth of 73 feet. Test wells 1 to 7, inclusive, were drilled northeast of Lubbock, and test wells 8, 9, and 10 were drilled west of the City (see maps, pls. 1 and 2).

Equipment and methods used

All the drilling was done with a truck-mounted rotary drilling rig, the essential parts of which were a drill bit, drill stem, rotary table, circulating mud pump, power-driven hoisting drum, and a 25-foot hydraulically-controlled folding mast. The rotary table, hoisting drum, and mud pump were driven by the truck motor. A 5½-inch fishtail bit with two jet openings was used for cutting through the sands and clays, and a roller rock bit was used for hard formations such as caliche rock and limestone. The drill stem was 2-3/8 inches in outside diameter, and in 10 foot lengths.

The drilling mud was made from the natural clay obtained from the test hole as drilling progressed. No commercial muds were needed because there is sufficient clay in the section to keep the drilling mud sufficiently heavy to prevent caving. Nine of the holes were logged electrically. This logging was done after all the holes had been completed in order to avoid the extra cost of transporting the electric logging outfit from the nearest logging headquarters at Midland, 120 miles distant as each hole was completed. The interval between completion of drilling and the electrical logging ranged from a few hours, in test holes 2 and 10, to several weeks in test holes 1, 2, 4, 5, 6, 7, and 8. Test hole 1, 4, and 7 required some reconditioning before logging could be accomplished, as they had partly caved in.

Samples of cuttings from eight of the wells were collected from the sluice ditch after each 10 feet of drilling or after each sharply-defined change in formation. Most of these samples were examined microscopically and correlated with the drillers logs and the electrical logs.

The test drilling was done by the Layne-Texas Company, Ltd., under a contract with the City of Lubbock. According to the terms of the contract the decision as to the maximum depth to which the holes should be drilled was left to the writer as the representative of the Federal Geological Survey and Texas State Board of Water Engineers.

Lithology of formations penetrated

Approximately 220 samples of drill cuttings were collected during the test-drilling operations. Most of these were examined under a hand lens but those from well 3 were examined under a binocular microscope. Because the samples were washed to the surface by the drilling mud they cannot be regarded as truly representative of the materials as they occur in place. An effort was made to use mud as light as possible, but even the light mud may have washed out and removed some of the finer particles that occur in the formation. However, the general lithologic character of the beds is probably represented by the cuttings. The results of the examination of the cuttings are incorporated in the table on page 20-a, are plotted graphically on the reproductions of the electrical logs, figures 5 to 9, inclusive.

Most of the sands in the Ogallala formation encountered in test holes 2 to 7, inclusive, northeast of Lubbock, are subangular to well-rounded, fairly well-sorted, quartz grains. In general the sands are fine to medium-grained. The coarsest sands, with some fine gravel, occur near the base of the formation. Most of the wells penetrated alternating hard and soft beds in the upper part of the formation. The hard layers were calcareous sandstone or sandy caliche ("mortar beds") and the soft layers were sand and sandy clay or sandy silt. In some of the holes caliche beds were encountered at intervals throughout the Ogallala section. In the test holes west of Lubbock the Ogallala sands consist of poorly-sorted grains of limestone and quartz, apparently derived mostly from reworked Cretaceous rocks. The sands are silty or clayey. The Cretaceous rocks underlying the Ogallala in test holes 1, 8, 9, and 10 consist of limestone with porous zones in places, some beds of shale, and a limy and fairly well-cemented basal sand.

Electrical logging of test holes

General statement.- Electrical logging of wells was pioneered by the Schlumberger Well Surveying Corporation, which in 1928 began to develop a series of procedures for studying in place the resistance of the beds penetrated by drill holes before the casing is installed, and for interpreting the results in terms of the character of the beds and the nature of the contained liquids or gasses. The procedures have been perfected to such an extent that, at present, electrical logs are obtained for most oil tests drilled in Texas and in many water-well tests. Electrical measurements are recorded automatically as an electrode carrier is lowered into or withdrawn from the well by means of a multiple-conductor cable operated by a winch mounted on a truck. The measurements are calibrated to show the units of resistivity of the different beds and are expressed in ohms per square meter per meter (ohms m^2m). The recording apparatus, which is too complicated to describe here, is briefly discussed in Water-Supply Paper 889-D of the Geological Survey 1/.

A detailed and continuous record of the formations penetrated by the drill is given by electrical logs which are, therefore, one of the most useful tools available to the geologist for subsurface studies. The two main uses of electrical logs are for the correlation of formations and the determination of the character of the fluid content of permeable beds.

The spacing of the electrodes lowered into the well governs the distance that electric currents penetrate beyond the bore of the well, and by adding more electrodes more curves can be obtained. The spacing should be large enough to allow the current to penetrate beyond the part of the beds invaded by the drilling mud, thus determining more nearly the true resistivity of the formation. In logging the Lubbock test holes two resistivity curves were obtained with each log, with electrode spacing of 18 inches and 13 feet, respectively.

In addition to the readings of the resistivity, the logging apparatus records changes in values of the earth current or natural "self potential" that occur spontaneously in the drilled hole. This record aids in distinguishing between permeable and less permeable beds and in determining the type of solutions they contain.

1/ Rose, N. A., White, W. N., and Livingston, Penn, Exploratory water well drilling in the Houston district, Texas: U.S. Geol. Survey Water-Supply Paper 889-D, pp. 229-304, 1944.

The following brief explanation of the use of electrical logging in differentiating rock types is based largely on a book by Heiland [2/] and a paper by Mathieu and others [3/].

Electrical logging, in a general sense, is the examination of the electrical properties, electrical reaction, and geometric disposition of subsurface formations by electrical measurements in wells. The resistance of a formation to the passage of an electric current is used to differentiate the geologic beds, because this property differs widely from one type of rock to another. The differences are dependent largely upon the physical characteristics of the rocks and the solutions they contain, and partly upon mineralogic make-up. The resistivity curves may be classified in four general groups, as follows:

1. High resistivity in permeable formations that contain in their interstices fluids, such as fresh water or oil and gas, that have a rather high resistance to the passage of electric currents.

2. Low resistivity in permeable rocks that contain in their interstices saline water, which is electrically conductive.

3. High resistivity in non-permeable rocks, generally dense, compact limestones, anhydrite, rock salt, and the like, which contain only small amounts of water and are, therefore, poor electrical conductors.

4. Low resistivity in non-permeable rocks, such as shales and clays, which usually contain in their minute pore spaces considerable amounts of water that is mineralized and is, therefore, a good electrical conductor.

2/ Heiland, C. A., Geophysical exploration, Prentice-Hall, 1940.

3/ Mathieu, J. L., and others, Houston Geological Society Study Group, Electrical well logging: Am. Assoc. Petroleum Geologists Bull., vol. 23, No. 9, pp. 1297-1298, 1939.

Lubbock tests.- The electrical logs of the test holes drilled at Lubbock consist of three graphs generally called curves. The first or self-potential curve on the left aids in distinguishing between permeable and less permeable beds and in determining the type of solutions contained in them. The curve shown by a solid line on the right is known as the second or normal resistivity curve and records the apparent resistance to an induced electric current that penetrates laterally to a distance approximately equal to the electrode spacing (in these logs about 18 inches) from the wall of the bore hole. Some geologists believe that a small amount of current penetration is inadequate and may lead to misinterpretation of the graph, because in permeable beds the resistivity may be affected by the invasion of drilling mud. Therefore, a third curve was made which parallels the second approximately, it is shown by a broken line. In these logs it is supposed to record the resistivity to a maximum lateral distance of about 13 feet, which is probably a greater distance than the drilling mud penetrated in the sands even though several weeks elapsed between the drilling and logging of most of the test holes. It is possible, however, that in honeycombed caliche the mud invasion may have extended 13 feet or more, thereby partly vitiating the record at some depths. All the curves are subject to limitations in accuracy and significance and need to be interpretated with care.

A comparison of the electrical logs with logs compiled from the drillers' records and study of the drill cuttings show that, on the whole, they agree remarkably well in fixing the upper and lower limits of the thicker beds (see figs. 5-9). The second curve of the electrical log seems to give more detail than the driller's log, in that it indicates the position of numerous caliche layers or "mortar beds" within the larger sand sections, and it also shows sandy layers within the clay zones. In general, these were recorded in the driller's log as alternating beds of sand and caliche and sand and clay.

Summary of results of test drilling

A summary of the data obtained for each test hole and the conclusions drawn therefrom are given below. The writer's classification of the test holes according to the thickness of the sands and proportion of different sizes of grains is given in the table on page 20-a. The drillers' logs are given in the appendix, and the electrical logs are shown in figures 5-9. For location of the test holes see the maps, plates 1 and 2.

Test hole 1.- Drilled 3½ miles northeast of Lubbock on north side of P. & S. F. Railway, near northwest corner sec. 6, blk. A; depth 244 feet; water level 53.2 feet below land surface on February 13, 1945, 8 days after drilling was completed; surface altitude 3,213 feet.

The base of the Ogallala formation as revealed by the drill at this site is about 131 feet below the surface, with the best developed sands at 77 to 104 and 112 to 131 feet. The saturated portion of the formation has a thickness of about 78 feet, including 50 feet of sand and gravel and about 20 feet of caliche with minor sand members. The sand and gravel should yield water freely to wells and the caliche also may yield considerable water. The remaining 8 feet of the saturated portion is sandy clay which would yield comparatively little ground water.

Deposits of Cretaceous age were penetrated from the base of the Ogallala to a depth of 215 feet. These rocks consist of thin layers of shale and clay; dense limestone; and the well-known basal Cretaceous sands at the bottom of the section from about 192 to 214 feet.

From 215 feet to the bottom of the hole at 244 feet, the drill penetrated tough dark red and greenish-blue shale with thin beds of greenish-blue siltstone. These rocks belong to the Dockum group of Triassic age commonly referred to as the Triassic redbeds.

In this test hole only 53 feet of good water-bearing sand was penetrated, which is the least that was encountered in any of the test holes drilled. The water in the Cretaceous and Triassic deposits is likely to be meager and of poor quality, and, therefore, of little or no importance as a municipal supply.

Test hole 2.- Drilled $5\frac{3}{4}$ miles northeast of Lubbock along the P. & S. F. Railway, in the $NW\frac{1}{4}NW\frac{1}{4}$ sec. 47, blk. A; depth 234 feet; water level 27.7 feet below the land surface on February 13, 1945, 6 days after drilling completed; surface altitude 3,184 feet.

In this test boring the Ogallala deposits, with base at 194 feet, consist of alternating beds of sand, gravel, clay, sandy clay, and honeycombed caliche. Tubular stems of calcium carbonate resembling fossil roots of plants occur in places in the sands. The overall saturated thickness is 166 feet; the major water-bearing beds have a total thickness of about 120 feet and consist of beds of sand and gravel interbedded with porous caliche. The remainder of the saturated section is mostly clay, sandy clay, and hard and soft caliche. No rocks of Cretaceous age were penetrated in this test hole.

From the base of the Ogallala, at 194 feet, to the bottom of the hole at 234 feet the drill penetrated tough, dark red clay interbedded with thin layers of greenish-blue clay and siltstone, obviously of Triassic age.

As revealed by the drill, ground-water conditions in this locality are excellent for the development of production wells.

Test holes 3 and 4.- Test hole 3 was drilled 7½ miles northeast of Lubbock in northwest corner of the NE¼ sec. 55, blk. A; depth 73 feet; water level 35 feet below the land surface on February 10, 1945.

Drilling was discontinued at 73 feet because a highly permeable zone was encountered--perhaps cavernous caliche--in which the drilling mud was lost. Owing to the fact that the test hole was only 30 feet from an irrigation well, and to the danger of damaging the irrigation well if attempts were made to regain circulation by sealing up the walls of the test hole, it was decided to abandon the test. The entire section drilled was sandy, consisting of alternating beds of sandy clay, caliche and sand in hard and soft layers, and loose red sand.

Test hole 4 was drilled 8 miles northeast of Lubbock at the intersection of the P. & S. F. and Fort Worth and Denver City Railway lines in the SE¼ sec. 66, blk. A; depth 264 feet; water level about 35 feet below the land surface on February 10, 1945; surface altitude, 3,181 feet.

The Ogallala formation occupies the section from the surface or from near the surface to a depth of 230 feet in bore hole 4. The formation here consists of alternating beds of sand, gravel, clay, sandy clay, and hard to soft caliche that is occasionally porous or sandy or both. The saturated section is 195 feet thick, of which about 140 feet is composed chiefly of sands and gravels with minor beds of porous caliche. This section appears to be very permeable, as indicated both by the loss of a large amount of drilling and during the drilling operation and by the slope of the resistivity curves of the electrical log. The remaining 50 feet of the saturated portion is composed of less permeable or essentially impermeable sandy, slightly porous caliche, sandy clays, and rather dense clays or shales. No rocks of Cretaceous age were penetrated.

From 230 feet to the bottom of the test hole at 264 feet the drill penetrated Triassic strata consisting of hard red and blue clay and thin beds of red shale and siltstone. These rocks are likely to yield little or no potable water.

Ground-water conditions in this locality are excellent for the development of large production wells in Ogallala sands for public water supplies or for irrigation.

Test hole 5.- Drilled 7 miles northeast of Lubbock in the northwest corner of the NW$\frac{1}{4}$ sec. 49, blk. A; depth 305 feet; water level about 42 feet below the land surface in February 1945; surface altitude 3,217 feet.

The base of the Ogallala lies 192 feet below the surface at this site. The saturated thickness of the formation is about 150 feet, of which about 90 feet of sand and porous caliche is believed to be fairly permeable. The remainder of the saturated portion, consisting mostly of sandy clay, clay, and a few hard caliche members, is believed to be relatively impermeable. No rocks of Cretaceous age were penetrated in this test hole.

From the base of the Ogallala formation to the bottom of the hole at 305 feet the sediments consist of nonwater-bearing Triassic hard maroon and greenish-blue shale and shaly siltstone.

Although the Ogallala sands encountered in test hole 5 were not as thick nor as permeable as in test holes 2 and 4, conditions are favorable for development of large-capacity wells in the locality of test hole 5.

<u>Test hole 6.</u>- Drilled $8\frac{3}{4}$ miles northeast of Lubbock in $NE\frac{1}{4}NE\frac{1}{4}$ sec. 52, blk. A, on property of Liberty Public School; depth 274 feet; water level 67 feet below the land surface in February 1945; surface altitude 3,241 feet.

The base of the Ogallala formation in this test hole is tentatively placed about 181 feet below the surface. The thickness of saturation in the formation is estimated at 114 feet, of which about 75 feet is composed of sands and porous sandy caliche. Relatively impermeable clays, sandy clays, and dense caliche make up the remainder of the saturated section.

Although the available information is not conclusive, it appears probable that the sediments between 181 and 216 feet below the surface, consisting of varicolored clays; dense, hard limestone; dark red clay; and caliche; with 10 feet of sand at the base, are of Cretaceous age. From 216 feet to the bottom of the hole at 274 feet the rocks consist of dark red shale and thin beds of bluish-green silty shale, of Triassic age.

The ground-water conditions in this locality are favorable for the development of large-capacity production wells in the Ogallala formation for irrigation or public supplies. The thin section of basal Cretaceous sands probably will yield only a meager volume of rather highly mineralized water.

<u>Test hole 7.</u>- Drilled in the northeast corner of the South Plains Army air base, 6 miles north of Lubbock in northeast corner of sec. 2, blk. D-3; depth 314 feet; water level about 63 feet below land surface in February 1945; surface altitude 3,262 feet.

The base of the Ogallala deposits in this test hole lies at 253 feet below the surface. The deposits include an overall thickness of 191 feet of saturated material, of which it is estimated that about 130 feet is composed of relatively permeable sands and associated porous caliche that should yield water freely to wells. The remainder of the Ogallala material below the water table is comparatively impermeable. Sediments of Cretaceous age were not penetrated in this test hole.

From 253 feet to the bottom of the hole at 314 feet the drill cuttings consisted of sandy red shale, siltstone, and red and greenish-blue shale of the Triassic redbeds, which are practically nonwater-bearing.

The thick section of saturated permeable sandy material revealed by this boring, together with data collected from local irrigation wells indicate that the ground-water reservoir in this locality is quite large and productive. Unconsolidated sands may be encountered locally that will give some concern in large-volume well construction.

Test hole 8.- Drilled $7\frac{1}{2}$ miles west of Lubbock in $SW\frac{1}{4}SW\frac{1}{4}$ sec. 3, blk. JS; depth 295 feet; water level about 68 feet below land surface in March 1945; surface altitude 3,303 feet.

The base of the Ogallala formation is about 208 feet below the surface in this test hole. The saturated thickness of the formation is about 140 feet, of which 115 feet consists mostly of fine to medium-grained sand with about 10 feet of porous caliche just below the water table, and which is believed to be moderately permeable. Available data indicate that the remainder of the saturated section is relatively impermeable.

Rocks of Cretaceous age occupy the section from about 208 to 276 feet in this hole. They consist of hard and soft layers of limestone from 208 to 235 feet, alternating beds of limestone and dark blue shale from 235 to 260 feet, and interbedded sands and shales and medium-grained limy gray sand from 260 to 276 feet. The limestones appear to be somewhat porous, according to the electrical log, and probably contain water; but according to the driller's log the sands are shaly and limy and would yield little water.

From 276 feet to the bottom of the test hole at 295 feet the material penetrated by the drill consisted of red and greenish-blue shale of Triassic age which is barren of water.

The ground-water conditions in this locality are favorable for development of large-capacity wells in the Ogallala deposits. In chemical quality, however, the water is considerably harder and contains more dissolved minerals than the ground water in the area northeast of Lubbock. This is an important consideration in a public supply. According to the electrical log the water in most of the Ogallala sands in this test hole was less mineralized than the drilling mud, which was made with water from the Lubbock mains; but that in the basal 20 feet was more highly mineralized than the mud. The Cretaceous rocks at this site offer little promise as a source of water of good quality.

Test hole 9.- Drilled 7½ miles northwest of Lubbock in NW¼NW¼ sec. 8, blk. JS; depth 294 feet; water level about 40 feet below the surface in March 1945; surface altitude 3,296 feet.

The Ogallala here extends to a depth of about 180 feet below the surface, and the saturated thickness of the formation is estimated as about 140 feet. Of the saturated section about 65 feet consists of the following: 20 feet of medium to coarse-grained sand, 30 feet of fine to medium-grained sand, 15 feet of fine-grained sand, and a little porous caliche that should yield water rather freely to wells. The remainder of the section consists of relatively impermeable clay, sandy clay, and hard caliche, which can be disregarded as a source of water.

Rocks from the base of the Ogallala at 180 feet to a depth of 253 feet consist of typical Cretaceous clays, dense to honeycombed limestone, and the basal sand, which here is about 10 to 12 feet thick. The Triassic section from 253 to 294 feet consists of hard red shale and silt interbedded with thin lenses of blue and yellow shale, which are essentially non-water-bearing.

According to the test drilling, conditions in this locality are favorable for the development of large-capacity wells for irrigation or municipal supply. The character of the electrical-log curves, together with other field data, indicate that the water in the Cretaceous rocks probably is too highly mineralized for satisfactory domestic use.

Test hole 10.- Drilled 6 miles northwest of Lubbock in NE$\frac{1}{4}$NE$\frac{1}{4}$ sec. 7, blk. JS; depth 254 feet; water level 29 feet below land surface in March 1945; surface altitude 3,256 feet.

The base of the Ogallala in this test hole is 162 feet below the surface. Of the total thickness 133 feet lies below the water table, and of this saturated section an estimated 114 feet is composed of relatively permeable sands and clayey sands with some porous sandy caliche. Less permeable or relatively impermeable clays, sandy clays, and hard caliche make up the remainder of the saturated portion.

Cretaceous rocks occupy the section between 162 and 235 feet below the surface. They consist of shales and clays; limestone, possibly porous in the middle section; and sands, which occur between 219 and 235 feet below the surface.

Triassic rocks, consisting of hard maroon and greenish-blue shales and silts, were penetrated from 235 to 254 feet, which are essentially nonwater-bearing.

The conclusions reached concerning the ground-water conditions in this locality are similar to those found in test hole 9.

Proportion of fine-grained, fine to medium-grained, and medium to coarse-grained sand, and the total thickness of sand in each test hole

(Based on examination of drill cuttings by the writer)

	Ogallala			Cretaceous	
Test hole	Medium to coarse-grained sand (includes honey-combed rocks) (feet)	Fine to medium-grained sand (feet)	Fine-grained sand (feet)	Fine-grained sand (feet)	Total thickness of sand (feet)
		Area northeast of Lubbock			
1	20	25	5	15	65
2	60	40	20	--	120
4	50	45	58	--	153
5	20	35	35	--	90
6	20	25	25	10	80
7	30	35	65	--	130
		Area west of Lubbock			
8	40	52	20	8	120
9	20	30	15	10	75
10	25	47	25	15	112

Quality of ground water as indicated by electrical logs

No water samples were obtained from the test holes, as the City authorities felt that earlier quality of water studies covering the entire county, previously mentioned in this report, (p. 1) were adequate (see map, pl. 2). The studies indicated that water in different horizons in the Ogallala does not differ greatly in chemical character within these areas.

Electrical logs, by the character of their curves, give a relative indication of the changes in chemical quality of the water in the different formations. These changes are registered on the basis of a comparison between the chemical character of the mud used for drilling (which is determined by the water used for mixing the mud and the material penetrated by the drilling), and the character of the water in the formation. In all the test holes the water used for drilling was obtained from the water mains of the City of Lubbock.

The electrical logs indicate that the water in the Ogallala formation in the test holes northeast of Lubbock is generally of lower mineral content than the water in the drilling mud. In test holes 2 and 4, however, there are some indications that the water in the basal 10 to 15 feet of sand has a higher mineral content than the mud used for drilling. This is also true of the shallow sands in well 2. In the test holes drilled west of Lubbock the Ogallala water in wells 8 and 9 appears to be less highly mineralized than the drilling mud, except for that in the basal 20 feet in well 8, which apparently is more highly mineralized than the mud. In well 10 the water in the Ogallala appears to be of about the same chemical character as the drilling mud. According to the electrical logs, the water in the Cretaceous rocks in all the test holes that penetrated these rocks contains more dissolved solids than the mud used for drilling, and would not be desirable for a city supply.

EFFECTS OF PUMPING

Specific capacity of wells

The specific capacity of a well is defined as the yield per unit of drawdown. It is generally expressed as the number of gallons per minute that a well will yield for each foot of drawdown. In eight wells in the area north and northeast of Lubbock (nos. C-15, 26, 64, 81, 416, 599, 604, and 666 in pl. 1) the range in specific capacity in tests ranging in length from a few hours to about 72 hours ranged from 21 to 65 gallons per minute per foot of drawdown and the average was 36 gallons per minute per foot.

For purposes of computations in this report a specific capacity of 35 gallons per minute per foot was used in making calculations of the theoretical drawdown to be expected in each well due to its own pumping in a well field assumed to be in the area northeast of Lubbock. (See fig. 2.)

Coefficients of transmissibility and storage and computations of effect of pumping

The amount and rate of decline of water levels produced by pumping from wells depends on the transmissibility and storage capacity of the water-bearing formation. The transmissibility of an aquifer is defined as the volume of water flowing in unit time through a vertical strip of the aquifer of unit width under unit hydraulic gradient. It may be expressed in terms of the number of gallons of water that will flow in 1 day through a vertical strip of the aquifer 1 foot wide under unit hydraulic gradient [4/]. The coefficient of storage may be defined as the volume of water released from storage in a vertical prism of the aquifer of unit cross-section by a unit decline of head. For water-table conditions, which exist in the Lubbock district, the ultimate coefficient of storage

4/ Theis, C. V., The relation between the lowering of the Piezometric surface and the rate and duration of discharge of a well using ground-water storage: Am. Geophys. Union, Trans. pp. 519-524, 1935.

is essentially equal to the specific yield of the material unwatered 5/. Meinzer 6/, defines the specific yield of a rock or soil as the ratio of (1) the volume of water which, after being saturated, it will yield by gravity, to (2) its own volume.

Data obtained from four recovery tests in the Lubbock area were analyzed by the Theis method to determine values of transmissibility.

The formula on which the recovery method depends is based on the following assumptions: (1) the water-bearing formation is homogeneous and of uniform thickness, (2) the formation has an infinite areal extent, (3) the discharge well penetrates the entire thickness of the formation, (4) the discharge well has an infinitesimal diameter, and (5) water is released from storage instantaneously with the drop in head. These assumptions, of course, are not fully realized in the Lubbock area, but in view of the areal extent and relative uniformity of the Ogallala formation they involve no great error. In the five pumping tests mentioned above values of transmissibility were obtained ranging from about 27,000 to 80,000 gallons per day per foot and averaging about 50,000 gallons per day per foot.

From studies in two large areas of heavy ground-water withdrawal in the High Plains region, in which the declines in water levels were correlated with the pumpage, storage coefficients of approximately 0.15 were obtained 7/.

5/ Theis, C. V., The significance and nature of the cone of depression in ground-water bodies: Econ. Geol., vol. 33, pp. 889-902, 1938.

6/ Meinzer, O. E., Outline of ground-water hydrology: U. S. Geol. Survey Water-Supply Paper 494, p. 28, 1923.

7/ Progress report on ground water in the High Plains in Texas: Texas State Board of Water Engineers in cooperation with U. S. Geol. Survey, pp. 15 to 17, April 1943.

The curves in figure 2, computed by means of the Theis formula, show the decline in water levels that theoretically would be produced in an ideal aquifer having a transmissibility of 50,000 gallons per day per foot and a storage coefficient of 0.15, at the end of 1, 2, 5, 10, and 20 years, as a result of pumping a well continuously at the rate of 1,000 gallons per minute.

From the curves in figure 2 the theoretical drawdowns resulting from the continuous pumping of 14 wells spaced on a line at half-mile intervals, at the rate of 500 gallons per minute each (a total of about 10 million gallons per day) were computed for periods of 1 year and 20 years, and are shown in figures 3 and 4. In these computations a specific capacity of 35 gallons per minute per foot was assumed for estimating the decline in the water level in each well due to its own pumping.

In computing the declines in water levels shown in figures 3 and 4, the effect of additional recharge was not considered. Recharge, that portion of the rainfall and snowfall that penetrates to the water table, will temporarily reduce the amount and rate of decline shown in the illustrations. On the other hand, the possibility was not taken into account that the current trend in water levels may be slightly downward as the result of pumping for irrigation. The effect of increased pumping by irrigation wells is another factor that has not been taken into consideration.

SURFACE RUNOFF AT LUBBOCK, TEXAS

By

Trigg Twichell

Little is known of the surface runoff of the headwater tributaries of the Brazos River that originate on the High Plains of the Texas Panhandle, or of these streams for a considerable distance downstream from the Plains escarpment ("Cap Rock"). The table below summarizes the discharge records collected at two stream-flow stations on the High Plains and at one station in the Brazos River downstream from the "Cap Rock".

Station	Period of record	Contributing drainage (Sq.mi.)	Average discharge mgd	Max. yearly discharge mgd	Min. yearly discharge mgd
Double Mountain Fork Brazos River at Lubbock, Texas	Sept. 1939 to Sept. 1944	Not known	1.61	5.54	0
Double Mountain Fork Brazos River near Aspermont, Texas	Dec. 1923 to Sept. 1934 June 1939 to Sept. 1944	1,509	122.0	340.0	27.0
White River at Plainview, Texas	June 1939 to Sept. 1944	Not known	5.72	23.0	0.013

Records collected at Lubbock and Plainview extend through a 5-year period. During this time the yearly rainfall ranged from 11.86 inches for the water year 1940 (ended September 30, 1940), to 37.39 inches for the water year ended September 30, 1941. Rainfall was above the average during the water years 1941, 1942, and 1944. It is believed, therefore, that the average daily flow of 1,610,000 gallons per day recorded at the station on the Double Mountain Fork Brazos River at Lubbock, for the 5 year period, is above the average flow that might be expected through a longer period of time.

The maximum recorded 12-month flow in the stream at Lubbock was from May 1, 1941 to April 30, 1942. The average flow for that period was 6,000,000 gallons per day, the major portion of which occurred during the 3 month period May 1 to July 31, 1941. There was no flow during the 18-month period September 1939 to February 1941, inclusive.

The Double Mountain Fork of the Brazos River at and below Buffalo Spring, about $10\frac{1}{2}$ miles southeast of Lubbock, is reported to be a perennially-flowing stream. Continuous stream-flow records have not been collected at this station. A discharge measurement was made at a section 2,000 feet below Buffalo Spring on January 17, 1937. At thet time the discharge was found to be 1,293,000 gallons per day. In all probability the spring flow fluctuates to some extent but the range of fluctuation is not known.

Runoff records collected to date on streams originating in the High Plains show the surface-water yield to be very low. A large portion of the flow is lost by infiltration into underlying formations. The low runoff measured during periods of heavy rainfall, such as occurred in 1941 and 1942. The extended periods of no flow, and high evaporation losses during drought periods, indicate that streams in the vicinity of Lubbock will not meet water requirements for large users.

SUMMARY AND CONCLUSIONS

The available supply of ground water of good quality in the Texas High Plains, of which the Lubbock district is a part, occurs in sands and gravels of the Ogallala formation. The formation rests on an uneven floor of Cretaceous rocks or Triassic redbeds. Although the water in the Ogallala is rather hard in some localities it is suitable for irrigation and municipal use, whereas the water in the underlying rocks is in general meager and quite highly mineralized.

The following information has been disclosed by test drilling: Northeast of Lubbock the average thickness of the saturated portion of the sands of the Ogallala formation in the six test holes that penetrated the full thickness of the formation is about 165 feet, of which about 100 feet is mainly sand and gravel. The poorest showing is in test hole 1, which penetrated 77 feet of saturated material with only 50 feet of sand. The best sands occur in the middle and lower parts of the formation. The base of the formation was reached at depths ranging from about 190 to 250 feet below the land surface, whereas most of the irrigation wells in the area are less than 150 feet in depth. The ground water in this area, is, in general, softer and lower in total dissolved minerals than in other parts of the county.

West of Lubbock the average thickness of saturated material in the Ogallala in the three test holes is about 135 feet, of which an average of about 80 feet is sand and gravel. The sands in this area do not appear to be as permeable as the sands northeast of Lubbock because of their clayey texture. Cretaceous rocks underlie the Ogallala formation in this area and consist of limestones, shales, and limy sands. The electrical logs indicate that, in general, the Cretaceous waters contain more dissolved minerals than the Ogallala waters.

If additional large supplies of ground water are to be developed for the City of Lubbock they should be obtained outside the present heavily-pumped areas, which are within and closely adjacent to the city itself, and the withdrawals should be spread over as wide an area as practicable in order to prevent a serious local decline of the water levels both in the new wells themselves and in the irrigation wells in the adjacent territory.

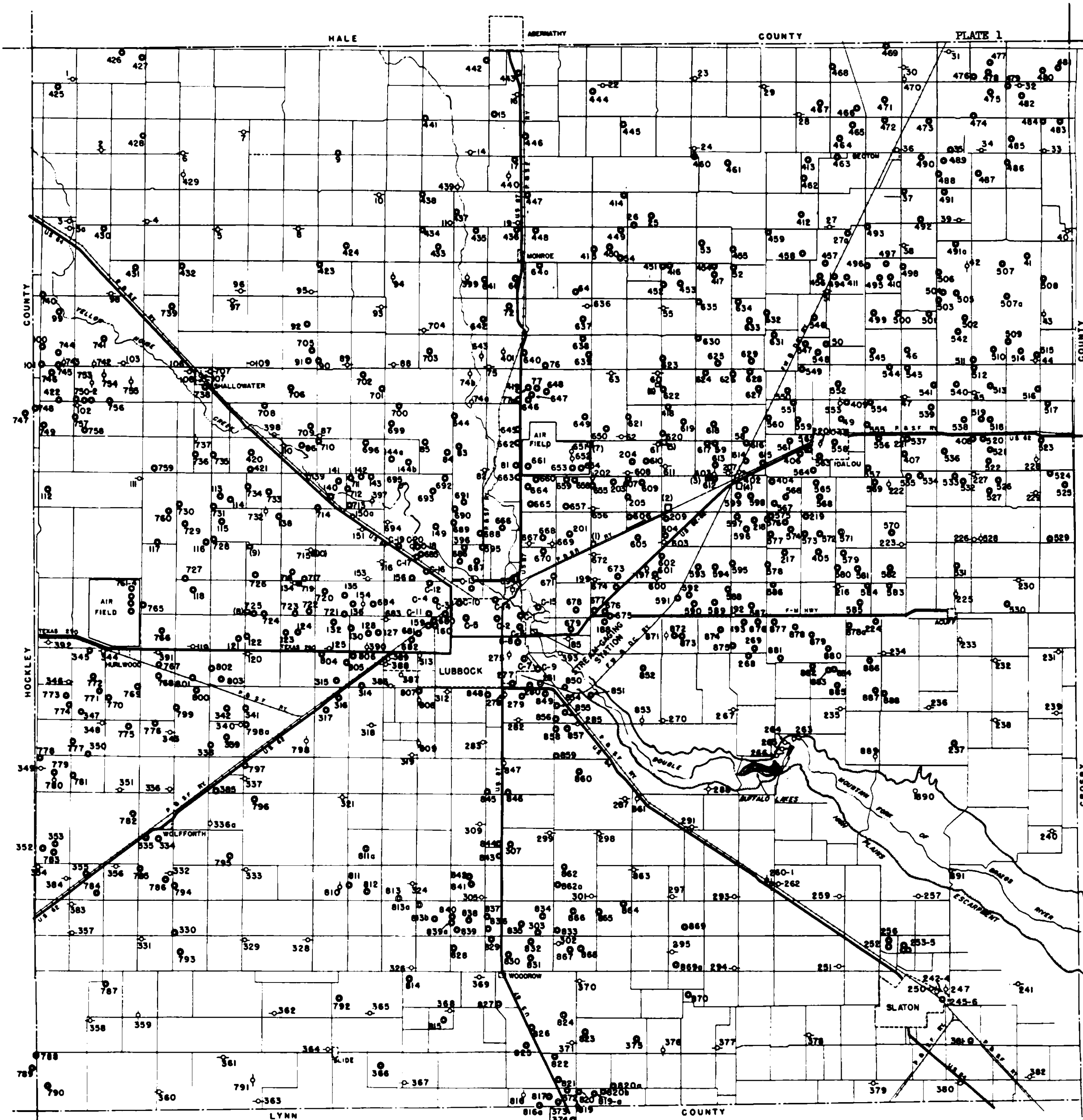
It is concluded from the test drilling and information previously available that the northeastern quarter of Lubbock County is the most promising area for development of large supplemental water supplies.

As a basis for computations for this report the wells to furnish such a large supply are assumed to be arranged in a straight line. Other arrangements, of course, may be equally feasible, provided that the pumpage is well distributed. The actual arrangement is a matter for the city engineer and the consulting engineer to decide. The theoretical drawdowns resulting from pumping 14 wells continuously at the rate of 500 gallons a minute each (about 10 million gallons a day), the wells being in a line spaced at half-mile intervals, were computed for periods of 1 year and 20 years. The results are shown in figures 3 and 4. If the pumpage should be at the rate of 1,000 gallons per minute per well (totaling 20 million gallons per day), the drawdowns indicated in the figures would be approximately doubled.

The estimates of drawdown of water levels given in this report are the best that can be made with present data. They relate only to drawdowns that should be expected in a well field laid out as described above. No account is taken of the effect of future pumping from irrigation wells, which is practically sure to increase.

Some water doubtless can be developed in the area west of Lubbock. However, it should be pointed out that the fluoride content of the water in that area is rather high.

Runoff records collected to date by the Surface Water Division of the Geological Survey show that the average flow of Double Mountain Fork of Brazos River at Lubbock is very small and is incapable of meeting the water requirements of large users. Ground water is, therefore, the only practicable source of large water supplies in the county.



MAP OF LUBBOCK COUNTY, TEXAS

SHOWING WATER WELLS AND SPRINGS

EXPLANATION

- WELL WITH HANDPUMP, BUCKET, OR BAILER
- WELL WITH WINDMILL OR SMALL POWER PUMP
- WELL WITH PUMPING PLANT – 5 HORSE-POWER OR LARGER
- UNUSED WELL
- SPRING
- (3) TEST WELL DRILLED BY THE CITY OF LUBBOCK
- WELL DRILLED TO TEST FOR OIL OR GAS
- U. S. OR TEXAS HIGHWAY
- COUNTY ROAD

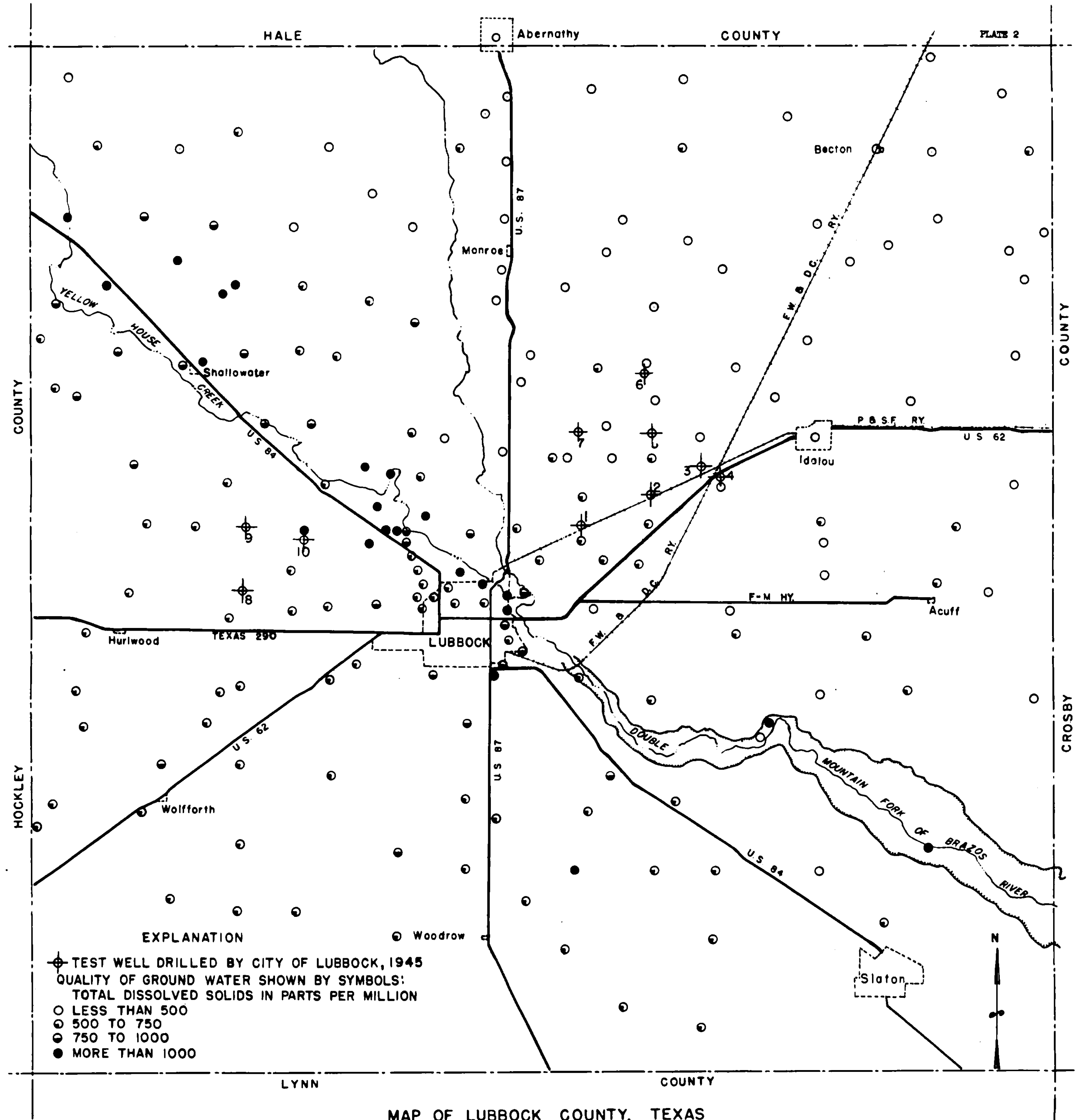
SCALE

0 1 2 3 4 5 6 7 8 MILES

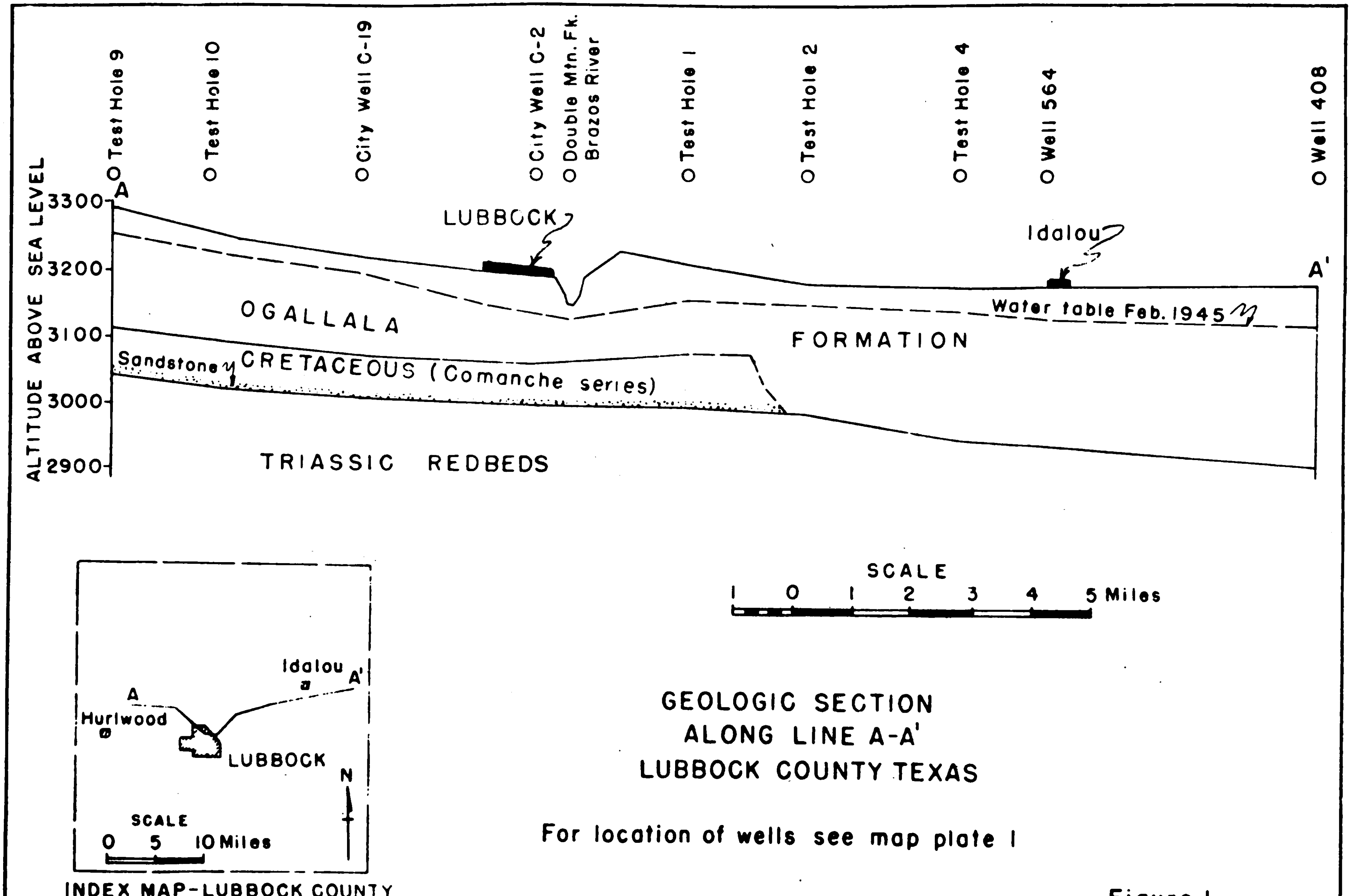
BASE COMPILED FROM HIGHWAY PLANNING SURVEY MAP AND FIELD NOTES

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

MARCH 1945



MAP OF LUBBOCK COUNTY, TEXAS
SHOWING LOCATION OF CITY TEST HOLES AND QUALITY OF GROUND WATER



GEOLOGIC SECTION
ALONG LINE A-A'
LUBBOCK COUNTY TEXAS

For location of wells see map plate 1

Figure 1

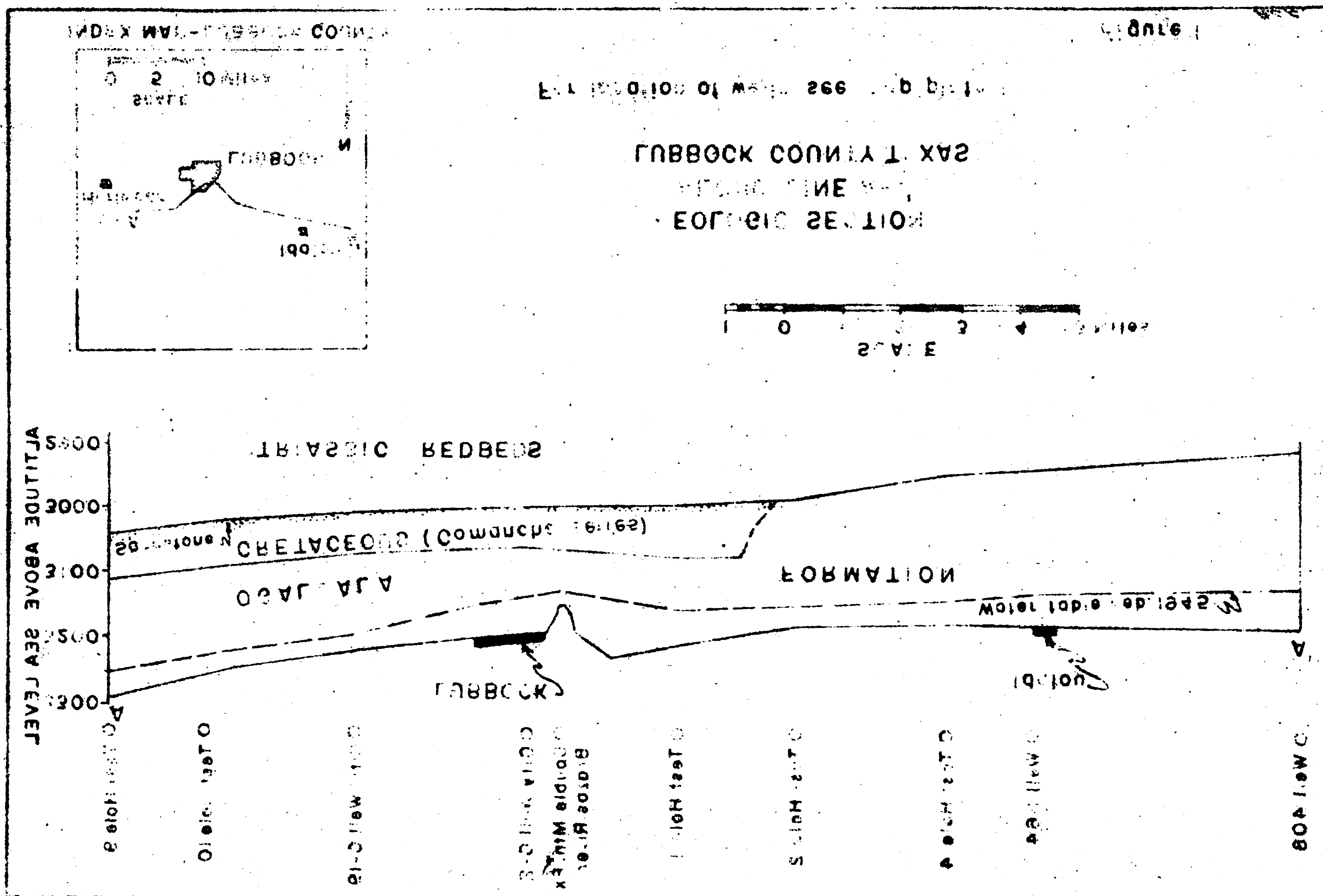


Figure 1
INDEX MAP
SCALE
0 5 10 Miles
LUBBOCK
N
Idalou
LUBBOCK COUNTY TEXAS
GEOLOGIC SECTION
SCALE
1 0 3 4
TRIASSIC REDBEDS
CRETACEOUS (Comanche Series)
OGALLALA FORMATION
Water table
ALTITUDE ABOVE SEA LEVEL
2900
3000
3100
3200
3300
A
A'
LUBBOCK
Idalou

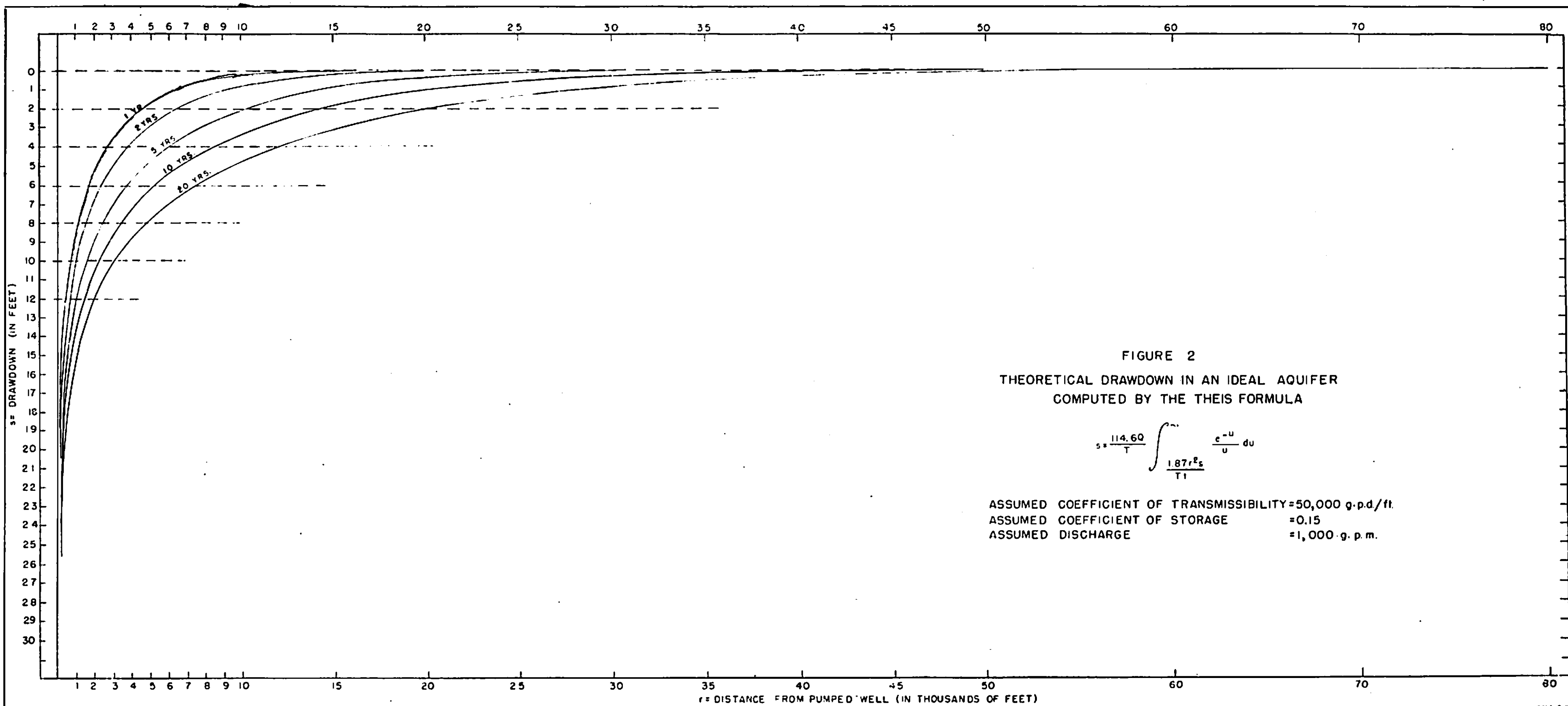


FIGURE 2

THEORETICAL DRAWDOWN IN AN IDEAL AQUIFER
COMPUTED BY THE THEIS FORMULA

$$s = \frac{114.6Q}{T} \int_{\frac{1.87r^2s}{Tt}}^{\infty} \frac{e^{-u}}{u}\,du$$

ASSUMED COEFFICIENT OF TRANSMISSIBILITY = 50,000 g.p.d./ft.
ASSUMED COEFFICIENT OF STORAGE = 0.15
ASSUMED DISCHARGE = 1,000 g.p.m.

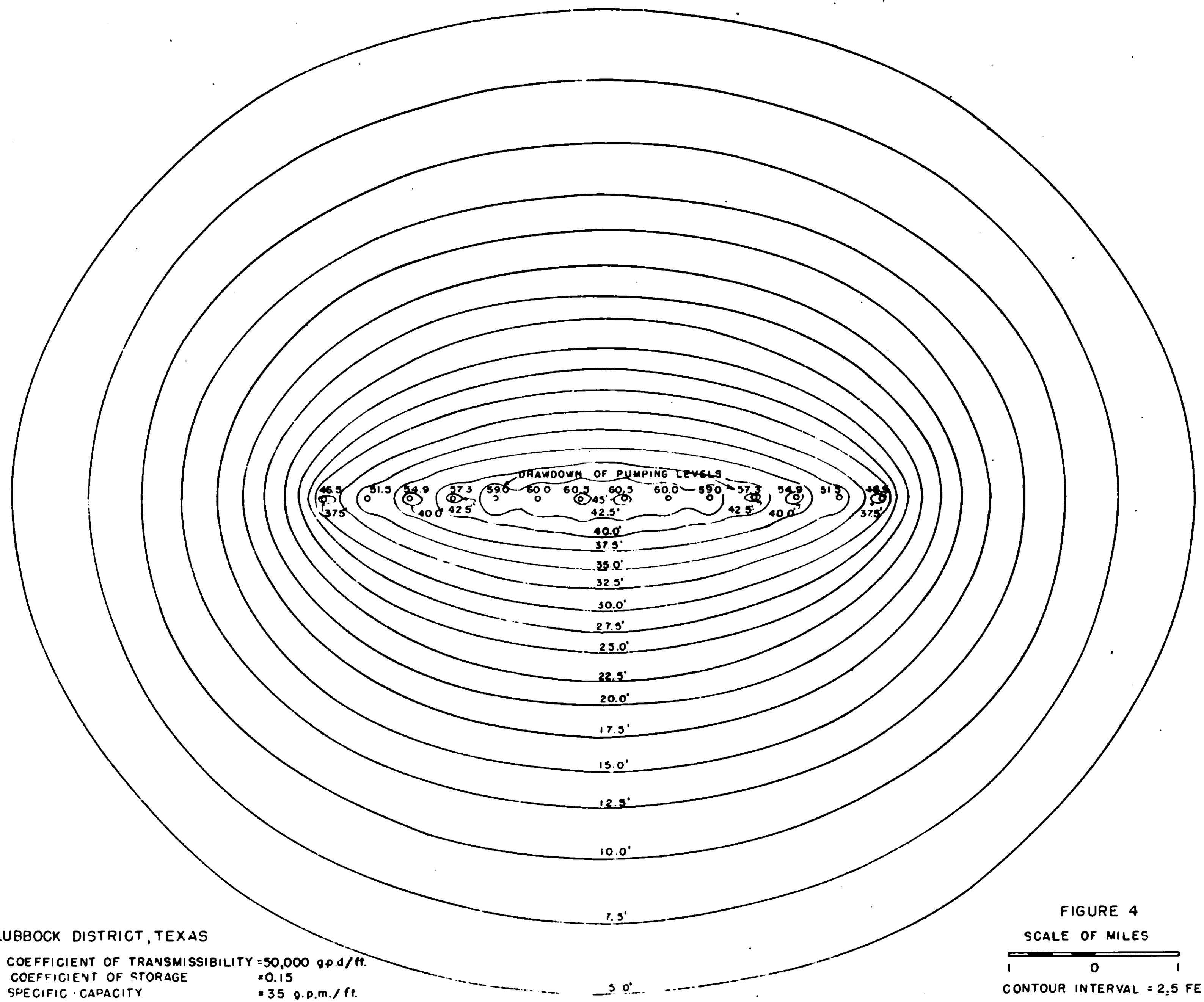


FIGURE 4

SCALE OF MILES

1 0 1

CONTOUR INTERVAL = 2.5 FEET

LUBBOCK DISTRICT, TEXAS

ASSUMED COEFFICIENT OF TRANSMISSIBILITY = 50,000 g.p.d./ft.
ASSUMED COEFFICIENT OF STORAGE = 0.15
ASSUMED SPECIFIC CAPACITY = 35 g.p.m./ft.

THEORETICAL DRAWDOWN IN WATER LEVEL AT END OF 20 YEARS CAUSED BY PUMPING 14 WELLS CONTINUOUSLY AT RATE OF 500 GALLONS PER MINUTE EACH – WELLS SPACED AT INTERVALS OF ONE-HALF MILE

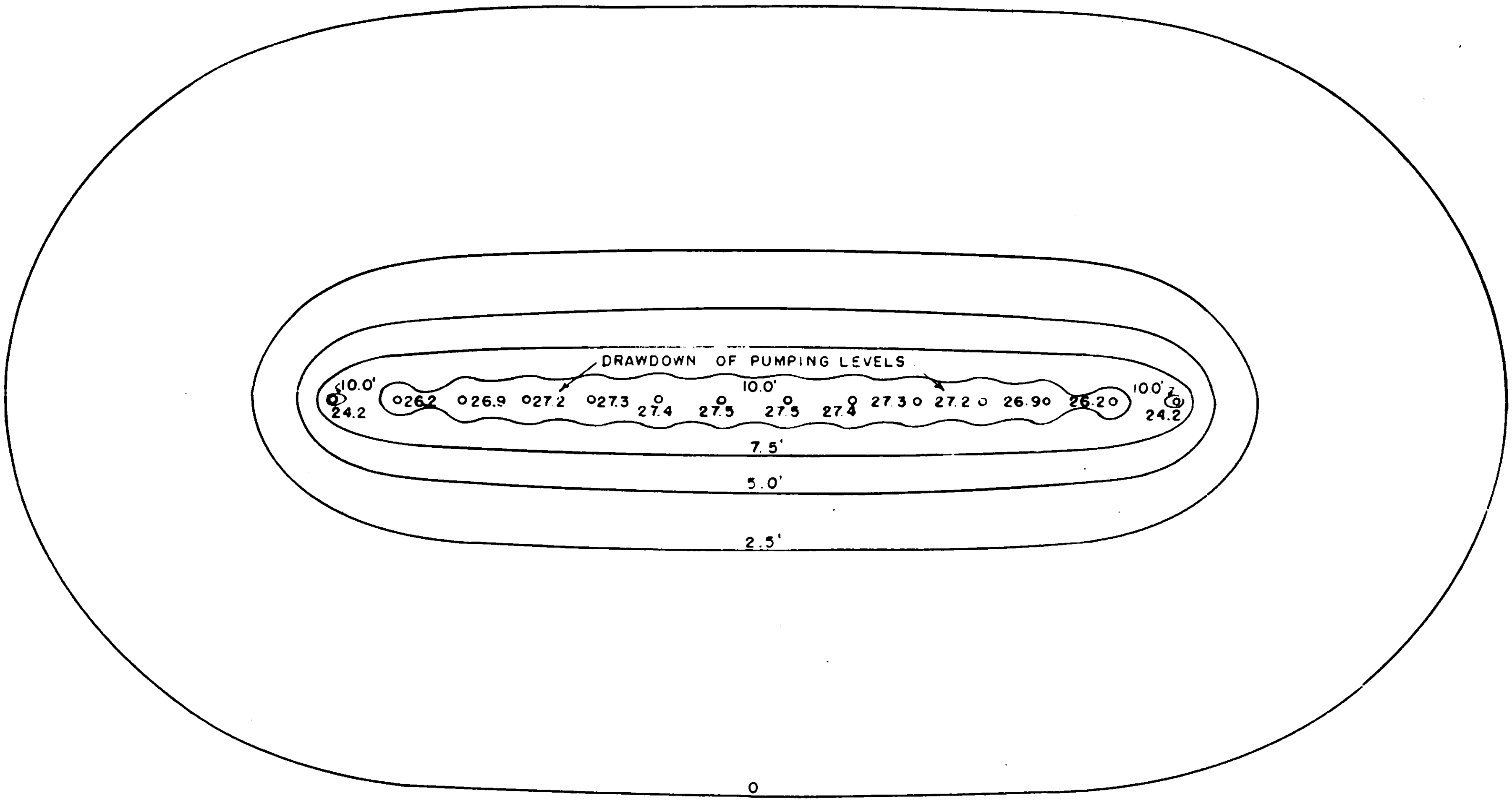


FIGURE 3

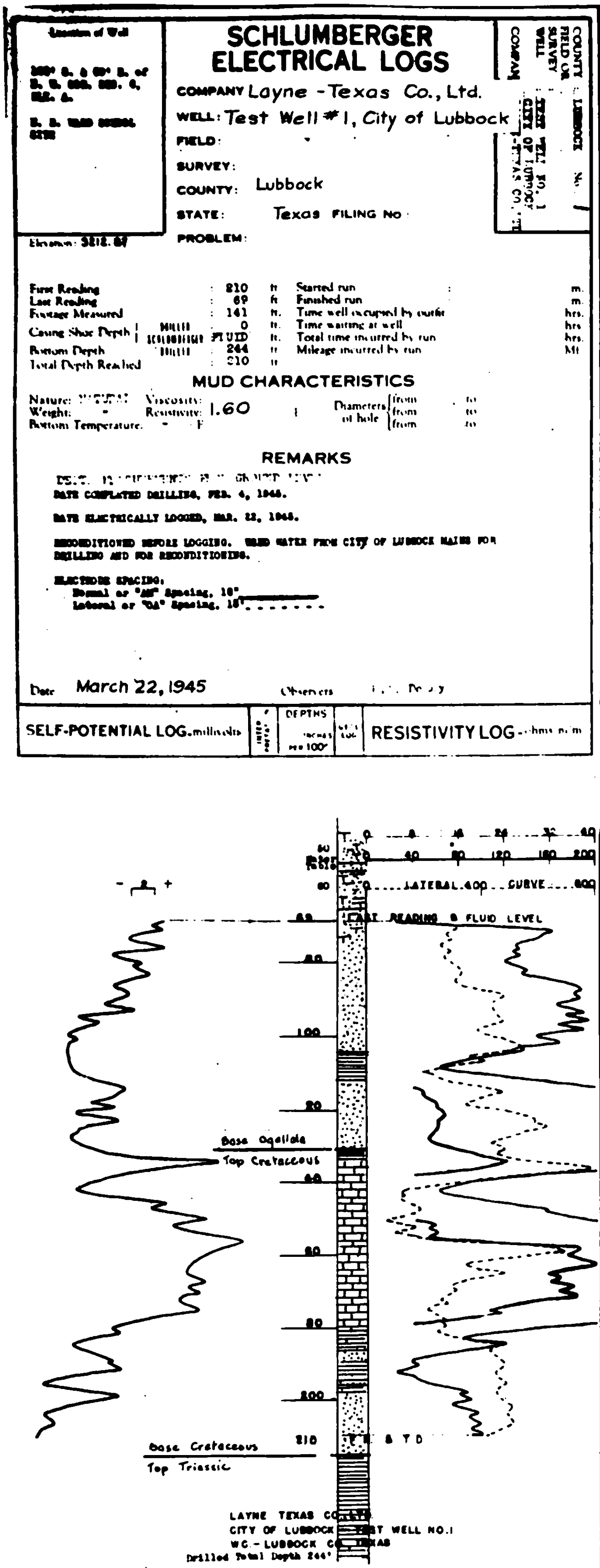
THEORETICAL DRAWDOWN IN WATER LEVEL AT END OF ONE YEAR
CAUSED BY PUMPING 14 WELLS CONTINUOUSLY AT RATE OF 500 GALLONS PER MINUTE EACH
WELLS SPACED AT INTERVALS OF ONE-HALF MILE
LUBBOCK DISTRICT, TEXAS

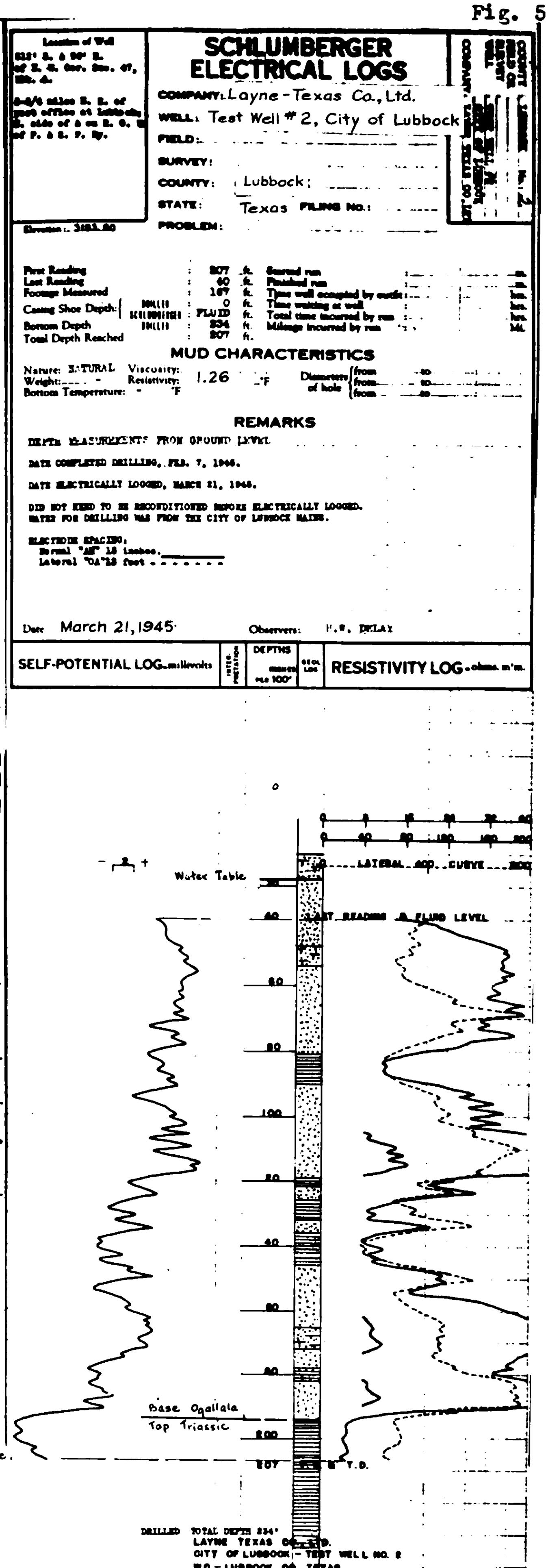
ASSUMED COEFFICIENT OF TRANSMISSIBILITY = 50,000 G.P.D. / FT.
ASSUMED COEFFICIENT OF STORAGE = 0.15
ASSUMED SPECIFIC CAPACITY = 35 G.P.M. / FT.

SCALE OF MILES
1 0 1

CONTOUR INTERVAL = 2.5 FEET

Fig. 5


SCHLUMBERGER ELECTRICAL LOGS
COMPANY Layne -Texas Co., Ltd.
WELL: Test Well # 1, City of Lubbock
FIELD:
SURVEY:
COUNTY: Lubbock
STATE: Texas FILING No.
PROBLEM:
First Reading 210 ft
Last Reading 69 ft
Footage Measured 141 ft
Casing Shoe Depth 0 ft
Bottom Depth 244 ft
Total Depth Reached 210 ft
MUD CHARACTERISTICS
Nature:
Weight:
Bottom Temperature:
Viscosity:
Resistivity: 1.60
REMARKS
DATE COMPLETED DRILLING, FEB. 4, 1945.
DATE ELECTRICALLY LOGGED, MAR. 22, 1945.
RECONDITIONED BEFORE LOGGING. USED WATER FROM CITY OF LUBBOCK MAINS FOR DRILLING AND FOR RECONDITIONING.
ELECTRODE SPACING:
Normal or "AM" Spacing, 16"
Lateral or "OA" Spacing, 18'
Date March 22, 1945
SELF-POTENTIAL LOG millivolts
DEPTHS
RESISTIVITY LOG ohms m²/m
LATERAL 400 CURVE 800
LAST READING & FLUID LEVEL
Base Ogallala
Top Cretaceous
Base Cretaceous
Top Triassic
LAYNE TEXAS CO. LTD.
CITY OF LUBBOCK - TEST WELL NO. 1
WC. - LUBBOCK CO. TEXAS
Drilled Total Depth 244'


SCHLUMBERGER ELECTRICAL LOGS
COMPANY: Layne -Texas Co., Ltd.
WELL: Test Well # 2, City of Lubbock
FIELD:
SURVEY:
COUNTY: Lubbock
STATE: Texas FILING No.
PROBLEM:
First Reading 207 ft.
Last Reading 40 ft.
Footage Measured 167 ft.
Casing Shoe Depth 0 ft.
Bottom Depth 234 ft.
Total Depth Reached 207 ft.
MUD CHARACTERISTICS
Nature: NATURAL
Viscosity:
Resistivity: 1.26
REMARKS
DEPTH MEASUREMENTS FROM GROUND LEVEL
DATE COMPLETED DRILLING, FEB. 7, 1945.
DATE ELECTRICALLY LOGGED, MARCH 21, 1945.
DID NOT NEED TO BE RECONDITIONED BEFORE ELECTRICALLY LOGGED.
WATER FOR DRILLING WAS FROM THE CITY OF LUBBOCK MAINS.
ELECTRODE SPACING:
Normal "AM" 16 inches.
Lateral "OA" 18 feet.
Date March 21, 1945
Observers: H. W. DELAY
SELF-POTENTIAL LOG millivolts
DEPTHS
RESISTIVITY LOG ohms m²/m
LATERAL 400 CURVE 800
Water Table
LAST READING & FLUID LEVEL
Base Ogallala
Top Triassic
DRILLED TOTAL DEPTH 234'
LAYNE TEXAS CO. LTD.
CITY OF LUBBOCK - TEST WELL NO. 2
WC. - LUBBOCK CO., TEXAS

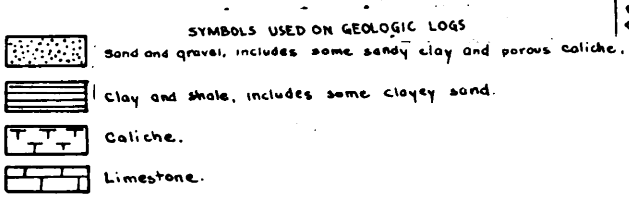

SYMBOLS USED ON GEOLOGIC LOGS
Sand and gravel, includes some sandy clay and porous caliche.
Clay and shale, includes some clayey sand.
Caliche.
Limestone.

Fig. 6

Location of Well

1800' S. & 75' E. of [illegible] Cor. Sec. [illegible], Blk. A. [illegible] miles [illegible] of Post office at Lubbock.

SCHLUMBERGER ELECTRICAL LOGS

COMPANY: Layne-Texas Co., Ltd.
WELL: Test Well #4, City of Lubbock
FIELD:
SURVEY:
COUNTY: Lubbock
STATE: Texas FILING NO.:
PROBLEM:

COUNTY LUBBOCK No. [illegible]
FIELD OR TEST WELL #4
SURVEY CITY OF LUBBOCK
WELL
COMPANY LAYNE-TEXAS CO. LTD

Elevation 3181.49

First Reading	: 254 ft.	Started run	:		m.
Last Reading	: 50 ft.	Finished run	:		m.
Footage Measured	: 204 ft.	Time well occupied by outfit	:		hrs.
Casing Shoe Depth: DRILLER	: 0 ft.	Time waiting at well	:		hrs.
SCHLUMBERGER	: FLUID ft.	Total time incurred by run	:		hrs.
Bottom Depth DRILLER	: 264 ft.	Mileage incurred by run	:		Mi.
Total Depth Reached	: 254 ft.				

MUD CHARACTERISTICS

Nature: NATURAL Viscosity:
Weight: Resistivity: 1.78 °F
Bottom Temperature: °F
Diameters of hole: from to; from to; from to

REMARKS

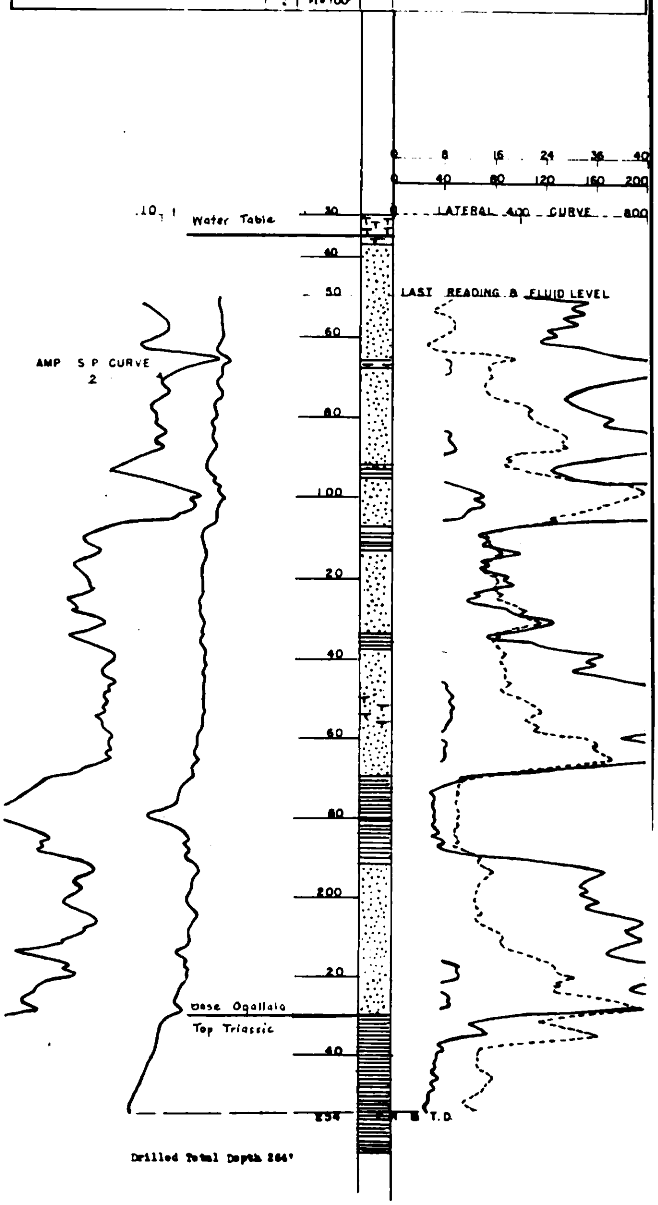
DEPTH MEASUREMENTS FROM GROUND LEVEL
DATE COMPLETED DRILLING, FEB. 12, 1945.
DATE ELECTRICALLY LOGGED, MARCH 22, 1945.

THE WELL HAD TO BE RECONDITIONED BEFORE ELECTRICALLY LOGGED.
WATER FOR DRILLING WAS FROM THE CITY OF LUBBOCK MAINS.

ELECTRODE SPACING:
Normal "AM" 16 inches
Lateral "OA" 13 feet

Date March 22, 1945 Observers [illegible]

SELF-POTENTIAL LOG—millivolts | INTERPRETATION | DEPTHS INCHES PER 100' | GEOL. LOG | RESISTIVITY LOG—ohms m²/m.



Location of Well

[illegible] of post office at Lubbock.

SCHLUMBERGER ELECTRICAL LOGS

COMPANY: Layne-Texas Co. Ltd.
WELL: Test Well #5, City of Lubbock
FIELD:
SURVEY:
COUNTY: Lubbock
STATE: Texas FILING NO.:
PROBLEM:

Elevation: 3217.40

First Reading	: 254 ft.	Started run	:		
Last Reading	: 68 ft.	Finished run	:		
Footage Measured	: 186 ft.	Time well occupied by outfit	:		
Casing Shoe Depth: DRILLER	: 0 ft.	Time waiting at well	:		
SCHLUMBERGER	: FLUID ft.	Total time incurred by run	:		
Bottom Depth DRILLER	: 305 ft.	Mileage incurred by run	:		
Total Depth Reached	: 254 ft.				

MUD CHARACTERISTICS

Nature: NATURAL Viscosity:
Weight: Resistivity: 1.70 @ °F
Bottom Temperature: °F
Diameters of hole: from to; from to; from to

REMARKS

DEPTH MEASUREMENTS FROM GROUND LEVEL
DATE COMPLETED DRILLING, FEB. 15, 1945.
DATE ELECTRICALLY LOGGED, MARCH 20, 1945.
DID NOT NEED TO BE RECONDITIONED BEFORE ELECTRICALLY LOGGED.
WATER FOR DRILLING WAS FROM THE CITY OF LUBBOCK MAINS.

ELECTRODE SPACING:
Normal "AM" 16 inches
Lateral "OA" 13 feet

Date March 20, 1945 Observers: H.V. DELAY

SELF-POTENTIAL LOG—millivolts | INTERPRETATION | DEPTHS INCHES PER 100' | GEOL. LOG | RESISTIVITY LOG—ohms m²/m.

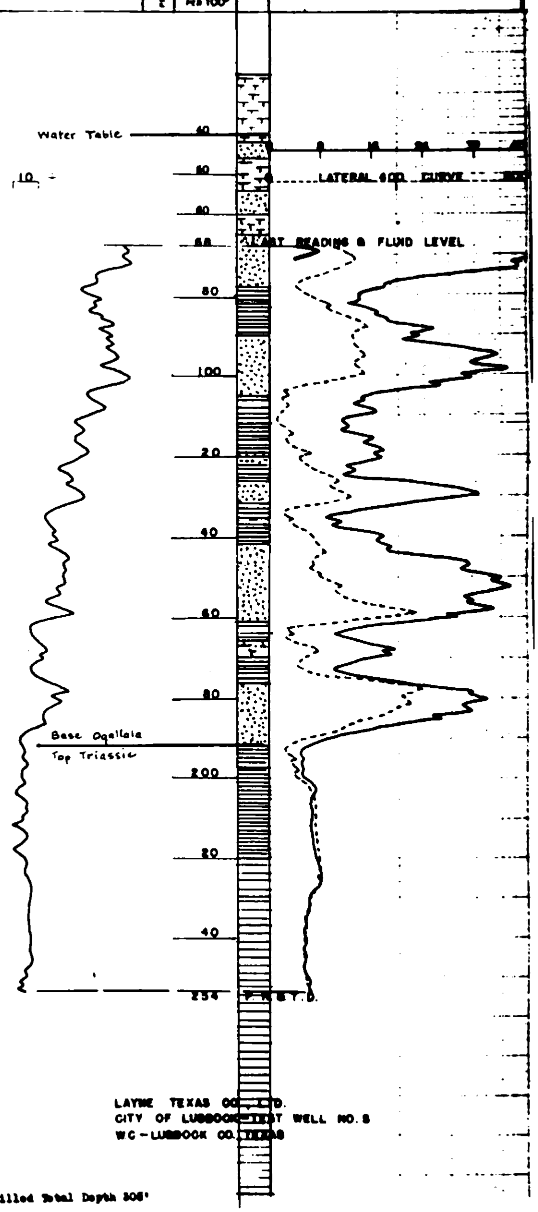


Fig. 7

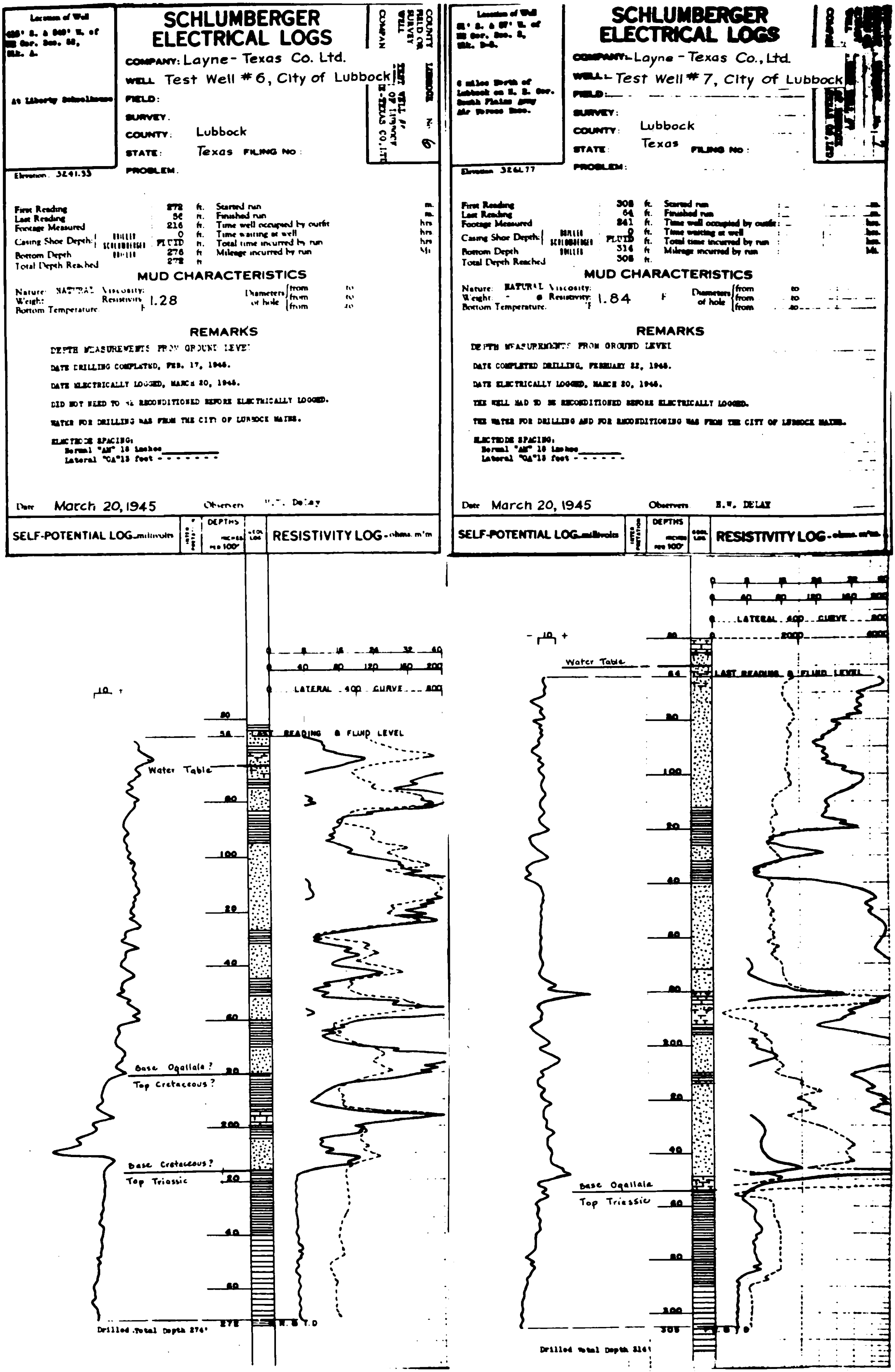

SCHLUMBERGER ELECTRICAL LOGS
COMPANY: Layne-Texas Co. Ltd.
WELL: Test Well #6, City of Lubbock
FIELD:
SURVEY:
COUNTY: Lubbock
STATE: Texas FILING NO:
PROBLEM:
First Reading 272 ft.
Last Reading 56 ft.
Footage Measured 216 ft.
Casing Shoe Depth: 0 ft.
Bottom Depth 276 ft.
Total Depth Reached 272 ft.
MUD CHARACTERISTICS
Nature: NATURAL
Resistivity 1.28
Bottom Temperature
REMARKS
DEPTH MEASUREMENTS FROM GROUND LEVEL
DATE DRILLING COMPLETED, FEB. 17, 1945.
DATE ELECTRICALLY LOGGED, MARCH 20, 1945.
DID NOT NEED TO BE RECONDITIONED BEFORE ELECTRICALLY LOGGED.
WATER FOR DRILLING WAS FROM THE CITY OF LUBBOCK MAINS.
ELECTRODE SPACING:
Normal "AM" 16 inches
Lateral "OA" 15 feet
Date March 20, 1945
SELF-POTENTIAL LOG millivolts
DEPTHS
RESISTIVITY LOG ohms m²/m
LATERAL 400 CURVE 800
LAST READING & FLUID LEVEL
Water Table
Base Ogallala ?
Top Cretaceous ?
Base Cretaceous ?
Top Triassic
Drilled Total Depth 276'
SCHLUMBERGER ELECTRICAL LOGS
COMPANY: Layne-Texas Co., Ltd.
WELL: Test Well #7, City of Lubbock
FIELD:
SURVEY:
COUNTY: Lubbock
STATE: Texas FILING NO:
PROBLEM:
First Reading 308 ft.
Last Reading 64 ft.
Footage Measured 241 ft.
Bottom Depth 314 ft.
Total Depth Reached 308 ft.
MUD CHARACTERISTICS
Nature: NATURAL
Resistivity 1.84
REMARKS
DEPTH MEASUREMENTS FROM GROUND LEVEL
DATE COMPLETED DRILLING, FEBRUARY 22, 1945.
DATE ELECTRICALLY LOGGED, MARCH 20, 1945.
THE WELL HAD TO BE RECONDITIONED BEFORE ELECTRICALLY LOGGED.
THE WATER FOR DRILLING AND FOR RECONDITIONING WAS FROM THE CITY OF LUBBOCK MAINS.
ELECTRODE SPACING:
Normal "AM" 16 inches
Lateral "OA" 15 feet
Date March 20, 1945
Observers H. W. DELAY
SELF-POTENTIAL LOG millivolts
RESISTIVITY LOG ohms m²/m
LATERAL 400 CURVE 800
LAST READING & FLUID LEVEL
Water Table
Base Ogallala
Top Triassic
Drilled Total Depth 314'

Fig. 8

Location of Well	
SW Cor. SW¼ Sec. 3, Blk. JS, 7½ miles West of Post Office at Lubbock.	

SCHLUMBERGER ELECTRICAL LOGS

COMPANY: LAYNE-TEXAS COMPANY, LTD.
WELL TEST WELL #8 CITY OF LUBBOCK
FIELD:
SURVEY:
COUNTY: LUBBOCK
STATE: TEXAS FILING NO.:
PROBLEM:

COUNTY: LUBBOCK No.:
FIELD OR SURVEY:
WELL: TEST WELL #8 CITY OF LUBBOCK
COMPANY: LAYNE-TEXAS CO. LTD.

Elevation: 3303.21

First Reading	: 248	ft.	Started run	:	m.
Last Reading	: 91	ft.	Finished run	:	m.
Footage Measured	: 157	ft.	Time well occupied by outfit	:	hrs.
Casing Shoe Depth: Driller	: FLUID	ft.	Time waiting at well	:	hrs.
Casing Shoe Depth: Schlumberger	: 0	ft.	Total time incurred by run	:	hrs.
Bottom Depth Driller	: 250	ft.	Mileage incurred by run	:	Mi.
Total Depth Reached	: 248	ft.			

MUD CHARACTERISTICS

Nature: NATURAL Viscosity:
Weight: Resistivity: 1.26 @ °F
Bottom Temperature: °F

Diameters of hole: from to; from to; from to

REMARKS

DEPTH MEASUREMENTS FROM GROUND LEVEL.

DATE COMPLETED DRILLING, MARCH 12, 1945.

DATE ELECTRICALLY LOGGED, MARCH 19, 1945.

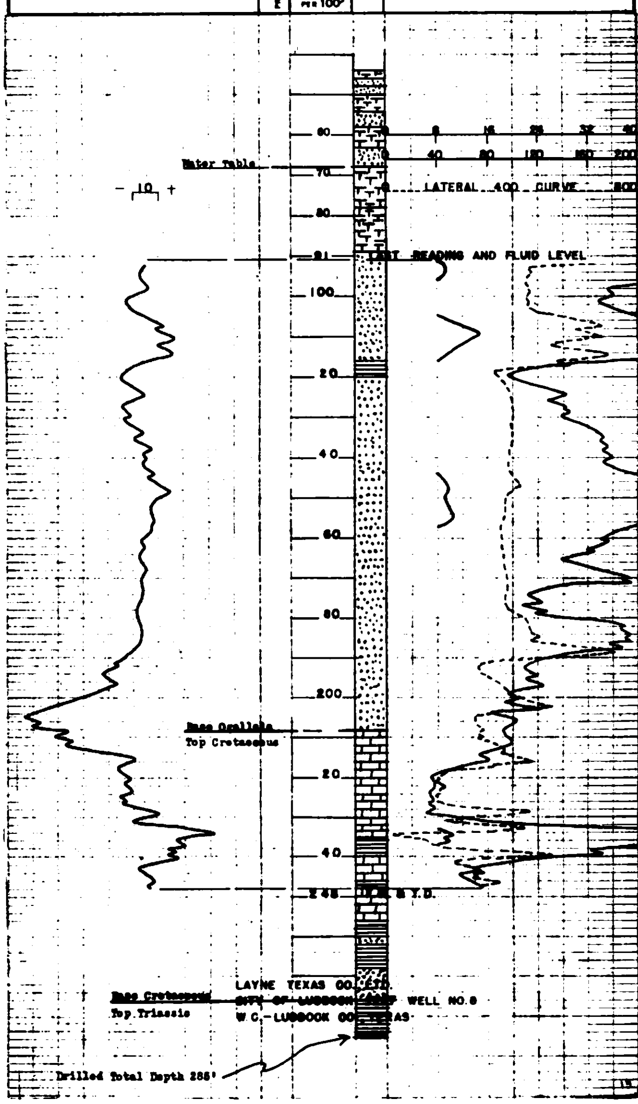
DID NOT NEED TO BE RECONDITIONED BEFORE ELECTRICALLY LOGGED.

WATER FOR DRILLING WAS FROM THE CITY OF LUBBOCK MAINS.

ELECTRODE SPACING:
Normal "AM" 18 inches
Lateral "OA" 13 feet

Date MARCH 19, 1945 Observers: H.W. DeLAY

SELF-POTENTIAL LOG millivolts	INTER-PRETATION	DEPTHS inches per 100'	GEOL. LOG	RESISTIVITY LOG - ohms. m²/m.



Location of Well	
5' S. & 430' E. of N. W. Cor. Sec. 8, Blk. JS, 7½ miles N.W. of post office at Lubbock.	

SCHLUMBERGER ELECTRICAL LOGS

COMPANY: LAYNE-TEXAS COMPANY, LTD.
WELL TEST WELL #9, CITY OF LUBBOCK
FIELD:
SURVEY:
COUNTY: LUBBOCK
STATE: TEXAS FILING NO:
PROBLEM:

COUNTY: LUBBOCK No.:
FIELD OR SURVEY:
WELL: TEST WELL #9 CITY OF LUBBOCK
COMPANY: LAYNE-TEXAS CO. LTD

Elevation: 3296.43

First Reading	: 292	ft.	Started run	:	m.
Last Reading	: 85	ft.	Finished run	:	m.
Footage Measured	: 207	ft.	Time well occupied by outfit	:	hrs.
Casing Shoe Depth: Driller	: 0	ft.	Time waiting at well	:	hrs.
Casing Shoe Depth: Schlumberger	: FLUID	ft.	Total time incurred by run	:	hrs.
Bottom Depth Driller	: 294	ft.	Mileage incurred by run	:	Mi.
Total Depth Reached	: 292	ft.			

MUD CHARACTERISTICS

Nature: NATURAL Viscosity:
Weight: Resistivity: 1.68 @ °F
Bottom Temperature: °F

Diameters of hole: from to; from to; from to

REMARKS

DEPTH MEASUREMENTS FROM GROUND LEVEL.

DATE COMPLETED DRILLING, ABOUT MARCH 16, 1945.

DATE ELECTRICALLY LOGGED, MARCH 19, 1945.

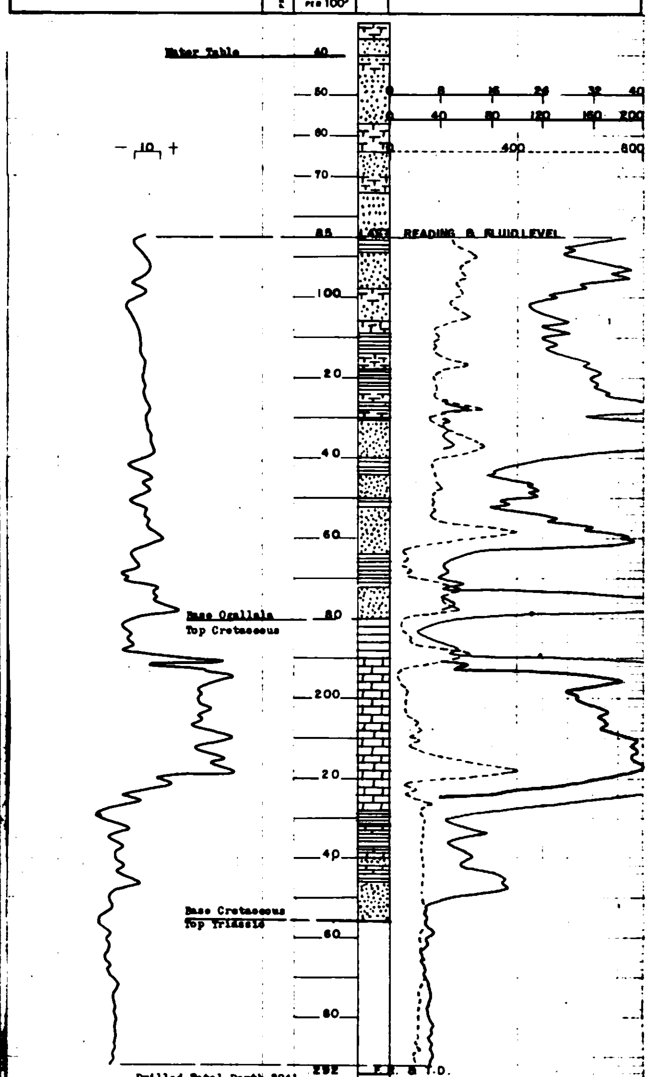
DID NOT NEED TO BE RECONDITIONED BEFORE ELECTRICALLY LOGGED.

WATER FOR DRILLING WAS FROM THE CITY OF LUBBOCK MAINS.

ELECTRODE SPACING:
Normal "AM" 18 inches
Lateral "OA" 13 feet

Date MARCH 19, 1945 Observers: H.W. DeLAY

SELF-POTENTIAL LOG millivolts	INTER-PRETATION	DEPTHS inches per 100'	GEOL. LOG	RESISTIVITY LOG - ohms. m²/m.



LAYNE TEXAS CO., LTD.
CITY OF LUBBOCK - TEST WELL NO. 9
W.C. - LUBBOCK CO., TEXAS

Fig. 9

SCHLUMBERGER ELECTRICAL LOGS

Location of Well
221' S. & 72' W. of N. E. Cor. Sec. 7, Blk. JS, 6 miles N. W. of post office at Lubbock.

Elevation: 3256.38

COMPANY: LAYNE-TEXAS COMPANY, LTD.
WELL: TEST WELL # 10, CITY OF LUBBOCK
FIELD:
SURVEY:
COUNTY: LUBBOCK
STATE: TEXAS FILING No.:
PROBLEM:

COUNTY LUBBOCK No.: 10
FIELD OR SURVEY
WELL TEST WELL #10 CITY OF LUBBOCK
COMPANY: LAYNE-TEXAS CO. LTD

First Reading	: 254 ft.	Started run	:	m.
Last Reading	: 36 ft.	Finished run	:	m.
Footage Measured	: 218 ft.	Time well occupied by outfit	:	hrs.
Casing Shoe Depth: DRILLER	: 0 ft.	Time waiting at well	:	hrs.
Casing Shoe Depth: SCHLUMBERGER	: FLUID ft.	Total time incurred by run	:	hrs.
Bottom Depth DRILLER	: 254 ft.	Mileage incurred by run	:	Mi.
Total Depth Reached	: 254 ft.			

MUD CHARACTERISTICS

Nature: NATURAL Viscosity: -
Weight: - Resistivity: 1.64 @ °F
Bottom Temperature: - °F

Diameters of hole: from to / from to / from to

REMARKS

DEPTH MEASUREMENTS FROM GROUND LEVEL

DATE COMPLETED DRILLING, MARCH 20, 1945.

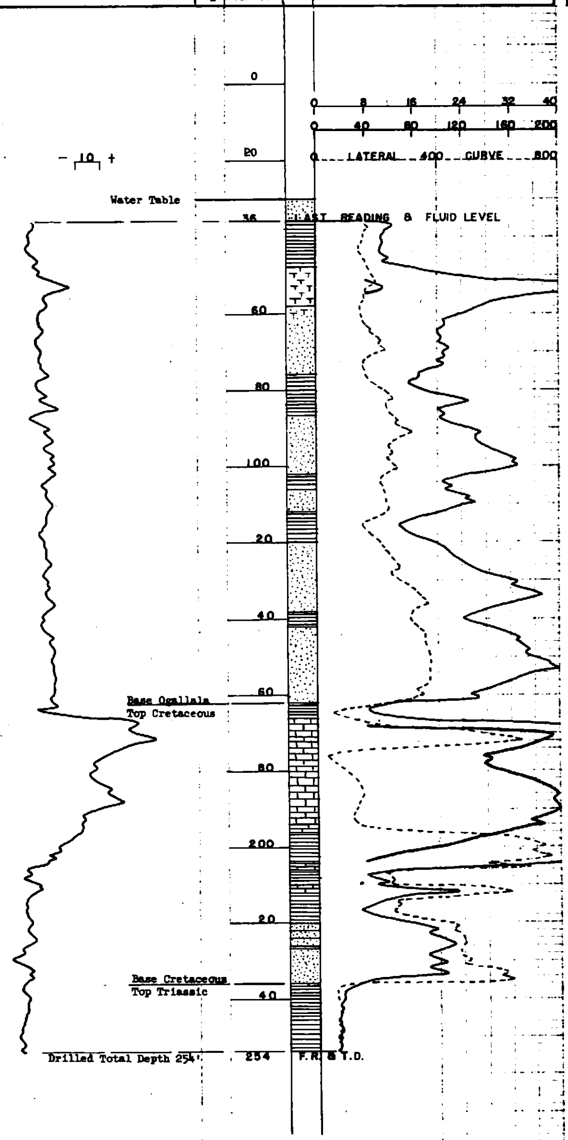
DATE ELECTRICALLY LOGGED, MARCH 20, 1945.

WATER FOR DRILLING WAS FROM THE CITY OF LUBBOCK MAINS.

ELECTRODE SPACING:
Normal "AM" 18 inches
Lateral "OA" 13 feet

Date MARCH 20, 1945 Observers: H. W. DeLAY

SELF-POTENTIAL LOG-millivolts	INTER-PRETATION	DEPTHS INCHES PER 100'	GEOL. LOG.	RESISTIVITY LOG-ohms. m²m.



LAYNE TEXAS CO., LTD.
CITY OF LUBBOCK TEST WELL NO. 10
W.C.-LUBBOCK CO., TEXAS

APPENDIX

Records of wells and springs in Lubbock County, Texas
Measuring point at city wells is top of concrete foundation of pump

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
C-1	¾ mile northeast	City of Lubbock Well 1	Gant Baker	1925	98	24	2.3
C-2	½ mile northwest	City of Lubbock Well 2	T. P. Wright	1917	300	24	1.2
C-3	1¾ miles northwest	City of Lubbock Well 3	D. L. McDonald	1925	210	24	1.5
C-4	2½ miles northwest	City of Lubbock Well 4	B. B. Baron	1928	156	24	1.5
C-5	1¼ miles northwest	City of Lubbock Well 5	Coy Rodgers	1929	150	24	0.4
C-6	½ mile northeast	City of Lubbock Well 6	D. L. McDonald	1931	142	18	1.2
C-7	1 mile southeast	City of Lubbock Well 7	do.	1931	158	18	0.5
C-8	½ mile southeast	City of Lubbock Well 8	do.	1931	157	22, 18	0.4

a/ Method of lift: T, turbine; C, cylinder; E, electric; G, gasoline or butane gas engine; W, windmill. Number indicates horsepower.

Records of wells and pumps in Lubbock County, Texas

Measuring point is top of the well ... [illegible]

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	[illegible]	[illegible]
G-1	½ mile northeast	City of Lubbock Well 1	[illegible]	[illegible]	[illegible]	24		[illegible]
G-2	½ mile northwest	City of Lubbock Well 2	R. P. Wright	[illegible]	200	24		1.8
G-3	1½ miles northwest	City of Lubbock Well 3	L. M. McDonald	1925	[illegible]	[illegible]		[illegible]
G-4	2½ miles northwest	City of Lubbock Well 4	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
G-5	3½ miles northwest	City of Lubbock Well 5	Coy Hodges	[illegible]	[illegible]	[illegible]		[illegible]
G-6	½ mile northeast	City of Lubbock Well 6	[illegible] McDonald	[illegible]	[illegible]	[illegible]		[illegible]
G-7	1 mile southeast	City of Lubbock Well 7	do.	[illegible]	[illegible]	[illegible]		[illegible]
G-8	½ mile northeast	City of Lubbock Well 8	do.	[illegible]	[illegible]	28, 20		0.2

a/ Method of lift: T, turbine; C, cylinder; [illegible]; W, windmill. *Number indicates horsepower.

Chemical analyses of water from these wells are shown in the table of analyses
All wells are drilled

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift a/	Use of water b/	Altitude of measuring point (ft.)	Remarks
C- 1	19.2 23.0 24.6 28.4	Oct. --, 1931 Dec. 8, 1936 Jan. 1939 Sept.25, 1944	T,E, 30	P	3151.7	Sand and gravel at 27-37, 41-49, and 68-98 feet. Pump: 15-inch, 5-stage; set at 75 feet with end of suction pipe at 90 feet. Reported drawdown 50 feet after pumping 12 hours at 600 gallons a minute in 1925.
C- 2	62.7 73.0 81.3	Jan. 27, 1932 Dec. 6, 1936 Sept.26, 1944	T,E, 25	P	3198.1	Original No. 1 well. Deepened in 1924 by D. L. McDonald from 132 to 300 feet; red and blue clay from 180 to bottom, no water sand encountered. Reported drawdown 57 feet after pumping 10 hours at 617 gallons a minute in 1932.
C- 3	59.5 66.9 72.3	May 6, 1932 Dec. 4, 1936 Sept.25, 1944	T,E, 15	P	3217.0	Depth to water 44 feet when drilled. Sands at 51-70 and 116-160 feet, and red clay at 175-210 feet. Pump: 12-inch, 4-stage, set at 120 feet with end of suction pipe at 128 feet.
C- 4	65.8 75.7 67.4	Apr. 3, 1929 Dec. 6, 1936 Oct. 2, 1944	T,E, 30	P	3218.8	Depth to water 46 feet when drilled. Pump: 12-inch, 8-stage set at 105 feet with end of suction pipe at 113 feet. See log.
C- 5	51.0 56.6 67.5 72.2	Oct. 1, 1929 Mar. 1, 1932 Dec. 6, 1936 Sept.26, 1944	T,E, 20	P	3206.7	Gravel-walled to 120 feet. Pump: 10-inch, 9-stage set at 110 feet with end of suction pipe at 127 feet. Drawdown 49 feet after pumping 8 hours at 440 gallons a minute in 1929. See log.
C- 6	65.7 73.0 80.0	Jan. 8, 1932 Dec. 8, 1936 Sept.25, 1944	T,E, 20	P	3193.9	Depth to water 60 feet when drilled. Pump: 12-inch, 7-stage set at 130 feet with 10 feet of suction pipe. Drawdown 63 feet after pumping 14 hours at 430 gallons a minute in 1932.
C- 7	55.0 59.1 63.1	May 1, 1931 Dec. 4, 1936 Sept.28, 1944	T,E, 40	P	3186.7	Casing: 150 feet of 18-inch O.D. welded steel pipe with screens at 60-80, 115-130 and 140-147 feet. Pump: 12-inch, 7-stage, set at 130 feet. Drawdown 56 feet after pumping 72 hours at 780 gallons a minute. See log.
C- 8	70.0 69.6 76.4	July 11, 1936 Dec. 4, 1936 Sept.28, 1944	T,E, 15	P	3194.0	Casing: 40 feet of 22-inch cemented in caliche rock and 140 feet of 18-inch lapped into 22-inch; screen from 60 to 140 feet. Pump: 10-inch, 8-stage, set at 125 feet with end of suction pipe at 141 feet. Depth to water 60 feet when drilled.

b/ P, public supply; S, stock.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
C- 9	1½ miles southeast	City of Lubbock Well 9	B. B. Baron	1937	151	22, 18	1.0
C-10	1½ miles northwest	City of Lubbock Well 10	W. P. Crawford and George Anderson	1938	151	24, 18	1.0
C-11	2¼ miles northwest	City of Lubbock Well 11	do.	1938	145	24, 18	1.0
C-12	2½ miles northwest	City of Lubbock Well 12	do.	1938	145	22, 18	1.0
C-13	1½ miles northwest	City of Lubbock Well 13	do.	1939	150	22, 18	1.0
C-14	1 mile north	City of Lubbock Well 14	do.	1940	135	22, 18	1.5

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift a/	Use of water b/	Altitude of measuring point (ft.)	Remarks
C- 9	56.4 67.0 66.5	Apr. 22, 1937 Jan. 10, 1939 Sept.28, 1944	T,E, 50	P	3183.4	Casing: 45 feet of 22-inch cemented in caliche rock and 151 feet of 18-inch lapped into 22-inch; screen from 60 to 150 feet. Pump: 12-inch, 8-stage, set at 130 feet with end of suction pipe at 149 feet. Drawdown 55 feet after pumping 72 hours at 650 gallons a minute in 1937.
C-10	53.8 67.4	Mar. 26, 1938 Sept.25, 1944	T,E, 40	P	3209.3	Casing: 45 feet of 24-inch and 145 feet of 18-inch lapped into 22-inch; screen from 70 to 145 feet. Pump: 12-inch, 7-stage, set at 130 feet with end of suction pipe at 143 feet. Yield 850 gallons a minute in March 1938.
C-11	54.5 61.7	May 5, 1938 Sept.28, 1944	T,E, 25	P	3219.3	Casing: 45 feet of 24-inch and 145 feet of 18-inch lapped into 22-inch; screen from 65 to 145 feet. Pump set at 130 feet. Drawdown 36 feet after pumping 66 hours at 500 gallons a minute in 1938.
C-12	d/42.0 58.4	June 1938 Sept.28, 1944	T,E, 30	P	3218.2	Casing: 35 feet of 22-inch cemented in caliche and 135 feet of 18-inch lapped into 22-inch; screen from 60 to 135 feet. Pump: 12-inch, 6-stage, set at 126 feet with end of suction pipe at 133 feet. Drawdown 53 feet after pumping 92 hours at 430 gallons a minute in 1938.
C-13	48.0 53.7	July 19, 1939 Sept.25, 1944	T,E, 40	P	3207.3	Casing: 35 feet of 22-inch set on caliche rock and cemented to surface; 135 feet of 18-inch lapped into 22-inch; screen from 65 to 135 feet. Pump: 12-inch 7-stage, set at 121 feet with end of suction pipe at 136 feet. Drawdown 35 feet after pumping 60 hours at 640 gallons a minute (weir measurement) in 1939.
C-14	48.5 59.4	Jan. 19, 1940 Sept.26, 1944	T,E, 25	P	3198.9	Casing: 35 feet of 22-inch cemented at surface; 135 feet of 18-inch lapped into 22-inch; screen from 60 to 135 feet. Pump: 12-inch, 5-stage, set at 121 feet. Drawdown 65 feet after pumping 167 hours at 535 gallons a minute in January 1940. See log of test well.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
C-15	1½ miles northeast	City of Lubbock Well 15	W. P. Crawford and George Anderson	1940	135	22, 18	1.0
C-16	3 miles northwest	City of Lubbock Well 16	L. A. Peeples	1941	135	22, 18	1.5
C-17	3½ miles northwest	City of Lubbock Well 17	do.	1941	125	22, 18	1.5
C-18	3¾ miles northwest	City of Lubbock Well 18	George Anderson	1943	110	22, 18	1.5
C-19	4 miles northwest	City of Lubbock Well 19	L. A. Peeples	1945	145	22, 18	1.5
C-20	3¾ miles northwest	City of Lubbock	--	--	Spring	--	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift a/	Use of water b/	Altitude of measuring point (ft.)	Remarks
C-15	52.0 60.2	Apr. 12, 1940 Sept.25, 1944	T,E, 40	P	3186.9	Casing: 35 feet of 22-inch cemented at surface; 135 feet of 18-inch lapped into 22-inch; screen from 60 to 135 feet. Pump: 15-inch, 3-stage, set at 121 feet with end of suction pipe at 133 feet. Drawdown 41 feet after pumping 71 hours at about 860 to 890 gallons a minute in 1940. Test well drilled 160 feet deep. See log.
C-16	39.0 54.6	June 1, 1941 Sept.28, 1944	T,E, 25	P	3219.5	Casing: 36 feet of 22-inch cemented at surface; 135 feet of 18-inch lapped into 22-inch; screen from 40 to 120 feet. Pump: 12-inch, 5-stage, set at 120 feet. Drawdown 78 feet after pumping 54 hours at 640 gallons a minute in June 1941. Test well drilled 153 feet deep. See log.
C-17	38.0 42.3	June 17, 1941 Sept.30, 1944	T,E, 40	P	3221.9	Casing: 35 feet of 22-inch cemented at surface; 126 feet of 18-inch lapped into 22-inch; screen from 38 to 113 feet. Pump: 12-inch, 5-stage, set at 110 feet with 10 feet of suction pipe. Drawdown 45 feet after pumping 72 hours at about 750 to 825 gallons a minute in June 1943. Test well drilled to depth of 156 feet; no water sand below 120 feet.
C-18	24.5 30.6	May 11, 1943 Sept.30, 1944	T,E, 25	P	3212.6	Casing: 26 feet of 22-inch cemented at surface; 110 feet of 18-inch lapped into 22-inch; screen from 30 to 100 feet. Pump: 12-inch, 6-stage, set at 90 feet with 5 feet of suction pipe. Drawdown 65 feet after pumping 72 hours at 700 gallons a minute in May 1943.
C-19	26.5	Jan. 29, 1945	--	P	3225.3	Casing: 32 feet of 22-inch cemented at surface; 125 feet of 18-inch lapped into 22-inch; screen from 30 to 123 feet. Drawdown 23 feet after pumping 52 hours at 1,050 to 1,575 gallons a minute (orifice measurement). Test well drilled to depth of 154 feet by B.B.Baron in 1937. See log.
C-20	--		Flows	S	--	Springs discharge into small lake which has been excavated below the water table. Sample for analysis taken at point 600 feet west of Well C-18.

Records of wells and springs in Lubbock County, Texas

All wells are drilled

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
1	20 miles northwest	H. H. Berryman	--	--	95	6	1
2	17½ miles northwest	W. F. Gilbert	--	1923	112	--	0.5
3	17 miles northwest	E. E. Winters	--	--	50	6	0.6
3a	do.	do.	--	--	50	--	0.5
4	15½ miles northwest	Hardy School	--	--	147	4	2.4
5	14 miles northwest	J. A. Brown	-- Osborne	1921	115	4	0.4
6	16½ miles northwest	B. W. Giles	--	1921	160	--	0.6
7	16 miles northwest	S. E. Cone	--	1937	135	6	2
8	12½ miles northwest	R. L. Hood	--	1929	106	--	0.8
9	14 miles northwest	Leon Estate	-- Kelly	1937	182	15	1.5
10	13 miles northwest	New Deal School	--	--	118	--	0.5
11	11½ miles north	Temple Trust Co.	--	--	--	--	0.5
14	13½ miles north	Richard Carruth	-- Wilkerson	1936	99	6	0.4
15	14½ miles north	T. V. Lovelace	L. A. Peeples	1936	209	16	0
16	15 miles north	H. A. Iverson	-- Jones	1925	120	5	1.2
17	13½ miles north	F. H. Sammons	-- Smiley	--	157	--	--
19	11½ miles north	L. Stephenson	--	--	110	--	1
22	15½ miles north	Fritz Fuchs	Will Litzsinger	1925	129	--	0.5
23	16½ miles northeast	L. D. Perry	--	--	115	5	--
24	14½ miles northeast	Center School	--	--	94	--	1
25	13 miles northeast	Walter Emery	Green Machinery Co.	1937	203	17	--
26	12½ miles northeast	R. H. Emery	M. G. Hughett	1937	186	17	1
27	15 miles northeast	S. Johnston	--	--	92	--	0.8
27a	do.	V. B. Gilmore	L. A. Peeples	1935	219	--	1.6

a/ Measuring point was usually top of casing, top of pipe clamp, or top of pump base.
b/ Method of lift: T, turbine; C, cylinder, E, electric; G, gasoline or butane gas engine; W, windmill. Number indicates horsepower.

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

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
1	89.8	Apr. 26, 1937	C,W	D,S	Irrigated small graden in 1937.
2	121.5	d/	C,W	D,S	No casing.
3	43.1	Apr. 15, 1937	C,W	D,S	Steel casing.
3a	29.5	Apr. 11, 1938	C,W	D,S	Located near small draw.
4	121.8	Apr. 15, 1937	C,W	D	Steel casing.
5	92.4	do.	C,W	D,S	
6	122.7	Apr. 26, 1937	C,W	D,S	No casing.
7	106.7	do.	C,W	D	Steel casing.
8	103.8	Apr. 15, 1937	C,W	D,S	
9	138.7	Apr. 26, 1937	T,G	Irr	Estimated yield, 400 gallons a minute. Irrigated 100 acres cotton in 1937. Test well drilled ½ mile north, was failure as irrigation well. See log.
10	113.4	Apr. 30, 1937	C W	P	
11	49.1	Apr. 27, 1937	C,W	D,S	Irrigated small garden in 1937. Estimated yield, 4 gallons a minute.
14	88	Apr. 26, 1937	C,W	D,S	Casing: 40 feet of 6-inch. Irrigated small garden in 1937. Reported yield, 5 gallons a minute.
15	104	d/	T,G	Irr	Casing: 180 feet of 16-inch. Irrigated 160 acres of wheat and cotton in 1937.
16	99.3	May 4, 1937	C,W	D,S	Casing: 120 feet of 5-inch. Irrigated a small garden in 1937.
17	--	--	T,G	Irr	
19	91.1	Apr. 27, 1937	C,W	D,S	
22	103.2	May 6, 1937	C,W	S	
23	100	do.	C,W	D,S	Casing: 115 feet of 5-inch. Irrigated small garden in 1937.
24	84.3	May 3, 1937	C,W	P	Supplies public school.
25	--	--	T,G	Irr	Steel casing.
26	99.4	Apr. 27, 1937	T,G	Irr	Concrete curb.
27	74.7	May 3, 1937	C,W	D,S	Irrigated small garden in 1937.
27a	79.9	Aug. 11, 1937	T,G	Irr	Estimated yield, 800 gallons a minute.

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

d/ Water level reported.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)a/
28	17 miles northeast	J. W. Kerley	--	1937	94	--	0.8
29	do.	Geo. R. Bean	--	1934	115	--	0.6
30	20 miles northeast	O. C. Powell	--	--	62	--	1.2
31	21 miles northeast	B. F. Davis	--	--	85	--	0.4
32	21½ miles northeast	C. S. Williams	--	Old	100	--	0.7
33	20½ miles northeast	E. P. Hildreth	--	--	87	--	0.6
34	19 miles northeast	A. M. Decton	L. A. Peeples	1926	100	--	1.5
35	18½ miles northeast	do.	W. T. Tarkington	1936	255	15½	0.3
36	17½ miles northeast	Bledsoe School	--	1925	100	--	1
37	17 miles northeast	S. E. Blair	W. T. Tarkington	1935	240	16	1
38	16 miles northeast	Frank Bledsoe	--	--	61	--	0
39	17½ miles northeast	Mrs. R. B. Catching	--	1917	100	--	0.6
40	20 miles northeast	Estacado School	--	--	100	--	0.2
41	18½ miles northeast	R. Q. Mabry	George Handley	1937	230	15½, 13½	0
42	17 miles northeast	W. M. Joiner	--	--	100	--	0.5
43	18 miles northeast	A. J. Bryant	--	--	72	6	0.3
44	17 miles northeast	S. A. Tharp	--	--	115	--	0.3
45	15 miles northeast	A. J. Sanders	--	--	95	--	0.7
46	14 miles northeast	George Benson	L. A. Peeples	1937	252	15¼	1.3
47	13 miles northeast	George Young	--	--	77	--	0.5
48	11 miles northeast	P. & S. F. Ry.	--	--	84	--	--
49	11½ miles northeast	J. L. Lee	G. A. Anderson	1937	250	15	--
50	12 miles northeast	F. H. Cannon	L. A. Peeples	1937	137	15	0

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
28	83.5	May 3, 1937	C,W	D	
29	85	May 6, 1937	C,W	D,S	Irrigated small garden in 1937. Pumping when measured.
30	41.6	Feb. 4, 1937	C,W	D,S	
31	74.2	do.	C,W	D,S	
32	75.6	do.	C,W	D,S	
33	72.9	do.	C,W	D,S	Pumping when measured. Estimated yield, 2 gallons a minute.
34	88.4	do.	C,W	D,S	Pumping when measured.
35	83.1	Mar. 15, 1937	T,G	Irr	Cased to 230 feet. Estimated yield, 700 gallons a minute. Irrigated 80 acres of cotton, 100 acres of wheat, and 80 acres of alfalfa in 1932. See log.
36	80.5	Feb. 4, 1937	C,W	P	Pumping when measured. Estimated yield, 5 gallons a minute.
37	74.2	Mar. 12, 1937	T,G	Irr	Owner reports 35 feet drawdown after pumping 800 gallons a minute for 12 hours. Irrigated 30 acres of cotton, 10 acres of feed, and 12 acres of wheat in 1937.
38	55.4	Mar. 11, 1937	C,W	D,S	Pumping when measured.
39	72.3	Feb. 4, 1937	C,W	D,S	
40	77	Feb. 3, 1937	C,W	P	Supplies public school.
41	79	do.	T,G	Irr	Casing: 172 feet of 15½-inch; 64 feet of 13½-inch. Estimated yield, 700 gallons a minute. Irrigated 75 acres of wheat and 50 acres of cotton in 1937. See log.
42	80.2	do.	None	N	
43	70.3	do.	C,W	N	Casing: 6-inch steel.
44	88.3	do.	C,W	D,S	Pumping when measured. Estimated yield, 4 gallons a minute.
45	44.8	Feb. 4, 1937	C,W	D,S	
46	76.5	Mar. 11, 1937	T,G	Irr	Casing: 205 feet of 15¼-inch.
47	63.8	Mar. 10, 1937	C,W	D,S	
48	54	d/	C,W	S,RR	Reported yield, 15 gallons a minute.
49	--	--	T,G	Irr	Insufficient water to supply pump efficiently at 250 feet. Deepened well in 1944.
50	68	d/	T,G	Irr	Estimated yield, 800 gallons a minute. Irrigated 112 acres cotton and feed in 1937. Owner reports original depth as 204 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
51	$13\frac{1}{2}$ miles northeast	W. A. Armstrong	--	1923	90	--	0.5
52	$12\frac{1}{2}$ miles northeast	O. B. Hankins	Ralph Henderson	1937	186	$15\frac{3}{4}$	0.5
53	do.	W. O. Fortenberry	C. A. Mullins	1937	200	17	1.4
54	11 miles northeast	L. L. Watson	George Manning	1937	264	17	1
55	$10\frac{1}{2}$ miles northeast	R. D. Holmes	--	--	94	--	0.6
58	9 miles northeast	William Yoxthiemer	L. A. Peeples	1935	225	$15\frac{1}{4}$	0.3
59	do.	L. E. Howard	--	--	--	--	--
60	$8\frac{1}{2}$ miles northeast	Liberty School	--	1923	100	--	1
61	7 miles northeast	G. R. Bean	Jim Hart	--	67	6	0.5
62	$6\frac{1}{2}$ miles northeast	H. T. Atkins	--	1926	89	--	0.4
63	8 miles northeast	Gayle Wallace	--	--	85	6	0.9
64	10 miles north	W. Y. Barrett	-- Tatum	--	211	$15\frac{1}{4}$	2
64a	$10\frac{1}{2}$ miles north	W. O. Fortenberry	C. A. Mullins	1934	240	16	1
66	do.	New Deal School	--	1936	125	--	--
72	9 miles north	J. I. Exum	B. Baron	1937	156	$15\frac{3}{4}$	0
74a	7 miles north	J. S George	--	--	52	5	1.0
74b	8 miles north	do.	--	--	52	5	1.0
75	$7\frac{1}{2}$ miles north	B. R. Shaw	--	1937	71	$4\frac{1}{2}$	0.5
76	do.	Tom J. Foster	--	1937	150	16	--
77	7 miles north	A. E. Griffis	J. C. Cook	1936	216	16	1
77a	$6\frac{1}{2}$ miles north	J. H. Felton	L. A. Peeples	1937	137	15	0.8
81	5 miles north	J. E. Vickers	-- Smiley	1936	160	--	2
82	$4\frac{3}{4}$ miles north	G. H. Grissom	--	--	51	5	0.3
83	$5\frac{1}{2}$ miles north	W. P. Perser	McClain and Bean	1935	115	16	1
84	$5\frac{1}{2}$ miles northwest	J. B. McCauley	--	--	116	17	--

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
51	70.3	May 3, 1937	C,W	D,S	Measured drawdown 3.2 feet after pumping 4 gallons a minute for 24 hours.
52	76.3	Apr. 28, 1937	T,G	Irr	Weak supply.
53	83.2	Apr. 27, 1937	T,G	Irr	Steel casing.
54	96.7	May 6, 1937	T,G	Irr	Casing: 130 feet of 17-inch. Irrigated 75 acres of cotton in 1937.
55	74.9	Apr. 27, 1937	C,W	D,S	
58	58.4	Mar. 9, 1937	T,G	Irr	Irrigated 30 acres cotton, 62 acres grain sorghum in 1937.
59	--	--	T,G	Irr	Estimated yield, 750 gallons a minute.
60	70	Mar. 15, 1937	C,W	N	Formerly supplied school which is now discontinued.
61	42.5	Jan. 28, 1937	C,W	D,S	Tenant reports caving sand in well.
62	60.3	do.	C,W	D,S	Pumping when measured. Estimated yield, 2 gallons a minute.
63	68.5	Mar. 15, 1937	C,W	D,S	Do.
64	85	Apr. 27, 1937	T,G	Irr	Casing: 130 feet of $15\frac{1}{4}$-inch. Measured drawdown 4 feet after pumping 700 gallons a minute for $\frac{1}{2}$ hour.
64a	87.2	Dec. 21, 1937	T,G	Irr	Casing: None in top, 112 feet of 16-inch from 86 to 198 feet. Pump set at 140 feet.
66	--	--	C,E, 5	P,Irr	
72	75	d/	T,G	Irr	Casing: 76 feet $13\frac{3}{4}$-inch. Estimated yield, 900 gallons a minute
74a	33.1 32.2	June 30, 1938 Feb. 9, 1944	C,W	S	Located on bank of large draw. For additional depth to water see table of water-level measurements.
74b	37.4 34.0	June 22, 1939 Feb. 9, 1944	None	N	Do.
75	55	Apr. 12, 1937	C,W	D,S	Irrigated small garden in 1937.
76	--	--	T,G	Irr	Irrigated 35 acres cotton, 40 acres wheat, and 15 acres of grain sorghum in 1937.
77	66	d/	T,G	Irr	Casing: 180 feet of 16-inch. Measured drawdown 30 feet after 4 hours pumping at 330 gallons a minute.
77a	70.9	Apr. 12, 1938	T,G	Irr	Pump: 12-inch, 2-stage, set at 100 feet.
81	44.5	Dec. 6, 1936	T,G	Irr	Measured drawdown 23.7 feet after pumping estimated rate of 800 gallons a minute for $1\frac{1}{2}$ hours.
82	40.7	Apr. 12, 1937	C,W	D,S	Measured drawdown 1.59 feet after pumping 4 gallons a minute for 4 hours.
83	48	d/	T,G	Irr	Casing: 16-inch. Estimated yield, 700 gallons a minute.
84	45	d/	T,G	Irr	Casing: 116 feet of 17-inch. Owner reports 15 feet of drawdown after pumping 800 gallons a minute for 2 weeks. See log.

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
85	5½ miles northwest	J. B. McCauley	--	1937	115	17	--
86	7 miles northwest	O. D. Hargis	L. A. Peeples	1935	118	12	--
87	7½ miles northwest	W. O. Arnold	--	--	44	5	1.2
88	8 miles northwest	J. A. McClatchy	O. S. Brock	1925	74	6	1
89	8½ miles northwest	Grovesville School	--	--	82	6	1
90	9½ miles northwest	W. W. McIlroy	C. C. White	1937	149	17	1
91	do.	Lubbock National Bank	--	1937	200	16	1
92	10 miles northwest	J. W. Watkins	H. H. Virdell	1937	169	15½	0.6
93	9½ miles northwest	T. H. Sears	--	1934	108	6	0.5
94	10½ miles northwest	Dr. J. T. Kruger	C. A. Mullins	1937	385	--	0
95	11 miles northwest	Meyers Estate	--	1927	100	5½	0.8
96	12 miles northwest	K. D. Kidd	--	--	100	--	--
97	do.	G. R. Johnson	W. C. Jay	1934	105	6	2
98	14½ miles northwest	Lon A. Mullican	--	--	73	6	0.8
99	15½ miles northwest	R. B. Gray	C. C. White	1937	108	19	0
100	do.	O. P. Bowser	M. G. Hughett	1937	165	15½	2
101	15 miles northwest	do.	-- Watson	1937	175	15½	--
102	13½ miles northwest	J. L. Lindsey	--	--	95	6	1
103	13 miles northwest	H. T. Fergeson	--	1917	59	6	0.8
106	11½ miles northwest	Mrs. S. P. Field	Osborne and Mullins	1926	58	--	0.4
107	11 miles northwest	B. G. Lokey	--	Old	75	6	0.7
108	do.	P. & S. F. Ry.Co.	--	--	70	6	--
109	10½ miles northwest	C. C. Vance	--	--	99	--	0.4
110	8 miles northwest	O. G. Hargis	--	--	50	6	0.4
111	11 miles northwest	W. D. Duncan	--	--	92	6	0.5

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
85	40	d/	T,G	Irr	Casing: 115 feet 17-inch. Owner reports 15 feet of drawdown after pumping 800 gallons a minute for 72 hours.
86	30	d/	T,G	Irr	Casing: 118 feet of 12-inch.
87	34	Apr. 12, 1937	C,W	D,S	
88	67.9	do.	C,W	D,S	
89	74.1	do.	C,W	N	Formerly supplied school which is now discontinued.
90	85.3	June 22, 1937	T,G	Irr	Casing: 126 feet of 17-inch. Reported drawdown 18 feet after pumping 1,000 gallons a minute for 24 hours.
91	87.2	Apr. 21, 1937	T,G	Irr	Steel casing.
92	87.5	June 22, 1937	T,G	Irr	Casing: 35 feet of 15½-inch, 60 feet of 13½-inch. Estimated yield, 1,000 gallons a minute.
93	86.6	Apr. 15, 1937	C,W	D,S	Steel casing.
94	85.5	May 4, 1937	None	N	Owner reports supply insufficient for irrigation. Water in Red Beds reported salty.
95	82.7	Apr. 16, 1937	C,W	D,S	
96	--	--	C,W	D,S	No casing.
97	81.8	Apr. 22, 1937	C,W	D,S	Casing: 60 feet of 6-inch.
98	63.9	Apr. 15, 1937	C,W	D,S	Cast iron casing.
99	34.2	June 22, 1937	T,G	Irr	Casing: 108 feet of 19-inch. Irrigated 230 acres of grain sorghum one time in 1937.
100	56.5	do.	T,G	Irr	Casing: 34 feet of 15½-inch; 136 feet of 13½-inch. See log.
101	64.6	do.	T,G	Irr	Casing: 135 feet of 13½-inch.
102	75	Apr. 15, 1937	C,W	D,S	
105	40.7	do.	C,W	D,S	
106	41	Apr. 9, 1937	C,W	D,S	Irrigated small garden in 1937.
107	51.3	do.	D,Ind	--	
108	--	--	C,W	S	Casing: 63 feet of 4½-inch.
109	69.1	Apr. 9, 1937	C,W	D,S	
110	29.6	Apr. 12, 1937	C,W	D,S	
111	62.6	Apr. 14, 1937	C,W	D,S	

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
112	13½ miles northwest	J. M. Ayres	Winfield Scott	1936	209	--	0.8
113	9 miles northwest	E. G. Hutchings	-- Emerson	1937	156	16	1.2
114	8½ miles northwest	G. W. McCleary	L. A. Peeples	--	143	15	0.6
115	do.	J. R. Jameson	--	1937	153	14	1.4
116	9 miles northwest	J. B. Edwards	L. A. Peeples	1936	160	15¾	--
117	10 miles northwest	J. H. Able	A. D. Farish	1937	170	14	0
118	9 miles west	T. C. James	--	--	100	18	0.5
119	8½ miles west	J. T. Jones	--	--	--	--	0.7
120	7 miles west	J. W. Bush	--	--	--	6	0.5
121	7½ miles west	Claude Campbell	-- Leach	1937	208	14	--
122	7 miles west	Mrs.W.M.Pevehouse	O. C. Reynolds	1937	153	16	--
123	6 miles west	Travis Tubbs	C. A. Mullins	1935	185	16	1.4
124	do.	Isham Tubbs	Osborne and Mullins	1927	195	18	2
125	5 miles west	Mrs. W. T. Bond	Lee Tubbs	--	--	--	0.3
127	3¾ miles west	Mrs. Sam O'Neal	L. A. Peeples	1937	159	14¼	--
128	do.	Rufus Rush	do.	--	160	14	0.8
130	4¼ miles west	C. C. Lane	--	1936	159	--	--
132	4¾ miles west	J. W. Ross	L. A. Peeples	1937	202	18	--
134	6 miles northwest	O. C. Ballard	--	--	65	6	0.4
135	4½ miles northwest	John King	--	1937	162	18	--
136	4¼ miles west	do.	L. A. Peeples	1937	162	15¼	2
138	7 miles northwest	Edith Collie	do.	1936	120	16	2
139	do.	O. C. Ballard	--	1934	120	18	1
140	6½ miles northwest	J. C. James	L. A. Peeples	1937	87	17	1.8
141	6 miles northwest	S. C. Arnett	--	1937	127	17	1

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
112	96.1	June 22, 1937	T,G	Irr	Casing: 129 feet of 14-inch. Owner reports drawdown of 20 feet after pumping 900 gallons a minute for 24 hours.
113	56.9	Apr. 13, 1937	T,G	Irr	
114	--	--	T,G	Irr	
115	58.5	Apr. 14, 1937	T,G	Irr	
116	65	d/	T,G	Irr	Measured drawdown 25.2 feet after pumping at estimated rate of 800 gallons a minute for 240 hours.
117	62.5	Apr. 14, 1937	T,G	Irr	Casing: 170 feet 14-inch.
118	81.9	Dec. 7, 1936	T,G	Irr	Measured drawdown 21 feet after pumping 590 gallons a minute (weir measurement) for 12 hours.
119	77.2	do.	C,W	D	
120	63.7	do.	C,W	D	
121	76	May 20, 1937	T,G	Irr	Casing: 208 feet of 14-inch. Pump set at 135 feet with 10 feet of suction pipe. Irrigated 40 acres cotton and 15 acres small grain in 1937. See log.
122	73.8	do.	T,G	Irr	Casing: 153 feet of 16-inch.
123	63.8	Dec. 8, 1937	T,G	Irr	Pump set at 90 feet with 10 feet of suction pipe. Irrigated a total of 170 acres in 1936.
124	53.8	do.	T,G	Irr	Estimated yield, 900 gallons a minute.
125	53.2	Dec. 7, 1936	C,W	D	
127	--	June 21, 1936	T,G	Irr	Casing: 159 feet of 15½-inch.
128	42.9	Dec. 8, 1936	T,E	Irr	Measured drawdown 43 feet after pumping 600 gallons a minute (weir measurement) for 12 hours
130	51.1	May 22, 1937	T,G	Irr	
132	--	--	T,G	Irr	Irrigated 26 acres of cotton and 11 acres of grain sorghum in 1937.
134	43.8	Dec. 8, 1937	C,W	D,S	Estimated yield, 3 gallons a minute.
135	41.4	June 21, 1937	T,G	Irr	Located near small lake.
136	38.9	do.	T,G	Irr	Casing: 162 feet of 15½-inch. Estimated yield, 800 gallons a minute.
138	46.3	Apr. 13, 1937	T,G	Irr	Estimated yield, 700 gallons a minute.
139	28.2	do.	None	N	
140	33.5	Apr. 14, 1937	T,G	Irr	Estimated yield, 800 gallons a minute. Tenant reports original depth, 130 feet. Reported altitude, 3,243.7 feet.
141	36.3	do.	T,G	Irr	Casing: 150 feet of 17-inch steel. Original depth reported to be 150 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
142	5½ miles northwest	M. K. Dean	--	1937	109	15½	1.2
143	do.	R. R. Marshall	-- Smiley	1937	101	14	0.6
144a	do.	W. D. McMillian	--	Old	158	24	--
144b	do.	do.	--	1936	116	--	--
149	3½ miles northwest	J. B. McCauley	--	1934	116	17	0
150a	5½ miles northwest	M. C. Gibson	--	--	50	6	1.2
151	5 miles northwest	Broadview School	--	--	51	6	0.4
153	4 miles northwest	Clyde McCrummen	--	--	55	--	0.3
154	do.	J. S. Hamilton	L. A. Peeples	1937	160	18	--
156	3 miles northwest	J. M. Phillips	Frank Bishop	1935	152	14	0
159	1¾ miles west	Texas Tech. College	L. A. Peeples	--	--	--	0.8
160	do.	do.	do.	--	200	24	--
185	2 miles east	F. Clowe	--	--	100	--	0.5
188	3 miles east	Texas Experiment Station No. 8	L. A. Peeples	1936	185	12	1
192	6½ miles east	Canyon School	--	--	62	6	0.2
193	7 miles east	J. A. Burleson	--	1937	125	16	--
197	4½ miles northeast	Mrs. W. G. Nairne	--	--	64	--	0.5
199	3¼ miles northeast	Jess Levens	--	--	59	--	1
201	3½ miles northeast	Ed Vaughn	--	1936	148	--	1
202	5 miles northeast	Robt. H. Bean	L. A. Peeples	1936	140	15½	0.8
203	5½ miles northeast	Russel Bean	do.	1934	138	15½	--
204	6 miles northeast	Perrin Bean	do.	1936	217	15¼	1
205	5½ miles northeast	J. M Hettler	J. C. Cook	1934	129	14	1.5
207	8 miles northeast	J. E. Smiley	--	--	53	6	0.8

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
142	23.8	June 22, 1937	T,G	Irr	Casing: 100 feet of 17½-inch steel. Measured drawdown 19 feet after pumping 950 gallons a minute (weir measurement) for 12 hours.
143	26.6	Dec. 20, 1937	T,G	Irr	Measured drawdown 18 feet on July 26, 1939 after pumping 760 gallons a minute (weir measurement) for 10 hours.
144a	39	d/	T,G	Irr	Reported drawdown 26 feet after pumping about 900 gallons a minute for 10 days.
144b	38	d/	T,G	Irr	Reported drawdown 25 feet after pumping about 850 gallons a minute for 25 hours.
149	45	d/	T,G	Irr	Owner reports drawdown of 12 feet after pumping 800 gallons a minute for 72 hours.
150a	28.8	June 28, 1938	C	D	
151	29.7	Apr. 13, 1937	C,W	N	
153	40.1	Dec. 8. 1936	C,W	D,S	Pumping when measured.
154	40.6	June 21, 1937	None	N	
156	40.5	Dec. 8, 1936	T,E, 25	Irr	Casing: 80 feet of 14-inch steel. Estimated yield, 750 gallons a minute.
159	62.5	Dec. 7, 1936	T,E, 15	P	Estimated yield, 400 gallons a minute Reported altitude , 3,213.42 feet.
160	54.8	Dec. 1, 1936	T,E, 40	P	Measuring point was top side of hole in pump base 10 feet below surface.
185	61.3	Mar. 8, 1937	C,E	S,Irr	Irrigated about 10 acres of truck in 1944.
188	78.2 76.2	Mar. 8, 1937 Feb. 3, 1944	T,G	Irr	Coarse-grained sand reported at 105-115 feet. Gravel reported at 115-120 feet. Casing: 124 feet of 12-inch steel with bottom 50 feet perforated. Reported yield, 450 gallons a minute.
192	54.5	Mar. 9, 1937	C,W	P	Estimated yield, 3 gallons a minute. Supplies school.
195	50	d/	T,G	Irr	Casing: 125 feet of 16-inch steel. Irrigated 115 acres cotton in 1937.
197	48.1	June 23, 1937	None	N	
199	51.7	Jan. 26, 1937	C,W	D,S	
201	76.4	do.	T,G	Irr	
202	57	do.	None	N	
203	--	--	T,G	Irr	Casing: None in top, 15½-inch from 38 to 138 feet.
204	50.2	Jan. 28, 1937	T,G	Irr	Casing: 180 feet of 15¼-inch steel. Reported yield, 800 gallons a minute.
205	40.8	do.	T,G	Irr	Casing: 104 feet. Water sands reported at 97-104 and 113-126 feet.
207	38.5	Mar. 9, 1937	C,W	D,S	Estimated yield, 3 gallons a minute. Pumping when measured.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
209	6 miles northeast	Franz Hettler	B. B. Baron	1937	120	$15\frac{3}{4}$	--
216	10 miles east	J. T. Mattingly	L. A. Peeples	1936	78	--	0.3
217	$8\frac{1}{2}$ miles northeast	Sam Hampton	do.	1936	180	16	1.2
218	8 miles northeast	T. B. Harrison	do.	1936	110	16	0.8
219	$9\frac{1}{2}$ miles northeast	Ed Harrison	do.	1935	193	16	1.4
220	12 miles northeast	Clint Debusk	--	--	64	--	0
221	$12\frac{1}{2}$ miles northeast	Bill Turner	--	--	59	--	--
222	12 miles northeast	R. T. Groves	L. A. Peeples	1937	250	12	1.2
223	do.	W. C. Grimes	--	1924	64	--	0.4
224	11 miles east	San Angustine Ranch	--	--	--	--	1.5
225	$13\frac{1}{2}$ miles east	Acuff School	--	1921	100	--	0.5
226	do.	T. U. Hunt	--	--	85	--	1
227	14 miles northeast	L. S. Evitt	--	--	76	--	1
228	16 miles northeast	G. H. Hutchings	--	--	83	6	2.5
229	do.	Roy Naney	--	--	85	--	1
230	15 miles east	Guss Collett	L. A. Peeples	1933	100	6	1
231	16 miles east	E. N. Cummings	--	Old	107	--	0.8
232	14 miles east	Mrs. Annie F. Parks	--	--	100	--	0.5
233	13 miles east	Mrs. U. P. Pace	--	--	200	6	0.4
234	11 miles east	San Augustine Ranch	--	--	100	--	1
235	10 miles east	W. F. Klattenhoff	--	--	76	--	0.3
236	$12\frac{1}{2}$ miles east	W. N. Ferris	Ben Cavitt	--	100	--	1

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
209	34	d/	T,G	Irr	Reported yield, 1,000 gallons a minute. Irrigated 100 acres of cotton, 53 acres of wheat and 40 acres of grain sorghum in 1937.
216	52.6	Feb. 3, 1937	C,W	D,S	Estimated yield, 4 gallons a minute.
217	45.5	Feb. 4, 1937	T,G	Irr	Casing: 120 feet of 16-inch steel. Reported yield, 900 gallons a minute. Irrigated 50 acres wheat, 60 acres cotton, and 30 acres of grain sorghum in 1937.
218	45.2	Feb. 5, 1937	T,G	Irr	Estimated yield, 900 gallons a minute. Irrigated 100 acres of cotton, 30 acres of corn, and 25 acres of feed in 1937.
219	44.4 36.8	Feb. 5, 1937 Feb. 22, 1944	T,G	Irr	Casing: 60 feet of 16-inch, 48 feet of 14-inch steel. Reported yield, 750 gallons a minute. Irrigated 90 acres of cotton, 46 acres of grain sorghum and 10 acres of alfalfa in 1937.
220	55.7	June 23, 1937	None	N	
221	55.2	do.	C,W	N	
222	54.9	Feb. 5, 1937	None	N	
223	47.2	Feb. 4, 1937	C,W	D,S	Water reported of good quality.
224	56.5	Feb. 3, 1937	T,G	Irr	
225	53.9	do.	C,W	P	Reported yield, 3 gallons a minute. Supplied school premises to 1936. Now unused.
226	73.5	do.	C,W	N	
227	59.5	Feb. 4, 1937	C,W	D,S	
228	70.9	Feb. 3, 1937	C,H	N	
229	69.3	do.	C,W	D,S	
230	75.1	do.	C,W	D,S	Estimated yield, 6 gallons a minute. Pumping when measured.
231	73.3	Jan. 14, 1937	C,W	D,S	Estimated yield, 3 gallons a minute.
232	91.5	Jan. 20, 1937	C,W	D,S	
233	63.5	do.	None	N	Casing: 200 feet of 6-inch steel.
234	57.1	do.	C,W	D,S	
235	73.6	do.	C,W	D,S	
236	88.1	do.	C,W	D,S	

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
237	13½ miles southeast	C. L. Bassinger	L. A. Peeples	1935	245	15	--
238	14½ miles east	Mrs. Annie F. Parks	--	--	100	--	0.5
239	16 miles east	W. A. Ferguson	--	--	85	--	0.3
240	16½ miles southeast	W. M. Meyer	--	--	185	5	1.2
241	18 miles southeast	O. W. Carr	Ben Cavitt	1936	136	5	0.4
242	16½ miles southeast	P. & S. F. Ry. Co. well 4	--	1925	130	10	--
243	do.	P. & S. F. Ry. Co. well 5	--	1921	130	10	--
244	do.	P. & S. F. Ry. Co. well 12	--	1925	155	10	--
245	do.	P. & S. F. Ry. Co. well 8	G. W. Guinn	1919	230	10	--
246	do.	P. & S. F. Ry. Co. well 9	D. L. McDonald	1924	137	26	--
247	do.	P. & S. F. Ry. Co. well 13	--	--	602	18, 6	--
250	16 miles southeast	P. & S. F. Ry. Co. well 2	--	--	157	10	--
251	13½ miles southeast	V. M. Schuette	--	--	--	--	0.3
252	14 miles southeast	P. & S. F. Ry. Co. well 10	--	--	--	--	--
253	14½ miles southeast	City of Slaton well 1	W. M. Edwards	1925	135	18	2.5
254	do.	City of Slaton well 3	-- Dottie	--	206	18	2.3
255	do.	City of Slaton well 2	D. L. McDonald	--	125	18	--
256	14 miles southeast	P. & S. F. Ry. Co.	--	1924	--	--	--
257	do.	W. M. Johnson	Dallas Capps	1915	165	6	--
259	12 miles southeast	J. T. Lokey	--	--	107	--	0.8
260	10½ miles southeast	P. & S. F. Ry. Co.	--	--	250	--	--
261	10 miles southeast	P. & S. F. Ry. Co. well 1	--	--	250	--	--
262	do.	P. & S. F. Ry. Co.	G. W. Guinn	1920	123	5½	--

Well	Water level: Below measuring point (ft.)	Water level: Date of measurement	Method of lift b/	Use of water c/	Remarks
237	95.8	May 19, 1937	T,G	Irr	Estimated yield, 300 gallons a minute. Reported continuous water sands, 95-185 feet.
238	69.2	Jan. 20, 1937	C,W	D,S	
239	71.9	Jan. 14, 1937	C,W	D,S	Estimated yield, 3 gallons a minute. Pumping when measured.
240	82.5	do.	C,W	D,S	Casing: 185 feet of 5-inch steel.
241	113.4	Jan. 26, 1937	C,W	D,S	Casing: 140 feet of 5-inch steel. Reported yield, 4 gallons a minute. Pumping when measured.
242	95	d/	None	N	Casing: 118 feet of 10-inch steel with 21 feet of 8-inch strainer at bottom. Reported altitude 3,152 feet. Reported to have failed.
243	95	d/	None	N	Owner reports well was a failure.
244	95	d/	None	N	Do.
245	99	d/	--	Ind	Reported yield, 125 gallons a minute. See log.
246	82	d/	--	Ind	Reported yield, 250 gallons a minute. Casing: 57 feet of 17-inch perforated. Water-bearing sand and gravel from 82 to 120 feet.
247	--	--	None	N	Owner reports well was a failure. Reported altitude, 3,127 feet. See log.
250	--	--	C,W	D	Casing: 120 feet of 10-inch, 22 feet of 8-inch screen. Pump: 4½-inch working barrel set at 116 feet.
251	102.8	Jan. 20, 1937	C,W	D,S	
252	--	--	T,E, 20	Ind	Casing: 119 feet of 26-inch, 37 feet of 17-inch. Reported yield, 140 gallons a minute.
253	d/85 100.4	1925 Jan. 18, 1937	T,E, 15	P	Casing: 135 feet of 18-inch. Reported yield, 235 gallons a minute. Reported yield, 250 gallons a minute with 23 feet of drawdown and 500 gallons a minute with 33 feet of drawdown when tested in 1925. See log.
254	101.9	Jan. 18, 1937	T.E, 40	P	Casing: 206 feet of 18-inch steel. Reported yield, 360 gallons a minute.
255	--	--	T,E, 15	P	Casing: 125 feet of 18-inch steel. Reported yield, 140 gallons a minute.
256	86.1	Feb. 11, 1937	T,E, 20	Ind	Casing: 81 feet of 26-inch at top; 57 feet of 17-inch perforated set on bottom.
257	100	d/	C,W	D,S	Casing: 165 feet of 6-inch steel.
259	101.8	Jan. 26, 1937	C,W	D,S	
260	105	d/	None	N	In Posey. Reported yield, 20 gallons a minute. Casing pulled and well abandoned.
261	105	d/	None	N	Owner reports well was a failure. Reported altitude, 3,191 feet.
262	81	d/	--	D,S	Near railroad section house at Posey. See log.

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
263	9½ miles southeast	W. H. Rogers	--	--	Spring	--	--
264	do.	do.	--	--	Spring	--	--
265	9 miles southeast	do.	--	--	Spring	--	--
266	do.	do.	--	--	Spring	--	--
267	7 miles southeast	A. H. Baer	--	--	100	--	0
268	7 miles east	E. H. Foerster	C. A. Mullins	1936	116	16	--
269	do.	H. C. Atwood	O. S. Brock	1937	130	14	--
270	5 miles southeast	Geo. M. Boles	do.	1936	100	5	1.2
275	½ mile south	City of Lubbock	R. P. Brazil	1931	154	--	--
277	1½ miles south	L. Kershner	-- Elliot	1933	120	8	0.2
278	1¾ miles south	Ed Putty	--	--	100	--	0.2
279	1¾ miles southeast	C. B. Berry	C. A. Mullins	1936	122	14	2
280	do.	F. K. Mitchell	do.	1935	120	--	0.8
281	do.	A. Judd	D. L. McDonald	1927	125	14	0.6
282	2½ miles south	L. E. Guilot	--	--	74	--	0.3
283	3 miles south	J. A. McClatchey	--	--	100	--	0.6
285	3½ miles southeast	W. M. Cheaney	A. J. Nordycke	1934	102	6	--
287	6 miles southeast	Edna G. Steele	--	1920	64	5	1
288	7½ miles southeast	Geo. W. Boles	--	--	4,105	8¼	--
291	do.	H. F. Guetersloh	--	--	83	--	0.7
293	10 miles southeast	James L. Benton, Sr.	Roy Jones	1920	79	--	1
294	11½ miles southeast	J. W. Maines	--	--	75	6	0.7
295	10 miles southeast	O. Walbrueck	--	--	100	--	0.5
297	9 miles southeast	Leon Melcher	--	--	100	--	0.8
298	6 miles southeast	Jerome I. Case	--	--	66	--	0.9

Well	WATER LEVEL: Below measuring point (ft.)	WATER LEVEL: Date of measurement	Method of lift b/	Use of water c/	Remarks
263	Flows	May 11, 1937	None	D	Estimated flow, 5 gallons a minute from one opening in white sand.
264	Flows	do.	None	--	Estimated flow, 2 gallons a minute from one opening in canyon wall.
265	Flows	do.	None	D	Flows from 3 openings in lime rock. Supplies swimming pool and bath house. Reported temperature 55° F.
266	Flows	do.	None	D	Flows from one opening in side of hill.
267	72.3	Dec. 21, 1936	C,W	D,S	Estimated yield, 5 gallons a minute. Pumping when measured.
268	50	d/	T,G	Irr	Casing: 116 feet steel. Irrigates 160 acres of land.
269	62	d/	T,G	Irr	Casing: 130 feet of 14-inch steel. Reported yield, 800 gallons a minute. Irrigated 110 acres of cotton in 1937.
270	88.1	Dec. 21, 1936	C,W	D,S	Casing: 100 feet of 5-inch steel. Estimated yield, 5 gallons a minute.
275	56	1931 d/	None	N	Drilled as test well 7. Reported insufficient water-bearing formation to supply city well.
277	65.1	Jan. 15, 1937	C,W	Irr	Casing: 45 feet of 8-inch steel. Measured drawdown 6.9 feet after pumping about 45 gallons a minute for ½ hour.
278	78.3	Mar. 8, 1937	C,W	N	
279	65.5	Jan. 15, 1937	T,G	Irr	Casing: 48 feet of 14-inch steel in bottom. Reported yield, 450 gallons a minute.
280	59.9	Mar. 8, 1937	T,E, 10	Irr	Reported yield, 400 gallons a minute. Irrigated 7 acres cotton and 9 acres truck in 1937.
281	54.6	Jan. 15, 1937	T,G	Irr	Reported yield, 400 gallons a minute.
282	55	Dec. 18, 1936	C,W	D,S	Estimated yield, 2 gallons a minute.
283	87	Dec. 22, 1936	C,W	D,S	Estimated yield, 3 gallons a minute.
285	49	d/	C,G, 3	Irr	Estimated yield, 30 gallons a minute. Owner reports water is in white sand at 50-100 feet.
287	49.9	Jan. 6, 1937	C,W	D,S	Estimated yield, 2 gallons a minute.
288	--	--	None	N	Oil test.
291	69.6	Jan. 20, 1937	C,W	D,S	Estimated yield, 4 gallons a minute.
293	74.8	Jan. 26, 1937	C,W	D,S	Estimated yield, 2 gallons a minute.
294	62.5	Jan. 20, 1937	C,W	D,S	Casing: 84 feet of 6-inch steel with lower 20 feet perforated. Pumping when measured.
295	83.4	do.	C,W	D,S	Estimated yield, 2 gallons a minute.
297	74.5	do.	C,W	D,S	
298	53.4	Jan. 6, 1937	C,W	D,S	

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
299	6 miles southeast	-- Nunally	--	--	100	--	0.3
301	8 miles southeast	S. D. Stewart	--	--	70	--	0.8
302	8 miles south	Fred E. Minssen	--	--	100	--	0.4
303	8½ miles south	R. L. Stewart	A. J. Nordycke	1937	165	16	0
305	7½ miles south	H. B. Davis	--	--	97	6	0.4
307	6 miles south	Dr. J. T. Krueger	L. A. Peeples	1934	161	18	1.3
309	5½ miles south	J. J. McGaw	--	--	98	--	0.5
312	2 miles southwest	M. C. Kinser	--	1916	90	--	0
313	2½ miles west	City of Lubbock	Sam Cunningham	1931	142	--	--
314	4 miles southwest	T. B. Zelmer	J. R. Watson	--	150	--	1.5
315	4¾ miles southwest	Dr. M. C. Overton	J. C. Cook	1934	92	12	0.3
316	4¾ miles southwest	E. A. Hankins	-- Kelly	1936	123	13¼	1.5
317	5½ miles southwest	Charlie Adams, Jr.	--	--	150	--	0.8
318	4½ miles southwest	-- Baker	--	--	--	6	0.4
319	4¼ miles southwest	W. W. Snodgrass	--	--	100	--	0.8
321	6½ miles southwest	J. Curtis Heald	--	--	100	6	0.3
324	7½ miles southwest	E. C. Hatton	O. S. Brock	1933	100	--	0.3
326	9½ miles southwest	F. P. Clark	--	--	105	6	1
328	10 miles southwest	W. C. Ratliff	H. Towe	1925	100	--	0.2
329	11 miles southwest	E. L. McCrummen	--	--	88	6	0.3
330	12½ miles southwest	Dr. W. C. Holden	--	1937	170	16	1
331	13 miles southwest	J. M. Locklar	W. C. Jay	--	89	--	0.3
332	11½ miles southwest	A. L. Walker	--	--	--	--	0.3
333	9½ miles southwest	Wilmer McCrummen	--	1936	--	6	1
334	11 miles southwest	M. E. Casey	D. L. Handley	1936	208	16	1.4

Well	WATER LEVEL		Method of lift b/	Use of water c/	Remarks
	Below measuring point (ft.)	Date of measurement			
299	71.1	Jan. 4, 1937	C,W	D,S	
301	58.5	Jan. 6, 1937	C,W	D,S	Estimated yield, 3 gallons a minute. Supplied school premises to 1938.
302	58.7	Jan. 4, 1937	C,W	D,S	Pumping when measured. Estimated yield, 2 gallons a minute.
303	81.9	do.	T,G	Irr	Casing: 137 feet of 16-inch steel.
305	80.8	Dec. 22, 1936	C,W	D,S	Estimated yield, 3 gallons a minute.
307	92.6	Dec. 18, 1936	T,G	Irr	Casing: 160 feet steel. Reported yield, 700 gallons a minute.
309	87.9	Dec. 22, 1936	C,W	D,S	Estimated yield, 2 gallons a minute.
312	77.6	Dec. 18, 1936	C,W	D,S	
313	55	d/	None	N	Drilled as test well. Reported insufficient water-bearing formation to supply a city well.
314	52.5 49.5	May 27, 1937 June 21, 1937	T,G	Irr	Casing: 101 feet of 16-inch steel, 60 feet perforated. Reported altitude, 3,245.9 feet.
315	73	Dec. 9, 1936	T,G	Irr	Reported yield, 300 gallons a minute. Reported altitude, 3,260.6 feet.
316	64.9 64.4	May 27, 1937 June 21, 1937	T,G	Irr	Casing: 123 feet steel. Irrigated 30 acres of cotton and truck in 1937. Reported altitude, 3,269.5 feet.
317	66.8	Dec. 9, 1936	T,G	Irr	Reported altitude of concrete curb 3,275.4 feet.
318	73.9	do.	C,W	D,S	
319	85.3	Dec. 23, 1936	C,W	D,S	
321	77.8	Dec. 14, 1936	C,W	D,S	Estimated yield, 4 gallons a minute.
324	81.7	Dec. 23, 1936	C,W	D,S	
326	97.5	do.	C,W	D,S	Casing: 6-inch steel.
328	95.5	Dec. 15, 1936	C,W	D,S	
329	74.7	do.	C,W	D,S	Casing: 6-inch steel. Estimated yield, 4 gallons a minute.
330	82.1	May 13, 1937	T,G	Irr	Casing: 170 feet of 16-inch steel. Estimated yield, 800 gallons a minute. Water reported in white sand.
331	74.6	Dec. 15, 1936	C,W	D,S	Estimated yield, 3 gallons a minute. Pumping when measured.
332	95.9	Dec. 14, 1936	C,W	D,S	Estimated yield, 2 gallons a minute.
333	81.9	do.	C,W	S	
334	73.8	May 14, 1937	T,G	Irr	Casing: 208 feet of 16-inch. Reported drawdown 37 feet after pumping 800 gallons a minute for 45 hours. Reported altitude, 3,321.2 feet. See log.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
335	$11\frac{1}{2}$ miles southwest	-- Borger	D. L. Handley	1936	208	16	2
336	$10\frac{1}{2}$ miles southwest	D. G. Kulms	--	--	95	--	1
336a	10 miles southwest	Mary Coons	--	1936	198	16	1.2
337	$8\frac{1}{2}$ miles southwest	Dr. J. T. Hutchinson	--	--	--	--	0
338	9 miles southwest	George Langford	L. A. Peeples	1937	160	15	--
339	$8\frac{1}{2}$ miles southwest	J. E. Hinson	Benny Baron	1937	162	15	0.5
340	8 miles southwest	do.	Winfield Scott	1921	80	6	0.7
341	$7\frac{1}{2}$ miles southwest	Dr. D. D. Cross	--	1937	173	$15\frac{1}{2}$	--
342	8 miles southwest	S. O. Adamson	--	1937	169	15	0.6
343	$9\frac{1}{2}$ miles southwest	J. P. Thomas	--	--	--	6	0
344	$11\frac{1}{2}$ miles west	D. S. Tucker	--	--	90	--	0.2
345	do.	do.	D. L. Handley	1936	196	$15\frac{1}{2}$	1
346	$13\frac{1}{2}$ miles west	A. M. Leftwich	John De Paul	--	86	--	0.5
347	12 miles west	J. S. Sharp	L. A. Peeples	1937	190	15	--
348	$11\frac{1}{2}$ miles southwest	L. F. Jordan	--	--	--	--	0.3
349	$13\frac{1}{2}$ miles southwest	L. E. Tucker	--	--	--	--	0.3
350	12 miles southwest	R. D. Martin	L. A. Peeples	1937	206	$15\frac{1}{4}$	--
351	$11\frac{1}{2}$ miles southwest	H. E. McClellan	--	--	--	6	1.5
352	14 miles southwest	W. V. Hill	A. J. Nordycke	1937	155	15	1.6
353	do.	W. H. Hill	--	1936	170	16	2
354	$14\frac{1}{2}$ miles southwest	I. Elwood	John De Paul	1932	--	--	0.5
355	$13\frac{1}{2}$ miles southwest	J. A. Medlock	D. L. Handley	1936	188	15	0.6
356	$12\frac{1}{2}$ miles southwest	A. M. Hughes	--	--	155	6	1
357	$14\frac{1}{2}$ miles southwest	L. P. Thomas	--	Old	140	--	0.5
358	16 miles southwest	M. F. Klattenhoff	W. C. Jay	--	77	--	0.8

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
335	93.1	May 14, 1937	T,G	Irr	Reported drawdown 18 feet after pumping 800 gallons a minute for 72 hours. Reported altitude, 3,322.4 feet.
336	82.2	Dec. 14, 1936	C,W	D,S	
336a	79.2	Apr. 27, 1938	None	N	Used in 1938 to irrigate about 40 acres of cotton. Reported yield, 500 gallons a minute.
337	60.9	Dec. 14, 1936	C,W	D,S	Estimated yield, 3 gallons a minute.
338	--	--	T,G	Irr	Irrigated 150 acres of cotton in 1937.
339	62.7	May 18, 1937	T,G	Irr	Casing: 15 feet of 15-inch steel. Irrigated 60 acres of land in 1938.
340	62.4	Dec. 9, 1936	C,W	D,S	Estimated yield, 3 gallons a minute.
341	59.9	May 18, 1937	T,G	Irr	Casing: 173 feet of steel.
342	65.4	do.	T,G	Irr	
343	73.8	Dec. 9, 1936	C,W	D,S	Estimated yield, 2 gallons a minute. Pumping when measured.
344	75.1	do.	C,W	D,S	Estimated yield, 3 gallons a minute.
345	81.3	do.	T,G	Irr	Casing: 197 feet of 15½-inch perforated from 60 to 195 feet. Reported drawdown 28 feet after pumping 800 gallons a minute for 40 minutes. See log.
346	74.6	Dec. 2, 1936	C,W	D,S	Casing: 20 feet at bottom. Estimated yield, 3 gallons a minute.
347	80.3	May 20, 1937	T,G	Irr	Casing: 170 feet of steel. Reported yield, 750 gallons a minute.
348	79.3	Dec. 9, 1936	C,W	D,S	
349	81.2	Dec. 2, 1936	C,W	D,S	Estimated yield, 2 gallons a minute.
350	79.3	May 20, 1937	T,G	Irr	Casing: 187 feet of 15½ to 13-inch steel. Reported yield, 800 gallons a minute.
351	84.7	Dec. 14, 1936	C,W	S	
352	81.8	May 12, 1937	T,G	Irr	Casing: 155 feet of 15-inch steel. Irrigated 50 acres of cotton and 5 acres of corn in 1937.
353	78.7	May 14, 1937	T,G	Irr	Casing: 170 feet of 16-inch steel lower 100 feet is perforated. Irrigated 100 acres of cotton, 10 acres of grain sorghum and 6 acres of alfalfa in 1937.
354	80.9	Dec. 2, 1937	C,W	D,S	
355	84.6	May 14, 1937	T,G	Irr	Reported drawdown 39 feet after pumping 800 gallons a minute for 72 hours. Reported altitude, 3,319.2 feet. See log.
356	92.7	Dec. 14, 1936	C,W	D,S	Casing: 6-inch steel.
357	94.7	Dec. 2, 1936	C,W	D,S	Reported yield, 9 gallons a minute.
358	66.4	Dec. 15, 1936	C,W	D,S	Estimated yield, 4 gallons a minute.

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
359	14½ miles southwest	Foster School	W. C. Jay	--	77	--	0
360	16 miles southwest	J. C. Stanford	--	--	85	--	0.3
361	14 miles southwest	H. C. Young	--	--	--	5	0.3
362	12½ miles southwest	J. M. Burch	-- Cohens	1926	109	6	0.4
363	15 miles southwest	Otis A. Rogers	--	--	100	--	0.4
364	12½ miles southwest	W. A. Frost	-- Osborne	1930	106	--	0.7
365	11 miles southwest	First National Bank	--	--	100	--	1
366	12½ miles southwest	J. T. Krueger	A. J. Nordycke	1937	190	16	0.8
367	13 miles southwest	Jacob Schieber	--	--	116	6	0
368	10½ miles south	John B. Lewis	--	--	100	6	0.4
369	9½ miles south	A. D. Thomas	--	--	98	--	0.6
370	10 miles south	E. F. Wollbrueck	--	--	90	--	0
371	11½ miles south	R. O. Gregory	--	--	--	--	0.4
372	13 miles south	W. P. Martin	--	1937	135	16	2
373	do.	do.	--	1936	122	16	1.5
374	do.	do.	--	1936	130	16	4
375	12 miles southeast	C. L. Griffin	C. C. White	1937	128	15	2
376	12½ miles southeast	Union School	--	--	98	--	1
377	13 miles southeast	M. D. Gamble	--	--	87	--	1.2
378	14½ miles southeast	--	--	--	--	--	0.2
379	16½ miles southeast	E. E. Wilson	--	--	81	--	0.8
380	18 miles southeast	Mrs. S. H. Adams	--	--	--	5	1
381	17½ miles southeast	J. R. Childres	-- Childres	--	130	--	--
382	19½ miles southeast	J. P. Railsback	George Guin	--	120	--	0.3

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
359	65.6	Dec. 15, 1936	C,W	N	School unused. Well was destroyed in 1939.
360	69.1	Dec. 22, 1937	C,W	D,S	
361	63.7	do.	C,W	D,S	
362	92.5	Dec. 15, 1936	C,W	D,S	Casing: 40 feet of 6-inch steel in top. Owner reports water level same as in 1926.
363	95.4	Dec. 22, 1936	C,W	D,S	
364	95.3	do.	C,W	D,S	Estimated yield, 3 gallons a minute.
365	87.5	Dec. 15, 1936	C,W	D,S	Do.
366	101.2	May 13, 1937	T,G	Irr	Reported yield, 500 gallons a minute. Tenant reports water is in white sand at 105-146 feet.
367	105.9	Dec. 22, 1936	C,W	D,S	
368	86.9	do.	C,W	D,S	
369	81.6	do.	C,W	D,S	
370	73.4	Jan. 4, 1937	C,W	D,S	
371	84.3	Jan. 6, 1937	C,W	D,S	Owner reports caving sand in well.
372	91.3	May 12, 1937	T,G	Irr	Casing: 16-inch steel. Irrigated 60 acres of cotton and corn two times in 1938.
373	72.2	do.	None	---	Casing: 16-inch steel. Drilled for purpose of draining playa lake.
374	87.7	do.	T,G	Irr	Irrigates about 10 acres of pasture, garden and yards.
375	82.2	do.	T,G	Irr	Casing: 128 feet of 15-inch steel. Measured drawdown 14 feet after pumping about 800 gallons a minute for ¼ hour. Water reported in yellow sand at 90-128 feet.
376	94.1	Jan. 6, 1937	None	N	
377	63.2	do.	C,W	D,S	Estimated yield 3 gallons a minute.
378	68.2	do.	C,W	D,S	
379	64.1	do.	C,W	D,S	
380	78.7	do.	C,W	---	Steel casing. Tenant reports caving sand in well.
381	--	--	C,G, 5	Irr	Irrigated 20 acres of cotton in 1937.
382	100	Jan. 26, 1937	C,E, 1	D,S	Reported yield, 10 gallons a minute.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
383	14½ miles southwest	H. B. Hobgood	--	--	87	6	0.2
384	14 miles southwest	L. McClelland	--	1928	96	6	0.7
385	9½ miles southwest	Ralph K. Landreth	George Anderson	1942	154	12½	--
386	3½ miles southwest	L. Nelson	--	1937	72	6	0.3
387	3 miles southwest	W. J. Garrett	--	1921	51	6	0.8
388	3½ miles west	G. D. Taylor	--	1930	57	6	0.4
389	do.	E. S. Jones	--	1917	55	6	0.4
390	4 miles west	Rufus Rush	--	--	45	6	0.5
391	10 miles west	C. R. Moore	--	--	85	6	0.7
392	13 miles west	Mrs. Betty Lindsey	--	--	95	6	0.8
393	2 miles southeast	--	--	--	73	6	0.4
394	1½ miles north	City of Lubbock	--	Old	62	6	0.4
395	2½ miles north	H. W. Stanton	--	1937	125	15	1.0
396	2¾ miles north	do.	--	1937	--	--	1.2
397	5½ miles northwest	C. L. Dean	--	--	25	10	1.6
398	9 miles northwest	E. E Ireland	--	1935	56	40, 10	1.4
399	10 miles north	D. R. Couch	--	Old	56	6	0.6
401	8 miles north	Virginia Bacon	--	Old	79	6	0.1
402	8 miles northeast	F. W. & D Ry. Co.	--	--	57	6	0.2
403	7½ miles northeast	J. E. Smiley	--	--	--	15	1.0
404	9 miles northeast	T. L. Ward	--	1945	130	15	--
405	9½ miles northeast	--	--	1945	--	--	--
406	10 miles northeast	Bailey Guess	--	1945	200	13	--
407	12½ miles northeast	J. D. Perkins	--	1945	--	--	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
383	73.7	July 1, 1937	C,W	D,S	About 600 feet from a playa lake.
384	80.5	July 19, 1937	C,W	D,S	
385	d/70		T,G	Irr	Casing: 152 feet of 12½-inch with perforation opposite all water sands. Pump: 10-inch, 4-stage set at 130 feet with 10 feet of suction pipe.
386	37.8 34.8	July 20, 1937 Apr. 26, 1938	C,W	D,S	Large playa lake 0.35 mile from well received considerable storm water between the two measurements given.
387	43.2	July 20, 1937	C,-	D,S	Used occasionally with hand pump. Large playa lake 0.3 mile from well.
388	21.2	do.	C,W	D,S	Near large playa lake.
389	22.6	July 20, 193	C,W	D,S	Do.
390	35.0	July 21, 1937	None	N	
391	79.1	do.	C,W	D,S	
392	93.3	do.	C,W	S	
393	57.1	Sept. 10, 1937	C,W	N	
394	46.5	Sept. 8, 1937	None	N	Between two large draws at old city incinerator.
395	46.2	do.	T,E, 30	Irr	
396	51.3	do.	T,E, 30	Irr	
397	18.3	do.	None	N	On bank of draw.
398	16.6 13.0 14.0	Sept. 8, 1937 July 20, 1941 Oct. 5, 1944	C,W	S,Irr	Dug to 28 feet and drilled remainder. Irrigates truck patch. In large draw where considerable storm water sinks into ground.
399	43.2	Sept. 9, 1937	C,W	N	
401	71.2	do.	None	N	
402	38.6	Sept. 10, 1937	None	N	
403	40.6 34.2	Sept. 10, 1937 Jan. 28, 1943	None	N	Formerly used as irrigation well.
404	--	--	T,G	Irr	Drilled in March.
405	--	--	T,G	Irr	Drilled in February.
406	--	--	T,G	Irr	Do.
407	--	--	T,G	Irr	Drilled in January.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
408	14½ miles northeast	E. T. Daniels	L. A. Peeples	1944	274	16	--
409	12 miles northeast	R. E. Bryant	--	1945	--	--	--
410	15 miles northeast	W. F. Foreman	L. A. Peeples	1944	260	16, 14	--
411	14 miles northeast	G. C. McKinney	do.	1944	253	16	--
412	14½ miles northeast	R. F. Collier	do.	1944	236	16, 14	--
413	16 miles northeast	T. U. Hunt	do.	1944	267	16	--
414	13 miles northeast	H. E. Singley	do.	1945	256	16	--
415	11½ miles north	Teal Brothers	Cecil Thurlkill	1945	250	16	--
416	11½ miles northeast	J. R. West Well 4	L. A. Peeples	1945	250	16	--
417	12 miles northeast	J. B. Hankins	--	1945	--	--	--
418	8 miles northeast	E. L. Sowder	--	1945	140	13	--
419	7 miles north	Teal Brothers	Cecil Thurlkill	1945	174	13	--
420	9 miles northwest	R C. Mowery	-- Altman	1945	120	12½	1.3
421	8½ miles northwest	E. E. Elliott	--	1945	--	--	--
422	14½ miles northwest	Jim Ashburn	-- Schwartz	1945	177	14	--
423	12 miles northwest	W. M. Edwards	--	1945	240	15	2.0
424	do.	S. W. Williams	Cecil Thurlkill	1945	--	16	--
425	20 miles northwest	-- Jones	--	1940	250	15	--
426	do.	Paul Harral	O. S. Brock	1940	233	16, 13	--
427	19½ miles northwest	do.	W. O. Tye	1941	235	16	--
428	17½ miles northwest	Swann Pettit	Van Pate	1941	240	14	--
429	16 miles northwest	M. B. Timmons	--	1941	275	--	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
408	--	--	T,G	Irr	Casing: 256 feet of 16-inch, perforated below the water surface. See log.
409	--	--	T,G	Irr	About 1,400 feet from well 553, a failure.
410	--	--	T,G	Irr	Casing: 100 feet of 16-inch and 150 feet of perforated 14-inch.
411	d/70	Nov. 1944	T,G	Irr	Casing: 253 feet of 16-inch. Driller reports water sands at 117-128 and 193-251 feet.
412	d/72	Nov. 1944	T,G	Irr	Casing: 236 feet of 16 to 14-inch, bottom 170 feet perforated. Driller reports water sands at 97-105, 128-151 and 211-235 feet.
413	--	--	T,G	Irr	Casing: 237 feet of 16-inch; bottom 30 feet of well uncased. Driller reports water sands at 86-93, 120-130 and 204-267 feet.
414	--	--	T,G	Irr	Casing: 245 feet of 16-inch.
415	--	--	T,G	Irr	Casing: 250 feet of 16-inch. Driller reports good water sand at 168-194 feet.
416	d/80	Jan. 1945	T,G	Irr	Casing: 240 feet of 16-inch, perforated below 90 feet. Pump: 12-inch, 3-stage, set at 140 feet. Drawdown 22 feet after pumping 6 hours at 700 gallons a minute.
417	--	--	T,G	Irr	Drilled in February.
418	d/47	Jan. 1945	T,G	Irr	Casing: 140 feet of 13-inch. Pump: 10-inch, 2-stage, set at 120 feet, 10 feet of suction pipe.
419	--	--	T,G	Irr	Casing: 174 feet of 13-inch.
420	26.8	Feb. 24, 1945	T,G	Irr	Casing: 120 feet of 12½-inch.
421	--	--	T,G	Irr	Drilled in February.
422	d/92	Jan. 1945	T,G	Irr	Casing: 177 feet of 14-inch. Pump: 12-inch, set at 128 feet, 10 feet of suction pipe. Cretaceous fossils were noted in the slush dump by the writer.
423	97.7	Mar. 3, 1945	T,G	Irr	
424	--	--	T,G	Irr	Well was being drilled when visited in March.
425	--	--	T,G	Irr	
426	d/95	1940	T,G	Irr	Cased to 233 feet. Pump: 12-inch, 3-stage, set at 140 feet, 30 feet of suction pipe. Pump column and suction pipe is of 8-5/8-inch diameter.
427	--	--	T,G	Irr	Pump: 12-inch, 3-stage, set at 140 feet, 32 feet of 8-5/8-inch suction pipe.
428	d/115	1941	T,G	Irr	Casing: 207 feet of 14-inch. Pump set at 160 feet with 20 feet of suction pipe.
429	--	--	None	N	Two wells were drilled ½ mile apart to Red Beds; neither found sufficient water to supply an irrigation plant.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
430	16½ miles northwest	Tom Adams	--	1944	200	16	--
431	15 miles northwest	Jack Mullins	L. A. Peeples	1942	180	14½	--
432	14 miles northwest	C. Tatum	D. L. Handley	1938	285	15	--
433	11½ miles north	L. G. Coney	--	1938	220	--	--
434	12 miles north	Emily Magee	--	1944	200	15	1.5
435	11½ miles north	Ross Edwards	B. B. Baron	1941	189	15	--
436	do.	B. C. Clutter	--	1944	--	--	--
437	12½ miles north	M. F. Landuer	O. S. Brock	1941	175	14	--
438	13 miles north	J. P. Nix	Green Machinery Co.	1944	--	--	--
439	do.	W. E. Cravens	Rowan Drilling Co.	1944	--	--	--
440	do.	Maple Wilson	L. A. Peeples	1943	250	--	--
441	15 miles north	M. T. Townsend	Bradford Supply Co.	1937	210	15, 11	1.5
442	16½ miles north	Sam Gentry	--	1943	--	--	--
443	16 miles north	C. O. Anderson	Green Machinery Co.	1943	200	--	--
444	do.	Fritz Fuchs, Jr.	B. B. Baron	1940	206	15	--
445	15 miles northeast	H. C. Von Struve	--	1944	240	--	--
446	14½ miles north	J. L. Snider	Green Machinery Co.	1937	250	15	--
447	12½ miles north	Jube Cooley	--	1944	210	16	--
448	11½ miles north	Sam Gentry	--	1943	200	--	--
449	12 miles northeast	-- Miller	--	1942	--	--	--
450	11½ miles northeast	Teal Brothers	B. B. Baron	1941	220	14, 12	--

Well	WATER LEVEL		Method of lift b/	Use of water c/	Remarks
	Below measuring point (ft.)	Date of measurement			
430	--	--	T,G	Irr	Pump: 12-inch, 3-stage, medium capacity set at 100 feet, 10 feet of suction pipe.
431	--	--	T,G	Irr	Casing: 180 feet of 14½-inch. Pump: 12-inch, 3-stage set at 130 feet, 10 feet of suction pipe. Pump column and suction pipe is of 8-inch diameter.
432	d/85	1938	T,G	D,S, Irr	Pump set at 150 feet. Estimated yield, 500 gallons a minute.
433	--	--	T,G	Irr	
434	89.4	Sept.23, 1944	T,G	Irr	
435	d/90	1941	T,G	Irr	Casing: 177 feet of 15-inch, lower 80 feet perforated. Pump: 12-inch, 3-stage, set at 140 feet, 10 feet of 8-inch suction pipe. See log.
436	--	--	T,G	Irr	
437	d/30	1941	T,G	Irr	Located on side of valley. Pump: 12-inch, 2-stage,set at 90 feet, 10 feet of suction pipe.
438	d/90	1944	--	Irr	Drilling November 18, 1944.
439	--	--	None	N	Seaboard Oil Company test. Driller reports clay, caliche and sand to a depth of 264 feet, and red clay, shale and shells to 574 feet. Surface casing set at 281 feet.
440	--	--	None	N	Two wells were drilled about ½-mile apart; reported capacity of each was about 300 gallons a minute which was insufficient for irrigation.
441	110.8	June 15, 1938	T,G	Irr	Cased to 210 feet. Pump: 12-inch, 2-stage set at 150 feet, 30 feet of suction pipe.
442	--	--	T,G	Irr	Pump: 12-inch, 4-stage, set at 160 feet.
443	d/112	1943	T,G	Irr	Pump: 12-inch, 3-stage, set at 150 feet, 23 feet of suction pipe. See log.
444	d/106	1940	T,G	Irr	Casing: 205 feet of 15-inch. Pump: 12-inch, 3-stage set at 160 feet, 10 feet of suction pipe. Driller reports water sand at 130-136 feet, 142-150 feet and 165-180 feet.
445	--	--	T,G	Irr	Pump: 12-inch, 4-stage, set at 170 feet.
446	--	--	T,G	Irr	Cased to 180 feet. Pump: 12-inch, 3-stage, set at 150 feet, 25 feet of suction pipe. Discharge 650 gallons a minute (weir measurement) after pumping 6 hours in July 1939. Small increase in discharge would exhaust well.
447	d/95	1944	T,G	Irr	Pump: 12-inch, 4-stage, set at 140 feet, 10 feet of suction pipe.
448	--	--	T,G	Irr	Pump: 12-inch, 3-stage set at 130 feet.
449	--	--	T,G	Irr	
450	d/95	1941	T,G	Irr	Cased to 220 feet. Pump: 12-inch, 3-stage, set at 140 feet, 10 feet of 8-inch suction pipe. See log.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
451	11½ miles northeast	J. R. West Well 1	--	1939	220	14	--
451a	do.	J. R. West Well 4	L. A. Peeples	1945	241	16	1.5
452	11 miles northeast	do.	--	1940	220	14	--
453	11½ miles northeast	J. W. West Well 3	L. A. Peeples	1944	262	16	--
454	12 miles northeast	Charlie Howell	E. S. Emerson	1940	200	14	--
455	13 miles northeast	V. B. Hankins	--	1944	--	--	--
456	13½ miles northeast	W. Armstrong	--	1944	--	--	--
457	14 miles northeast	E. N. Nance	L. A. Peeples	1944	260	16	--
458	do.	L. F. Dawdy	do.	1944	241	14	--
459	14 miles northeast	M. P. Wright	--	1942	--	--	--
460	15 miles northeast	W. A. Dunn	L. A. Peeples	1941	233	15	--
461	do.	W. O. Fortenberry	C. A. Mullins	1937	239	18, 16	--
462	15½ miles northeast	W. H. Massey	--	1942	--	--	--
463	16½ miles northeast	Dewey Erwin	Bud Gibbons	1944	240	15	--
464	17 miles northeast	do.	--	1940	250	15, 12	--
465	17½ miles northeast	W. F. Hudman	L. A. Peeples	1942	238	12½	--
466	18 miles northeast	W. R. Tanner	--	1944	362	16	--
467	do.	J. L. Sears	G. L. Manning	1937	180	15, 13	--
468	19 miles northeast	J. T. Ellord	Green Machinery Co.	1941	246	16	--

Well	WATER LEVEL: Below measuring point (ft.)	WATER LEVEL: Date of measurement	Method of lift b/	Use of water c/	Remarks
451	--	--	T,G	Irr	Pump: 12-inch, 3-stage set at 140 feet.
451a	d/86	Jan. 1945	T,G	Irr	Casing: 240 feet of 16-inch, perforated from 90 tc 240 feet. Pump: 12-inch, 3-stage set at 140 feet. Drawdown 22 feet after pumping estimated 700 gallons a minute for 6 hours in February 1945.
452	--	--	T,G	Irr	
453	--	--	T,G	Irr	Casing: 262 feet cf 16-inch, perforated opposite all water sands. Pump: 12-inch, 4-stage, set at 140 feet. See log.
454	--	--	T,G	Irr	Pump: 12-inch, 3-stage, set at 120 feet, 40 feet cf suction pipe. Pump column and suction pipe is 8 inches in diameter.
455	--	--	T,G	Irr	
456	--	--	T,G	Irr	
457	--	--	T,G	Irr	Casing: 260 feet of 16-inch. See log.
458	--	--	T,G	Irr	Casing: 241 feet cf 14-inch, perforated opposite all water sands. Pump set at 140 feet with 10 feet of suction pipe. See log.
459	--	--	T,G	Irr	
460	--	--	T,G	Irr	Casing: 233 feet of 15-inch, perforated opposite all water sands. Pump: 12-inch, 3-stage set at 130 feet, 10 feet of 8-inch suction pipe.
461	--	--	T,G	Irr	Casing: 16-inch from 90 to 190 feet, none in top. Pump: 12-inch, 3-stage, set at 130 feet, 80 feet cf suction pipe. Irrigated 120 acres cf wheat and 100 acres of cotton in 1937.
462	--	--	T,G	Irr	
463	--	--	T,G	Irr	Pump: 12-inch, 3-stage set at 120 feet, 10 feet cf suction pipe. Pump column and suction pipe is 8 inches in diameter.
464	d/85	1940	T,G	Irr	Cased to 226 feet with perforation opposite all water sands. Pump: 12-inch, 3-stage, set at 140 feet, 10 feet of 8-inch suction pipe.
465	--	--	T,G	Irr	Cased to 238 feet. Pump: 10-inch, 4-stage, set at 130 feet, 10 feet of suction pipe.
466	d/81	1944	T,G	Irr	Casing: 188 feet cf 16-inch in top. Pump company reports a yield of 700 gallons a minute with 12-inch, 4-stage pump set at 140 feet and 20 feet cf suction pipe.
467	--	--	T,G	Irr	Casing: 100 feet of 13-inch perforated steel pipe in bottom. Pump: 10-inch, 2-stage set at 110 feet, 66 feet of suction pipe.
468	d/76	1941	T,G	Irr	Casing: 246 feet cf 16-inch, lower 166 feet perforated. Pump: 12-inch, 2-stage set at 120 feet. See log.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
469	20 miles northeast	W. M. Kurklin	W.T.Tarkington	1936	223	15,13, 11	--
470	$19\frac{1}{2}$ miles northeast	O. C. Powell	do.	1934	275	--	--
471	19 miles northeast	B. B. Foreman	--	1937	205	13, 10	--
472	$18\frac{1}{2}$ miles northeast	M. L. Morris	--	1944	--	--	--
473	19 miles northeast	Floyd Cannon	L. A, Peeples	1944	300	16	--
474	20 miles northeast	L. M. Golden	Bud Gibbons	1944	248	14	1,5
475	$20\frac{1}{2}$ miles northeast	Lloyd Croslin	W. O. Tye	1941	241	15	--
476	do.	E. R. Shelly	John Bell	1940	210	16,13	--
477	$21\frac{1}{2}$ miles northeast	F. J. Stanton	--	1938	200	--	--
478	do.	R. C. Elder	Bud Gibbons	1944	250	14	--
479	do,	C S. Williams	do.	1944	240	15	--
480	22 miles northeast	Mrs. A. C. Scott	J.S.Tarkington	1941	207	15,13	--
481	$22\frac{1}{2}$ miles northeast	Dr. A. C. Scott	L. Buchanan	1940	205	15	--
482	$21\frac{1}{2}$ miles northeast	J. C. Erwin	--	1941	--	--	--
483	22 miles northeast	H. C. Leon	--	1944	312	16	--
484	$21\frac{1}{2}$ miles northeast	E. P. Hildreth	--	1944	300	15	1.5
485	$20\frac{1}{2}$ miles northeast	A. J. Goode	--	1944	--	--	--
486	20 miles northeast	Henry Linn	--	1944	--	--	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
469	d/90	1936	T,G	Irr	Casing: 150 feet of 15½-inch, 37 feet of 13½-inch, and 60 feet of 11½-inch. Pump: 12-inch, 3-stage set at 140 feet, 30 feet of suction pipe.
470	d/70	1934	None	N	Owner reports struck red clay at about 130 feet; capacity of well was about 600 gallons a minute. Abandoned and filled.
471	--	--	T,G	Irr	Casing: 81 feet of 13-inch unperforated, 79 feet of 13-inch and 54 feet of 10-inch perforated. Pump: 12-inch, 3-stage, set at 140 feet, 30 feet of suction pipe.
472	--	--	T,G	Irr	
473	--	--	T,G	Irr	Casing: 290 feet of 16-inch, lower 200 feet perforated. See log.
474	80.7	Oct. 13, 1944	T,G	Irr	Casing: 248 feet of 14-inch, 145 feet perforated. Pump: 12-inch, 3-stage, set at 160 feet, 10 feet of suction pipe.
475	d/80	Mar. 21, 1941	T,G	Irr	Casing: 241 feet of 15-inch, perforated from 85 to 235 feet. Pump: 12-inch, 2-stage set at 140 feet. Driller reports chief aquifer is sand and gravel at 101-160 feet.
476	--	--	T,G	Irr	Casing: 150 feet of 16-inch, lower part perforated; 60 feet of perforated 13-inch. Pump: 12-inch, 3-stage set at 150 feet, 30 feet of 8-5/8-inch suction pipe.
477	--	--	T,G	Irr	
478	--	--	T,G	Irr	Pump: 12-inch, 3-stage set at 140 feet, 10 feet of suction pipe. Pump column and suction pipe is 8 inches in diameter.
479	--	--	T,G	Irr	Casing: 240 feet of 15-inch. Pump: 12-inch, 3-stage set at 120 feet, 10 feet of 8-inch suction pipe.
480	d/86	Apr. 9, 1941	T,G	Irr	Casing: 150 feet of 15-inch, lower 60 feet perforated; 60 feet of perforated 13-inch. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of 8-inch suction pipe.
481	d/85	Sept. 27, 1940	T,G	Irr	Pump: 12-inch, 2-stage set at 130 feet, 10 feet of 8-inch suction pipe. See log.
482	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 100 feet, 10 feet of suction pipe. Pump column and suction pipe is 8 inches in diameter.
483	d/75	June 1944	T,G	Irr	Casing: 310 feet of 16-inch. Pump: 12-inch, set at 130 feet. Owner reports g..d water sand and gravel at 250 to 305 feet. Reports drawdown of about 37 feet after pumping 24 hours at 750 gallons a minute.
484	75.4	Oct. 10, 1944	T,G	Irr	Not used in 1944.
485	--	--	T,G	Irr	
486	--	--	T,G	Irr	Sluch dump contains large amount of deep-red and greenish-blue shale and siltstone of Triassic age. Well is weak.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
487	19 miles northeast	Adamson and Crews	--	1943	--	--	--
488	18 miles northeast	do.	--	1943	--	--	--
489	18½ miles northeast	E. J. King	Bud Gibbons	1944	250	--	--
490	18 miles northeast	Geo. D. Whiting	L. A. Peeples	1941	250	14	--
491	do.	E. O. King	Bud Gibbons	1944	250	14	1.2
491a	17 miles northeast	John Joiner	--	1944	--	--	--
492	do.	Donald Bledsoe	W. O. Tye	1940	257	15	--
493	15½ miles northeast	Robbins Bros.	L. A. Peeples	1944	294	16	1.3
494	14 miles northeast	Mrs. W. A. Hill	--	1940	--	--	--
495	15 miles northeast	G. C. McKinney	L. A. Peeples	1943	244	12½	--
496	do.	E. H. Truett	--	1944	232	14, 12	--
497	15½ miles northeast	E. R. Steene	--	1938	--	--	--
498	do.	Ed Snodgrass	L. A. Peeples	1941	262	15	1.0
499	14 miles northeast	N. G. Kelley	Bud Gibbons	1944	255	16	--
500	14½ miles northeast	Forbes McInroe	do.	1944	250	16	1.0
501	15 miles northeast	J. R. Killebrew	L. A. Peeples	1940	250	15	--
502	16 miles northeast	R. E. Caldwell	--	1944	216	16	--
503	do.	F. L. Peeples	--	1944	--	--	--
504	do.	Gulf Ins. Co.	--	1944	--	--	--
505	16½ miles northeast	J. R. Killebrew	--	1944	--	--	--
506	16 miles northeast	C. C. Mull	L. A. Peeples	1940	250	16	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
487	--	--	T,G	Irr	
488	--	--	T,G	Irr	
489	--	--	T,G	Irr	Pump: 12-inch, 3-stage set at 130 feet, 10 feet of suction pipe.
490	--	--	T,G	Irr	Casing: 250 feet of 14-inch, all perforated below the first water. Pump: 12-inch, 2-stage, set at 130 feet, 10 fe t of 8-inch suction pipe.
491	78.4	Oct. 13, 1944	T,G	Irr	Pump: 12-inch, 3-stage set at 160 feet.
491a	--	--	T,G	Irr	
492	d/78	Nov. 20, 1940	T,G	Irr	Casing: 257 feet of 15-inch. Pump: 12-inch, 3-stage set at 120 feet, 10 feet of 8-inch suction pipe. See log.
493	78.5	Oct. 10, 1944	T,G	Irr	Casing: 290 feet of 16-inch. Driller's log shows water sand at 86-94 feet, 180-218 feet, 224-270 feet and 275-289 feet.
494	--	--	T,G	Irr	
495	--	--	T,G	Irr	Casing: 244 feet of 12½-inch. Pump: 10-inch, 4-stage set at 120 feet, 10 feet of 8-inch suction pipe. See log.
496	d/75	Oct. 1944	T,G	Irr	Casing: 150 feet of 14-inch and 90 feet of 12-inch. Pump: 12-inch, 4-stage set at 120 feet. Discharge measured (parshall flume) 550 gallons a minute on short test by Soil Conservation Service engineers in October 1944.
497	--	--	T,G	Irr	
498	88.2	Jan. 25, 1941	T,G	Irr	Casing: 257 feet of 15-inch, perforated from 85 to 250 feet. Pump: 12-inch, 3-stage, set at 120 feet, 10 feet of 8-inch suction pipe.
499	--	--	T,G	Irr	Casing: 255 feet of 16-inch. Pump: 12-inch set at 120 feet.
500	79.8	Feb. 3, 1944	T,G	Irr	Casing: 250 feet of 15-inch. Pump: 12-inch, 3-stage, set at 120 feet. Driller reports this is a very good well.
501	--	--	T,G	Irr	Casing: 250 feet of 16-inch. Pump: 12-inch, 3-stage set at 120 feet, 20 feet of 8-inch suction pipe.
502	d/83	May 1944	T,G	Irr	Casing: 216 feet of 16-inch. Pump: 12-inch, 3-stage, set at 120 feet.
503	--	--	T,G	Irr	
504	--	--	T,G	Irr	
505	--	--	T,G	Irr	
506	--	--	T,G	Irr	Casing: 237 feet of 16-inch, perforated from 80 to 235 feet. Pump: 12-inch, 3-stage, set at 120 feet with 20 feet of 8-inch suction pipe.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
507	18 miles northeast	Mary C. Brown	--	1938	323	13, 11	--
507a	17½ miles northeast	-- Mabry	L. A. Peeples	1945	335	14	--
508	18½ miles northeast	A. J. Bryant	--	1944	361	16	1.2
509	16½ miles northeast	Alex Kittrell	L. A. Peeples	1941	247	15	--
510	16 miles northeast	W. S. Wendeborn	--	1944	--	--	--
511	15½ miles northeast	G. B. Forrest	L. A. Peeples	1944	221	16	--
512	do.	S. N. Sanders	O. S. Brock	1937	256	13	--
513	do.	R. J. Fisher	L. A. Peeples	1944	278	14	--
514	17 miles northeast	S. A. Tharp	--	1944	245	--	--
515	17½ miles northeast	do.	L. A. Peeples	1941	244	15	--
516	17 miles northeast	O. C. Medlock	do.	1942	291	14	1.5
517	do.	Geo. E. Benson	--	1938	--	--	--
518	15½ miles northeast	L. A. and W. W. Bradshaw	L. A. Peeples	1940	275	15	--
519	15 miles northeast	R. E. Bryant	--	1945	--	--	--
520	do.	E. T. Daniels	--	1944	240	--	--
521	do.	B. F. and R. Watkins	--	1940	250	16	--
522	do.	B. F. Watkins	L. A. Peeples	1941	242	15	--
523	16½ miles northeast	T. T. Easter	--	1943	--	--	--
524	do.	E. R. Sifert	--	1943	--	--	--

Well	WATER LEVEL: Below measuring point (ft.)	WATER LEVEL: Date of measurement	Method of lift b/	Use of water c/	Remarks
507	d/92	June 1938	T,G	Irr	Casing: 207 feet of 13-inch, lower 167 feet perforated; 80 feet of 11-inch perforated. Pump: 12-inch, 3-stage, set at 160 feet, 50 feet of suction pipe. See log.
507a	--	--	T,G	Irr	Casing: 335 feet of 14-inch. Driller states sand formations are hard; estimates well will yield 600 gallons a minute.
508	77.3	Oct. 12, 1944	T,G	Irr	Casing: 342 feet of 16-inch, 180 feet perforated. Pump: 12-inch, 3-stage, set at 160 feet. During development well was pumped at 700 gallons a minute (measured by parshall flume) for 33 hours. Drawdown not measured.
509	d/89	Mar. 7, 1941	T,G	Irr	Casing: 247 feet of 15-inch, lower 140 feet perforated. Pump: 12-inch, 3-stage, set at 140 feet, 10 feet of 8-inch suction pipe.
510	--	--	T,G	Irr	
511	--	--	T,G	Irr	Casing: 220 feet of 16-inch. Pump: 12-inch, 3-stage set at 140 feet. See log.
512	--	--	T,G	Irr	Casing: 250 feet of 13 to 11-inch with 126 feet perforated. Pump: 12-inch, 2-stage, set at 120 feet. 60 feet of suction pipe.
513	--	--	T,G	Irr	Casing: 278 feet of 14-inch. Pump: 10-inch, 4-stage, set at 150 feet, 10 feet of suction pipe. Driller reports chief aquifer is sand and gravel at 233-276 feet.
514	--	--	--	Irr	Not used in 1944.
515	d/85	Mar. 1941	T,G	Irr	Casing: 244 feet of 15-inch. Pump: 12-inch, 3-stage, set at 140 feet. Irrigated 130 acres of cotton, 100 acres of grain sorghum and 8 acres of alfalfa in 1944.
516	88.6	Oct. 12, 1944	T,G	Irr	Casing: 280 feet of 14-inch. Pump: 12-inch, 3-stage, set at 140 feet, 10 feet of suction pipe.
517	--	--	T,G	Irr	
518	d/73	Dec. 5, 1940	T,G	Irr	Casing: 263 feet of 15-inch. Pump: 12-inch, 2-stage, set at 120 feet.
519	--	--	--	Irr	
520	--	--	T,G	Irr	Pump: 12-inch, 4-stage, set at 140 feet, 10 feet of 8-inch suction pipe.
521	--	--	T,G	Irr	Casing: 160 feet of 16-inch; open hole from 160 to 250 feet. Pump: 12-inch, 3-stage, set at 140 feet, 20 feet of suction pipe.
522	d/78	Jan. 20, 1941	T,G	Irr	Casing: 230 feet of 15-inch. Pump: 12-inch, 2-stage, set at 140 feet, 10 feet of 8-inch suction pipe.
523	--	--	T,G	Irr	
524	--	--	T,G	Irr	

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
525	17 miles northeast	Fred Robb	--	1944	--	--	--
526	15 miles northeast	Joe Jenkins	--	1944	210	14	--
527	14½ miles northeast	do.	--	1945	--	--	--
528	14 miles northeast	T. U. Hunt	--	1941	250	--	1.3
529	16 miles east	V. E. Railsback	L. A. Peeples	1941	205	15	--
530	14½ miles east	Lucien Moore	--	1944	260	16, 12	--
531	13 miles east	C. R. Nix	--	1941	130	15	--
532	14 miles northeast	M. T. Darden	D. L. Handley	1941	289	16	--
533	13½ miles northeast	Glenn Eubank	L. A. Peeples	1941	262	15	--
534	13 miles northeast	J. H. Spence	--	1944	--	--	--
535	12½ miles northeast	W. T. Dawdy	--	1941	295	15	--
536	13½ miles northeast	-- Johnson	--	1944	--	--	--
537	13 miles northeast	Monroe DeBuske	--	1944	--	--	--
538	14½ miles northeast	H. Young	--	1937	--	--	--
539	14 miles northeast	Wayne S. Butler	L. A. Peeples	1941	255	15, 12	--
540	15 miles northeast	Grice Herrington	--	1944	249	14	--
541	14½ miles northeast	H. A. Black	--	1943	--	--	--
542	15½ miles northeast	Mrs. L. Stobaugh	--	1944	--	15, 13	--

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
525	--	--	T,G	Irr	
526	--	--	T,G	Irr	Casing: 210 feet of 14-inch. Pump: 12-inch, 3-stage, set at 120 feet, 10 feet of 8-inch suction pipe.
527	--	--	--	Irr	
528	70.8	Nov. 14, 1944	None	N	Neighbor reports supply not sufficient for irrigation.
529	d/72	Jan. 28, 1941	T,G	Irr	Casing: 197 feet of 15-inch, all perforated below the water table. Pump: 12-inch, 3-stage, set at 150 feet, 40 feet of suction pipe. Capacity of well reported by driller to be between 500 and 600 gallons a minute.
530	d/80	Aug. 1944	T,G	Irr	Casing: 152 feet of 16-inch; 110 feet of 12-inch. Pump: 10-inch, 3-stage, set at 160 feet. Discharge measured (parshall flume) 615 gallons a minute on 2-hour test by engineers of the Soil Conservation Service. Well was exhausted after 40 minutes at 690 gallons a minute.
531	d/60	Feb. 8, 1941	T,G	Irr	Casing: 130 feet of 16-inch. Pump: 12-inch, 2-stage set at 110 feet, 10 feet of 9-inch suction pipe.
532	d/88	Feb. 1941	T,G	Irr	Casing: 289 feet of 16-inch. Pump: 12-inch, 3-stage, set at 120 feet, 130 feet of suction pipe. Pump column is 9 inches in diameter.
533	d/60	Feb. 7, 1941	T,G	Irr	Casing: 260 feet of 15-inch. Pump: 12-inch, 3-stage set at 120 feet, 10 feet of 9-inch suction pipe.
534	--	--	T,G	Irr	
535	--	--	T,G	Irr	Casing: 295 feet of 15-inch, all perforated below the water table. Pump: 12-inch, 3-stage, set at 180 feet, 10 feet of 8-inch suction pipe.
536	--	--	T,G	Irr	
537	--	--	T,G	Irr	Pump: 12-inch, 3-stage, set at 130 feet, 10 feet of suction pipe. Pump column and suction pipe is 8-5/8-inches in diameter.
538	--	--	T,G	Irr	
539	d/69	Feb. 13, 1941	T,G	Irr	Casing: 155 feet of 15-inch; 100 feet of 12-inch. Pump: 12-inch, 3-stage set at 120 feet, 10 feet of 8-inch suction pipe. Discharge measured (parshall flume) 855 gallons a minute on short test by engineers of the Soil Conservation Service in October 1944.
540	--	--	T,G	Irr	Casing: 249 feet of 14-inch. Pump: 12-inch, 3-stage, set at 140 feet, 10 feet of suction pipe.
541	--	--	T,G	Irr	Pump: 12-inch, 3-stage, set at 130 feet, 10 feet of suction pipe.
542	--	--	T,G	Irr	Do.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
543	14 miles northeast	T. K. and W. F. Pruitt	L. A. Peeples	1941	264	15½	--
544	13½ miles northeast	Mrs. C. H. DeBuske	do.	1942	267	14	--
545	do.	K. Coats	do.	1940	213	16, 12	--
546	13 miles northeast	D. J. Ledbetter	--	1942	--	--	--
547	12 miles northeast	C. D. Bradford	L. A. Peeples	1937	--	--	--
548	do.	M. A. Evitt	--	1941	--	--	--
549	11½ miles northeast	J. A. Peel	L. A. Peeples	1941	198	15	--
550	11 miles northeast	R. L. Adamson	do.	1941	297	15	--
551	10½ miles northeast	J. F. Toler	do.	1941	300	16, 12	--
552	12 miles northeast	Mrs.Lillian Steely	--	1944	200	--	--
553	do.	R. E. Bryant	L. A. Peeples	1941	293	15	--
554	12½ miles northeast	E. C. DeBuske	--	1944	250	--	--
555	12 miles northeast	Mrs.Nettie DeBuske	L. A. Peeples	1941	289	14, 12	--
556	do.	Will Knowles	do.	1941	299	15	--
557	11½ miles northeast	M. Knowles	do.	1944	300	15	--
558	11 miles northeast	City of Idalou	do.	1925	125	15	--
559	10½ miles northeast	J. O. Barnhart	Bud Gibbons	1944	260	14	--
560	10 miles northeast	Geo. L. Manning	--	1941	--	--	--
561	do.	C. J. Hallmark	--	1943	--	--	--
562	10½ miles northeast	Claude Fields	L. A. Peeples	1940	200	15½	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
543	--	--	T,G	Irr	Casing: 264 feet of 15½-inch. Pump: 12-inch, 3-stage, set at 130 feet. Pump column is 8-5/8-inches in diameter.
544	--	--	T,G	Irr	Casing: 267 feet of 14-inch. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of suction pipe. Pump column and suction pipe is 8 inches in diameter.
545	--	--	T,G	Irr	Cased to 213 feet. Pump: 12-inch, 2-stage, set at 90 feet, 10 feet of suction pipe. Pump column is 8 inches in diameter.
546	--	--	T,G	Irr	
547	--	--	T,G	Irr	Pump: 10-inch, 2-stage, set at 100 feet, 10 feet of suction pipe.
548	--	--	T,G	Irr	
549	d/70	Jan. 15, 1941	T,G	Irr	Casing: 198 feet of 15-inch, all perforated below the water table. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 8-inch suction pipe.
550	d/62	Apr. 18, 1941	T,G	Irr	Casing: 297 feet of 15-inch. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 8-inch suction pipe.
551	d/60	Feb. 21, 1941	T,G	Irr	Casing: 250 feet of 16-inch; 50 feet of 12-inch. Pump: 12-inch, 2-stage, set at 120 feet. Irrigated 140 acres of cotton and grain sorghum two times and 10 acres of alfalfa fifteen times in 1944.
552	--	--	T,G	Irr	Pump: 12-inch, 3-stage, set at 120 feet, 10 feet of 8-inch suction pipe.
553	d/57	Mar. 1941	None	N	Driller reports capacity of well was about 300 gallons a minute which was not sufficient for irrigation. Abandoned and filled. See log.
554	--	--	T,G	Irr	Pump: 12-inch, 3-stage, set at 110 feet.
555	d/53	June 24, 1941	T,G	Irr	Casing: 289 feet of 14 to 12-inch, all perforated below the water table. Pump: 12-inch, 2-stage set at 120 feet, 10 feet of 8-inch suction pipe.
556	--	--	T,G	Irr	Casing: 299 feet of 15-inch. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 9-inch suction pipe.
557	--	--	T,G	Irr	Casing: 300 feet of 15-inch. Driller reports well will yield about 600 gallons a minute.
558	d/50	1944	T,E	P,S	One well served 105 meters in 1944.
559	--	--	T,G	Irr	Casing: 260 feet of 14-inch. Pump: 12-inch, 3-stage, set at 130 feet, no suction pipe.
560	--	--	T,G	Irr	
561	--	--	T,G	Irr	
562	d/55	Mar. 1940	T,G	Irr	Casing: 200 feet of 15½-inch; screen from 60 to 200 feet. Pump: 12-inch, 2-stage, set at 100 feet, 10 feet of 8-inch suction pipe.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
563	10½ miles northeast	L. P. Soape	L. A. Peeples	1944	240	16	--
564	10 miles northeast	C. A. Lawrence	do.	1941	242	15, 13	--
565	do.	J. W. Turner	--	1944	--	--	--
566	9 miles northeast	W. W. Lewis	Bud Gibbons	1942	134	15½	--
567	8½ miles northeast	J. A. Wood	B. B. Baron	1941	107	15	--
568	10 miles northeast	E. W. Reddell	--	1944	--	14	--
569	11½ miles northeast	Ed Foreman	L. A. Peeples	1944	304	16	--
570	do.	W. O. Grimes	do.	1940	160	15	--
571	10 miles northeast	H. W. Lasater	W.T.Tarkington	1944	170	16	1.5
572	9½ miles northeast	E. Fulfer	L. A. Peeples	1944	129	12	--
573	9 miles northeast	Ed Harrison	do.	1937	115	16	--
574	do.	J. B. Sherrod	B. B. Baron	1941	125	15	--
575	8½ miles northeast	J. C. Sherrod	--	1940	134	15, 12	--
576	do.	J. M. Sherrod	B. B. Baron	1941	106	15	--
577	8 miles northeast	J. F. Sherrod	do.	1941	117	15	--
578	do.	W. T. Adams	George Anderson	1942	120	12½	--

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
563	--	--	T,G	Irr	Casing: 240 feet of 16-inch. Pump: 10-inch, 4-stage, set at 110 feet, 10 feet of suction pipe.
564	d/52	Mar. 1941	T,G	Irr	Casing: 242 feet of 15 to 13-inch, all perforated below the water table. Pump: 12-inch, 2-stage, set at 140 feet. See log.
565	--	--	T,G	Irr	
566	d/44	Mar. 1941	T,G	Irr	Casing: 127 feet of 15½-inch, all perforated below the water table. Pump: 12-inch, 2-stage, set at 90 feet, 20 feet of 8-5/8-inch suction pipe.
567	--	--	T,G	Irr	Cased to 107 feet with screen from 40 to 107 feet. Pump: 12-inch, 2-stage, set at 80 feet. Driller's log shows water sand at 48-55 feet, 60-80 feet, and 85-103 feet.
568	43.7	Oct. 12, 1944	T,G	Irr	During development a large pile of fine to medium-grained buff sand was pumped from this well.
569	--	--	T,G	Irr	Casing· 300 feet of 16-inch. Pump: 10-inch, 4-stage, set at 150 feet, 10 feet of suction pipe. Driller estimates well will yield 600 gallons a minute. See log.
570	d/52	Dec. 28, 1940	T,G	Irr	Casing: 156 feet of 15-inch, all perforated below the water table. Pump: 12-inch, 2-stage, set at 120 feet. See log.
571	40.2	Nov. 21, 1944	T,G	Irr	Casing: 170 feet of 16-inch. Pump: 10-inch set at 100 feet. Drawdown 13 feet after pumping 830 gallons a minute (measured by parshall flume) for eight hours.
572	d/35	May 1944	T,G	Irr	Casing: 129 feet of 12-inch; perforated from 40 to 125 feet. Pump: 10-inch, 4-stage, set at 60 feet, 10 feet of suction pipe. Driller reports that well yielded 1,200 gallons a minute without exhaustion on short test.
573	--	--	T,G	Irr	Driller reports this well will yield more than 1,000 gallons a minute.
574	--	--	T,G	Irr	Casing: 106 feet of 15-inch, all perforated below the water table. Pump: 12-inch, 2-stage, set at 90 feet, 10 feet of 8-inch suction pipe.
575	d/58	Dec. 17, 1940	T,G	Irr	Cased to 134 feet, all of pipe perforated below 60 feet. Pump: 12-inch, 2-stage, set at 100 feet, 20 feet of 9-inch suction pipe. See log.
576	d/42	Feb. 13, 1941	T,G	Irr	Casing: 106 feet of 15-inch, all perforated below the water table. Pump: 12-inch, 2-stage, set at 80 feet, 15 feet of 8-inch suction pipe.
577	--	--	T,G	Irr	Casing: 117 feet of 15-inch. Pump: 12-inch, 2-stage, set at 95 feet with 10 feet of suction pipe. Driller reports water sands at 51-75 feet and 79-112 feet.
578	d/45	Sept. 5, 1942	T,G	Irr	Casing: 120 feet of 12½-inch. Pump: 10-inch, 4-stage, set at 90 feet. Driller reports water sands at 45-90 feet and 103-118 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
579	10 miles northeast	Alex Weaver	L. A. Peeples	1944	142	18	--
580	do.	B. M. Hicks	--	1944	140	--	--
581	10½ miles east	V. C. Snodgrass	L. A. Peeples	1941	133	15	--
582	11½ miles east	W. J. Grimes	do.	1942	185	14	--
583	11 miles east	L. V. Pounds	do.	1942	130	14	--
584	10½ miles east	C. C. Range	do.	1940	160	15	--
585	10 miles east	Milton Davis	do.	1942	115	14	--
586	8 miles east	W. A. Sides	do.	1939	150	13	--
587	7 miles east	G. F. and Marvin Moore	Q. S. Brock	1938	152	13	--
588	6½ miles east	F. O. Miller No. 3	L. A. Peeples	1942	129	13	--
589	6 miles east	W. C. and W. L. Walker	Bud Gibbons	1941	130	15½	--
590	5½ miles east	A. E. Griffis	L. A. Peeples	1943	133	12½	--
591	5 miles east	J. F. Goodnight	W. P. Crawford	1941	132	15	--
592	5½ miles east	J. F. Goodnight No.2	L. A. Peeples	1944	140	15	--
593	6 miles northeast	F. O. Miller No. 4	do.	1944	130	13	--
594	6½ miles northeast	Lula M. Koger	--	1942	--	--	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
579	d/40	Aug. 1940	T,G	Irr	Casing: 140 feet of 18-inch, 80 feet perforated. Pump: 12-inch, 4-stage, set at 90 feet. Discharge 990 gallons a minute (parshall flume measurement by engineers of the Soil Conservation Service) on short test in October 1944.
580	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 80 feet with 10 feet of 8-inch suction pipe.
581	d/52	Jan. 3, 1941	T,G	Irr	Casing: 131 feet of 15-inch. Pump: 12-inch, 2-stage, set at 110 feet, 10 feet of 8-inch suction pipe. Driller reports water sands at 55-95 feet and 107-117 feet.
582	--	--	T,G	Irr	Casing: 137 feet of 14-inch. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 8-inch suction pipe. See log.
583	--	--	T,G	Irr	Casing: 130 feet of 14-inch. Pump: 12-inch, 2-stage, set at 110 feet, 10 feet of suction pipe. Driller's log shows water sand at 50-60 feet, 70-85 feet, and 120-125 feet.
584	d/50	Dec. 10, 1940	T,G	Irr	Casing: 160 feet of 15-inch. Pump: 12-inch, 2-stage, set at 100 feet, 10 feet of 8-inch suction pipe.
585	d/47	Apr. 16, 1942	T,G	Irr	Casing: 115 feet of 14-inch. Pump: 12-inch 2-stage, set at 90 feet. Driller reports water in red sand at 50-80 feet and in coarse sand and gravel at 95-114 feet.
586	--	--	T,G	Irr	Casing: 150 feet of 13-inch; lower 80 feet perforated. Pump: 12-inch, 2-stage, set at 100 feet, 20 feet of suction pipe.
587	d/51	May 1938	T,G	Irr	Casing: 152 feet of 13-inch, lower 106 feet perforated. Pump: 12-inch, 2-stage, set at 110 feet, 30 feet of suction pipe.
588	d/55	Sept. 1942	T,G	Irr	Casing: 129 feet of 13-inch. Pump: 12-inch, 2-stage, set at 100 feet. Driller's log shows water in red sand at 55-72 feet, and in sand and gravel at 80-118 feet.
589	--	--	T,G	Irr	Casing: 130 feet of 15½-inch, lower 98 feet perforated. Pump: 12-inch, 2-stage, set at 100 feet, 10 feet of suction pipe.
590	d/40	Mar. 1943	T,G	Irr	Casing: 102 feet of 12½-inch. Pump: 10-inch, 4-stage, set at 90 feet, 10 feet of 8-inch suction pipe. Irrigated 80 acres of cotton in 1943.
591	d/60	Apr. 25, 1941	T,G	Irr	Casing: 132 feet of 15-inch, lower 70 feet perforated. Pump: 12-inch, 2-stage, set at 100 feet. Driller's log shows water sand at 62-78 feet, 84-106 feet and 114-130 feet.
592	--	--	T,G	Irr	Casing: 140 feet of 15-inch. See log.
593	--	--	T,G	Irr	Casing: 130 feet of 12-inch. Pump: 10-inch, 4-stage, set at 100 feet, 10 feet of suction pipe. Driller's log shows chief aquifer is coarse sand and gravel at 93-129 feet.
594	--	--	T,G	Irr	

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
595	7 miles northeast	C. C. Forbes	--	1941	--	--	--
596	7½ miles northeast	T. B. Harrison	-- McFarland	1941	--	--	--
597	do.	E. N. Harrison	L. A. Peeples	1944	125	14	--
598	8 miles northeast	G. W. Butler	--	1941	115	--	--
599	do.	P. L. Hamilton	L. A. Peeples	1938	114	--	--
600	5 miles northeast	Nairn Estate	L. C. Harrison	1941	5,002	--	--
601	4½ miles northeast	R. S. Collins	L. A. Peeples	1942	132	14	--
602	5 miles northeast	J. D. Nairn	George Anderson	1942	100	12	--
603	5½ miles northeast	C. Faulkner	--	Old	63	5	0.5
604	do.	do.	-- Spraules	1944	117	15	1.5
605	4¾ miles northeast	Nancy E. Brown	George Anderson	1942	120	14	--
606	5 miles northeast	W. W. Leach	--	1940	--	--	--
607	6 miles northeast	G. R. Bean	--	1941	115	--	--
608	do.	Perrin Bean	--	Old	97	6	0.7
609	do.	R. W. Matthews	--	1937	--	--	--
610	6½ miles northeast	G. R. Bean	--	1941	161	15	--

Well	Water level: Below measuring point (ft.)	Water level: Date of measurement	Method of lift b/	Use of water c/	Remarks
595	--	--	T,G	Irr	
596	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 80 feet, 10 feet of 8-inch suction pipe.
597	d/35	May 1944	T,G	Irr	Casing: 125 feet of 14-inch. Pump: 12-inch, 2-stage, high capacity set at 80 feet, 10-inch column pipe; no suction pipe. Driller's log shows chief aquifer is gravel at 93-125 feet.
598	--	--	T,G	Irr	
599	34.9	Nov. 28, 1944	T,G	Irr	Pump: 12-inch, 2-stage, set at 90 feet. Drawdown 19 feet after pumping 1,000 gallons a minute (parshall flume measurement) for 7 hours on November 1, 1944.
600	--	--	--	--	Nairn Estate No. 1 oil well. Initial production 300 barrels a day. Reported altitude, 3,290 feet. Casing: 392 feet of 1[illegible]-inch set in red beds. Log shows continuous red beds to 750 feet.
601	d/60	May 1942	T,G	Irr	Casing: 121 feet of 14-inch. Pump: 12-inch, 2-stage set at 80 feet, 10 feet of 9-inch suction pipe. See composite log of this well and well 600.
602	d/45	May 1942	T,G	Irr	Pump: 12-inch, 2-stage, set at 80 feet, 5 feet of suction pipe. Driller's log shows water sand at 45-60 feet, 65-90 feet and 95-100 feet.
603	36.3	Oct. 25, 1944	C,W	D,S	
604	35.3	do.	T,G	Irr	Casing: 115 feet of 15-inch, lower 75 feet perforated. Pump: 12-inch, 2-stage, set at 80 feet. Drawdown 27 feet after pumping 835 gallons a minute (orifice measurement) for 30 hours on test in October 1944.
605	--	--	T,G	Irr	Casing: 114 feet of 14-inch. Pump: 12-inch, 2-stage, set at 90 feet, 10 feet of suction pipe. Driller's log shows water at 48-60 feet, 75-90 feet and 97-113 feet.
606	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 80 feet, 10 feet of 8-inch suction pipe.
607	--	--	T,G	Irr	
608	50.5	Nov. 1, 1944	C,W	D,S	Owner reports that when well 607 was installed 250 feet away it became necessary to deepen this well and lower the pump. Continuous operation of the irrigation well for 3 days and nights would lower the water level in this well below 58 feet, the original pump setting.
609	--	--	T,G	Irr	
610	--	--	T,G	Irr	Casing: 154 feet of 15-inch, perforated from 50 to 150 feet. Pump: 12-inch, 2-stage, set at 120 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date com-ple-ted	Depth of well (ft.)	Diam-eter of well	Height of measuring point above ground (ft.) a/
611	6½ miles northeast	H. V. Edsall	--	Old	45	6	--
612	7½ miles northeast	H. H. Murray	B. B. Baron	1941	108	15, 13	--
613	8 miles northeast	J. E. Smiley	--	1939	--	--	--
614	8½ miles northeast	R. A. Gregory	L. A. Peeples	1944	196	15	--
615	9 miles northeast	Claude Martin	do.	1944	174	15	--
616	do.	Kenneth Williams	do.	1941	255	15, 13	--
617	8 miles northeast	Howard and McWhorter	do.	1940	130	14½	--
618	8½ miles northeast	M. C. Carroll	--	1940	--	--	--
619	8 miles northeast	J. W. Hairston	L. A. Peeples	1941	177	15	--
620	7½ miles northeast	J. N. Smiley	--	1940	135	--	--
621	do.	A. L. Cone	L. A. Peeples	1941	147	--	--
622	8½ miles northeast	J. A. Crawford	Harris and Wagoner	1937	170	15½, 13½	--
623	9 miles northeast	J. C. Newton Well 1	Bud Gibbons	1942	250	15½	--
624	9½ miles northeast	J. C. Newton Well 2	do.	1943	262	16	--
625	10 miles northeast	C. H. Gurney	--	--	--	--	--
626	do.	Baxter Orr	L. A. Peeples	1941	291	15	--
627	do.	J. N. Marks	do.	1940	230	15, 12½	--
628	10½ miles northeast	T. J. Bovell	--	1941	200	--	--
629	do.	Arthur Hettler	-- Spraules	1944	225	16	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
611	d/30	--	C,W	D,S	Tenant reports that depth to water was 17 feet in a seismograph test hole 0.3 mile from this well near a large playa lake.
612	--	--	T,G	Irr	Cased to 108 feet. Pump: 12-inch, 2-stage, set at 80 feet. Driller's log shows water sand at 45-65 feet, 70-85 feet and 90-107 feet.
613	--	--	T,G	Irr	
614	--	--	T,G	Irr	Casing: 195 feet of 15-inch. Driller's log shows water sand at 58-74 feet, 98-107 feet and water sand and conglomerate at 153-165 feet.
615	--	--	T,G	Irr	Casing: 174 feet of 15-inch. Pump: 10-inch, 4-stage, set at 100 feet, 10 feet of suction pipe. Pump column is 8 inches in diameter.
616	d/53	Feb. 8, 1941	T,G	Irr	Cased to 255 feet. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 8-inch suction pipe. See log.
617	d/42	1940	T,G	Irr	Casing: 130 feet of $14\frac{1}{2}$-inch, all perforated below 50 feet. Pump: 12-inch, 2-stage, set at 90 feet, 10 feet of 8-inch suction pipe.
618	--	--	T,G	Irr	
619	d/60	Apr. 10, 1941	T,G	Irr	Casing: 177 feet of 15-inch, all perforated below 60 feet. Pump: 12-inch, 2-stage, set at 110 feet, 10 feet of suction pipe. Pump column is 8 inches in diameter.
620	--	--	T,G	Irr	
621	--	--	T,G	Irr	Pump set at 110 feet. Estimated yield 750 gallons a minute. Not operated in 1941; pumped about 2 weeks in 1942; irrigated 210 acres and operated about 1,100 hours in 1943 and 1,000 hours in 1944.
622	--	--	T,G	Irr	Cased to 170 feet. Pump: 12-inch, 2-stage, set at 100 feet, 33 feet of suction pipe.
623	d/89	May 1942	T,G	Irr	Casing: 250 feet of $15\frac{1}{2}$-inch, perforated from 80 to 250 feet. Pump: 12-inch, 2-stage, set at 120 feet, 20 feet of suction pipe.
624	--	--	T,G	Irr	Casing: 260 feet of 16-inch. Pump: 12-inch, 3-stage, set at 120 feet, 10 feet of 8-5/8-inch suction pipe.
625	--	--	T,G	Irr	
626	--	--	T,G	Irr	Casing: 291 feet of 15-inch. Pump: 12-inch, 2-stage set at 120 feet, 10 feet of suction pipe.
627	--	--	T,G	Irr	Cased to 230 feet with 130 feet of screen. Pump: 12-inch, 2-stage set at 90 feet, 10 feet of 8-inch suction pipe.
628	d/55	1944	T,G	Irr	Estimated yield by the writer 750 gallons a minute on September 22, 1944.
629	d/58	Oct. 1944	T,G	Irr	Casing: 225 feet of 16-inch. Pump: 12-inch, 3-stage, set at 130 feet, 10 feet of suction pipe. Owner reports pumped 1,100 gallons a minute for 36 hours without exhausting well during development test in November 1944.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
630	10 miles northeast	Cecil Brashear	L. A. Peeples	1941	243	15	--
631	11½ miles northeast	J. W. Isom	--	1938	190	--	--
632	12 miles northeast	H. V. Seggern	--	1944	--	--	--
633	11½ miles northeast	J. W. Lawson	L. A. Peeples	1941	300	15	--
634	do.	H. G. Lawson	do.	1942	316	14½	--
635	11 miles northeast	A. L. Cone	do.	1945	250	14	--
636	10 miles northeast	Lee Minyard	--	1930	96	6	0.7
637	9½ miles northeast	John O. Ford	George Anderson	1941	166	14	--
638	9 miles northeast	Sue Evans	--	1944	--	--	--
639	8½ miles northeast	F. R. Friend	--	1941	--	--	--
640	8 miles north	Bruce Gentry	L. A. Peeples	1944	162	15½	1.3
641	10 miles north	George P. Livermore	--	1942	148	--	--
642	9 miles north	-- Litton	L. A. Peeples	1944	152	16	--
643	8 miles north	--	do.	1943	--	--	--
644	6½ miles north	S. E. and Arthur Cone	do.	1944	145	15	1.3
645	6 miles north	L. A. Peeples	do.	1938	146	15	1.0
646	7 miles north	Teal Brothers Well 3	--	1943	--	12	--
647	do.	Teal Brothers Well 2	--	1943	--	12	--
648	do.	Teal Brothers Well 1	--	1943	--	12	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
630	--	--	T,G	Irr	Casing: 243 feet of 15-inch. Pump: 12-inch, 2-stage, set at 120 feet. Driller's log shows water sand at 76-90, 141-153, 170-181 and 209-242 feet.
631	--	--	T,G	Irr	
632	--	--	T,G	Irr	
633	--	--	T,G	Irr	Casing: 300 feet of 15-inch. Pump: 12-inch, 2-stage, set at 140 feet, 10 feet of suction pipe. Pump column and suction pipe is 8 inches in diameter.
634	d/70	Sept. 1942	T,G	Irr	Casing: 300 feet of 14-inch. Pump: 12-inch, 3-stage, set at 140 feet, 10 feet of 9-inch suction pipe.
635	--	--	T,G	Irr	Casing: 250 feet of 14-inch, lower 170 feet perforated. See log.
636	83.2	Nov. 14, 1944	C,W	D,S	Pumping about 2 gallons a minute when water level was measured.
637	d/78	May 1941	T,G	Irr	Casing: 164 feet of 14-inch, screened from 80 to 160 feet. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of 8-inch suction pipe. See log.
638	--	--	T,G	Irr	Pump: 12-inch, 3-stage set at 130 feet, 10 feet of suction pipe.
639	--	--	T,G	Irr	
640	63.7	Sept.22, 1944	T,G	Irr	Casing: 157 feet of 15½-inch, screened from 65 to 155 feet. Driller estimates capacity of well at 400 gallons a minute. Log shows chief aquifer is sand at 81-117 feet.
641	--	--	T,G	Irr	Pump: 10-inch, 4-stage,set at 120 feet, 10 feet of suction pipe. Pump column and suction pipe is 8 inches in diameter.
642	--	--	T,G	Irr	Casing: 150 feet of 16-inch, lower 80 feet perforated. Driller estimates yield as 70 gallons a minute. See log.
643	--	--	None	N	Driller reports that insufficient water sand to supply an irrigation plant was penetrated; abandoned well.
644	43.2	Oct. 4, 1944	T,G	Irr	Casing: 145 feet of 15-inch, screened from 50 to 145 feet. Pump: No. 12, 2-stage, set at 80 feet. Driller's log shows chief aquifer is sand and gravel at 127-145 feet.
645	50.1	Dec. 4, 1944	T,G	Irr	Casing: 145 feet of 15-inch. Pump: 12-inch, 2-stage, set at 90 feet. Owner reports 35 feet of drawdown after pumping 1,000 gallons a minute for several days.
646	--	--	T,G	Irr	Pump: 10-inch, 4-stage, set at 110 feet, 10 feet of 8-inch suction pipe.
647	--	--	T,G	Irr	Same as well 646 except setting is 120 feet.
648	--	--	T,G	Irr	Same as well 646 except setting is 130 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
649	7 miles northeast	N. T. Stubblefield	--	--	--	--	--
650	6½ miles northeast	Elmer Edwards	L. A. Peeples	1944	183	--	--
651	5½ miles northeast	South Plains Army Air Forces School	do.	1942	--	--	--
652	do.	do.	do.	1942	150	--	--
653	5 miles northeast	do.	do.	1942	150	--	--
654	5½ miles northeast	do.	do.	1942	155	--	--
655	5 miles northeast	Robert R. Bean	--	1938	150	--	--
656	1½ miles northeast	C. R. McLaurin	O. S. Brock	1944	102	6	--
657	4¼ miles northeast	G. C. Beard	--	1938	--	--	--
658	5 miles northeast	G. L. Louden	L. A. Peeples	1944	151	12	0.5
659	do.	V. Ford	George Anderson	1941	160	15	--
660	4½ miles north	C. L. Goodnight	L. A. Peeples	1943	120	12	--
661	5 miles north	City of Lubbock	W.P.Crawford and George Anderson	1941	124	--	--
662	5½ miles north	J. E. Vickers	L. A. Peeples	1941	152	15	--
663	4½ miles north	J. E. Hancock	--	1942	--	14	--
664	do.	C. Covey	--	1940	120	--	--
665	4 miles north	--	--	--	--	--	--
666	3 miles north	R. E. Karper	Bradford Supply Co.	1940	140	16	1.0
667	2¾ miles northeast	E. L. Steck	--	--	110	5	--
668	3 miles northeast	do.	L. A. Peeples	1943	177	--	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
649	--	--	C,G	Irr	Irrigates a few acres of truck.
650	--	--	T,G	Irr	Cased to 180 feet. Pump: 10-inch, 4-stage, set at 140 feet, 10 feet of suction pipe. See log.
651	--	--	None	N	Driller reports very little water sand was penetrated and well was abandoned.
652	--	--	None	N	Located about 0.3 mile south of well 651. Test indicated well would yield about 125 gallons a minute, according to driller.
653	--	--	T,E	P,S	Located about ½ mile south of well 652. Driller estimates well will yield 700 gallons a minute.
654	--	--	T,E	P,S	Located about 0.3 mile east of well 653. Estimated yield, 400 gallons a minute according to driller.
655	--	--	T,G	Irr	
656	--	--	C,W	D,S	No casing in top; 40 feet of perforated pipe in bottom.
657	--	--	T,G	Irr	
658	77.4	Sept.25, 1944	T,G	Irr	Casing: 150 feet of 12-inch, lower 70 feet perforated. Pump: 10-inch, 2-stage, set at 110 feet, 10 feet of 8-inch suction pipe. Had to "mud hog" well to clear up loose water sand.
659	--	--	T,G	Irr	Pump: 12-inch, 3-stage, set at 110 feet, 10 feet of suction pipe.
660	--	--	T,E, 25	Irr	Casing: 117 feet of 12-inch. Pump: 10-inch, 3-stage, set at 80 feet, 10 feet of 8-inch suction pipe.
661	--	--	T,E	P,S	Supplies municipal airport. Driller reports that "porous sandrock" at 85 to 95 feet supplies most of the water.
662	--	--	T,G	Irr	Casing: 141 feet of 15-inch, lower 80 feet perforated. Pump: 10-inch, 3-stage, set at 110 feet. See log.
663	--	--	T,G	Irr	Pump: 10-inch, 3-stage, set at 80 feet, 10 feet of suction pipe. Pump column and suction pipe is of 6-inch diameter.
664	--	--	T,E	Irr	
665	--	--	T,G	Irr	Irrigates several acres of truck.
666	59.2	Sept.10, 1940	T,G	Irr	Casing: 140 feet of 16-inch, lower 75 feet perforated. Pump: 12-inch, 2-stage, set at 90 feet, 30 feet of suction pipe. Drawdown 24 feet after pumping 1,100 gallons a minute (weir measurement) for 14½ hours on test in September 1940.
667	--	--	C,W	D,S	
668	--	--	T,G	Irr	Pump: 12-inch set at 100 feet, 10 feet of suction pipe. Tenant reports coarse gravel from 157 to 177 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
669	3 miles northeast	E. L. Steck	L. C. Harrison et al.	1941	5,510	--	--
670	2½ miles northeast	Harvey Allen	L. A. Peeples	1941	147	16	1.5
671	2¼ miles northeast	Mollie D. Abernathy	B. B. Baron	1941	190	15	1.0
672	3½ miles northeast	C. R. Styles	--	--	80	6	--
673	3¾ miles northeast	J. W. Lemon	--	1943	126	14	--
674	3½ miles northeast	Bedford Shearer	Bud Gibbons	1943	118	15	--
675	3 miles northeast	J. A. Hodges	--	1944	150	12½	--
676	do.	Kenneth Bozeman	R. F. Davis	1941	126	12½	--
677	2¾ miles northeast	--	--	1944	--	--	--
678	2¼ miles northeast	R. H. Hester	--	1938	--	--	--
679	2 miles east	--	--	--	--	--	--
680	2 miles west	Texas Technological College	L. A. Peeples	1944	154	14	1.2
681	2½ miles west	do.	--	1930	--	--	--
682	do.	do	--	1930	--	--	--
683	3½ miles west	do.	--	1930	51	5	0.8
684	4 miles northwest	do.	L. A. Peeples	1942	168	14	--
685	3¼ miles northwest	L. H. Redwine	--	1938	100	--	--
686	2½ miles northwest	H. W. Stanton	--	1938	130	--	--
687	2¼ miles northwest	do.	--	1944	--	--	--

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
669	--	--	--	--	E. L. Stock No. 1 oil test; no production. Reported altitude, 3,238 feet. Surface casing set in red clay at 207 feet, probably top of Triassic Red Beds.
670	70.3	Sept.25, 1944	T,G	Irr	Casing: 147 feet of 16-inch. Pump: 12-inch, 3-stage, set at 110 feet, 10 feet of suction pipe.
671	73.9	Oct. 7, 1944	T,E, 30	Irr	Casing: 150 feet of 15-inch, lower 75 feet perforated. Pump: 12-inch, 3-stage, set at 120 feet. Driller's log shows water sand and gravel at 75-106 feet, 120-144 feet and 160-190 feet.
672	--	--	C,W	D,S	
673	--	--	T,G	Irr	Pump: 10-inch, 4-stage, set at 90 feet, 10 feet of suction pipe.
674	d/50	1943	T,G	Irr	Pump: 12-inch, 3-stage, set at 90 feet,10 feet of suction pipe. Pump dealer reports well will yield more than 1,000 gallons a minute on continuous pumping.
675	--	--	T,G	Irr	Casing: 150 feet of 12½-inch, lower 75 feet perforated. Pump: 10-inch, 4-stage, set at 90 feet, 10 feet of suction pipe.
676	d/76	Apr. 19, 1941	T,G	Irr	Casing: 122 feet of 12½-inch. Pump: 10-inch, 2-stage, set at 100 feet, 10 feet of suction pipe. Driller's log shows water sand at 76-100 feet, and 104-122 feet.
677	--	--	T,G	Irr	
678	--	--	T,G	Irr	
679	--	--	T,G	Irr	One of 5 irrigation wells on ½ section of land of similar size used to irrigate small truck farms.
680	67.6	Oct. 4, 1944	T,E	Irr	Not used in 1944. Driller reports capacity of well is about 350 gallons a minute. Log shows water sand at 81-114 feet, clay and gravel at 114-148 feet, and lime rocks at 148-154 feet.
681	--	--	T,E	Irr	
682	--	--	T,E	Irr	
683	41.2	Nov. 11, 1944	C,W	D,S	Pumping about 2 gallons a minute when measured.
684	--	--	T,G	Irr	Casing: 168 feet of 14-inch. Pump: 12-inch, 2-stage, set at 100 feet, 10 feet of suction pipe.
685	--	--	T,E, 25	Irr	About 500 feet from Lubbock City Well C-17.
686	--	--	T,E, 30	Irr	
687	--	--	T,E	Irr	

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
688	3 miles northwest	J. M. Steele	--	1944	--	--	--
689	3½ miles northwest	J. E. Griffis	--	1944	--	--	--
690	4 miles northwest	O. C. Horne	Bud Gibbons	1940	120	14	--
691	do.	do.	--	1944	--	--	--
692	5 miles northwest	J. B. McCauley	Green Machinery Co.	1940	120	16	--
693	4¾ miles northwest	H. L. McCauley	George Anderson	1944	110	--	--
694	do.	C. L. Quillen	--	Old	55	--	--
695	5 miles northwest	W. D. Mac Millan	--	--	Lake	--	--
696	7 miles northwest	S. E. Cone Well 1	B. B. Baron	1941	133	15, 13	--
699	do.	D. J. James	--	1937	127	--	--
700	7½ miles northwest	W. D. Mac Millan	--	1944	170	--	1.0
701	8 miles northwest	S. E. Cone Well 2	B. B. Baron	1941	178	15, 13	--
702	8½ miles northwest	L. E. McMenemy	Tatum and Son	1937	170	19, 15, 13	--
703	do.	Alfred Jackson	--	--	--	--	--
704	9 miles northwest	J. B. Marion	--	Old	84	6	--
705	10 miles northwest	Herbert Galbraith	O. S. Brock	1941	192	14	--
706	9½ miles northwest	W. M. Gilliam	R. F. Davis	1941	159	15, 12	--
707	11½ miles northwest	Shallowater School	--	1930	110	--	--
708	9½ miles northwest	H. K. Arant	--	1941	150	--	--
709	8 miles northwest	E. V. Anderson	Bud Gibbons	1942	140	15½	--
710	7½ miles northwest	do.	do.	1942	140	15½	--
711	6½ miles northwest	Reba B. Green Well 3	D. Nordyke	1941	125	15½	--

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
688	--	--	T,G	Irr	
689	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 90 feet, 10 feet of suction pipe.
690	--	--	T,G	Irr	Casing: 120 feet of 14-inch. Pump: 12-inch, 2-stage set at 90 feet, 20 feet of suction pipe.
691	--	--	T,G	Irr	Pump: 12-inch. 2-stage, set at 90 feet, 20 feet of suction pipe.
692	d/42	Dec. 1940	T,G	Irr	Casing: 112 feet of 16-inch, lower 70 feet perforated. Pump: 14-inch, 1-stage, set at 85 feet. Pump column is 10-5/8 inches in diameter.
693	--	--	T,G	Irr	Pump is set at 90 feet.
694	--	--	C,W	D,S	
695	--	--	--	S	Small lake artificially excavated below the water table and fed by springs.
696	--	--	T,G	Irr	Cased to 133 feet. Pump: 12-inch, 2-stage, set at 80 feet, 10 feet of 9-inch suction pipe. Driller's log shows water in sand at 37-57 feet, 63-103 feet, and in gravel at 106-127 feet.
699	d/40	May 1937	T,G	Irr	Irrigated 60 acres of cotton, 30 acres of grain sorghum and 6 acres of truck in 1937.
700	70.0	Sept.23, 1944	T,G	Irr	Pumped large pile of fine to coarse-grained reddish-buff sand during development.
701	--	--	T,G	Irr	Cased to 178 feet. Pump: 12-inch, 2-stage set at 130 feet, 10 feet of suction pipe. See log.
702	--	--	T,G	Irr	Casing: 40 feet of unperforated 19-inch; 137 feet of 15-inch, upper 80 feet perforated; 40 feet of perforated 13-inch. Pump: 12-inch, 2-stage set at 120 feet.
703	--	--	T,G	Irr	
704	65.0	Nov. 10, 1944	C,W	D,S	
705	d/85	Feb. 26, 1941	T,G	Irr	Casing: 192 feet of 14-inch. Pump: 12-inch, 3-stage set at 120 feet, 20 feet of suction pipe. See log.
706	d/66	Apr. 10, 1941	T,G	Irr	Cased to 159 feet. Pump: 12-inch, 2-stage set at 110 feet, 10 feet of 8-inch suction pipe. Driller's log shows chief water sands to be at 65-100 feet and 133-155 feet.
707	d/65	1944	T,E	P,S	Supplies public school.
708	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 80 feet, 15 feet of suction pipe.
709	--	--	T,G	Irr	Casing: 140 feet of 15½-inch. Pump: 12-inch, 2-stage, set at 90 feet, 10 feet of suction pipe.
710	d/45	July 1942	T,G	Irr	Do.
711	--	--	T,G	Irr	Casing: 125 feet of 15½-inch. Pump: 14-inch, 2-stage set at 80 feet, 20 feet of suction pipe.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
712	6 miles northwest	Reba B. Green Well 1	D. Nordyke	1941	105	15½	2.0
713	do.	Reba B. Green Well 2	do.	1941	105	15½	1.0
714	6½ miles northwest	J. A. Hodges	--	1944	140	--	2.0
715	6 miles northwest	H. V. Feazel	--	Old	49	6	0.0
716	4 miles northwest	Will Stacy	--	Old	40	6	--
717	6 miles northwest	C. W. Meyers	F. R. Kelly	1941	166	15, 13	--
718	6½ miles northwest	R. L. Oldham	L. A. Peeples	1937	210	14	--
719	6 miles west	W. B. Gregory	do.	1937	179	14	--
720	5½ miles west	J. C. Davis	George Anderson	1943	179	14	--
721	4½ miles west	John King	--	1939	170	--	--
722	5½ miles west	B. B. Kent	George Anderson	1943	177	12½	--
723	6 miles west	J. H. Whiteside	--	1941	--	--	--
724	7 miles west	M. S. Goodpasture	L. A. Peeples	1935	140	14	0.7
725	do.	J. W. Goodpasture	F. R. Kelly	1940	143	16	--
726	7½ miles northwest	W. F. White	--	--	--	--	--
727	9½ miles west	J. H. Abel	--	--	--	--	--
728	9 miles northwest	J. R. Jameson	--	1940	160	15	--
729	10 miles northwest	J. B. and Aubrey Edwards	L. A. Peeples	1940	150	15	--
730	do.	C. L. Bryan	do.	1942	162	14	--
731	9 miles northwest	M. T. Stanton	--	1937	170	16	1.8

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
712	26.4	Nov. 7, 1944	T,G	Irr	Casing: 105 feet of 15½-inch, lower 97 feet perforated. Pump: 12-inch, 2-stage, set at 90 feet, 10 feet of suction pipe.
713	23.9	do.	T,G	Irr	Cased to 105 feet. Pump: 14-inch, 2-stage, set at 80 feet, 10 feet of 10-inch suction pipe. City Engineer of Lubbock reports pumped 1,500 gallons a minute on 2½-hour test without exhausting well. Could not measure drawdown.
714	32.7	do.	T,G	Irr	
715	29.5	Oct. 5, 1944	C,W	D,S	
716	d/20	Oct. 1944	C,E, ½	D,S	
717	--	--	T,G	Irr	Cased to 166 feet. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 8-inch suction pipe.
718	--	--	T,G	Irr	Cased to 200 feet. Pump: 10-inch, 3-stage, set at 150 feet.
719	d/45	Aug. 1939	T,G	Irr	Cased to 179 feet. Pump: 10-inch, 3-stage, set at 150 feet, 15 feet of 8-inch suction pipe. Drilled to blue shale of Cretaceous age.
720	d/45	1943	T,G	Irr	Casing: 157 feet of 14-inch. Pump: 12-inch, 2-stage, set at 120 feet. Driller's log shows water in sand at 55-70 feet, and in sand and gravel at 110-125 feet and 145-175 feet.
721	--	--	T,G	Irr	
722	--	--	T,G	Irr	Casing: 177 feet of 12½-inch. Pump: 10-inch, 4-stage, set at 120 feet, 10 feet of 9-inch suction pipe. See log.
723	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 110 feet, 10 feet of suction pipe.
724	68.9	Oct. 12, 1939	T,G	Irr	Pump: 12-inch, 2-stage set at 80 feet, 20 feet of suction pipe.
725	--	--	T,G	Irr	Casing: 140 feet of 16-inch. Pump: 12-inch, 2-stage, set at 80 feet, 30 feet of suction pipe.
726	--	--	T,G,	Irr	
727	--	--	T,G	Irr	
728	--	--	T,G	Irr	
729	--	--	T,G	Irr	Casing: 150 feet of 15-inch. Pump: 12-inch, 2-stage, set at 100 feet, 10 feet of 8-inch suction pipe.
730	d/50	July 1942	T,G	Irr	Casing: 162 feet of 14-inch. Pump: 12-inch, 2-stage, set at 120 feet. Driller's log shows chief aquifer is sand and gravel at 99-161 feet.
731	54.4	Dec. 20, 1937	T,G	Irr	Yellow and black shale of Cretaceous age were noted in the slush dump by the writer. Irrigated 90 acres of cotton, 80 acres of wheat, and barley, and 5 acres of alfalfa in 1938.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
732	8 miles northwest	C. A. Gibson	--	1937	161	15	1.5
733	do.	G. W. Williams	O. S. Brock	1941	160	15½	--
734	8½ miles northwest	R. D. Holmes	--	1938	--	--	--
735	10 miles northwest	R. L. Polk	L. A. Peeples	1943	139	12½	--
736	10½ miles northwest	Glenn Blackman	do.	1944	126	15	--
737	do.	do.	do.	1944	130	--	--
738	11 miles northwest	C. C. Vance	George Anderson	1943	120	12½	1.5
739	13½ miles northwest	E. A. Preston	L. A. Peeples	1943	192	12½	--
740	16½ miles northwest	Presbyterian Church	--	1943	--	--	--
741	14½ miles northwest	Joe Sooter	--	1941	--	--	--
742	14 miles northwest	T. M. Lawson	--	1942	--	--	--
743	15 miles northwest	J. T. Treadwell	J. N. Smiley	1938	146	--	--
744	do.	do.	do.	1938	160	12½	--
745	do.	do.	do.	1938	165	--	--
746	do.	Jim Ashburn	D. C. Howell	1942	159	12½	--
747	do.	O. A. Woody Well 1	L. A. Peeples	1940	184	15, 12½	--
748	do.	O. A. Woody Well 2	B. B. Baron	1940	186	14	--

Well	WATER LEVEL: Below measuring point (ft.)	WATER LEVEL: Date of measurement	Method of lift b/	Use of water c/	Remarks
732	41.8	Dec. 18, 1937	T,G	Irr	Casing: 134 feet of 15-inch. Irrigated 58 acres of cotton and grain sorghum in 1938. Tenant reports capacity of well is about 450 gallons a minute.
733	--	--	T,G	Irr	Casing: 150 feet of 15½-inch, lower 120 feet perforated. Pump: 12-inch, 2-stage, set at 80 feet, 20 feet of suction pipe. See log.
734	--	--	T,G	Irr	
735	--	--	T,G	Irr	Casing: 134 feet of 12½-inch: Pump: 10-inch. 4-stage, set at 70 feet, 10 feet of 8-inch suction pipe.
736	--	--	T,G	Irr	Casing: 120 feet of 15-inch. Pump: 12-inch, 2-stage, set at 100 feet, 10 feet of suction pipe. See log.
737	--	--	None	N	Driller reports very little water sand was penetrated; estimates capacity of well was about 300 gallons a minute. Cretaceous clays were noted in the slush dump by the writer.
738	40.1	Oct. 9, 1944	T,G	Irr	Casing: 120 feet of 12½-inch. Pump: 10-inch, 3-stage, set at 80 feet, 10 feet of 8-inch suction pipe. Irrigated 100 acres in 1944. Driller's log shows water sand at 45-67 feet, 87-95 feet, and 110-120 feet.
739	--	--	T,G	Irr	Casing: 192 feet of 12½-inch. Pump: 10-inch, 4-stage, set at 120 feet, 10 feet of 8-inch suction pipe. See log.
740	--	--	T,G	Irr	Cretaceous shales were noted in the slush dump by the writer.
741	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 80 feet, 10 feet of 9-inch suction pipe.
742	--	--	None	N	Owner reports that yield was insufficient for irrigation; abandoned and filled.
743	--	--	None	N	Do.
744	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 110 feet, 8-inch column pipe. Chief aquifer, coarse yellow sand and gravel at 98 to 146 feet. Yellow and blue clay from 146 to 160 feet.
745	--	--	T,G	Irr	Driller reports yield of well as about 450 gallons a minute.
746	d/68	May 1942	T,G	Irr	Casing: 157 feet of 12½-inch. Pump: 10-inch, 4-stage, set at 120 feet. Chief aquifer, yellow sand and gravel at 118-130 feet. Alternating beds of yellow clay and sand from 130 to 159 feet.
747	--	--	T,G	Irr	Casing: 148 feet of 15-inch; 41 feet of 12½-inch. Pump: 12-inch, 2-stage, set at 140 feet, 10 feet of suction pipe. Driller reports water sand at 106-149 feet and 166-184 feet.
748	d/106	July 1940	T,G	Irr	Casing: 146 feet of 14-inch. Pump: 12-inch, 2-stage, set at 140 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
749	14½ miles northwest	J. J. Callaway	H. V. Price	1942	212	14	--
750	14 miles northwest	Bellows and Greer Well 1	L. A. Peeples	1941	167	15	--
751	do.	Bellows and Greer Well 6	do.	1942	146	15	--
752	13½ miles northwest	Bellows and Greer Well 7	do.	1942	160	15	--
753	14 miles northwest	Bellows and Greer Well 4	do.	1941	144	15	--
754	13½ miles northwest	Bellows and Greer Well 5	do.	1942	114	15	--
755	13 miles northwest	Bellows and Greer Well 3	do.	1941	124	--	--
756	do.	Bellows and Greer Well 2	do.	1941	140	15	--
757	14 miles northwest	L. L. Lindsey	George Anderson	1943	192	12½	--
758	13½ miles northwest	Burl Griffith	L. A. Peeples	1942	152	14	--
759	11 miles northwest	George Baumgart	--	1938	--	--	--
760	10½ miles northwest	S. H. Robinson	E. S. Emerson	1941	161	16	--
761	do.	Lubbock Army Air Forces Base	Nordyke Lumber Co.	1941	157	12	--
762	10½ miles west	do.	do.	1941	155	12	--
763	do.	do.	do.	1941	152	12, 10½	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
749	--	--	T,G	Irr	Cased to 212 feet. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of suction pipe. See log.
750	d/90	Dec. 18, 1941	T,G	Irr	Casing: 167 feet of 15-inch. Pump: 12-inch, 2-stage, set at 130 feet. Pump company reports drawdown was 20 feet after pumping 900 gallons a minute for 24 hours in February 1941.
751	d/82	Jan. 27, 1942	T,G	Irr	Casing: 146 feet of 15-inch. Pump: 12-inch, 2-stage, set at 130 feet. Pump company reports drawdown was 43 feet after pumping 750 gallons a minute for 18 hours during development of well.
752	d/60	Feb. 1, 1942	T,G	Irr	Casing: 160 feet of 15-inch. Pump: 12-inch, 2-stage, set at 130 feet. Pump company reports drawdown was 70 feet after pumping 600 gallons a minute for 24 hours.
753	d/55	Dec. 22, 1941	None	N	Pump company reports drawdown was 70 feet after pumping 330 gallons a minute for 12 hours. Insufficient water for irrigation; abandoned well.
754	d/50	Jan. 2, 1942	None	N	Driller's log shows only 12 feet of water sand between 50 and 80 feet, and yellow and blue clay from 80 to 114 feet. Insufficient water for irrigation; abandoned well.
755	d/56	Dec. 18, 1941	None	N	Do.
756	d/55	do.	T,G	Irr	Casing: 140 feet of 15-inch. Pump: 12-inch, 3-stage, set at 130 feet. Reported drawdown 71 feet after pumping 460 gallons a minute for 24 hours in February 1942. See log.
757	d/100	Mar. 1943	T,G	Irr	Casing: 192 feet of 12½-inch. Pump: 10-inch, 4-stage, set at 140 feet. Driller's log shows water sand and gravels at 130-150 feet, 162-172 feet, and yellow clay, 190-192 feet.
758	d/75	May 1942	T,G	Irr	Casing: 152 feet of 14-inch. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 9-inch suction pipe. Driller's log shows chief aquifer is sand and gravel at 90 to 150 feet.
759	--	--	T,G	Irr	
760	--	--	T,G	Irr	Casing: 161 feet of 16-inch. Pump: 12-inch 2-stage, set at 100 feet, 10 feet of 8-inch suction pipe.
761	--	--	T,E, 40	P,S	Test well 1. Casing: 157 feet of 12-inch. Owner reports average yield on 43-hour test was 720 gallons a minute. In 1944 average daily consumption at the Base was 459,000 gallons.
762	--	--	T,E, 40	P,S	Casing: 155 feet of 12-inch. Owner reports average yield on 24-hour test was 650 gallons a minute. Driller reports water sand and gravel from 76 to 153 feet.
763	--	--	T,G	P,S	Test well 3; used as standby. Cased to 152 feet. After test pumping for 44 hours capacity of well was estimated as 300 gallons a minute.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
764	10½ miles west	Lubbock Army Air Forces Base	Nordyke Lumber Co.	1941	161	12, 10½	--
765	10¼ miles west	A. L. King	O. S. Brock	1941	160	15	--
766	10 miles west	W. C. Huffaker	R. F. Davis	1941	167	15	--
767	do.	C. R. Moore	George Anderson	1944	190	12½	--
768	do.	Aubrey Lane	--	1944	--	--	--
769	10½ miles west	C. B. Self	B. B. Baron	1940	183	14½, 12½	--
770	11½ miles west	S. H. Bradford	--	1942	170	14	--
771	12 miles west	J. S. Sharp	F. R. Kelly	1941	164	15	--
772	do.	J. R. Cates	W. P. Crawford	1941	188	15	--
773	13 miles west	L. V. Preston	Van Pate	1941	170	--	--
774	12½ miles west	Clowe and Cowan	--	1935	175	--	--
775	11 miles southwest	W. O. Moore	--	1943	170	--	--
776	10½ miles southwest	T. M. Nelson	E. S. Emerson	1941	172	15½	--
777	13 miles southwest	-- Manning	George Anderson	1944	166	14	--
778	14 miles southwest	L. E. Tucker	--	1938	--	--	--
779	13½ miles southwest	Ernest Marquis	Bud Gibbons	1941	165	15½	--
780	do.	W. B. Atkins	George Anderson	1943	174	12	--
781	13 miles southwest	-- Miller	--	1944	170	--	--

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
764	--	--	T,G	P,S	Test well 4; used as standby. Casing: 135 feet of 12-inch; 31 feet of 10½-inch. After test pumping for 44 hours yield of well increased from 400 to about 700 gallons a minute.
765	d/80	1941	T,G	Irr	Cased to 160 feet, lower 80 feet perforated. Pump: 12-inch, 2-stage, set at 110 feet, 10 feet of suction pipe. See log.
766	--	--	T,G	Irr	Casing: 167 feet of 15-inch. Pump: 12-inch, 3-stage, set at 150 feet. Driller reports water sand and gravel at 85-120 feet, 134-144 feet, and 145-167 feet.
767	--	--	T,G	Irr	Casing: 186 feet of 12-inch. Pump: 10-inch, 4-stage, set at 140 feet, 10 feet of suction pipe. See log.
768	--	--	T,G	Irr	
769	d/79	Feb. 21, 1940	T,G	Irr	Cased to 183 feet. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of suction pipe. Driller reports water sand at 108-133 feet, 139-156 feet, and 162-180 feet.
770	d/76	1942	T,G	Irr	Casing: 170 feet of 14-inch. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of suction pipe.
771	--	--	T,G	Irr	Casing: 164 feet of 15-inch, lower 100 feet perforated. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of suction pipe.
772	d/80	May 1941	T,G	Irr	Casing: 188 feet of 15-inch, lower 100 feet perforated. Pump: 12-inch, 2-stage, set at 130 feet. Driller's log shows water sand and gravel at 90-105 feet, 107-120 feet, 127-150 feet, and 160-172 feet.
773	--	--	T,G	Irr	Cased to 137 feet. Pump: 12-inch, 2-stage, set at 130 feet, 20 feet of suction pipe.
774	--	--	T,G	Irr	Pump: 12-inch, 3-stage. Owner reports yield as about 700 gallons a minute.
775	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 8-inch suction pipe.
776	--	--	T,G	Irr	Casing: 172 feet of 15½-inch. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of 8-inch suction pipe. Log shows water sand and gravel at 130-160 feet, and 164-169 feet.
777	d/84	Feb. 10, 1944	T,G	Irr	Casing: 166 feet of 14-inch. Owner reports chief water sand is from 115 to 166 feet.
778	--	--	T,G	Irr	
779	--	--	T,G	Irr	Casing: 148 feet of 15½-inch. Pump: 12-inch, 2-stage, set at 140 feet, 10 feet of suction pipe.
780	--	--	None	N	Owner reports yield was about 350 gallons a minute which was not adequate for irrigation. Pulled casing and abandoned well. See log.
781	--	--	T,G	Irr	Yield reported about 600 gallons a minute.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
782	12 miles southwest	Len McClellan	W. P. Crawford	1941	168	15	--
783	$14\frac{1}{2}$ miles southwest	S. J. Oliver	--	1943	--	--	--
784	14 miles southwest	J. T. Leach	--	1938	--	--	--
785	$12\frac{1}{2}$ miles southwest	Fred A. Groves	--	1941	198	15, 12	--
786	12 miles southwest	A. L. Walker	--	1939	165	18	--
787	15 miles southwest	R. S. Hobgood	B. B. Baron	1940	193	$15\frac{1}{2}$, $12\frac{1}{2}$	--
788	18 miles southwest	W. and F. E. McNabb	--	1940	--	--	--
789	$18\frac{1}{2}$ miles southwest	do.	--	1943	--	--	--
790	do.	do.	--	1940	--	--	--
791	$14\frac{1}{2}$ miles southwest	J. C. Stanford	W. P. Crawford	1941	165	14	--
792	$11\frac{1}{2}$ miles southwest	B. A. Morrow	--	1944	160	--	--
793	13 miles southwest	J. T. Hutchinson	--	1943	--	--	--
794	12 miles southwest	J. B. McCauley	Green Machinery Co.	1940	200	16	--
795	10 miles southwest	do.	--	1940	--	--	--
796	$3\frac{1}{2}$ miles southwest	E. L. McCrummen	--	1938	--	--	--
797	do.	Jenkins Brothers	--	1941	--	--	--
798	$6\frac{1}{2}$ miles southwest	Clovis Vaughn	--	--	--	--	--
798a	8 miles southwest	J. C. Clark	--	1945	--	14	--
799	$9\frac{1}{2}$ miles southwest	A. J. Nordycke	A. J. Nordycke	1943	--	--	--
800	9 miles west	J. Douglas	--	1944	--	--	--
801	do.	John H. Burroughs	Green Machinery Co.	1942	210	$15\frac{1}{2}$	--
802	$8\frac{1}{2}$ miles west	Clowe and Cowan	--	1943	--	--	--
803	8 miles west	do.	A. J. Nordycke	1940	--	--	--

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
782	d/98	Feb. 11, 1941	T,G	Irr	Casing: 168 feet of 15-inch. Pump: 12-inch, 2-stage, set at 130 feet. Driller's log shows water sand at 98-106 feet, 132-140 feet, and 146-166 feet, and yellow clay at 166-168 feet.
783	--	--	T,G	Irr	
784	--	--	T,G	Irr	
785	--	--	T,G	Irr	Cased to 177 feet. Pump: 12-inch, 2-stage, set at 140 feet, 10 feet of suction pipe.
786	d/65	1939	T,G	Irr	Casing: 150 feet of 18-inch, 15 feet of open hole. Pump: 12-inch, 4-stage, set at 140 feet. Drawdown reported by engineers of Soil Conservation Service as 24 feet after pumping 800 gallons a minute in a short test.
787	d/82	Feb. 1940	T,G	Irr	Cased to 193 feet. Pump: 12-inch, 2-stage, set at 140 feet. See log.
788	--	--	T,G	Irr	
789	--	--	T,G	Irr	
790	--	--	T,G	Irr	
791	d/87	May 1941	None	N	Pump company reports yield was not sufficient for irrigation; pulled casing and abandoned well. See log.
792	--	--	T,G	Irr	Pump: 12-inch, 3-stage, set at 120 feet, 10 feet of suction pipe.
793	--	--	T,G	Irr	
794	d/93	1940	T,G	Irr	Casing: 200 feet of 16-inch, lower 120 feet perforated. Pump: 12-inch, 2-stage, set at 130 feet.
795	--	--	T,G	Irr	
796	--	--	T,G	Irr	
797	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of 8-inch suction pipe.
798	--	--	None	N	Yield reported not sufficient for irrigation.
798a	--	--	T,G	Irr	
799	--	--	T,G	Irr	
800	--	--	T,G	Irr	
801	d/87	Apr. 20, 1942	T,G	Irr	Casing: 210 feet of 15½-inch. Pump: 12-inch, 2-stage, set at 120 feet; 8-5/8-inch column pipe.
802	--	--	T,G	Irr	Pump: 12-inch, 3-stage, set at 120 feet.
803	--	--	T,G	Irr	Do.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
804	5½ miles west	C. M. Casey	--	1941	--	--	--
805	4½ miles west	Winston Reeves	--	1943	130	--	--
806	do.	Garland Newsom	--	1943	125	--	--
807	3 miles southwest	R. C. Hewett	--	1943	120	--	--
808	do.	--	--	1937	125	--	--
809	4 miles southwest	-- Corcorran	--	1940	--	--	--
810	8½ miles southwest	B. F Foster	George Anderson	1943	152	--	--
811	do.	E. C. Hatton Well 3	do.	1943	160	14	--
811a	7½ miles southwest	--	--	1945	--	--	--
812	8½ miles southwest	E. C. Hatton Well 2	George Anderson	1942	162	14	--
813	8 miles southwest	E. C. Hatton Well 1	do.	1942	165	14	--
813a	do.	Cecil Smith	Green Machinery Co.	1945	--	16	--
813b	8½ miles southwest	Cecil Smith Well 2	do.	1945	160	16	1.0
814	10 miles southwest	T. D. Julian	George Anderson	1943	158	12½	--
815	11 miles south	Tom French	do.	1943	157	14	--
816	13 miles south	W. P. Martin	--	1939	150	--	--
816a	13½ miles south	W. P. Martin Well 3	George Anderson	1943	150	--	--
817	do.	W. P. Martin Well 5	do.	1944	135	--	--
818	14 miles south	W. P. Martin Well 4	do.	1943	148	--	--
819	13½ miles south	W. B. Jeter	A. J. Nordycke	1936	132	15½	1.5
819a	13 miles south	W. B. Wevels	--	1943	--	--	--
820	do.	W. B. Jeter	L. A. Peeples	1938	168	15½, 13	--

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
804	--	--	T,G	Irr	
805	--	--	T,E, 5	D,Irr	Pump: Capacity 125 gallons a minute, set at 120 feet.
806	--	--	T,E, 5	D,Irr	Twelve or more wells, with pumping equipment similar to that in well 805, supply nearby homes and truck gardens.
807	--	--	T,E, 5	Irr	Pump: 6-inch, 8-stage, set at 90 feet, 10 feet of suction pipe.
808	--	--	None	N	Red and blue clay noted in slush dump by the writer. Yield of well reported not adequate for irrigation.
809	--	--	None	N	Do.
810	d/91	Feb. 1943	None	N	Log shows total thickness of 16 feet of water-bearing sand and gravel underlain by yellow clay at 145 to 152 feet. Pump company reports yield not sufficient for irrigation.
811	--	--	T,G	Irr	Casing: 158 feet of 14-inch. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of suction pipe. See log.
811a	--	--	--	Irr	Drilled in March.
812	d/95	Sept.15, 1942	T,G	Irr	Log shows water sand or sand and gravel at 95-105 feet, 120-138 feet, and 145-155 feet.
813	--	--	T,G	Irr	Casing: 165 feet of 14-inch. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of suction pipe. Log shows total of 40 feet of water sand and gravel.
813a	--	--	T,G	Irr	Drilled in March 1945.
813b	73.30	Mar. 5, 1945	T,G	Irr	
814	--	--	T,G	Irr	Casing: 158 feet of $12\frac{1}{2}$-inch. Pump: 10-inch, 4-stage, set at 130 feet, 10 feet of suction pipe. See log.
815	d/100	Jan. 1943	T,G	Irr	Casing: 151 feet of 14-inch. Pump: 12-inch, 2-stage, set at 130 feet. Log shows dry sand at 90-100 feet, water sand and gravels at 100-145 feet and yellow clay at 145-157 feet.
816	--	--	None	N	Owner reports yield was about 300 gallons a minute and not sufficient for irrigation.
816a	--	--	T,G	Irr	Owner reports estimated yield about 500 gallons a minute.
817	--	--	T,G	Irr	
818	--	--	T,G	Irr	Pump: 10-inch, 4-stage, set at 130 feet, 10 feet of suction pipe. In Lynn County.
819	95.4	Mar. 8, 1939	None	N	
819a	--	--	T,G	Irr	
820	--	--	T,G	Irr	Cased to 168 feet Pump: 12-inch, 3-stage, set at 141 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
820a	13½ miles southeast	C. L. Griffin	--	1945	--	14	4.0
820b	13 miles south	W. B. Wevels	--	1944	--	--	--
821	do.	A. E. Hlavaty	W. P. Crawford	1940	161	18, 15	--
822	12 miles south	W. M. Martin	do.	1941	165	15	--
823	11½ miles south	J. W. Bounds	--	1945	--	--	--
824	11 miles south	John Ehler	W. P. Crawford	1941	183	15	--
825	12 miles south	F. V. Brown	--	1943	--	--	--
826	11½ miles south	G. C. Beard	--	1944	--	--	--
827	10½ miles south	J. R. Whatley	--	1940	160	16, 14	--
828	9 miles south	W. E. Kittrell	--	1944	--	--	--
829	8½ miles south	J. M. Macry	W. P. Crawford	1941	150	15	--
830	9 miles south	Alvin B. Allen	do.	1941	147	15	--
831	9½ miles south	H. Fehlieson Well 2	L. A. Peeples	1940	162	15, 12½	--
832	9 miles south	H. G. Fehlieson Well 1	--	1937	--	--	--
833	8½ miles south	F. E. Minssen	B. B. Baron	1939	164	15½, 14	--
834	8 miles south	R. L. Stewart	L. A. Peeples	1940	178	14	--
835	8½ miles south	A. T. Yancey	George Anderson	1942	157	12½	--
836	do.	Alvin B. Allen	do.	1942	160	14	--
837	8 miles south	J. C. Kerr	W. P. Crawford	1941	160	15	--

Well	WATER LEVEL: Below measuring point (ft.)	WATER LEVEL: Date of measurement	Method of lift b/	Use of water c/	Remarks
820a	92.6	Mar. 5, 1945	T,G	Irr	Drilled in February 1945.
820b	--	--	T,G	Irr	
821	--	--	T,G	Irr	Cased to 161 feet. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of suction pipe.
822	d/87	May 31, 1941	T,G	Irr	Casing: 165 feet of 15-inch. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of 8-inch suction pipe. See log.
823	--	--	T,G	Irr	
824	d/86	Apr. 18, 1941	T,G	Irr	Casing: 167 feet of 15-inch, lower 80 feet perforated. Pump: 12-inch, 3-stage, set at 140 feet. Log shows water sand at 92-112 feet, 118-135 feet and 142-183 feet.
825	--	--	T,G	Irr	
826	--	--	T,G	Irr	
827	--	--	T,G	Irr	Cased to 160 feet. Pump: 12-inch, 3-stage, set at 120 feet, 10 feet of suction pipe.
828	--	--	T,G	Irr	
829	--	--	T,G	Irr	Casing: 144 feet of 15-inch, lower 60 feet perforated. Pump: 12-inch, 3-stage, set at 120 feet, 10 feet of suction pipe.
830	d/92	Apr. 4, 1941	T,G	Irr	Casing: 147 feet of 15-inch. Pump: 12-inch, 2-stage, set at 125 feet, 10 feet of 8-inch suction pipe. See log.
831	d/82	Feb. 1940	T,G	Irr	Casing: 150 feet of 15-inch, lower 70 feet perforated; 20 feet of 12½-inch perforated. Pump: 12-inch, 2-stage, set at 140 feet.
832	--	--	T,G	Irr	
833	d/70	Aug. 1939	T,G,	Irr	Cased to 164 feet. Pump: 12-inch, 2-stage, set at 110 feet. Cretaceous fossils and yellow marl were noted in the slush dump by the writer.
834	--	--	T,G	Irr	Cased to 175 feet. Pump: 12-inch, 2-stage, set at 120 feet, 20 feet of suction pipe. Well originally 150 feet deep but would not supply the pump at that depth.
835	--	--	T,G	Irr	Pump: 10-inch, 4-stage, set at 110 feet. Log shows water sand at 90-105 feet, sand and gravel at 115-130 feet, and 140-155 feet, and yellow clay at 155-157 feet.
836	--	--	T,G	Irr	Casing: 158 feet of 14-inch. Pump: 12-inch, 2-stage, set at 120 feet, 20 feet of 8-inch suction pipe. Driller reports water sand at 97-107 feet, 124-130 feet and 140-152 feet.
837	d/90	Apr. 10, 1941	T,G	Irr	Casing: 160 feet of 15-inch, lower 70 feet perforated. Pump: 12-inch, 2-stage, set at 130 feet. Driller reports water sand at 94-114 feet, and 119-158 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
838	8 miles south	R. D. Holmes Well 3	--	1941	200	15	--
839	$8\frac{1}{2}$ miles south	W. J. Baker Well 1	B. B. Baron	1939	150	15	1.4
839a	8 miles south	W. J. Baker Well 2	--	1945	156	12	1.3
840	do.	R. L. Stewart	--	1941	--	--	--
841	7 miles south	H. B. Davis	F. E. Mauldin	1940	166	16	--
842	do.	R. L. Stewart	George Anderson	1942	150	$14\frac{1}{2}$	--
843	$7\frac{1}{2}$ miles south	Joe Bowman	--	1943	--	--	--
844	6 miles south	do.	--	1943	165	--	--
845	$4\frac{1}{2}$ miles south	Dr. J. T. Hutchinson	--	1943	--	--	--
846	do.	Dr. M. C. Overton	--	1940	--	--	--
847	$3\frac{1}{2}$ miles south	Texas Highway Department	--	1936	120	--	1.5
848	$1\frac{3}{4}$ miles south	Joe W. Bowman	--	1935	--	--	--
849	2 miles southeast	R. D. Brown	George Anderson	1943	125	15	--
850	$2\frac{1}{4}$ miles southeast	Lubbock Memorial Park	--	1941	120	--	--
851	3 miles southeast	City of Lubbock	B. B. Baron	1940	105	--	--
852	4 miles southeast	L. W. Baker	--	--	--	--	--
853	$4\frac{3}{4}$ miles southeast	J. L. Birdwell	--	1937	200	--	--
854	$2\frac{1}{2}$ miles southeast	K. Wolf	--	1940	--	--	--
855	$2\frac{3}{4}$ miles southeast	--	--	--	--	--	--
856	do.	T. J. James	--	1936	120	--	--
857	$3\frac{1}{4}$ miles southeast	Clint Breedlove	L. A. Peeples	1942	121	--	--

Well	WATER LEVEL: Below measuring point (ft.)	WATER LEVEL: Date of measurement	Method of lift b/	Use of water c/	Remarks
838	--	--	T,G	Irr	Casing: 153 feet of 15-inch. Pump: 12-inch, 2-stage, set at 130 feet, 10 feet of 8-inch suction pipe.
839	79.9	Mar. 27, 1942	T,G	Irr	Pump: 12-inch, 2-stage, set at 130 feet.
839a	78.2	Mar. 5, 1945	T,G	Irr	Casing: 156 feet of 12-inch. Pump: 10-inch, 3-stage, set at 120 feet 10 feet of suction pipe. Well is 550 feet from well 840.
840	--	--	T,G	Irr	
841	d/79	May 1940	T,G	Irr	Casing: 155 feet of 16-inch, lower 85 feet perforated. Pump: 12-inch, 2-stage, set at 120 feet, 20 feet of suction pipe. See log.
842	--	--	T,G	Irr	Casing: 150 feet of 14½-inch. Pump: 12-inch, 2-stage, set at 120 feet, 20 feet of 8-inch suction pipe.
843	--	--	T,G	Irr	Pump: 12-inch, 3-stage, low capacity set at 120 feet, 5 feet of suction pipe. Pump column and suction pipe is 8 inches in diameter.
844	--	--	T,G	Irr	Do.
845	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of suction pipe.
846	--	--	T,G	Irr	Pump: 12-inch, 3-stage, set at 130 feet, 10 feet of suction pipe.
847	83.8	Mar. 8, 1939	None	N	Well was used for wetting road base during construction of highway.
848	--	--	T,E, 15	Irr	Pump: 10-inch, 3-stage, set at 110 feet 10 feet of suction pipe. Capacity of pump is 400 gallons a minute.
849	d/57	July 11, 1943	T,G	Irr	Casing: 125 feet of 15-inch. Pump: 12-inch, 2-stage, set at 100 feet, 10 feet of 8-inch suction pipe. See log.
850	--	--	T,E, 30	Irr	Pump: 10-inch, 6-stage, set at 80 feet, 10 feet of suction pipe. Pump column and suction pipe is of 7-inch diameter.
851	--	--	T,E, 5	Ind	At sewage disposal plant. Pump: 6-inch, 10-stage, set at 90 feet, 5 feet of suction pipe.
852	--	--	T,G	Irr	
853	--	--	None	N	Former owner reports that yield was not sufficient for irrigation.
854	--	--	T,G	Irr	
855	--	--	T,G	Irr	
856	--	--	T,G	Irr	
857	--	--	T,G	P,S	Breedlove C.A.P. airport. Casing: 120 feet of 12½-inch. Pump: 10-inch, 4-stage, set at 90 feet, 10 feet of suction pipe. Driller's log shows water-bearing sand and gravel at 68-116 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
858	3 miles southeast	Kathleen Brown	--	1940	--	--	--
859	$3\frac{3}{4}$ miles southeast	L. E. Bartlett	--	1943	--	--	--
860	$4\frac{1}{2}$ miles southeast	John B. Steele	--	1944	135	16	--
861	6 miles southeast	P. G. Boyd	--	--	--	--	--
862	7 miles southeast	C. L. Boyd	--	1939	--	--	--
862a	$7\frac{1}{2}$ miles south	M. F. Stewart	--	1945	--	--	--
863	$7\frac{1}{2}$ miles southeast	F. V. Brown	--	--	66	6	0.9
864	$8\frac{1}{2}$ miles southeast	L. C. Boyd	J. N. Smiley	1937	153	16	--
865	do.	Ed Harvey	--	1937	--	--	--
866	8 miles southeast	L. D. Moss	George Anderson	1942	162	$12\frac{1}{2}$	1.1
867	9 miles southeast	W. T. Lemon	Bud Gibbons	1942	160	--	--
868	$8\frac{1}{2}$ miles southeast	do.	--	1944	160	--	--
869	10 miles southeast	J. H. Griffith	--	1944	155	--	--
869a	$10\frac{1}{2}$ miles southeast	W. Neal	--	1944	152	--	--
870	$11\frac{1}{2}$ miles southeast	T. C. Workman	--	1944	--	--	--
871	$4\frac{3}{4}$ miles east	Taylor Crim	--	1941	200	--	--
872	5 miles east	do.	--	1942	206	$15\frac{1}{2}$	--
873	do.	C. H. Beaty	B. B. Baron	1941	174	15	--
874	6 miles east	J. W. Jackson	--	1941	135	15	--
875	$6\frac{1}{2}$ miles east	H. Foerster	--	1944	135	--	--
876	$7\frac{1}{2}$ miles east	Roy D. Sherrod	B. B. Baron	1939	125	15	--

Well	WATER LEVEL Below measuring point (ft.)	Date of measurement	Method of lift b/	Use of water c/	Remarks
858	--	--	T,G	Irr	Pump: 10-inch, 3-stage, set at 80 feet, 10 feet of 6-inch suction pipe.
859	--	--	T,G	Irr	
860	--	--	T,G	Irr	Casing: 135 feet of 16-inch. Pump: 12-inch, 3-stage, set at 100 feet, 10 feet of suction pipe.
861	--	--	None	N	Yield reported not sufficient for irrigation.
862	--	--	T,G	Irr	
862a	--	--	T,G	Irr	Drilled in March 1945.
863	53.4	Jan. 6, 1937	C,W	D,S	
864	d/50	Feb. 1937	T,G	Irr	Casing: 153 feet of 16-inch. Pump: 10-inch, 2-stage, set at 110 feet, 10 feet of suction pipe. Owner reports 80 feet of water sand penetrated by well.
865	--	--	T,G	Irr	
866	62.9	Oct. 1, 1942	T,G	Irr	Casing: 157 feet of $12\frac{1}{2}$-inch. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 8-inch suction pipe. See log.
867	--	--	T,G	Irr	Cased to 160 feet. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of suction pipe. Driller reports very hard lime rock at 70-92 feet, and 94-114 feet, and coarse water sand from 114 to 160 feet.
868	--	--	T,G	Irr	
869	--	--	T,G	Irr	
869a	d/82	July 1944	T,G	Irr	Pump: 12-inch, 3-stage, set at 120 feet, 18 feet of suction pipe.
870	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 8-inch suction pipe.
871	--	--	None	N	Former owner reports that yield was not sufficient for irrigation. Well was abandoned and filled.
872	d/70	Mar. 1942	T,G	Irr	Casing: 206 feet of $15\frac{1}{2}$-inch. Pump: 12-inch, 3-stage, set at 130 feet, 20 feet of suction pipe. Pump company estimates yield as about 700 gallons a minute.
873	--	--	T,G	Irr	Casing: 140 feet of 15-inch. Pump: 12-inch, 2-stage, set at 120 feet, 10 feet of 8-inch suction pipe.
874	d/64	Jan. 28, 1941	T,G	Irr	Casing: 135 feet of 15-inch, lower 70 feet perforated. Pump: 12-inch, 2-stage, set at 110 feet, 10 feet of suction pipe.
875	--	--	T,G	Irr	
876	d/52	Nov. 1939	T,G	Irr	Casing: 125 feet of 15-inch, lower 70 feet perforated. Pump: 12-inch, 2-stage, set at 100 feet. Log shows water sand at 56-72 feet, 84-102 feet, and 104-124 feet.

Records of wells and springs in Lubbock County--Continued

Well	Distance from post office at Lubbock	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
877	8 miles east	Bay Simmons	B. B. Baron	1941	130	15	--
878	8½ miles east	H. H. Sides	do.	1940	142	15	--
878a	10 miles east	S. E. Cone	L. A. Peeples	1945	--	--	--
879	9 miles east	F. O. Miller Well 2	do.	1942	149	12½	--
880	9½ miles east	F. O. Miller Well 1	B. B. Baron	1941	222	15	--
881	8 miles east	Ted Barnett	L. A. Peeples	1943	142	12½	--
882	9 miles east	Roscoe Sides	--	1940	150	13	--
883	9½ miles east	do.	--	1941	--	--	--
884	do.	Lewis Travis	B. B. Baron	1941	135	15	--
885	do.	B. H. Sides	do.	1941	161	15, 12½	--
886	10½ miles east	S. E. Cone Well 3	L. A. Peeples	1941	151	15	--
887	11 miles east	S. E. Cone Well 4	B. B. Baron	1941	165	14, 13	--
888	11 miles southeast	J. H. Harrison	--	1945	170	15	--
889	11½ miles southeast	M. F. Klattenhoff	L. A. Peeples	1944	203	15	--
890	12½ miles southeast	L. D. Johnson	--	--	Spring	--	--
891	14½ miles southeast	S. S. Forrest	--	--	Creek	--	--

a/ Measuring point was usually top of casing, top of pipe clamp, or top of pump base.
b/ Method of lift: T, turbine; C, cylinder; E, electric; G, gasoline or butane gas engine; W, windmill. Number indicates horsepower.

Well	WATER LEVEL Below measuring point (ft.)	WATER LEVEL Date of measurement	Method of lift b/	Use of water c/	Remarks
877	d/52	Jan. 23, 1941	T,G	Irr	Casing: 130 feet of 15-inch. Pump: 12-inch, 2-stage, set at 100 feet, 10 feet of 8-inch suction pipe. Chief aquifer is sand and gravel at 78-114 feet.
878	--	--	T,G	Irr	Cased to 142 feet. Pump: 12-inch, 2-stage, set at 120 feet. Driller reports water sand at 63-79 feet and coarse sand and gravel at 83-114 fe t and 125-141 feet.
878a	--	--	T,G	Irr	Being drilled at time of visit in February 1945.
879	d/60	Sept.19, 1942	T,G	Irr	Cased to 149 feet. Pump: 10-inch, 4-stage, set at 110 feet, 10 feet of suction pipe.
880	--	--	T,G	Irr	Casing: 219 feet of 15-inch. Pump: 12-inch, 3-stage, set at 140 feet, 10 feet of 8-inch suction pipe. See log.
881	--	--	T,G	Irr	Casing: 107 feet of 12½-inch. Pump: 10-inch, 4-stage, set at 90 feet, 10 feet of 8-inch suction pipe.
882	--	--	T,G	Irr	Casing: 150 feet of 13-inch, lower 80 feet perforated. Pump: 12-inch, 2-stage, set at 100 feet, 20 feet of suction pipe.
883	--	--	T,G	Irr	Pump: 12-inch, 2-stage, set at 90 feet, 10 feet of 8-inch suction pipe.
884	--	--	T,G	Irr	Casing: 131 feet of 15-inch, lower 70 feet perforated. Pump: 12-inch, 2-stage, set at 110 feet. Driller reports water in sand at 63-85 feet, and in sand and gravel at 88-105 feet and 125-133 feet.
885	d/62	Jan. 13, 1941	T,G	Irr	Cased to 161 feet, lower 100 feet perforated. Pump: 12-inch, 2-stage, set at 110 feet. Log shows chief water sands at 80-100 feet and 150-160 feet.
886	d/50	Mar. 10, 1941	T,G	Irr	Casing: 151 feet of 15-inch. Pump: 12-inch, 2-stage, set at 110 feet 10 feet of suction pipe.
887	--	--	T,G	Irr	Cased to 165 feet. Pump: 12-inch, 2-stage, set at 80 feet, 10 feet of 9-inch suction pipe. See log.
888	--	--	T,G	Irr	Pump installed March 1945.
889	--	--	None	N	Near the canyon rim of Double Mountain Fork of Brazos River which is spring fed at this place. Driller reports insufficient water for irrigation well. See log.
890	--	--	--	S	Estimated flow 10 gallons a minute from sand at contact with Triassic clay.
891	--	--	--	S	Double Mountain Fork of Brazos River; estimated flow about 10 second feet on March 4, 1945.

c/ Irr, irrgation; Ind, industrial; P, public supply; D, domestic; S, stock; N, not used.

d/ Water level reported.

Logs of test holes drilled by City of Lubbock, Texas 1/

(Drilled in February and March, 1945 by the Layne-Texas Co., Ltd., Houston)

Test hole 1; 108 feet south and 69 feet east of the NW corner sec. 6, blk. A; 3½ miles northeast of post office at Lubbock. Surface altitude, 3,212.9 feet.

	Thickness (feet)	Depth (feet)
Quaternary and Tertiary (mostly Ogallala formation)		
Soil, sandy, brown	3	3
Clay, sandy, red and thin beds of sandy caliche, tar	10	13
Sand, fine to medium-grained, red	2	15
Clay, sandy, and thin beds of caliche, pink-buff	9	24
Sand, silty, clayey, red	2	26
Caliche rock, buff-gray	2	28
Clay, sandy, red and caliche, sandy, gray in alternating beds	17	45
Caliche, hard and soft layers, sandy, tan	6	51
Clay, sandy, red and caliche rock, light gray	12	63
Water level, 53.2 feet below land surface (measured 8 days after drilling)		
Sand, fine, red, and caliche, interbedded	4	67
Caliche, sandy, hard, light-gray	7	74
Sand, very calcareous, buff-gray	3	77
Sand, fine to medium-grained, buff-red with thin layers of hard and soft caliche	30	107
Clay, sandy, red	5	112
Sand, medium to coarse-grained, buff-red	12	124
Sand and small gravel, brown	7	131
Clay, sandy, white	3	134
Cretaceous		
Limestone, quartz and flint gravels in upper part, hard, yellow and gray	31	165
Limestone, dense, gray, hard and soft beds	16	181
Limestone and shale, interbedded, gray and dark blue	4	185
Sand, fine, very limy, gray	3	188
Shale, hard, blue-black and thin beds of sand, gray	11	199
Sand, fine to medium-grained, gray and a few thin beds of shale, blue	16	215
Triassic, Dockum group		
Shale, greenish-blue and dark red	9	224
Shale, tough, dark red with thin beds of greenish-blue, silty layers	20	244

Test hole 2; 512 feet south and 96 feet east of the NW corner sec. 47, blk. A; 5¾ miles northeast of post office at Lubbock. Surface altitude, 3,183.8 feet.

Quaternary and Tertiary (mostly Ogallala formation)		
Soil, sandy, chocolate-brown	3	3
Clay, sandy, brown and caliche, sandy, light-yellow	17	20
Sand, limy, pink-buff and caliche, in hard and soft layers, porous, pink	11	31
Water level, 27.7 feet below and surface (measured 6 days after drilling)		
Sand, fine to medium-grained, unconsolidated, red with thin seams of soft caliche	17	48
Caliche, sandy, buff-red in hard and soft layers	6	54

(Continued on next page)

1/ Compiled from records of W. Basye, driller, and examination of cuttings by the writer.

Logs of test holes drilled by the City of Lubbock--Continued

Test hole 2--Continued

	Thickness (feet)	Depth (feet)
Quaternary and Tertiary (mostly Ogallala formation)		
Sand, reddish-buff and thin beds of porous (honeycomb) caliche and calcareous sandstone	27	81
Caliche and clay, sandy, soft, reddish-buff	9	90
Sand and gravel, clean, coarse, brown	29	119
Clay, sandy, brown	2	121
Sand and gravel, clean, coarse, brown	5	126
Clay and sand in thin alternating beds, reddish-brown	10	136
Clay, sandy, red and brown	10	146
Sand, fine, red and clay, sandy, buff-red	14	160
Sand, fine to medium-grained, red	5	165
Caliche, perous (honeycomb), reddish-brown and thin beds of clay, silty, buff-red	7	172
Clay and caliche, sandy, brown and buff-red	10	182
Caliche rock, honeycomb, sandy, buff-red	6	188
Sand and clay, red	6	194
Triassic, Dockum group		
Shale, tough, dark red	10	204
Shale and siltstone, dark red	30	234

Test hole 3; 2,630 feet west and 15 feet south of the NE corner sec. 55 blk. A; 7½ miles northeast of post office at Lubbock.

Soil, sandy, reddish-brown	4	4
Silt and fine sand, clayey, red	2	6
Clay, sandy, red and caliche, light gray	13	19
Caliche, sandy, buff-yellow, hard and soft layers	9	28
Caliche, hard and thin beds of sand, red	8	36
Caliche, sandy, buff-yellow and sand, fine red	12	48
Sand, fine to medium-grained, calcareous, red	20	68
Caliche rock, sandy, reddish-brown	2	70
Sand, loose, red	3+	73

Lost circulation of drilling mud in porous zone or cavern and abandoned test hole.

Test hole 4; 1,300 feet south and 73 feet east of the NW corner sec. 66 blk. A; 8 miles northeast of post office at Lubbock. Surface altitude, 3,181.3 feet.

Quaternary and Tertiary (mostly Ogallala formation)		
Soil, sandy, brown	3	3
Silt, clay and caliche, sandy, reddish-brown	12	15
Caliche, sandy, hard and soft layers, tan	15	30
Caliche rock, hard, reddish-brown	7	37
Water level, about 34 feet below land surface		
Sand, calcareous, tan	4	41
Sand, fine, red and thin layers of caliche	25	66
Caliche rock, hard, porous, red-buff	2	68
Caliche, porous, sandy and clay, red-buff	15	83
Sand, fine, red, clayey in lower part	12	95

(Continued on next page)

Logs of test holes drilled by the City of Lubbock--Continued

Test hole 4--Continued

	Thickness (feet)	Depth (feet)
Quaternary and Tertiary (mostly Ogallala formation)		
Sand and gravel, reddish-brown	12	107
Clay and sand in thin beds, reddish-brown	6	113
Sand, fine to medium-grained, brown	4	117
Sand, silty and fine-grained, reddish-brown	21	138
Sand, reddish-brown and honeycomb, calcareous, friable sandstone	17	155
Sand, medium to coarse-grained, loose, red-buff	11	166
Sand and clay, reddish-buff	4	170
Clay, silty, reddish-brown	16	186
Caliche rock, hard	1	187
Clay, sandy, brown	5	192
Sand with tubular, calcareous stems, honeycomb, red	12	204
Sand, clayey, and gravel, brown	8	212
Clay, sandy and sand, fine, reddish-brown	9	221
Conglomerate, sand, gravel, shale balls, poorly sorted, reddish-brown	9	230
Triassic, Dockum group		
Shale, blue and red	10	240
Shale, hard, red	24	264

Test hole 5; 32 feet south and 50 feet east of the NW corner sec. 49, blk. A; 7 miles northeast of post office at Lubbock. Surface altitude, 3,217.4 feet.

	Thickness (feet)	Depth (feet)
Quaternary and Tertiary (mostly Ogallala formation)		
Soil, sandy, red	3	3
Silt and clay, calcareous, sandy, reddish-yellow	15	18
Caliche, buff-yellow, cemented in lower part	7	25
Caliche, rock, sandy, porous, hard and soft layers, buff-yellow	17	42
Water level, about 42 feet below land surface		
Sand and sandy caliche, red and buff-red	4	46
Caliche rock, sandy, reddish-brown	10	56
Sand, soft, limy, gray	4	60
Caliche rock, hard, sandy, buff-gray	5	65
Silt, clay and caliche, soft, buff-gray	10	75
Clay, sandy, red and gray	14	89
Sand, fine to medium-grained, red	4	93
Sand, clean, medium-grained, red	12	105
Clay and caliche, sandy, red and gray	22	127
Sand, fine to medium-grained, red	5	132
Clay and caliche, sandy, red and light gray	8	140
Silt, brownish-red	6	146
Sand, clayey in lower part, red	10	156
Clay, sandy, reddish-brown	2	158
Sand, porous (may be honeycomb), red	3	161
Caliche rock, hard dense buff-gray	1	162
Clay, sandy, brown and caliche rock, tan	8	170
Clay, silty, vari-colored	7	177
Clay, sandy, red	4	181

(Continued on next page)

Logs of test holes drilled by the City of Lubbock--Continued

Test hole 5--Continued

	Thickness (feet)	Depth (feet)
Quaternary and Tertiary (mostly Ogallala formation)		
Sand, medium to coarse-grained, brown and buff	11	192
Triassic, Dockum group		
Shale, light-green, blue and red	5	197
Shale, hard, maroon-red with thin seams of yellow and blue-green silt and shale	108	305

Test hole 6; 415 feet south and 549 feet west of the northeast corner sec.52, blk. A; 8$\frac{3}{4}$ miles northeast of post office at Lubbock. Surface altitude, 3,241.3 feet.

	Thickness (feet)	Depth (feet)
Quaternary and Tertiary (mostly Ogallala formation)		
Soil, sandy, red	3	3
Sand, silt and caliche, reddish yellow	15	18
Sand and sandy clay, hard, red	13	31
Caliche, light-gray and clay, sandy, red, in thin alternating beds	14	45
Clay, sandy, reddish-buff and sand, red	7	52
Clay, sandy, red and caliche rock, light-gray, in thin alternating beds	11	63
Caliche, sandy, gray-buff and sand, red, in thin alternating beds	5	68
Water level, 67 feet below land surface (measured in unused well 200 feet from test hole)		
Clay, sandy, red, caliche rock, sandy, light-gray and sand, red, in thin alternating beds	25	83
Clay, sandy, red and caliche rock, sandy, light-gray	12	95
Sand and silt, red	9	104
Sand, clayey, red and thin beds of caliche, sandy, light-gray.	23	127
Clay, red and sand, clayey, red	14	141
Sand, clayey, red and clay, sandy, red	10	151
Sand, fine to medium-grained, red	9	160
Clay, dark-red and blue-gray	10	170
Sand, clean, medium to coarse-grained, reddish-buff	10	180
Clay, dark-red and thin beds of caliche, light-gray	13	193
Limestone, hard, gray and buff-colored	3	196
Limestone and clay in thin alternating beds	3	199
Clay, sandy, vari-colored	5	204
Sand, fine to medium-grained, red and clay, sandy, red	6	210
Sand, clean, buff-gray	6	216
Triassic, Dockum group		
Shale, dark-red and greenish-blue	8	224
Shale, hard, dark-red with thin layers of greenish-blue shale, silty	50	274

Logs of test holes drilled by the City of Lubbock--Continued

Test hole 7; 51 feet south and 57 feet west of the northeast corner sec. 2, blk. D-3; 6 miles north of post office at Lubbock. Surface altitude, 3,261.8 feet.

	Thickness (feet)	Depth (feet)
Quaternary and Tertiary (mostly Ogallala formation)		
Soil, sandy, red	4	4
Sand, silt, clay and caliche, red and light grey	22	26
Caliche, sandy, reddish-buff, in hard and soft layers	24	50
Caliche rock, hard, reddish-brown	5	55
Caliche, sandy and thin beds of sand, red	18	73
Depth to water about 60 feet below land surface		
Sand, calcareous, fine, red	29	102
Clay, sandy, red and sand, fine, red	10	112
Clay, sticky, dark-red and thin beds of sandy clay	14	126
Sand and clay, reddish-brown	6	132
Clay, sandy, reddish-brown	8	140
Sand and thin beds of silt and clay, red-buff	32	172
Sand, red and layers of caliche, hard, opalized, reddish-brown	10	182
Flint rock, very hard, reddish-brown	3	185
Sand, sandy shale and porous caliche rocks; in alternating beds, reddish-brown	63	248
Caliche rock, honeycomb in hard and soft layers	5	253
Triassic, Dockum group		
Shale and siltstone, red and greenish-blue	61	314

Test hole 8; 63 feet north and 50 feet east of the southwest corner sec. 3, blk. JS; 7½ miles west of post office at Lubbock. Surface altitude, 3,303.2 feet.

	Thickness (feet)	Depth (feet)
Quaternary and Tertiary (mostly Ogallala formation)		
Soil, sandy, red	3	3
Silt, clay and caliche, reddish-brown and light-gray	7	10
Sand, sandy clay and nodules of caliche, red-gray	14	24
Caliche rock, sandy, buff-tan	10	34
Clay, sandy, red	6	40
Sand, red	4	44
Sand, red and caliche rock, buff-tan, in thin alternating beds	24	68
Water level, about 68 feet below land surface		
Caliche rock, honeycomb, very porous, reddish-brown, in alternating hard and soft beds	10	78
Caliche rock, hard	11	89
Sand, hard, calcareous, buff-red	14	103
Sand, soft, medium-grained, reddish-buff	8	111
Sand, medium to coarse-grained, grayish-buff	36	147
Sand and clay, gray to buff-colored	8	155
Sand and gravel, clean, loose, medium to coarse-grained, grayish-buff	16	171
Sand, medium to coarse-grained, gray-buff, and thin beds of clay, sandy, yellow	37	208
Cretaceous		
Limestone, hard and soft layers, gray	27	235
Limestone and shale, interbedded, gray and dark-blue	19	254
Limestone, hard, gray	2	256

(Continued on next page)

Logs of test holes drilled by the City of Lubbock--Continued

Test hole 8--Continued

	Thickness (feet)	Depth (feet)
Cretaceous		
Shale, dark blue	4	260
Sand and shale, interbedded, gray and dark blue	4	264
Shale, light blue	5	269
Sand, medium-grained, gray	7	276
Triassic, Dockum group		
Shale, hard, contains a few thin beds of silty, greenish-blue shale	19	295

Test hole 9; 5 feet south and 430 feet east of the northwest corner sec. 8, blk. JS; 7½ miles northwest of post office at Lubbock. Surface altitude, 3,296.4 feet.

Quaternary and Tertiary (mostly Ogallala formation)		
Soil, sandy, red	3	3
Clay, sand and caliche, reddish-brown	23	26
Caliche, tan	6	32
Caliche and sand, red and tan	17	49
Water level, about 40 feet below land surface.		
Sand, red and a few layers of caliche	8	57
Caliche and sand, interbedded, in hard and soft layers, reddish-brown and light tan	49	106
Clay and caliche, sandy, interbedded	23	129
Caliche rock, hard	1	130
Clay, sand and caliche rock, interbedded, in hard and soft layers	29	159
Sand and gravel	5	164
Clay, hard, yellow and blue	8	172
Sand and gravel, and layers of lime	8	180
Cretaceous		
Clay, yellow	10	190
Limestone, hard, dense	4	194
Limestone, porous, honeycomb layers	22	216
Limestone, hard	12	228
Shale and limestone, gray and dark blue	8	236
Shale and limestone, sandy, interbedded, blue	8	244
Sand and shale, hard, gray and blue	9	253
Triassic, Dockum group		
Shale, hard, sandy, red	3	256
Shale, hard, dark reddish-brown with thin layers of blue and yellow shale	38	294

Logs of test holes drilled by the City of Lubbock--Continued

Test hole 10; 221 feet south and 72 feet west of the northeast corner sec. 7, blk. JS; 6 miles northwest of post office at Lubbock. Surface altitide, 3,256.4 feet.

	Thickness (feet)	Depth (feet)
Quaternary and Tertiary (mostly Ogallala formation)		
Soil, sandy, red	3	3
Sand, silt, clay and caliche, interbedded, reddish-brown and tan	46	49
Water level, 29 feet below land surface (measured in nearby farm well)		
Caliche, sandy, buff-tan	27	76
Clay, sandy, red	10	86
Sand and clay, red	25	111
Clay and sand, interbedded, reddish-buff	34	145
Sand, clayey, reddish-buff	8	153
Sand and gravel	9	162
Cretaceous		
Shale, yellow	4	166
Limestone, hard with soft layers from 170 to 183 feet, gray	31	197
Shale and limestone, interbedded, gray and blue	8	205
Shale, hard, limy, dark blue	4	209
Limestone and shale, interbedded	3	212
Shale, sandy, dark blue	12	224
Sand and small gravel	11	235
Triassic, Dockum group		
Shale, light blue	4	239
Shale, hard, maroon	15	254

Table of drillers' logs of wells in Lubbock County, Texas

Well C-4

City of Lubbock Well 4; $2\frac{1}{4}$ miles northwest of post office in Lubbock. Altitude, top of concrete pump foundation, 3218.8 feet.

	Thickness (feet)	Depth (feet)
Sandy material	3	3
Reddish clay	15	18
Clay and lime boulders	4	22
Grayish clay and gravel	8	30
White clay and sand	4	34
Clay and lime boulders	12	46
Clay, sand and rock	20	66
Fine-grained soft sand	4	70
Clay, sand and rock	31	101
Brownish sand and gravel	3	104
Soft sand and gravel	11	115
Red sand and gravel	10	125
White sand and gravel	11	136
Soft sandy clay	20	156

Well C-5

City of Lubbock Well 5; $1\frac{1}{2}$ miles northwest of post office in Lubbock. Altitude, top of concrete pump foundation, 3206.7 feet.

	Thickness (feet)	Depth (feet)
Topsoil and clay	3	3
Soft white rock	12	15
Hard caliche rock	2	17
Soft caliche rock	6	23
Soft red sand	12	35
Red packsand	15	50
Hard and soft layers of red sand, some water	18	68
Hard gypsum and sand	12	80
Soft red and gray clay	22	102
Packsand	5	107
Soft sand, water	10	117
Hard rock	12	129
Clay	3	132
Gravel and sand	15	147
Rock	3	150

Well C-7

City of Lubbock Well 7; 1 mile southeast of post office in Lubbock. Altitude, top of concrete pump foundation 3186.7 feet.

Well C-7--Continued

	Thickness (feet)	Depth (feet)
Sandy topsoil and sandy red clay	4	4
Chalky white clay and a few loose lime pebbles	21	25
Hard caliche rock	5	30
Light red clay and a few rocks	25	55
Hard rock (water at 60 feet)	5	60
Sandy light red clay and a few lime rocks	24	84
Yellow and gray clay	26	110
Red sand, a few gravels and small amount of clay	12	122
Yellow sand and gravel	3	125
Dark muddy sand and gravel	4	129
Gray sand and clay	11	140
Gray sand and gravel	7	147
Yellow clay	11	158

Well C-15

City of Lubbock Well 15; $1\frac{1}{8}$ miles northeast of post office in Lubbock. Altitude, floor of pump house, 3186.9 feet.

	Thickness (feet)	Depth (feet)
Caliche	20	20
Sandy red rock and red clay	32	52
Hard sand rock	3	55
Red water sand	8	63
Red sand rock	5	68
Water sand	17	85
Red clay	21	106
Water sand	22	128
Red clay	2	130
Gray clay	20	150
Caliche rock	10	160

Well C-16

City of Lubbock Well 16; 3 miles northwest of post office in Lubbock. Altitude, top of concrete pump foundation, 3219.5 feet.

	Thickness (feet)	Depth (feet)
Topsoil	4	4
Caliche clay and sandy caliche	31	35
Caliche rock (water at 39 feet)	15	50

(Continued on next page)

Table of drillers' logs, Lubbock County--Continued

	Thickness (feet)	Depth (feet)
Well C-16--Continued		
Red sand, water	11	61
Rock	2	63
Red sand, water	12	75
Red clay	4	79
Sand and gravel, water	32	111
Red clay	24	135
Clayey fine-grained sand	18	153
Well C-19		
Log of test well drilled at site of City of Lubbock well 19; 4 miles northwest of post office in Lubbock. Altitude, top of steel casing 1.5 feet above land surface, 3225.3 feet.		
Topsoil and caliche clay	20	20
Caliche clay and small rock	10	30
Gray sand, water	13	43
Sandy red clay	40	83
Red sand, honeycomb rock and some gravel, water	11	94
Coarse sand and gravel, water	13	107
Sandy red clay	33	140
Dry packsand	11	151
White caliche rock	3	154
Well 9		
Leon Estate, 14 miles northwest of Lubbock.		
Surface material	15	15
Caliche	10	25
Clay	10	35
Packsand	100	135
Sand, water	10	145
Clay	3	148
Sand and gravel, water	22	170
Sand rock	1	171
Light-colored sand	8	179
Clay	3	182
Well 35		
A. M. Beckton, 18½ miles northeast of Lubbock.		
No record	80	80
Sand, water	10	90
Shale and red clay	20	110
Sand, water	5	115
Shale and clay	20	135
Sand, water	10	145
Red clay	3	148
Sand, water	7	155
Caliche, shell rock and clay	65	220
Hard rock	10	230
Sandy caliche	25	255
Well 41		
R. Q. Mabry, 18½ miles northeast of Lubbock.		
No record	78	78
Quicksand	18	96
Coarse-grained red sand, water	18	114
Coarse gravel	3	117
Clay	15	132
Coarse-grained red sand with streaks of clay	30	162
Coarse-grained white sand, water	17	179
Clay	19	198
Red sand, water	9	207
Packsand	10	217
Red sand, water	8	225
Red clay	5	230
Well 84		
J. B. McCauley, 5½ miles northwest of Lubbock.		
Sandy surface material	45	45
Sand, water	12	57
Clay and rock	4	61
Sand, water	39	100
Gravel, water	16	116

Table of drillers' logs, Lubbock County--Continued

	Thickness (feet)	Depth (feet)
Well 100		
O. P. Bowser, 15½ miles northwest of Lubbock.		
Surface material	4	4
White sand	8	12
Shell rock	4	16
Red rock	3	19
Red clay	4	23
Shell rock	8	31
Caliche	10	41
White sandy clay	16	57
Yellow clay and gravel	10	67
Sand, water	7	74
Sandy red clay	12	86
Sand and gravel, water	11	97
White gravel and clay	10	107
Coarse gravel and sand with streaks of yellow clay	50	157
Yellow shale	3	160
Well 121		
Claude Campbell, 7½ miles west of Lubbock		
Surface material	4	4
Caliche	36	40
Sand rock	3	43
Sand	7	50
Sand rock	2	52
Sand	16	68
Sand rock	4	72
Sand	3	75
Sand, water	8	83
Rock	17	100
Sand and gravel	21	121
Sand and shell	10	131
Sand and gravel	11	142
Yellow clay	1	143
Sand and gravel	63	206
Blue shale	2	208
Well 205		
J. M. Hettler, 5½ miles northeast of Lubbock.		
Clay and sand	67	67
Quicksand	19	86
Clay	11	97
Water sand and gravel	7	104

	Thickness (feet)	Depth (feet)
Well 205--Continued		
Clay	9	113
Water sand	13	126
Red clay	3	129
Well 245		
P. & S. F. Ry. Co. well 8, 16½ miles southeast of Lubbock.		
Surface material	4	4
Red clay	6	10
Soft gypsum and rock	12	22
Red packsand	10	32
Red sand rock	10	42
Red packsand	15	57
Red sandy clay	33	90
Quicksand, water	12	102
Red clay	2	104
Coarse sand and gravel, water	19	123
Fine-grained packsand	21	144
Hard white limestone	31	175
Yellow sand and clay	5	180
Blue shale	20	200
Gray sand, water	10	210
Black flint rock	3	213
Light-gray (?)	5	218
Red clay	6	224
Well 247		
P. & S. F. Ry. Co. well 13, 16½ miles southeast of Lubbock.		
Light-colored clay	30	30
Clay and boulders	10	40
Red clay	50	90
Quicksand	17	107
Clay, gypsum, and rock	25	132
Limestone	35	167
Gray sandstone	3	170
Blue shale	32	202
Gray quicksand	5	207
Red clay	35	242
Light-gray clay	35	277
Red clay	15	292
Gray sandstone	10	302
Red clay	70	372
Brown sandstone	20	392
Red clay	78	470
Shells	87	557
Light-reddish-gray sandstone	35	592
Dark-gray sandstone	10	602

Table of drillers' logs, Lubbock County--Continued

	Thickness (feet)	Depth (feet)
Well 253		
City of Slaton well 1, 14½ miles southeast of Lubbock.		
No record	84	84
Fine soft sand, little water	5	89
Stiff red clay	3	92
Sand and clay	14	106
Sand, some water	10	116
Hard red clay	3	119
Fine-grained sand, water	4	123
Sand, water	9	132
Large gravel, rock and coarse sand, water	3	135
Well 256		
A. T. & S. F. R.R. Co. well 9, 14 miles southeast of Lubbock.		
Surface material	3	3
Clay	27	30
Soft white rock	10	40
Hard white rock	5	45
Soft sand, rock and clay	37	82
Sand and gravel, water	42	124
Red sand rock	13	137
Well 262		
P. & S. F. Ry. Co. well 4, 10 miles southeast of Lubbock.		
Surface material	10	10
Caliche	10	20
Red sandstone	15	35
Red packsand	5	40
Red sandstone	5	45
Fine-grained red sand	20	65
Gray sandstone	25	90
Fine-grained red sand, water	20	110
Red clay	2	112
Fine-grained red sand, water	8	120
Red clay	3	123

	Thickness (feet)	Depth (feet)
Well 334		
M. E. Casey, 11 miles southwest of Lubbock.		
Surface material	3	3
Red clay	9	12
Yellow sand and clay	12	24
Red clay	12	36
Pink rock and sand	14	50
Red sand rock	5	55
Pink sand	15	70
Gray sand	11	81
White rock	4	85
White packsand	4	89
Red rock	4	93
Gray sand	23	116
Chalk rock and sand	24	140
Gravel	20	160
Yellow sand and gravel	20	180
Yellow sand	20	200
Sand and gravel	8	208
Well 345		
D. S. Tucker, 11½ miles west of Lubbock		
Surface material	3	3
Caliche	8	11
Red sand and chalk	8	19
White sand	22	41
White rock	4	45
White sand	2	47
White rock	16	63
Chalk and sand	11	74
Red sand rock, first water	11	85
Sand, water	8	93
Sand and gravel, water	10	103
Black gravel	14	117
Yellow sand and gravel	23	140
Gray sand	10	150
Packsand	10	160
Yellow sand and gravel	8	168
Sand	4	172
Soapstone and gravel	9	181
Gravel and coarse sand	13	194
Blue soapstone	2	196

Table of drillers' logs, Lubbock County--Continued

Well 355

J. A. Modlock, 13½ miles southwest of Lubbock.

	Thickness (feet)	Depth (feet)
Surface material	4	4
Red sand	8	12
White rock	4	16
Red sand	4	20
Light-red sand	10	30
White rock	8	38
Red sand	10	48
White flint rock	2	50
Light-red sand	10	60
Sand and clay	15	75
Sand rock	12	87
White flint rock	3	90
Sand and clay, water	10	100
Sand with layers of clay	25	125
Yellow sand	10	135
White sand and gravel	8	143
Gravel and clay	8	151
Yellow sand	10	161
Yellow sand and gravel	10	171
Black sand and gravel	10	181
Yellow sand and gravel	7	188

Well 408

E. T. Daniels, 14½ miles northeast of Lubbock; 4 miles east of Idalou.

	Thickness (feet)	Depth (feet)
Sandy soil	4	4
Caliche	17	21
Dry red sand	31	52
Hard rock	12	64
Dry red sand	20	84
Sand, water	17	101
Sandy reddish-buff clay	18	119
Sand, water	49	168
Sandy reddish-buff clay	4	172
Yellow sand, water	22	194
Sand and gravel, water	76	270
Clay	4	274

Well 435

Ross Edwards, 11½ miles north of Lubbock; 1½ miles northwest of Monroe.

	Thickness (feet)	Depth (feet)
Sandy soil	2	2
Caliche	18	20
White clay	25	45

Well 435--Continued

	Thickness (feet)	Depth (feet)
Red clay	25	70
Dry red sand	15	85
Red clay	5	90
Red sand, water	10	100
Clayey fine-grained sand	20	120
Red sand, water	20	140
Clayey fine-grained sand	10	150
Red sand, water	21	171
White clay	18	189

Well 443

C. O. Anderson, 16 miles north of Lubbock; 1 mile south of Abernathy.

	Thickness (feet)	Depth (feet)
Sandy soil	5	5
Sandy clay and caliche	20	25
Dry red sand	60	85
Sand and sandy clay	20	105
Sand (water at 112 feet)	15	120
Rock, clay and sand	20	140
Clay and sand	40	180
Hard rock (limestone?)	10	190
Coarse-grained sand and gravel	8	198
Shale and clay	6	204
Red clay	4	208
Soft lime rock	4	212
Yellow clay	8	220
Black clay	15	235
Blue clay	6	241
Red bed	11	252

Well 450

L. L. Watson, 11½ miles northeast of Lubbock; 2½ miles east of Monroe.

	Thickness (feet)	Depth (feet)
Sandy red soil and clay	5	5
Red clay	7	12
Caliche clay	85	97
Fine-grained red sand, water	17	114
Red joint clay	6	120
Rock	8	128
Fine-grained red sand, water	17	145
Red clay	25	170
Fine-grained red sand, water	15	185

(Continued on next page)

Table of drillers' logs, Lubbock County--Continued

Well 450--Continued

	Thickness (feet)	Depth (feet)
Sandy yellow clay	10	195
Fine-grained red sand, water	20	215
Red clay	2	217
Red bed, clay	3	220

Well 453

J. R. West No. 3, 11½ miles northeast of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil	4	4
Sandy clay and caliche	61	65
Caliche rock	4	69
Pink and buff-colored clay	16	85
Red sand, water	10	95
Clayey fine-grained sand	47	142
Red water sand	16	158
Clayey fine-grained sand	6	164
Sand and clay in alternating beds	50	214
Pink clay	10	224
Red sand, water	18	242
Sand and rock, water	15	257
Reddish-buff clay	5	262

Well 457

E. N. Nance, 14 miles northeast of Lubbock, 5½ miles north of Idalou.

	Thickness (feet)	Depth (feet)
Soil	4	4
Caliche	37	41
Sandy red clay	42	83
Caliche rock	7	91
Red sand, water	26	117
Sandy buff-red clay	23	140
Red clay	11	151
Sandy clay	38	189
Red sand, water	38	227
Red clay	11	238
Coarse-grained sand, water	21	259
Clay	1	260

Well 468

J. T. Ellerd, 19 miles northeast of Lubbock.

Well 468--Continued

	Thickness (feet)	Depth (feet)
Sandy soil	5	5
Caliche	9	14
Sandy clay and clay	14	28
Dry red sand	45	73
Hard clay	4	77
Rock (water at 76 feet)	5	82
Sandy clay and clay	30	112
Soft red sand	6	118
Hard clay	14	132
Sand	13	145
Clay	7	152
Soft sand	12	164
Rock	5	169
Soft sand, and coarse-grained sand and gravel	71	240
Blue clay	6	246

Well 473

Floyd Cannon, 19 miles northeast of Lubbock, near Becton.

	Thickness (feet)	Depth (feet)
Soil	4	4
Caliche	33	37
Buff-colored clay	26	63
Caliche rock	11	74
Clayey fine-grained sand	34	108
Rock	19	127
Buff clay	23	150
Clayey fine-grained sand	15	165
Rock and clay	27	192
Clayey fine-grained sand	48	240
Rock and sand	24	264
Clayey fine-grained sand	36	300

Well 481

Dr. A. C. Scott, 22½ miles northeast of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil	3	3
Caliche and sandy clay	37	40
Caliche rock	5	45
Clay	15	60
Rock	13	73
Clay	10	83
Red sand, water	7	90
Red clay and sand	35	125
Joint clay	8	133
Sand, water	30	163
Clay	14	177
Sand and gravel, water	28	205

Table of drillers' logs, Lubbock County--Continued

Well 492

Donald Bledsoe, 17 miles northeast of Lubbock.

	Thickness (feet)	Depth (feet)
Soil	3	3
Red caliche	23	26
Sandy yellow clay	11	37
Caliche rock	6	43
Yellow clay	4	47
Chalk rock	4	51
Red clay	5	56
Very hard caliche rock	6	62
Red clay	13	75
Red sand and gravel, water	21	96
Red clay	17	113
Red sand and clay	7	120
Reddish-brown sand, water	11	131
Honeycomb sand and clay	9	140
Hard sand, clay and gravel	12	152
Brown sand	35	187
Sandy brown clay	11	198
Red clay	16	214
Red sand	8	222
Sandy red clay	10	232
Red sand	8	240
Brown clay	10	250
Brown sand and gravel	2	252
Yellow clay	5	257

Well 495

G. C. McKinney, 15 miles northeast of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil	5	5
Caliche	37	42
Sandy clay	23	65
Clay	32	97
Sand and gravel, water	20	117
Clay	11	128
Clayey fine-grained sand	11	139
Coarse-grained sand, water	12	151
Clayey fine-grained sand	39	190
Sand and gravel, water	50	240
Clay	4	244

Well 507

Mary C. Brown, 18 miles northeast of Lubbock.

	Thickness (feet)	Depth (feet)
Soil	3	3
Caliche and clay	27	30
Dry red sand	20	50
Caliche rock	6	56
Red sand (water at 95 feet)	57	113
Clay	27	140
Red sand, water	12	152
Red clay	20	172
Sand	8	180
Rock	4	184
Red clay	19	203
Rock	3	206
Clay	2	208
Rock	8	216
Clay	20	236
Sand	6	242
Clay	32	274
Rock	2	276
Sand	6	282
Clay	20	302
Sand	20	322
Clay	1	323

Well 511

G. B. Forrest, 15½ miles northeast of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil	4	4
Caliche	54	58
Caliche rock	10	68
Caliche boulders	12	80
Reddish-buff clay	17	97
Red sand, water	17	114
Clayey fine-grained sand	8	122
Red sand, water	18	140
Reddish-buff clay	22	162
Sand, water	23	185
Reddish-buff clay	7	192
Water-bearing gravel	15	207
Clay	14	221

Table of drillers' logs, Lubbock County--Continued

	Thickness (feet)	Depth (feet)
Well 553		
R. E. Bryant, 12 miles northeast of Lubbock; 1 mile north of Idalou.		
Soil, clay and caliche	25	25
Dry sand	30	55
Sand rock	2	57
Sand, water	16	73
Sandy buff-colored clay	6	79
Clayey red sand	11	90
Red clay	49	139
Clayey red sand	6	145
Clayey fine-grained sand	39	184
Sand and gravel, water	8	192
Red clay	11	203
Clayey sand, water	8	211
Packsand	60	271
Gravel and clay	20	291
Clay	2	293
Well 564		
C. A. Lawrence, 10 miles northeast of Lubbock; 1 mile south of Idalou.		
Sandy red soil	4	4
Caliche	10	14
Clayey red sand	6	20
Sandy caliche rock	6	26
Clayey dry sand	14	40
Calcareous sand rock	4	44
Sandy buff-colored clay	9	53
Red sand, water	17	70
Sandy buff-colored clay	6	76
Red sand, water	32	108
Clay	8	116
Sand, water	15	131
Clayey fine-grained sand	49	180
Sand, water	5	185
Clayey fine-grained sand	50	235
Gravel, water	3	238
Red clay	4	242
Well 569		
Ed Foreman, 11½ miles northeast of Lubbock; 1½ miles southeast of Idalou.		
Sandy red soil and clay	5	5
Caliche	50	55
Sandy buff-colored clay	9	64
Well 569--Continued		
Sandy reddish-buff caliche rock	21	85
Red sand, water	16	101
Hard reddish-buff caliche rock (drills like limestone)	14	115
Pink sand with clay balls	13	128
Reddish-buff clay	15	143
Clayey fine-grained red sand	41	184
Hard conglomerate	7	191
Clayey fine-grained red sand	57	248
Coarse gravel and hard conglomerate	15	263
White clay	7	270
Conglomeratic sand and gravel	21	291
Tough dark-red clay	13	304
Well 570		
W. O. Grimes, 11½ miles northeast of Lubbock; 3 miles southeast of Idalou.		
Sandy soil	4	4
Caliche	14	18
Calcareous sand rock	32	50
Rock with seeps of water	21	71
Gravel, water	22	93
Clay	4	97
Conglomerate	4	101
Red clay	12	113
Coarse sand and gravel, water	8	121
Red clay	10	131
Water-bearing gravel	7	138
Red clay with a little sand	22	160
Well 575		
J. C. Sherrod, 8½ miles northeast of Lubbock.		
Sandy soil	4	4
Clay and caliche	16	20
Sandy caliche rock	3	23
Sandy gray clay	17	40
Sandy red clay	18	58
White sand, water	14	72

(Continued on next page)

Table of drillers' logs, Lubbock County--Continued

	Thickness (feet)	Depth (feet)
Well 575--Continued		
White clay	11	83
Red sand and gravel, water	23	106
Gray clay	4	110
Red sand and gravel, water	10	120
Gray clay	1	121
Red sand and gravel, water	12	133
Red clay	1	134

Well 582

W. J. Grimes, 11½ miles east of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy red soil	4	4
Caliche	41	45
Red sand (water at 48 feet)	10	55
Thin beds of clay and sand	25	80
Red clay	15	95
Sandy clay	30	125
Red sand, water	5	130
Clayey fine-grained sand	55	185

Well 592

J. F. Goodnight no. 2, 5½ miles east of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy red soil	2	2
Caliche	29	31
Caliche rock	11	42
Reddish-buff clay	22	64
Red sand, water	17	81
Reddish-buff clay	9	90
Water-bearing gravel	7	97
Reddish-buff clay	9	106
Coarse sand, water	34	140
Hard rock		140

Well 601, partial log

R. S. Collins, 4½ miles northeast of Lubbock. Composite log of wells 600 and 601.

(Well 601, irrigation well)

	Thickness (feet)	Depth (feet)
Well 601, partial log--Continued		
Sandy red soil and clay	15	15
Caliche rock	5	20
Sandy reddish-buff clay	45	65
Red sand, water	15	80
Clayey fine-grained sand	10	90
Red sand, water	30	120
Clayey fine-grained sand	10	130
White rock	2	132
(Well 600, oil well 300 feet from well 601)		
Rock, sand and gravel	33	165
Sand and gravel	25	190
Sand, shale and shells (set 392 feet of 10¾-inch casing)	215	405
Red bed	345	750
Sandy red bed	170	920
Red shale and sand	250	1170
Sandy red bed	30	1200
Red shale	160	1360
Anhydrite and sand (top anhydrite, 1,360 feet)	70	1430
TOTAL DEPTH of Well 600		5002

Well 616

Kenneth Williams, 9 miles northeast of Lubbock; 2½ miles west of Idalou.

	Thickness (feet)	Depth (feet)
Sandy soil	3	3
Sandy clay and caliche	32	35
Caliche rock	5	40
Sandy light-yellow clay	13	53
Sandy caliche (water at 53 feet)	21	74
Cavey clay	27	101
Red sand, water	11	112
Reddish-buff clay	6	118
Red sand, water	3	121
Clayey fine-grained sand	12	133
Reddish-buff clay	3	136
Clayey fine-grained sand	29	165
Red clay	5	170
Red sand, water	12	182
Clayey fine-grained sand	58	240
Sand and gravel, water	8	248
Clay	7	255

Table of drillers' logs, Lubbock County--Continued

Well 635

A. L. Cone, 11 miles northeast of Lubbock; $5\frac{1}{2}$ miles northwest of Idalou.

	Thickness (feet)	Depth (feet)
Sandy red and brown soil	4	4
Caliche clay	26	30
Caliche rock and clay	45	75
Red sand, water	12	87
Rock	29	116
Sand, water	17	133
Clayey fine-grained sand	27	160
Sand, water	23	183
Clayey fine-grained sand	37	220
Sand, water	25	245
Clay	5	250

Well 637

John O. Ford, $9\frac{1}{2}$ miles northeast of Lubbock; $2\frac{1}{2}$ miles southeast of Monroe.

	Thickness (feet)	Depth (feet)
Sandy red soil	4	4
Gray clay and caliche	41	45
Sandy red clay	21	66
Sandy caliche rock	12	78
Red sand, water	18	96
Red clay	19	115
Red sand, water	15	130
Red clay	10	140
Red sand, water	20	160
Hard red clay	6	166

Well 642

F. C. Litton, 9 miles north of Lubbock; 2 miles southwest of Monroe.

	Thickness (feet)	Depth (feet)
Soil	2	2
Gray caliche and clay	16	18
Red caliche	19	37
Sandy red clay	38	75
Red sand, water	11	86
Clayey fine-grained sand	38	124
Red sand, water	11	135
Clay	15	150
Hard lime rock	2	152

Well 65[illegible]

Elmer Edwards, $6\frac{1}{2}$ miles northeast of Lubbock; near airport.

	Thickness (feet)	Depth (feet)
Sandy red soil	5	5
Caliche	23	28
Dry red sand	23	51
Caliche rock	7	58
Sandy buff-colored clay	21	79
Red sand, water	15	94
Clay	18	112
Sand, water	16	128
Clay	21	149
Sandy, reddish-buff clay	29	178
Hard rock (caliche or limestone)	2	180

Well 662

J. E. Vickers, $5\frac{1}{2}$ miles north of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy red soil	4	4
Caliche clay	8	12
Calcareous sand rock	8	20
Dry red sand	12	32
Sand rock	3	35
Dry red sand	5	40
Sand rock	4	44
Sandy red clay	9	53
Red sand, water	15	68
Rock	15	83
Red sand, water	10	93
Red clay	27	120
Sand,water	23	143
Red clay	9	152

Well 701

S. E. Cone no. 2, 8 miles northwest of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy red soil	3	3
Caliche	28	31
Sandy red clay	47	78
Sand rock	5	83
Red sand, water	20	103
Gray clay	7	110

(Continued on next page)

Table of drillers' logs, Lubbock County--Continued

Well 701--Continued

	Thickness (feet)	Depth (feet)
Fine-grained red sand, water	25	135
Red clay	5	140
Red sand, water	35	175
Sandy gray clay	3	178

Well 705

Herbert Galbraith, 10 miles northwest of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil and clay	5	5
Clay and caliche rock	15	20
Caliche rock	4	24
Clay	26	50
Rock	10	60
Dry red sand	20	80
Red sand, water	10	90
Sand rock	10	100
Red sand, water	20	120
Sand rock	10	130
Red sand, water	20	150
Pink clay	9	159
Rock and clay	21	180
Sand, water	6	186
White clay	6	192

Well 722

B. B. Kent, 5½ miles west of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil and clay	5	5
Sandy red clay	20	25
Caliche	40	65
Red sand, water	10	75
Red clay	20	95
Sand and gravel, water	15	110
Light-gray clay	20	130
Sand and gravel, water	10	140
Sandy gray clay	15	155
Sand and gravel, water	21	176
White caliche rock	1	177

Well 733

G. W. Williams, 8 miles northwest of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil	1	1
Caliche	33	34
Sand, water	10	44

Well 733--Continued

	Thickness (feet)	Depth (feet)
Red clay	6	50
Sand, water	5	55
Red clay	10	65
Sand, water	15	80
Red clay	25	105
Red and yellow clay	45	150
Blue clay	10	160

Well 736

Glenn Blackman, 10½ miles northwest of Lubbock; 2 miles south of Shallowater.

	Thickness (feet)	Depth (feet)
Sandy red soil	4	4
Caliche	28	32
Sandy buff-colored clay	22	54
Caliche rock	14	68
Red sand	11	79
Clay	6	85
Sand, water	18	103
Hard rock	7	110
Sand, water	10	120
Yellow clay	6	126

Well 739

E. A. Preston, 13½ miles northwest of Lubbock; 2½ miles northwest of Shallowater.

	Thickness (feet)	Depth (feet)
Sandy soil and clay	4	4
Caliche clay	48	52
Caliche rock	16	68
Clayey fine-grained sand	28	96
Red sand, water	15	111
Clayey fine-grained red sand	10	121
Hard sand	37	158
Clay	14	172
Coarse-grained sand and gravel, water	18	190
Red bed	2	192

Well 749

J. J. Calloway, 14½ miles northwest of Lubbock; 5 miles southwest of Shallowater.

	Thickness (feet)	Depth (feet)
Soil	3	3
Caliche	9	12

(Continued on next page)

Table of drillers' logs, Lubbock County--Continued

	Thickness (feet)	Depth (feet)
Well 749--Continued		
Clay and sand	48	60
Clayey fine-grained red sand	33	93
Sand rock	3	96
Red sand, water	29	125
Red clay	20	145
Sand, water	25	170
Sand rock	5	175
Yellow clay	10	185
Yellow sand	27	212
Well 756		
Bellows and Greer no. 2, 13 miles northwest of Lubbock; 3 miles west of Shallowater.		
Soil	4	4
Caliche	31	35
Clay	20	55
Sand, water	6	61
Clay	6	67
Packsand	4	71
Sand, water	14	85
Packsand	20	105
Sand and gravel, water	15	120
Yellow clay	18	138
Blue clay	2	140
Well 765		
A. L. King, 10 miles west of Lubbock; 1½ miles north of Hurlwood.		
Sandy loam soil	3	3
Clay and caliche	37	40
Hard red rock	5	45
Caliche	5	50
Hard red rock	3	53
White caliche	17	70
Soft gray rock	5	75
Red clay	5	80
Sand, water	2	82
Clay with a little sand	18	100
Red clay	10	110
Sand and gravel, water	4	114
Tough red clay	2	116
Soft red clay	12	128
Sand and gravel, water	10	138
Soft red clay	8	146
Tough yellow clay	14	160
Well 767		
C. R. Moore, 10 miles west of Lubbock; 1 mile east of Hurlwood.		
Sandy soil and clay	5	5
Caliche and clay	20	25
Sandy red clay	25	50
Gray clay	10	60
Rock	12	72
Gray clay	8	80
Red flint rock	5	85
Gray clay	7	92
Red flint rock	6	98
Sand and gravel, water	20	118
Sandy gray clay	12	130
Soft sand rock	10	140
Sand and gravel, water	14	154
Gray clay	11	165
Sand and gravel, water	20	185
Yellow clay	5	190
Well 780		
W. B. Atkins, 13½ miles southwest of Lubbock; 3½ miles northwest of Wolfforth.		
Sandy soil and clay	5	5
Caliche	20	25
Sandy red clay	25	50
Sand rock	35	85
Sandy gray clay	5	90
Sand, water	15	105
Gray clay	20	125
Sand and gravel, water	10	135
Gray clay	10	145
Sand and gravel, water	10	155
Yellow clay	19	174
Well 787		
R. S. Hobgood, 15 miles southwest of Lubbock; 5 miles southwest of Wolfforth.		
Sandy soil and clay	5	5
Light-gray clay	13	18
Small caliche rock and clay	17	35
Hard caliche rock	5	40
Caliche clay	6	46
Caliche clay and rock	4	50
Limy sand rock	32	82
Yellow sand, water	13	95

(Continued on next page)

Table of drillers' logs, Lubbock County--Continued

Well 787--Continued

	Thickness (feet)	Depth (feet)
Clayey fine-grained sand	5	100
Yellow sand and gravel, water	26	126
Gray clay	15	141
Yellow sand and gravel, water	21	162
Gray clay	1	163
Yellow sand and gravel, water	27	190
Blue clay	3	193

Well 791

J. C. Stanford, 14½ miles southwest of Lubbock; 8 miles southeast of Wolfforth.

	Thickness (feet)	Depth (feet)
Soil and clay	5	5
Clay and caliche	50	55
Sandy clay	9	64
Sand rock	8	72
Sandy clay	23	95
Sand, water	13	108
Clay	14	122
Sand, water	9	131
Clay	17	148
Sand, water	15	163
Yellow clay	2	165

Well 811

E. C. Hatton No. 3, 8½ miles southwest of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil	4	4
Caliche clay	26	30
Caliche rock	5	35
Packsand	15	50
Sandy gray clay	30	80
Sand rock	7	87
Sandy gray clay	12	99
Sand, water	11	110
Sandy gray clay	7	117
Sand and gravel, water	10	127
Sandy gray clay	8	135
Sand and gravel, water	12	147
Yellow clay	10	157
Blue clay	3	160

Well 814

T. D. Julian, 10 miles southwest of Lubbock; 2½ miles west of Woodrow.

	Thickness (feet)	Depth (feet)
Soil and clay	5	5
Caliche	20	25
Red clay	15	40
Sand rock	20	60
Packsand	30	90
Sand rock (water level, 95 feet)	10	100
Sand and gravel, water	38	138
Yellow clay	20	158

Well 822

W. M. Martin, 12 miles south of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil	4	4
Clay	24	28
Caliche	10	38
Sandy clay	16	54
Sand rock	11	65
Sandy clay	27	92
Sand, water	12	104
Clay	14	118
Sand, water	10	128
Clay	7	135
Sand, water	27	162
Yellow clay	3	165

Well 830

Alvin B. Allen, 9 miles south of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil	4	4
Clay	11	15
Caliche	27	35
Sandy clay	27	62
Hard rock	5	67
No record	--	--
Sand and gravel, water	9	99
Clay	4	103
Sand and gravel, water	26	129
Yellow clay	18	147

Table of drillers' logs, Lubbock County--Continued

Well 841

H. B. Davis, 7 miles south of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil	3	3
Caliche clay	6	9
Red clay	3	12
Caliche and thin beds of red clay	13	25
Caliche clay and rock	10	35
Sand rock and caliche rock	9	44
Clayey fine-grained sand	8	52
Sand rock	5	57
Clayey fine-grained sand	18	75
Hard rock	4	79
Sand, water	8	87
Rock	4	91
Sand and gravel with thin beds of sand rock, water	53	144
Yellow clay	11	155
Yellow clay and blue shale	11	166

Well 849

R. D. Brown, 2 miles southeast of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy soil and clay	5	5
Caliche clay	15	20
Caliche rock	15	35
Sandy clay and dry sand	22	57
Sand (water level 57 feet)	8	65
Sandy yellow clay	5	70
Sand and gravel, water	9	79
Sandy yellow clay	21	100
Sand and gravel, water	17	117
Yellow clay	8	125

Well 866

L. D. Moss, 8 miles southeast of Lubbock; 2½ miles northeast of Woodrow.

	Thickness (feet)	Depth (feet)
Sandy soil and clay	6	6
Caliche	14	20
Sandy red clay	30	50
Hard sand rock	25	75
Sandy gray clay	3	78
Gray clay, water	17	95
Gray clay	8	103
Sand and gravel, water	20	123
Sandy gray clay	12	135
Sand and gravel, water	20	155
Yellow clay	7	162

Well 880

F. O. Miller, 9½ miles east of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy red soil	4	4
Caliche	8	12
Clay	29	41
Red clay	24	65
White clay and caliche rock	30	95
No record	--	--
Red sand, water	30	125
Red clay	13	138
Red sand, water	14	152
Red clay	12	164
Red sand, water	10	174
Red clay	4	178
Red sand, water	40	218
Red bed	4	222

Well 887

S. E. Cone no. 4, 11 miles east of Lubbock.

	Thickness (feet)	Depth (feet)
Sandy red soil	2	2
Caliche clay and rock	33	35
Sand rock	5	40
Dry red sand	25	65
Rock	7	72
Coarse-grained red sand and gravel	35	107
Red clay	21	128
Rock	4	132
White sand and gravel, water	23	155
Yellow soapstone	5	160
Yellow clay	5	165

Well 888

M. F. Klattenhoff, 11½ miles southeast of Lubbock, near north rim of canyon of Double Mountain Fork of Brazos River.

	Thickness (feet)	Depth (feet)
Soil	3	3
Caliche clay and rock	18	21
Red clay	25	46
Dry red sand and boulders	41	87
Dry coarse gravel	23	110
Reddish-buff clay	7	117
Dry gravel	14	131
Red clay	24	155
Gravel with some water	42	197
Sticky red clay	6	203

Water levels in observation wells in Lubbock County, in feet below measuring point

(Owner, distance and direction of well from County Courthouse at Lubbock, and description of measuring points.)

3a

E. E. Winters; 17 miles NW.; top of pipe clamp, 0.5 foot above land surface.

Apr. 11, 1938	29.48
June 21	29.43
June 28	28.81
Aug. 10	28.03
Sept. 19	28.38
Oct. 19	28.51
Jan. 16, 1939	28.98
Nov. 18, 1940	29.24
Feb. 9, 1944	28.50
Feb. 21, 1945	28.61

37

S. E. Blair; 17 miles NE.; ½-inch hole on east side of steel pump base, 1 foot above land surface.

Mar. 12, 1937	74.15
Dec. 22	74.02
Jan. 10, 1939	74.13
Dec. 16	74.49
Nov. 19, 1940	75.37
Jan. 25, 1941	75.14
Mar. 23, 1942	72.60
Oct. 30	72.51
Jan. 28, 1943	72.11
Feb. 22, 1944	71.96
Feb. 9, 1945	72.43

64a

W. O. Fortenberry; 10½ miles N.; top of concrete pump foundation, 1 foot above land surface.

Dec. 21, 1937	87.18
June 15, 1938	87.58
Oct. 18	87.21
Dec. 22	87.02
Mar. 7, 1939	86.72
June 23	88.94
Oct. 10	87.58
Dec. 17	86.83
Mar. 13, 1940	86.49
Nov. 13	87.14
Jan. 22, 1941	87.74
Dec. 27	85.44
Mar. 24, 1942	85.00
Feb. 11, 1943	84.35
Feb. 9, 1944	83.54
Feb. 9, 1945	83.53

74a

J. S. George; 6½ miles N.; top of concrete curb, 1 foot above land surface.

June 30, 1938	33.06
Aug. 10	34.20
Sept. 23	34.98
Oct. 24	35.33
Dec. 22	35.40
Jan. 28, 1939	35.23
Mar. 4	35.42
Apr. 3	35.50
June 16	35.04
June 22	34.87
June 30	33.32
July 5	32.97
July 10	33.52
July 20	33.98
Aug. 4	34.36
Aug. 16	34.48
Oct. 10	35.35
Dec. 16	35.53
Mar. 13, 1940	35.60
July 10	35.81
Nov. 13	36.30
Jan. 22, 1941	36.13
Mar. 6	36.52
June 3	30.41
July 28	29.30
Mar. 24, 1942	31.50
Feb. 1, 1943	29.66
Feb. 9, 1944	32.21
Feb. 9, 1945	32.63

74b

J. S. George; 7½ miles N.; top of concrete curb, 1 foot above land surface.

June 22, 1939	37.42
June 30	36.06
July 5	35.41
July 10	35.88
July 20	36.06
Aug. 4	36.70
Aug. 16	36.36
Oct. 10	37.04
Dec. 16	37.53
Mar. 13, 1940	37.89
Jan. 22, 1941	38.66
Mar. 6	38.55
June 3	33.58
July 28	31.43

(Continued on next page)

74b--Continued

Mar. 23, 1942	32.95
Dec. 17	29.94
Feb. 1, 1943	30.40
Feb. 9, 1944	34.02
Feb. 9, 1945	34.40

77a

J. H. Felton; 6½ miles N.; top of concrete pump foundation, 0.8 foot above land surface.

Apr. 12, 1938	70.87
June 15	70.88
June 30	70.83
Sept. 23	70.72
Oct. 18	70.67
Mar. 7, 1939	70.67
June 23	70.63
Oct. 10	70.80
Dec. 16	71.16
Mar. 13, 1940	71.16
Nov. 13	73.44
Feb. 1, 1943	70.77
Feb. 9, 1944	71.21
Feb. 21, 1945	70.92

81

J. E. Vickers; 5 miles N.; top of lower edge large opening in pump base, 2 feet above land surface.

Dec. 6, 1936	44.52
Dec. 21, 1937	44.25
Jan. 25, 1938	44.22
June 15	48.19
June 30	44.65
Dec. 23	44.33
Mar. 7, 1939	45.48
Oct. 10	47.98
Dec. 16	47.40
Mar. 13, 1940	46.92
Nov. 13	48.14
Jan. 22, 1941	46.74
Mar. 6	47.15
Dec. 27	41.78
Dec. 17, 1942	42.59
Feb. 1, 1943	42.00
Feb. 9, 1944	43.30
Feb. 23, 1945	42.52

99

R. B. Gray; 15½ miles NW.; top of concrete curb, inside trap door, level with land surface.

June 22, 1937	34.29
Dec. 20	34.31
Jan. 26, 1938	34.35
Apr. 9	34.41

99--Continued

June 21, 1938	38.24
Nov. 18, 1940	39.67
Mar. 26, 1942	25.81
Feb. 1, 1943	20.66
Feb. 9, 1944	25.53
Feb. 20, 1945	29.58

101

O. P. Bowser; 15 miles NW.; top of lower edge large opening in pump base, 2 feet above land surface.

June 22, 1937	64.55
Aug. 22	64.70
Dec. 20	64.64
Jan. 26, 1938	64.60
Apr. 9	64.31
June 21	64.52
Sept. 10	65.03
Mar. 11, 1939	63.82
Aug. 15	64.38
Oct. 13	64.55
Mar. 13, 1940	63.88
Nov. 18	66.64
Mar. 7, 1941	64.97
Feb. 1, 1943	63.68
Feb. 20, 1945	64.22

107

B. G. Lokey; in Shallowater; top of casing, 0.7 foot above land surface.

Apr. 9, 1937	51.30
Sept. 8	50.80
Sept. 22	50.82
Jan. 26, 1938	50.74
Apr. 9	50.94
June 17	50.87
Oct. 19	50.82
Jan. 16, 1939	50.80
Mar. 11	50.87
June 19	51.01
Aug. 15	50.21
Oct. 13	50.05
Mar. 13, 1940	50.08
Nov. 18	50.56
Mar. 7, 1941	50.58
May 30	50.11
July 29	47.81
Mar. 26, 1942	46.43
July 28	46.28
Feb. 1, 1943	44.26
Feb. 9, 1944	45.01
Feb. 20, 1945	46.08

Water levels, Lubbock County--Continued

118

T. C. James; 9 miles W.; top of concrete pump foundation, 0.5 foot above land surface.

Dec. 7, 1936	81.94
Dec. 18, 1937	81.11
Dec. 23, 1938	81.17
Dec. 16, 1939	81.27
Mar. 7, 1941	82.06
Mar. 27, 1942	80.68
Dec. 18	80.16
Feb. 18, 1943	80.10
Feb. 4, 1944	80.06
Feb. 22, 1945	80.12

121

Claude Campbell; 7 miles W.; top of lower edge large opening in pump base, 1.2 feet above land surface.

May 20, 1937	75.95
June 21	75.59
Dec. 18	74.96
Apr. 12, 1938	75.87
June 22	76.28
Dec. 23	75.12
Mar. 14, 1939	75.36
June 26	80.80
Oct. 12	77.68
Dec. 12	76.79
Mar. 26, 1940	76.92
Nov. 18	78.20
Jan. 22, 1941	77.53
Mar. 7	79.04
Mar. 27, 1942	75.62
Dec. 18	74.28
Feb. 18, 1943	73.90
Feb. 10, 1944	74.42
Feb. 20, 1945	74.67

123

Travis Tubbs; 6 miles W.; top of concrete pump foundation, 1.4 feet above land surface.

Dec. 8, 1936	63.75
Dec. 18, 1937	63.40
Dec. 23, 1938	64.20
Oct. 12, 1939	65.53
Dec. 16	65.12
Dec. 18, 1940	66.54
Jan. 22, 1941	67.48
Mar. 7	66.05
Mar. 27, 1942	63.60
Feb. 18, 1943	62.60
Feb. 10, 1944	63.10
Feb. 21, 1945	63.56

128

Rufus Rush; 4 miles W.; top of concrete pump foundation, 0.8 foot above land surface.

Dec. 8, 1936	42.89
Dec. 18, 1937	41.94
Dec. 23, 1938	41.48
June 26, 1939	--
Oct. 11	44.58
Dec. 16	42.76
Nov. 18, 1940	44.95
Jan. 22, 1941	43.89
Mar. 7	47.33
Mar. 27, 1942	40.08
Dec. 18	38.99
Feb. 18, 1943	38.37
Feb. 10, 1944	38.72
Feb. 21, 1945	40.05

138

Edith Collie; 7½ miles NW.; top of concrete pump foundation, 1.4 feet above land surface.

Apr. 13, 1937	45.68
Dec. 18	41.44
June 17, 1938	41.51
June 21	41.53
June 28	41.53
Sept. 10	41.09
Oct. 19	41.00
Dec. 23	40.99
Mar. 10, 1939	40.98
June 19	41.18
Aug. 15	41.20
Oct. 13	41.26
Dec. 16	41.23
Mar. 13, 1940	41.32
Apr. 4	41.30
Nov. 18	41.60
Mar. 7, 1941	41.81
July 29	39.23
Mar. 26, 1942	37.65
Dec. 18	36.00
Feb. 1, 1943	35.94
Feb. 23, 1945	37.50

139

O. C. Ballard; 7 miles NW.; top of steel casing in concrete, 1 foot above land surface.

Apr. 13, 1937	28.24
Dec. 20	26.81
Jan. 26, 1938	26.85
Apr. 9	27.25
June 17	28.04

(Continued on next page)

Water Levels, Lubbock County--Continued

139--Continued

June 21, 1938	27.79
June 28	27.34
Sept. 10	26.69
Jan. 16, 1939	26.82
Mar. 10	26.86
June 19	25.04
July 20	--
Aug. 15	24.52
Oct. 13	24.88
Dec. 16	25.41
Mar. 13, 1940	25.88
Apr. 4	26.01
Nov. 18	27.07
Mar. 7, 1941	27.23
May 30	25.91
July 29	23.23
Mar. 26, 1942	23.76
Dec 18	22.45
Feb. 1, 1943	22.43
Feb. 9, 1944	23.33
Feb. 22, 1945	24.77

150a

M. C. Gibson; 5½ miles NW.; top of concrete curb, 1.2 feet above land surface.

June 28, 1938	28.78
Aug. 10	28.12
Sept. 10	27.83
Oct. 19	28.18
Jan. 16, 1939	28.38
Mar. 10	28.43
June 19	28.21
Aug. 15	28.23
Oct. 13	28.24
Dec. 16	28.23
Mar. 13, 1940	28.30
July 10	28.49
Nov. 18	29.00
Mar. 7, 1941	29.16
May 30	28.01
July 29	25.40
Mar. 26, 1942	23.92
July 28	23.32
Feb. 1, 1943	20.69
Feb. 4, 1944	22.21
Feb. 22, 1945	24.62

151

Broadview School; 5 miles NW.; top of concrete curb, 0.1 foot above land surface.

Apr. 13, 1937	29.41
Sept. 21	27.48
Jan. 26, 1938	27.44
Apr. 9	27.58
June 17	27.74

151--Continued

June 21, 1938	27.69
June 28	27.56
Aug. 10	26.88
Sept. 10	26.78
Oct. 19	26.87
Dec. 6	26.96
Jan. 16, 1939	27.06
Mar. 10	27.14
June 19	26.98
July 12	27.00
Aug. 15	27.00
Oct. 13	27.08
Dec. 16	27.13
Mar. 13, 1940	27.24
July 10	27.44
Oct. 27	27.95
Nov. 18	28.06
Mar. 7, 1941	28.33
May 30	27.26
July 29	24.40
Mar. 26, 1942	22.86
July 4	22.30
Nov. 18	19.96
Feb. 1, 1943	19.41
Feb. 4, 1944	--
Feb. 9	21.73
Feb. 22, 1945	23.31

154

J. S Hamilton, 4 miles W.; top of concrete pump foundation, level with land surface.

June 21, 1937	40.55
Dec. 18	38.71
Dec. 23	38.18
Oct. 11, 1939	39.41
Dec. 16	38.90
Nov. 18, 1940	40.34
Jan. 22, 1941	40.07
Mar. 7	40.33
Mar. 27, 1942	36.48
Dec. 18	34.96
Feb. 18, 1943	34.82
Feb. 10, 1944	35.43
Feb. 21, 1945	37.04

156

J. M. Phillips; 3 miles NW.; top of concrete pump foundation, level with land surface.

Dec. 8, 1936	40.53
Dec. 18, 1937	40.21
Dec. 23, 1938	39.98
June 26, 1939	40.58
Oct. 11	41.77

(Continued on next page)

Water levels, Lubbock County--Continued

156--Continued

Dec. 16, 1939	41.23
Mar. 13, 1940	41.37
Nov. 18	43.38
Jan. 22, 1941	42.32
Mar. 7	42.17
July 29	40.40
Mar. 26, 1942	38.20
Dec. 18	38.44
Feb. 1, 1943	37.81
Feb. 4, 1944	41.21
Feb. 23, 1945	41.16

185

F. Clowe; 2 miles E.; top of steel casing, 0.5 foot above land surface.

Mar. 8, 1937	61.78
Sept. 10	61.81
Sept. 22	61.79
Oct. 16	61.80
Jan. 26, 1938	61.66
Apr. 9	61.71
June 17	61.91
June 21	61.91
June 28	61.87
Sept. 9	61.68
Dec. 12	61.78
Jan. 16, 1939	61.76
Mar. 8	61.78
June 19	62.25
July 20	62.37
Oct. 10	62.50
Dec. 17	62.48
Mar. 22, 1940	62.54
Feb. 7, 1944	61.82
Feb. 21, 1945	62.42

188

Texas State Experiment Farm; 3 miles E.; top of concrete pump foundation, 1 foot above land surface.

Mar. 8, 1937	78.19
May 8	79.40
June 14, 1938	79.12
Jan. 12, 1939	78.08
Mar. 7	78.47
Dec. 17	79.40
Feb. 28, 1940	77.92
Nov. 19	79.38
Jan. 25, 1941	78.57
Mar. 6	78.46
July 29	78.85
Dec. 18	76.97
Feb. 3, 1944	76.18
Mar. 1, 1945	75.29

216

J. T. Mattingly; 9^1 miles E.; top of steel casing in concrete, 0.3 foot above land surface.

Feb. 3, 1937	52.58
Feb. 22, 1944	46.92
Feb. 26, 1945	47.20

219

E. N. Harrison; 9½ miles NE.; top of air-line hole in steel base of pump, 1.4 feet above land surface.

Feb. 5, 1937	44.40
Dec. 22	44.20
June 14	45.13
Mar. 7, 1939	43.96
June 23	45.52
Oct. 10	46.14
Dec. 17	45.22
Nov. 19, 1940	46.92
Jan. 25, 1941	46.27
Mar. 6	46.12
July 29	42.64
Mar. 23, 1942	39.56
Dec. 18	35.42
Jan. 28, 1943	35.18
Feb. 22, 1944	36.82
Feb. 20, 1945	38.83

221

Bill Turner; 12½ miles NE.: top of pipe clamp, 0.3 foot above land surface.

June 23, 1937	55.20
Sept. 10	55.79
Jan. 24, 1938	56.17
Mar. 7, 1939	56.22
June 23	56.27
Sept. 30	56.28
Dec. 17	56.23
Nov. 19, 1940	56.49
Jan. 25, 1941	56.51
Mar. 6	56.55
July 29	53.89
Mar. 23, 1942	52.27
July 31	52.58
Jan. 28, 1943	50.43
Feb. 8, 1944	50.63
Feb. 9, 1945	52.42

222

R. T. Groves; 12 miles NE.; lower edge of concrete trough, flush with land surface.

Feb. 5, 1937	53.66
Apr. 14, 1938	53.25

(Continued on next page)

Water levels, Lubbock County--Continued

222--Continued

June 14, 1938	53.23
Sept.30	53.12
Mar. 7, 1939	53.08
June 23	53.06
Oct. 10	53.08
Dec. 17	53.04
Mar. 22, 1940	53.02
Mar. 6, 1941	53.13
Mar. 23, 1942	50.55
July 31	50.12
Jan. 28, 1943	48.61
Feb. 8, 1944	47.50
Feb. 20, 1945	48.10

223

W. C. Grimes; 12 miles E.; top of pipe clamp, 0.4 foot above land surface.

Feb. 4, 1937	47.20
June 14, 1938	47.81
Aug. 9	47.86
Jan. 6, 1939	47.82
Mar. 8	47.79
June 30	47.82
Oct. 10	48.05
Dec. 16	47.80
Mar. 22, 1940	47.86
Nov. 19	47.80
Jan. 25, 1941	47.76
Mar. 6	47.80
July 29	44.85
Mar. 23, 1942	43.25
July 31	43.84
Jan. 28, 1943	43.03
Feb. 8, 1944	43.01
Feb. 20, 1945	43.07

228

G. H. Hutchings; 16 miles NE.; top of steel casing, 2.5 feet above land surface.

Feb. 3, 1937	70.89
Sept.10	70.74
Jan. 24, 1938	70.63
Apr. 14	70.59
June 14	70.56
June 23	70.58
Aug. 9	70.49
Sept.30	70.42
Mar. 7, 1939	70.41
June 23	70.37
Sept.30	70.34
Dec. 17	70.30
Mar. 22, 1940	70.29
Nov. 19	70.37
Jan. 25, 1941	70.35
Mar. 6	70.36
June 3	70.38

228--Continued

July 29, 1941	69.17
Mar. 23, 1942	68.03
July 31	67.85
Jan. 28, 1943	67.74
Feb. 8, 1944	67.58
Feb. 20, 1945	67.82

301

S. D. Stewart; 8 miles SE.; top of concrete curb, 0.8 foot above land surface.

Jan. 6, 1937	58.50
Jan. 6, 1939	57.36
Mar. 8	57.32
June 30	57.61
Oct. 11	57.97
Dec. 16	57.57
Nov. 19, 1940	58.33
Mar. 6, 1941	58.13
Feb. 16, 1943	51.00
Feb. 7, 1944	50.38
Feb. 27, 1945	50.93

314

T. B. Zelner; 4 miles SW.; top of lower edge large opening in pump base, 1.5 feet above land surface.

May 27, 1937	52.45
June 21	49.49
Dec. 23	46.69
Jan. 26, 1938	46.56
June 20	48.32
July 22	47.51
Jan. 26, 1939	46.11
Mar. 10	45.92
Aug. 9	45.60
Oct. 11	45.59
Jan. 16, 1940	45.58
Nov. 20	49.39
Mar. 7, 1941	47.06
July 28	46.82
Dec. 18	47.94
Feb. 18, 1943	46.36
Feb. 10, 1944	45.68
Feb. 27, 1945	44.62

316

E. A. Hankins; $4\frac{3}{4}$ miles SW.; top of lower edge large opening in pump base 1.5 feet above land surface.

May 27, 1937	64.90
June 21	64.36
Aug. 2	64.62
Apr. 26, 1938	63.98
Jan. 6, 1939	63.89
Mar. 27, 1942	63.00
Feb. 18, 1943	62.65
Feb. 29, 1945	62.12

Water levels, Lubbock County--Continued

336a

Mary Coons; 10 miles SW.; top of lower edge large opening in pump base, 1.2 feet above land surface.

Apr. 27, 1938	79.15
July 22	80.10
Oct. 27	79.82
Jan. 26, 1939	79.77
Aug. 9	79.85
Oct. 11	79.88
Jan. 16, 1940	79.90
July 31	80.02
Nov. 20	80.13
Jan. 22, 1941	80.14
Mar. 7	80.20
July 28	78.47
Mar. 25, 1942	77.75
July 30	78.04
Feb. 18, 1943	77.78
Feb. 10, 1944	77.67
Feb. 27, 1945	77.82

339

J. E. Hinson; 8½ miles SW.; top of ½-inch airline hole in pump base, 0.5 foot above land surface.

May 18, 1937	62.68
Dec. 23	62.23
Jan. 4, 1939	62.30
Oct. 11	63.33
Jan. 16, 1940	62.96
Nov. 20	64.34
Jan. 22, 1941	64.00
Mar. 7	63.95
Mar. 25, 1942	61.57
Dec. 18	60.67
Feb. 18, 1943	60.44
Feb. 10, 1944	60.03
Feb. 21, 1945	59.96

355

J. A. Medlock; 13½ miles SW.; top of airline hole in pump base, 0.6 foot above land surface.

May 14, 1937	84.58
June 21	84.50
Dec. 23	84.29
Jan. 25, 1938	84.24
Apr. 26	88.10
Jan. 6, 1939	84.62
Oct. 11	86.02
Jan. 16, 1940	85.24
Nov. 20	86.21
Jan. 22, 1941	85.40
Mar. 7	86.29
July 28	85.21

355--Continued

Mar. 25, 1942	83.94
Feb. 18, 1943	83.55
Feb. 10, 1944	83.18
Feb. 27, 1945	82.63

369

A. D. Thomas; 9½ miles S.; top of concrete curb, 0.6 foot above land surface.

Dec. 22, 1936	81.57
Jan. 21, 1938	81.47
Dec. 12	81.10
Nov. 19, 1940	81.67
Mar. 27, 1942	75.32
Feb. 16, 1943	75.00
Feb. 7, 1944	76.70
Feb. 27, 1945	76.51

372

W. P. Martin; 13 miles S.; top of concrete pump foundation, 2 feet above land surface.

May 12, 1937	91.28
Sept. 28	90.32
Jan. 21, 1938	90.05
Apr. 30	91.48
July 22	90.52
Oct. 26	90.50
Dec. 12	90.33
Feb. 7, 1944	94.20
Feb. 27, 1945	94.28

376

Union School; 12½ miles SE.; top of concrete curb, 1 foot above land surface.

Jan. 6, 1937	94.06
Jan. 6, 1939	93.81
Mar. 8	93.78
June 30	94.32
Oct. 11	94.10
Dec. 16	93.95
Mar. 27, 1942	92.75
July 31	92.42
Feb. 16, 1943	91.78
Feb. 7, 1944	91.21
Feb. 27, 1945	90.95

383

H. B. Hobgood; 14½ miles SW.; top of wooden curb, 0.2 foot above land surface.

July 1, 1937	73.65
Aug. 2	73.52
Jan. 25, 1938	73.48
Aug. 14, 1939	73.68
Oct. 11	73.72
Jan. 16, 1940	73.84

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Water levels, Lubbock County--Continued

383--Continued

Nov. 20, 1940	73.99
Mar. 25, 1942	72.43
Feb. 10, 1944	71.90
Mar. 5, 1945	71.72

387

W. J. Garrett; 3 miles SW.; top of pipe clamp, 0.8 foot above land surface.

July 20, 1937	43.21
Aug. 2	42.96
Aug. 12	42.72
Sept. 7	42.27
Sept.21	42.12
Sept.28	41.96
Oct. 18	41.59
Jan. 26, 1938	40.94
Apr. 26	40.68
June 20	40.92
June 22	40.85
July 22	40.81
Oct. 27	40.72
Jan. 26, 1939	40.89
Aug. 14	40.92
Oct. 11	41.25
Jan. 16, 1940	41.87
Mar. 26	42.23
July 31	43.05
Oct. 27	43.64
Nov. 19	43.81
Jan. 22, 1941	44.17
Mar. 6	44.23
May 30	43.87
June 3	43.53
July 28	41.95
Mar. 27, 1942	38.12
July 4	38.12
Nov. 18	37.10
Feb. 13, 1943	35.80
Feb. 10, 1944	37.04
Feb. 27, 1945	38.31

388

G. D. Taylor; 3½ miles W.; top of pipe clamp, 0.4 foot above land surface.

July 20, 1937	21.21
Aug. 2	20.40
Sept. 7	21.29
Sept.21	20.33
Sept.28	20.43
Oct. 18	20.63
Jan. 26, 1938	22.25
Apr. 26	23.24
June 20	23.16
June 22	22.90
July 22	22.41
Jan. 26, 1939	23.81
June 24	24.72

388--Continued

Aug. 14, 1939	24.96
Oct. 11	25.67
Mar. 26, 1940	27.40
Nov. 19	29.59
Jan. 22, 1941	29.83
Mar. 6	30.02
May 30	22.71
June 3	21.88
July 28	19.71
Mar. 27, 1942	20.72
Feb. 10, 1944	22.12
Feb. 27, 1945	24.98

389

E. S. Jones; 3½ miles W.; top of pipe clamp, 0.4 foot above land surface.

July 20, 1937	22.58
Aug. 2	22.29
Sept. 7	22.49
Sept.21	21.13
Oct. 18	21.43
Jan. 26, 1938	23.46
Apr. 26	24.62
June 20	23.25
June 22	22.92
July 22	22.81
Jan. 26, 1939	24.50
Oct. 11	26.76
Mar. 26, 1940	28.52
July 31	29.90
Nov. 19	30.08
Jan. 22, 1941	31.00
May 30	21.97
June 3	22.04
Mar. 27, 1942	21.71
Dec. 18	19.17
Jan. 18, 1943	19.84
Feb. 10, 1944	24.52
Feb. 27, 1945	25.81

391

C. R. Moore; 10 miles W.; top of pipe clamp, 0.7 foot above land surface.

July 21, 1937	79.06
Sept. 7	78.97
Jan. 25, 1938	79.52
Apr. 12	78.54
June 22	78.48
Sept. 9	78.46
Feb. 6, 1939	78.58
Mar. 14	78.64
June 26	78.75
Oct. 12	78.94
Mar. 26, 1940	79.23
Nov. 18	79.66
July 28, 1941	79.71
Mar. 25, 1942	78.44

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Water levels, Lubbock County--Continued

391--Continued

Feb. 18, 1943	77.45
Feb. 10, 1944	77.47

392

Mrs. Betty Lindsey; 13 miles W.; top of wooden curb, 0.8 foot above land surface.

July 21, 1937	93.34
Sept. 7	94.05
Jan. 25, 1938	93.31
June 22	93.21
Feb. 6, 1939	93.07
Mar. 14	92.98
Oct. 12	92.96
Mar. 25, 1942	92.54
Feb. 18, 1943	92.00
Feb. 10, 1944	92.38
Feb. 20, 1945	91.85

395

H. W. Stanton; 2½ miles N.; top of concrete pump foundation, 1 foot above land surface.

Sept. 8, 1937	46.21
Sept. 21	45.91
Oct. 16	45.46
Jan. 26, 1938	45.04
Apr. 9	44.96
June 17	44.89
Mar. 10, 1939	44.95
June 19	54.00
Aug. 15	54.07
Mar. 13, 1940	47.15
Nov. 19	51.43
Jan. 22, 1941	49.00
Mar. 7	48.83
Dec. 17, 1942	42.94
Feb. 1, 1943	43.12
Feb. 8, 1944	41.36
Feb. 23, 1945	46.20

397

C. L. Dean; 5½ miles NW.; top of steel casing, 1.6 feet above land surface.

Sept. 8, 1937	18.27
Sept. 21	18.46
Jan. 26, 1938	18.60
Apr. 9	18.79
June 17	18.42
June 21	18.37
June 28	18.34
Sept. 10	17.99
Oct. 19	18.33
Jan. 16, 1939	18.59
Mar. 10	18.71

397--Continued

June 19, 1939	18.04
Aug. 15	18.56
Oct. 13	18.43
Dec. 16	18.43
Mar. 13, 1940	18.54
Apr. 4	18.55
July 10	18.80
Nov. 18	19.54
Mar. 7, 1941	18.61
May 20	16.18
July 29	14.84
Mar. 26, 1942	14.54
Feb. 1, 1943	11.70
Feb. 4, 1944	13.62
Feb. 9, 1945	14.91

398

E. E. Ireland; 9 miles NW.; top edge of steel tractor wheel, 1.4 feet above land surface.

Sept. 8, 1937	16.64
Sept. 22	16.69
Jan. 26, 1938	16.76
Apr. 9	16.94
June 21	15.63
June 28	16.10
Sept. 10	16.66
Oct. 19	16.83
Jan. 16, 1939	16.98
Mar. 10	17.10
June 19	16.12
Aug. 15	15.07
Oct. 13	15.09
Dec. 16	15.33
Mar. 13, 1940	15.69
July 10	16.11
Nov. 18	16.83
Mar. 7, 1941	16.92
May 30	13.05
July 29	13.02
Mar. 26, 1942	13.30
Feb. 1, 1943	11.69
Feb. 9, 1944	13.78
Oct. 5	14.03

401

Virginia Bacon; 8 miles N.; top of casing, 0.1 foot above land surface.

Sept. 9, 1937	71.24
Jan. 25, 1938	71.10
Apr. 12	71.07
June 15	71.09
June 30	71.05
Jan. 28, 1939	70.81
Mar. 4	70.68
June 16	70.72

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Water levels, Lubbock County--Continued

401--Continued

July 10, 1939	70.74
Aug. 16	70.80
Oct. 10	70.74
Dec. 16	70.65
Mar. 13, 1940	70.63
July 10	70.64
Nov. 13	70.98
Jan. 22, 1941	70.97
Mar. 6	70.98
July 28	70.49
Mar. 24, 1942	69.34
July 28	69.05
Feb. 1, 1943	68.62
Feb. 9, 1944	69.06
Feb. 9, 1945	67.76

402

Fort Worth and Denver City Railway Co.; at Kitalou siding, 8 miles NE.; top of concrete curb, 0.2 foot above land surface.

Sept.10, 1937	38.57
Jan. 24, 1938	38.44
Apr. 14	38.54
June 14	38.77
Sept.30	38.20
Mar. 7, 1939	38.43
June 23	38.62
Sept.30	39.23
Dec. 17	39.64
Mar. 22, 1940	39.88
Nov. 19	40.91
Jan. 25, 1941	41.20
Mar. 6	41.32
June 3	39.60
July 29	36.65
Mar. 23, 1942	35.08
Dec. 18	30.54
Jan. 28, 1943	30.78
Feb. 7, 1944	31.82
Feb. 9, 1945	31.90

403

J. E. Smiley; 7½ miles NE.; top of concrete pump foundation, 0.65 foot above land surface.

Sept.10, 1937	40.95
Jan. 24, 1938	40.29
Apr. 14	39.91
June 14	40.13
Sept.30	39.58
Mar. 7, 1939	39.72
June 23	39.76
Sept.30	41.35
Dec. 17	41.15
Mar. 22, 1940	41.06

403--Continued

Nov. 19, 1940	43.07
Jan. 25, 1941	42.81
Mar. 6	42.71
July 29	40.58
Mar. 23, 1942	36.51
Dec. 18	34.47
Jan. 28, 1943	33.83
Feb. 7, 1944	35.56
Feb. 7, 1945	35.51

498

Ed Snodgrass; 15½ miles NE.; top of concrete pump foundation, 1 foot above land surface.

Jan. 25, 1941	88.20
Feb. 22, 1944	85.43
Feb. 9, 1945	86.00

666

R. E. Karper; 3 miles N.; top of ½-inch airline hole in steel pump base, 1 foot above land surface.

Mar. 29, 1940	53.00
Aug. 13	57.62
Sept.10	59.18
Oct. 13	57.62
Jan. 22, 1941	56.18
Mar. 6	55.87
June 3	56.20
July 28	54.95
Mar. 28, 1942	52.94
Dec. 17	51.70
Feb. 1, 1943	51.38
Feb. 9, 1944	52.00

839

W. J. Baker; 8½ miles S.; top of lower edge large opening in pump base, 1.4 feet above land surface.

Mar. 27, 1942	79.87
Feb. 16, 1943	79.08
Mar. 5, 1945	79.62

847

Texas Highway Department; 3½ miles S.; top of concrete pump foundation, 1.5 feet above land surface.

Mar. 8, 1939	83.77
June 30	83.91
Feb. 5, 1944	78.56
Feb. 21, 1945	78.19

Partial analyses of water from wells and springs in Lubbock County, Texas
(Results are in parts per million)

Lubbock City Wells

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)
C- 1	City of Lubbock	98	Sept.22, 1944	1,200	78	96	160	423	379	126	3.2	11	589
C- 2	do.	300	Feb. 15, 1944	746	57	65	102	318	169	110	5.4	7.5	410
C- 3	do.	210	Sept.22, 1944	738	63	63	76	316	165	98	3.4	4.1	416
C- 4	do.	156	Oct. 2, 1944	628	48	57	69	331	139	62	-	0.8	354
C- 5	do.	150	do.	694	53	60	118	318	153	150	-	3.8	379
C- 6	do.	142	Sept.22, 1944	1,020	78	86	114	354	319	114	3.3	4.1	548
C- 7	do.	158	Sept.25, 1944	744	61	66	74	324	145	109	3.5	5.3	424
C- 8	do.	157	do.	786	61	63	83	310	157	114	3.4	5.1	411
C- 9	do.	151	do.	781	61	67	73	308	154	111	3.4	10	428
C-10	do.	151	Sept.22, 1944	629	50	56	74	325	121	79	3.5	3.2	356
C-11	do.	145	Sept.25, 1944	675	58	61	74	326	153	84	3.4	2.5	396
C-12	do.	145	do.	651	50	58	76	321	126	87	3.5	4.0	364
C-13	do.	150	Sept.22, 1944	1,200	76	94	165	345	421	146	3.2	1.5	576
C-14	do.	135	Oct. 2, 1944	1,080	78	96	164	386	398	151	-	3.2	589
C-15	do.	135	Sept.22, 1944	831	70	62	101	339	240	80	2.2	1.8	430
C-16	do.	135	Sept.25, 1944	619	45	58	59	249	120	98	3.5	2.8	351
C-17	do.	125	Oct. 2, 1944	960	76	92	132	317	292	198	-	14	568
C-18	do.	110	do.	820	59	73	137	391	218	140	-	0.5	447
C-20	do.	Spring	Oct. 4, 1944	1,120	56	112	186	328	347	239	4.1	1.2	600

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

Analyzed at The University of Texas under the direction of W. W. Hastings and E. W. Lohr, Chemists, U. S. Department of the Interior, Geological Survey, and Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry. Results are in parts per million. Well numbers correspond to numbers in table of well records.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)
1	H. H. Berryman	95	Apr. 26, 1937	475	-	-	-	268	120	54	-	-	-
2	W. F. Gilbert	112	do.	582	-	-	-	146	176	136	-	-	-
3	F. E. Winters	50	Apr. 15, 1937	1,938	203	201	162	438	831	326	-	-	1,333
4	Hardy School	147	do.	841	-	-	-	159	365	124	-	-	-
5	J. A. Brown	115	do.	862	84	79	102	300	337	112	-	-	534
6	B. W. Giles	160	Apr. 26, 1937	435	-	-	-	171	120	80	-	-	-
7	S. E. Cone	135	Nov. 4, 1944	613	78	55	36	276	115	102	1.9	4.2	420
8	R. L. Hood	106	do.	481	58	36	47	285	76	53	1.9	2.8	292
9	Leon Estate	182	Apr. 26, 1937	417	-	-	-	256	104	38	-	-	-
10	New Deal School	118	Apr. 30, 1937	462	-	-	-	268	98	66	-	-	-
11	Temple Trust Co.	-	Apr. 27, 1937	641	-	-	-	342	140	104	-	-	-
14	Richard Carruth	99	Apr. 26, 1937	595	86	55	56	343	96	128	-	-	439
15	T. V. Lovelace	209	May 7, 1937	274	42	34	20	305	a/	28	-	-	246
16	H. A. Iverson	120	Oct. 2, 1937	407	52	50	31	307	47	64	1.4	10	335
17	P. H. Sammons	157	Apr. 26, 1937	372	-	-	-	329	32	36	-	-	-
19	L. Stephenson	110	Apr. 27, 1937	423	-	-	-	317	64	46	-	-	-
22	Fritz Fuchs	129	May 6, 1937	335	-	-	-	329	15	28	-	-	-
23	L. D. Perry	115	do.	371	67	29	35	329	42	36	-	-	288
24	Center School	94	Sept. 30, 1937	510	63	70	28	298	63	135	1.8	2.2	444
26	R. H. Emery	186	Apr. 27, 1937	316	-	-	-	293	23	28	-	-	-
27	S. Johnston	92	Oct. 1, 1937	403	59	41	35	306	72	42	2.0	1.2	316
28	J. W. Kerley	94	May 3, 1937	327	-	-	-	317	12	32	-	-	-
29	Geo. R. Bean	115	May 6, 1937	350	-	-	-	317	30	30	-	-	-
30	O. C. Powell	62	Feb. 4, 1937	507	-	-	-	390	57	68	-	-	-
31	B. F. Davis	85	do.	344	63	45	5	281	19	74	-	-	343
32	C. S. Williams	100	do.	370	-	-	-	256	60	48	-	-	-
33	E. P. Hildreth	87	do.	682	-	-	-	378	113	136	-	-	-
34	A. M. Becton	100	do.	543	-	-	-	256	83	138	-	-	-
35	do.	255	Sept. 30, 1937	358	38	34	55	349	36	16	2.0	5.0	234

a/ Sulfate less than 10 parts per million.

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)
36	Bledsoe School	100	Feb. 4, 1937	344	–	–	–	232	49	54	–	–	–
38	Frank Bledsoe	61	Mar. 11, 1937	440	–	–	–	342	60	48	–	–	–
39	Mrs.R.B.Catching	100	Feb. 4, 1937	230	–	–	–	281	26	8	–	–	–
40	Estacoda School	100	Sept.30, 1937	468	59	67	19	284	70	98	2.5	9.0	422
41	R. Q. Mabry	230	Feb. 3, 1937	388	–	–	–	342	41	32	–	–	–
44	S. A. Tharp	115	do.	385	31	27	86	360	34	30	–	–	187
45	A. J. Sanders	95	Feb. 4, 1937	510	82	63	16	311	86	110	–	–	464
47	George Young	77	Mar. 10, 1937	859	–	–	–	354	185	196	–	–	–
50	F. H. Cannon	137	May 3, 1937	301	50	41	12	349	a/	26	–	–	296
51	W. A. Armstrong	90	do.	555	81	61	45	451	68	78	–	–	453
52	O. B. Hankins	186	Apr. 28, 1937	304	–	–	–	293	12	30	–	–	–
53	W.O.Fortenberry	200	Apr. 27, 1937	243	35	29	18	220	19	34	–	–	208
54	L. L. Watson	264	May 6, 1937	231	26	24	29	177	23	42	–	–	165
55	R. D. Holmes	94	Apr. 27, 1937	270	–	–	–	220	26	34	–	–	–
59	L. E. Howard	–	Mar. 15, 1937	447	–	–	–	317	80	47	–	–	–
60	Liberty School	100	do.	357	67	38	22	366	a/	50	–	–	323
61	G. R. Bean	67	Jan. 28, 1937	632	90	43	89	451	110	78	–	–	401
62	H. T. Atkins	89	do.	361	54	43	23	305	49	42	–	–	311
63	Gayle Wallace	85	Nov. 2, 1944	662	86	54	37	291	108	102	3.9	14	436
64	W. Y. Barrett	211	Sept.30, 1937	341	43	36	40	320	30	28	2.0	4.2	255
66	New Deal School	125	Oct. 1, 1937	362	54	35	36	314	46	31	2.4	3.0	278
72	J. I. Exum	156	Apr. 27, 1937	359	–	–	–	281	49	38	–	–	–
75	B. R. Shaw	71	Apr. 12, 1937	580	–	–	–	256	151	100	–	–	–
76	Tom J. Foster	150	Apr. 28, 1937	302	–	–	–	232	47	30	–	–	–
77	A. E. Griffis	216	Mar. 16, 1937	386	–	–	–	281	64	42	–	–	250
81	J. E. Vickers	160	Dec. 6, 1936	458	44	41	67	287	113	52	–	–	281
82	G. H. Grissom	51	Apr. 12, 1937	765	104	49	103	329	205	142	–	–	460
83	W. P. Perser	115	Apr. 13, 1937	462	52	34	73	311	102	48	–	–	271
84	J. B. McCauley	116	do.	631	–	–	–	305	185	76	–	–	–
85	do.	115	do.	646	75	44	94	305	213	70	–	–	367
87	W. O. Arnold	44	Apr. 12, 1937	850	76	66	130	317	306	116	–	–	461
88	J. A. McClatchy	74	do.	491	–	–	–	207	125	92	–	–	–

a/ Sulfate less than 10 parts per million.

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)
89	Grovesville School	82	Sept. 30, 1937	600	70	47	79	288	188	72	2.0	.10	368
91	Lubbock National Bank	200	Apr. 21, 1937	696	116	49	61	348	225	74	–	–	490
93	T. H. Sears	108	Nov. 4, 1944	616	58	55	74	347	113	86	1.9	4.2	370
95	Meyers Estate	100	Apr. 16, 1937	724	–	–	–	171	242	154	–	–	–
96	K. D. Kidd	100	do.	1,179	–	–	–	146	538	190	–	–	–
97	G. R. Johnson	105	Apr. 22, 1937	1,189	–	–	–	293	502	152	–	–	–
98	Lon A. Mullican	73	Apr. 15, 1937	1,325	102	113	174	232	682	140	–	–	720
99	R. B. Gray	108	June 22, 1937	920	–	–	–	220	366	142	–	–	–
100	O. P. Bowser	165	do.	515	–	–	–	342	108	52	–	–	–
102	J. L. Lindsey	95	Apr. 15, 1937	756	75	69	99	365	217	116	–	–	473
103	H. T. Fergeson	59	do.	815	–	–	–	281	221	174	–	–	–
106	S. P. Fields	53	Sept. 30, 1937	793	56	60	145	323	253	112	5.2	3.0	386
109	C. C. Vance	99	Nov. 2, 1944	938	58	61	167	311	293	131	4.9	1.8	396
111	W. D. Duncan	92	Nov. 7, 1944	814	61	79	97	360	153	145	5.8	16	477
113	E. G. Hutchings	156	Oct. 1, 1937	502	40	46	85	326	95	64	4.5	7.0	289
114	G. W. McCleary	143	Apr. 13, 1937	516	55	52	67	390	92	58	–	–	352
116	J. B. Edwards	150	Apr. 14, 1937	588	–	–	–	268	165	86	–	–	–
117	J. H. Able	170	do.	499	–	–	–	281	133	52	–	–	–
121	Claude Campbell	203	Oct. 1, 1937	541	46	53	81	350	128	53	4.3	3.0	332
122	Mrs.W.M.Pevehouse	153	May 20, 1937	564	–	–	–	317	144	64	–	–	–
124	Isham Tubbs	195	Dec. 8, 1936	605	69	51	81	342	150	86	–	–	332
130	C. C. Lane	159	May 22, 1937	623	–	–	–	342	147	86	–	–	–
132	J. W. Ross	202	May 20, 1937	642	62	57	94	366	153	96	–	–	390
134	O. C. Ballard	65	Dec. 8, 1936	688	83	60	84	366	169	112	–	–	452
136	John King	162	June 21, 1937	739	–	–	–	281	189	154	–	–	–
138	Edith Collie	120	Apr. 14, 1937	437	–	–	–	256	92	62	–	–	–
140	J. C. James	87	do.	657	72	56	99	492	116	72	–	–	410
142	M. K. Dean	100	June 22, 1937	1,064	–	–	–	317	402	150	–	–	–
143	R. R. Marshall	101	Apr. 14, 1937	1,106	128	73	156	415	405	140	–	–	620
149	J. B. McCauley	116	Apr. 13, 1937	1,342	122	83	222	366	567	168	–	–	646
153	Clyde McCrummen	55	Dec. 8, 1936	602	–	–	–	348	133	82	–	–	–
154	J. S. Hamilton	160	June 21, 1937	596	–	–	–	244	169	100	–	–	–
156	J. M. Phillips	152	Dec. 8, 1936	601	–	–	–	354	129	82	–	–	–

a/ Sulfate less than 10 parts per million.

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)
160	Texas Tech College	200	Oct. 1, 1937	537	49	63	96	338	162	93	4.2	3.6	384
188	Texas Exp. Station	185	Sept. 30, 1937	410	46	39	54	303	76	40	2.5	3.2	275
192	Canyon School	62	Nov. 1, 1944	510	50	46	52	325	53	61	3.6	12	314
193	J.A. Burleson	125	May 19, 1937	450	54	40	60	336	72	56	-	-	300
199	Jess Levens	59	Jan. 28, 1937	619	-	-	-	329	125	110	-	-	-
203	Russell Bean	138	do.	426	-	-	-	317	64	48	-	-	-
216	J. T. Mattingly	78	Feb. 3, 1937	384	-	-	-	329	34	42	-	-	-
225	Acuff School	100	Oct. 2, 1937	842	100	77	94	343	216	178	4.2	4.0	566
226	T. U. Hunt	85	Oct. 30, 1944	598	47	48	83	350	83	73	4.7	9.2	315
227	L. S. Evitt	76	Feb. 4, 1937	278	-	-	-	232	30	29	-	-	-
229	Roy Naney	85	Feb. 3, 1937	426	-	-	-	256	71	74	-	-	-
230	Gus Collett	100	do.	452	-	-	-	305	57	78	-	-	-
231	F. N. Cummings	107	Jan. 14, 1937	711	-	-	-	464	108	114	-	-	-
232	Mrs. Annie E. Parks	100	Jan. 20, 1937	428	-	-	-	305	64	56	-	-	-
233	Mrs. Y. P. Pace	200	do.	582	-	-	-	354	100	96	-	-	-
234	San Augustine Ranch	100	do.	532	-	-	-	403	92	78	-	-	-
235	W. F. Klattenhoff	76	do.	411	36	49	49	275	76	66	-	-	290
236	W. N. Ferris	100	do.	576	-	-	-	354	83	108	-	-	-
238	Mrs. Annie E. Parks	100	do.	561	-	-	-	451	49	78	-	-	-
239	W. A. Ferguson	85	Jan. 14, 1937	433	33	35	87	366	60	38	-	-	227
240	W. M. Meyer	185	do.	385	-	-	-	268	68	44	-	-	-
241	O. W. Carr	136	Jan. 26, 1937	591	-	-	-	378	117	74	-	-	-
253	City of Slaton Well 1	135	Feb. 17, 1944	611	42	51	103	342	121	71	5.9	3.0	314
254	City of Slaton Well 3	206	Jan. 18, 1937	591	52	50	98	378	133	72	-	-	336
255	City of Slaton Well 2	125	do.	561	52	50	87	354	124	74	-	-	336
257	W. M. Johnson	165	Jan. 26, 1937	461	-	-	-	293	110	42	-	-	-
259	J. T. Lokey	107	do.	432	35	44	64	268	97	60	-	-	267
263	W. H. Rogers	Spring	May 11, 1937	1,668	-	-	-	500	517	336	-	-	-
264	do.	Spring	do.	416	50	39	58	366	41	48	-	-	284
265	do.	Spring	do.	434	-	-	-	329	56	54	-	-	-
266	do.	Spring	do.	464	-	-	-	329	71	60	-	-	-
267	A. H. Baer	100	Dec. 21, 1936	460	-	-	-	329	72	56	-	-	-

a/ Sulfate less than 10 parts per million.

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)
268	E. H. Foerster	116	May 19, 1937	445	–	–	–	329	64	54	–	–	–
269	H. C. Atwood	130	do.	515	74	39	63	403	72	54	–	–	344
270	Geo. M. Boles	100	Dec. 21, 1936	714	58	46	140	380	201	82	–	–	333
277	L. Kershner	120	Jan. 15, 1937	821	–	–	–	329	241	134	–	–	–
278	Ed Putty	100	Mar. 8, 1937	1,666	170	147	207	349	470	500	–	–	1,031
282	L. E. Guilot	74	Dec. 18, 1936	661	–	–	–	378	144	94	–	–	–
283	J. A. McClatchey	100	Dec. 22, 1936	817	77	60	142	441	189	132	–	–	437
285	W. M. Cheaney	102	May 19, 1937	646	–	–	–	305	156	112	–	–	–
287	Edna G. Steele	64	Jan. 6, 1937	918	–	–	–	378	228	182	–	–	–
291	H. P. Guetersloh	83	Jan. 20, 1937	617	–	–	–	220	174	122	–	–	–
293	James L. Benton, Sr.	79	Jan. 26, 1937	581	33	51	112	342	137	80	–	–	292
294	J. W. Maines	75	Jan. 20, 1937	663	–	–	–	378	137	102	–	–	–
295	O. Walbrueck	100	do.	622	–	–	–	366	137	82	–	–	–
297	Leon Melcher	100	do.	604	–	–	–	366	120	86	–	–	–
298	Jerome I. Case	66	Jan. 6, 1937	626	–	–	–	268	165	110	–	–	–
299	— Nunally	100	Jan. 4, 1937	635	–	–	–	378	141	80	–	–	–
301	S. D. Stewart	70	Jan. 6, 1937	1,022	–	–	–	390	297	180	–	–	–
302	Fred E. Minssen	100	Jan. 4, 1937	857	–	–	–	476	177	138	–	–	–
303	R. L. Stewart	165	do.	612	–	–	–	415	117	68	–	–	–
305	H. B. Davis	97	Dec. 22, 1936	664	–	–	–	403	121	104	–	–	–
307	Dr. J. T. Krueger	161	Dec. 18, 1936	596	34	39	134	342	148	72	–	–	244
309	J. J. McGaw	93	Dec. 22, 1936	738	–	–	–	415	155	114	–	–	–
312	M. C. Kinser	90	Dec. 18, 1936	815	–	–	–	464	159	134	–	–	–
314	T. B. Zelner	150	May 17, 1937	602	–	–	–	354	145	68	–	–	–
316	E. A. Hankins	123	May 18, 1937	658	–	–	–	366	180	66	–	–	–
317	Charles Adams, Jr.	150	do.	626	–	–	–	378	157	60	–	–	–
321	J. Curtis Heald	100	Dec. 14, 1936	572	–	–	–	311	129	86	–	–	–
324	E. C. Hatton	100	Dec. 23, 1936	796	101	69	78	250	265	160	–	–	538
326	F. P. Clark	105	do.	605	–	–	–	415	101	78	–	–	–
328	W. C. Ratliff	100	Dec. 15, 1936	617	–	–	–	397	102	94	–	–	–
329	F. L. McCrummen	88	do.	560	–	–	–	403	83	72	–	–	–
330	Dr. W. C. Holden	170	May 13, 1937	563	36	39	127	427	80	66	–	–	249

a/ Sulfate less than 10 parts per million.

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)
331	J. M. Locklar	89	Dec. 15, 1936	599	-	-	-	403	106	76	-	-	-
332	A. L. Walker	-	Dec. 14, 1936	631	73	56	75	354	140	108	-	-	425
333	Wilmer McCrummen	-	do.	541	-	-	-	372	98	62	-	-	-
335	-- Borger	203	Nov. 3, 1944	572	28	53	103	394	99	50	5.9	0.8	288
336	D. G. Kulms	95	Dec. 14, 1936	763	-	-	-	354	197	124	-	-	-
337	Dr. J. T. Hutchinson	-	do.	660	-	-	-	384	155	80	-	-	-
338	George Langford	160	May 20, 1937	539	-	-	-	390	91	58	-	-	-
340	J. E. Hinson	80	Dec. 19, 1936	757	-	-	-	390	185	112	-	-	-
341	Dr. D. D. Cross	173	May 20, 1937	622	-	-	-	403	140	60	-	-	-
342	S. O. Adamson	169	May 18, 1937	678	-	-	-	390	130	66	-	-	-
343	J. P. Thomas	-	Dec. 9, 1936	782	-	-	-	397	201	110	-	-	-
345	D. S. Tucker	196	do.	546	42	40	113	427	87	54	-	-	270
346	A. M. Leftwich	86	Dec. 2, 1936	677	-	-	-	354	135	80	-	-	-
347	J. S. Sharp	190	May 20, 1937	656	26	26	192	427	128	74	-	-	171
350	R. D. Martin	206	do.	637	-	-	-	329	204	50	-	-	-
352	W. V. Hill	155	Oct. 1, 1937	615	40	48	120	325	169	72	5.4	.80	297
353	W. H. Hill	170	May 14, 1937	686	59	45	131	372	178	90	-	-	333
354	I. Elwood	-	Dec. 2, 1936	790	61	52	152	354	241	110	-	-	367
355	J. A. Medlock	188	May 20, 1937	627	-	-	-	366	147	76	-	-	-
356	A. M. Hughes	105	Dec. 14, 1936	674	-	-	-	378	151	96	-	-	-
357	L. P. Thomas	140	Dec. 2, 1936	786	-	-	-	458	169	110	-	-	-
358	M. F. Klattenhoff	77	Dec. 15, 1936	507	66	51	49	342	117	56	-	-	375
360	J. C. Stanford	85	Dec. 22, 1936	514	-	-	-	366	98	48	-	-	-
361	H. C. Young	-	do.	571	-	-	-	354	117	74	-	-	-
362	J. M. Burch	109	Dec. 15, 1936	523	-	-	-	403	68	62	-	-	-
363	Otis A. Rogers	100	Dec. 22, 1936	747	-	-	-	378	174	122	-	-	-
364	W. A. Frost	106	do.	492	-	-	-	354	83	54	-	-	-
365	First Natl. Bank	100	Dec. 15, 1936	499	46	43	86	390	76	56	-	-	291
367	Jacob Schieber	116	Dec. 22, 1936	491	51	45	74	384	76	56	-	-	313
368	John B. Lewis	100	do.	787	-	-	-	488	174	90	-	-	-
369	A. D. Thomas	98	do.	483	-	-	-	403	53	50	-	-	-
370	E. F. Wollbrueck	90	Jan. 4, 1937	677	66	57	107	403	133	116	-	-	400

a/ Sulfate less than 10 parts per million.

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)
371	R. O. Gregory	–	Jan. 6, 1937	592	–	–	–	378	124	68	–	–	–
375	C. L. Griffin	128	Oct. 1, 1937	523	38	48	98	405	85	48	6.1	.25	292
376	Union School	98	Jan. 6, 1937	576	–	–	–	317	133	82	–	–	–
377	M. D. Gamble	87	do.	607	60	55	91	396	116	90	–	–	375
379	E. E. Wilson	81	do.	713	–	–	–	415	153	100	–	–	–
380	Mrs. S. H. Adams	–	do.	578	–	–	–	378	116	66	–	–	–
381	J. R. Childres	130	May 12, 1937	592	–	–	–	390	117	68	–	–	–
382	J. P. Railsback	120	Jan. 26, 1937	517	–	–	–	378	91	50	–	–	–
395	H. W. Stanton	125	Sept. 23, 1944	782	76	51	92	294	216	88	2.6	2.2	399
398	E. E. Ireland	56	Oct. 5, 1944	953	42	86	149	472	227	86	4.2	32	458
432	Claude Tatum	285	Oct. 9, 1944	1,310	107	107	187	299	558	201	1.6	0.8	707
434	Emily Magee	200	Nov. 4, 1944	442	51	36	47	305	49	48	2.6	4.0	276
496	E. H. Truett	232	Oct. 10, 1944	363	44	37	32	312	33	22	2.8	2.2	262
508	A. J. Bryant	361	Oct. 17, 1944	422	39	33	65	360	42	19	2.8	2.2	233
530	Lucien Moore	260	Oct. 19, 1944	436	31	27	92	361	37	31	2.8	3.0	188
539	Wayne Butler	255	Oct. 17, 1944	–	–	–	–	338	36	20	–	–	285
551	J. F. Toler	300	Oct. 9, 1944	387	43	37	44	322	35	31	3.2	3.0	260
558	City of Idalou	125	do.	425	46	49	37	333	45	36	3.6	3.8	316
571	H. W. Lasater	170	Oct. 24, 1944	555	53	52	55	322	79	78	3.2	3.2	346
579	Alex Weaver	142	Oct. 20, 1944	–	–	–	–	314	22	26	–	–	244
599	P. L. Hamilton	114	Nov. 1, 1944	498	52	48	38	303	66	59	3.1	3.8	328
601	R. S. Collins	132	Oct. 7, 1944	589	64	49	60	350	99	65	2.3	4.6	361
603	C. Faulkner	63	Oct. 30, 1944	614	48	49	87	320	105	90	3.5	3.2	322
604	do.	117	Oct. 28, 1944	502	52	44	52	326	73	51	2.8	2.8	311
608	Perrin Bean	97	Nov. 1, 1944	444	47	39	49	314	62	37	2.7	3.2	278
611	H. V. Edsall	45	do.	642	54	53	71	328	111	76	3.5	8.0	353
628	T. J. Bovell	200	Sept. 22, 1944	390	42	38	44	328	34	29	3.6	3.2	261
636	Lee Minyard	96	Nov. 14, 1944	798	93	73	60	345	123	162	2.7	19	532
653	South Plains Army Air Forces	150	Jan. 9, 1943	582	69	58	63	312	116	119	–	3.5	410
654	do.	155	do.	414	52	42	45	326	70	42	–	2.4	302
656	C. R. McLaurin	102	Oct. 25, 1944	552	75	36	55	315	87	69	2.8	0.8	335

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)
371	R. O. Gregory	–	Jan. 6, 1937	592	–	–	–	378	124	68	–	–	–
375	C. L. Griffin	128	Oct. 1, 1937	523	38	48	98	405	85	48	6.1	.25	292
376	Union School	98	Jan. 6, 1937	576	–	–	–	317	133	82	–	–	–
377	M. D. Gamble	87	do.	607	60	55	91	396	116	90	–	–	375
379	F. E. Wilson	81	do.	713	–	–	–	415	153	100	–	–	–
380	Mrs. S. H. Adams	–	do.	578	–	–	–	378	116	66	–	–	–
381	J. R. Childres	130	May 12, 1937	592	–	–	–	390	117	68	–	–	–
382	J. P. Railsback	120	Jan. 26, 1937	517	–	–	–	378	91	50	–	–	–
395	H. W. Stanton	125	Sept. 23, 1944	782	76	51	92	294	216	88	2.6	2.2	399
398	E. E. Ireland	56	Oct. 5, 1944	953	42	81	149	472	227	86	4.2	32	458
416	J. R. West	250	Feb. 9, 1945	371	38	38	34	293	22	42	–	4.8	251
418	F. L. Sowder	140	Feb. 17, 1945	421	35	39	27	267	38	32	–	3.5	248
422	Jim Asburn	177	Feb. 28, 1945	506	35	42	67	337	50	53	–	3.2	260
432	Claude Tatum	285	Oct. 5, 1944	1,310	107	107	187	299	558	201	1.6	0.8	707
434	Emily Magee	200	Nov. 4, 1944	442	51	36	47	305	49	48	2.0	4.0	276
496	E. H. Truett	232	Oct. 10, 1944	363	44	37	32	312	33	22	2.8	2.2	262
508	A. J. Bryant	361	Oct. 17, 1944	422	39	33	65	360	42	19	2.8	2.2	233
530	Lucien Moore	260	Oct. 19, 1944	436	31	27	92	361	37	31	2.8	3.0	188
539	Wayne Butler	255	Oct. 17, 1944	–	–	–	–	338	36	20	–	–	285
551	J. F. Toler	300	Oct. 9, 1944	387	43	37	44	322	35	31	3.2	3.0	260
558	City of Idalou	125	do.	425	46	49	37	333	45	36	3.6	3.8	316
571	H. W. Lasater	170	Oct. 24, 1944	555	53	52	55	322	79	78	3.2	3.2	346
579	Alex Weaver	142	Oct. 20, 1944	–	–	–	–	314	22	26	–	–	244
599	P. L. Hamilton	114	Nov. 1, 1944	498	52	48	38	303	66	59	3.1	3.8	328
601	R. S. Collins	132	Oct. 7, 1944	539	64	49	60	350	99	65	2.3	4.6	361
603	C. Faulkner	63	Oct. 30, 1944	614	48	49	87	320	105	90	3.5	3.2	322
604	do.	117	Oct. 28, 1944	502	52	44	52	326	73	51	2.8	2.8	311
608	Perrin Bean	97	Nov. 1, 1944	444	47	39	49	314	62	37	2.7	3.2	278
611	H. V. Edsall	45	do.	642	54	53	71	328	111	76	3.5	8.0	353
628	T. J. Bovell	200	Sept. 22, 1944	390	42	38	44	328	34	29	3.6	3.2	261
636	Lee Minyard	96	Nov. 14, 1944	798	93	73	60	345	123	162	2.7	19	532
653	South Plains Army Air Forces	150	Jan. 9, 1943	532	69	58	63	312	116	119	–	3.5	410

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)
654	South Plains Army Air Forces	155	Jan. 9, 1943	414	52	42	45	326	70	42	–	2.4	302
656	C. R. McLaurin	102	Oct. 25, 1944	552	75	36	55	315	87	69	2.8	0.8	335
667	E. L. Steck	110	Nov. 2, 1944	726	67	61	82	322	160	108	2.6	7.6	413
671	Mollie D. Abernathy	190	Oct. 7, 1944	520	59	42	55	317	98	49	1.9	3.2	320
672	C. R. Styles	80	Oct. 25, 1944	586	65	43	71	330	120	62	2.7	2.8	339
673	J. W. Lemon	126	Oct. 27, 1944	516	52	41	66	318	91	54	2.3	3.0	298
683	Texas Tech College	51	Nov. 11, 1944	816	58	70	109	368	132	101	5.0	27	432
693	H. L. McCauley	110	Sept.29, 1944	730	93	63	71	290	279	77	2.9	1.2	491
694	C. L. Quillen	55	Oct. 4, 1944	1,300	73	107	225	356	484	222	4.0	6.5	634
695	W. D. McMillan	Lak	Sept.29, 1944	–	–	–	–	326	2,200	645	–	–	1,640
704	J. B. Marion	84	Nov. 10, 1944	875	76	82	90	376	207	132	1.8	10	526
707	Shallowater Public School	110	Nov. 7, 1944	1,020	70	85	137	362	191	148	4.2	132	524
715	H. V. Feazel	49	Oct. 5, 1944	1,410	94	135	220	330	338	440	3.3	19	790
716	Will Stacy	40	Oct. 24, 1944	1,130	67	92	140	321	213	240	5.0	18	546
719	W. B. Gregory	179	Sept.26, 1944	633	53	50	89	314	148	76	4.0	3.2	338
761	Lubbock Army Air Forces	157	Feb. 23, 1943	580	35	41	126	386	137	50	–	.4	256
762	do.	155	do.	575	30	39	135	410	125	44	–	.4	236
851	City of Lubbock (disposal plant)	105	Nov. 11, 1944	717	28	46	148	352	150	84	5.8	3.8	259
891	Double Mountain Fork of Brazos River near Slaton	Creek	Mar. 4, 1945	1,060	63	86	201	479	294	177	–	0.8	510

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