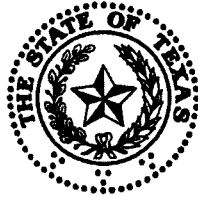


TEXAS BOARD OF WATER ENGINEERS

Durwood Manford, Chairman

R. M. Dixon, Member

O. F. Dent, Member



BULLETIN 6003

GEOLOGY AND GROUND-WATER RESOURCES OF DIMMIT COUNTY, TEXAS

Prepared in cooperation with the United States Geological Survey
and Dimmit County

June 1960

Second Printing November 1975
by
Texas Water Development Board

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By

C. C. Mason, Geologist
United States Geological Survey

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G E O L O G Y A N D G R O U N D - W A T E R R E S O U R C E S
O F D I M M I T C O U N T Y , T E X A S

ABSTRACT

Dimmit County in south Texas has an area of 1,341 square miles and in 1950 the population was 10,654. The county is part of the Winter Garden district of Texas which is known for its production of garden vegetables.

Dimmit County is on the Gulf Coastal Plain and has a maximum relief of about 470 feet. The county is drained largely by the Nueces River and its tributaries; the southwestern part is drained by tributaries of the Rio Grande.

The rocks exposed in Dimmit County consist chiefly of sand and clay and include the Kincaid formation of Paleocene age; the Indio formation, the Carrizo sand, the Mount Selman formation, and the Cook Mountain formation, all of Eocene age; the Uvalde gravel of Pliocene(?) age; the Leona formation of Pleistocene age; and the Recent alluvium.

The Kincaid formation consists of dark fossiliferous marine shale, sandy shale, sandstone, and sandy limestone. The Kincaid does not yield water to wells in Dimmit County.

The Indio formation consists of alternating layers of sand, shale, and clay; the finer grained materials being predominant. The Indio yields small supplies of water to a few wells in the county, but most of the water is highly mineralized.

The Carrizo sand consists chiefly of fine- to coarse-grained sand and a few layers of clay. The Carrizo is the principal aquifer in the county, supplying large quantities of water to wells throughout the county.

The Mount Selman formation consists of sandy clay, clay, and a few thin beds of sand. The water in the Mount Selman is too highly mineralized for most uses, but a few ranch wells tap the formation in the eastern part of the county,

The Cook Mountain formation consists chiefly of sandstone, interbedded with clay and a few lenses of limestone. The formation yields no water to wells in the county.

The Uvalde gravel consists largely of chert gravel and silt. Capping the hills and divides the Uvalde is not water bearing in Dimmit County.

The Leona formation and the alluvium consist of silt, sand, and gravel deposits occupying the stream terraces and valleys. Small quantities of water are supplied to a few wells in the county by the Leona formation and the alluvium,

The dip of the Paleocene and Eocene formations toward the east is slightly greater than the slope of the land surface so that progressively younger beds are exposed from west to east. The Uvalde gravel, Leona formation, and the alluvium form patches distributed sporadically across the beveled edges of the older rocks.

As the principal aquifer in the county, the Carrizo sand supplies more than 95 percent of the water pumped from wells. During the 1956-57 irrigation season, about 24,200 acre-feet of water was pumped from the Carrizo to irrigate 20,000 acres. The extensive irrigation has been in progress for many years and the large withdrawals of water have caused large declines in water levels throughout the county. Declines in the outcrop area have averaged 1.1 feet per year during the period 1929-57. In the artesian area, water levels have declined as much as 230 feet in the same period.

The average annual recharge to the Carrizo sand is estimated to be about 9,300 acre-feet. This is only about three-eighths of the quantity pumped during the 1956-57 season.

The water in the Carrizo is generally suitable for irrigation in Dimmit County. However, a number of wells have been contaminated by salt water leaking into the Carrizo from the overlying Bigford member of the Mount Selman formation. The salt water has leaked through faulty casing or through old wells in which no casing was set opposite the Bigford. Contamination seems to be confined to individual wells with little likelihood of becoming wide spread.

INTRODUCTION

Purpose and Scope

The purpose of this study is to present all available information pertaining to the availability and development of ground water in Dimmit County. Much information from previous studies and reports is incorporated herein. (See section on "Previous Investigations".) The investigation included a new inventory of the wells and irrigated lands in the county, collection and study of electric logs of wells, periodic water-level measurements in wells, and 10 pumping tests. Samples of water from wells were analyzed in the U. S. Geological Survey laboratory in Austin, Tex., for chloride content and electrical conductance; and water-level recorders were installed on several wells, and the records analyzed.

The principal objectives of the investigation were to determine (1) the change in water levels in wells since the earlier investigations; (2) the effect of pumping on water levels in nearby wells; (3) the amount of water removed from storage during the period 1929-57; (4) the rate of natural recharge to the Carrizo sand in the county; (5) the hydraulic properties of the Carrizo sand; (6) the direction and rate of movement of water in the Carrizo sand; (7) the extent of salt-water contamination; (8) the rate of withdrawal of water in 1956-57 from the Carrizo sand; and (9) the altitude of the top of the Carrizo sand.

This publication was compiled from data published in earlier reports and from data collected during 1956 and 1957 under a cooperative agreement among the U. S. Geological Survey, the Commissioner's Court of Dimmit County, and the Texas Board of Water Engineers.

The investigation was made under the administrative direction of A. N. Sayre, chief of the Ground Water Branch, U. S. Geological Survey, and under the field supervision of R. W. Sundstrom, district engineer in charge of ground-water investigations in Texas.

Location and Extent

Dimmit County, approximately 100 miles southwest of San Antonio, is in a semiarid part of southern Texas (fig. 1). It has an area of 1,341 square miles, most of which is ranch land; only a small portion of its area (2 to 3 percent) is used for the growing of irrigated crops. Dimmit and Zavala Counties and the eastern part of Maverick County are often referred to as the Winter Garden district because of the vegetables produced in the area during the winter.

The population of Dimmit County in 1950, according to the United States Bureau of the Census, was 10,654, Carrizo Springs, the county seat, had a population of 4,316; Asherton, 2,425; Big Wells, 1,077; and Catarina, 380.

Previous Investigations

Hutson (1898, p. 50-54), Hill (1901), and Taylor (1902, p. 64-65, and 1907, p. 51-52) were among the early writers of reports that include data on ground water in Dimmit County. Geologic reports on Dimmit County were written by Trowbridge (1923, p. 91-92, and 1932) and Deussen (1924).

Previous investigations of Dimmit County by the Geological Survey in cooperation with the Texas Board of Water Engineers were made as part of the

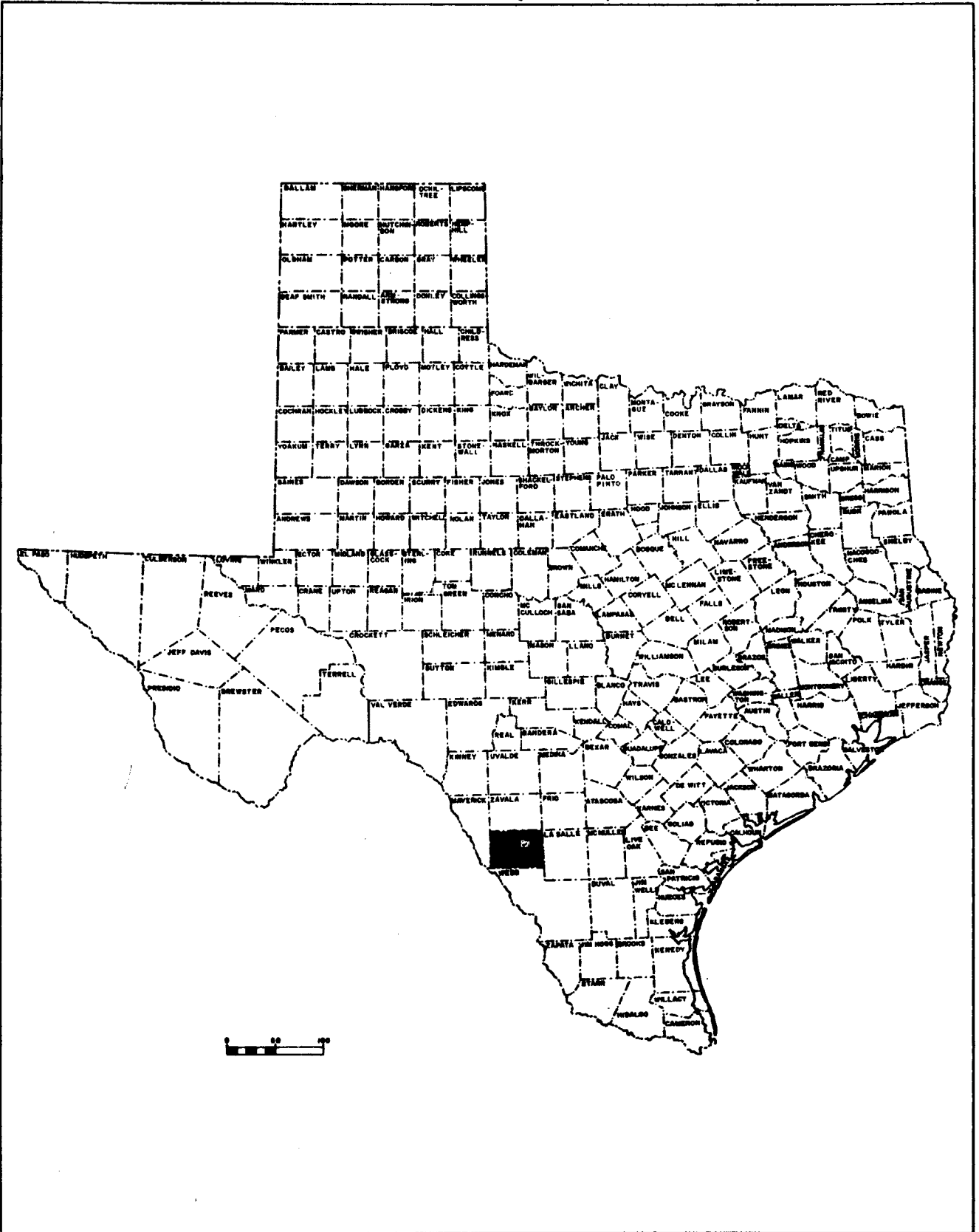


FIGURE 1. - Map of Texas showing location of Dimmit County.

studies on the Winter Garden district. Various phases of the investigation started in 1929 and 1930 when W. N. White, A. G. Fiedler, P. P. Livingston, A. N. Sayre, S. F. Turner, T. W. Robinson, and W. A. Lynch began an intensive study of the water resources of the Winter Garden district. A summary of the results was prepared by White and Meinzer (1931). An investigation of salt-water leaks in irrigation wells started by Livingston and Fiedler was continued by Livingston and Lynch, and the results of the investigation were published in 1937. Livingston and Lynch returned to the Winter Garden district in 1938 to make additional tests for salt-water leaks in well casings. Well data were published by Robinson, Turner, and Cromack, (1940). The public water supplies in Dimmit County were studied by Broadhurst, Sundstrom, and Rowley (1950, p. 46-59). D. E. Outlaw (1952) collected and compiled well data and made additional geologic and hydrologic studies.

In 1956 all data collected by the U. S. Geological Survey in cooperation with the Texas Board of Water Engineers were compiled and released in an open-file report (Turner, White, Robinson, Outlaw, and others, 1957). This report is now being prepared for publication as a water-supply paper of the Geological Survey. Ground-water withdrawals in the Winter Garden and adjacent areas for 1955 were inventoried by Moulder (1957).

Ground-water studies in areas adjacent to the Winter Garden district have been made by Lonsdale (1935), Sayre (1936), and Lonsdale and Day (1937).

Well-Numbering System

The well-numbering system used in the report is the same as used in reports on the Winter Garden district (Robinson and others, 1940; Outlaw and others, 1952; Turner and others, 1957). (See pl. 1.) Each 30-minute quadrangle was assigned a letter and each 10-minute quadrangle within was numbered consecutively starting with one in the upper left-hand corner. Within each 10-minute quadrangle the wells were numbered consecutively as inventoried. For example, well N8-108 is in the 30-minute quadrangle N, in the 10-minute quadrangle 8, and the 108th well inventoried in that quadrangle.

Acknowledgments

The writer is indebted to those who previously conducted investigations in Dimmit County. Their published and unpublished works have been used freely in the preparation of the report. Thanks are also due to well drillers R. B. Owens, Ira Cribbs, O. F. Webb, and the McKinley Drilling Co.; to the pump companies, John Stahl Machinery Co., San Antonio Machinery and Supply Co., C. C. Caperton Co., Zavala Pump and Engine Co., and Huffman Brothers. Appreciation is expressed to the many property owners who contributed data and permitted access to their property.

The sections of this report dealing with the geology of Dimmit County and the significance of chemical constituents in ground water were taken almost entirely from the open-file report on the Winter Garden district by Turner, White, Robinson, Outlaw, and others (1957).

Physiography

Dimmit County is in the western part of the Gulf Coastal Plain, which

extends in Texas from the Gulf of Mexico to the Balcones scarp (Hill, 1901, p. 48). The sediments that underlie the Coastal Plain were deposited intermittently during Tertiary and Quaternary time by streams flowing into the Gulf of Mexico. During the latter part of the Tertiary period, Dimmit County was probably a relatively flat land, tilted slightly to the south and southeast. During the Pleistocene epoch streams began cutting through the highest terrace deposits (the Uvalde gravel) and into the underlying formations (Weeks, 1941, p. 932; Trowbridge, 1932, pl. 7). The eroded material was deposited in valleys forming lower terrace deposits (the Leona formation). Only remnants remain of the higher terrace (of Uvalde age), whereas the lower terrace (of Leona age) occupies broad flats forming part of the Nueces Basin of Trowbridge (1932, p. 14-21).

Most of the relief in the county has resulted from degradation by streams which cut through the Uvalde terrace into the underlying formations. Between the terrace remnants are low, approximately parallel asymmetrical hills having gentle slopes in the direction of the dip of the geologic formations and steeper slopes in the opposite direction, the hills being formed by the more resistant beds in the various formations. Relatively flat areas between the hills are suitable for irrigation farming.

Dimmit County is drained largely by the Nueces River and its tributaries. The flow of the Nueces is intermittent, most of the discharge coming in the form of flood runoff. A few dams have been constructed permitting storage of a portion of the flood runoff for irrigation use.

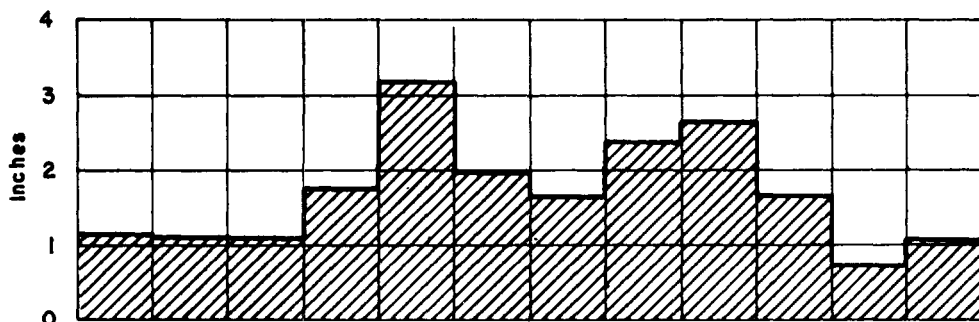
A small area in the southwest corner of the county known as "the breaks of the Rio Grande" (Trowbridge, 1932, p. 14-21) is drained by tributaries of the Rio Grande. The land surface in the area is sharply dissected and not suitable for irrigation farming.

Dimmit County has a total relief of about 470 feet. The highest point in the county, at an elevation of 870 feet, is on the divide separating the Rio Grande drainage basin from that of the Nueces River. The lowest point in the county, at an elevation of about 400 feet, is at the east edge of the county in the bed of the Nueces River.

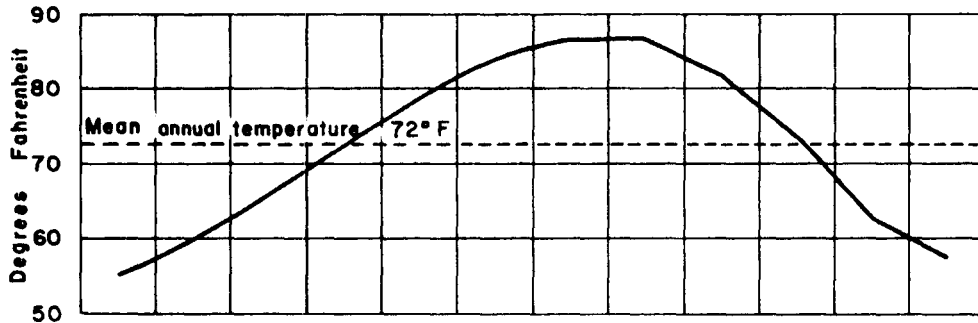
Climate

The climate of Dimmit County is semiarid; the winters are mild - the January mean temperature is 55°F, and the summers are hot - the August mean temperature is 87°F. The infrequency of killing frosts has made the growing of winter vegetables a profitable enterprise. Average monthly evaporation at the Winter Haven Experiment Station generally ranges from 2 inches in January to 9 inches in July, and the annual evaporation averages approximately 64 inches. According to records of the U. S. Weather Bureau, the average annual rainfall at Carrizo Springs for the periods 1912-17 and 1928-56 was 20.70 inches; the maximum rainfall was 33.87 inches in 1931 and the minimum was 10.76 inches in 1938. The average temperature at Carrizo Springs is 72°F. The semiarid climate makes it necessary to supplement the natural rainfall with irrigation water, especially during the winter when the rainfall usually averages only about 1 inch per month.

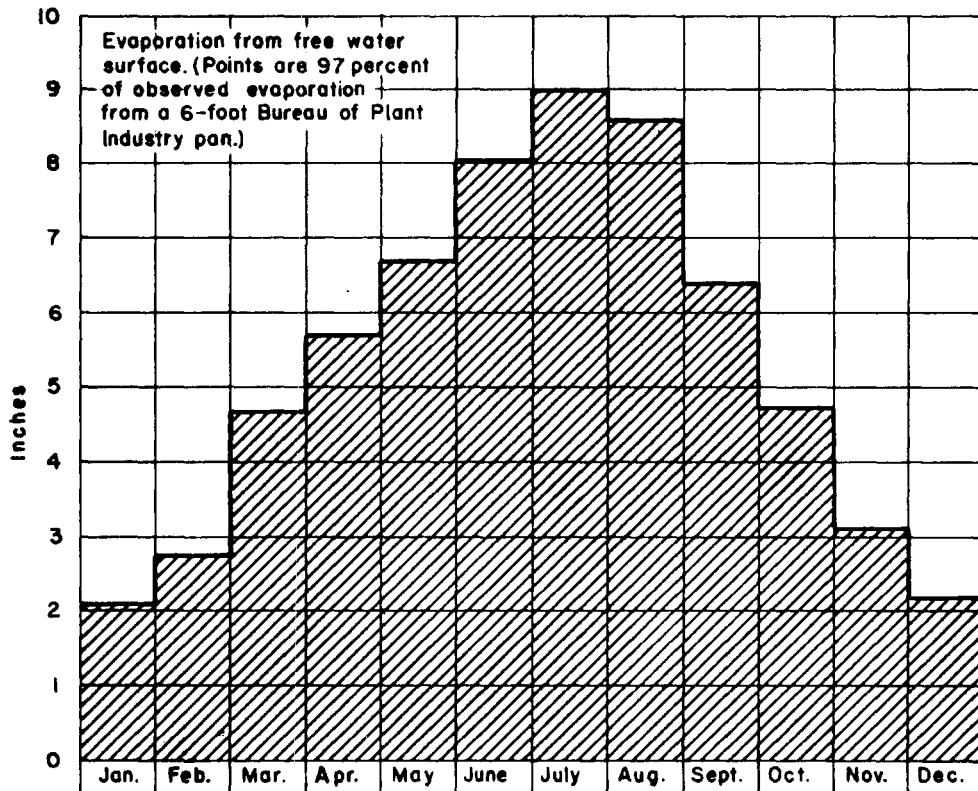
Figure 2 shows the relationship between evaporation, temperature, and precipitation at the Winter Haven Experiment Station. When the evaporation rate is high the effectiveness of any precipitation is reduced because a large amount of water is lost by evaporation. The figure shows that most of the precipitation



Mean monthly precipitation at Winter Haven



Mean monthly temperature at Winter Haven



Mean monthly evaporation at Winter Haven

FIGURE 2- Mean monthly precipitation, temperature, and evaporation at Winter Haven, Tex., 1931-56.
From records of the Texas Agricultural Experiment Station

occurs during the months when evaporation rates are relatively high. Figure 3, which shows the annual precipitation at Carrizo Springs for the period 1928-56, illustrates the periods of drought and periods of above average rainfall. Figure 4 illustrates the relationship between maximum, minimum, and mean monthly precipitation, and shows the variations of monthly precipitation.

History of Irrigation

A dam built in 1876 on the Leona River in Zavala County ponded water to supply the first attempt at irrigation in the vicinity of Dimmit County. Two dams were built on the Nueces River in Dimmit County in 1910, and in 1918 another dam was built forming the lower end of Espantosa Lake in Dimmit County. An inadequate supply of surface water, resulting from a lack of adequate storage space and from droughts, led to the use of ground water. Where surface water is now used for irrigation, it generally is supplemented with ground water.

The first flowing artesian well in the area was completed at Carrizo Springs in 1884 at a depth of 165 feet (Roesler, 1890, p. 287). The well flowed about 40 gpm (gallons per minute) and was used to irrigate 4 acres of land. By 1898 windmills and flowing wells at Carrizo Springs provided water for a considerable amount of irrigation (Hutson, 1898). Many of the wells did not penetrate the full thickness of the sand and most did not yield sufficient water to encourage large-scale irrigation. Taylor (1907, p. 51-52) reported that water from more than 60 flowing wells in Dimmit County was being used for irrigation and stock watering. In 1910 the United States Bureau of the Census listed 250 irrigation wells in Dimmit and Zavala Counties.

Table 1 gives acres of land under irrigation in Dimmit County at 5-year intervals from 1929 to 1954.

Table 1.- Irrigated acreage in Dimmit County.

Year	1929	1934	1939	1944	1949	1954
Acres Irrigated	13,694	10,056	14,305	13,345	21,898	18,340

The figures in table 1 include all land irrigated in the county by both surface and ground water; however, the proportion irrigated by surface water alone is small. According to Moulder (1957, p. 10), 22,100 acres was irrigated with ground water during 1955. About 20,000 acres was irrigated with ground water during the 1956-57 irrigation season.

Since 1947 the irrigation has tended to be concentrated at a few localities in the northern half of the county. By contrast, in 1930 the irrigation was widespread throughout the northern half of Dimmit County. The amount of irrigated land in the county decreased during the depression, but the concentration of irrigation in specific areas did not begin until well after 1940. Irrigated acreage increased during World War II and during the postwar period. By 1948 the largest concentration of irrigation wells in use was close to the outcrop of the Carrizo sand and to the areas having the largest well yields. Since 1949 the shifting trend has continued but the number of acres irrigated in the county has remained fairly constant. However, the total use of water increased from 1950 to 1957 because of drought.

- 6 -

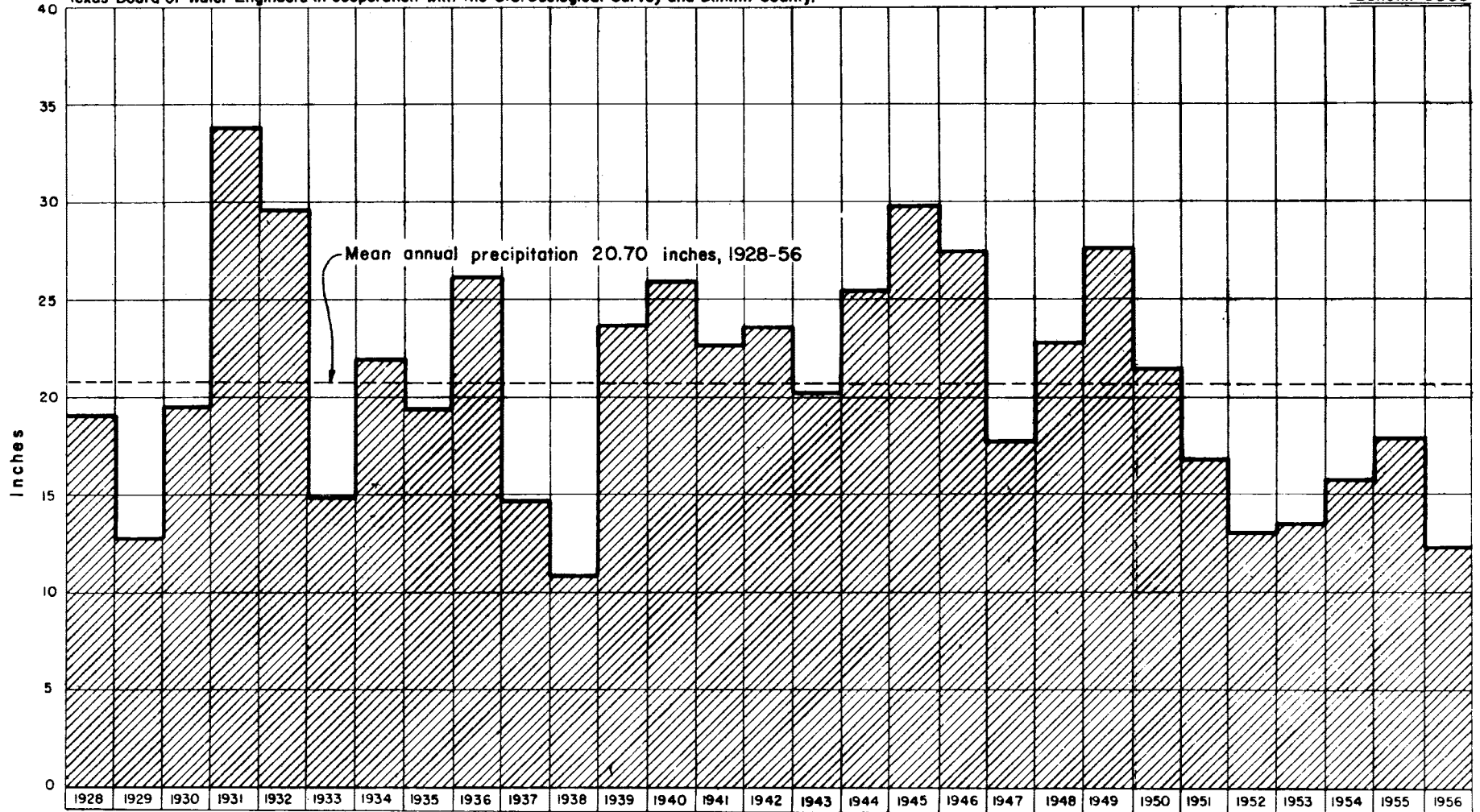


FIGURE 3.— Annual precipitation at Carrizo Springs, Tex., 1928-56.

From records of the U.S. Weather Bureau.

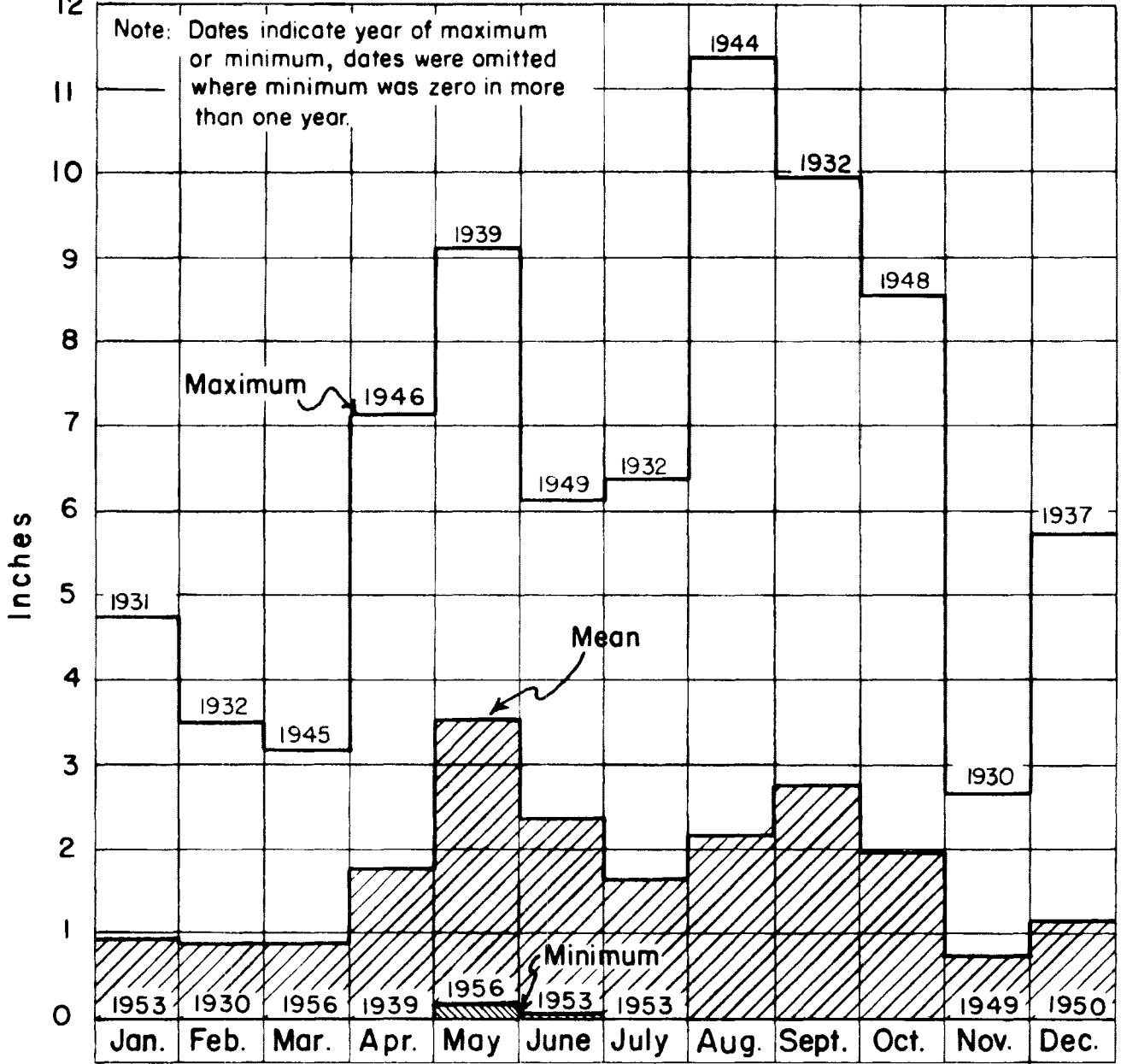


FIGURE 4- Maximum, minimum, and mean monthly precipitation at Carrizo Springs, Tex., for the period of record 1928-56.
From records of the U.S. Weather Bureau

Table 2 shows the trend toward larger irrigated farms in Dimmit County. Fifty percent of the irrigated land in 1930 was farmed by single operators having farms smaller than 100 acres; 86 percent of the farms were larger than 100 acres by 1957, and 43 percent were larger than 600 acres.

Table 2.- Size of farms operated by single operators

Size of farms	1929-30	1937-38	1947-48	1956-57
	Percent of irrigated acreage farmed by single operators			
Less than 100 acres	50	46	35	14
100 to 600 acres	45	44	60	43
More than 600 acres	5	10	5	43

GEOLOGY^{1/}

General Geology

The rocks exposed in Dimmit County consist chiefly of clay, shale, sand, and sandstone; but in some places they include lenticular bodies of limestone and beds of gravel and silt. The oldest rocks exposed in the area are beds of clay, shale, sand, and sandstone of early Tertiary age. The Tertiary rocks were deposited as detrital material at or near an oscillating shoreline. Gravel of Pliocene(?) age caps most of the hills and ridges. The gravel is the remnant of extensive flood-plain deposits that were laid down on the beveled surface of the older rocks. Quaternary gravel, sand, and silt occur in valley fill and terrace deposits along all major streams. All the Tertiary deposits have been slightly tilted and broken by faults during several periods of earth movements since they were first laid down.

The relative position, age, and thickness of the geologic formations and brief descriptions of their lithologic character and water-bearing properties are given in table 3. The outcrop area of the Carrizo sand was mapped during the Dimmit County investigation and is shown on plate 1 and figure 5. Plates 2, 3, and 4 show the strata in profile. The Uvalde gravel, which is generally on the tops of hills, has not been mapped and is not shown on the geologic map.

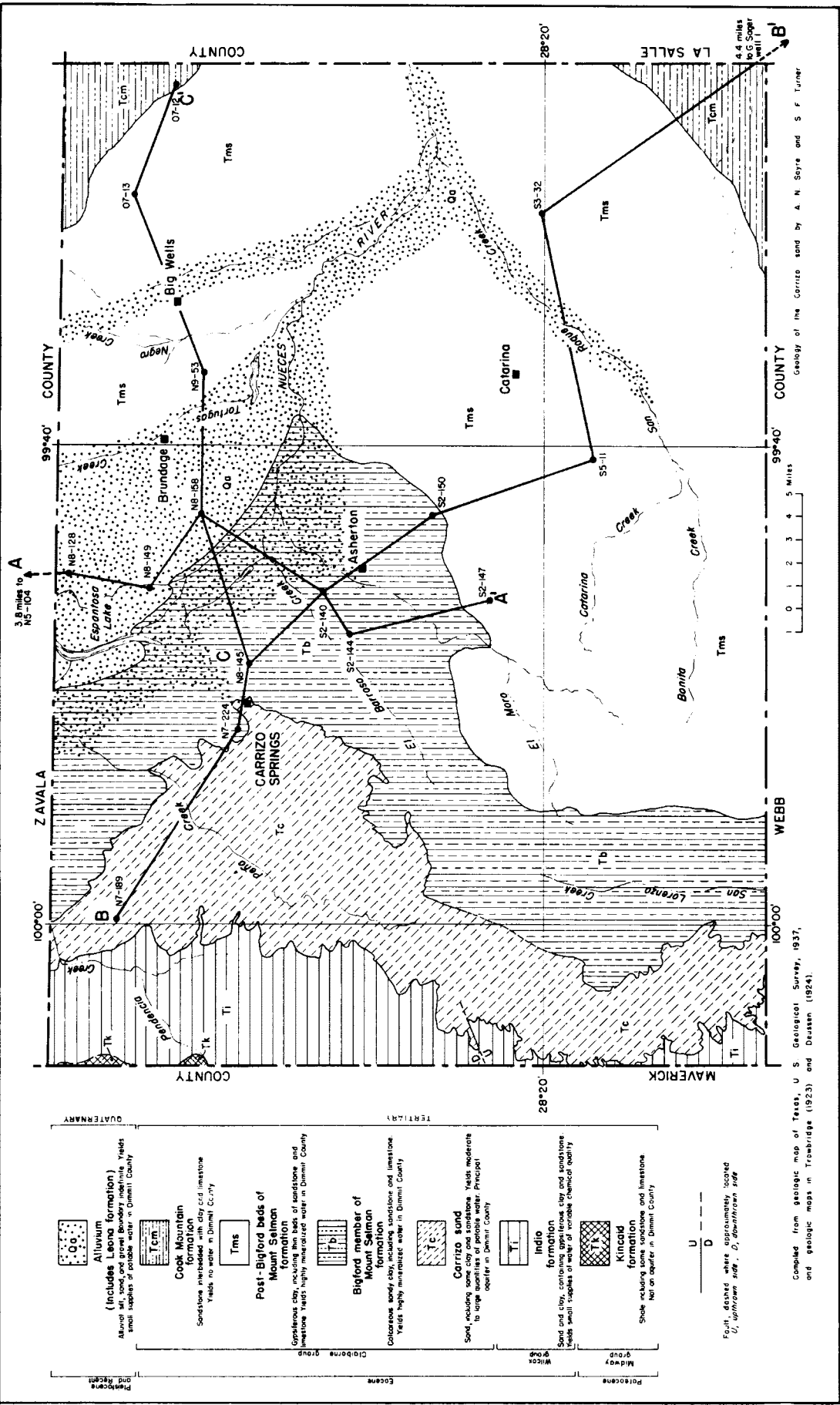
The Tertiary formations crop out in bands that roughly parallel the western edge of Dimmit County. A traverse of the county from west to east crosses the outcrops of progressively younger formations. The rocks dip southeastward at an angle slightly greater than the slope of the surface. Therefore, a formation that crops out in the western part of the county will be penetrated in wells at increasing depths toward the east.

The Carrizo sand is the chief water-bearing formation in the county. It supplies most of the ground water used for irrigation, municipal, domestic, and industrial supply. Small quantities of ground water are obtained from the Bigford member of the Mount Selman formation and the Indio formation. Water-bearing formations older than the Indio generally contain highly mineralized

^{1/} This section is taken almost entirely from a report by Turner and others (1957).

Table 3. - Geologic formations in Dimmit County, Tex.

System	Series	Group	Formation and member	Thickness, in feet		Lithologic character	Water-bearing properties	
				Min.	Max.			
Quaternary	Recent	--	Alluvium	-	-	Silt, sand, and gravel in the stream valleys.	Locally yields small amounts of water to wells for domestic uses.	
	Pleistocene	--	Leona formation	0	75	Alluvial silt, sand, and gravel forming wide, nearly flat terraces in the stream valleys.	A few domestic and stock wells derive potable water from Leona formation in the valley to the Nueces River.	
Tertiary	Pliocene (?)	--	Uvalde gravel	0	20	Mostly chert gravel but contains other quartz and igneous rocks and some silt. Caps the hills and divides.	Yields no water to wells in Dimmit County.	
	Eocene	Claiborne	Cook Mountain formation	0	700	Chiefly medium-grained glauconitic, micaceous, and ferruginous sandstone, interbedded with dark clay and lenses of gray limestone. Marine fossils are abundant.	do	
			Mount Selman formation	Post-Bigford beds	0	700	Mostly dark gypsiferous clay and a few thin beds of sand and limestone containing numerous concretions. Marine fossils are rare.	Yields small supplies of highly mineralized water to a few ranch wells in eastern Dimmit County.
				Bigford member	0	800	Dominantly calcareous clay; contains many lenses of sandstone near the base. Contains concretions and a few layers of limestone. Marine fossils are rare but plant remains are abundant.	Contains highly mineralized water Dimmit County.
				Carrizo sand	0	360	Mostly fine to coarse-grained cross-bedded sand; contains clay lenses, sandstone, lignite, pyrite, and concretions of ironstone. No marine fossils. Plant remains are not abundant.	Yields more than 95 percent of the water pumped in Dimmit County. Many wells flowed prior to heavy development for irrigation.
		Wilcox	Indio formation	0	1,520	Dominantly clayey sand and sandy shale, but contains gypsiferous clay and many lenses and persistent layers of sandstone. Calcareous and ferruginous concretions are abundant.	Yields small supplies of potable water to some stock and domestic wells. However, the water generally is highly mineralized and in some wells is unfit even for stock.	
	Paleocene	Midway	Kincaid formation	320	500	Chiefly dark shale but contains lenses and layers of sandstone and limestone.	Yields no water to wells in Dimmit County.	



Compiled from geologic map of Texas, U.S. Geological Survey, 1937, and geologic maps in Townbridge (1923) and Deussen (1924).

FIGURE 5. Geologic map of Dimmit County, Tex.

water and are too deeply buried to be practical sources of water in Dimmit County.

Structural Geology

Dimmit County is immediately south of the region where the dominant westerly structural trend of the Balcones fault zone meets and blends with the dominantly northward-trending structures of the folded areas of Mexico. The resulting structures are broad, gentle flexures. The dips are low, generally no more than 60 feet to the mile, but in some places they are as much as 150 feet to the mile. The regional dip increases from the youngest to oldest strata. The regional dip in Dimmit County is eastward.

Trowbridge (1932, p. 237) observed and named the Carrizo Springs anticline, the axis of which passes through Carrizo Springs. In Dimmit County the axis trends westward, but in Maverick County it probably swings northwestward and may be an extension of the Chittim anticline described by Vanderpool (1930, p. 252). The anticlinal structure is shown by the position of the outcrop of the Carrizo sand which, in the vicinity of Carrizo Springs, swings several miles east of its northerly trend (pl. 1 and fig. 5). Similar deflection is shown in the outcrop pattern of other formations on figure 5.

Faults have been observed in both the subsurface and the surface in Dimmit County. Most of the subsurface faults are determined on the basis of "shortened" sections within formations as indicated on electric logs. The throw of the faults generally is small and at no place is the estimated throw sufficient to restrict completely the free movement of ground water. For this reason most of the faults are not shown on the map or cross sections.

A small thrust fault may be seen in southwest Dimmit County on a small hill near Olmos Creek, about 3 miles west of the Hamilton ranch house (pl. 1). Clay of the Indio formation crops out on the top of the hill, whereas the Carrizo sand crops out about halfway down the hill on the north side. The fault dips slightly toward the south.

Rock formations and their Water-bearing Properties

TERTIARY SYSTEM

Paleocene Series

MIDWAY GROUP

Kincaid formation

The Kincaid formation (Gardner, 1933) is the only formation of the Midway group in Dimmit County, the younger Wills Point formation of east Texas being absent. The Kincaid lies unconformably on and overlaps the rocks of Late Cretaceous age in the subsurface of Dimmit County. This formation crops out in only a very small part of Dimmit County, but drillers' logs and electric logs indicate it has a general range in thickness from 320 to 500 feet.

The Kincaid formation consists of dark fossiliferous marine shale, sandy shale, sandstone, and sandy limestone. According to Sayre (1936, p. 59), the formation generally has a greenish cast due to the presence of glauconite. Sayre also reports the presence of sharks teeth, phosphate nodules, and small rounded pieces of the underlying Escondido formation at the base of the Kincaid. The Kincaid is composed predominantly of relatively impermeable rocks and does not

yield water to wells in Dimmit County.

Eocene Series

WILCOX GROUP

Indio formation

The Indio formation lies unconformably on and overlaps the Kincaid formation. The type locality is on the old Indio ranch in Maverick and Dimmit Counties. This formation crops out in a belt extending northward from the Rio Grande through western Dimmit and eastern Maverick Counties (fig. 5). Near the Rio Grande southwest of Carrizo Springs, the outcrop is about 8 to 10 miles wide. The Indio in Dimmit County ranges from 0 to about 1,520 feet in thickness.

The beds of sandstone near the base of the Indio are relatively resistant to erosion and form escarpments facing updip and persisting for many miles. One of the escarpments formed by the outcrop of a lime-cemented sandstone crosses U. S. Highway 277 near the Dimmit-Maverick County line. The upland formed by beds of the lower part of the Indio grades into low, featureless areas which have been developed on the less resistant clay and soft sandstone dominant in the middle and upper parts of the formation. Generally the upland is covered with grass and has little brush except along streams, whereas the lowland areas generally have a heavy covering of vegetation consisting of mesquite (Prosopis juliflora), huajillo (Acacia berlandieri), blackbrush (Acacia amentacea), catclaw (Acacia greggi), and various types of cacti and grass.

The Indio is composed predominantly of thin-bedded to laminated clayey sand and sandy shale, but it includes some thick layers of clay, lenses and persistent layers of sandstone, discontinuous beds of lignite, and numerous calcareous, arenaceous, and ferruginous concretions. A fine yellow powder contained along the bedding planes of the laminated shale and shaly sand has been identified by Julia A. Gardner of the U. S. Geological Survey (written communication, November 1929) as copiapite, a ferric sulfate mineral. The clay and shale are greenish, bluish gray, or light chocolate brown and generally are gypsiferous. The sandstones are gray, yellow, brown, or red, generally medium to fine grained, and not notably crossbedded. Most of the calcareous and arenaceous concretions are flat or biscuit shaped. The ferruginous concretions are thin and are particularly abundant near the upper and lower contacts. In several localities the surface near the Carrizo-Indio contact is nearly covered with concretions.

The physical properties of samples of sand obtained from the Indio formation are shown in table 4. Results of laboratory analyses made on two samples of well cuttings (R3-6 and S2-18) show that the largest percentage of sand grains is in the 0.25 to 0.125 millimeter range, and the next largest percentage is in the 0.125 to 0.062 millimeter range. These two groups compose an average of about 78 percent of the two samples. The sands of the Indio formation are similar to the fine-grained sands of the Carrizo sand and of the Bigford member of the Mount Selman formation. In general, however, the Indio has a greater percentage of fine-grained sand than the Carrizo.

Part of the Indio formation is of nonmarine origin, but part of it is marine and includes oyster shells and Foraminifera (Gardner, 1924, p. 141-145; Trowbridge, 1923, p. 90-91). The common occurrence of lignite throughout the formation suggests lagoonal deposition.

Few wells are reported to have penetrated water-bearing sands in the middle part of the Indio. Some thick water-bearing sandstones have been reported near the base but they are believed to be lenticular and, therefore, discontinuous.

Table 4.- Physical properties of samples of sands from drilled wells and on cores taken from surface outcrops in

Dimmit County, Tex.

Analyzed by M. H. Short, U. S. Geological Survey

Specific yield and retention calculated from moisture equivalent. (See p. 67.)

Well or core number	Source of sample	Mechanical composition (percent *)						Apparent specific gravity	Porosity (percent)	Moisture equivalent (percent by volume)	Specific retention (percent)	Specific yield (percent)	Coefficient of permeability (gpd/ft ²)
		2 - 1 mm.	1 - .5 mm.	.5 - .25 mm.	.25 - .125 mm.	.125 - .062 mm.	Less than .062 mm.						
	<u>Indio formation</u>												
R3-6	At depth of 230 ft	3.0	3.0	9.5	54.0	21.0	8.0	1.44	-	9.0	-	-	38
S2-18	At depth of 670 ft	.5	.5	7.0	64.0	17.6	9.5	1.51	-	8.1	-	-	39
	<u>Carrizo sand</u>												
N7-18	At depth of 200 ft	2.5	6.9	41.5	30.0	8.5	9.7	1.61	-	6.8	-	-	25
N7-29	From composite sample from Carrizo sand at depths from 106 to 248 ft	2.0	8.0	40.9	38.3	7.0	4.0	1.65	37.1	.9	2.4	34.7	473
N7-46	At depth of 830 ft	1.6	4.7	45.2	43.0	4.0	.7	1.61	41.6	2.5	5.2	36.4	412
	At depth of 850 ft	2.2	8.0	64.0	23.3	1.7	.1	1.64	38.8	1.4	3.5	35.3	683
	At depth of 860 ft	6.0	2.9	44.1	44.5	1.5	.1	1.59	41.0	1.9	4.4	36.6	609
	At depth of 870 ft	7.5	14.8	56.0	20.0	.6	.1	1.66	38.9	2.4	5.3	33.6	534
	At depth of 880 ft	2.0	9.0	57.9	28.9	1.1	0.1	1.58	40.7	2.1	4.7	36.0	676
	At depth of 940 ft	2.5	5.9	23.0	58.4	11.0	2.0	1.55	41.8	2.4	5.0	36.8	275
	At depth of 960 ft	1.0	3.0	20.1	63.3	9.6	1.4	1.54	42.4	1.6	3.0	38.6	252
	At depth of 980 ft	.4	5.5	38.9	48.6	5.0	.9	1.58	40.8	1.3	3.2	37.6	329
	At depth of 1,000 ft	.1	2.7	29.8	56.2	8.9	1.7	1.60	42.3	2.4	5.2	37.1	335
	At depth of 1,022 ft	.1	2.6	30.0	57.7	8.0	1.5	1.64	38.8	1.3	3.2	35.6	321
N7-51	At depth of 78 ft	.5	2.5	14.4	61.5	13.3	6.0	1.46	44.8	9.7	12.4	32.4	-

Table 4.- Physical properties of samples of sands from drilled wells and on cores taken from surface outcrops in

Dimmit County--Continued

Well or core number	Source of sample	Mechanical composition (percent *)						Apparent specific gravity	Porosity (percent)	Moisture equivalent (percent by volume)	Specific retention (percent)	Specific yield (percent)	Coefficient permeability (gpd/ft ²)
		2 - 1 mm.	1 - .5 mm.	.5 - .25 mm.	.25 - .125 mm.	.125 - .062 mm.	Less than .062 mm.						
	<u>Carrizo sand</u>												
N7-101	At depth of 190 ft	2.4	6.8	8.9	41.0	19.5	19.5	1.43	46.2	17.3	18.7	27.5	-
	At depth of 285 ft	6.1	7.2	8.0	21.0	37.0	18.7	1.41	46.6	10.2	12.7	33.9	-
	At depth of 332 ft	.5	1.5	26.0	40.5	22.0	7.0	1.47	45.1	2.0	4.4	40.7	-
	At depth of 377 ft	.1	1.2	37.7	44.0	9.5	6.0	-	-	-	-	-	-
	At depth of 380 ft	.1	2.4	59.0	27.4	5.9	4.5	-	-	-	-	-	-
N8-43	At depth of 390 ft	none	.1	1.1	73.5	17.9	6.5	1.46	44.9	2.2	4.7	40.2	176
	At depth of 400 ft	none	.1	2.2	75.0	13.0	7.8	1.54	41.8	3.1	6.2	35.6	79
	At depth of 410 ft	.1	2.8	23.7	51.1	14.5	6.7	1.52	43.0	2.7	5.5	37.5	158
	At depth of 420 ft	.5	1.5	24.0	49.0	12.0	12.0	1.51	43.6	7.2	10.2	33.4	3
	At depth of 440 ft	0.1	1.5	24.0	49.0	10.2	9.0	1.52	43.0	3.4	6.5	36.5	56
	At depth of 478 ft	none	.2	13.3	55.5	18.4	10.9	1.48	44.0	3.2	6.1	37.9	33
	At depth of 485 ft	none	.1	10.4	67.8	13.0	6.0	1.48	45.0	3.4	6.4	38.6	78
	At depth of 500 ft	none	.1	13.8	59.9	19.5	6.0	1.52	43.4	1.9	4.4	39.0	148
	At depth of 510 ft	none	.8	21.0	52.0	18.5	6.0	1.49	44.2	3.3	6.3	37.9	95
N8-66	At depth of 302 ft	1.0	1.0	1.9	60.7	23.0	13.1	1.52	43.3	8.1	11.2	32.1	20
	At depth of 322 ft	.7	.7	1.5	60.0	24.0	14.0	1.35	49.7	6.3	9.0	40.7	33
	At depth of 342 ft	.1	.2	.5	62.5	22.0	11.5	1.44	45.9	5.2	8.2	37.7	20
	At depth of 350 ft	14.9	30.2	36.4	17.3	.8	.1	1.73	35.4	1.0	2.7	32.7	1,439
	At depth of 362 ft	.2	1.0	4.9	34.9	48.0	10.5	1.48	44.8	2.9	5.8	39.0	155
	At depth of 382 ft	.8	1.1	1.2	40.2	44.6	12.0	1.43	47.0	3.9	6.9	40.1	82
	At depth of 402 ft	.9	1.0	1.3	45.0	38.6	12.0	1.43	46.6	3.6	6.5	40.1	-
01-15	At depth of 40 ft	1.3	1.1	13.5	66.2	15.6	2.7	1.45	46.0	2.8	5.7	40.3	270

(Continued on next page)

Table 4.- Physical properties of samples of sands from drilled wells and on cores taken from surface outcrops in

Blair County--Continued

Well or core number	Source of sample	Mechanical composition (percent %)						Apparent specific gravity	Porosity (percent)	Moisture equivalent (percent by volume)	Specific retention (percent)	Specific yield (percent)	Coefficient permeability (gpd/ft ²)
		2 - 1 mm.	1 - .5 mm.	.5 - .25 mm.	.25 - .125 mm.	.125 - .062 mm.	Less than .062 mm.						
	<u>Carrizo sand</u>												
SI-15	At depth of 50 ft	.1	7.6	55.0	30.0	4.3	2.6	1.52	42.8	2.0	4.5	38.3	399
	At depth of 60 ft	.1	5.2	50.5	36.9	4.3	3.0	1.54	42.5	2.5	5.2	37.3	425
	At depth of 70 ft	.1	.8	29.5	49.4	14.9	10.0	1.45	45.9	6.3	9.1	36.8	121
	At depth of 80 ft	.5	1.0	44.2	46.9	4.5	2.5	1.50	43.8	1.8	4.1	39.7	567
	At depth of 90 ft	2.9	14.5	50.2	29.0	2.9	0.8	1.62	38.6	1.0	2.7	35.9	464
	At depth of 100 ft	.5	4.9	34.0	39.0	12.0	8.6	1.60	32.2	9.0	12.1	20.1	76
	At depth of 110 ft	.5	2.5	31.0	54.4	8.0	1.9	1.59	40.9	1.3	3.2	37.7	373
	At depth of 120 ft	.3	1.5	14.0	69.1	11.1	2.3	1.54	42.3	1.6	3.8	38.5	416
	At depth of 130 ft	.5	1.0	10.1	72.0	13.0	2.5	1.51	43.3	1.9	4.3	39.0	433
	At depth of 140 ft	.2	1.0	11.0	70.0	14.7	2.0	1.51	43.7	1.9	4.3	39.4	355
	At depth of 150 ft	1.0	1.6	12.9	65.5	10.7	3.0	1.51	43.6	1.8	4.1	39.5	335
	At depth of 160 ft	.1	.8	20.5	67.8	7.9	2.5	1.53	43.0	1.1	2.9	40.1	435
	At depth of 170 ft	.1	.8	10.8	70.9	7.7	1.0	1.52	42.6	2.1	4.6	38.0	395
	At depth of 180 ft	.1	.8	15.5	73.0	8.9	1.5	1.54	43.0	1.5	3.6	39.4	422
	At depth of 190 ft	.1	1.0	20.0	66.8	9.0	2.0	1.54	42.8	3.7	6.8	36.0	411
	At depth of 200 ft	.1	13.1	60.3	29.9	3.5	1.2	1.71	36.2	1.2	3.1	33.1	480
	At depth of 210 ft	2.5	28.1	12.8	17.8	5.0	2.5	1.75	34.3	2.7	5.8	28.5	178
	At depth of 220 ft	3.5	28.0	45.0	15.8	4.0	2.5	1.70	36.8	2.6	5.6	31.2	256
	At depth of 230 ft	3.4	41.0	37.8	10.3	3.0	2.3	1.76	34.4	2.8	5.9	28.5	410
	At depth of 240 ft	4.1	34.5	41.0	12.7	3.7	2.8	1.76	34.7	2.0	4.7	30.0	762
	At depth of 250 ft	5.1	38.5	38.5	11.9	3.1	2.0	1.75	33.1	.8	2.2	30.9	610
	At depth of 260 ft	3.0	20.5	44.0	25.0	4.0	2.6	1.60	40.5	1.5	3.7	36.8	246
	At depth of 270 ft	2.0	17.2	52.3	23.0	3.0	1.1	1.67	37.5	1.3	3.2	34.3	625

Table 4.- Physical properties of samples of sands from drilled wells and on cores taken from surface outcrops in

Dimmit County--Continued

Well or core number	Source of samples	Mechanical composition (percent *)						Apparent specific gravity	Porosity (percent)	Moisture equivalent (percent by volume)	Specific retention (percent)	Specific yield (percent)	Coefficient permeability (gpd/ft ²)
		2 - 1 mm.	1 - .5 mm.	.5 - .25 mm.	.25 - .125 mm.	.125 - .062 mm.	Less than .062 mm.						
	<u>Carrizo sand</u>												
S1-18	At depth of 120 ft	5.4	13.0	41.0	28.0	7.2	3.8	1.55	46.0	7.0	8.0	38.0	26
	At depth of 140 ft	3.0	4.9	32.2	46.0	9.3	4.0	1.47	46.7	4.3	7.3	39.4	245
	At depth of 160 ft	2.4	2.0	4.5	68.0	18.9	3.3	1.42	47.5	4.9	11.5	36.0	148
	At depth of 180 ft	.2	.8	13.7	65.3	15.6	4.0	1.49	43.8	1.7	10.7	33.1	204
	At depth of 200 ft	1.0	11.2	42.5	27.0	9.2	8.0	1.62	40.3	3.4	11.8	28.5	32
	At depth of 220 ft	.1	1.8	18.9	54.0	17.0	7.7	1.54	42.6	2.8	11.4	31.2	83
	At depth of 240 ft	.5	1.6	21.0	58.0	11.0	7.0	1.55	41.9	1.7	13.4	28.5	154
	At depth of 260 ft	.2	1.2	14.1	67.0	13.6	4.0	1.54	38.5	1.2	8.5	30.0	187
	At depth of 280 ft	.2	1.0	13.0	66.8	14.9	5.0	1.51	43.0	1.3	12.1	30.9	170
	At depth of 300 ft	.2	4.0	40.1	48.1	5.8	2.1	1.55	42.4	.9	5.6	36.8	677
	At depth of 320 ft	.6	.9	20.2	64.9	10.0	1.5	1.52	43.3	1.6	9.0	34.3	307
S2-18	At depth of 384 ft	1.0	2.1	10.5	73.0	10.0	2.0	1.51	-	3.1	-	-	238
	At depth of 465 ft	3.6	8.7	10.0	53.5	20.0	3.0	1.55	-	8.0	-	-	151
1	Sandstone from the Carrizo sand just above the Carrizo-Indio contact at Brand Rock, on Pena Creek, 5 miles west of Carrizo Springs. Very coarse and crossbedded, and probably windblown.	4.0	35.6	44.5	11.2	2.0	1.6	-	-	-	-	-	-

Table 4.- Physical properties of samples of sands from drilled wells and on cores taken from surface outcrops in

Dimmit County--Continued

Well or core sampled	Source of samples	Mechanical composition (percent *)						Apparent specific gravity	Porosity (percent)	Moisture equivalent (percent by volume)	Specific retention (percent) ^{1/}	Specific yield (percent)	Coefficient permeability (gpd/ft ²)
		2 - 1 mm.	1 - .5 mm.	.5 - .25 mm.	.25 - .125 mm.	.125 - .062 mm.	Less than .062 mm.						
2	<p><u>Carrizo sand</u></p> <p>Core taken perpendicular to the bedding planes from the upper part of the Carrizo sand at the Farm to Market road 186 crossing on Carrizo Creek about 4 miles south of Carrizo Springs. This is a massive deposit with no apparent stratification and is probably water-laid. Bedding shown only by faint iron stains.</p>	0.1	0.6	29.8	64.9	2.9	0.9	1.43	46.8	3.9	6.8	40.0	285
3	<p>Core taken parallel to the true bedding planes from the same locality as 2.</p>	none	0.2	19.0	73.7	4.8	1.5	1.44	46.7	3.4	6.3	40.4	265

Table 4. - Physical properties of samples of sands from drilled wells and on cores taken from surface outcrops in

Dimmit County--Continued

Well or core samples	Source of samples	Mechanical composition (percent *)						Apparent specific gravity	Porosity (percent)	Moisture equivalent (percent by volume)	Specific retention (percent) ^{1/}	Specific yield (percent)	Coefficient permeability (gpd/ft ²)
		2 - 1 mm.	1 - .5 mm.	.5 - .25 mm.	.25 - .125 mm.	.125 - .062 mm.	Less than .062 mm.						
4	<p><u>Carrizo sand</u></p> <p>Core taken perpendicular to the true bedding planes from the lower sand of the Carrizo at the type locality at Brand Rock on Pena Creek, 5 miles west of Carrizo Springs. This is a very coarse crossbedded deposit and is probably dune sand. Bedding shown by very coarse layers.</p>	4.0	35.2	52.7	5.4	1.1	.2	1.42	46.9	4.3	7.3	39.6	217
5	<p>Core taken perpendicular to the true bedding planes from the lower sand of the Carrizo near the type locality, 200 ft south of well N7-73. This sand is probably water-laid.</p>	1.0	14.2	48.7	32.1	2.5	1.0	1.46	44.9	6.0	8.8	36.1	-

Table 4. - Physical properties of samples of sands from drilled wells and on cores taken from surface outcrops in

Dimmit County--Continued

Well or core samples	Source of samples	Mechanical composition (percent *)						Apparent specific gravity	Porosity (percent)	Moisture equivalent (percent by volume)	Specific retention (percent) ^{1/}	Specific yield (percent)	Coefficient permeability (gpd/ft ²)
		2 - 1 mm.	1 - .5 mm.	.5 - .25 mm.	.25 - .125 mm.	.125 - .062 mm.	Less than .062 mm.						
6	<u>Carrizo sand</u> Core taken parallel to the true bedding planes from same locality as 4.	7.4	42.2	40.7	5.9	2.0	.7	1.48	44.9	4.3	7.4	37.5	247
7	Core taken parallel to the true bedding planes from the lower sand of the Carrizo, 300 ft north of well R3-9. This is conspicuously crossbedded and is probably windblown.	0.1	1.0	36.7	61.7	4.0	0.9	1.41	47.4	2.9	5.6	41.8	363
	<u>Mount Selman formation, Bigford member</u>												
N7-101	At depth of 145 ft	3.5	12.8	7.3	16.3	33.3	24.8	1.38	47.7	20.3	20.7	27.0	-
N8-123	At depth of 809 ft	2.0	7.5	8.4	23.5	44.0	13.5	-	-	-	-	-	-
N8-123	At depth of 820 ft	1.9	7.0	30.0	50.0	7.5	1.5	-	-	-	-	-	-

* Analyses were made by sieving a 100-gram sample through a set of United States Standard screens, then transferring the portion remaining on each screen to a balance and weighing. The weight of each portion is reported in percent although the sum of the different portions of the sample usually does not equal 100 grams because the weight of each portion was rounded off to the nearest 0.1 gram.

^{1/} Obtained by a method based on work by Piper (1933).

Wells developed in water-bearing sands in the Indio formation are listed in table 5, which gives the depth to the top of the sand below land surface, the thickness of the water-bearing sand, and the reported quality of the water.

In the western part of Dimmit County, where the sands crop out, a few wells yield small quantities of water from the Indio for domestic and stock use. Some wells in the Indio yield highly mineralized water and electric logs indicate that down dip in eastern Dimmit County all the water in the Indio is highly mineralized.

CLAIBORNE GROUP

The Claiborne group in Dimmit County includes the Carrizo sand, the Mount Selman formation, and the Cook Mountain formation. The Yegua formation, the uppermost formation of the Claiborne group, crops out in Frio and La Salle Counties but is not present in Dimmit County.

Carrizo sand

The name Carrizo, from the town of Carrizo Springs, was applied by Owen (1889, p. 70) to the thick, massive sand layers that lie disconformably on the clays of the Indio formation. Owen specified no type locality for the Carrizo sand, but Plummer (in Sellards, Adkins, and Plummer, 1932, p. 614) suggested that the type locality be designated at Brand Rock on the east bank of Pena Creek, about 5 miles west of Carrizo Springs.

The disconformable relationship between the Carrizo sand and the Indio formation is not well demonstrated in Dimmit County but is clearly shown at several exposures in Zavala County. In some places conglomerate is found at the base of the Carrizo. The Carrizo may be seen lying on the eroded surface of the Indio formation at Bee Bluff on the east side of the Nueces River, about 3 miles south of the Uvalde-Zavala County line. The basal conglomerate is well exposed on the west side of the river a short distance downstream from Bee Bluff. For about a mile along Comanche Creek near the western boundary of Zavala County, the contact is irregular and can be seen at several places in the banks of the stream.

The Carrizo crops out in a belt extending from the Rio Grande through the western part of Dimmit County to the Zavala County line. Near the Rio Grande the belt of outcrop is about 2 to 3 miles wide. In the vicinity of the Carrizo Springs anticline, west and southwest of Carrizo Springs, the outcrop has a maximum width of about 9 miles narrowing again to about 2 miles at the Zavala County line (pl. 1 and fig. 5).

In general, the relief is greater in the area of outcrop of the Carrizo sand than in the adjacent areas underlain by the less resistant clay and shale of the Indio and Mount Selman formations. The topography is not rugged, although in some places quartzitic masses form rather prominent hills. The poorly cemented sand that composes most of the Carrizo weathers rapidly, and the resulting surface is gently rolling. Sand dunes are numerous; the unimproved roads crossing them are often impassable by automobile. Surface drainage in the dune areas is poorly developed.

Most of the creeks that cross the area of outcrop of the Carrizo head on the outcrops of the Indio formation. Small closed drainage basins, some of them covering more than 50 acres, are found on the outcrop of the Carrizo. Storm waters form ponds in these depressions during exceptionally heavy rains. Most of the ponds disappear in two or three days, but the beds of some of them have become covered with silt and hold water for weeks or even months.

Large plants are sparse on the Carrizo outcrop. Although mesquite trees are

Table 5. - Water-bearing sands in the Indio formation in Dimmit County, Texas

Well	Depth to top of sand below land surface (feet)	Thickness of sand (feet)	Reported quality of water
N7-18	350	10	-
N7-27	422	30	-
N7-29	336	16	-
N7-32	668	25	-
N7-36	100	-	-
N7-72	130	10	Salty
N7-77	127	18	-
	215	15	-
N8-97	880	5	-
N8-101	954	21	-
	1,056	44	-
N8-102	890	55	-
	980	9	-
	1,035	7	-
	1,050	20	-
	1,105	60	-
	1,197	8	-
	1,210	7	-
N9-24	1,250	5	-
N9-33	1,501	22	-
R3-6	230	10	See analysis
S2-4	590	10	-
	620	50	-
	677	15	-
S2-18	650	20	Good
S2-29	625	20	-
S2-46	705	20	Good
	780	15	-
	880	20	-
	1,235	5	-
	1,505	80	Salty
S2-47	545	20	-
	660	10	-
S2-50	835	10	-
S2-91	1,284	23	-
	1,342	43	-
S6-5	1,712	7	-

common, they generally are widely spaced, giving the outcrop an open appearance. The area of outcrop supports a fairly vigorous growth of grass, and in the spring it is carpeted more abundantly with brightly colored flowers than are the outcrops of other formations in the county.

The Carrizo sand consists of beds of massive, commonly crossbedded, loosely cemented, remarkably clean sand and some minor amounts of sandstone and clay. The sand is composed chiefly of grains of quartz ranging from a fraction of a millimeter to more than 5 millimeters in diameter. In general, the sand grains are coarse near the base of the formation and somewhat finer near the top. In many places the upper part contains fine-grained stratified sand and a few lenses of gray, brown, and brownish-red clay and sandy shale. In general, the sand is loosely cemented and weathers readily to incoherent sand, but in some places on the outcrop certain layers or masses of the rock have been firmly cemented with silica, commonly iron stained, forming pink quartzite. In a few places, such as along Picoso Creek in Maverick County, the upper part of the Carrizo is cemented with calcium carbonate, but on the whole, calcareous material is rare. Ferruginous concretions are abundant in the formation in some localities.

The Carrizo sand is a continental deposit. Poorly preserved fossil leaves have been found in some of the thin-bedded sands and clays, but neither invertebrate fossils have been found in the Carrizo in Dimmit County. Lignite has been reported by drillers in several wells in the Carrizo but it is probably rare. Copiapite, of common occurrence in the Indio formation, is relatively rare in the Carrizo. It is found in the form of a yellow powder along the bedding planes of some of the thin-bedded sands and sandy shales.

The purity of the quartz sand constitutes one of the chief criteria for differentiating sand beds of the Carrizo from the sand beds of other formations. The sands of the underlying Indio formation and of the overlying Bigford member of the Mount Selman formation commonly are lime cemented, contain considerable mica, and have appreciable amounts of such heavy minerals as magnetite, tourmaline, and garnet. In Webb County, Lonsdale and Day (1937, p. 17) found 2 to 3 percent of clay, carbonates, and heavy minerals in the Carrizo, and a petrographic examination by M. N. Short of the U. S. Geological Survey of two samples of the Carrizo from Dimmit County (cores 2 and 4 in table 4) showed that quartz constitutes at least 95 percent of the volume of each sample. The remainder consists of muscovite mica and partly kaolinized feldspar. No heavy minerals are present. Short examined in more detail the sample from Brand Rock, the proposed type locality of the Carrizo on the east bank of Pena Creek about 5 miles west of Carrizo Springs. No fraction of this sample, which had previously been crushed, sank in a bromoform solution having a specific gravity of 2.83. The proportion of heavy minerals in the sand, therefore, must be very low, if not zero.

The coarse-grained sand in the Carrizo is much coarser than the sand in other formations in the county. The fine-grained sand is similar in mechanical composition to fine-grained sand in the Indio formation and in the Bigford member of the Mount Selman formation. Results of mechanical analyses of 78 samples from well cuttings and outcrops of the Carrizo sand in different parts of the county are given in table 4. A comparison of these analyses with similar analyses of sand from the Indio formation and the Bigford member shows that it is impossible to differentiate by means of mechanical analyses between the fine-grained sand of the Carrizo and the sands from the Indio and Bigford.

An excellent exposure of the lower part of the Carrizo sand is at Brand Rock on Pena Creek west of Carrizo Springs. Brand Rock is an expanse of rock of about 2 acres which has been swept clean of loose sand and dirt by wind and water. The

sand, which is very coarse and generally well sorted, contains some grains of quartz as large as 5 millimeters in diameter. The sand grains are rounded to sub-angular and are polished. The whole deposit is strongly crossbedded. The section is given below:

Carrizo sand:	Feet
Sandstone, white, crossbedded-----	25
Clay or gumbo, blue, very sticky-----	8
Clay, gray, sandy, containing irregular iron-cemented concretions, partly concealed-----	6
Sand, white and gray, thin-bedded; contains clayey sand and sandy clay-----	12

An exposure of coarse crossbedded sand in the upper part of the Carrizo may be seen on Chaparrosa Creek, three quarters of a mile north of the crossing of State Highway 76, about 9 miles west of La Pryor in Zavala County.

A few sandstone beds are found in the Carrizo sand. Fine-grained, thin-bedded, somewhat lenticular sandstones are well exposed in Bell quarry, 2 miles southwest of Carrizo Springs, and a massive fine-grained sandstone, apparently 40 to 50 feet thick, crops out on Carrizo Creek just east of Farm to Market Road 186.

Beds of clay are not common in the area of outcrop of the Carrizo sand. Clay and sandy shale may form a larger part of the Carrizo than is apparent, however, because such beds may be covered by sand which is readily spread by wind and rain over the adjacent areas of outcrop. Well logs in the Winter Garden district show beds of clay in the Carrizo near the outcrop. Lenses of clay appear to increase in number and thickness as the formation thickens to the southeast.

Locally some beds in the Carrizo sand have been indurated to quartzite by secondary cementation by silica. The quartzite generally ranges in color from pink to deep red. Some of the quartzitic masses appear to have been formed along fairly definite lines that can be followed as far as a mile. Hypothetical faults have been mapped by some geologists along the outcrops of the quartzite. Theoretically, deep-seated solutions rich in silica have moved upward along fault planes and the silica was deposited in the sand. Other quartzitic masses are localized, such as those forming Chimney Rock on the Red ranch 12 miles southwest of Carrizo Springs, and Castle Rock on the Chupadero ranch 25 miles southwest of Carrizo Springs. Thin, hard rock layers of "shell" commonly are reported in wells drilled through the Carrizo sand near the quartzite outcrops. These reports that the secondary silica may extend for some distance downdip.

Two types of ironstone concretions are abundant in the Carrizo sand in a few localities. One type, which may be irregularly shaped, round, or spheroidal, consists of sand grains cemented by iron carbonate (siderite). These concretions range from a quarter of an inch to 3 inches in diameter and some are aggregated into irregular masses. Near the base of the Carrizo sand on the east side of the Nueces River, 6 miles north of La Pryor in Zavala County, the valley slopes are nearly covered with spherical concretions. When these concretions are broken, loose sand pours out from the center. Concretions found in several

localities in eastern Maverick County generally are less than an inch in diameter and are irregular in shape.

The second type of concretion is in stalagmitic form, generally irregular, but in some places spherical and appears to be relatively pure limonite. These concretions have columns up to 1 inch in diameter and 3 to 4 inches in height, and are most abundant at the contact with the Indio formation. In most places, however, iron concretions cannot be found at the contacts or elsewhere in the Carrizo sand.

Some of the beds in the Carrizo sand are highly ferruginous and weather to a brick red. Other beds which contain small quantities of iron are gray or which. Hard layers 1 foot to 2 feet thick containing pyrite are found in some wells at the top of the first water-bearing sand just below the contact between strata of clay and sand within the Carrizo.

The average thickness of the Carrizo sand in Dimmit County as determined from 23 electric logs from widely spaced wells is about 265 feet; however, the thickness ranges from 0 at the outcrop to a maximum of 360 feet.

The dip of the Carrizo varies from place to place in Dimmit County but averages about 60 feet to the mile. (See pls. 2, 3, and 4.) The direction of dip generally is southeast, but owing to structural irregularities it ranges from north-northeast to south. Plate 5 shows the approximate altitude of the top of the Carrizo sand in Dimmit County.

The Carrizo sand, the principal water-bearing formation in Dimmit County, furnished more than 95 percent of the water used for irrigation and domestic purposes during 1956-57. The occurrence of water in the Carrizo sand, including the percolation of the water into the formation and its movement and discharge, the artesian head, the ability of the sand to transmit water, and the chemical character of the water, is discussed at greater length in later sections of the report.

Mount Selman formation

The name Mount Selman, from the town of Mount Selman in Cherokee County, Tex., was applied by Kennedy (1892, p. 52-54) to the lower part of the "Marine beds" that lie on the "lignitic" and under the Yegua formation. He applied the name Cook Mountain to the upper part of the "marine beds".

The Mount Selman formation lies with apparent conformity on the Carrizo sand in Dimmit County. The lower part of the Mount Selman was named and defined by Trowbridge (1923, p. 92) as the Bigford formation. After a detailed study in Webb County by Lonsdale and Day (1937), the lower part of the Mount Selman was classified as the Bigford member of the Mount Selman formation and the upper part of the Mount Selman was called post-Bigford beds. The same terminology is used here.

Bigford member

The contact between the Carrizo sand and the Bigford member in Dimmit County generally has been drawn between the clean, massive to thin-bedded sand at the top of the Carrizo and the clayey to sandy shale at the bottom of the Bigford. Exposures of this contact are visible on Comanche Creek, $13\frac{1}{2}$ miles west of Crystal City in Zavala County; on Elm Creek, 1 mile northeast of the Burke ranch in Maverick County; and on the Nueces River, $2\frac{1}{2}$ miles below the old Uvalde-La Pryor crossing in Zavala County.

The contact between the Carrizo and the Bigford is not well defined at some places in Dimmit County especially where the top of the Carrizo is in contact with a sand of the Bigford member. Apparently the sand from the Carrizo has been re-worked to form the basal sand beds or lenses of the Bigford. Such sands easily could be mistaken for Carrizo sand and be so recorded in drillers' logs. The water from these sands could be fresh, whereas most water from the Bigford generally is highly mineralized. The Bigford crops out in a belt trending northward through Dimmit County. Southeast of Carrizo Springs, where the dip is comparatively low, the outcrop of the Bigford is about 12 miles wide.

Resistant sandstone beds in the lower part of the Bigford member form distinct scarps, some of which extend for several miles. Where clay beds are interbedded with resistant sandstone beds, the scarps are rugged. The Mills bed of Getzendaner (1930, p. 1436) stands out as a west-facing scarp through western Dimmit County. The scarp, especially prominent near the site of the old Dentonio school 17 miles southwest of Carrizo Springs, is also seen about halfway between Carrizo Springs and Crystal City.

The vegetation on the outcrop area of the Bigford is very much the same as that on the Indio formation. Mesquite grows thickly, huajillo, catclaw, and cacti are generally thick, but small shrubs and grass also thrive.

The Bigford member in Dimmit County consists chiefly of clay which is generally calcareous and of many colors. It contains subordinate amounts of gray or brown sandy clay and sandstone; many beds of lignite, some as much as 3 feet thick; a few "paper" shales and sands, such as are present in the Indio formation; and a few thick, coarse-grained, crossbedded, quartzitic sand beds, similar to those in the Carrizo sand. The Bigford contains also many beds, lenses, and concretions of yellow limestone and some thin beds of hematite. Many beds contain gypsum, which weathers out in thin plates or as very small twinned crystals of selenite. Cone-in-cone structure is fairly common in the clayey beds in which calcareous and argillaceous materials are about equally mixed.

The sandstone for the most part is fine grained, containing much mica, many grains of heavy minerals, and a small amount of glauconite. The sand grains are clean and well rounded, ranging in color from pink to moroon. Most beds are thin to massive, but several layers of fine-grained, lime-cemented, crossbedded sand have been observed. Some of the layers, however, are poorly cemented. The sandstone beds are relatively much thicker and coarser grained near the base of the member.

A very hard, lime-cemented, gray sandstone, 6 inches to 2 feet thick, is an excellent marker about 25 to 50 feet above the Carrizo-Bigford contact. The bed extends for more than 50 miles in western Dimmit and Zavala Counties. In many places a layer of irregularly banded ironstone of varying thickness was found directly underneath the sandstone. The following description is of an outcrop on U. S. Highway 277, about $8\frac{1}{2}$ miles northwest of Carrizo Springs, where beds of very hard sandstone are exposed on each side of the road.

Bigford member

Sandstone, very hard, fine-grained, lime-cemented; consists of quartz, but contains many grains of limonite. Breaks with subconchoidal fracture. Un- weathered surfaces are gray; weathered surfaces are light yellow-----	1-2
Sandstone, softer, lime-cemented, crossbedded-----	1
Ironstone, argillaceous, conglomeratic; contains calcite. Weathers in parallel or concentric bands of brown and yellow-----	$\frac{1}{2}$ -2

The mechanical analyses of three samples from the Bigford member (table 4) indicate marked variations in the distribution of grain sizes in the different well cuttings. Most of the grains, however, are 0.25 millimeter in diameter or smaller. The distribution of grain size of the fine-grained sand in the Bigford member is similar to that of the fine-grained sand in the Carrizo sand and Indio formation.

The lime concretions in the Bigford are predominately lens shaped and have a distinctive mustard-yellow color. The smaller concretions are commonly formed about a leaf or twig. Large lenticular concretions, containing cavities and veins filled with deep-yellow calcite crystals are found near the top of the member. Siderite is present in some of the concretions, and in a few localities limonite or marcasite is found as more or less spherical concretions 1 inch to 2 inches in diameter in hard, lime-cemented sandstone. Small, irregularly shaped iron concretions were found at a few sandstone-clay contacts.

Layers of ironstone occur in the Bigford, but they are thin and have parallel banding resembling the grain in wood. On the surface the exposures resemble brick pavements because of a tendency to crack into even-sized blocks. The ironstone contains much hematite associated with limonite, siderite, and clay.

Fossil leaves and leaf imprints are fairly well preserved in some of the thin-bedded, clayey sand and carbonaceous shale beds in the Bigford member. Trowbridge (1932, p. 66) described a small collection of mollusks and fish scales taken from the Bigford 0.6 mile northeast of the old Dentonio schoolhouse 17 miles southwest of Carrizo Springs. Getzendaner (1930, p. 1436) states that several mussel shells belonging to the fresh-water genus Unio have been found in the Bigford. Other fossils, most of them unidentifiable fragments, have been taken from the Bigford at several localities. Although no guide fossils have been described for the member, Lonsdale and Day (1937, p. 19-21) reported 8 fossil zones in the Bigford in Webb County, 2 of them traceable across the county.

The upper part of the Bigford closely resembles the post-Bigford beds of the Mount Selman formation; therefore, it is almost impossible to determine accurately the thickness of the Bigford from well logs. The thickness of the Bigford ranges from 0 at the outcrop to about 800 feet in eastern Dimmit County.

In general, the sands of the Bigford are thin and lenticular and yield highly mineralized water in only small amounts. The outcrops of the water-bearing sands are narrow in most places, and the amount of recharge to them probably is small. Nearly all the water in the Bigford is under artesian pressure; however, no flowing wells have been reported.

Post-Bigford beds

The post-Bigford beds of the Mount Selman formation crop out in a broad belt in Dimmit County (fig. 5). The width of the outcrop belt diminishes northward from 23 miles at the Dimmit-Webb County line to 16 miles near the Dimmit-Zavala County line.

The following lithologic description of the post-Bigford beds is chiefly from the observations of Trowbridge (1932). The post-Bigford beds are similar lithologically to the beds of the Bigford member but are composed chiefly of clay, a few relatively thin ledges of sandstone and gray limestone, and beds of coal, either lignitic or bituminous. The clay is gray, black, greenish gray, and bluish gray where fresh and yellow or buff where weathered. Some of the beds are sandy, others are limy, but most of them consist chiefly of stiff, compact clay--plastic and sticky when wet, hard and brittle when dry. The beds of clay contain large quantities of gypsum as lenses, stringers, joint fillings, and irregular aggregates of crystals.

The thin ledges of sandstone and limestone protect the underlying clay from erosion and provide some relief in a topography that is otherwise monotonously flat. The exposed sections probably exaggerate the proportion of sandstone because outcrops occur only where lenses of the more resistant materials are abundant. Some of the sandstone lenses, most common near the base of post-Bigford beds, are 25 to 30 feet thick. They contain fine to coarse grains of quartz and small amounts of mica and glauconite; they are fairly well indurated but are not quartzitic.

Many calcareous concretions are distributed throughout the post-Bigford beds, but they are found chiefly in clay and shale. Most of the concretions are composed of compact, fine-grained, pure, almost lithographic limestone. The exterior of the concretions is pale yellowish gray or buff; on the inside they are light chocolate brown or gray and the septarian fractures are filled with calcite. They range in diameter from about a quarter of an inch to about 6 feet; some are cylindrical, some are biscuit shaped, some are irregularly nodular, and some are spheroidal.

The maximum thickness of the post-Bigford beds in the county is estimated to be 700 feet. Fossils, though typical of the Claiborne group, are poorly preserved and scarce in Dimmit County.

The sandstone lenses in the lower part of the post-Bigford beds yield small supplies of highly mineralized water in Dimmit County. Farther northeast in Frio County, however, the beds yield adequate supplies of good water to many farm and ranch wells (Lonsdale, 1935, p. 34-35).

Cook Mountain formation

The name Cook Mountain, from Cook Mountain, Houston County, Tex., was applied by Kennedy (1892, p. 52-54) to the upper part of the "marine beds" that underlie the Yegua formation. The Cook Mountain formation crops out in southeastern and northeastern Dimmit County (fig. 5). The geologic map of Texas from which figure 5 was adapted does not differentiate the Cook Mountain formation from the Sparta sand in southwest Texas. The Sparta sand, however, is believed

not to be present in Dimmit County. The outcrop area of the Cook Mountain formation commonly has greater relief than outcrops of the other Eocene formations in the county. This formation is characteristically a series of rather high, rolling red hills formed by resistant sandstone and fossiliferous limestone. Vegetation generally is dense, consisting of huajillo, mesquite, low shrubs and grass.

The Cook Mountain formation consists chiefly of sand and sandstone (Trowbridge, 1932, p. 104-107; Gardner, Julia A., unpublished field notes). The sand ranges from fine grained to coarse grained, but is mostly medium grained, and is more or less firmly cemented. The beds of sandstone are green, brown, red, yellow, and gray and are commonly glauconitic, ferruginous, and micaceous. Many of them are crossbedded and ripple marked. The sandstone is interbedded with some beds of white, yellowish, bluish, and greenish-gray or chocolate-colored clay and a few thin lenses of gray limestone. The sandstone beds and at some places the clay beds contain large dark-gray hard-centered crystalline limestone concretions, some of which are fossiliferous. The lower two-thirds of the formation weathers characteristically into red sandy soil; the upper third weathers gray at most places. Marine fossils are abundant throughout the outcrop of the formation. The full thickness of the Cook Mountain formation is not exposed in Dimmit County but is estimated to be about 700 feet.

The lower part of the Cook Mountain formation contains many permeable beds of sandstone, but tests have not been made to determine the quantity of water that might be developed from them. It is reported by the ranchers in the outcrop area that cattle would not drink water from the Cook Mountain formation, and that all ranch wells were drilled to deeper formations.

The Cook Mountain formation yields sufficient water for irrigation in a few places in Frio County northeast of Dimmit County. The water is variable in quality, but the lower, sandy parts of the formation yield the best water (Lonsdale, 1935, p. 40-41).

Pliocene(?) Series

Uvalde gravel

The Uvalde gravel includes the gravel and silt that were first named the Uvalde formation by R. T. Hill (1891, p. 368) from its characteristic development in the vicinity of the town of Uvalde. Trowbridge (1923, p. 98-100) correlated these deposits with the Reynosa formation of former usage in south Texas, but it has been shown since that the Uvalde gravel is younger than the Reynosa and the name Uvalde gravel is now accepted by the U. S. Geological Survey.

The Uvalde gravel, which usually consists primarily of pebbles and cobbles of chert, but sometimes consists of other quartz and igneous rocks, caps the divide between the streams. It is generally only 1 to 2 feet thick, but in a few places is as much as 20 feet thick. It is commonly cemented with caliche and contains black silt. In the area drained by the Nueces River and its tributaries, most of the Uvalde consists of chert derived from the Edwards limestone of the Edwards Plateau, but on the divide between the Nueces River and the Rio Grande, broad plains of black silt are underlain by gravel deposits consisting chiefly of pebbles of igneous rocks.

A typical deposit of the Uvalde gravel can be seen in a cut on State Highway 85, about 1.8 miles east of the Nueces River bridge. The deposit is about 2 feet thick and contains pebbles and cobbles from 1 to 6 inches in diameter. A good exposure of the gravel, cemented by caliche, is on the west side of U. S. Highway 83 in a gravel pit on top of the highest hill, about 6 miles north of

Carrizo Springs and a little south of Winter Haven. The Uvalde gravel does not contain appreciable quantities of water because of its topographic position, thickness, and lack of reservoir capacity. It is not shown on the geologic map of Dimmit County (fig. 5).

QUATERNARY SYSTEM

Pleistocene Series

Leona formation

The Leona formation was named by Hill and Vaughan (1898, p. 253-254) from the extensive deposits composing the first wide terrace in the valleys of the Nueces and Leona Rivers. These flood-plain deposits are of Pleistocene age, are lenticular, and consist of light-gray and buff silt grading down into sand and gravel. The Leona formation lies in the valleys of the Leona and Nueces Rivers and their tributaries between the high-level deposits of the Uvalde gravel and the Recent flood-plain deposits. The Leona formation is not differentiated from the Recent alluvium in figure 5.

The pebbles and cobbles of the Leona formation were derived chiefly from the Edwards limestone and are composed of limestone, chert, and minor amounts of igneous rock. The silt commonly contains fossil shells of land snails.

Trowbridge (1923, p. 101; 1932, p. 219-230) lists several fresh-water, air-breathing mollusks in terrace deposits tentatively assigned to the Leona formation. Large teeth from Pleistocene elephants reportedly were found in the old spring valley at Carrizo Springs, which was a bog before the springs ceased flowing.

In the valleys of the main streams, the Leona formation ranges in thickness from 0 to 75 feet, and the base of the formation may be as much as 70 feet below the bed of the river. The Leona generally is only a few feet thick along the tributary streams.

The Leona furnishes small supplies of potable water to a few wells in the valley of the Nueces River. It is not anticipated that large supplies will be obtained from the Leona in Dimmit County because it is small in areal extent and saturated thickness.

Recent Series

Alluvium

Most of the stream valleys of Dimmit County contain some alluvial deposits of Recent age. The Nueces River flood plain through central Dimmit County has a thick mantle of fertile, porous silt that produces large crop yields when properly irrigated. Gravel deposits along the Nueces River yield small quantities of water to wells for domestic purposes. Other alluvial deposits occupy rather narrow areas within the stream beds or on Recent flood plains and do not yield water to wells. As previously mentioned the alluvium is not separated from the Leona formation on figure 5.

Caliche

Caliche is rock composed largely of soluble salts deposited by evaporation at or near the surface of the ground. Water percolating through the soil dissolves soluble materials in the order of and in proportion to their solubility. The total evaporation exceeds the total precipitation in semiarid and arid

regions and water evaporated at or near the ground surface leaves a residue of the contained minerals. The mineral matter may be deposited by water that is moving from the ground surface toward the water table or from the water table toward the ground surface.

Caliche in Dimmit County generally consists of a few inches of an upper layer or crust of hard banded gray to light-buff calcium carbonate that grades downward into a greater thickness of softer white porous to powdery calcium carbonate. In most parts of the county the caliche is only a few feet thick; however, it is as much as 20 feet thick in many places along the outcrop of the lower part of the Bigford member of the Mount Selman formation from Carrizo Springs northwestward for a distance of about 12 miles.

Caliche has considerable economic value for use in road construction. Although not everywhere suitable for quarrying, it is common as a surficial deposit in all parts of the county except in the outcrop area of the Carrizo sand. The presence of caliche in exposed rocks of all ages and the fact that it is still being formed suggests that it is of Recent age, possibly extending back to Pleistocene time.

Caliche may restrict the downward percolation of water and thus inhibit recharge to the ground-water reservoir. Caliche may also hold some water in temporary storage, the water later evaporating. Caliche, however, generally can be regarded as having only a minor effect on the hydrology in the county.

GROUND WATER IN THE CARRIZO SAND

Occurrence

The fundamental principles of the occurrence and movement of ground water have been presented in papers by Meinzer (1832, 1942) and Meinzer and Wenzel (1942), among others. The following discussion is a brief outline of the principles related to the occurrence of ground water in the Carrizo sand, which is the principal aquifer in Dimmit County.

A part of the precipitation that falls on and a part of the stream-flow crossing the outcrop of the Carrizo sand percolates downward to the water table, the top of the zone of saturation, or zone of ground water. Ground water moves downdip laterally from the outcrop, ultimately being discharged upward to the surface through wells or into the overlying Mount Selman formation through less permeable materials in areas where pressure decline has been negligible. Where the upward movement tends to be retarded by the overlying material, the water is said to be confined under artesian pressure. If the water in a well rises above the confining layer, the well is called artesian; if it rises to and flows at the land surface, it is called flowing artesian water. The level to which water rises in artesian wells defines an imaginary surface called the "piezometric surface".

The lateral movement of ground water is in the direction of the greatest hydraulic gradient. The configuration of the piezometric surface as shown by contours on plates 6 and 7, therefore, is indicative of the general direction of lateral movement of ground water in the Carrizo sand in Dimmit County. (Movement and the hydraulic gradient are perpendicular to the contour lines toward the lower altitude.)

The extent of the Carrizo sand outcrop, or the area underlain by unconfined water, is shown in figure 5. The artesian part of the aquifer in the Carrizo

extends eastward from the outcrop through the county, attaining a depth of 2,000 feet (from land surface at the top of the sand) in the southeast corner (pl. 5).

In some areas the large withdrawals of ground water from the Carrizo sand have lowered the artesian pressure below that in the overlying Bigford member of the Mount Selman formation. The vertical component of movement of water tends to be downward in these areas. Movement between the formations in either direction appears to be negligible except where the movement is through or alongside a well casing. Thus in places the highly mineralized water from the Bigford member is a source of contamination to the Carrizo sand--the amount of contamination being related to the size of the leak and the difference in head between the formations.

Hydraulic Properties of the Aquifer

GLOSSARY OF TECHNICAL TERMS

The following definitions are presented as a reference to basic quantitative terms used in the following sections of this publication.

Porosity can be quantitatively expressed as the percentage of the total volume of a rock that is occupied by interstices.

Permeability is the capacity of an aquifer to transmit water. The field coefficient of permeability (P) is defined (Wenzel, 1942, p. 7) as the number of gallons of water a day that percolates under prevailing conditions through each mile of water-bearing bed (measured at right angles to the direction of flow) for each foot of thickness of the bed and for each foot per mile of hydraulic gradient. The standard coefficient of permeability is the same figure corrected to 60°F.

The coefficient of transmissibility (T) is the product of the thickness, in feet, of the saturated part of a water-bearing bed and the field coefficient of permeability.

The coefficient of storage (S) of an aquifer is the volume of water it releases or takes into storage per unit surface area of the aquifer per unit change in the component of head normal to that surface. The coefficient of storage is a dimensionless unit and is expressed as a decimal fraction.

Specific yield relates to the water that is free to drain by gravity from saturated water-bearing material. It is the fraction of a cubic foot of water that will drain by gravity from a cubic foot of saturated material. For practical purposes the specific yield equals the coefficient of storage in water-table aquifers, except that the specific yield generally is expressed as a percentage.

Specific retention is the difference between porosity and specific yield. A close approximation of the specific retention is obtained by changing the centrifuge moisture equivalent to a percentage by volume and then applying a conversion factor that is based on experimental work by Piper (1933).

The moisture equivalent of a soil is the ratio of the weight of the water which the soil, after saturation, will retain against a centrifugal force of 1,000 times the pull of gravity to the weight of the soil when dry, or it may be expressed as the ratio of the volume of water to the bulk volume of sample. The moisture equivalent usually is expressed as a percentage.

The specific capacity is used to indicate the relation of well yield to

drawdown and generally is expressed in terms of gallons per minute per foot of drawdown. The term implies that the ratio of yield to drawdown remains constant for any rate of withdrawal for any length of time. Because both the rate of withdrawal and the time element affect the specific capacity, the term should be considered approximate.

LABORATORY TESTS

Laboratory tests were made on 78 samples of loose sand, well cuttings, and cores taken from the Carrizo sand in Dimmit County (table 4). The following physical and hydraulic properties of the samples were determined: grain-size distribution, porosity, permeability, apparent specific gravity, moisture equivalent, specific retention, and specific yield. The average porosity of 72 samples from the Carrizo sand was 42.4 percent; permeability of 69 samples averaged 304 gpd (gallons per day) per square foot; and specific yield of 72 samples ranged from 20.1 to 41.8 percent, averaging 35.9 percent.

Coefficients determined in the laboratory generally are not directly applicable to field problems because of factors such as failure to get representative samples, failure to repack the sample in its original state, and deterioration of samples before testing. The values of specific yield from laboratory samples were calculated from the moisture equivalent by means of an adjustment that is based on experimental work by Piper (1933) and currently used in the hydrologic laboratory of the Geological Survey. However, the specific yield under field conditions may be considerably less than the adjusted laboratory results (average 35.9 percent). Formations made up predominantly of sand generally have a specific yield ranging from 10 to 21 percent.

Turner and others (1957, p. 95) report the specific yield as being about 10 percent for the Carrizo sand based on decline of water levels in the outcrop area.

PUMPING TESTS

Two pumping tests were made in 1948 on wells completed in the Carrizo sand in the artesian area of the Winter Garden district--one in Dimmit County, the other in Zavala County. The test in Dimmit County was made on wells N7-167 and N7-168, 3 1/2 miles northwest of Carrizo Springs, where the thickness of the Carrizo averages 150 feet. The average thickness of the Carrizo at the wells which were tested in Zavala County is 194 feet. The tests were analyzed by the nonequilibrium formula developed by Theis (1935). The coefficient of transmissibility (T) computed from the test in Zavala County was about 37,000 gpd (gallons per day) per foot, and the coefficient computed from the Dimmit County test was 30,000 gpd per foot. The field coefficients of permeability were about 190 and 200 gpd per foot, respectively. The coefficient of Storage (S) for the test in Zavala County was 0.0001 and for the test in Dimmit County 0.00019.

The coefficients of transmissibility, computed from 8 pumping tests made in 1957 and analyzed by the Theis recovery method (Wenzel, 1942, p. 95-96) ranged between 9,000 and 80,000 gpd per foot, (See table 6). The highest coefficient of transmissibility (80,000 gpd per foot) was from well N8-89 on the Essar Ranch (pl. 1). In this area yields of 1,000 gpm are common. The coefficient of transmissibility ranged from 9,000 to 34,000 gpd per foot for the rest of the pumping tests and averaged 27,000 for all 8 tests. No significant correlation of transmissibility coefficients with geographical position is apparent. However, the Carrizo sand underlying an area close to the Dimmit-Zavala County line, extending from Catlett farms, 5 miles west of Winter Haven, to a point north of Brundage has an unusually high coefficient of transmissibility as shown by large well yields and pumping-test data.

Table 6.- Results of pumping tests on wells in the Carrizo sand in Dimmit County, Tex.

Well	Transmissibility (gpd/ft)
N7-236	34,000
N8-89	80,000
S1-55	13,000
S2-4	13,000
S2-48	21,000
S2-96	23,000
S3-23	9,000
T1-10	26,000

Withdrawals of Ground Water

Essentially all the ground-water discharge in Dimmit County occurs through wells; a relatively small part moves out of the county by underflow to the south-east. The quantity of water being removed from the Carrizo sand from wells became of concern to the residents of Dimmit County in the 1920's. During the 1929-30 irrigation season, about 13,700 acre-feet of ground water was withdrawn to irrigate 13,700 acres. Farming operations declined, especially irrigation farming, during the depression years. During the 1937-38 season only about 9,000 acre-feet of water was used to irrigate 11,000 acres. World War II brought on an increase in the amount of land used for irrigation farming and the increasing trend has continued. Estimated withdrawal of ground water in the 1948-49 irrigation season was 27,000 acre-feet to irrigate 22,000 acres. In the 1956-57 season 24,200 acre-feet was used to irrigate 20,000 acres. Irrigation accounts for about 95 percent of the ground-water withdrawal in Dimmit County.

Changes in Water Levels

CAUSES

Water levels in wells tapping the Carrizo sand fluctuate in response to changes in ground-water storage and changes in artesian pressure. Water recharging the aquifer in the outcrop tends to make water levels rise, whereas withdrawals from wells tend to make water levels decline.

The effects of recharge are distributed rather uniformly throughout the area of outcrop and are transmitted downdip, fluctuations being less discernible at progressively greater distances from the outcrop. During or after heavy precipitation, many of the irrigators shut down their pumps and the resultant recovery of water levels is often mistakenly related to recharge. Where the water table is more than about 50 feet beneath the surface, recharge from a single storm may have no apparent effect on water levels in wells. Sustained wet or dry periods,

however, have a distinct effect on long-term water-level trends.

Withdrawal of water from a well results in a nonuniform decline of water levels, the decline becoming smaller at greater distances from the point of withdrawal. The water table (piezometric surface in artesian areas) takes the form of an inverted cone (cone of depression) centered at the pumped well (fig. 6).

Pumping a well in the artesian area causes a more rapid decline in water level than pumping a well in the outcrop area. The surface of the cone of depression of a pumped well in the artesian portion of the aquifer is a pressure surface; whereas the cone of a pumped well in the outcrop is the upper surface of the zone of saturation. The cone in the artesian area is a depressurized zone, whereas the cone in the outcrop area is a dewatered zone. Although declines in either area represent a decrease in storage, a unit decline in the outcrop area represents about 1,000 times as much water removed from storage as does a unit decline in the artesian area.

Water pumped from wells both in the outcrop and the artesian area causes dewatering of the aquifer in the outcrop area. The symmetry of a cone in the artesian part of the aquifer is distorted when it intercepts the outcrop area. Also, the development of the cone is retarded owing to its extension into the outcrop where the unit storage is many times larger (fig. 7, A).

Other things being equal, the ultimate size of the cone of depression is larger for wells farther from the outcrop (fig. 7, B). At greater distances the cone intercepts the outcrop at a later time and hence at a later stage of development.

The cones of depression formed by each pumped well combine to form the piezometric surface as it appears under conditions of development. The configuration of the surface in 1929 and 1957 is shown on plates 6 and 7.

OUTCROP AREA

A study of the earliest records of water levels in wells in the outcrop area indicates that at least since 1929 withdrawals from the Carrizo sand in Dimmit County have almost consistently exceeded recharge. Hydrographs showing fluctuations of water levels in wells in the outcrop area (fig. 8) show a continuous decline in the water level, the decline accelerating slightly after 1944. Most of the increase in the rate of decline was caused by the increasing rate of withdrawals; however, a part was probably caused by a decrease in the rate of recharge during the years of drought. The average annual decline for the period 1944-57 was 1.7 feet, compared with 1.1 feet for the period 1929-57.

ARTESIAN AREA

Water levels in wells in the artesian area (fig. 9) reflect the changes in the distribution and rates of withdrawals not only in Dimmit County, but also in LaSalle and Zavala Counties and perhaps part of Frio County. The water levels declined as much as 240 feet in one area from 1929 to 1957 (pl. 8), most of the decline occurring after 1948 when withdrawals from the Batesville area in Zavala County began to increase rapidly. The rapidity with which the water level may change in response to change of withdrawal in the artesian area, in this case a reduction in draft, is illustrated by the daily hydrograph of well N9-24 (fig. 10).

The declines of water levels in wells for various periods in the history of irrigation in Dimmit County are shown on plates 8, 9, 10, and 11.

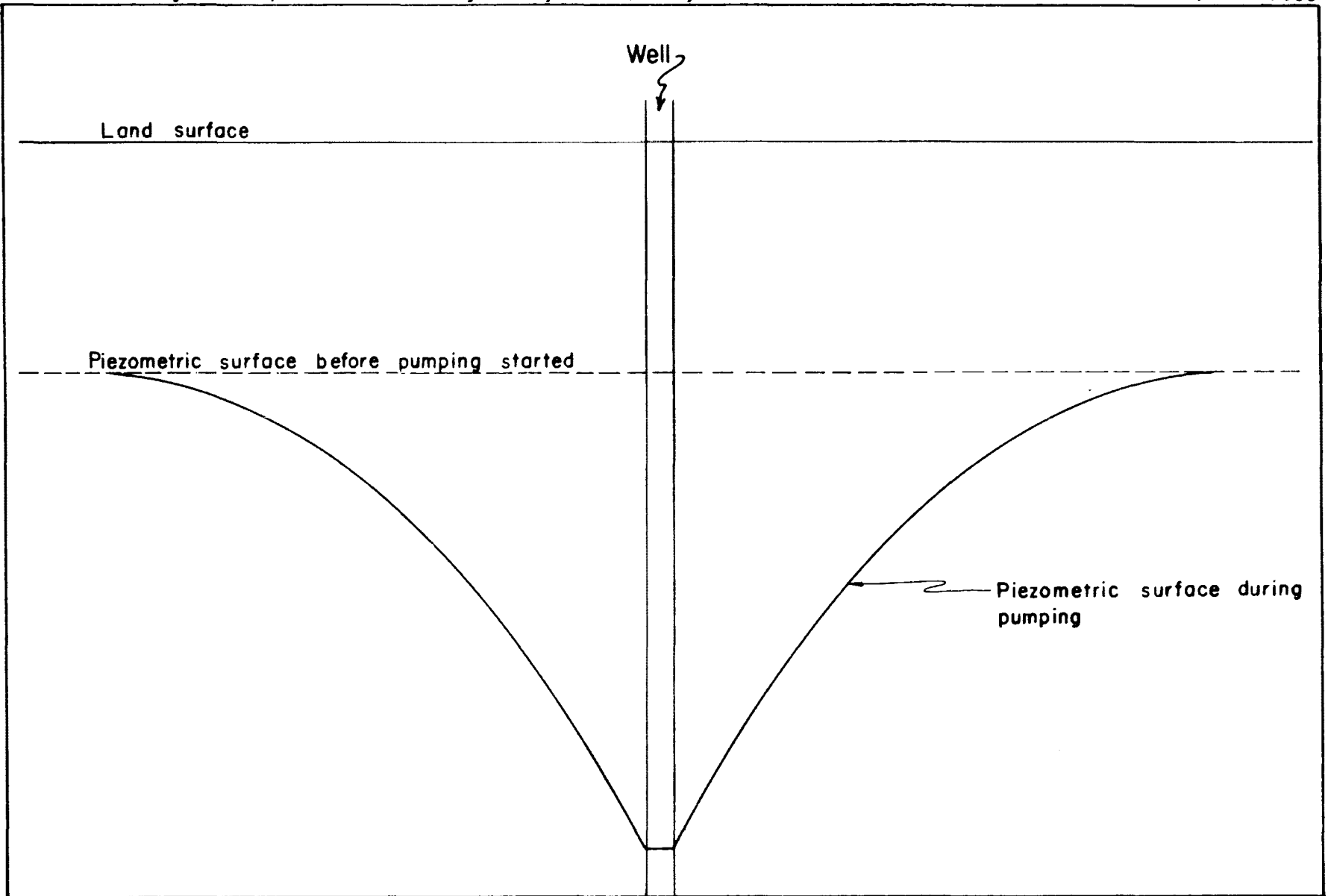


FIGURE 6. - Idealized cross section of cone of depression.

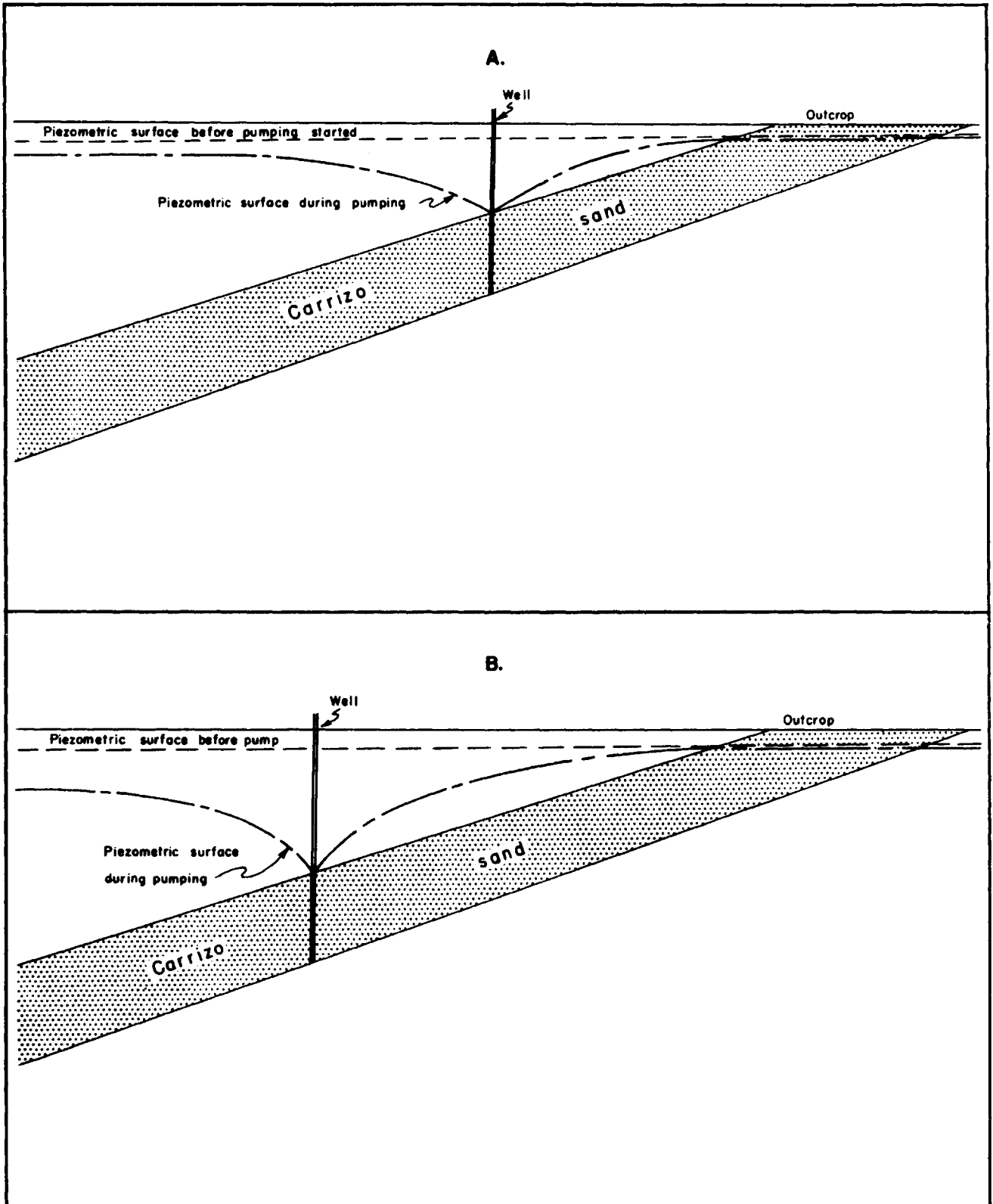


FIGURE 7. - (A.) Idealized cross section showing an unsymmetrical cone of depression caused by cone's intersection of outcrop.
 (B.) A larger cone formed by a similar well farther from the outcrop.

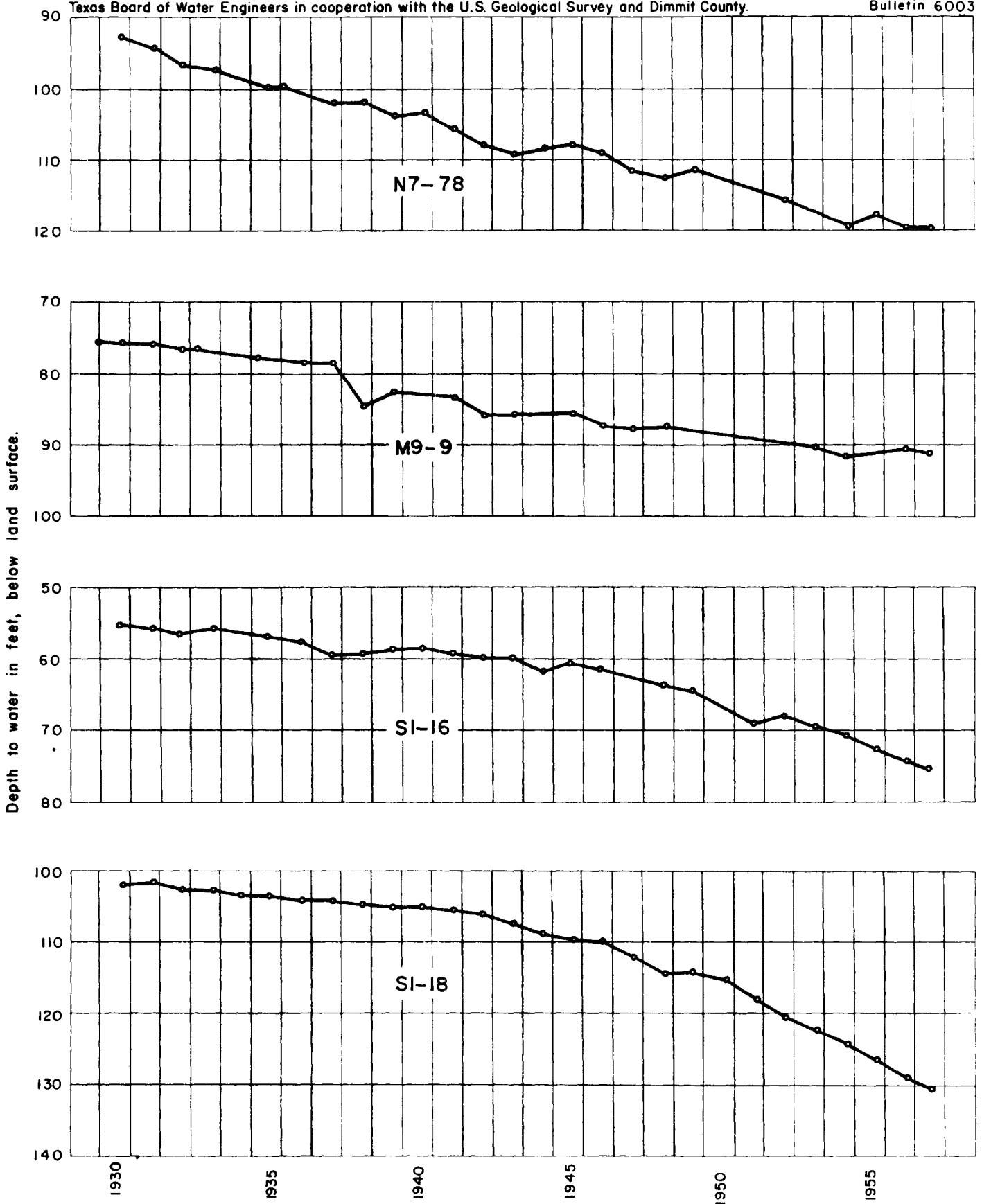


FIGURE 8. — Hydrographs of observation wells N7-78, M9-9, SI-16, and SI-18 in water-table area.

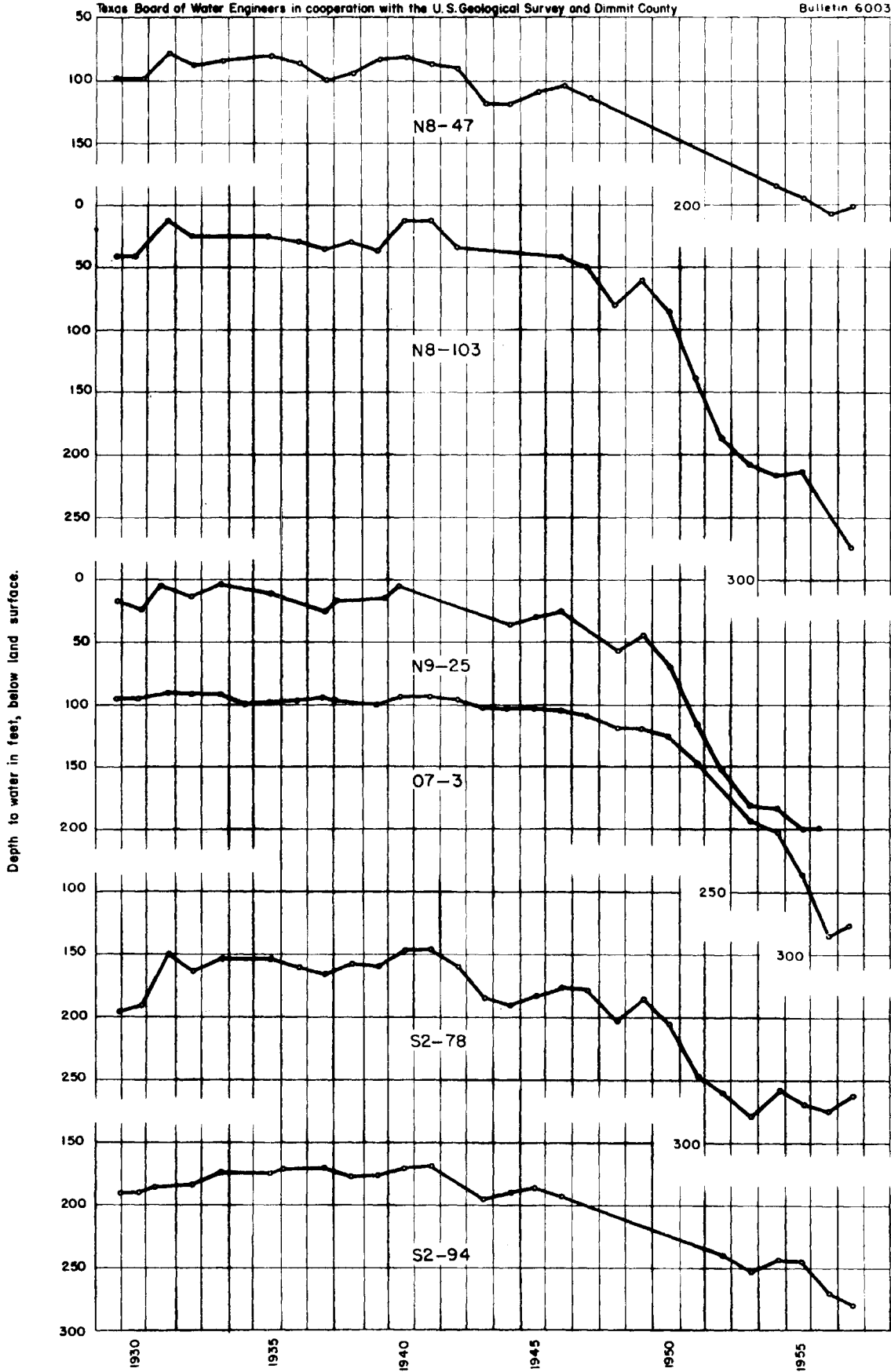


FIGURE 9. - Hydrographs of observation wells N8-47, N8-103, N9-25, 07-3, S2-78, and S2-94 in the artesian area.

Seasonal changes in rates of withdrawal show a pronounced effect on water levels in the artesian area. Nearly all the changes in trends of water level in well N9-24 (fig. 10) were the result of changes in rates of withdrawal. A series of measurements made in March 1957, when the rate of withdrawal for irrigation was comparatively large, was the basis for the map of the piezometric surface shown in plate 7. Water levels in May 1957, after a reduction in pumping rates, were 0 to 70 feet higher (pl. 12).

DEWATERING

The ground water withdrawn in excess of recharge has been removed from storage in the sand. The static water level has been lowered not only in the outcrop portion of the Carrizo sand but also in the downdip portion in some places.

Plate 13 shows the extent of dewatering in the Carrizo sand for the period 1929 to 1957. The volume of the dewatered zone is estimated to be about 2,300,000 acre-feet. Assuming that the coefficient of storage averages 0.1 (p. 34), the volume of water that has been removed from storage by dewatering is 230,000 acre-feet. The dewatering has proceeded to the extent that it has affected the yields of the wells in some areas. For example, the yields of the wells of the city of Carrizo Springs have decreased substantially as some of the sands have been dewatered.

Recharge

The quantity of water recharged to an aquifer is the most significant factor determining the quantity of water that can be continually withdrawn from the aquifer. Most of the recharge to the Carrizo sand occurs by infiltration from precipitation on the outcrop. Seepage from surface streams crossing the outcrop and interformational leakage from adjacent formations are other sources of recharge, but these probably are relatively small.

The area of outcrop of the Carrizo sand in Dimmit County is about 70,000 acres. During a storm nearly all the precipitation penetrates the surface of the ground in the outcrop area, but most of it eventually is lost by evapotranspiration. A part of the water may run off during intense storms. The remainder reaches the zone of saturation.

Various methods have been used to estimate infiltration rates in the area of outcrop of the Carrizo sand. Lysimeters were used by White and Meinzer (1931, p. 9) to measure percolation rates on the outcrop, but the results obtained varied widely and were inconclusive. Seepage measurements made on streams crossing the outcrop of the Carrizo sand showed that Carrizo Creek lost water at a high rate in a short stretch 2 or 3 miles above the crossing of U. S. Highway 83, but lost comparatively little in the rest of the course over the outcrop. Pena Creek lost heavily in only part of its course on the outcrop, and Pendencia Creek showed no losses.

The storm waters in the creeks that begin on outcrops of shale and clay are laden with clay and silt when they cross the outcrop of the Carrizo sand. These materials have been deposited in stream beds in many places on the Carrizo outcrop, making a partial seal which retards infiltration.

The quantity of water recharged to the Carrizo sand from interformational leakage is probably small, owing to the low permeability of the adjacent beds.

The average annual recharge to the Carrizo sand can be estimated by taking



FIGURE 10.—Daily water levels in well N9-24 for the period May 9, 1957 to April 27, 1958.

the difference between the pumpage and the depletion from storage. The water removed from storage in the water-table area in the 28 years from 1929 to 1957 is estimated from plate 13 to have been about 230,000 acre feet, and the amount of water derived from artesian storage in the same period is estimated to have been perhaps 10,000 acre-feet, making a total of 240,000 acre-feet of water removed from storage in Dimmit County during the period. The water pumped in Dimmit County during this period is estimated at 500,000 acre-feet on the basis of records for the irrigation seasons of 1929-30, 1937-38, 1947-48, 1956-57, and for the year 1955. The net difference, or the recharge during the 28 years, is estimated at 260,000 acre-feet, or an average of about 9,300 acre-feet per year. The area of outcrop of the Carrizo sand in Dimmit County is about 35 per cent of the total Carrizo sand outcrop area in the Winter Garden District. For purposes of comparison, if the 22,000 acre-foot recharge estimated for the Winter Garden district in the 1938-39 irrigation season (Turner, and others, 1957, p. 90) be multiplied by a factor of 35 per cent, the resulting figure is 7,700 acre-feet. Likewise, if the 27,000 acre-foot recharge estimated for the Winter Garden district in the 1929-30 irrigation season (White and Meinzer, 1931, p. 11) be multiplied by a factor of 35 percent, the resulting figure is about 9,500 acre-feet per year.

The estimate of recharge depends on the estimate of 10 percent for specific yield, which may be substantially in error. Hence, it is only approximate.

QUALITY OF WATER

Rain falling through the atmosphere is relatively free of dissolved minerals, but every drop dissolves atmospheric gases. As it percolates into the earth the water dissolves minerals to an extent depending on their solubility. The amount and kind of mineral matter dissolved in a natural water depends upon the chemical composition and physical structure of the rocks with which the water comes in contact, the temperature, the pressure, and the duration of contact.

Formations deposited in marine waters originally contained sea water in all pore spaces, but after the sea receded, the sea water eventually may have been flushed out by rain water percolating in from the outcrop area. In highly permeable rocks that permit good circulation of ground water the flushing action may have proceeded to considerable depth downdip. Less permeable formations may not be flushed as far downdip and may contain water of poor quality close to the surface.

The chemical quality of the water from wells in Dimmit County is shown by the analyses of samples of water in table 11. (See p. 225). Most of the analyses were made by the U. S. Geological Survey, but a few of the earlier analyses were made by the Bureau of Industrial Chemistry of the University of Texas.

Mineral Constituents

Silica (SiO_2) is found in most natural water. Silica has little effect on the use of water for irrigation or domestic purposes, but it does contribute to boiler scale, particularly in high-pressure boilers.

Iron (Fe) is dissolved from practically all rocks and also from iron pipes. It generally occurs in water as ferrous bicarbonate. When present in large amounts it adds to the hardness and causes an unpleasant astringent taste. If a water contains much more than 0.3 ppm (part per million) of iron, the excess may separate out when the water is exposed to the air as a reddish sediment, which stains clothing and plumbing fixtures. Most of the iron can be removed from solution by aeration, which oxidizes and precipitates the iron, followed by settling or filtration. Iron is not harmful in irrigation waters unless

present in unusually large amounts.

Calcium (Ca) and magnesium (Mg) are found in water that has been in contact with limestone, dolomite, calcareous gravel or sand, and many other rocks. Calcium and magnesium salts make water hard and are generally characteristic of water from shallow wells in Dimmit County.

Sodium (Na) and potassium (K) are found in all natural water, although generally there is much less potassium than sodium. Sodium is the chief basic constituent in sea water and most brines. Large percentages of sodium are undesirable in irrigation water because use of a water with high percent sodium may result in the formation of "black alkali" which causes the soil to become hard and untillable. However, water with a high percent sodium may be used without difficulty if its dissolved solids content is low.

Bicarbonate (HCO_3) and carbonate (CO_3) are largely responsible for the alkalinity of natural waters. Bicarbonate results from the action on carbonate rocks of the carbon dioxide dissolved in water. Bicarbonates in large amounts cause the water to have an objectionable taste. Carbonate generally is not found in natural water except in that which is strongly alkaline.

Sulfate (SO_4) may be dissolved in large quantities from gypsum or from alkali deposits of sodium sulfate, or may result from the oxidation of iron sulfides, principally pyrite. Sulfates of calcium and magnesium contribute to hard boiler scale. Sulfate is undesirable in drinking water if the concentration is more than 250 ppm, particularly if the magnesium content is high. (Magnesium sulfate is epsom salt.)

Chloride (Cl) has little effect on the utility of water except when present in large amounts. Most chloride salts increase the corrosiveness of water. Chloride is harmful to plants if present in excessive amounts (generally 1,000 ppm or more), and water having a chloride content exceeding about 300 ppm will taste salty to most people.

Fluoride (F) commonly occurs in rocks but most fluorides are relatively insoluble. The amount of fluoride in natural water seldom exceeds a few parts per million. Up to 1.5 ppm of fluoride in drinking water lessens the incidence of tooth decay of children, but quantities of fluoride in excess of 1.5 ppm in water used during the formation of teeth, may cause mottling or discoloration of the teeth (Maier, 1950, p. 4).

Nitrate (NO_3) is considered to be a final oxidation product of nitrogenous organic material. High concentrations of nitrate may indicate pollution by fertilizers, sewage, or other organic wastes. However, many wells yield water high in nitrate that occurs naturally and is not associated with harmful bacteria from pollution.

The dissolved solids--the residue on evaporation--represents the approximate total of the dissolved mineral substances in solution, and includes any organic matter and some water of crystallization. The palatability of water is affected by the amount of dissolved solids contained in the water. Water containing less than 1,000 ppm of dissolved solids is generally satisfactory for most uses. The amount of dissolved solids in irrigation water is commonly expressed as tons per acre-foot, which may be computed by multiplying the dissolved solids in parts per million by 0.00136.

Hardness generally is caused by the calcium and magnesium present in the

water. This characteristic usually is recognized by the increased amount of soap required to make a good lather. "Temporary" (carbonate) hardness is caused principally by bicarbonates of calcium and magnesium and is that part of the hardness which can be removed by boiling. "Permanent" (noncarbonate) hardness is caused by the other dissolved salts of calcium and magnesium. With respect to hardness, water can be classified as follows: hardness of 60 ppm or less, soft; 61 to 120 ppm, moderately hard; 121 to 200 ppm, hard; and more than 200 ppm, very hard.

The sodium-adsorption-ratio (SAR) is a ratio for irrigation waters and soil extracts used to express the relative activity of sodium ions in exchange reactions with the soil. This ratio is expressed by the equation

$$\text{SAR} = \frac{\text{Na}^+}{\sqrt{\frac{\text{Ca}^{++} + \text{Mg}^{++}}{2}}}$$

The SAR value is an index of the sodium hazard, which is an important factor in determining the suitability of a water for irrigation.

The specific conductance (micromhos at 25°C) of a water is a measure of its ability to conduct electricity. The conductance varies with the concentration and ionization of the different minerals in solution and with the temperature of the water. When considered in conjunction with results of determinations for other constituents, specific conductance gives a good indication of the total quantity of dissolved minerals in the water.

The hydrogen-ion concentration of a water, expressed as pH, denotes the degree of acidity or alkalinity, a factor that has an important bearing on the corrosiveness of the water. Values less than 7.0 denote acidity and values greater than 7.0 denote alkalinity. Acid waters generally are more corrosive than alkaline waters.

The suitability of water for irrigation is determined largely by (1) the total concentration of soluble salts (salinity hazard), (2) the relative activity of sodium ions in exchange reactions with the soil (sodium hazard), and (3) concentration of boron.

The classification most commonly used for judging the usefulness of a water for irrigation was proposed in 1954 by the U. S. Salinity Laboratory Staff (1954, p. 69-82). The salinity hazard is indicated by the electrical conductivity of the water and the sodium hazard is indicated by the sodium-adsorption-ratio (SAR). (See table 11.)

The relative importance of the dissolved constituents for irrigation is dependent upon the degree to which they accumulate in the soil. Killy (1951, p. 95-99) cites areas having an average annual precipitation of about 18 inches in which salts did not accumulate in soil irrigated with moderately mineralized water. Later, Wilcox (1955, p. 15), a member of the U. S. Salinity Laboratory staff, stated that the classification of irrigation waters proposed by the laboratory staff "is not directly applicable to supplemental waters used in areas of relatively high rainfall." Thus, in Dimmit County where the average annual precipitation is about 20 inches, the classification probably is not directly applicable. However, Wilcox (1955, p. 16) indicates that generally water may be used safely for supplemental irrigation if its conductivity is less than 2,250 micromhos per centimeter at 25°C and its SAR is less than 14. Further study of individual situations should be made before irrigating with water whose dissolved constituents

exceed these limits, or where soil and drainage conditions are unfavorable, or when the crop to be grown is especially sensitive to the hazards of sodium and salinity

Boron (B) in excess of certain amounts has been found to be detrimental to citrus fruits and many other crops. Plant species differ markedly in their tolerance to boron, and the permissible limits of boron for several classes of irrigation waters are shown in table 7.

Table 7.- Permissible limits of boron for several classes of irrigation waters (from Scofield, 1936)

Boron class	Sensitive crops (ppm)	Semitolerant crops (ppm)	Tolerant crops (ppm)
1	0.33	0.67	1.00
2	0.33 to .67	0.67 to 1.33	1.00 to 2.00
3	.67 to 1.00	1.33 to 2.00	2.00 to 3.00
4	1.00 to 1.25	2.00 to 2.50	3.00 to 3.75
5	1.25	2.50	3.75

Quality of Water in Formations in Dimmit County

The water in the Indio formation exhibits marked variations of chemical character, probably because the sands are deviously connected and there is little circulation in the water-bearing beds. In 14 samples the dissolved solids ranged from 664 to 4,990 ppm and the sodium-adsorption-ratio (SAR) ranged from 2.0 to 120. The upper beds may produce water usable for stock in some places near the outcrop, but the water in the lower part of the formation generally is too mineralized for most uses.

The Carrizo sand contains water of generally good quality. The water in the outcrop area is low in dissolved solids but generally is hard because of the solution of calcareous material in the Carrizo in the outcrop area. The water obtained downdip, however, contains more dissolved solids but is softer because of base-exchange reactions which occur as the water moves downdip through the sand. In 47 samples the dissolved solids ranged from 325 to 7,430 ppm, and the sodium-adsorption-ratio ranged from 1.3 to 65. The samples of water from the Carrizo sand that have a high dissolved-solids content probably have been contaminated by saline water from the Bigford member of the Mount Selman formation.

In general, the water from the Carrizo sand is suitable for irrigation in Dimmit County except where the wells have been contaminated by salt water from the overlying Bigford member of the Mount Selman formation. Most of the water has a low sodium hazard, though a medium to high salinity hazard, according to the classification of irrigation waters to be used on arid lands (U. S. Salinity Laboratory Staff, 1954, p. 69-82). The conditions of climate, soil type, drainage, and other factors apparently are such that the medium to high salinity hazard has had little or no adverse effects on the irrigated land in Dimmit County.

Samples have been collected from some of the wells screened in the Carrizo

sand on two or more occasions. The wells that show a large increase in dissolved solids have been contaminated by salt water leaking into the wells from the overlying Bigford member of the Mount Selman formation through faulty casing. An improvement in quality of the water from some of the resampled wells shows the effect of repair of wells that previously had been leaking. Salt-water contamination of the Carrizo is discussed further in another section of the report.

The water from the Bigford member of the Mount Selman formation generally is highly mineralized and is unfit for most uses. The dissolved-solids content of four samples of water from the Bigford member ranged from 4,260 ppm to 11,790 ppm.

Only one sample was obtained from a well that definitely draws water from the Cook Mountain formation, and the water was of good quality. Ranchers reported, however, that the water from the Cook Mountain generally was too mineralized for stock use. Several shallow wells northeast of Dimmit County in Frio County draw water for domestic use from the formation, but only one of the wells was reported to yield water of good quality.

Salt-Water Contamination

Salt-water contamination in Dimmit County is confined to small localized areas. In fact, no leaking well is known to have contaminated another well. Salt water leaking from the Bigford member of the Mount Selman formation through or along defective well casings to the Carrizo sand forms the only apparent cause for contamination.

The reasons for the lack of widespread contamination are the slow rate of leakage in the defective wells compared to the large volume of fresh water in the Carrizo sand, and the manner in which the salt water acts after it enters the sand. Many of the wells that have been drilled in Dimmit County have defective casings or have only a short length of casing; however, not all of them are leaking salt water. About 100 wells are being contaminated by salt water leaking from the Bigford member of the Mount Selman formation into the Carrizo sand.

Most of the contaminated wells require only a short period of pumping to remove the contaminated water after a period of shutdown. Therefore, it is believed that most of the leaks are small. The rate of leakage in well S2-56 was estimated to be about 5 to 7 gpm (8 to 11 acre-feet per year). If it is assumed that 10 acre-feet per year is the average leakage rate in the 100 leaky wells in the county, about 1,000 acre-feet of salt water would enter the Carrizo sand each year. Considering the several million acre-feet of fresh water in storage in Dimmit County, the rate of leakage is not of immediate concern to the aquifer as a whole.

The salt water that enters the sand probably disperses slowly. It tends to spread out radially from the well at a decreasing rate, but its flow is also influenced by the regional movement of the fresh water. The salt water probably moves in the form of a streamer that extends in the direction of regional movement and that increases slowly in width away from the well at a rate dependent upon the rate of leakage and the rate of regional movement. As the distance from the well increases, the salt water becomes more dilute owing to diffusion and mixing with the fresh water. The regional movement is only a few hundred feet a year, so that the salt-water streamer may be dilute enough to be unrecognizable by the time it reaches another well in its path.

Although the contamination problem is a local one and is serious probably only to the owners of the contaminated wells, its prevention in old wells and

especially in new wells should be considered. Old wells that are leaking should be plugged and new wells should be constructed so as to prevent leakage. The contamination problem is more serious in the deeper wells because the water in the deeper part of the Carrizo naturally is more mineralized and is made unsuitable by a lesser amount of contamination.

OUTLOOK FOR THE FUTURE

The principal ground-water problems facing well owners in Dimmit County are: (1) deepening pumping levels in the artesian part of the reservoir; (2) declining water levels and yields and depletion of storage near the outcrop of the Carrizo sand; and (3) contamination of water in the Carrizo sand from defective wells.

Declining pumping levels in the artesian part of the reservoir are unavoidable if present rates of withdrawal are maintained. However, a more uniform distribution of withdrawals would result in a more even distribution of pumping levels and in a slight reduction in lift in the heavily pumped area. Assuming that rates of withdrawal remain the same, the decline of water levels in the artesian area will continue at about the same rate as the decline in the outcrop.

The pumping from each well causes a drawdown in every other nearby well, the drawdown being greater in the artesian part of the aquifer than in the water-table part. Because the drawdown decreases with distance from the pumped well, it is important to space producing wells as far apart as practical. The ultimate drawdown effect is related to the distance of the well from the outcrop, the effect being larger with greater distance. Thus, the spacing between wells should be greater in the eastern part of the irrigated area than in the western part.

Declining yields of wells and depletion of storage in and near the outcrop will continue unless withdrawal rates are reduced or recharge rates increased appreciably. Ultimately yields will be so small that pumping will have to be discontinued for irrigation on and near the outcrop. The prospects for increasing recharge appreciably appear unfavorable, so irrigation in the outcrop must continue to decrease unless water from surface sources can be developed to recharge or replace depleted ground-water supplies. The rate of decline of water levels in the outcrop area averages only about 2 feet a year, so withdrawals at the 1957 rate may be continued for some years before the problem becomes critical.

Contamination of water in the Carrizo sand from defective wells is not likely to become a widespread problem within the foreseeable future. However, defective wells are leaking highly mineralized water from the Bigford member of the Mount Selman formation into the Carrizo and are contaminating several small areas. To prevent this contamination, all defective wells should be reconditioned or plugged and new wells should be constructed so that all sources of contamination from overlying formations will be sealed off permanently.

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U. S. Geol. Survey Water-Supply Papers:

Year	Water-Supply Paper	Year	Water-Supply Paper
1935	777	1947	1099
1937	840	1948	1129
1939	886	1949	1159
1940	909	1950	1168
1941	939	1951	1194
1942	947	1952	1224
1943	989	1953	1268
1944	1019	1954	1324
1945	1026	1955	1407
1946	1074		

Table 8.--Records of wells and springs in Dimmit County, Texas

All wells are drilled unless otherwise noted in remarks column.

Water level : Reported water levels given in feet; measured water levels given in feet and tenths.

Method of lift and type of power : C, cylinder; Cf, centrifugal; E, electric; G, gasoline, butane or Diesel engine; H, hand; J, jet; Ng, natural gas; O, oil; T, turbine; W, windmill. Number indicates horsepower.

Use of water : D, domestic; Ind, industrial; Irr, irrigation; N, none; P, public supply; S, stock.

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
M9-6	Farias Ranch	--	--	460	--	--	--	C,W	N	--	--	--	--	Reported salt water seeps at 40, 80, and 460 ft.
M9-7	W. M. Singleton	--	--	700	--	--	--	C,W	N	--	--	--	--	Water reported salty.
M9-8	do	--	1928	100	6	29.2	May 15, 1930	C,W	D,S	--	--	--	--	
M9-9	Jay Myers	--	--	--	10	41.6 1/75.0	Dec. 5, 1956 Dec. 12, 1929	C,W	S	--	--	--	--	Observation well.
M9-10	Farias Ranch	--	1910	250	--	--	--	C,W	N	--	--	--	--	Yields salt water.
M9-11	Jay Myers	M. McCorley	1924	110	8	--	--	C,W	S	--	--	--	--	Observation well.
M9-12	--	Geo. Petty	1920	200	6	--	--	C,W	S	--	--	--	--	Cased to 200 ft. Reported weak well. Yields salt water.
*M9-16	Ed Gardner	-- Owens	--	--	--	--	--	C,W	S	--	--	--	--	
*M9-17	do	do	1949	--	--	--	--	C,W	S	--	--	--	--	
*M9-18	do	do	--	--	--	--	--	C,W	S	--	--	--	--	
*M9-19	Ben Patterson	-- Petty	--	200	--	--	--	C,W	S	--	--	--	--	
*M9-20	Ed Gardner	-- Owens	--	--	--	--	--	C,W	S	--	--	--	--	

* See footnotes at end of table.

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Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks	
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)		
*M9-21	Ed Gardner	-- Owens	--	--	--	--	--	--	C,W	S	--	--	--	--	
*N7-11	J. H. Webb	--	1904	450	10	181.0	Dec. 5, 1956	T,G	Irr		170	50.5	100	--	Cased to 100 ft. For irrigated acreage, 1956-57, see well N7-199.
N7-12	J. L. Mogford	I. L. White	1904	450	8	41.4	May 29, 1930	--	N		--	--	--	--	Cased to 60 ft.
N7-13	B. C. White	Frank Kellogg	1917	402	8	--	--	--	N		40	61	90	--	Cased to 40 ft.
N7-14	do	B. C. White	1927	319	12, 10	--	--	T,E	D,S		45	23	65	--	Cased to 60 ft.
N7-15	Jim Webb	L. A. Watts	1926	376	10, 8	--	--	C,W	S		9	0	0	--	Cased to 35 ft. Reported in 1938, no irrigation since 1936. Cleaned out in 1955.
N7-16	B. J. Cook	Frank Kellogg	1928	360	10, 8	--	--	T,E, 40	D,S, Irr		40	37	60	45	Cased to 20 ft.
N7-17	Percy Herman	--	--	--	6	78.7	Mar. 10, 1930	--	N		--	--	--	--	
N7-18	Mrs. -- Wetzig	Elmo Owens	1914	400	6	91.7	Dec. 19, 1929	J,E	D		--	--	--	--	
N7-19	Mrs. O. V. Underwood.	--	--	185	8	185.0 65.0	Dec. 11, 1956 Dec. 19, 1929	C,W	S		--	--	--	--	
N7-20	-- Crawford	G. A. Petty	1928	330	12, 8	--	--	T,E, 25	D,S, Irr		45	40	65	45	
N7-21	R. M. Fletcher	--	1926	425	10	1/66.2	Oct. 29, 1929	T,G	D,S, Irr		--	39	60	60	Cased to 280 ft.
N7-22	Mrs. O. V. Underwood	S. M. Owens	1910	400	8, 6	--	--	C,W	S		--	--	--	--	

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-23	Mary H. White	S. M. Owens	1916	472	8	--	--	C,E	D,S	20	--	--	--	Cased to 200 ft. Reported in 1938, no irrigation since 1934.
N7-24	A. Allee	I. White	1903	450	6	31.4	Feb. 2, 1928	T,E, 20	D,S, Irr	15	0	0	50	Cased to 100 ft. Reported flowing 400 gpm when drilled.
N7-25	Mrs. Ella Perrin	Geo. Petty	1925	350	6	1/52.3	May 14, 1930	--	N	--	--	--	--	Clogged in 1957.
N7-26	L. I. Bennett	Elmo Owens	1928	352	10, 8	--	--	T,E	D,S, Irr	103	39	150	--	Cased to 39 ft. For irrigated acreage, 1956-57, see well N7-177.
*N7-27	Quality Vegetable Growers	Charley Lindborn	1929	472	10, 6	1/58.0	Oct. 28, 1929	T,E, 40	D,S, Irr	100	44.5	80	--	For irrigated acreage, 1956-57, see well N7-207. Temp. 79°F.
N7-28	do	-- Owens	1928	240	10	65.0	do	T,E, 30	D,S, Irr	31	0	0	--	Cased to 40 ft. For irrigated acreage, 1956-57, see well N7-215. Temp 79°F.
N7-29	do	Floyd Trimm	1930	1,580	--	117	May 17, 1950	--	N	--	--	--	--	Drilled as gas test.
N7-30	J. B. Catlett & -- Bennett	Frank Kellogg	1929	495	10, 8	--	--	T,E, 30	N	120	10	300	--	Cased to 65 ft. Formerly used in conjunction with well N7-207.
N7-31	Joe Byrd	Floyd Trimm	1928	755	10, 8	--	--	T,E, 75	D,S, Irr	20	160	500	120	
N7-32	do	--	1910	980	8	--	--	T,E, 50	D,S, Irr	160	180	--	70	Cased to 360 ft. Reported flowing 75 gpm in 1913.
N7-33	do	--	1910	614	10	--	--	--	N	--	--	--	--	

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-34	Paul Little	Floyd Trimm	--	--	8	1/50.7	Dec. 7, 1929	--	N	--	--	--	--	
N7-35	Carl Reiker	do	1928	921	8, 6	--	--	T,E, 15	N	--	45	0	--	Formerly used for irrigation.
N7-36	-- Williams et al.	--	--	140	8	74.9 83.6	Feb. 7, 1930 Dec. 10, 1956	C,W	D,S	--	--	--	--	
N7-37	J. A. Webb	Geo. Petty	1913	100	6	--	--	C,W	S	--	--	--	--	
*N7-38	do	--	--	900	--	51.6	May 17, 1930	C,W	S	--	--	--	--	
N7-39	I. O. Kotchman	Geo. Petty	1913	115	6	1/82.2	Dec. 19, 1929	C,W	S	--	--	--	--	Observation well.
*N7-40	Lynch Bros.	Frank Kellogg	1927	188	10, 8	185.6	Feb. 18, 1957	C,W	S	18	--	--	--	Cased to 78 ft. Formerly used for irrigation. Temp. 76°F. 2/
N7-41	A. N. Box	S. M. Owens	1906	504	8	41.0	May 9, 1930	C,W	S	40	5	--	--	Cased to 80 ft. Reported flowing 150 gpm in 1913.
*N7-42	Byrd Cattle Co.	Floyd Trimm	--	--	--	--	--	T,E, 50	Irr	800	410	410	--	For irrigated acreage, 1956-57, see well N7-43.
N7-43	do	Geo. Leonard	1910	840	8	--	--	T,E, 50	Irr	--	--	--	70	Cased to 483 ft. Used for irrigation, 1956-57, in conjunction with well N7-42.
N7-44	do	-- Barnett	1910	960	5	--	--	T,E	D,S	--	--	--	--	
N7-45	do	Geo. Leonard	1913	805	10, 8	--	--	--	N	--	--	--	--	Cased to 605 ft.
*N7-46	State of Texas	Cribbs & Davidson	1930	1,022	12, 8, 6	89.6	July 22, 1930	T,G	D,S, Irr	0	58.5	80	80	Casing: 254 ft of 12-in.; 523 ft of 8-in.; 264 ft of 6-in. perforated. Temp. 91°F. 2/

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-47	J. B. Allen	Cribbs & Davidson	1927	992	10, 8, 6	--	--	T,E, 40	D,S, Irr	45	6	--	20	Cased to 780 ft.
N7-48	Hugh Greer	Geo. Crowell	1926	1,001	15, 8	1/61.0	Oct. 9, 1929	T,E, 15	D	70	8	80	--	Water reported salty.
N7-49	Davidson Co.	do	1926	890	12, 8, 6	--	--	C,E	D	22.5	0	8	--	Do.
N7-50	Ben Patterson	John Bell	1920	90	6	57.2	May 15, 1930	C,W	S	--	--	--	--	
N7-51	Sam McKnight	Elmo Owens	1930	282	10	--	--	C,W	S	--	--	--	--	2/
N7-52	E. L. Wetzig	Frank Kellogg	1928	176	10	--	--	T,E	Irr	19	26	29	10	Cased to 40 ft.
N7-53	do	--	--	--	10	1/80.5	Dec. 19, 1929	T,G	N	--	--	40	--	Well deepened, penetrated salt water.
N7-54	do	Elmo Owens	1928	176	10	--	--	C,W	S	20	--	--	--	Not used for irrigation since 1936. Temp. 76°F.
N7-55	R. W. Williams	Frank Kellogg	1929	370	6	165	1956	C,W	D,S	--	--	--	--	
*N7-56	H. H. Herrington	S. M. Owens	1909	600	10, 6	65.5	May 15, 1930	T,G, 15	D,S, Irr	20	5	--	10	
N7-57	W. G. Orr	--	1927	705	8	1/67.7	Oct. 3, 1929	T,E	D	63	0	0	0	Observation well. Temp. 86°F.
N7-58	H. Row	Floyd Trimm	1925	700	6, 4	--	--	T,Ng	Irr	--	--	--	--	Cased to 500 ft. For irrigated acreage, 1956-57, see well N7-239.
N7-59	Bain Peanut Co.	Geo. Leonard	1924	752	10, 8	--	--	T,G	Irr, D,S	150	125	--	--	Cased to 550 ft. For irrigated acreage, 1956-57, see well N7-60.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-60	Bain Peanut Co.	--	1921	800	10, 8	--	--	T,E, 50	D,S, Irr	--	--	300	200	Used for irrigation, 1956-57, in conjunction with well N7-59.
N7-61	C. Zedler	--	--	760	12, 8	--	--	C,W	D	42	20	0	--	Cased to 525 ft.
N7-62	Central Securities Co.	--	--	--	6	20.6	June 19, 1930	C,W	S	--	--	--	--	
N7-63	Sam McKnight	Humble Oil & Refining Co.	1928	5,004	--	--	--	--	N	--	--	--	--	Oil test. Abandoned.
N7-64	Henry Moses	Geo. Petty	--	375	--	--	--	--	N	2	--	--	--	Not used for irrigation since 1936.
N7-65	L. A. Warren	Elmo Owens	1928	230	12, 10	1/49.2	Oct. 29, 1929	C,W	D,S	--	--	--	--	Cased to 230 ft. Observation well. 2/
N7-66	J. A. Heyman	W. D. Morrison	1927	332	12, 10	--	--	--	N	40	5	0	--	Cased to 79 ft. Temp. 78 1/2°F. 2/
*N7-67	Mrs. Willie Wilson	do	1927	310	10	93.1	Oct. 28, 1929	N	N	20	31.25	0	--	Cased to 90 ft. Temp. 78°F.
N7-68	J. M. Davis	Geo. Petty	1927	210	10	86.4	Feb. 2, 1928	--	N	--	--	--	--	
*N7-69	G. E. Whitney	do	1923	504	8	--	--	N	N	45	87.75	0	--	Cased to 160 ft.
*N7-70	C. M. Burns	S. M. Owens	1905	530	6	8	1913	C,E	D,S	--	--	--	--	Cased to 60 ft. Reported flowing 125 gpm in 1905.
N7-71	do	do	1929	500	8	--	--	T,Ng, 2	D,S, Irr	14	0	30	--	Cased to 165 ft. Reported flowing 75 gpm in 1907. Not used for irrigation in 1957.
N7-72	R. F. Miller Estate	Geo. Petty	1912	140	6	79.5	Feb. 7, 1930	C,W	S	--	--	--	--	
N7-73	Sam McKnight	--	--	40	6	1/9.6	Jan. 16, 1930	C,W	S	--	--	--	--	
						23.0	Jan. 9, 1957							

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*N7-74	Sam McKnight	G. B. Williams	--	--	8	1/71.9	Sept. 24, 1929	C,W	D,S	--	--	--	--	Temp. 78°F.
*N7-75	F. Kirk	--	--	306	10,	--	--	--	N	--	--	--	--	
N7-76	do	--	1926	309	10,	123.9	Feb. 8, 1957	C,W	S	--	--	--	--	
N7-77	Sam McKnight	W. D. Morrison	1930	436	8	1/105	Mar. 1930	C,W	S	--	--	40	--	Cased to 251 ft. Obser-
N7-78	C. Schmitt	Sam Howard	1915	300	10	79.2 1/91.2	July 29, 1957 Jan. 6, 1929	C	N	2	.5	.5	--	vation well. 2/ Observation well.
N7-79	B. Padilla	Frank Kellogg	--	--	6	--	--	T,E, 7 1/2	D,S, Irr	10	10.5	20	20	
N7-80	T. A. Smith	Elmo Owens	1929	356	10	--	--	T,E	D,S	9	16	4	--	Cased to 59 1/2 ft.
N7-81	Joe Gardner	Frank Kellogg	1926	525	10,	--	--	C,W	S	58	12	0	--	
N7-82	do	Sam Howard	--	312	8	149.8	Mar. 12, 1957	C,W	D	5	0	0	--	
N7-83	P. Tijarena	A. Brown	1927	300	8	--	--	T,G	N	27	10	0	0	
N7-84	-- Shaw	Elmo Owens	--	315	8	--	--	T,E	N	--	--	0	--	
N7-85	do	do	--	318	8	--	--	--	N	0	0	0	--	Cased to 40 ft.
*N7-86	Leonardo Villameva	Geo. Petty	1922	456	--	106.0	Nov. 31, 1939	T,E	D,S, Irr	35	37	50	25	
*N7-87	M. L. Norwood	S. M. Owens	1924	312	12,	--	--	T,E, 20	D	35	46	40	0	Cased to 169 ft.
N7-88	-- Butcher	Elmo Owens	1922	305	10	--	--	T,G	N	40	3	50	--	Cased to 40 ft.
N7-89	do	do	--	315	8	--	--	--	N	--	--	--	--	

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-90	-- Crosby	S. M. Owens	1910	454	8	--	--	C,G, 10	N	20	--	--	--	Cased to 80 ft. Not used for irrigation since 1936.
N7-91	G. O. Bell	--	--	310	5	--	--	T,G, 20	N	23	--	--	--	Do.
N7-92	W. D. Carter	S. M. Owens	1914	324	18, 16	--	--	T,E	D,S, Irr	75	30	150	--	Cased to 140 ft. For irrigated acreage, 1956-57, see well N7-116.
N7-93	J. L. Spear	A. E. Petty	1918	350	5	--	--	--	N	24	--	--	--	Cased to 40 ft. Not used for irrigation since 1931.
N7-94	Mary Whitherspoon	S. M. Owens	1916	608	12, 10	--	--	--	N	60	2	70	--	Cased to 100 ft.
N7-95	M. E. Cook	G. A. Petty	1915	232	10	1/69.5	Jan. 6, 1930	C,W	N	--	--	--	--	Observation well.
N7-96	Central Securities Co.	W. D. Morrison	1930	272	10	65	May 1930	C,W	N	--	--	--	--	Cased to 65 ft. 2/
N7-97	T. M. Leavers	--	--	200	--	82.0 82.2	Sept. 14, 1948 Aug. 10, 1949	C,W	D	--	0	0	--	
N7-98	Spears Dairy	-- Petty	--	400	10, 6	--	--	C,W	D,S	--	0	--	--	Cased to 50 ft.
*N7-99	Mobley Bros.	Frank Kellogg	1925	410	12	--	--	C,W	N	75	57	0	--	Yield 75 gpm.
N7-100	Siberio Zavata	S. M. Owens	1920	455	10, 7	--	--	C,H	D	20	0	15	--	Cased to 40 ft. Formerly used for irrigation.
N7-101	do	--	1930	388	--	--	--	--	N	--	--	--	--	
N7-102	Gus Jeffrey	S. M. Owens	1925	325	--	--	--	--	N	32	0	35	--	Clogged.
N7-103	Wm. D. Cater	--	1917	315	10	--	--	T,E, 20	Irr	15	0	0	26	Cased to 140 ft.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-104	I. Martinez	Elmo Owens	--	230	8	--	--	C,G,	D,S	5	5	--	--	
N7-105	T. J. Haire	G. A. Petty	1920	347	10,	--	--	T,E,	N	45	28	19	--	Cased to 140 ft. Formerly used for irrigation.
N7-106	R. P. Childress	G. A. Petty	1917	315	10,	--	--	T,E	D	14	0	20	0	Cased to 140 ft.
*N7-107	Texas Calgary Refinery	do	1920	321	7	--	--	T,E	Ind	8	6	13.5	--	Cased to 60 ft.
N7-108	Jess Scoggins	-- Simpson	1922	450	10,	--	--	T,Ng	D,S, Irr	32	47	60	10	Casing: 120 ft of 10-in., 100 ft of 8-in. Well cleaned out in 1938.
*N7-109	R. T. Mooreman	Sam Howard	1912	315	10	15	Feb. 19, 1913	T,E,	D,S, Irr	37	26	22	8	Cased to 48 ft. Temp. 80°F.
*N7-110	O. M. Hughes	do	1912	312	8	--	--	T,G	Irr	10	.5	0	20	Cased to 60 ft. Temp. 78°F.
N7-111	T. J. Haire	Frank Kellogg	1925	250	8,	57.8	Jan. 30, 1939	T,E,	D,S, Irr	14.5	17	17	25	Cased to 100 ft. Used for citrus irrigation.
N7-112	N. Castelllos	A. E. Eardley	1910	--	10,	70.4	May 3, 1930	--	N	40	64.75	49	--	Temp. 78°F.
N7-113	O. N. Hatcliff	John Eardley	1911	301	8	4	Feb. 19, 1913	T,E,	D,S	--	--	12.5	--	Cased to 60 ft. Temp. 78°F.
N7-114	H. Petry	S. M. Owens	1916	316	12	--	--	T,E	D	23	10	--	--	Cased to 60 ft.
N7-115	-- Noble	G. A. Petty	1916	318	9,	--	--	T,E,	D,S	16	5.25	14	--	
N7-116	W. A. Stewart	-- Simpson	1916	325	16	--	--	T,Ng	Irr	90	80	0	80	Cased to 140 ft. Used for irrigation, 1956-57, in conjunction with well N7-92.
N7-118	C. Crouch	Frank Kellogg	1927	476	10,	--	--	C,E	D,S	4	4	--	--	Cased to 150 ft.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks	
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)		
N7-119	A. B. Shaw	Frank Kellogg	1928	380	--	--	--	C,G,	D,S,	20	5	10	0		
N7-120	do	W. D. Morrison	1927	252	10	--	--	7	Irr	--	--	--	--	Cased to 40 ft.	
N7-121	John Stahl	--	--	--	--	99.4	May 27, 1957	T,E,	D,S,	15	12	50	14	Yield 50 gpm.	
N7-122	Mrs. Ivy White	W. D. Morrison	1927	404	10	55.0	Feb. 2, 1928	7½	Irr	C,W	D,S	--	--	--	Cased to 20 ft.
N7-123	W. A. Hoose	do	1927	344	10, 8	--	--	C,W,E	D,S	5	--	--	--	Cased to 40 ft. Reported no irrigation for several years prior to 1937-38.	
N7-124	A. Tocquigny	--	1918	349	12	--	--	C,W	D,S	5	6	14	--	Cased to 20 ft.	
*N7-125	A. J. Knaggs	--	1910	133	6	1/56.4	Nov. 22, 1929	--	N	--	--	--	--	Unused in 1957. Temp. 76°F.	
*N7-126	City of Carrizo Springs	W. D. Morrison	1928	322	12	82.4	Mar. 12, 1930	T,E,	P	--	--	--	--	Cased to 123 ft. Supplies city of Carrizo Springs.	
N7-127	Mrs. F. F. Kellogg	G. A. Petty	1912	450	6	1/58.1	Oct. 8, 1929	30	N	--	--	--	--	Cased to 150 ft.	
N7-128	H. O. Case	do	1919	325	10, 6	73.5	do	T,E	D,S	32	32	15	--		
*N7-129	T. J. Haire	do	1924	246	8	--	--	5	T,E,	D,S	66	--	--	--	Not used for irrigation since 1935.
N7-130	Mrs. F. F. Kellogg	--	--	28	54	18.5	May 5, 1930	--	N	--	--	--	--	Dug. Water formerly used locally for medicinal purposes.	
N7-131	Mrs. W. C. Butler	--	1890	--	6	--	--	C,W	D,S	--	--	--	--		
N7-132	Mrs. Gus Jeffery	G. A. Petty	1922	300	6	86.1	Apr. 11, 1930	--	N	--	--	--	--		

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-133	Whorton Johnson	S. M. Owens	1921	318	6	--	--	T,E	D,S, Irr	30	15	0	--	Cased to 60 ft. For irrigated acreage, 1956-57, see well N7-236.
N7-134	A. M. Thorpe	do	1904	360	14, 5	--	--	--	N	5	--	--	--	Not used for irrigation since 1935. Casing clogged. Temp. 80°F.
N7-135	J. L. Bell	J. L. Bell	1921	106	6	1/25.0	Jan. 7, 1930	--	N	--	--	--	--	
N7-136	Wm. Haun	--	1929	112	8	41.2	Feb. 5, 1930	--	N	--	--	--	--	Cased to 15 ft.
*N7-137	G. A. Hero Estate	--	--	31	36	26.5	Apr. 28, 1930	C,W	D,S	--	--	--	--	
N7-138	A. Dickens Estate	--	--	--	6	1/49.8	Oct. 24, 1929	--	N	--	--	--	--	
N7-139	W. L. Measles	--	1926	140	10, 8	--	--	T,E	N	10	0	0	0	No irrigation for several years prior to 1937-38.
N7-140	M. Nistle	Luke Simpson	1924	480	10	--	--	--	N	33	0	0	--	Cased to 150 ft. Well replaced by well N7-147 in 1932. Temp. 79°F.
N7-141	Joe Gardner	Elmo Owens	--	235	10	--	--	T,E, 20	D,S, Irr	45	54	40	40	Cased to 80 ft.
*N7-142	A. Vasquez	do	1932	420	6	--	--	T,Ng	D,S, Irr	--	12.25	34	15	
N7-143	Locadio Zarate	do	1932	485	10	179.3	Mar. 12, 1957	--	N	--	13	58	--	Cased to 20 ft.
N7-144	Joe Gardner	do	1938	300	8	--	--	T,E, 30	D,S	--	--	--	--	Cased to 200 ft.
*N7-145	Mobley Bros.	--	1917	340	10	--	--	C,W	D,S	--	--	--	--	
*N7-146	-- Wilson	Frank Kellogg	1934	300	6	--	--	C,W	D	--	2	0	--	Cased to 20 ft.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*N7-147	W. A. Robertson	Elmo Owens	1932	180	12	--	--	T,E, 15	D,S, Irr	--	9	20	7.5	Cased to 140 ft.
N7-148	J. S. Myers	Petty Bros.	1937	397	8	86.8	Dec. 7, 1937	T,E	D	--	0	--	--	Cased to 230 ft. ^{2/}
*N7-149	W. L. Measles	L. D. Stripling	1934	280	8	--	--	T,E	D,S	--	18	0	--	Cased to 140 ft. Supplies water for swimming pool.
N7-150	M. E. Cook	--	--	565	10	--	--	--	N	--	--	--	--	Not used for irrigation since 1932.
N7-151	E. Goodwin	Petty Bros.	1936	355	8	--	--	--	N	--	--	--	--	Cased to 200 ft. Not used for irrigation since 1936. ^{2/}
*N7-152	-- Tisdell	Sam Howard	1913	375	10	--	--	C,W	D	--	6	0	--	Cased to 88 ft. with galvanized tin.
*N7-153	-- Risinger	Petty Bros.	1936	215	8	85 123.3	Feb. 1936 May 28, 1957	T,E, 2	D,S	--	4	2	--	Cased to 51 ft. ^{2/}
*N7-154	-- Finehoute	E. B. Owens	1900	333	5	--	--	C,W	D,S	--	--	--	--	Cased to 60 ft. Reported flowing 100 gpm when drilled.
N7-155	J. H. McGee	--	--	--	10	--	--	C,W	D,S	--	--	--	--	Reported no irrigation for several years prior to 1937-38.
N7-156	Ben Fleming	R. B. Owens	--	275	--	--	--	--	N	--	0	--	--	^{2/}
N7-157	H. Rouw	I. C. Cribbs	1944	565	12, 10	105	Dec. 22, 1944	T,Ng, 67	Irr	--	--	--	--	Cased to 428 ft. For irrigated acreage, 1956-57, see well N7-239. Carroll Burns farm. ^{2/}
N7-158	do	Ed Owens	1947	600	12	--	--	T,Ng, 67	Irr	--	--	--	--	Cased to 400 ft. For irrigated acreage, 1956-57, see well N7-239.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-159	H. Row	I. C. Cribbs	1944	600	12	110	Aug. 21, 1948	T,Ng, 67	Irr	--	--	590	--	Cased to bottom. For irrigated acreage, 1956-57, see well N7-239. 2/
N7-160	do	do	1945	708	12, 10	85	Jan. 25, 1945	T,Ng, 67	Irr	--	--	--	--	Cased to 510 ft. For irrigated acreage, 1956-57, see well N7-239. 2/
N7-161	do	do	1947	610	11	150	July 17, 1947	T,Ng, 67	Irr	--	--	--	--	Cased to 407 ft. For irrigated acreage, 1956-57, see well N7-239. 2/
N7-162	do	do	1945	570	12, 10	90	May 17, 1945	T,Ng, 67	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well N7-239. 2/
N7-163	J. B. Catlett	O. F. Webb	1947	490	12	1/109	June 1947	T,G	Irr	--	--	--	--	Cased to 200 ft. For irrigated acreage, 1956-57, see well N7-207. Observation well.
N7-164	H. Row	I. C. Cribbs	1945	395	10, 8	90	Feb. 15, 1945	T,Ng	Irr	--	--	--	--	Cased to bottom. For irrigated acreage, 1956-57, see well N7-239. Waco farm. 2/
N7-165	do	do	1944	427	10, 8	110	Nov. 1944	T,Ng	Irr	--	--	245	--	Cased to bottom. For irrigated acreage, 1956-57, see well N7-239. 2/
N7-166	do	do	1946	350	10	87	May 10, 1946	T,Ng	Irr	--	--	--	--	Cased to bottom. For irrigated acreage, 1956-57, see well N7-239. 2/
N7-167	do	do	1943	471	10, 8	116.5	Mar. 3, 1948	T,Ng	Irr	--	--	--	--	Cased to 459 ft. For irrigated acreage, 1956-57, see well N7-239. 2/

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-168	H. Rouw	I. C. Cribbs	1941	478	10, 8	116.9	Mar. 3, 1948	T,Ng	Irr	--	--	220	--	For irrigated acreage, 1956-57, see well N7-239. 2/
*N7-169	do	do	1945	456	10, 8	95	Oct. 1945	T,Ng	Irr	--	--	--	--	Cased to bottom. For irrigated acreage, 1956-57, see well N7-239. Youngblood farm. 2/
N7-170	do	do	1942	460	10, 8	--	--	T,Ng	Irr	--	--	175	--	Do.
N7-171	Carroll Burns	Elmo Owens	1947	600	12	--	--	T,Ng	Irr	--	--	100	100	Cased to 280 ft.
N7-172	J. G. Jouran	do	1948	330	12	--	--	T,Ng	Irr	--	--	0	100	Cased to 146 ft. Offset well N7-99.
*N7-173	City of Carrizo Springs	do	1944	338	16	117	Nov. 2, 1948	T,E, 30	P	--	--	--	--	Cased to 122 ft. 2/
N7-174	L. H. Upchurch	--	--	--	--	--	--	C,E, 1	Irr	--	--	6	6	
N7-175	Quality Vegetable Growers	R. B. Owens	1948	250	12	95	Oct. 8, 1948	T,E	Irr	--	--	--	--	Cased to 34 ft. For irrigated acreage, 1956-57, see well N7-215. 2/
N7-176	do	do	1948	254	12	95	Oct. 23, 1949	T,E	Irr	--	--	0	--	Cased to 32 ft. For irrigated acreage, 1956-57, see well N7-215.
N7-177	-- Bennett	do	1948	400	12	105	June 15, 1948	T,E	Irr	--	--	0	160	Cased to 56 ft. Used for irrigation, 1956-57, in conjunction with well N7-26. 2/
N7-180	Joe Gardner	Luke Simpson	1924	440	10, 8	--	--	C,W	D,S	30	--	--	--	Cased to 100 ft. Not used for irrigation since 1936.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*N7-181	L. L. Arche	Elmo Owens	1928	256	10	--	--	T,E, 15	D,S, Irr	9	5	30	25	Cased to 93 ft.
*N7-182	Joe Gardner	do	--	--	--	--	--	C,W	S	--	--	--	--	
*N7-183	do	do	1947	--	--	--	--	C,W	S	--	--	--	--	
*N7-184	Ben Patterson	-- Petty	--	220	6	109.6	Dec. 11, 1956	C,W	S	--	--	--	--	
N7-185	-- Sutton	--	--	208	8	78.9	do	C,W	S	--	--	--	--	
N7-186	do	Sutton Drilling Co.	--	200	4	70.2	do	--	N	--	--	--	--	Cased to 90 ft. Oil test, converted to water well.
N7-187	do	do	--	--	8	100.1	Dec. 11, 1956	--	N	--	--	--	--	Oil test; converted to water well.
N7-188	W. S. Myers Estate	Holland Oil Co.	--	3,004	--	--	--	--	--	--	--	--	--	Oil test.
N7-189	do	--	1950	209	6	85.5	Dec. 4, 1956	--	N	--	--	--	--	Cased to 20 ft. Drilled to supply water for oil test. Observation well.
N7-190	Jay S. Myers	--	1916	--	10	146.1	Dec. 19, 1956	--	N	--	--	--	--	Drilled for irrigation use.
N7-191	Quality Vegetable Growers	--	--	--	--	--	--	T,E, 40	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well N7-215.
N7-192	Jay S. Myers	--	--	--	--	149.9 150.6 154.0	Dec. 5, 1956 Jan. 8, 1957 June 4, 1957	C,W	S	--	--	--	--	
N7-193	W. S. Myers Estate	--	--	--	8	143.1 144.1	Dec. 4, 1956 June 6, 1957	C,W	S	--	--	--	--	Observation well.
N7-194	Bill Ansmus	--	1948?	--	--	148.7	Oct. 6, 1954	T,E, 20	Irr	--	--	--	0	Do.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-195	Bill Ausmus	--	1948?	229	12	1/139.4	Oct. 6, 1954	T,E	Irr	--	--	--	0	Do.
N7-196	Mrs. -- Wetzig	--	1950	--	--	--	--	T,E, 30	Irr	--	--	--	0	
N7-197	Pat Vivian	--	1927	240	--	1/147.7	Dec. 11, 1956	--	N	--	--	--	--	Observation well.
N7-198	Quality Vegetable Growers	R. B. Owens	1950	325	10	108 184.4	Mar. 1950 Feb. 7, 1957	T,E	Irr	--	--	--	--	Cased to 56 ft. For irrigated acreage, 1956-57, see well N7-215. 2/
*N7-199	W. G. Orr	--	Old	--	--	--	--	T,G	Irr	--	--	--	200	Used for irrigation, 1956-57, in conjunction with well N7-11.
N7-200	Earl McClendon	O. F. Webb	1957	450	12	--	--	T,E	Irr	--	--	--	--	
N7-201	K. Kothman	do	1957	450	12	--	--	T,E	Irr	--	--	--	--	
N7-202	do	do	1957	450	12	--	--	T,E	Irr	--	--	--	--	
N7-203	J. B. & L. S. Catlett	R. B. Owens	1955	496	12	230	June 4, 1955	T,E	Irr	--	--	--	--	Cased to 349 ft. Replaces well N7-30. For irrigated acreage, 1956-57, see well N7-207. 2/
N7-204	do	do	1950?	562	12	--	--	T,E	Irr	--	--	--	--	Cased to 348 ft. For irrigated acreage, 1956-57, see well N7-207. 2/
N7-205	J. B. Catlett	do	1950?	455	12	--	--	T,E	Irr	--	--	--	--	Cased to 326 ft. For irrigated acreage, 1956-57, see well N7-207. 2/
*N7-206	Quality Vegetable Growers	--	--	--	--	--	--	T,E	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well N7-215.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-207	J. B. Catlett	R. B. Owens	1950	345	12	--	--	T,E	Irr	--	--	--	600	Cased to 285 ft. Used for irrigation, 1956-57, in conjunction with wells N7-27, 29, 163, 203, 204, and 205. 2/
N7-208	do	do	1950?	400	12, 8	--	--	--	N	--	--	--	--	Cased to 260 ft. 2/
N7-209	Quality Vegetable Growers	do	1950	290	10	110	Apr. 12, 1950	T,E	Irr	--	--	--	--	Cased to 125 ft. For irrigated acreage, 1956-57, see well N7-215. 2/
N7-210	do	do	1950	300	10	110	Apr. 1, 1950	T,E	Irr	--	--	--	--	Cased to 119 ft. For irrigated acreage, 1956-57, see well N7-215. 2/
N7-211	do	do	1950	408	10, 8	112	May 9, 1950	T,E	Irr	--	--	--	--	Cased to 130 ft. Original depth 300 ft; deepened to 408 ft in 1956. For irrigated acreage, 1956-57, see well N7-215. 2/
N7-212	do	do	1950	363	10	106	Apr. 24, 1950	T,E	Irr	--	--	--	--	Cased to 38 ft. Original depth 260 ft; deepened to 363 ft in 1956. For irrigated acreage, 1956-57, see well N7-215. 2/
N7-213	do	do	1950	300	10	--	--	T,E, 30	Irr	--	--	--	--	Cased to 251 ft. For irrigated acreage, 1956-57, see well N7-215. 2/

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-214	Quality Vegetable Growers	R. B. Owens	1953	250	10	140 178.1	Aug. 1953 Feb. 19, 1957	T,E	Irr	--	--	--	--	Cased to 60 ft. For irrigated acreage, 1956-57, see well N7-215. 2/
N7-215	do	do	1950	275	10	108	Apr. 28, 1950	T,E	Irr	--	--	--	1,000	Cased to 21 ft. Used for irrigation, 1956-57, in conjunction with wells N7-28, 175, 176, 191, 198, 206, 209, 210, 211, 212, 213, and 214. 2/
N7-216	-- Webb	--	--	--	--	--	--	C,W	D,S	--	--	--	--	
N7-217	do	--	--	--	--	81.6	Feb. 11, 1957	C,W	S	--	--	--	--	
N7-218	E. L. Wetzig	--	Old	--	--	--	--	C,W	N	--	--	--	--	Well 25 ft north drilled to Indio formation, and salt water from the Indio probably has contaminated this well.
N7-219	-- Gardner	--	--	175	--	81.4	Jan. 9, 1957	C,W	S	--	--	--	--	
N7-220	S. E. Bartlett	--	Old	--	--	138.6	June 18, 1957	C,W	S	--	--	--	--	
N7-221	do	--	Old	--	--	138.1	do	C,W	D,S	--	--	--	--	
N7-222	Leroy Williams	--	1948	--	--	--	--	C,W	D,S	--	--	--	--	
N7-223	Alfonso Sanchez	--	1951	317	10	1/116.1	Oct. 5, 1954	C,W	S	--	--	--	--	Cased to bottom. Observation well.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water Level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-224	A. Votaw	Antler Drilling Co. Inc.	--	2,983	--	--	--	--	--	--	--	--	--	Oil test.
N7-225	City of Carrizo Springs	R. B. Owens	1956	460	--	125	Dec. 1956	T,E, 20	P	--	--	--	--	Reported yield, 160 gpm with 147 ft of draw-down. 2/
N7-226	W. Allee	--	1948	--	--	--	--	T,E	D	--	--	--	--	
*N7-227	Bill Moats	R. B. Owens	1952	254	6	112	July 10, 1952	C,W	S	--	--	--	--	Cased to 80 ft. 2/
N7-228	City of Carrizo Springs	O. F. Webb	1957	312	--	135.0	Apr. 3, 1957	T,E	P	--	--	--	--	
N7-229	do	R. B. Owens	1956	355	--	178	Dec. 1956	T,E	P	--	--	--	--	2/
N7-230	Nick Castellanos	do	1952	302	10	142	Nov. 2, 1952	T,Ng	Irr, D	--	--	--	20	Cased to 57 ft. 2/
N7-231	City of Carrizo Springs	do	1956	355	--	--	--	--	N	--	--	--	--	Reported small yield of water. 2/
N7-232	do	do	1956	444	--	153	Dec. 1956	T,E, 50	P	--	--	--	--	Reported yield 230 gpm with 98 ft of draw-down. 2/
N7-233	J. G. Jouran	--	Old	355	--	147.6	June 18, 1957	C,W	S	--	--	--	--	Cleaned out July 23, 1951.
N7-234	-- Landsford	--	Old	--	--	--	--	--	N	--	--	--	--	Cleaned out recently.
N7-235	Whorton Johnson	O. F. Webb	1954	385	10	--	--	T,-	N	--	--	--	--	Cased to 33 ft.
*N7-236	do	do	1951	409	10	162.1	June 19, 1957	T,G	Irr	--	--	--	20	Cased to 70 ft. Used for irrigation, 1956-57, in conjunction with well N7-133.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-237	Edward Gardner	R. B. Owens	1955	720	8	--	--	T,E	Irr, D	--	--	--	100	Cased to 328 ft. 2/
N7-238	H. Rouw	--	--	--	--	240.8	June 24, 1957	T,Ng	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well N7-239.
N7-239	do	I. Cribbs	1951	790	10, 8	225	Aug. 7, 1951	T,Ng	Irr	--	--	--	6.32	Casing: 344 ft of 10-in. and 457 ft of 8-in. Used for irrigation, 1956-57, in conjunction with wells N7-58, 157 through 162, 164 through 170, and 238. 2/
N7-240	C. Zedler	Howeth & Mason	--	4,222	--	--	--	--	--	--	--	--	--	Oil test.
N7-241	Dave Colbert	Elmo Owens	1943	--	--	--	--	C,E, 1	D	--	--	--	--	Water reported salty.
N7-242	E. R. Byrd	I. Cribbs	1950	1,043	10	--	--	T,E, 50	Irr	--	--	--	40	Cased to 750 ft. 2/
*N7-243	Paul Little	McKinley Drilling Co.	1954	1,064	12, 8	330.4	Feb. 20, 1957	T,Ng	Irr	--	--	--	180	Casing: 600 ft of 12-in., 464 ft of 8-in. Obser- vation well.
*N7-244	-- Templar	do	1954	1,028	12, 8	--	--	T,E	Irr	--	--	--	240	Casing: 600 ft of 12-in., 428 ft of 8-in.
N7-245	Wm. Haun	--	--	--	--	1764.6	Sept. 14, 1948	C,W	S	--	--	--	--	Observation well.
N7-246	W. S. Myers Estate	R. B. Owens	1957	272	7, 6	134	July 10, 1957 Oct. 1957	C,W	S	--	--	--	--	Cased to bottom. 2/

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N7-247	R. B. Owens	R. B. Owens	1953	275	8	1/126.2	Oct. 5, 1954	--	N	--	--	--	--	Observation well.
						133.4	July 9, 1957							
N8-12	R. A. Stevenson	Cribbs & Davidson	--	1,020	10, 6	--	--	T,E, 25	N	60	0	100	0	Cased to 760 ft.
N8-14	Sid Parkinson	A. B. Webb	1912	1,137	6, 4	1/61.0	Nov. 14, 1929	J,E	S	--	--	--	--	Cased to bottom.
N8-15	N. C. Guenther	--	1925	1,175	15, 8, 6	67.5	do	--	N	160	--	--	--	Not used for irrigation since 1933. Temp. 92°F.
N8-16	E. P. Curtis	S. M. Owens	1912	1,116	8, 6, 4	78.0	do	--	N	190	--	--	--	Cased to bottom. Not used for irrigation since 1933. Water reported salty.
*N8-17	G. C. Crenshaw	I. I. Dingman	1927	--	12, 8	--	--	T,Ng	Irr	300	0	0	220	
*N8-18	J. E. Baylor	Tom Leary	1913	1,210	8, 6	298.6	Oct. 13, 1954	C,W	S	16	0	--	--	
						404.0	Sept. 19, 1956							
						316.9	June 7, 1957							
N8-19	E. L. Omera	--	--	--	--	1/91.3	Apr. 7, 1939	--	N	--	--	0	0	Drilled for irrigation; never used. Observation well.
N8-20	A. N. Box	Floyd Trimm	1927	1,250	12	--	--	--	N	200	0	150	--	Casing obstructed. Temp. 91°F.
N8-21	E. L. Omera	A. Coe	1912	1,070	8	--	--	--	N	45	--	--	--	Not used for irrigation since 1934. Water reported salty. Temp. 91°F.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N8-22	Morris & Pannill	S. M. Owens	1910	1,100	8, 6, 5	--	--	--	N	90	105	0	--	
N8-23	Fred Foster	A. B. Webb	1910	1,115	8	1/69.6	Nov. 15, 1929	--	N	--	--	--	--	Cased to 1,100 ft. Reported flowing 50 gpm in 1913.
*N8-24	H. P. Bailey	--	--	66	8	20.2	Nov. 18, 1929	--	N	--	--	--	--	Temp. 79°F.
N8-25	Hiram G. Hines	S. M. Owens	1907	654	4	42.0	do	--	N	--	--	--	--	Reported flowing 100 gpm in 1907, and 75 gpm in 1913. Water reported salty.
N8-26	Geo. Rheia	--	1908	818	8	1/62.4	do	T,E	D,S, Irr	--	22	2	70	
N8-27	J. S. Ward	A. B. Webb	1909	818	6	61.5	do	T,E, 10	D	--	0	0	0	Cased to 650 ft. Reported flowing 50 gpm in 1913. Temp. 86°F.
N8-28	do	-- Petty	1928	1,008	--	1/64.8 139.4	Nov. 18, 1929 Aug. 16, 1950	C,W	N	--	--	--	--	
*N8-29	O. E. Bookout	Cribbs & Davidson	1928	1,005	12½, 8, 6	1/65.7 53.1	Nov. 15, 1929 Aug. 16, 1939	T,G	D,S, Irr	340	526	154	--	Casing: 210 ft of 12½-in. 532 ft of 8-in. and 288 ft of 6 5/8-in. perforated. Water reported slightly salty. For irrigated acreage, 1956-57, see well N8-142. Temp. 88°F.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*NB-30	I. J. New	Frank Kellogg	1930	435	8	64.0	May 15, 1930	C,E, $\frac{1}{4}$	N	--	--	--	--	
NB-31	M. M. Adams	S. M. Owens	1925	387	10	--	--	--	N	38	13	0	--	Cased to 150 ft. Offset.
NB-32	C. A. Williams	-- Owens	1910	--	6	--	--	T,E	D,S	14	--	--	--	Not used for irrigation since 1934.
NB-34	J. L. Mogford	Frank Kellogg	1928	460	10	144.0	July 28, 1957	--	N	55	20	0	--	Gypsum.
NB-35	J. G. Benavides	A. E. Eardley	1916	504	10	--	--	C,E, 2	D,S	44	3	0	--	
NB-36	S. Statler	G. A. Petty	1920	440	10, 8	--	--	--	N	49	--	--	--	
NB-37	-- Evans	A. B. Webb	1903	510	7	--	--	C,E, 1	D,S	18	15	40	--	Cased to 50 ft.
NB-38	F. Riha	Elmo Owens	1928	454	10	--	--	T,E, 20	N	30	--	--	--	Cased to 150 ft. Not used for irrigation since 1936.
NB-39	C. Umphries	A. E. Eardley	1910	459	6	--	--	T,E, 2	D	--	8	0	--	Cased to 228 ft. Reported flowing 100 gpm when drilled, and 80 gpm in 1931.
NB-40	E. W. Gordon	--	1910	380	5 $\frac{1}{2}$	1/48.5 108.5	Dec. 16, 1929 Sept. 14, 1948	T,E, 1	D,S	27	0	--	--	
NB-41	-- Cox	--	1910	--	6	--	--	T,E, 15	D,S, Irr	--	--	--	3	
*NB-42	A. N. Box	K. B. Ayres	1907	425	5-7/8	43.0	May 7, 1930	--	N	45	0	--	--	Cased to 55 ft. Replaced by well NB-43. Used for citrus irrigation.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
NB-43	A. N. Box	Frank Kellogg	1930	522	10	41.6	May 7, 1930	T,E, 30	D,S	--	10	10	--	Cased to 176 ft. Used for irrigation, 1956-57, in conjunction with well NB-42. 2/
NB-44	I. W. House	-- Moebrig	1903	550	7	--	--	C,W	S	22	0	0	--	Cased to 330 ft. Reported flowing 150 gpm in 1907. Reported water salty.
NB-45	George Morris	A. E. Eardley	1904	445	6	1/86.2	Oct. 9, 1929	T,E	D,S	0	0	--	--	Cased to 80 ft.
NB-46	G. W. Baylor	--	--	590	6	--	--	C,W	N	2	--	--	--	Not used for irrigation since 1934. Temp. 79°F.
*NB-47	Dimmit County Airport	--	--	500	6	1/95.7	Oct. 12, 1929	C,W	S	--	--	--	--	Observation well.
NB-48	E. A. Roberts	W. D. Morrison	1927	545	10, 8	--	--	T,E, 25	D,S, Irr	16	12	0	60	
NB-49	C. W. Miller	do	--	475	6	90.9	Oct. 12, 1929	C,W	N	--	--	--	--	
NB-50	I. O. Kotchman	--	1904	570	6	1/73.8	Oct. 14, 1929	--	N	--	--	--	--	Reported flowing 400 gpm when drilled.
NB-51	-- McRoury	Frank Kellogg	1927	707	8	--	--	C,W	D,S	40	--	--	--	Cased to bottom. Not used for irrigation since 1935.
NB-52	-- Jouran	A. B. Webb	1924	565	8, 4	--	--	T,E, 1½	D,S	20	2	--	--	
NB-53	W. A. Farley	Geo. Petty	1928	645	8, 6	--	--	--	N	20	7	--	--	Cased to 430 ft.
NB-54	Mrs. Beatrice McClean	A. B. Webb	1925	640	8	--	--	T,E, 25	N	47	0	40	--	Cased to 250 ft.
NB-55	Urban Farrow	Geo. Petty	1929	733	8, 6	--	--	--	N	7	20	40	--	Cased to 500 ft. Casing obstructed.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*N8-56	-- Ruffman	A. B. Webb	1925	700?	10	1/58.9	Oct. 14, 1929	--	N	0	0	125	--	Water reported salty.
N8-57	Arthur Ivey	--	1924	835	8	257.3	June 18, 1957	T,E, 60	Irr	--	--	--	50	
N8-58	G. Denton Estate	--	--	834	8	1/45.7	Oct. 16, 1929	--	N	--	--	--	--	Oil test; plugged back and formerly used for irrigation.
N8-59	Mrs. Jennie Campbell	--	--	35	8	234.7	June 10, 1957	--	N	--	--	--	--	Probably yields water by seepage from Nueces River.
N8-60	W. S. Swart	--	--	--	6	38.9	Oct. 18, 1929	C,W	S	--	--	--	--	
*N8-61	F. A. Combs	A. B. Webb	1912	1,170	10, 8	--	--	T,E, 60	D,S,	80	26	--	0	Cased to bottom.
N8-62	G. Pickett	Tom Wren	1912	1,200	6	--	--	T,G, 25	N	15	35	35	0	
N8-63	A. Armstrong	do	1912	1,190	6	--	--	T,G	D,S, Irr	40	42.5	0	30	Temp. 93°F.
*N8-64	City of Brundage	-- Wheeler	1909	1,170	6, 3	--	--	C,G, 15	P	--	--	--	--	Supplies city of Brundage. Water reported salty when first pumped after standing idle.
N8-65	A. A. Swindell	W. D. Morrison	1927	725	10, 8	--	--	C,W	D	85	28	--	--	
*N8-66	do	Elmo Owens	1930	408	12, 10	--	--	--	N	--	--	25	--	
*N8-67	S. P. Spalding	L. Simpson	1925	495	12, 8, 6	--	--	T,E, 20	D,S, Irr	109.5	30	100	80	Cased to 180 ft. Temp. 81°F.
N8-68	H. J. White-cotton	S. M. Owens	--	512	10	--	--	C,W	S	16	--	--	--	Reported no irrigation for several years prior to 1937-38.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N8-69	H. J. White-cotton	Geo. Petty	1928	680	10, 8, 6	76.7 118.0	Nov. 19, 1929 Feb. 21, 1957	--	N	17.5	11	0	--	Cased to 542 ft. Casing obstructed.
N8-70	do	--	1917	545	12, 10	1/56.5	Nov. 29, 1929	C,W	D,S	--	--	--	--	Cased to 12 ft.
N8-71	B. E. Pickett	-- Seward	1927	--	8	1/54.4 43.4	Nov. 29, 1929 Aug. 11, 1939	T,E, 20	D,S	0	40	115	--	
*N8-72	Jack Bowman	do	1928	866	10, 8	--	--	T,E, 75	D,S, Irr	139	64	0	--	Casing: 260 ft of 10-in.; 370 ft of 8-in. For irrigated acreage, 1956-57, see well N8-162.
N8-73	Mrs. Moody Beascon	C. W. Wheeler	--	--	6	1/29.5	Oct. 21, 1929	C,W	N	--	--	--	--	
N8-74	Nueces Land & Irrigation Co.	--	1908	960	8, 7	2	Jan. 1928	C,W	N	80	120	0	--	Casing: 660 ft of 8-in.; 200 ft of 7-in. perforated. Temp. 88°F.
*N8-75	Tommy Powers	-- Petty	1928	440	10	--	--	T,E, 25	D,S, Irr	166	126.5	--	--	Cased to 150 ft. For irrigated acreage, 1956-57, see well N8-76. Temp. 81°F.
N8-76	do	A. E. Eardley	1917	700	10	--	--	T,G, 25	D,S, Irr	--	--	--	250	Cased to 150 ft. Temp. 80°F. Used for irrigation, 1956-57, in conjunction with well N8-75.
N8-77	-- Ehlers	L. Simpson	1923	441	10	--	--	--	N	--	--	30	--	Cased to 150 ft.
N8-78	U. R. Brown	Frank Kellogg	1925	500	10	--	--	C,W	D,S	49	18	0	--	Cased to 150 ft.
N8-79	Mrs. A. F. Childress	W. D. Morrison	--	615	10	--	--	--	N	--	--	--	--	

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N8-80	Mrs. A. F. Childress	A. E. Eardley	1903	600	8	75.3	June 26, 1930	--	N	--	--	--	--	Reported flowing 200 gpm in 1903; no flow in 1913.
N8-81	Mrs. Cramer M. Bell	do	1900	590	6	--	--	--	N	--	--	--	--	Cased to 60 ft. Reported flowing 200 gpm in 1903; no flow in 1913.
*N8-82	R. N. Mitchell	A. B. Webb	1907	660	6	--	--	T,G	D,S	16	35	35	--	Cased to 240 ft. Reported flowing 500 gpm when drilled; no flow in 1913. Temp. 82°F.
N8-83	Jack Bowman	R. J. Bauereisen	--	--	--	--	--	T,E	D,S, Irr	100	201.5	150	--	For irrigated acreage, 1956-57, see well N8-162.
N8-86	W. E. Wroe	A. B. Webb	1910	660	8, 5	--	--	--	N	0	0	--	--	Cased to 48 ft. Reported flowing 700 gpm when drilled.
N8-87	do	--	1910	643	5	--	--	--	N	--	--	--	--	Cased to 48 ft.
N8-88	do	--	1920	660	12	--	--	--	N	361	--	0	--	Used in conjunction with wells 82-121, 129, and 130, in 1929-30.
*N8-89	Essar Ranch	-- McKinley	1947	1,010	12, 10	92	1947	T,G	Irr	--	--	432	--	Cased to 900 ft. For irrigated acreage, 1956-57, see well N8-152.
N8-91	Eardley Estate	W. W. Miller	1903	725	8	--	--	T,G	N	--	--	--	--	Cased to 350 ft. Reported flowing 450 gpm when drilled.
N8-92	E. Burton	--	Old	--	--	--	--	--	N	--	--	40	--	
N8-97	Jack Bowman	Layne-Texas Co.	--	897	--	--	--	T,-	Irr	350	1,035.5	100	--	For irrigated acreage, 1956-57, see well N8-162.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N8-98	Jack Bowman	--	--	--	8	30	Feb. 1928	--	N	180	--	--		Not used for irrigation since 1934.
N8-99	do	--	1906	852	6	30	Feb. 1928	C,W	N	--	--	--		Reported flowing 500 gpm in 1906.
*N8-100	do	R. J. Bauereisen	--	1,100	--	--	--	T,E, 75	Irr	350	0	0	--	For irrigated acreage, 1956-57, see well N8-162.
*N8-101	do	E. & F. Eckert	1927	1,135	10, 8	30 289.9 275.0	Jan. 1928 Apr. 8, 1957 May 3, 1957	T,E, 50	Irr	208	--	50	--	Cased to 960 ft. For irrigated acreage, 1956-57, see well N8-162. Observation well.
*N8-102	do	Layne-Texas Co.	--	1,224	15, 8			T,E, 75	Irr	--	--	100	--	Cased to bottom. For irrigated acreage, 1956-57, see well N8-162. 2/ For irrigated acreage, 1929-30, see well N8-97.
N8-103	do	E. & F. Eckert	1927	780	10, 8	1/40.3	Nov. 26, 1929	T,E, 25	D,S, Irr	160	--	30	--	For irrigated acreage, 1956-57, see well N8-162. Observation well.
*N8-104	Hiram G. Hines	G. A. Petty	1936	582	8	35.8	Dec. 4, 1937	T,G	D,S	--	--	35	--	Cased to 437 ft. 2/
N8-105	T. G. Patterson	Elmo Owens	1928	566	8	--	--	T,G	D,S	--	0	35	--	Cased to 515 ft.
*N8-106	R. Rodriguez	Petty Bros.	1936	450	8	57	Mar. 15, 1936	T,G, 10	Irr	--	21	--	20	Cased to 150 ft. 2/
N8-107	T. H. Thalman	--	--	--	--	314.8	Apr. 18, 1957	--	N	--	0	75	0	
*N8-108	F. Webb	Elmo Owens	1935	564	10, 8	38.8	July 15, 1939	--	N	--	13	0	--	Water reported salty. Well plugged.
N8-111	W. H. Gardner	-- Petty	--	--	--	--	--	T,E, 40	Irr	--	--	160	--	For irrigated acreage, 1956-57, see well S2-132.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N8-114	Jack Bowman	-- McKinley	1946	1,150	12	70.7	Jan. 22, 1948	T,E, 100	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well N8-162.
N8-115	Dimmit County	O. F. Webb	1948	510	8	130	Aug. 3, 1948	T,G	D	--	--	--	--	
N8-116	J. M. Saunders	do	1946	557	10	--	--	T,E, 30	N	--	--	47	0	Cased to 300 ft. Indio formation from 525 to 557 ft.
N8-117	Arthur Ivy	O. F. Webb	1947	805	10, 8	97	Dec. 1947	T,E	Irr	--	--	--	250	Cased to 800 ft. Supplements surface water.
N8-119	-- Bennis	--	Old	--	6	229.3 237.6 246.5	Oct. 12, 1954 Sept. 21, 1955 May 14, 1957	T,Ng	N	--	--	35	0	Water reported salty.
N8-121	A. M. Thorpe	Chas. Petrie	1905	500	18, 6	--	--	T,-	N	5.5	--	--	--	No casing. Not used for irrigation since 1935.
N8-124	-- Wagner	I. Gribbs	1947	1,145	12, 10, 8	110	Mar. 31, 1947	T,E	Irr	--	--	--	650	Casing: 373 ft of 12-in.; 540 ft of 10-in.; 259 ft of 8-in. 2/
N8-125	T. O. Box	I. K. Howeth	1955	3,662	--	--	--	--	--	--	--	--	--	Oil test.
*N8-126	E. L. Dismukes	McKinley Drilling Co.	1954	1,212	10, 8	--	--	T,G	Irr	--	--	--	100	Casing: 519 ft of 10-in.; 693 ft of 8-in.
N8-127	G. C. Crenshaw	Howeth & Mason	1956	4,600	--	--	--	--	--	--	--	--	--	Oil test.
N8-128	E. L. Dismukes	do	1955	3,580	--	--	--	--	--	--	--	--	--	Do.
*N8-129	Fred Miller	McKinley Drilling Co.	1952	1,300	12, 8	--	--	T,E, 125	Irr	--	--	--	--	Casing 450 ft of 12-in.; 650 ft of 8-in. For irrigated acreage, 1956-57, see well N8-131.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N8-130	Ray McGlothlin	McKinley Drilling Co.	1954	1,300	12	345.5	Apr. 4, 1957	T,G	N	--	--	--	--	Cased to bottom.
*N8-131	Fred Miller	do	1952	1,300	12, 10	--	--	T,G	Irr	--	--	--	300	Casing: 800 ft of 12-in.; 300 ft of 10-in. Used for irrigation, 1956-57, in conjunction with well N8-129.
*N8-132	Jack Bowman	--	1952?	--	--	--	--	T,E, 100	Irr	--	--	--	200	
*N8-133	Essar Ranch	McKinley Drilling Co.	--	--	--	--	--	T,G	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well N8-152.
N8-134	do	do	--	--	--	358.0	Mar. 18, 1957	T,G	Irr	--	--	--	--	Do.
*N8-135	--	--	--	Spring	++	+	--	Flows	--	--	--	--	--	Spring flowing from alluvium.
N8-136	Adolph Fehlis	I. Gribbs	1953	900	10, 8	1/280	Dec. 1953	T,E	Irr	--	--	--	100	Cased to 660 ft. Observation well. 2/
N8-137	Bill Simpson	do	1955	1,107	12, 8	--	--	T,G	Irr	--	--	--	200	Casing: 566 ft of 12-in.; 520 ft of 8-in. 2/
N8-138	do	--	--	--	--	--	--	T,G	Irr, D	--	--	--	300	Water reported salty when pump first starts; clears up in 30 to 45 minutes.
*N8-139	O. E. Bookout	I. Gribbs	1954	960	12, 10	304	Nov. 5, 1954	T,G	Irr	--	--	--	--	Casing: 657 ft of 12 3/4 1/2 in.; 315 ft of 10-in. Estimated yield 1,000 gpm. For irrigated acreage, 1956-57, see well N8-142. 2/

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N8-140	Green Bookout	--	--	--	--	--	--	C,W	--	--	--	--	--	Yields small quantity of good water from alluvium.
*N8-141	O. E. Bookout	I. Cribbs	1955	780	12	--	--	T,G	Irr	--	--	--	--	Estimated yield 1,000 gpm. For irrigated acreage, 1956-57, see well N8-142.
N8-142	do	do	1954	937	--	362.8	Mar. 1, 1957	T,E, 100	Irr	--	--	--	1,200	Estimated yield 800 gpm. Used for irrigation, 1956-57, in conjunction with wells N8-29, 139, and 141. 2/
N8-143	J. S. Ward	McCabe, Turner & Pronto	1955	4,004	--	--	--	--	--	--	--	--	--	Oil test.
N8-144	Fred Pickett	O. F. Webb	1949	416	--	--	--	T,E, 15	Irr, D	--	--	--	10	Replaced well N8-108, which became salty. Water from this well salty when pump first starts, but becomes fresh in 5 to 10 minutes.
N8-145	W. C. Moats	Pronto Drilling Co. & W. H. McGarr	1955	3,367	--	--	--	--	--	--	--	--	--	Oil test.
N8-146	H. J. White-cotton	R. B. Owens	1952	764	10, 8	245	May 5, 1952	T,G	Irr	--	--	--	50	Casing: 354 ft of 10-in.; 260 ft of 8-in. 2/
N8-147	Urban Farrow	--	1950	721	10	--	--	--	N	--	--	--	--	Cased to 289 ft. Well bridged over. 2/
N8-148	J. T. Tumison	--	1950	--	--	--	--	T,G	D,S, Irr	--	--	--	15	

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N8-149	H. P. Hunnicutt	Pronto Drilling Co. & Foster Hinson	--	3,907	--	--	--	--	--	--	--	--	--	Oil test.
*N8-150	Essar Ranch	McKinley Drilling Co.	--	--	--	--	--	T,G	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well N8-152.
N8-151	Dee Davenport	Howeth, Mason, & Intex Oil Co.	1954	4,506	--	--	--	--	--	--	--	--	--	Oil test.
*N8-152	Essar Ranch	McKinley Drilling Co.	--	--	--	--	--	T,E, 125	D, Irr	--	--	--	1,000	Used for irrigation, 1956-57, in conjunction with wells N8-89, 133, 134 and 150.
N8-153	do	--	--	--	--	--	--	T,E, 15	S	--	--	--	--	Probably not a Carrizo sand well.
N8-154	Jack Bowman	--	--	--	--	--	--	T,E, 75	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well N8-162.
N8-155	Essar Ranch	--	--	--	--	--	--	T,G	S	--	--	--	--	
N8-156	Dee Davenport	Howeth & Mason	--	4,207	--	--	--	--	--	--	--	--	--	Oil test.
N8-157	Essar Ranch	--	--	--	--	--	--	T,G	S	--	--	--	--	
N8-158	Dee Davenport	Howeth, Mason & Intex Oil Co.	1952	4,139	--	--	--	--	--	--	--	--	--	Oil test.
N8-159	Wilson & Webster	Fith, M. E. Andrews Ltd., & Pronto Drilling Co.	--	4,104	--	--	--	--	--	--	--	--	--	Do.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N8-160	Jack Bowman	I. Cribbs	1954	960	12, 10	200	June 7, 1954	T,E, 100	Irr	--	--	--	--	Casing: 638 ft of 12-in.; 333 ft of 10-in. For irrigated acreage, 1956-57, see well N8-162. 2/
N8-161	do	do	1954	900	12, 10	--	--	T,E, 100	Irr	--	--	--	--	Casing: 664 ft of 12-in.; 240 ft of 10-in. For irrigated acreage, 1956-57, see well N8-162. 2/
N8-162	do	do	1956	836	12, 10	--	--	T,E, 125	Irr	--	--	--	2,800	Casing: 611 ft of 12 3/4-in.; 116 ft of 10-in. Used for irrigation, 1956-57, in conjunction with wells N8-72, 83, 97, 100, 101, 102, 103, 114, 154, 160, 161, N9-25, and 26. 2/ Plugged back to 725 ft.
N9-1	W. C. Coffey	Floyd Trimm	1926	1,400	10, 8	--	--	C,W	D,S	23	--	--	--	Cased to bottom. Reported no irrigation for several years prior to 1937-38.
*N9-3	Alton & Howard	--	1912	1,236	6, 5	26.1	Jan. 31, 1928	T,E, 15	D,S, Irr	66	93	150	--	Casing: 900 ft of 6-in.; 300 ft of 5-in. perforated. For irrigated acreage, 1956-57, see well N9-4. Temp. 95°F.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*N9-4	Clark & Howard	--	1920	--	--	33.7	Nov. 27, 1929	T,E, 30	Irr	80	38	80	160	Used for irrigation, 1956-57, in conjunction with well N9-3.
*N9-5	Geo. D. Price	Howeth & Stalter	1912	1,353	8, 7, 6	1/90.7 243	Nov. 29, 1929 Apr. 1, 1957	T,E, 40	D,S, Irr	130	138	60	56	Casing: 920 ft of 8-in.; 260 ft of 7-in.; 115 ft of 6-in. perforated.
*N9-6	O. H. Nance	Ed Homer	1912	1,448	8	24.7	Feb. 1, 1928	T,G	D,S, Irr	50	64	60	30	Cased to 1,306 ft. Temp. 98°F.
*N9-7	J. T. Kinnard	Patterson, Zarderson & Rodley	1911	1,600	8	268.6	Apr. 1, 1957	--	N	--	63	5	--	Temp. 96°F.
*N9-8	H. Brown	C. W. Wheeler	1909	1,412	8, 5	1/54.1 62.3	Nov. 30, 1929 July 25, 1945	--	N	30	24	0	--	Casing: 808 ft of 8-in.; 604 ft of 5-in., 200 ft perforated. Temp. 98°F.
N9-9	W. H. Zimmerman	Ed Homer	1914	1,147	8	32.5	Oct. 18, 1929	C,W	D,S	100	0	0	--	Cased to bottom. Reported static head was 18½ ft above ground in 1916.
N9-10	Commercial National Bank	--	--	1,470	8	--	--	--	N	--	--	--	--	Temp. 96°F.
N9-11	T. P. Bowles	Floyd Trimm	1928	1,553	10, 8, 6	26.1	Jan. 31, 1928	--	N	--	0	0	--	Casing: 220 ft of 10-in.; 312 ft of 6-in., perforated.
N9-12	Federal Land Bank	--	1911	1,469	8, 6	1/17.8	Oct. 18, 1929	--	N	--	--	80	--	Casing: 302 ft of 8-in.; 1,167 ft of 6-in. perforated. Observation well.
N9-13	do	W. E. Stalter	1912	1,580	8, 7, 6	--	--	--	N	--	19	0	--	Casing: 840 ft of 8-in.; 260 ft of 7-in. 480 ft of 6-in. perforated at intervals.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N9-14	B. F. Pickett	Cribbs & Davidson	1928	1,416	10, 8, 6	--	--	--	N	44	57.5	55	--	Casing: 406 ft of 10-in., 830 ft of 8-in., 218 ft of 6-in. perforated.
*N9-15	City of Big Wells	Geo. Crowell	1909	1,520	6, 3	--	--	--	N	--	--	--	--	Cased to bottom. Plugged and abandoned. Replaced by well N9-46.
N9-16	C. G. Boyd	R. E. Homer	1914	1,640	8, 7	1/74.0 92.9	Nov. 18, 1929 Jan. 16, 1948	T,E	D,S, Irr	100	230	--	10	Casing: 121 ft of 8-in., 1,259 ft of 7-in. Temp. 102°F.
N9-17	R. L. Jenkins	-- McCrary	1911	1,200	8, 6, 5	--	--	C,W	D,S	43	48	--	--	
N9-18	City of Brundage	A. E. Eardley	1908	1,137	8, 3	--	--	--	N	31	--	--	--	Cased to bottom. Not used for irrigation since 1934.
N9-19	M. McLean	Layne-Texas Co.	1909	1,224	10	30.6 43.6	Nov. 30, 1929 Jan. 22, 1948	C,W	S	--	--	--	--	
*N9-20	City of Big Wells	Cribbs & Davidson	1937	1,355	10, 8	--	--	T,E, 20	P	--	--	--	--	Cased to 400 ft. 2/
N9-21	Hancock Bros.	Littlejohn Drilling Co.	1911	1,365	8, 6	--	--	T,E, 50	D,S, Irr	80	131	125	100	Cased to bottom. Temp. 94°F.
N9-22	L. L. Allison	Geo. Leonard	1912	1,410	6, 5	--	--	J,E, 20	N	45	25	60	0	Casing: 1,022 ft of 6-in., 383 ft of 5-in., perforated.
N9-23	Jack Bowman	Littlejohn Drilling Co.	--	--	--	226.7	Mar. 19, 1957	--	N	60	45	--	--	
N9-24	do	Cribbs & Davidson	1927	1,305	12½, 10, 8	60.2	Nov. 29, 1929	--	N	--	0	200	--	Casing: 208 ft of 12½-in., 828 ft of 10-in., 275 ft of 8-in., perforated. 2/

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*N9-25	Jack Bowman	--	1920	1,300?	10, 8	1/17.7 198.5	Nov. 29, 1929 Feb. 8, 1957	T,E, 50	D,S, Irr	--	211	175	--	Reported flowing in 1925. For irrigated acreage, 1956-57, see well N8-162. Observation well.
*N9-26	do	--	--	--	20, 10	17.1 57.5	Nov. 29, 1929 Sept. 14, 1948	T,E, 50	D,S, Irr	55	19.5	0	--	For irrigated acreage, 1956-57, see well N8-162.
N9-27	Frank Shirley	C. W. Wheeler	1910	1,520	8, 6	230.6	May 7, 1957	T,E	Irr	102	0	30	55	
N9-28	J. Straltz	do	1910	1,394	6	--	--	--	N	48	45	0	--	
N9-29	do	G. W. Crowell	1909	1,240	6	--	--	C,E, 3/4	S	--	--	--	--	Temp. 95°F.
N9-30	H. A. Ross	W. E. Stalter	1912	1,226	8, 7, 6	--	--	T,E, 40	D,S	62	70	200	--	Cased to bottom.
N9-31	Knox Pittard	do	1911	1,408	8, 7, 6	--	--	T,E, 30	Irr	8	--	--	--	Casing: 868 ft of 8-in., 260 ft of 7½-in., and 300 ft of 6½-in., perforated. For irrigated acreage, 1956-57, see well N9-54.
N9-32	P. J. Lewis	do	--	1,428	8, 7, 6	1/22.8	Dec. 3, 1929	T,E, 25	N	--	455	455	0	Casing: 860 ft of 8-in., 400 ft of 7-in., and 158 ft of 6-in., perforated.
N9-33	do	C. W. Wheeler	1909	1,523	6, 5	1/16.0	Aug. 12, 1932	C,W	N	--	--	--	--	Casing: 806 ft of 6-in., 706 ft of 5-in., 450 ft perforated. 2/
N9-35	Ben Ivy	--	1914	1,447	12, 10	--	--	T,E, 50	Irr	--	18	100	100	Cased to bottom.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
N9-36	-- Frito Co.	--	--	--	6	8.8	Jan. 16, 1930	--	N	--	--	--		
*N9-37	do	--	--	1,500	6	--	--	--	N	20	0	300	--	No irrigation during 1937-38 season.
N9-38	G. Lubbock	C. W. Wheeler	1914	1,720	10	--	--	T,E, 30	D,S, Irr	90	0	20	50	No irrigation during 1937-38 season. Temp. 96°F.
N9-39	V. Murrell	W. M. Dodds	1912	1,529	8, 6	1/23.1	Jan. 16, 1930	T,G	D,S, Irr	50	37	92	40	Casing: 1,026 ft of 8-in., and 503 ft of 6-in., 420 ft perforated.
N9-40	Vernon Standifer	--	--	--	8	--	--	C,W	D,S	25	60.75	0	--	
N9-41	Jim Standifer	--	--	--	36	35.3	Dec. 3, 1929	--	N	--	--	--	--	
*N9-42	Wallace Rogers	--	--	120	6	--	--	C,W	S	--	--	--	--	Reported water highly mineralized. Temp. 80°F.
N9-43	do	--	--	1,760	8	1/27.0	Jan. 3, 1930	T,G, 20	N	--	59	0	0	Cased to bottom.
N9-44	Mortgage Land & Investment Co.	--	--	100	5	--	--	--	N	--	--	--	--	Not Carrizo sand.
*N9-45	Federal Land Bank	--	--	--	6	--	--	--	N	--	57	0	--	
N9-46	Ray McGlothlin	--	--	--	--	--	--	C,W	D,S	--	--	--	--	
N9-47	do	McKinley Drilling Co.	1954	1,333	12	336.2	Apr. 4, 1957	T,G	Irr	--	--	--	0	Cased to bottom. Not used for irrigation in 1957.
N9-48	do	do	1954	1,363	12	--	--	T,G	Irr	--	--	--	0	Do.
N9-49	do	do	1954	1,363	12	--	--	T,G	Irr	--	--	--	0	Do.
N9-50	-- Wilson	do	1957	1,213	7	--	--	--	D,S	--	--	--	--	Cased to bottom. Not equipped when scheduled in 1957.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*N9-51	--	--	--	--	--	--	--	C,W	S	--	--	--	--	Probably not a Carrizo sand well.
N9-52	--	--	--	--	--	--	--	C,W	S	--	--	--	--	Do.
*N9-53	Jack Bowman	Deep Rock Drilling Co.	1952	8,517	10	+ 21	Aug. 13, 1957	Flows	N	--	--	--	--	Cased to 1,800 ft. Very salty water coming from Indio formation. Flows 50 gpm, shut-in pressure. Drilled for oil test. Temp. 107°F.
N9-54	Knox Pittard	McKinley Drilling Co.	1951	2,065	12, 10	--	--	T,E, 100	D, Irr	--	--	--	200	Casing: 815 ft of 12-in., 1,150 ft of 10-in. Used for irrigation, 1956-57, in conjunction with well N9-31.
N9-55	Lynn Porter	do	1954	1,573	12, 8	--	--	T,E, 100	Irr	--	--	--	--	Casing: 563 ft of 12-in., 1,010 ft of 8-in. For irrigated acreage, 1956-57, see well N9-56.
N9-56	do	do	1952	1,570	12, 8	--	--	T,E, 75	Irr	--	--	--	500	Casing: 400 ft of 12-in., 1,170 ft of 8-in. Used for irrigation, 1956-57, in conjunction with well N9-55.
N9-57	C. E. Dulan	-- Martin	1954	1,300	10	--	--	T,E	D,S, Irr	--	--	--	150	
N9-58	R. L. Bach	Howeth & Mason	--	4,876	--	--	--	--	--	--	--	--	--	Oil test.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
07-1	G. W. Hatch	Trinity Drilling Co.	1928	2,200	12, 6	172	Mar. 15, 1928	--	N	200	0	0	--	
07-2	Y. C. Strait	Bob Roberts	1929	1,800	12	1/158.1	Aug. 19, 1952	C,E	N	--	--	--	--	Observation well.
*07-3	G. W. Hatch	do	1929	1,800	12	1/96.1	July 10, 1957 Nov. 18, 1929	C,W	D,S	--	--	--	--	Do.
07-4	do	do	1929	1,400	12, 8	--	--	--	N	--	--	--	--	
07-5	F. V. Standifer	Bob Hall	--	110	5	61.3	Oct. 22, 1929	C,W	D,S	--	--	--	--	
*07-6	Jim Standifer	do	--	140	5	29.5	do	C,W	S	--	--	--	--	
07-7	do	do	--	160	5	58.5	do	C,W	S	--	--	--	--	
07-8	W. Rogers	Floyd Trimm	1910	1,800	10	41.0	Jan. 4, 1930	C,W	D,S	--	--	--	--	Temp. 99°F.
07-9	D. Vesper	Jack Ward	1909	1,800	6, 5	--	--	C,W	D,S	--	--	--	--	
07-10	O. C. Rogers	Cockrell & Continental Oil Co.	--	6,183	--	--	--	--	--	--	--	--	--	Oil test.
07-11	Anna & R. B. Vesper	Adams & Haggarty	1954	5,203	--	--	--	--	--	--	--	--	--	Do.
07-12	Y. C. Strait	Kirkwood & Morgan	--	5,138	--	--	--	--	--	--	--	--	--	Do.
07-13	Odus Waldrum	Amerada Petroleum Corp.	1955	8,836	--	--	--	--	--	--	--	--	--	Do.
R3-1	John Bonham	--	--	--	--	--	--	C,W	D,S	--	--	--	--	
R3-2	Hal A. Hamilton	--	--	--	6	--	--	C,W	S	--	--	--	--	

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
R3-3	Hal A. Hamilton	--	--	--	6	--	--	C,W	S	--	--	--	--	
R3-4	do	--	--	--	6	--	--	C,W	S	--	--	--	--	
R3-5	do	--	--	--	6	--	--	C,W	D,S	--	--	--	--	
*R3-6	W. C. Ammann	-- Owens	1930	475	6	--	--	C,W	D,S	--	--	--	--	Sands reported from 210 to 220 ft, and 230 to 240 ft. Temp. 81°F.
R3-7	--	-- Howard	--	600	6	--	--	--	N	--	--	--	--	
R3-8	Hal A. Hamilton	--	--	--	6	--	--	C,W	S	--	--	--	--	
*R3-9	do	--	--	50	6	42.6	Feb. 10, 1930	C,W	S	--	--	--	--	
R3-10	do	-- Owens	1929	--	10	105.3	do	C,W	S	--	--	--	--	
R3-12	--	--	--	--	--	187.5	July 30, 1957	C,W	S	--	--	--	--	
S1-1	S. E. McKnight	--	1915	250	10	1/100.6	Jan. 9, 1930	C,W	D,S	--	--	--	--	Observation well.
S1-2	do	--	1930	253	10	1/67.0	May 13, 1930	C,W	S	--	--	--	--	Cased to 15 ft. Observation well.
S1-3	N. Stein	Charley L. Lindenborn	1928	320	10	--	--	T,E	D,S, Irr	57	22	33	20	
S1-4	A. Hansen	Frank Kellogg	1927	462	10	90.8	May 6, 1957	T,E, 15 1 1/2	D,S, Irr	--	27	--	20	
S1-5	Etta Finhaute	Elmo Owens	1930	250	12, 8	--	--	C,E, 1 1/2	D	0	2.5	0	--	Cased to 12 ft.
S1-6	Cruz Pena	S. M. Owens	1916	235	10, 6	--	--	T,E	D	6	5	0	--	Cased to 100 ft.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
Sl-7	E. B. Cartwright	Charley L. Lindenborn	1928	325	12	--	--	T,E	D,S, Irr	9	6	7	5	
Sl-8	Mrs. Chas. Bradshaw	do	1927	312	10	--	--	C,W	S	14	--	--	--	Reported no irrigation for several years prior to 1937-38.
Sl-9	Mrs. F. K. Davis	Elmo Owens	--	210	10	--	--	T,E, 15	D,S, Irr	0	6.5	--	--	Cased to 20 ft. For irrigated acreage, 1956-57, see well Sl-10.
Sl-10	C. Groseclose	W. D. Morrison	1929	250	10, 8	--	--	T,E, 10	D,S, Irr	10	11.5	30	25	Cased to 30 ft. Used for irrigation, 1956-57, in conjunction with well Sl-9.
*Sl-11	R. A. Manter	Charley L. Lindenborn	1928	150	15, 12	1/44.7	Jan. 7, 1930	C,W	D,S	--	--	--	--	Cased to 6 ft.
Sl-14	J. C. Johnson	--	1930	240	10	1/56.4	Mar. 4, 1930	--	N	0	0	0	--	Cased to 20 ft. Not used since 1948. Observation well.
Sl-15	H. Brauer	W. D. Morrison	1930	270	10	1/52.2	Apr. 1, 1930	C,W	S	0	0	0	--	Cased to 20 ft. Observation well. Temp. 79°F.
Sl-16	C. W. Gilfillan & Son	--	1929	295	10	1/54.7	Mar. 1, 1930	--	N	10	45	45	--	Cased to 20 ft. Observation well. Temp. 79°F.
Sl-17	J. C. Johnson	Frank Kellogg	--	200	10	38.8 57.0	Nov. 14, 1929 Dec. 13, 1956	C,W, J,E	D,S	--	--	--	--	
*Sl-18	E. G. Castellaw	W. D. Morrison	1930	320	10	1/106.7	Apr. 5, 1939	--	N	0	0	0	--	Cased to 30 ft. Temp. 79°F. 2/
Sl-19	Erskine Rhodes	Frank Kellogg	1925	360	10, 8	88.0	Mar. 7, 1930	T,E	D,S	15	12	--	--	Cased to 90 ft.
Sl-20	G. E. Light	--	--	--	6	93.7	Mar. 8, 1930	--	N	--	--	--	--	
Sl-21	Lawrence Quinney	Frank Kellogg	--	410	--	--	--	T,E, 30	D,S, Irr	12	25	25	35	Reported drilled through three strata of sand.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
SI-24	Citra Land Farms	--	1930	--	10	51	Feb. 20, 1930	T,E, 30	Irr	--	--	25	--	For irrigated acreage, 1956-57, see well SI-75.
SI-25	Oak Grove Ranch	--	--	--	10	56.2	Nov. 12, 1929	T,E	D,S	--	--	--	--	
*SI-26	S. G. Taylor	A. E. Eardley	1902	350	6	50.4	Mar. 8, 1930	C,W	D,S	--	--	--	--	Cased to 100 ft.
SI-29	W. H. Burns	--	--	--	5	--	--	C,W	S	--	--	--	--	
SI-30	H. A. Fitzsimmons	--	--	280	8	1/197.2	Nov. 12, 1929	C,W	S	--	--	--	--	Observation well.
SI-31	Joe Gardner	A. E. Eardley	1903	640	8	20	1913	C,W	D,S	--	--	--	--	Cased to 100 ft.
*SI-32	W. J. Rott	--	1932	300	8	--	--	T,E, 20	D,S, Irr	--	72	34	25	
SI-33	M. H. Love	--	--	250	8	51	June 10, 1956	T,E, 10	Irr	--	8	8	10	
SI-34	A. D. Groseclose	--	1930	380	10	--	--	T,G	Irr	--	10	60	5	
SI-35	R. C. Salisbury	G. A. Petty	1932	323	10	--	--	--	N	--	--	--	--	Cased to 29 ft. Casing obstructed.
SI-36	Jeff Fowler	do	1932	326	10	116.3	Mar. 25, 1957	--	N	--	--	--	--	Cased to 39 ft.
*SI-37	O. P. Leonard	--	1930	--	8	--	--	--	N	--	--	--	--	
SI-38	John Stahl	Elmo Owens	1930	--	8	--	--	T,E, 20	D,S, Irr	--	37.75	40	55	
SI-39	D. O. Leftwich	do	1932	--	8	--	--	T,G, 30	D,S, Irr	--	18	32	50	
SI-40	H. Brauyer	do	1935	--	8	--	--	T,G, 30	D,S	--	24	40	--	
SI-41	Dopson & Lansford	O. F. Webb	1947	275	10	--	--	T,E, 15	Irr	--	--	20	20	Cased to 40 ft.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
SI-42	Dopson & Lansford	O. F. Webb	1946	330	10	--	--	C,W	--	--	--	40	--	Cased to 60 ft.
SI-43	N. B. Thompson	do	1944	360	10	90	1944	T,E, 20	Irr	--	--	40	50	Cased to 40 ft.
SI-44	W. A. Morris	do	1947	341	10	--	--	T,G	D,S, Irr	--	--	30	10	Cased to 60 ft.
SI-45	Walker Burns	-- Morrison	1922	355	10	--	--	T,E	Irr	--	--	80	--	Cased to 45 ft. For irrigated acreage, 1956-57, see well SI-48.
*SI-46	do	Elmo Owens	1944	355	10	--	--	T,G	Irr	--	--	150	--	Cased to 40 ft. For irrigated acreage, 1956-57, see S2-135. Probably screened partly in sand of Indio formation.
SI-47	do	-- Morrison	1922	404	10	--	--	T,G	N	--	--	150	0	Cased to 40 ft.
SI-48	do	do	1922	355	10	--	--	T,E, 40	Irr	--	--	100	500	Cased to 40 ft. Used for irrigation, 1956-57, in conjunction with wells SI-45 and 52.
SI-49	do	do	1922	355	10	171.5	Mar. 27, 1957	--	N	--	--	--	--	Cased to 40 ft. Used very little in 1947-48.
SI-50	H. Rouw	I. C. Cribbs	1944	670	10, 8	--	--	T,E, 40	Irr	--	--	--	--	Cased to bottom. For irrigated acreage, 1956-57, see well S2-135. 2/
*SI-51	Williams Produce Co.	O. F. Webb	1946	675	10	--	--	T,G, 70	N	--	--	110	0	Cased to 270 ft.
SI-52	Walker Burns	R. B. Owens	1948	665	10	--	--	T,G	Irr	--	--	40	--	Cased to 60 ft. For irrigated acreage, 1956-57, see well SI-48.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
SI-53	Carl Johnson	-- Owens	1930	253	6	--	--	C,W	S	--	--	--	--	
SI-54	Mogford & Kimble	Humble Oil & Refining Co.	1946	2,994	10	--	--	--	--	--	--	--	--	Oil test.
*SI-55	W. H. Burns	R. B. Owens	1954	470	12	178.0	June 20, 1957	T,E, 40	Irr	--	--	--	--	Cased to 33 ft. Yields 550 gpm. For irrigated acreage, 1956-57, see SI-57. 2/
SI-56	-- Pittman	do	1957	556	10	171	Aug. 8, 1957	--	Irr	--	--	--	0	Cased to 385 ft. 2/
*SI-57	W. H. Burns	do	1954	467	12	161	Aug. 4, 1954	T,E, 75	Irr	--	--	--	120	Cased to 35 ft. Yields 450 gpm. Used for irrigation, 1956-57, in conjunction with well SI-55. 2/
SI-58	do	do	1957	550	12	203	May 29, 1957	T,E	Irr	--	--	--	--	Cased to 20 ft. 2/
SI-59	Leroy Jones	do	1952	300	6	207.3	Dec. 13, 1956	C,W	S	--	--	--	--	Cased to 29 ft. Observation well. 2/
SI-60	W. H. Burns	do	1949	327	8, 6	140	Dec. 21, 1949	C,W	S	--	--	--	--	Cased to 9 ft. 2/
SI-61	-- Pittman	--	Old	--	--	--	--	C,W	N	--	--	--	--	
SI-62	do	R. B. Owens	1957	430	12	158.1	May 7, 1957	T,E	Irr	--	--	--	0	Cased to 41 ft. 2/
SI-63	do	do	1957	500	12	142	May 15, 1957	T,E	Irr	--	--	--	0	Cased to 36 ft. 2/
*SI-64	R. G. Slocum	do	1955	352	12	--	--	T,E, 30	Irr	--	--	--	60	Cased to 21 ft. 2/
SI-65	Bill Johnson	--	Old	--	6	120.3	June 10, 1957	C,W	S	--	--	--	--	

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S1-66	Damon White	R. B. Owens	1956	229	8	125.1	May 5, 1957	--	N	--	--	--	--	Cased to 20 ft. 2/
S1-67	do	--	--	150	--	132.4	May 7, 1957	C,W	S	--	--	--	--	
S1-68	Bill Johnson	Elmo Owens	1949?	--	--	1/48.1	Sept. 11, 1951	C,W	S	--	--	--	--	Observation well.
S1-69	-- Bradshaw	--	1939	--	--	--	--	C,W	D	--	--	--	--	
S1-70	-- Davis	--	--	--	--	--	--	C,W	S	--	--	--	--	
S1-71	Bill Johnson	--	--	--	--	120.8	Dec. 14, 1956	C,W	S	--	--	--	--	Observation well.
S1-72	Strauss & Ewing	R. B. Owens	1948?	315	12	--	--	T,E	Irr	--	--	--	0	Cased to 22 ft. 2/
S1-73	Citra Land Farms	--	1950?	--	--	--	--	T,E, 30	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well S1-75.
S1-74	do	--	1950?	--	--	--	--	T,E, 30	Irr	--	--	--	--	Do.
*S1-75	do	--	1950?	--	--	--	--	T,E, 30	Irr	--	--	--	200	Used for irrigation, 1956-57, in conjunction with wells S1-24, 73, and 74.
S1-76	Oak Grove Ranch	R. B. Owens	1949?	452	12, 10	--	--	T,E, 5	D,S	--	--	--	--	Cased to 278 ft. 2/
S1-77	Walker Burns	do	1948	213	6	72	Mar. 13, 1948	C,W	S	--	--	--	--	Cased to 20 ft. 2/
S1-78	Oak Grove Ranch	do	1948?	--	12	1/112.7	Dec. 13, 1956	--	N	--	--	--	--	Observation well.
S1-79	Leroy Jones	W. J. Steeger	1956	654	--	--	--	--	--	--	--	--	--	Oil test. 2/
S1-80	Fred & Walker Burns	R. B. Owens	1951	654	6	132	Aug. 29, 1951	C,W	S	--	--	--	--	Cased to 355 ft.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S1-81	E. G. Castellaw	--	Old	250	--	124.3	May 21, 1957	C,W	D,S	--	--	--	--	2/
S1-82	do	R. B. Owens	1948	250	6	99	Aug. 19, 1948	C,W	S	--	--	--	--	Cased to 23 ft.
S1-83	J. D. Powell	--	1944	--	--	79.6	May 7, 1957	C,W	S	--	--	--	--	
S1-84	do	--	1937?	--	--	64.4	do	C,W	S	--	--	--	--	
*S2-1	F. Guerrero	--	1925	510	8, 6	--	--	T,E	D,S, Irr	24	15	30	60	Cased to 300 ft.
*S2-2	J. C. Celkers	-- Burkett	1926	600	--	--	--	T,E, 50 Irr	D,S, Irr	325	49	--	--	For irrigated acreage, 1956-57, see well S2-132.
*S2-3	do	do	1926	600	--	--	--	T,E, 30 Irr	D,S, Irr	--	25	306	--	For irrigated acreage, 1956-57, see well S1-132. Temp. 83°.
*S2-4	W. E. Munson	Cribbs & Davidson	1927	694	10	100	Feb. 20, 1927	T,E, 50 Irr	Irr	100	202.25	95	--	For irrigated acreage, 1956-57, see well S2-132. Observation well. Temp. 83°F. 2/
*S2-5	do	--	--	634	10	--	--	C,W	N	--	--	--	--	
S2-6	W. E. Wroe	A. E. Eardley	1903	638	6	--	--	--	N	--	--	--	--	Cased to 100 ft. Reported flowing 100 gpm in 1903; none in 1913. Bridged at 33 ft in 1938.
S2-7	N. Borden	L. Simpson	1926	720	10, 6	293.5	Apr. 12, 1957	--	N	65	113.5	0	--	Cased to 500 ft. Temp. 85°F.
*S2-8	Tommy Powers	W. W. Miller	1918	670	10	297.1	Mar. 20, 1957	T,E	D,S	266	43	43	--	Cased to 320 ft. Temp. 83°F.
S2-9	do	A. B. Webb	--	670	8	--	--	--	N	--	0	0	--	Cased to 320 ft. Cleaned out recently.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*S2-10	Fisher & Webb	W. W. Miller	1926	670	10	--	--	T,E, 60	Irr	--	0	0	--	Cased to 265 ft. For irrigated acreage, 1956-57, see well S2-11.
*S2-11	do	do	1903	640	10	--	--	T,E, 50	Irr	--	0	45	170	Cased to 100 ft. Used for irrigation, 1956-57, in conjunction with well S2-10.
S2-12	Eagle Nest Farms	--	1900	601	12	--	--	T,Ng	Irr	--	262	0	--	For irrigated acreage, 1956-57, see well S2-13. Water reported salty. Temp. 84°F.
*S2-13	do	--	1915	601	12	--	--	T,Ng	Irr	10	0	0	480	Used for irrigation, 1956-57, in conjunction with well S2-14. Temp. 83°F.
S2-15	Francis Giller	--	1913	700	8	--	--	C,W	N	45	105	75	--	Cased to 300 ft. Water seeping in well above static level.
S2-16	W. S. Minus	Luke Simpson	1910	723	8, 6	--	--	--	N	--	--	--	--	Cased to 153 ft.
S2-17	Francis Giller	do	1910	700	6	--	--	--	N	50	0	0	--	Cased to 350 ft.
*S2-18	Sam Rayburn	Elmo Owens	1930	670	10, 8	--	--	T,E	D,S, Irr	--	25	40	70	Cased to 518 ft. Temp. 83°F.
S2-19	Alamo Lumber Co.	A. B. Webb	1903	600	5	--	--	--	N	--	--	--	--	Cased to 215 ft. Casing obstructed.
*S2-20	-- Reynolds	do	1903	418	6	--	--	C,W	S	--	--	--	--	Cased to 200 ft.
S2-21	Joe White	A. E. Eardley	1904	500	8	--	--	C,W	N	8	--	--	--	Cased to 80 ft. Reported no irrigation for several years prior to 1937-38.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S2-22	John Mogford	--	1915	740	12, 8, 5	--	--	--	N	100	118	0	--	Casing: 200 ft of 12-in.; 400 ft of 8-in.; and 140 ft of 5-in., perforated.
S2-23	A. J. Votaw	--	1916	600	6	--	--	--	N	20	0	40	--	Temp. 83°F.
*S2-24	Mrs. Geo. Gay	W. W. Miller	1928	667	12, 10	1/115.9	Nov. 15, 1929	T,E	D,S, Irr	92	105.5	--	170	Cased to 290 ft. Observation well. Temp. 83°F.
*S2-25	Victor Martinez	Luke Simpson	1927	677	10	--	--	T,E, 40	D,S, Irr	40	60	0	10	Cased to 420 ft.
S2-27	Mrs. J. A. McDonald	W. W. Miller	--	1,000	8	1/75.2	Nov. 26, 1929	C,W	D,S	--	--	--	--	Completed before 1910. Observation well.
S2-28	F. T. Fuller	Luke Simpson	1924	820	6, 4	--	--	C,W	N	--	--	--	--	Cased to bottom.
*S2-29	H. Row	-- Petty	1928	680	10, 8	1/87.8 98.7	Oct. 22, 1929 Aug. 12, 1943	T,E, 60	Irr	56	0	0	--	Original depth 380 ft; deepened to 680 ft. For irrigated acreage, 1956-57, see well S2-135.
S2-30	J. N. Lockley	Frank Kellogg	1925	650	10	--	--	T,E, 2	D,S	55	93.5	70	--	Cased to 250 ft.
S2-31	Wm. Verner	--	1927	625	6	230	May 12, 1957	--	N	30	24	24	--	Cased to 375 ft.
*S2-32	Cochran & Cochran	L. Simpson	1927	693	10	245.5	do	T,E, 20	D,S, Irr	83	57	57	18	Cased to 377 ft. Used for irrigation, 1956-57, in conjunction with well S2-34.
S2-33	Kimble Land & Cattle Co.	--	--	--	6	--	--	--	N	--	--	--	--	Cased to 400 ft.
*S2-34	H. Petry	A. E. Eardley	--	1,000	--	--	--	T,G	D,S, Irr	70	44	30	--	Completed before 1910. For irrigated acreage, 1956-57, see well S2-32.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S2-35	-- Farrow	L. Simpson	--	600	--	230.5	May 12, 1957	--	N	70	0	60	0	
S2-36	-- Wiatriech	do	--	675	6, 4	--	--	--	N	69	30	0	--	Cased to 450 ft. Completed before 1915. Casing obstructed. Abandoned.
S2-37	Jack Votaw	--	--	--	6	--	--	T,G	D,S, Irr	--	23.75	24	--	For irrigated acreage, 1956-57, see well S2-43.
S2-38	V. Martinez	--	--	--	6	--	--	T,G	D,S	--	9	20	--	Used very little.
S2-39	P. E. Johnson	--	--	500	5	--	--	C,W	N	40	4	0	--	Cased to bottom. Casing obstructed.
S2-40	do	J. C. Moore	1911	800	6, 4	229.5	May 12, 1957	--	N	--	--	--	--	
S2-42	J. Votaw	--	1928	--	10	56.7	Oct. 15, 1929	--	N	40	--	--	--	Reported no irrigation for several years prior to 1937-38.
*S2-43	do	M.L.V. Smith	1929	700	10	--	--	T,E, 50	S, Irr	--	--	100	150	Cased to 300 ft. Used for irrigation, 1956-57, in conjunction with well S2-37.
S2-44	J. C. Mims	W. D. Morrison	1929	600	10	217.3	May 17, 1957	--	N	20	0	0	--	Cased to 300 ft. Water seeping in well above static water level. Temp. 81°F.
S2-45	C. M. Oliver	--	1912	650	6	--	--	--	N	--	--	--	--	Reported flowed until 1917. Casing obstructed.
*S2-46	Silva & Rowden	W. W. Miller	1922	--	12	180	May 1929	T,E, 75	Irr	259.5	18.26	0	--	Cased to 350 ft. For irrigated acreage, 1956-57, see well S2-47.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*S2-47	Silva & Rowdon	C. Davenport	1922	803	12	--	--	T,E, 75	Irr	--	--	--	200	Cased to 350 ft. Well shot with nitro-glycerine, reported capacity increased from 200 to 900 gpm. Used for irrigation, 1956-57, in conjunction with well S2-46.
S2-48	O. Granberry	L. Simpson	1926	601	10, 6	227.3	May 5, 1957	T,E, 20	Irr	64	5.5	10	5	Cased to 350 ft.
S2-49	C. H. Risley	N. Simpson	1909	666	6	--	--	C,W 20	D,S	8	24.5	0	--	Cased to 400 ft.
S2-50	do	J. C. Moore	1909	860	6	212.5	May 20, 1957	--	N	--	--	--	--	Cased to 460 ft.
S2-51	Mrs. R. D. Campbell	N. Simpson	1909	643	6, 4	--	--	C,W	D,S	21	--	--	--	Cased to 373 ft. Reported no irrigation for several years prior to 1937-38. Water reported salty.
S2-52	do	do	1909	650	6, 4	--	--	--	N	--	--	--	--	Cased to 373 ft. Casing obstructed.
S2-53	Huffman Bros.	W. W. Miller	1917	680	6	239.0	Mar. 27, 1957	T,G, 15	D,S, Irr	33	11	0	10	Cased to 400 ft. Reported small seep.
*S2-54	D. O. Leftwich	Cribbs & Davidson	1911	625	12	241.1	May 20, 1957	T,G	Irr	78	37	37	40	Cased to 320 ft.
*S2-56	P. D. Smith	C. Davenport	1922	499	10	--	--	T,E, 30	D,S	22	0	50	0	Cased to 350 ft. Reported in 1938, no irrigation since 1932. Seeps salt water.

* See footnotes at end of table.

Table 8.—Records of wells and springs in Dimmit County—Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S2-57	W. A. Williams	--	1911	691	6	215.4	May 24, 1957	C,W	D,S	--	--	--	--	Cased to 320 ft.
S2-58	Geo. Courtney	N. Simpson	1910	749	6	--	--	T,G	N	63	63	100	--	Cased to 310 ft. Reported flowing 125 gpm when drilled.
S2-59	O. Granberry	--	1923	537	10, 6	--	--	--	N	100	30	20	--	Cased to 350 ft.
S2-60	C. C. Caperton	N. Simpson	--	703	8	--	--	--	N	21	29.25	0	--	Completed before 1910.
S2-61	W. C. Campbell	L. Simpson	--	--	6	--	--	--	N	60	--	--	--	Reported in 1938, no irrigation since 1935.
*S2-62	City of Asherton	Layne-Texas Co.	1926	640	12, 8	52.5	June 19, 1927	T,E, 25	P	--	--	--	--	Cased to 352 ft. Supplies city of Asherton. Temp. 82°F.
S2-63	Alamo Lumber Co.	W. W. Miller	1907	600	6	--	--	--	N	--	--	--	--	Reported flowing 300 gpm in 1908. Casing obstructed.
S2-64	do	do	1914	740	15, 12	93.3	Oct. 15, 1929	--	N	125	121.5	--	--	Cased to 300 ft. Water seep above static water level. Temp. 84°F.
S2-65	Polo Vasquez	Geo. Crowell	1910	774	12, 9	--	--	--	N	110	0	--	--	Casing: 320 ft of 12-in.; 454 ft of 9-in., perforated.
S2-66	do	--	--	774	12, 10, 8, 6	--	--	--	N	0	0	80	--	Cased to 300 ft. Completed before 1905.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S2-67	Polo Vasquez	--	1921	740	6	--	--	--	N	--	17	0	--	Cased to 360 ft.
S2-68	J. G. Garcia	--	1910	600	6	272.4	Mar. 21, 1957	--	N	--	2.5	20	--	Observation well.
S2-69	E. T. Grisham	--	1917	586	6	--	--	--	N	--	16	0	--	Cased to 350 ft.
S2-70	Mrs. Maggie Tollet	--	--	--	6	67.9	Dec. 21, 1938	C,G	S	--	2	0	--	
S2-71	E. T. Grisham	--	1915	716	6	--	May 17, 1957	T,-	N	--	--	--	--	Cased to 300 ft.
S2-72	do	Geo. Crowell	1915	680	8	--	--	--	N	--	--	60	--	Cased to 300 ft. Casing obstructed.
S2-73	Mrs. W. R. Harris	Fred Poole	1917	730	6	--	--	--	N	--	2	0	--	Casing obstructed.
S2-74	C. M. Mathis	S. M. Owens	1917	736	8	--	--	--	N	8	--	--	--	Reported in 1938, no irrigation since 1933.
S2-75	Alamo Lumber Co.	--	--	--	6	--	--	C,W	N	--	--	--	--	
S2-76	O. K. Braune	G. A. Petty	1928	690	10, 8	--	--	C,G, 10	N	18	19.5	--	--	Casing: 240 ft of 10-in.; 160 ft of 8-in. Casing obstructed. Temp. 86°F.
S2-77	Gordon Smith	--	--	--	10	1/72.6	Dec. 14, 1929	--	N	20	--	--	--	No irrigation since 1932.
*S2-78	-- McClendon	N. Simpson	1911	1,000	12, 8	1/191.1	Dec. 7, 1929	--	N	60	--	--	--	Cased to 400 ft. No irrigation since 1933. Observation well. Temp. 88°F.
S2-79	Roger Brown	L. Simpson	1910	960	12, 6	--	--	--	N	20	--	--	--	Cased to 250 ft. No irrigation since spring of 1937.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S2-80	P. G. Scruggs	Cribbs & Davidson	1926	933	10	--	--	T,E, 100	D,S, Irr	100	60	60	180	Cased to 312 ft. Water salty when pumping first starts.
S2-81	A. K. Post	--	--	--	--	--	--	--	N	55	12	80	--	
S2-82	Strauss Grisham	Fred Poole	--	--	10	144.9	Dec. 20, 1938	T,E	D,S	113	82	0	0	Used very little in 1957. Temp. 89°F.
*S2-83	G. Grisham	Floyd Trimm	1926	1,100	10, 8, 6	--	--	T,E, 50	Irr	85	0	107	167	Casing: 165 ft of 10-in.; 400 ft of 8-in.; and 265 ft of 6-in., perforated. Temp. 88°F.
S2-84	C. M. Decker	W. W. Miller	1917	822	8, 7	--	--	C,W	N	5	--	--	--	Casing: 400 ft of 8-in.; 422 ft of 7-in., perforated. No irrigation since 1932.
S2-85	A. Hearne	Cribbs & Davidson	1928	985	10, 8	--	--	T,G	D,S	75	--	--	--	Casing: 302 ft of 10-in.; 440 ft of 8-in. No irrigation since 1932. Temp. 89°F.
*S2-86	D. J. Hill	Fred Poole	1928	1,021	10	1/121.7	Aug. 4, 1941	--	N	77	0	80	--	Cased to 727 ft. Temp. 91°F.
S2-87	Miller & Holsonback	--	1928	996	10, 8	--	--	C,W	S	80	--	--	--	Casing: 344 ft of 10-in., 368 ft of 8-in. No irrigation since 1933. Temp. 88°F.
S2-88	M. G. Howard	Fred Poole	1928	1,020	10	--	--	T,E, 40	N	145	70	0	--	Temp. 80°F.
S2-89	Joe Moss	Cribbs & Davidson	1926	1,016	10, 8	--	--	T,G, 60	N	90	73	30	--	Cased to 795 ft.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S2-91	L. Zanbrecher	--	--	1,385	10	1/153.4	Dec. 13, 1929	--	N	--	--	--	--	
S2-92	H. A. Dillon	Fred Poole	--	1,018	10,	--	--	C,W	N	100	0	20	--	Casing: 400 ft of 10-in.; 320 ft of 8-in.; 321 ft of 5-in., perforated.
S2-93	do	Floyd Trimm	1926	1,085	10	--	--	C,W	N	30	0	0	--	No irrigation since 1930.
S2-94	Catarina Farms	--	--	1,424	10	1/190.7	Dec. 10, 1929	C,W	N	--	--	--	--	2/
S2-95	Wm. Raver	Fred Poole	1928	1,141	8	--	--	C,W	N	31	0	--	--	Casing: 8-in. cemented at 872 ft. No irrigation since 1931.
*S2-96	L. Hester	--	--	1,081	--	--	--	T,E, 50	D,S, Irr	74.5	120	135	80	Temp. 90°F. 2/
S2-97	J. H. Long	--	1928	1,099	8	--	--	--	N	70	--	--	--	Cased to 809 ft. No irrigation since 1935.
S2-98	Catarina Farms	Fred Poole	1928	1,195	10	--	--	C,W	N	50	--	--	--	Cased to 871 ft. No irrigation since 1931.
S2-99	C. M. Kilgore	Floyd Trimm	1927	1,143	10, 6	--	--	C,W	S	43	--	--	--	Cased to 790 ft. No irrigation since 1935. Standby well for stock. Temp. 91°F.
S2-100	R. A. Smith	--	--	--	10	138.2	Nov. 20, 1929	--	N	45	--	--	--	No irrigation since 1934. Temp. 91°F.
S2-102	do	Floyd Trimm	1926	1,185	10, 8	1/110.8	Oct. 25, 1929	C,W	N	130	0	0	--	Water reported salty.
*S2-103	R. A. Flood	--	1932	512	8	80	1932	T,E, 20	D,S, Irr	--	34	30	25	Cased to 90 ft.
S2-104	M. Ramos	--	1928	350	8	--	--	C,G, 10	D,S	--	16	20	0	Cased to 200 ft.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S2-105	C. A. Johnson	--	1931	500	8	--	--	C,G, 6	N	--	10	0	0	Water seeps above static water level.
S2-106	Mrs. Felix Reynolds	--	1931	503	8	--	--	T,E	D,S	--	6	0	--	Water reported salty.
*S2-107	C. Jung	--	1931	728	10, 8	--	--	T,E	D,S	--	69	70	--	Casing: 305 ft of 10-in.; 123 ft of 8-in., set at 563 ft.
S2-108	L. F. Kleeman	--	--	--	--	--	--	--	N	--	15	0	--	Casing obstructed.
S2-109	-- Daegler	--	--	650	8, 5	--	--	T,G, 25	D,S, Irr	--	44	10	10	Casing: 400 ft of 8-in.; 250 ft of 5 in., perforated. Small salt water seep. Temp. 81°F.
*S2-110	E. F. Simpson	--	--	--	6	--	--	--	N	--	10	10	--	
*S2-111	J. H. Long	Floyd Trimm	1931	--	--	--	--	--	N	--	85	24	--	Orchard irrigation.
S2-112	D. O. Leftwich	--	--	--	--	--	--	T,G	N	--	19	0	--	
S2-113	H. Row	I. C. Cribbs	1944	900	10, 8	110	July 14, 1944	T,E, 40	N	--	--	--	0	Cased to 652 ft. 2/
S2-114	do	do	1944	660	10	140	Nov. 9, 1944	T,E, 50	N	--	--	--	0	Cased to bottom. 2/
S2-115	do	do	1945	506	10, 8	100	Mar. 14, 1945	T,E, 40	N	--	--	--	0	Do.
*S2-116	J. T. Stinnett	do	1943	572	10, 8	135	July 1948	T,E, 40	Irr	--	--	181	--	Cased to bottom. For irrigated acreage, 1956-57, see well S2-132. 2/
*S2-117	Leonard Arche, Jr.	I. C. Cribbs	1940	--	--	--	--	T,E	Irr	--	--	100	80	

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S2-118	-- Daegler	--	1945	--	10	--	--	T,G, 60	N	--	--	120	0	
S2-119	Jose Garza	--	--	--	--	--	--	T,E, 20	Irr	--	--	11	10	Water reported salty.
S2-120	Gene Grisham	O. F. Webb	1943	706	8, 6	70	1943	--	N	--	--	60	--	Cased to bottom. Casing obstructed.
S2-121	Charles Wilson	--	1927	650	8	--	--	T,E, 20	D,S, Irr	--	--	25	20	Cased to 350 ft. For irrigated acreage, 1929-30, see well N8-88.
S2-122	Eardley Estate	Miller Bros.	1910	663	6	--	--	C,W	D,S	--	--	0	--	Cased to 320 ft. Reported flowing 400 gpm when drilled. Temp. 82°F.
S2-123	do	--	1916	625	10	--	--	C,G	N	15	--	--	--	Cased to 400 ft. Reported no irrigation for several years prior to 1937-38. Water seep above static water level.
S2-124	do	--	1916	675	8	--	--	--	N	--	--	--	--	Cased to 400 ft. Reported no irrigation for several years prior to 1937-38.
S2-125	do	--	1920	670	10	--	--	--	N	55	--	--	--	Cased to 400 ft. Reported no irrigation for several years prior to 1937-38.
S2-126	do	--	--	--	6	--	--	--	N	--	--	--	--	Do.
S2-127	do	W. W. Miller	1916	673	10, 8, 7	--	--	--	N	--	--	--	--	Cased to 373 ft. Reported no irrigation for several years prior to 1937-38.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S2-128	Wm. Volbrecht	A. E. Eardley	1903	720	10	--	--	C,W	S	59	0	--	--	Cased to 50 ft. Reported flowing 1,200 gpm when drilled. Reported no irrigation for several years prior to 1937-38. 2/
*S2-129	W. E. Wroe	--	1921	660	15, 12	--	--	T,E, 60	Irr	--	--	17	80	Cased to 350 ft. Water seep above static water level. For irrigated acreage, 1929-30, see well N8-88.
S2-130	do	W. W. Miller	1926	660	12	--	--	T,E, 40	N	--	--	70	--	Cased to 320 ft. Observation well. For irrigated acreage, 1929-30, see well N8-88.
S2-131	J. Galan	O. F. Webb	1945	610	10	--	--	C,W	--	--	--	--	--	Cased to bottom.
S2-132	J. C. Oelkers	I. C. Cribbs	1941	565	10	--	--	T,E	Irr	--	--	179	320	Cased to bottom. Used for irrigation, 1956-57, in conjunction with wells S2-2, 3, 4, 116, and S8-111. 2/
*S2-133	E. D. Guerrero	Frank Kellogg	--	420	8	--	--	T,E, 30	D,S, Irr	29	0	--	80	
S2-134	J. W. Walthall	do	1924	452	10	--	--	T,E, 30	D,S, Irr	30	32	126	50	Cased to 150 ft. Temp. 80°F.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*S2-135	H. Row	S. M. Owens	--	--	--	--	--	T,E, 40	D,S, Irr	0	90	700	800	Used for irrigation, 1956-57, in conjunction with wells S1-46, 50, and S2-29.
S2-136	do	I. C. Cribbs	1944	665	10, 8	130	July 31, 1944	T,G	N	--	--	--	--	Cased to bottom. 2/
S2-137	do	do	1944	675	12, 8	199.5 184.9 176.6 184.2	Mar. 22, 1957 May 3, 1957 June 7, 1957 July 11, 1957	T,E, 40	N	--	--	--	--	Cased to bottom. Observation well. 2/
S2-138	S. G. Taylor	--	--	--	6	49.8	Mar. 8, 1930	--	N	--	--	--	0	
S2-139	H. Row	I. C. Cribbs	1942	624	10, 8	118	May 2, 1942	T,E, 40	N	--	--	--	--	Cased to 439 ft.
S2-140	Ethel Payne	The Texas Co.	1947	4,013	--	--	--	--	--	--	--	--	--	Oil test.
S2-141	Eagle Nest Ranch	R. B. Owens	1954	649	10	242	May 8, 1954	T,Ng	Irr	--	--	--	--	Cased to 413 ft. For irrigated acreage, 1956-57, see well S2-13. 2/
S2-142	Whorton Johnson	O. F. Webb	1951	715	10	--	--	T,G	N	--	--	--	0	Cased to 375 ft.
S2-143	Williams Produce Co.	--	--	--	10	--	--	T,E, 50	Irr	--	--	--	75	Replaces well S1-51.
S2-144	Ruth McLean Bowman	Sutton Drilling Co., & McCabe & Turner	1955	3,608	--	--	--	--	--	--	--	--	--	Oil test.
S2-145	Ollie Granberry	--	Old	--	--	--	--	C,W	N	--	--	--	--	Water reported salty.
S2-146	-- Batey	R. B. Owens	1952	510	7, 6	122	Aug. 5, 1952	C,W	D,S	--	--	--	--	Cased to 419 ft. 2/

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S2-147	J. R. Marmion	Howeth & Mason	--	5,015	--	--	--	--	--	--	--	--	--	Oil test.
S2-148	C. S. Alexander	--	Old	--	6	--	--	--	N	--	--	--	--	Cased to 246 ft. Water reported salty.
S2-149	do	O. F. Webb	1952	826	8, 6	--	--	T,G	D,S	--	--	--	--	Casing: 456 ft of 8-in.; 370 ft of 6-in.
S2-150	M. A. McClarer	Howeth & Mason	--	5,065	--	--	--	--	--	--	--	--	--	Oil test.
S2-151	Jack Votaw	--	Old	--	--	--	--	--	N	--	--	--	--	Casing obstructed.
*S3-1	Wm. O'Brien	A. H. Rife	1910	1,800	6, 5	--	--	--	N	0	48	20	--	Casing: 1,400 ft of 6-in.; 400 ft of 5-in. perforated. Flowing Jan. 4, 1930. Water reported salty. Reported temp. 104°F. when drilled.
S3-2	C. J. Ducos	Floyd Trimm	--	1,668	8	--	--	T,G	N	16	20	20	--	Flowing Jan. 31, 1930. Water reported salty.
S3-3	Weaver & Gary	do	1924	1,697	8, 6	--	--	T,G,	N	0	53	60	--	Cased to 1,400 ft. Flowing Jan. 4, 1930. Water reported salty.
*S3-4	-- Rasmussen, et al.	W. M. Doods	--	1,776	8, 7	--	--	T,G	D,S, Irr	0	50	75	--	Casing: 1,400 ft. of 8-in.; 376 ft of 7-in., perforated. Reported flowing 50 gpm Jan. 4, 1930. Used very little; water salty. Temp. 99°F., Sept. 1, 1928.
S3-5	R. E. Brooks	--	--	--	--	78	Jan. 1928	T,E, 2	S	60	--	--	--	Reported no irrigation for several years prior to 1937-38.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*S3-6	C. Ward	--	1927	--	--	78.3	Mar. 21, 1927	T,E	Irr	72	0	180	--	Water reported salty. For irrigated acreage, 1956-57, see well S3-31.
S3-7	Emerson, O'Banion & Rick	Floyd Trimm	1929	1,400	8	--	--	--	N	80	--	--	--	Casing cemented at 1,098 ft. No irrigation since 1935.
S3-8	Catarina Farms Co.	do	--	1,263	12	1/146.3	Nov. 19, 1929	C,W	D,S	160	--	--	--	No irrigation since 1932. Temp. 93°F.
S3-9	H. Nolt	F. Poole	1928	1,283	10	--	--	--	N	80	--	--	--	Casing cemented at 970 ft. No irrigation since 1935.
*S3-10	H. H. Coffield	--	1928	1,419	8	1/83.6	Dec. 17, 1929	T,E, 20	Irr	47	0	44	--	For irrigated acreage, 1956-57, see well S3-11. Temp. 96°F.
S3-11	do	Floyd Trimm	1924	1,470	8, 6	15	Jan. 1930	T,E, 60	Irr	28	0	120	235	Used for irrigation, 1956-57, in conjunction with well S3-10. Temp. 94°F.
S3-12	Catarina Farms Co.	--	--	--	--	--	--	C,W	S	138	--	--	--	No irrigation since 1933.
S3-13	D. O. Leftwich	Floyd Trimm	1926	1,315	10, 8	115	Oct. 1929	T,E, 50	D,S, Irr	100	152	25	50	Casing: 150 ft of 10-in.; 830 ft of 8-in. Temp. 95°F.
S3-14	Dillon Ranch	--	1928	1,226	10	--	--	C,W	S	65	--	--	--	Cased to 951 ft. No irrigation since 1932.
S3-15	B. Ewell	--	--	--	--	--	--	--	N	50	--	--	--	No irrigation since 1933.
S3-16	Catarina Farms Co.	--	--	--	10	1/139.6	Apr. 8, 1939	--	N	--	--	--	--	
S3-17	do	--	1928	1,339	10	--	--	C,W	D,S	20	35	0	--	Casing cemented at 1,021 ft.
S3-18	do	--	1928	1,335	--	71.0	Nov. 19, 1929	--	N	120	0	0	--	Cased to 985 ft. No irrigation since 1934. 2/

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S3-19	-- McArdle	--	1927	1,297	10, 8	--	--	T,G, 65	N	--	33.75	30	--	Casing: 525 ft of 10-in.; 483 ft of 8-in. Temp. 93°F.
S3-20	H. A. Dillon	Fred Poole	--	1,280	10, 8	104	July 17, 1929	C,W	N	65	--	--	--	Casing: 315 ft of 10-in.; 629 ft of 8-in., 315 ft perforated. Casing ob- structed. No irrigation since 1931.
S3-21	C. L. Howard	Floyd Trimm	--	1,574	--	15.0	July 5, 1930	T,G, 20	N	27	--	--	--	No irrigation since 1935.
*S3-22	B. L. Z. Water Co.	do	--	1,334	12, 10	102.6	Dec. 22, 1938	T,E, 50	P	--	75	86	--	Casing: 307 ft of 12-in.; 718 ft of 10-in. Sup- plies town of Catarina. Temp. 99°F. 2/
*S3-23	L. Vivian	--	--	--	--	164.5	July 19, 1957	T,E, 30	D,S	100	--	--	--	
S3-24	J. P. Giles	Floyd Trimm	1926	1,188	10, 8			--	N	75	7	0	--	
S3-25	R. E. Brooks	--	1928	--	10	127.5	Dec. 14, 1929	T,G, 30	D,S	120	85	120	--	Temp. 98½°F.
S3-26	J. T. Baber	-- Dodd	1912	1,700	8	--	--	Cf,O, 20	N	55	44	110	--	Water reported salty. Flowing on Jan. 3, 1930. 2/
S3-27	H. A. Dillon	The Texas Co.	1946	4,809	--	--	--	--	--	--	--	--	--	Oil test.
S3-28	D. W. Bouldin	Sun Oil Co.	--	4,935	--	--	--	--	--	--	--	--	--	Do.
*S3-29	Mrs. Dave W. Bouldin	McKinley Drill- ing Co.	1952	1,441	12, 10	--	--	T,E, 75	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well S3-31. Estimated yield 700 gpm.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S3-30	N. C. King	Spartan Drilling Co.	1952	4,716	--	--	--	--	--	--	--	--	--	Oil test.
*S3-31	A. Taylor	McKinley Drilling Co.	1953	1,237	12, 10	--	--	T, E, 100	Irr	--	--	--	450	Estimated yield 970 gpm. Used for irrigation, 1956-57, in conjunction with wells S3-6 and S3-29.
S3-32	Geo. Light, Jr.	Howeth & Mason	--	5,555	--	--	--	--	--	--	--	--	--	Oil test.
S3-33	S. L. Kone	S. L. Kone	1934	1,800	8	61.7	May 14, 1940	C, W	N	--	--	--	--	
S3-34	do	do	1934	1,886	8	+	do	C, W, O, 15	D, S, Irr	--	185	--	--	
S4-1	W. W. McRory	--	1914	600	8	145	1927	C, W	D, S	30	0	--	--	Cased to 200 ft. Sand reported from 380 to 400 ft. No irrigation since 1932.
S4-2	McRory Estate	A. E. Hardley	1911	960	10	174	Feb. 7, 1928	C, W	D, S	--	--	--	--	2/
S4-3	Dentonio School Board	L. Simpson	1925	515	6	181.7	Nov. 12, 1929	C, W	N	--	--	--	--	Cased to 250 ft. Sand reported from 450 to 475 ft.
S4-4	Roy Jones	R. B. Owens	1952	253	6	127	May 10, 1952	C, W	S	--	--	--	--	Cased to 25 ft. 2/
S4-5	Bill George	do	--	375	--	189.0	Jan. 8, 1957	C, W	S	--	--	--	--	
S4-6	do	Sutton Drilling Co.	--	--	--	--	--	--	--	--	--	--	--	Oil test.
S5-1	Catarina Farms Co.	--	--	--	4	--	--	C, W	S	--	--	--	--	

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S5-2	Catarina Farms Co.	--	--	1,375	10, 8	194.8	Dec. 10, 1929	C,W	S	--	--	--	--	Casing: 394 ft of 10-in.; 662 ft of 8-in.
S5-3	do	--	1928	1,422	10	1/122.2	do	--	N	--	--	--	--	Cased to 1,044 ft.
*S5-4	do	--	--	--	6	115.1	Dec. 12, 1929	C,W	S	--	--	--	--	
*S5-5	do	--	1928	1,374	12, 10	1/73.2	Dec. 10, 1929	T,E	D,S	--	--	--	--	Casing 380 ft of 12-in.; 703 ft of 10-in. Observation well.
S5-6	E. A. Gilson Estate	--	1928	1,524	10	72.0	Dec. 11, 1929	C,W	S	120	0	0	--	Cased to 1,344 ft. No irrigation since 1935.
S5-7	E. C. Smith	--	1928	1,655	10	--	--	C,W	S	--	--	--	--	Yielded 312 gpm on test of Nov. 20, 1928.
S5-8	Alex Durst	--	--	1,632	--	--	--	--	N	--	--	--	--	Casing pulled.
S5-9	Catarina Farms Co.	--	1928	1,540	10	--	--	--	N	--	--	--	--	Do.
*S5-10	do	--	--	1,615	10	1/85.9	Dec. 11, 1929	C,W	S	--	--	--	--	Water reported salty.
S5-11	H. A. Dillon	Armstrong & Horn	--	4,915	--	--	--	--	--	--	--	--	--	Oil test.
S5-12	do	do	--	5,402	--	--	--	--	--	--	--	--	--	Do.
S6-1	Fred Reyher	J. Culberson	--	1,302	10, 8	--	--	--	N	20	115	7	0	Casing: 300 ft of 10-in.; 677 ft of 8-in.; casing obstructed.
S6-2	R. H. Sims	--	--	1,170	10, 8	1/68.9	Dec. 11, 1920	--	N	80	0	0	--	Casing: 305 ft of 10-in.; 721 ft of 8-in.; casing obstructed. No irrigation since 1937.

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
S6-3	O. S. Rawdon	--	1928	1,351	10	110.9	Nov. 5, 1929	T,E, 60	N	165	0	375	--	Cased to 1,028 ft. Water reported salty.
*S6-4	O. V. Ray	Fred Poole	--	1,432	10	1/24.2	Oct. 15, 1929	--	N	--	--	--	--	Cased to 1,071 ft. Water reported salty. Temp. 94°F.
S6-5	C. E. Luker	-- Seward	1929	1,816	10, 8	1/49.5	Oct. 21, 1929	--	N	--	--	--	--	Casing: 1,170 ft of 10-in.; 590 ft of 8-in., perforated from 1,555 to 1,618 ft.
*S6-6	J. S. Pearce	Floyd Trimm	1931	1,362	8	--	--	T,G	D,S	--	70	70	--	Cased to 1,014 ft. Surface water sand from 70 to 97 ft. Other sands from 1,014 to 1,358 ft with several lenses of shale.
*S6-7	Catarina Farms Co.	--	1912	600- 700?	6	--	--	--	N	--	--	--	--	Not Carrizo sand. Flowing May 16, 1940.
*S6-8	R. W. Briggs	-- McKinley	1946	1,800	10, 8	80	1946	T,G, 125	D,S	--	--	5	--	Cased to bottom.
*T1-1	Frank Schilds	Floyd Trimm	--	--	--	--	--	T,G	D,S, Irr	0	149	60	165	Flowing Feb. 1, 1928.
*T1-2	Jack Ward	Jack Ward	1909	--	6	--	--	C,W	D,S	--	--	--	--	Temp. 102°F.
T1-4	Hendricks & Archery	Floyd Trimm	1911	175	8	--	--	T,O, 20	N	40	110	110	0	Casing obstructed. Water reported salty. Flowing Jan. 3, 1930. Temp. 100°F.
*T1-5	Jack Bowman	--	1913	1,710	8	1/25	Jan. 6, 1930	T,G	D,S	--	--	--	--	Reported flowing, February 1928. Temp. 86°F.
*T1-6	Silverlake Ranch	--	1910	--	8, 7	--	--	C,W	D,S	--	--	--	--	

* See footnotes at end of table.

Table 8.--Records of wells and springs in Dimmit County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water level		Method of lift	Use of water	Land irrigated				Remarks
						Below land-surface datum (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	Season 1947-48 (acres)	Season 1956-57 (acres)	
*Tl-7	W. L. Moody	--	1938	--	6	37.1	May 16, 1940	C,W	S	--	--	--	--	
Tl-8	Geo. Light	Sun Oil Co.	--	6,072	--	--	--	--	--	--	--	--	--	Oil test.
*Tl-9	L. W. Henrickson	L. W. Henrickson	1955	1,755	10, 8	135	1955	T,G	Irr	--	--	--	300	Casing: 575 ft of 10-in.; 980 ft of 8-in. 2/
*Tl-10	G. T. McCarley	-- Winch	1955	1,770	12, 8	187.5 175.0 175.8	Apr. 24, 1957 June 7, 1957 July 9, 1957	T,G	Irr	--	--	--	70	
Tl-11	G. W. Henrickson	Stanrose Production Co.	--	5,265	--	--	--	--	--	--	--	--	--	Oil test.
Tl-12	H. G. Ritchie	McKinley Drilling Co.	1951	2,065	10, 8	172.8	May 21, 1957	T,G	Irr, D	--	--	--	--	For irrigated acreage, 1956-57, see well Tl-15.
*Tl-13	do	do	1954	2,050	12, 8	--	--	T,G	Irr	--	--	--	--	Casing: 514 ft of 12-in.; 1,536 ft of 8-in. For irrigated acreage, 1956- 57, see well Tl-15.
Tl-14	do	do	1951	2,113	--	--	--	T,G	Irr	--	--	--	--	For irrigated acreage, 1956-57, see well Tl-15.
Tl-15	do	do	--	--	--	--	--	T,G	Irr	--	--	--	400	Used for irrigation, 1956- 57, in conjunction with wells Tl-12, 13 and 14.
*T4-1	G. E. Light	--	1910	2,040	--	92.3	July 28, 1957	T,E	D,S	4	0	--	--	
T4-2	do	--	--	--	5	57.8	May 16, 1940	C,W	S	--	--	--	--	
T4-3	do	Wilcox Oil & Gas Co.	--	8,048	--	--	--	--	--	--	--	--	--	Oil test.

1/ See table 9 for water-level measurements.

2/ See table 10 for drillers' logs.

* See table 11 for chemical analyses of water from wells and springs.

Table 9.-Water levels in wells in Dimmit County, Tex.
(In feet below land surface datum)

Date	Water level	Date	Water level	Date	Water level
Well M9-9					
Owner: Jay Myers.					
Dec. 12, 1929	75.10	Mar. 17, 1932	76.40	Aug. 7, 1942	85.83
Feb. 19, 1930	75.15	July 6	76.49	Aug. 9, 1943	85.84
Aug. 26	75.50	Aug. 29	76.38	July 23, 1945	85.55
Feb. 6, 1931	75.55	Dec. 21	76.62	July 12, 1946	87.34
Mar. 4	75.60	Mar. 22, 1933	76.75	July 23, 1947	87.60
Apr. 25	75.60	Mar. 13, 1935	77.85	Sept. 16, 1948	87.48
June 9	75.75	Aug. 26, 1936	78.30	Sept. 10, 1953	90.30
July 3	75.85	July 14, 1937	78.44	Oct. 6, 1954	91.48
Aug. 5	75.80	Aug. 15	78.52	Sept. 21, 1955	97.40
Oct. 2	75.90	Jan. 11, 1938	79.56	Sept. 20, 1956	90.60
Nov. 6	76.00	Aug. 24	84.43	Dec. 11	91.00
Dec. 4	76.05	Apr. 6, 1939	83.34	Feb. 18, 1957	91.11
Jan. 7, 1932	76.15	Aug. 14	82.30	May 2	91.33
Feb. 11	76.35	Aug. 3, 1941	83.31	July 29	92.62

Well N7-21

Owner: R. M. Fletcher.

Oct. 29, 1929	66.20	Mar. 10, 1930	72.05	Dec. 18, 1930	67.55
Nov. 22	67.10	Apr. 16	72.00	Feb. 16, 1931	68.05
Dec. 4	67.40	May 19	71.75	Mar. 4	67.40
Dec. 18	68.15	July 15	69.30	Apr. 25	68.65
Jan. 16, 1930	68.70	Aug. 26	68.90	June 8	67.00
Feb. 19	70.35	Sept. 24	69.25	Oct. 2	66.05

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-21--Continued					
Nov. 6, 1931	68.30	Mar. 18, 1932	70.60	Mar. 18, 1933	69.55
Dec. 4	70.60	July 6	71.15	Aug. 27, 1934	77.15
Jan. 7, 1932	70.15	Aug. 29	70.80		
Feb. 11	70.90	Dec. 22	71.23		

Well N7-25

Owner: Mrs. Ella Perrin.

May 14, 1930	52.30	Aug. 24, 1938	54.12	Aug. 2, 1940	52.77
July 14, 1937	52.13	Apr. 6, 1939	63.09	Aug. 3, 1941	53.36
Aug. 15	55.60	July 19	56.52	Aug. 7, 1942	56.91
Jan. 11, 1938	53.20	Aug. 13	55.82		

Well N7-27

Owner: Quality Vegetable Growers.

Oct. 28, 1929	58.05	May 19, 1930	64.95	Dec. 4, 1931	69.20
Nov. 22	76.65	June 16	60.65	Mar. 18, 1932	70.15
Dec. 18	69.70	July 15	60.15	Mar. 18, 1933	68.30
Jan. 16, 1930	72.00	Sept. 25	69.40	Sept. 21	67.65
Feb. 19	74.85	Apr. 25, 1931	61.70		
Mar. 17	71.15	June 8	62.80		

Well N7-34

Owner: Paul Little.

Dec. 7, 1929	50.70	May 24, 1930	50.70	Aug. 20, 1930	47.10
Feb. 5, 1930	64.60	June 21	46.80	Sept. 25	50.50
Apr. 18	60.15	July 26	45.20	Oct. 30	49.40

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-34--Continued					
Dec. 9, 1930	45.70	Aug. 26, 1932	41.70	Aug. 2, 1941	34.70
Jan. 8, 1931	51.60	Dec. 19	45.05	Aug. 8, 1942	47.23
Feb. 4	44.00	Mar. 17, 1933	40.15	Aug. 12, 1943	60.45
Mar. 2	37.80	Sept. 15	35.90	Dec. 19	58.44
Apr. 23	44.90	Aug. 29, 1934	41.85	July 9, 1944	55.65
May 23	35.80	July 28, 1935	44.25	July 21, 1945	62.81
June 24	35.50	Jan. 24, 1936	58.95	July 12, 1946	64.53
July 24	28.65	Aug. 24	46.75	July 23, 1947	55.85
Sept. 28	33.35	July 12, 1937	44.54	May 14, 1948	57.24
Nov. 3	50.60	Aug. 15	45.96	Aug. 10	58.19
Dec. 1	56.65	Jan. 11, 1938	45.81	Sept. 14	58.92
Jan. 4, 1932	45.85	Aug. 18	40.72	Aug. 10, 1949	62.61
Feb. 2	46.55	Apr. 7, 1939	69.62	Aug. 16, 1950	65.23
Mar. 17	44.15	July 15	48.46	Sept. 12, 1951	74.58
May 5	45.00	Aug. 16	44.84	Aug. 21, 1952	76.04
July 5	41.70	July 31, 1940	34.13	Sept. 10, 1953	88.64

Well N7-39

Owner: I. O. Kotchman.

Dec. 19, 1929	82.2	Sept. 19, 1955	116.63	June 6, 1957	118.46
Aug. 21, 1952	113.62	Sept. 18, 1956	117.73	July 29	118.65
Sept. 11, 1953	114.68	Dec. 11	117.85		
Oct. 5, 1954	115.93	May 2, 1957	118.39		

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-48					
Owner: Hugh Greer.					
Oct. 9, 1929	61.00	Sept. 28, 1931	29.50	Aug. 24, 1936	47.55
Nov. 22	72.65	Nov. 2	68.30	July 12, 1937	44.53
Dec. 18	79.60	Dec. 1	97.40	Aug. 16	45.17
Jan. 21, 1930	76.90	Jan. 4, 1932	66.75	Jan. 11, 1938	47.83
May 24	68.20	Feb. 2	73.20	Aug. 18	42.25
June 27	51.90	Mar. 17	59.10	Apr. 7, 1939	71.34
July 16	47.15	May 5	61.60	July 15	52.40
Dec. 9	52.30	July 5	44.20	Aug. 12	46.67
Jan. 8, 1931	68.60	Aug. 6	40.70	Aug. 1, 1940	32.19
Feb. 4	47.00	Mar. 17, 1933	42.00	Aug. 2, 1941	35.11
Apr. 23	48.40	Sept. 15	33.90	Aug. 8, 1942	49.83
May 23	33.85	Aug. 29, 1934	43.85	Aug. 11, 1943	67.73
June 24	32.15	July 28, 1935	45.40		
July 24	24.40	Jan. 24, 1936	60.38		

Well N7-53

Owner: E. L. Wetzig

Dec. 19, 1929	80.50	July 15, 1930	81.50	Apr. 25, 1931	82.00
Jan. 16, 1930	79.90	Aug. 26	84.90	July 3	82.60
Feb. 19	80.15	Sept. 25	82.15	Oct. 2	84.80
Mar. 17	80.45	Dec. 11	81.75	Nov. 6	83.35
Apr. 16	81.00	Jan. 9, 1931	82.05	Dec. 4	85.06
May 19	81.40	Feb. 6	81.45	Jan. 7, 1932	83.30
June 16	81.00	Mar. 4	81.60	Feb. 11	83.30

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-53--Continued					
Mar. 18, 1932	84.25	Dec. 22, 1932	84.75	Jan. 11, 1938	90.0
June 30	84.14	Mar. 18, 1936	86.55	Aug. 23	88.4
Aug. 29	84.50	Aug. 16, 1937	90.90		

Well N7-57

Owner: W. G. Orr.

Oct. 3, 1930	67.7	Oct. 6, 1954	218.04	Sept. 17, 1956	264.97
Aug. 21, 1952	238.49	Sept. 21, 1955	233.51	May 6, 1957	228.7

Well N7-65

Owner: L. A. Warren.

Aug. 20, 1952	99.03	Oct. 5, 1954	111.93	Sept. 18, 1956	121.98
Sept. 10, 1953	105.88	Sept. 19, 1955	116.50	Mar. 19, 1957	163.25

Well N7-73

Owner: Sam McKnight.

Jan. 16, 1930	9.60	Apr. 25, 1931	8.60	Dec. 4, 1931	12.50
June 7	9.70	June 9	8.20	Jan. 7, 1932	8.80
Oct. 20	9.30	July 2	8.00	July 1	11.44

Well N7-74

Owner: Sam McKnight.

Sept. 24, 1929	72.00	Feb. 19, 1930	73.70	July 15, 1930	72.10
Nov. 22	78.10	Apr. 16	72.85	Aug. 26	79.95
Dec. 18	77.80	May 13	72.20	Sept. 25	87.20
Jan. 16, 1930	72.65	June 17	71.85	Oct. 20	72.90

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-74--Continued					
Jan. 9, 1931	80.60	July 2, 1931	71.85	July 1, 1932	71.34
Feb. 7	79.90	Oct. 3	77.30	Aug. 27	71.80
Mar. 4	74.60	Dec. 4	71.30	Mar. 18, 1933	70.70
Apr. 25	71.75	Jan. 7, 1932	71.20	Sept. 21	70.60
June 8	71.90	Mar. 19	71.35	Aug. 28, 1934	71.80

Well N7-77

Owner: Sam McKnight.

Dec. 11, 1956	77.60	Feb. 18, 1957	77.45	June 6, 1957	77.65
Jan. 9, 1957	77.26	May 2	79.22	July 29	79.2

Well N7-78

Owner: C. Schmitt.

Jan. 6, 1930	91.70	June 8, 1931	93.70	July 31, 1935	99.70
Feb. 19	91.95	July 2	94.00	Jan. 24, 1936	99.55
Mar. 17	92.00	Oct. 2	94.20	July 14, 1937	101.36
June 17	92.40	Nov. 6	94.70	Aug. 18	101.69
July 15	92.65	Dec. 4	94.30	Jan. 11, 1938	101.57
Aug. 26	92.80	Jan. 7, 1932	94.30	Aug. 23	101.72
Sept. 25	92.90	Mar. 19	95.00	Apr. 5, 1939	103.62
Oct. 20	93.00	June 30	95.85	July 19	103.61
Dec. 11	93.05	Aug. 28	96.47	Aug. 13	103.92
Jan. 9, 1931	93.90	Dec. 22	96.40	Aug. 2, 1940	103.32
Feb. 6	93.15	Mar. 18, 1933	96.20	Aug. 3, 1941	105.52
Apr. 25	93.70	Sept. 20	97.10	Aug. 8, 1942	107.86

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-78--Continued					
Aug. 7, 1943	109.22	Sept. 14, 1948	112.35	Dec. 11, 1956	119.22
July 8, 1944	106.88	Aug. 11, 1949	111.32	Mar. 19, 1957	120.26
Aug. 14	108.13	Aug. 21, 1952	115.6	May 2	121.15
July 23, 1945	107.90	Oct. 5, 1954	119.12	June 6	121.49
July 12, 1946	108.99	Sept. 19, 1955	117.77	July 9	119.74
July 23, 1947	111.28	Sept. 18, 1956	119.65		

Well N7-95

Owner: M. E. Cook.

Jan. 6, 1930	69.45	Nov. 6, 1931	72.65	July 14, 1939	74.51
Feb. 19	69.50	Dec. 4	74.10	Aug. 13	74.48
Mar. 17	69.60	Jan. 7, 1932	73.10	Aug. 2, 1940	74.17
Apr. 16	70.20	Mar. 19	73.60	Aug. 3, 1941	74.22
May 19	71.45	July 1	79.75	Aug. 8, 1942	74.70
June 17	70.25	Aug. 27	78.80	Aug. 7, 1943	76.50
July 15	69.40	Dec. 22	74.00	Dec. 19	75.14
Aug. 26	71.10	Mar. 18, 1933	74.15	July 8, 1944	75.36
Sept. 25	71.05	Aug. 27, 1934	73.55	Aug. 14	75.49
Oct. 20	70.85	July 31, 1935	77.30	July 23, 1945	76.32
Dec. 11	69.35	Jan. 24, 1936	72.35	July 10, 1946	75.98
Jan. 9, 1931	69.35	Aug. 26	73.20	Jan. 9, 1957	83.40
Feb. 7	68.20	July 14, 1937	72.00	Feb. 11	83.20
Mar. 4	68.30	Aug. 18	72.32	May 2	83.51
Apr. 25	67.95	Jan. 11, 1938	71.37	June 6	83.31
June 8	71.75	Aug. 23	74.28	July 10	83.80
July 2	72.20	Apr. 5, 1939	74.99		

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-125					
Owner: A. J. Knaggs.					
Feb. 26, 1930	57.50	Aug. 29, 1932	59.83	Aug. 3, 1941	66.82
Sept. 12	58.50	Dec. 22	58.78	Aug. 8, 1942	67.47
Feb. 6, 1931	58.30	Aug. 26, 1936	63.88	Aug. 7, 1943	68.05
Apr. 25	58.75	July 14, 1937	64.19	Dec. 19	68.23
June 8	58.35	Aug. 13	64.03	July 8, 1944	69.05
Oct. 3	58.60	Jan. 11, 1938	64.00	Aug. 14	69.24
Dec. 4	59.00	Aug. 23	64.78	July 23, 1945	69.52
Jan. 7, 1932	58.85	Apr. 5, 1939	65.57	July 9, 1946	69.39
Feb. 11	58.65	July 19	65.68	July 23, 1947	72.14
Mar. 19	59.55	Aug. 13	65.51	Sept. 14, 1948	71.79
July 1	60.08	Aug. 2, 1940	65.97	Aug. 10, 1949	71.80

Well N7-127

Owner: Mrs. F. F. Kellogg.

Oct. 8, 1929	58.10	June 21, 1930	51.95	Aug. 26, 1932	42.02
Nov. 22	62.40	July 9	53.15	Dec. 19	31.23
Dec. 5	55.60	Aug. 20	59.20	Mar. 17, 1933	32.20
Dec. 19	53.40	Sept. 25	62.00	Sept. 15	26.55
Jan. 21, 1930	55.85	Oct. 30	51.90	Mar. 9, 1935	30.50
Feb. 20	64.15	Dec. 9	52.60	July 28	29.50
Mar. 24	59.35	Mar. 2, 1931	48.50	Jan. 24, 1936	32.74
Apr. 18	68.65	May 23	45.80	Aug. 28	64.00
May 24	58.55	July 24	43.30	July 11, 1937	63.55

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-127--Continued					
Aug. 17, 1937	79.00	Apr. 7, 1939	73.00	Dec. 10, 1939	65.50
Jan. 14, 1938	61.12	July 15	64.44		
Aug. 17	32.64	Aug. 12	64.85		

Well N7-135

Owner: J. L. Bell.

Jan. 7, 1930	25.05	July 2, 1931	24.95	Aug. 23, 1938	29.58
Feb. 19	25.60	Oct. 3	25.05	Apr. 5, 1939	31.09
Mar. 17	25.35	Nov. 6	25.35	July 17	30.82
Apr. 16	25.45	Dec. 4	25.30	Aug. 12	31.03
May 19	25.20	Jan. 7, 1932	25.40	Dec. 9	31.03
June 16	24.90	Feb. 11	25.40	Aug. 2, 1940	31.40
July 15	25.10	Mar. 19	25.35	Aug. 3, 1941	31.78
Aug. 26	25.45	June 30	26.00	Aug. 8, 1942	32.89
Sept. 25	25.60	Aug. 19	25.73	Aug. 6, 1943	33.21
Oct. 20	25.60	Mar. 18, 1933	25.25	Dec. 20	33.11
Dec. 11	25.60	Sept. 20	26.10	July 8, 1944	33.55
Jan. 9, 1931	25.45	Aug. 27, 1934	26.70	Aug. 11	33.65
Feb. 7	25.25	Mar. 12, 1935	28.90	July 24, 1945	33.76
Mar. 4	25.25	July 28	28.43	July 10, 1946	34.62
Apr. 25	25.40	Jan. 24, 1936	30.30		
June 8	25.00	Jan. 11, 1938	29.60		

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-138					
Owner: A. Dickens Estate.					
Oct. 24, 1929	49.75	Aug. 26, 1930	51.70	June 24, 1931	42.70
Dec. 17	50.15	Sept. 24	55.35	July 30	39.85
Jan. 17, 1930	50.65	Oct. 27	48.20	Sept. 30	43.80
Feb. 21	58.50	Dec. 9	46.10	Nov. 4	50.35
Mar. 18	58.40	Jan. 9, 1931	49.90	Dec. 2	49.20
Apr. 21	58.30	Feb. 5	43.55	Jan. 5, 1932	43.95
May 17	49.70	Mar. 6	43.55	Sept. 15, 1933	42.90
June 17	47.20	Apr. 29	44.30	Aug. 27, 1934	46.00
July 17	46.25	June 4	41.50		

Well N7-163					
Owner: J. B. Catlett.					
Feb. 22, 1957	231.98	May 2, 1957	224.30	July 9, 1957	226.57
Mar. 19	253.85	June 4	216.45		

Well N7-193					
Owner: W. S. Myers Estate.					
Dec. 4, 1956	143.13	Jan. 8, 1957	144.93	June 6, 1957	144.11
Dec. 10	143.90	Mar. 2	145.26		

Well N7-194					
Owner: Bill Ausmus.					
Oct. 6, 1954	148.65	Dec. 6, 1956	165.77	Mar. 19, 1957	168.47
Sept. 21, 1955	156.53	Jan. 8, 1957	166.55	May 2	169.75
Sept. 18, 1956	163.57	Feb. 7	167.24	June 4	170.57

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-195					
Owner: Bill Ausmus.					
Oct. 6, 1954	139.36	Sept.18, 1956	153.99	June 4, 1957	160.23
Sept.21, 1955	146.88	Dec. 6	155.93	July 9	160.86
Well N7-197					
Owner: Pat Vivian.					
Dec. 11, 1956	147.7	Mar. 19, 1957	152.5	June 4, 1957	152.5
Feb. 11, 1957	152.0	May 2	152.0	July 9	153.0
Well N7-223					
Owner: Alfonso Sanchez.					
Oct. 5, 1954	116.10	Dec. 11, 1956	120.81	May 2, 1957	121.48
Sept.19, 1955	118.31	Jan. 9, 1957	121.10	June 6	121.50
Sept.18, 1956	121.20	Feb. 18	121.04		
Well N7-245					
Owner: Wm. Haun.					
Sept.14, 1948	64.56	Sept.10, 1953	58.38	Jan. 9, 1957	67.23
Aug. 12, 1949	64.22	Oct. 5, 1954	65.50	Mar. 25	68.03
Aug. 16, 1950	68.2	Sept.20, 1955	65.78	May 2	66.00
Sept.11, 1951	65.88	Sept.19, 1956	68.71	June 5	65.31
Aug. 20, 1952	66.17	Dec. 11	68.00	July 10	65.31

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N7-247					
Owner: R. B. Owens.					
Oct. 5, 1954	126.23	Jan. 9, 1957	131.73	June 6, 1957	132.93
Sept.19, 1955	127.52	Feb. 8	132.16	July 9	133.41
Sept.18, 1956	130.12	Mar. 19	132.45		
Dec, 11	131.36	May 2	132.75		

Well N8-14					
Owner: Sid Parkinson.					
Nov. 14, 1929	61.00	Aug. 20, 1930	47.45	July 24, 1931	18.25
Dec. 4	63.90	Sept.25	57.50	Sept.28	20.55
Dec. 19	65.70	Oct. 30	47.40	Nov. 3	60.70
Feb. 20, 1930	91.20	Jan. 8, 1931	65.35	Dec. 1	60.70
Mar. 25	85.50	Feb. 4	44.80	Jan. 4, 1932	53.70
Apr. 19	79.10	Mar. 2	34.95	Feb. 2	53.70
May 24	62.45	Apr. 23	39.90	Mar. 17	52.80
June 20	50.80	May 23	29.50	Aug. 26	33.55
July 9	48.15	June 24	23.70	Dec. 19	16.81

Well N8-19					
Owner: E. L. Omera.					
Dec. 18, 1929	94.50	Apr. 18, 1930	111.20	Aug. 20, 1930	82.05
Jan. 21, 1930	92.70	May 24	93.80	Sept.25	89.75
Feb. 20	106.20	June 27	80.00	Oct. 30	78.00
Mar. 20	107.10	July 16	78.50	Dec. 9	77.00

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-19--Continued					
Jan. 8, 1931	88.60	May 27, 1932	81.40	Aug. 10, 1948	93.15
Feb. 4	75.35	July 5	79.00	Sept. 14	93.61
Mar. 2	68.15	Aug. 26	77.10	Aug. 11, 1949	94.81
Apr. 23	77.20	Dec. 19	87.01	Dec. 2	95.04
May 23	65.30	Mar. 17, 1933	71.25	Aug. 16, 1950	96.04
June 24	63.30	July 12, 1937	77.30	Sept. 12, 1951	98.60
July 8	60.98	Aug. 16	80.15	Aug. 21, 1952	102.0
July 24	58.08	Jan. 11, 1938	78.52	Sept. 10, 1953	104.86
Aug. 15	56.75	Aug. 18	75.99	Oct. 6, 1954	107.46
Sept. 28	61.48	Apr. 7, 1939	91.39	Oct. 12	107.07
Nov. 3	87.89	July 19	82.70	Sept. 21, 1955	110.75
Dec. 1	102.80	Aug. 12	79.64	Sept. 17, 1956	113.62
Jan. 4, 1932	87.98	Aug. 1, 1940	69.33	May 6, 1957	115.00
Feb. 2	88.80	Aug. 2, 1941	82.03	June 4	114.99
Mar. 17	82.13	Aug. 8, 1942	83.42	July 12	115.32
Apr. 13	92.45	Aug. 12, 1943	85.03		
May 5	87.06	July 23, 1947	90.45		

Well N8-23

Owner: Fred Foster.

Nov. 15, 1929	69.65	Mar. 25, 1930	95.80	July 17, 1930	58.10
Dec. 18	76.75	Apr. 19	85.40	Aug. 20	59.25
Jan. 21, 1930	80.30	May 24	75.40	Sept. 25	68.20
Feb. 20	97.80	June 20	63.70	Oct. 30	60.70

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-23--Continued					
Dec. 9, 1930	60.15	July 24, 1931	31.35	Aug. 26, 1932	48.70
Jan. 8, 1931	76.15	Sept. 28	31.95	Dec. 19	72.11
Feb. 4	57.25	Nov. 3	68.60	Mar. 17, 1933	49.30
Mar. 2	57.20	Dec. 1	107.50	Sept. 15	38.40
Apr. 23	50.90	Feb. 2, 1932	80.50	Aug. 29	50.60
May 23	41.70	Mar. 17	65.40	Mar. 6, 1935	100.52
June 24	36.30	May 5	66.20		

Well N8-26

Owner: Geo. Rheia.

Nov. 18, 1929	62.44	Mar. 2, 1931	48.70	Mar. 6, 1935	80.30
Dec. 19	70.40	Apr. 23	50.70	Aug. 23, 1936	51.60
Jan. 21, 1930	73.40	May 23	43.50	July 11, 1937	47.45
Feb. 20	85.00	June 24	37.40	Aug. 17	48.54
Mar. 25	93.75	July 24	33.20	Jan. 14, 1938	57.17
Apr. 19	86.80	Sept. 28	30.80	Aug. 17	47.13
May 24	76.50	Nov. 3	50.70	Apr. 9, 1939	66.21
July 17	60.10	Dec. 1	82.20	July 20	56.15
Aug. 20	59.90	Jan. 4, 1932	65.80	Aug. 16	53.48
Sept. 25	67.55	Feb. 2	65.80	July 31, 1940	37.97
Oct. 30	63.60	Mar. 17	60.10	Aug. 2, 1941	39.38
Dec. 9	54.60	Aug. 26	50.77	Aug. 11, 1943	73.47
Jan. 8, 1931	64.45	Mar. 17, 1933	47.70	Dec. 19	79.23
Feb. 4	57.50	Aug. 29, 1934	57.40	July 8, 1944	66.84

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-26--Continued					
Aug. 11, 1944	74.55	Aug. 10, 1948	130.15	Aug. 16, 1950	139.96
July 22, 1945	65.79	Sept. 14	136.30	Sept. 12, 1951	196.50
July 11, 1946	74.07	June 16, 1949	115.58	Aug. 21, 1952	160.5
May 14, 1948	138.89	Aug. 11	107.77		

Well N8-28

Owner: J. S. Ward.

Nov. 18, 1929	63.30	July 24, 1931	30.85	July 11, 1937	45.59
Dec. 19	70.85	Sept. 28	28.50	Aug. 17	46.82
Jan. 21, 1930	73.75	Nov. 3	49.40	Jan. 14, 1938	57.90
Feb. 20	85.50	Dec. 1	81.30	Aug. 17	45.75
Apr. 19	86.55	Jan. 4, 1932	66.00	Apr. 9, 1939	66.41
May 24	76.70	Feb. 2	68.10	July 20	55.02
July 17	59.80	Mar. 18	58.65	Aug. 16	53.36
Aug. 20	60.05	May 5	69.40	July 31, 1940	36.66
Sept. 25	64.55	Aug. 26	49.45	Aug. 2, 1941	37.84
Oct. 30	63.40	Dec. 19	61.30	Aug. 8, 1942	56.64
Dec. 9	54.35	Mar. 17, 1933	45.05	Aug. 11, 1943	73.16
Jan. 8, 1931	64.85	Sept. 15	45.25	Dec. 19	79.65
Feb. 4	57.10	Aug. 29, 1934	56.90	July 8, 1944	66.01
Mar. 2	47.90	Mar. 6, 1935	80.96	Aug. 11	75.69
Apr. 23	49.45	July 31	54.30	July 22, 1945	64.25
May 23	42.30	Jan. 25, 1936	54.62	July 10, 1946	72.74
June 24	35.30	Aug. 28	50.12	July 23, 1947	88.35

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-28--Continued					
May 14, 1948	134.95	Sept.13, 1948	131.61	Aug. 16, 1950	139.35
Aug. 10	126.06	Aug. 11, 1949	106.63		

Well N8-29

Owner: O. E. Bookout.

Nov. 15, 1929	65.70	Mar. 2, 1931	51.10	Mar. 17, 1933	50.20
Dec. 19	75.20	Apr. 23	52.40	Sept.15	41.50
Jan. 21, 1930	78.20	May 23	45.60	Aug. 29, 1934	56.95
Feb. 20	91.10	June 24	39.25	July 30, 1935	55.55
Mar. 25	97.75	July 24	34.80	Jan. 25, 1936	58.80
Apr. 19	89.00	Sept.28	33.80	Aug. 23	51.41
May 24	79.30	Nov. 3	57.85	July 11, 1937	47.75
June 20	68.70	Dec. 1	93.15	Aug. 17	47.68
July 17	62.00	Jan. 4, 1932	70.00	Jan. 14, 1938	57.99
Sept.25	68.30	Feb. 2	75.35	Aug. 17	47.44
Oct. 30	65.65	Mar. 17	63.90	Apr. 7, 1939	67.05
Dec. 9	58.75	May 5	67.75	July 20	56.65
Jan. 9, 1931	70.65	Aug. 26	51.75	Aug. 16	53.07
Feb. 4	60.50	Dec. 19	68.45		

Well N8-40

Owner: E. W. Gordon.

Dec. 5, 1929	48.50	Jan. 21, 1930	48.90	Mar. 24, 1930	55.90
Dec. 19	40.65	Feb. 20	72.70	Apr. 18	81.20

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-40--Continued					
May 24, 1930	51.35	Nov. 3, 1931	69.60	Jan. 11, 1938	29.25
June 21	31.50	Dec. 1	44.75	Apr. 7, 1939	47.88
July 16	38.00	Jan. 4, 1932	29.80	July 15	36.18
Aug. 20	52.50	Feb. 2	39.05	Aug. 12	34.89
Sept. 25	65.00	Mar. 17	32.75	Aug. 1, 1940	43.34
Oct. 20	28.70	July 5	35.54	Aug. 2, 1941	40.06
Dec. 9	34.00	Aug. 26	43.95	Aug. 8, 1942	49.87
Jan. 8, 1931	50.00	Dec. 19	30.80	Aug. 11, 1943	79.13
Feb. 4	23.85	Mar. 17, 1933	23.30	Dec. 19	48.54
Mar. 2	22.40	Sept. 15	42.45	July 8, 1944	47.58
Apr. 23	30.30	Mar. 6, 1935	44.50	Aug. 11	78.34
May 23	19.85	July 30	30.30	July 24, 1945	67.74
June 24	29.60	Jan. 24, 1936	38.40	July 24, 1947	96.72
July 24	16.45	July 12	38.50	Sept. 14	108.46
Sept. 28	34.70	Aug. 16	60.05		

Well N8-45

Owner: George Morris.

Jan. 28, 1928	72.80	Mar. 18, 1930	100.85	Dec. 9, 1930	75.80
Oct. 9, 1929	86.20	June 17	76.40	Jan. 9, 1931	85.70
Nov. 18	88.90	July 17	81.40	Feb. 5	68.60
Dec. 17	84.15	Aug. 26	88.95	Mar. 6	70.20
Jan. 17, 1930	88.80	Sept. 24	92.50	Apr. 29	69.85
Feb. 21	105.60	Oct. 27	77.75	June 4	63.20

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-45--Continued					
June 24, 1931	67.40	Dec. 2, 1931	81.40	July 1, 1932	79.15
July 30	61.45	Jan. 5, 1932	70.20	Aug. 27	78.20
Sept. 30	69.70	Feb. 3	74.65	Mar. 18, 1933	65.85
Nov. 4	85.00	Mar. 20	73.80		

Well N8-47

Owner: Dimmit County Airport.

Oct. 12, 1929	98.20	Mar. 6, 1931	78.50	July 30, 1935	82.10
Nov. 18	86.40	Apr. 29	78.40	Jan. 26, 1936	82.50
Dec. 5	88.90	June 4	72.20	Aug. 24	85.90
Dec. 17	91.40	June 24	75.60	July 10, 1937	80.96
Jan. 17, 1930	96.90	July 30	70.20	Aug. 24	99.29
Feb. 21	112.70	Sept. 30	77.80	Jan. 15, 1938	79.03
Mar. 18	107.00	Nov. 4	91.10	Aug. 20	94.27
Apr. 21	109.90	Dec. 2	88.75	Apr. 7, 1939	94.38
May 17	89.80	Jan. 5, 1932	79.00	July 18	85.38
June 17	84.35	Feb. 3	82.50	Aug. 11	85.08
July 17	87.45	Mar. 20	83.10	Dec. 11	90.18
Aug. 26	95.75	July 1	88.67	July 30, 1940	83.96
Sept. 24	99.50	Aug. 27	88.05	Aug. 5, 1941	86.66
Oct. 27	85.85	Dec. 22	79.42	Aug. 11, 1942	92.58
Dec. 9	85.55	Mar. 18, 1933	74.70	Aug. 10, 1943	118.94
Jan. 9, 1931	92.75	Sept. 16	85.50	Dec. 20	98.64
Feb. 5	77.00	Mar. 14, 1935	90.35	July 10, 1944	99.41

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-47--Continued					
Aug. 10, 1944	117.50	Oct. 7, 1954	184.26	Feb. 8, 1957	214.63
July 25, 1945	109.62	Sept. 20, 1955	193.06	May 6	203.09
July 9, 1946	104.50	Sept. 17, 1956	206.81	June 13	195.12
July 24, 1947	113.82	Dec. 10	218.65	July 10	199.83

Well N8-50

Owner: I. O. Kotchman.

Oct. 14, 1929	73.80	Dec. 9, 1930	64.20	Sept. 16, 1933	58.75
Nov. 18	73.05	Jan. 9, 1931	66.90	Aug. 28, 1934	67.45
Dec. 17	72.90	Feb. 5	60.90	July 10, 1937	58.95
Jan. 17, 1930	73.50	Mar. 5	57.60	Aug. 17	63.79
Feb. 21	81.50	Apr. 29	60.50	Jan. 15, 1938	61.63
Mar. 18	82.95	June 4	53.05	Aug. 20	63.09
Apr. 21	81.70	June 24	52.55	Apr. 7, 1939	70.40
May 17	75.30	July 30	48.20	July 18	64.17
June 17	70.65	Sept. 30	54.15	Aug. 11	64.50
July 17	68.40	July 1, 1932	64.40	Dec. 11	66.23
Aug. 26	71.10	Aug. 27	66.83	July 30, 1940	56.40
Sept. 24	72.85	Dec. 22	60.14	Aug. 5, 1941	58.17
Oct. 27	69.60	Mar. 18, 1933	55.40	Aug. 11, 1942	65.94

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-56					
Owner: -- Huffman.					
Oct. 14, 1929	58.90	May 17, 1930	71.35	Jan. 9, 1931	56.25
Nov. 18	59.55	June 17	58.70	Feb. 5	44.10
Dec. 17	62.10	July 17	54.70	Mar. 5	38.10
Jan. 17, 1930	66.00	Aug. 26	59.00	Apr. 29	40.65
Feb. 21	81.55	Sept. 24	67.25	July 1, 1932	48.75
Mar. 18	87.50	Oct. 27	57.65		
Apr. 21	85.50	Dec. 9	45.50		

Well N8-58					
Owner: G. Denton Estate.					
Oct. 16, 1929	45.70	Nov. 4, 1931	34.80	July 10, 1937	32.49
Nov. 18	47.30	Dec. 2	58.45	Aug. 17	36.70
Dec. 17	54.25	Jan. 5, 1932	45.95	Jan. 15, 1938	38.98
Jan. 17, 1930	57.80	Feb. 3	50.50	Aug. 20	34.06
Feb. 21	70.70	Mar. 20	41.75	Apr. 8, 1939	52.23
Mar. 18	80.15	July 1	39.50	July 18	39.98
Apr. 21	74.70	Aug. 27	37.90	Aug. 11	39.47
May 17	63.50	Dec. 22	41.02	Dec. 11	41.18
June 17	51.65	Mar. 18, 1933	28.55	July 30, 1940	25.06
July 17	45.20	Aug. 28, 1934	47.05	Aug. 5, 1941	26.51
Aug. 26	47.90	Mar. 14, 1935	56.95	Aug. 11, 1942	44.03
Sept. 24	54.95	Jan. 26, 1936	36.30	Aug. 10, 1943	62.98
Sept. 30, 1931	17.90	Aug. 24	40.75	July 10, 1944	53.37

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-58--Continued					
Aug. 10, 1944	62.36	July 9, 1946	55.23	July 24, 1947	66.47
July 25, 1945	53.34				

Well N8-70

Owner: H. J. Whitecotton.

Nov. 29, 1929	56.50	Mar. 18, 1930	83.10	Aug. 26, 1930	56.30
Dec. 5	57.25	Apr. 21	80.75	Sept. 24	64.60
Dec. 17	61.05	May 17	66.60	July 1, 1932	46.35
Jan. 17, 1930	64.50	June 21	54.10		
Feb. 21	76.95	July 17	52.10		

Well N8-71

Owner: B. E. Pickett.

Nov. 29, 1929	54.40	Jan. 9, 1931	50.50	Jan. 5, 1932	48.30
Dec. 17	58.85	Feb. 5	40.75	Feb. 3	54.75
Jan. 17, 1930	62.85	Mar. 6	34.45	Mar. 20	43.95
Feb. 21	76.45	Apr. 29	37.65	July 1	43.10
Mar. 18	84.20	June 4	27.90	Aug. 27	41.58
Apr. 21	81.00	June 24	25.20	Dec. 22	42.04
May 17	67.75	July 30	20.95	Mar. 18, 1933	30.95
June 17	55.60	Sept. 30	22.30	Sept. 16	30.10
July 17	48.90	Nov. 4	39.70	Aug. 28, 1934	50.60
Sept. 24	62.50	Dec. 2	60.45	Mar. 14, 1935	57.94

(Continued on next page)

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-71--Continued					
July 30, 1935	41.75	July 10, 1937	33.43	Apr. 9, 1939	59.00
Jan. 26, 1936	37.62	Jan. 15, 1938	41.38	Aug. 11	43.35
Aug. 24	44.45	Aug. 20	37.57	July 30, 1940	26.81

Well N8-73

Owner: Mrs. Moody Beascon.

Oct. 21, 1929	29.45	Dec. 10, 1930	25.60	May 6, 1932	34.20
Nov. 18	33.00	Feb. 9, 1931	22.00	July 5	23.80
Dec. 24	36.30	Mar. 3	17.80	Aug. 27	21.20
Jan. 21, 1930	42.05	Apr. 24	21.20	Dec. 20	22.46
Feb. 18	55.45	June 4	11.75	Mar. 21, 1933	19.89
Mar. 19	59.80	June 26	13.65	Sept. 18	15.60
Apr. 17	58.00	July 27	5.60	July 13, 1937	16.66
May 16	51.00	Sept. 29	8.70	Aug. 14	30.98
June 17	37.25	Dec. 2	39.35	Aug. 25, 1938	26.04
July 14	36.10	Jan. 11, 1932	29.90	Aug. 15, 1939	30.61
Aug. 22	38.25	Feb. 4	43.05		
Sept. 23	49.40	Mar. 22	29.05		

Well N8-103

Owner: Jack Bowman.

Nov. 26, 1929	40.25	Mar. 20, 1930	66.35	Dec. 10, 1930	36.80
Dec. 24	42.00	Apr. 17	71.50	Feb. 9, 1931	26.20
Jan. 21, 1930	51.05	June 17	41.15	Mar. 3	22.10

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N8-103--Continued					
Apr. 24, 1931	27.00	July 13, 1937	20.49	July 11, 1946	39.80
June 4	16.55	Aug. 15	35.41	July 24, 1947	49.72
July 27	10.10	Jan. 13, 1938	26.51	Aug. 11, 1948	71.92
Sept. 29	12.00	Aug. 25	28.00	Sept. 14	80.00
Feb. 4, 1932	53.10	Apr. 7, 1939	58.98	Aug. 12, 1949	60.53
May 6	41.20	July 20	29.25	Aug. 15, 1950	85.67
July 5	27.38	Aug. 15	32.42	Sept. 12, 1951	139.31
Aug. 27	25.48	Dec. 8	27.73	Aug. 19, 1952	186.02
Dec. 20	23.67	Aug. 3, 1940	12.94	Sept. 9, 1953	208.33
July 30, 1935	25.15	Aug. 5, 1941	11.90	Oct. 5, 1954	216.5
Aug. 27, 1936	28.71	Aug. 10, 1942	28.77	Sept. 20, 1955	214.73

Well N8-136

Owner: Adolph Fehlis.

Dec. 1953	280	May 6, 1957	309.7	July 10, 1957	271.86
Feb. 28, 1957	341.9	June 7	277.64		

Well N9-5

Owner: Geo. D. Price.

Nov. 29, 1929	90.65	May 17, 1930	103.00	Apr. 5, 1931	81.00
Dec. 17	92.80	June 21	95.70	June 4	75.60
Mar. 30, 1930	109.10	Feb. 5, 1931	84.10		

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N9-8					
Owner: H. Brown.					
Nov. 30, 1929	54.05	Feb. 5, 1931	45.60	Dec. 22, 1932	50.90
Dec. 17	54.35	Mar. 5	47.45	Sept. 19, 1933	45.30
Jan. 17, 1930	55.40	Apr. 29	42.10	Aug. 17, 1937	64.97
Feb. 24	60.85	May 27	42.30	Jan. 15, 1938	54.11
Apr. 22	74.70	June 24	42.10	Aug. 22	57.52
May 21	58.35	July 28	38.40	July 18, 1939	56.20
June 21	54.00	Nov. 4	50.35	Aug. 11	57.28
July 18	52.30	Dec. 2	49.10	July 30, 1940	49.67
Aug. 23	54.45	Feb. 3, 1932	52.30	Aug. 5, 1941	47.98
Oct. 31	50.60	Mar. 29	51.60	July 25, 1945	62.28
Dec. 12	49.40	July 2	49.80		
Jan. 13, 1931	51.80	Aug. 27	48.30		

Well N9-12

Owner: Federal Land Bank.

Oct. 18, 1929	17.10	May 21, 1930	28.15	Jan. 9, 1931	20.90
Nov. 18	20.20	June 21	17.40	Feb. 5	10.30
Dec. 5	19.00	July 17	17.30	Mar. 5	16.00
Dec. 17	19.85	Aug. 26	18.30	Apr. 29	11.15
Jan. 17, 1930	21.00	Sept. 24	23.30	May 27	6.55
Feb. 24	30.00	Oct. 27	15.35	June 24	9.30
Mar. 20	29.00	Oct. 31	15.15	July 28	6.30
Apr. 21	34.50	Dec. 12	17.40	Sept. 30	7.40

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N9-12--Continued					
Nov. 4, 1931	15.25	Jan. 27, 1936	24.35	Aug. 10, 1943	24.70
Dec. 2	16.30	Aug. 24	22.20	May 14, 1948	51.56
Jan. 5, 1932	12.35	July 10, 1937	13.23	Sept. 14	53.87
Feb. 3	12.30	Aug. 17	21.08	Aug. 12, 1949	44.27
Mar. 29	21.80	Jan. 15, 1938	17.03	Sept. 12, 1951	107.02
July 2	13.94	Aug. 22	18.27	Aug. 19, 1952	124.36
Aug. 27	13.45	Apr. 8, 1939	30.53	Sept. 9, 1953	150.6
Dec. 22	13.90	July 18	17.90	Sept. 20, 1955	192.7
Mar. 23, 1933	22.60	Aug. 11	20.17	Sept. 19, 1956	217.4
Sept. 19	11.70	Dec. 11	19.21	Feb. 18, 1957	226.0
Aug. 28, 1934	28.35	July 30, 1940	9.91	Mar. 19	212.02
Mar. 14, 1935	26.64	Aug. 5, 1941	8.65	May 3	192.77
July 30	16.20	Aug. 11, 1942	17.71	July 10	185.0

Well N9-16

Owner: C. G. Boyd.

Nov. 18, 1929	74.00	Jan. 13, 1931	63.65	Dec. 5, 1931	61.75
Dec. 17	67.25	Feb. 5	59.90	July 2, 1932	63.70
Feb. 24, 1930	72.55	Mar. 5	59.30	Aug. 27	61.80
May 21	71.15	Apr. 30	60.10	Dec. 22	66.35
June 21	66.75	May 27	56.65	July 31, 1935	66.00
July 18	65.40	June 25	56.70	July 10, 1937	64.84
Oct. 31	64.75	July 28	53.80	Aug. 11, 1939	67.73

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N9-16--Continued					
Aug. 11, 1942	65.04	July 25, 1945	75.73	Aug. 11, 1948	97.72
Aug. 10, 1943	77.88	July 9, 1946	72.27	Sept. 14	98.89
July 11, 1944	75.50	July 22, 1947	77.16	Aug. 12, 1949	93.70
Aug. 10	80.51	May 15, 1948	97.64	Aug. 15, 1950	109.5

Well N9-25

Owner: Jack Bowman.

Nov. 29, 1929	17.70	Mar. 6, 1931	6.20	July 30, 1940	5.15
Dec. 17	20.95	Apr. 30	7.40	July 11, 1944	30.61
Jan. 17, 1930	21.85	May 27	2.85	Aug. 10	36.84
Feb. 21	30.95	June 24	3.45	July 25, 1945	29.92
Mar. 20	35.65	July 2, 1932	12.60	July 11, 1946	24.97
Apr. 21	37.15	Aug. 27	11.65	May 14, 1948	55.37
May 17	28.80	Dec. 22	11.03	Sept. 14	57.50
June 21	19.45	Sept. 19, 1933	3.50	Aug. 12, 1949	44.30
July 10	17.15	Mar. 14, 1935	22.98	Aug. 15, 1950	70.25
Aug. 23	17.30	July 30	11.80	Sept. 12, 1951	116.31
Sept. 24	23.30	Jan. 27, 1936	20.30	Aug. 19, 1952	151.67
Oct. 31	15.65	July 10, 1937	10.39	Sept. 9, 1953	180.1
Dec. 12	11.75	Aug. 17	25.11	Oct. 6, 1954	183.4
Jan. 9, 1931	16.00	Jan. 15, 1938	17.53	Sept. 20, 1955	199.3
Feb. 5	8.40	Dec. 11, 1939	15.38	Feb. 8, 1957	198.48

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N9-32					
Owner: P. J. Lewis.					
Dec. 3, 1929	22.85	Feb. 5, 1931	22.00	Mar. 23, 1933	24.50
Dec. 17	23.50	Apr. 29	21.35	July 10, 1937	23.19
Jan. 17, 1930	23.10	May 27	19.30	Jan. 15, 1938	25.82
Feb. 24	26.80	June 24	19.30	July 18, 1939	27.06
Apr. 21	39.55	July 28	15.50	Aug. 11	28.88
May 21	32.60	Sept. 30	16.40	July 30, 1940	18.68
June 21	27.35	Dec. 5	25.55	Aug. 5, 1941	18.75
July 18	28.20	Jan. 12, 1932	20.90	July 22, 1947	40.80
Aug. 23	29.25	Feb. 12	25.15	Sept. 14, 1948	62.39
Sept. 24	32.15	Mar. 20	26.60	Aug. 12, 1949	52.42
Oct. 31	28.50	July 2	24.80	Aug. 19, 1952	148.90
Dec. 12	25.25	Aug. 27	24.38	Sept. 9, 1953	174.35
Jan. 13, 1931	26.25	Dec. 22	22.83		

Well N9-33					
Owner: P. J. Lewis.					
Aug. 12, 1932	16.00	Apr. 9, 1939	43.06	Aug. 10, 1943	43.55
Dec. 22	13.76	July 18	26.44	July 11, 1944	38.97
Aug. 24, 1936	35.52	Aug. 11	27.53	Aug. 10	43.79
July 10, 1937	21.61	Dec. 11	24.08	July 25, 1945	40.25
Aug. 17	34.94	July 30, 1940	17.09	July 11, 1946	35.12
Jan. 15, 1938	23.48	Aug. 5, 1941	17.55	July 22, 1947	38.61
Aug. 22	35.78	Aug. 11, 1942	30.66	May 14, 1948	39.55

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N9-33--Continued					
Aug. 11, 1948	42.85	Aug. 15, 1950	53.45	Sept. 9, 1953	121.24
Sept. 14	46.19	Sept. 12, 1951	80.01		
Aug. 12, 1949	51.32	Aug. 19, 1952	98.44		

Well N9-39

Owner: V. Murrell.

Jan. 31, 1928	13.2	Jan. 16, 1930	23.15	Apr. 29, 1931	17.10
Sept.	12.3	Feb. 24	30.00	June 24	14.00
May 13, 1929	29.5	Apr. 21	36.55	July 28	10.10
May 24	28.2	June 21	23.40	Dec. 5	16.85
June 1	27.00	July 18	21.60	Mar. 29, 1932	16.00
June 10	25.0	Aug. 23	20.50	July 2	18.40
July 9	22.0	Jan. 13, 1931	19.20	Aug. 27	16.83
Sept. 22	18.0	Feb. 5	15.65		

Well N9-43

Owner: Wallace Rogers.

Jan. 3, 1930	27.00	Sept. 24, 1930	28.25	May 27, 1931	20.80
Feb. 24	30.20	Oct. 31	25.90	June 25	21.30
Apr. 22	32.00	Dec. 12	24.20	July 28	17.75
May 21	30.60	Jan. 13, 1931	24.85	Oct. 5	20.35
June 26	27.75	Feb. 5	23.15	Dec. 5	21.70
July 18	26.50	Mar. 6	21.50	Jan. 12, 1932	19.55
Aug. 23	26.30	Apr. 30	23.30	Feb. 12	20.60

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well N9-43--Continued					
Mar. 24, 1932	20.40	Mar. 23, 1933	21.05	July 30, 1935	26.60
July 2	25.20	Sept. 16	22.05	Jan. 27, 1936	32.20
Oct. 27	24.17	Aug. 28, 1934	34.25		
Dec. 22	22.15	Mar. 14, 1935	29.80		

Well 07-2

Owner: Y. C. Strait

Aug. 19, 1952	158.05	Feb. 18, 1957	260.26	July 10, 1957	252.20
Sept. 19, 1956	258.58	Mar. 18	257.93		
Dec. 10	261.18	June 7	254.35		

Well 07-3

Owner: G. W. Hatch.

Nov. 18, 1929	96.10	Dec. 12, 1930	94.40	Feb. 12, 1932	91.10
Dec. 17	94.05	Jan. 13, 1931	94.20	Mar. 24	91.40
Jan. 17, 1930	95.00	Feb. 5	93.50	July 2	92.74
Feb. 24	94.45	Mar. 5	92.80	Aug. 27	92.93
Apr. 22	96.05	Apr. 30	92.95	Dec. 22	92.25
May 21	96.40	May 27	92.35	Mar. 23, 1933	91.90
June 26	96.15	June 25	91.75	Sept. 16	92.25
July 18	95.65	July 28	91.05	Aug. 28, 1934	99.25
Aug. 23	95.20	Oct. 5	90.10	July 30, 1935	8.30
Sept. 24	95.15	Dec. 5	91.00	Aug. 25, 1936	97.25
Oct. 31	95.50	Jan. 12, 1932	90.70	July 10, 1937	94.44

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well 07-3--Continued					
Jan. 15, 1938	97.43	Aug. 10, 1944	103.56	Sept.12, 1951	147.11
Apr. 8, 1939	97.59	July 25, 1945	102.49	Sept. 9, 1953	193.08
Aug. 11	98.37	July 9, 1946	105.38	Oct. 6, 1954	202.11
July 30, 1940	93.31	July 22, 1947	108.13	Sept.20, 1955	236.3
Aug. 5, 1941	93.34	Sept.14, 1948	118.01	Sept.19, 1956	284.76
Aug. 11, 1942	96.12	June 16, 1949	120.60	Dec. 10	286.28
Aug. 10, 1943	102.23	Aug. 13	119.77	Feb. 18, 1957	284.10
July 11, 1944	103.38	Aug. 15, 1950	124.95	July 10	276.17

Well S1-1

Owner: S. E. McKnight.

Jan. 9, 1930	100.60	Apr. 25, 1931	100.70	Aug. 29, 1932	101.02
Mar. 17	100.25	June 8	100.65	Mar. 18, 1933	100.95
Apr. 16	100.35	July 2	100.70	Sept.20	101.20
May 19	100.60	Nov. 6	101.00	Aug. 27, 1934	101.10
June 17	100.35	Dec. 4	100.95	Jan. 9, 1957	107.4
Oct. 20	100.55	Jan. 7, 1932	101.00	May 7	107.99
Dec. 11	100.65	Feb. 11	101.00	June 6	107.90
Jan. 9, 1931	100.70	Mar. 19	101.05		
Feb. 7	100.60	June 30	100.90		

Well S1-2

Owner: S. E. McKnight.

May 13, 1930	67.0	Feb. 20, 1957	73.48	June 6, 1957	74.01
Jan. 9, 1957	73.21	May 7	74.01		

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S1-11					
Owner: R. A. Manter.					
Jan. 7, 1930	44.70	Dec. 11, 1930	45.20	Nov. 6, 1931	45.15
Apr. 16	44.50	Jan. 9, 1931	45.20	Mar. 18, 1932	44.65
May 19	44.56	Feb. 7	45.10	June 30	45.38
June 17	44.40	Mar. 4	45.00	Aug. 29	45.58
July 15	44.55	Apr. 25	45.25	Mar. 18, 1933	44.50
Aug. 26	44.70	June 8	45.15	Sept. 20	44.55
Sept. 25	44.25	July 2	45.15		
Oct. 20	44.75	Oct. 3	44.90		

Well S1-14					
Owner: J. C. Johnson.					
Mar. 4, 1930	56.4	May 7, 1957	64.57	July 10, 1957	64.74
July 21, 1947	56.80	June 5	64.71		

Well S1-15					
Owner: H. Brauer					
Apr. 1, 1930	51.90	Jan. 9, 1931	52.40	Nov. 6, 1931	52.60
May 19	52.20	Feb. 7	52.25	Dec. 4	52.40
July 15	52.20	Mar. 4	52.15	Jan. 7, 1932	52.70
Aug. 26	51.30	Apr. 25	52.15	Feb. 11	52.45
Sept. 25	52.15	June 8	52.25	Mar. 18	52.40
Oct. 20	52.45	July 2	52.35	June 30	52.65
Dec. 11	52.20	Oct. 3	52.30	Aug. 29	52.65

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S1-15--Continued					
Dec. 22, 1932	52.45	Apr. 5, 1939	54.56	July 8, 1944	56.72
Mar. 18, 1933	52.40	July 17	54.75	July 24, 1945	57.01
Sept. 20	53.00	Aug. 12	54.90	July 9, 1946	57.24
Aug. 27, 1934	53.30	Aug. 2, 1940	55.14	July 21, 1947	57.56
Jan. 11, 1938	54.08	Aug. 6, 1941	55.47	Dec. 14, 1956	64.48
Aug. 23	55.50	Aug. 6, 1943	56.21	Aug. 29, 1957	64.84

Well S1-16

Owner: C. W. Gilfillin & Son.

Mar. 1, 1930	54.90	June 30, 1932	56.05	Aug. 12, 1939	58.61
June 13	55.00	Aug. 29	56.15	Dec. 9	58.72
July 15	55.00	Dec. 22	55.25	Aug. 2, 1940	58.63
Aug. 26	55.10	Mar. 18, 1933	55.40	Aug. 3, 1941	59.09
Sept. 25	55.20	Sept. 20	55.90	Aug. 9, 1942	59.87
Oct. 20	55.25	Mar. 12, 1935	56.80	Aug. 6, 1943	59.92
Mar. 4, 1931	55.35	July 28	56.90	Dec. 20	60.19
Apr. 25	55.50	Jan. 24, 1936	56.75	Aug. 11, 1944	61.82
July 2	55.50	Aug. 26	57.61	July 24, 1945	60.92
Oct. 3	55.60	July 14, 1937	57.38	July 10, 1946	61.52
Nov. 6	55.90	Aug. 13	59.67	May 15, 1948	63.54
Dec. 4	55.65	Jan. 11, 1938	57.86	Aug. 10	63.89
Jan. 7, 1932	55.75	Aug. 23	59.18	Sept. 14	65.08
Feb. 11	55.85	Apr. 5, 1939	57.38	Aug. 12, 1949	64.57
Mar. 18	56.00	July 17	58.41	Sept. 11, 1951	69.17

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S1-16--Continued					
Aug. 20, 1952	68.18	Sept. 17, 1956	74.26	May 6, 1957	75.26
Sept. 10, 1953	69.75	Dec. 13	74.63	June 6	75.38
Oct. 5, 1954	70.94	Jan. 9, 1957	74.74	July 10	75.56
Sept. 19, 1955	72.56	Feb. 12	74.92		

Well S1-18

Owner: E. G. Castellaw

Mar. 18, 1930	99.00	Jan. 7, 1932	102.25	July 17, 1939	104.74
May 19	101.80	Feb. 11	102.30	Aug. 12	104.94
June 16	101.60	Mar. 18	102.20	Dec. 9	105.06
July 15	101.60	June 30	102.21	Aug. 2, 1940	104.90
Aug. 26	101.85	Aug. 29	102.53	Aug. 3, 1941	105.29
Sept. 26	102.00	Dec. 22	102.03	Aug. 8, 1942	105.83
Oct. 20	102.00	Sept. 20, 1933	102.45	Aug. 6, 1943	107.37
Dec. 11	102.00	Aug. 27, 1934	103.10	July 8, 1944	108.22
Jan. 9, 1931	102.20	Mar. 12, 1935	103.55	Aug. 11	108.85
Feb. 7	101.90	July 28	103.25	July 24, 1945	109.50
Mar. 4	101.80	Jan. 24, 1936	103.42	July 9, 1946	109.93
Apr. 25	102.20	Aug. 26	104.22	July 21, 1947	111.72
June 9	101.80	July 14, 1937	103.14	May 16, 1948	113.04
July 2	101.90	Aug. 13	104.00	Aug. 10	113.86
Oct. 3	101.70	Jan. 11, 1938	104.01	Sept. 14	114.07
Nov. 6	102.15	Aug. 23	104.48	Oct. 11	114.47
Dec. 4	102.15	Apr. 5, 1939	104.74	Nov. 9	114.20

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S1-18--Continued					
Dec. 23, 1948	114.25	Aug. 3, 1950	115.21	Jan. 24, 1952	118.37
Jan. 19, 1949	114.32	Sept. 5	115.11	Feb. 22	118.50
Mar. 4	113.88	Oct. 3	115.55	Mar. 26	118.72
Apr. 18	114.19	Nov. 2	116.11	Apr. 21	118.89
May 11	113.82	Dec. 8	116.37	May 26	119.12
June 16	113.80	Jan. 13, 1951	116.45	June 25	119.14
July 16	113.84	Feb. 11	116.49	July 24	119.54
Aug. 12	113.98	Apr. 4	116.69	Aug. 20	119.80
Sept. 22	114.44	May 4	116.93	Aug. 22	119.78
Oct. 29	114.60	June 1	116.86	Sept. 25	120.16
Dec. 3	115.08	July 10	116.90	Oct. 23	120.53
Jan. 25, 1950	114.74	July 31	116.01	Sept. 9, 1953	122.11
Apr. 6	115.32	Sept. 11	117.83	Oct. 12, 1954	124.04
May 2	115.04	Oct. 24	118.07	Sept. 19, 1955	126.16
June 7	114.75	Nov. 21	118.07	Sept. 17, 1956	128.90
July 10	115.16	Dec. 21	118.21	Dec. 13	129.75

Well S1-30

Owner: H. A. Fitzsimmons.

Nov. 12, 1930	197.2	Dec. 11, 1956	206.65	May 7, 1957	205.12
Sept. 20, 1956	205.13	Mar. 26, 1957	207.75	June 7	204.47

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S1-59					
Owner: Leroy Jones.					
Dec. 13, 1956	207.26	May 7, 1957	200.78	July 10, 1957	203.72
Mar. 25, 1957	207.52	June 7	199.98		
Well S1-68					
Owner: Bill Johnson.					
Sept. 11, 1951	48.13	Sept. 17, 1956	52.87	June 5, 1957	54.02
Aug. 20, 1952	48.96	Dec. 13	52.93	July 10	53.98
Sept. 19, 1955	51.70	May 7, 1957	53.75		
Well S1-78					
Owner: Oak Grove Ranch.					
Dec. 13, 1956	112.70	May 7, 1957	113.64	July 10, 1957	113.70
Feb. 12, 1957	113.08	June 6	113.32		
Well S2-24					
Owner: Mrs. Geo. Gay.					
Nov. 1, 1928	136.0	Apr. 24, 1931	101.90	Dec. 20, 1932	93.50
Nov. 15	138.0	May 26	84.40	Sept. 18, 1933	92.65
July 14, 1930	105.15	June 26	78.55	July 29, 1935	91.35
Oct. 31	106.62	Dec. 3	109.15	Jan. 23, 1936	90.98
Dec. 10	96.40	Jan. 6, 1932	94.40	July 12, 1937	91.38
Jan. 15, 1931	106.60	May 6	106.10	Aug. 14	109.23
Feb. 9	91.40	July 3	97.40	Jan. 13, 1938	88.10
Mar. 3	87.00	Aug. 29	99.00	Aug. 18	104.82

(Continued on next page)

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S2-24--Continued					
Apr. 9, 1939	126.50	Aug. 9, 1942	102.83	Sept. 14, 1948	163.7
July 16	96.14	Aug. 12, 1943	140.29	Aug. 12, 1949	133.47
Aug. 13	97.69	Dec. 19	124.96	Aug. 16, 1950	152.73
Dec. 9	106.05	July 10, 1946	120.01	Oct. 5, 1954	141.62
Aug. 3, 1940	95.57	July 22, 1947	125.22		
Aug. 4, 1941	90.32	May 15, 1948	146.35		

Well S2-27

Owner: Mrs. J. A. McDonald.

Nov. 26, 1929	75.20	June 26, 1931	44.90	Jan. 23, 1936	49.45
Dec. 24	76.45	July 27	39.00	Aug. 27	56.74
Jan. 15, 1930	81.40	Sept. 29	39.60	July 13, 1937	47.37
Feb. 18	89.40	Dec. 3	66.45	Jan. 13, 1938	53.51
Mar. 20	100.70	Jan. 11, 1932	54.10	Aug. 19	52.09
Apr. 17	98.10	Feb. 4	61.35	Apr. 12, 1939	72.83
May 16	86.45	Mar. 22	56.60	Aug. 11	56.50
June 18	71.10	May 6	67.90	Dec. 8	54.43
July 14	65.15	July 5	56.30	Aug. 4, 1941	50.41
Sept. 23	79.55	Aug. 30	56.10	Aug. 10, 1942	52.42
Dec. 10	59.40	Dec. 20	52.20	Aug. 13, 1943	60.41
Feb. 9, 1931	56.10	Mar. 21, 1933	47.00	July 11, 1944	65.76
Mar. 3	49.60	Sept. 18	45.00	Aug. 11	65.50
Apr. 24	60.10	Mar. 11, 1935	56.55	July 24, 1945	64.43
June 4	46.70	July 30	51.40	July 11, 1946	68.66

(Continued on next page)

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S2-27--Continued					
July 24, 1947	68.07	Aug. 16, 1950	82.42	Sept.20, 1955	136.3
May 15, 1948	71.70	Sept.12, 1951	91.41	Sept.19, 1956	134.1
Aug. 11	73.30	Aug. 19, 1952	111.0	May 3, 1957	127.02
Sept.14	74.21	Sept. 9, 1953	114.2	June 10	129.94
Aug. 12, 1949	75.57	Oct. 5, 1954	117.8	July 11	130.55

Well S2-29					
Owner: H. Rouw.					
Oct. 2, 1929	87.80	Sept.29, 1931	60.90	Aug. 25, 1936	81.30
Dec. 17	84.50	Dec. 3	78.10	July 12, 1937	67.10
Feb. 18, 1930	92.4	Jan. 6, 1932	68.75	Aug. 14, 1937	78.11
May 16	89.00	Feb. 4	71.25	Jan. 13, 1938	66.10
July 14	74.60	Mar. 22	70.95	Aug. 18	73.24
Aug. 22	82.45	May 6	78.25	Apr. 8, 1939	79.59
Dec. 10	72.75	July 3	73.90	July 16	72.12
Jan. 15, 1931	79.70	Aug. 29	73.90	Aug. 12	73.74
Feb. 9	68.40	Dec. 20	70.05	Dec. 9	82.14
Mar. 3	64.30	Mar. 21, 1933	63.60	Aug. 3, 1940	68.29
Apr. 24	75.70	Sept.18	68.00	Aug. 4, 1941	68.55
May 26	62.50	Mar. 10, 1935	70.10	Aug. 9, 1942	72.58
June 26	59.65	July 29	68.20	Aug. 12, 1943	98.65
July 27	54.75	Jan. 23, 1936	65.48		

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S2-77					
Owner: Gordon Smith.					
Dec. 14, 1929	72.55	July 14, 1930	58.30	Sept. 18, 1932	38.40
Jan. 15, 1930	77.20	Dec. 3, 1931	59.45	Aug. 27, 1936	49.96
Feb. 18	85.85	May 6, 1932	60.95	July 13, 1937	40.61
Mar. 20	95.95	July 5	48.00	Aug. 15	51.60
May 16	79.55	Aug. 30	49.23		
June 18	62.90	Dec. 20	45.76		

Well S2-78					
Owner: -- McClendon.					
Dec. 7, 1929	190.75	May 26, 1931	157.65	July 29, 1935	153.15
Jan. 15, 1930	200.90	June 26	151.40	Jan. 23, 1936	153.95
Mar. 19	210.70	July 27	146.35	Aug. 25	159.61
Apr. 17	216.15	Sept. 29	149.30	July 12, 1937	151.54
May 16	193.60	Dec. 3	170.55	Aug. 14	164.84
June 18	186.70	Jan. 6, 1932	162.25	Jan. 13, 1938	156.04
July 14	174.65	Feb. 4	165.60	Aug. 19	157.24
Aug. 22	172.90	May 6	173.35	Apr. 8, 1939	170.41
Sept. 23	191.10	July 3	167.75	July 15	156.70
Oct. 31	173.50	Aug. 30	163.18	Aug. 15	158.02
Dec. 10	173.70	Dec. 20	158.30	Dec. 10	164.96
Jan. 15, 1931	181.45	Mar. 21, 1933	159.55	Aug. 3, 1940	145.23
Feb. 9	163.25	Sept. 18	153.00	Aug. 4, 1941	143.20
Apr. 4	175.70	Mar. 10, 1935	162.25	Aug. 10, 1942	159.77

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S2-78--Continued					
Aug. 12, 1943	184.11	Aug. 10, 1948	202.34	Sept. 20, 1955	268.10
Dec. 18	187.28	Sept. 15	211.97	Sept. 19, 1956	274.83
July 11, 1944	176.11	Aug. 12, 1949	185.17	Mar. 26, 1957	281.61
Aug. 12	190.57	Aug. 16, 1950	205.82	May 3	267.61
July 24, 1945	182.54	Sept. 11, 1951	246.30	June 7	262.90
July 10, 1946	176.47	Aug. 19, 1952	260.45	July 11	261.80
July 22, 1947	178.23	Sept. 9, 1953	278.25		
May 16, 1948	201.69	Oct. 5, 1954	257.65		

Well S2-86

Owner: D. J. Hill.

Nov. 1, 1928	133	July 27, 1931	126.15	Mar. 10, 1935	134.00
Nov. 15	137	Sept. 29	126.70	July 29	130.20
July 14, 1930	149.80	Dec. 3	143.80	Jan. 23, 1936	131.30
Aug. 22	150.90	Jan. 11, 1932	136.90	Aug. 27	137.50
Oct. 31	150.28	Mar. 22	146.00	Aug. 19, 1938	128.01
Dec. 10	146.00	May 6	149.30	July 16, 1939	126.54
Jan. 15, 1931	155.70	July 3	143.70	Aug. 15	127.33
Feb. 9	141.60	Aug. 30	141.80	Aug. 3, 1940	122.87
Apr. 24	149.70	Dec. 20	135.10	Aug. 4, 1941	121.67
June 26	131.00	Sept. 18, 1933	129.60		

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S2-91					
Owner: L. Zanbrecher.					
Dec. 13, 1929	153.40	July 3, 1932	141.50	Jan. 13, 1938	137.02
Jan. 15, 1930	154.00	Aug. 3	140.50	Aug. 19	137.06
Feb. 18	155.30	Dec. 20	140.50	Apr. 8, 1939	148.91
Mar. 19	156.70	Mar. 10, 1935	139.35	July 15	138.84
Apr. 17	156.20	July 29	139.10	Aug. 15	139.06
May 16	155.65	Jan. 23, 1936	138.00	Aug. 4, 1940	138.46
June 18	154.20	Aug. 27	138.50	Aug. 4, 1941	135.60
July 14	153.65	July 12, 1937	135.18		
Aug. 22	153.00	Aug. 15	135.53		

Well S2-94					
Owner: Catarina Farms Co.					
Dec. 10, 1929	190.70	Dec. 10, 1930	188.70	Mar. 21, 1933	176.90
Jan. 15, 1930	192.00	Jan. 15, 1931	189.90	Sept. 18	174.50
Feb. 18	191.70	Feb. 9	188.35	Mar. 10, 1935	172.95
Mar. 19	192.30	Mar. 3	187.10	July 29	174.20
Apr. 17	191.60	Jan. 11, 1932	193.70	Jan. 23, 1936	172.35
May 16	191.10	Feb. 4	190.60	July 12, 1937	171.63
June 19	189.60	Mar. 22	182.50	Aug. 14	171.78
July 14	189.50	May 6	187.60	Jan. 13, 1938	176.60
Aug. 22	189.80	July 3	181.90	Aug. 24	176.96
Sept. 23	192.30	Aug. 30	183.50	Aug. 15, 1939	176.01
Oct. 31	192.05	Dec. 20	177.30	Aug. 4, 1940	171.28

(Continued on next page)

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S2-94--Continued					
Aug. 4, 1941	168.84	July 10, 1946	193.04	Sept. 20, 1955	245.61
Dec. 18, 1943	195.55	Aug. 19, 1952	239.99	Sept. 19, 1956	269.77
Aug. 12, 1944	191.54	Sept. 9, 1953	252.87	Mar. 14, 1957	276.46
July 24, 1945	187.26	Oct. 13, 1954	244.44	June 11	279.83

Well S2-102

Owner: R. A. Smith.

Oct. 25, 1929	109.80	Apr. 4, 1932	119.55	Aug. 4, 1941	100.82
Nov. 19	119.90	May 6	119.00	Aug. 10, 1942	105.11
Feb. 18, 1930	140.80	July 5	116.75	Aug. 13, 1943	113.45
Mar. 19	148.50	Aug. 30	113.90	Dec. 18	114.77
May 16	133.60	Dec. 30	106.25	July 11, 1944	113.99
June 19	123.80	Mar. 21, 1933	100.00	Aug. 12	113.14
July 14	119.60	Sept. 18	100.00	July 21, 1945	112.55
Sept. 23	125.80	Mar. 11, 1935	106.45	July 10, 1946	112.45
Oct. 31	118.85	July 29	102.00	July 22, 1947	110.91
Feb. 9, 1931	112.10	Jan. 23, 1936	106.60	Aug. 10, 1948	113.60
Mar. 3	116.40	Aug. 27	114.32	Sept. 14	113.87
Apr. 24	120.20	July 13, 1937	110.14	Oct. 11	114.31
June 26	103.75	Jan. 13, 1938	107.48	Nov. 9	114.87
July 27	99.50	July 15, 1939	110.31	Dec. 23	115.52
Sept. 29	98.85	Aug. 15	110.08	Jan. 19, 1949	116.02
Jan. 11, 1932	105.10	Dec. 8	110.07	Mar. 4	115.59
Mar. 22	115.35	Aug. 3, 1940	103.80	Apr. 18	115.64

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S2-102--Continued					
May 11, 1949	115.37	Nov. 2, 1950	116.50	May 26, 1952	126.64
June 16	115.11	Dec. 8	116.36	June 25	126.85
July 16	114.73	Jan. 13, 1951	117.38	July 24	127.39
Aug. 13	114.58	Feb. 11	117.46	Aug. 19	127.99
Sept. 22	114.21	May 4	120.08	Aug. 22	127.99
Oct. 29	114.23	June 1	120.38	Sept. 25	129.02
Dec. 3	114.28	July 10	120.42	Oct. 23	129.80
Jan. 25, 1950	113.90	July 31	120.23	Sept. 9, 1953	137.94
Mar. 9	114.29	Sept. 11	123.31	Oct. 5, 1954	147.88
Apr. 6	115.02	Oct. 24	123.31	Sept. 20, 1955	143.77
May 2	115.05	Nov. 21	123.37	Sept. 19, 1956	146.04
June 7	115.16	Dec. 21	123.50	Feb. 12, 1957	154.17
July 10	115.18	Jan. 24, 1952	124.64	Mar. 26	157.65
Aug. 3	115.36	Feb. 22	124.81	July 30	153.50
Sept. 5	115.35	Mar. 26	125.06		
Oct. 3	115.34	Apr. 21	125.88		

Well S3-8

Owner: Catarina Farms Co.

Nov. 19, 1929	146.30	June 19, 1930	134.30	Mar. 3, 1931	122.85
Dec. 17	139.70	July 14	130.40	Apr. 24	139.10
Jan. 15, 1930	143.80	Aug. 22	130.45	June 4	118.75
Mar. 19	152.30	Sept. 23	135.15	June 26	114.60
Apr. 17	156.10	Dec. 10	131.25	Sept. 29	109.70
May 16	144.80	Feb. 9, 1931	124.10		

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S3-10					
Owner: H. H. Coffield.					
Dec. 17, 1929	83.50	Jan. 11, 1932	67.85	Aug. 15, 1939	73.96
Jan. 15, 1930	83.05	Feb. 4	67.90	Aug. 3, 1940	65.34
Feb. 18	86.40	Mar. 22	67.90	Aug. 4, 1941	64.59
Mar. 19	92.65	May 6	73.70	Aug. 10, 1942	72.84
June 19	83.50	July 5	72.80	Aug. 13, 1943	83.93
July 14	79.45	Aug. 30	71.75	July 7, 1944	88.87
Aug. 22	79.10	Dec. 20	67.70	Aug. 12	88.33
Feb. 9, 1931	74.30	Mar. 31, 1933	64.00	July 24, 1945	85.06
Mar. 3	71.10	Aug. 27, 1936	75.13	July 10, 1946	88.67
May 26	69.90	July 13, 1937	69.56	July 22	90.16
June 26	68.10	Aug. 14	72.73	May 14, 1948	107.94
July 27	65.75	Jan. 13, 1938	74.96	Sept. 16	102.03
Sept. 29	63.60	Aug. 25	83.09	Aug. 20, 1952	159.88
Dec. 3	69.95	July 16, 1939	76.36	Sept. 9, 1953	192.42

Well S3-16					
Owner: Catarina Farms Co.					
Dec. 20, 1932	113.34	Apr. 8, 1939	139.56	July 24, 1945	145.93
Aug. 27, 1936	137.80	July 15	132.41	July 10, 1946	143.62
July 13, 1937	128.24	Aug. 15	133.10	July 22, 1947	141.43
Aug. 14	134.82	Aug. 3, 1940	125.32	Sept. 16, 1948	152.53
Jan. 13, 1938	130.55	Aug. 4, 1941	124.59	Aug. 12, 1949	146.30
Aug. 25	132.64	Aug. 13	140.42		

Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S5-3					
Owner: Catarina Farms Co.					
Dec. 10, 1929	121.70	Dec. 3, 1931	106.35	July 16, 1939	102.88
Jan. 15, 1930	126.40	Jan. 11, 1932	102.15	Aug. 15	103.10
Feb. 18	128.90	Feb. 4	103.40	Aug. 4, 1940	96.62
June 19	126.20	Mar. 22	104.15	Aug. 4, 1941	94.21
July 14	122.70	May 6	111.80	Aug. 10, 1942	104.57
Aug. 22	117.75	July 3	110.50	Aug. 13, 1943	116.23
Sept. 23	118.25	Aug. 30	109.85	Dec. 18	131.24
Oct. 31	117.40	Dec. 20	103.90	July 7, 1944	119.40
Dec. 10	113.80	Mar. 21, 1933	97.50	Aug. 20	120.89
Jan. 15, 1931	118.40	Sept. 18	97.50	July 21, 1945	137.52
Feb. 9	112.10	Mar. 10, 1935	97.55	July 10, 1946	139.60
Mar. 3	107.50	July 29	98.10	July 22, 1947	137.95
Apr. 24	115.40	Jan. 23, 1936	97.75	May 15, 1948	143.55
May 26	109.00	July 13, 1937	97.19	Aug. 10	144.67
June 26	106.00	Aug. 14	99.34	Sept. 15	146.87
July 27	100.35	Jan. 13, 1938	102.39	Aug. 13, 1949	141.91
Sept. 29	96.65	Aug. 24	100.18	Aug. 15, 1950	147.78

Well S5-5

Owner: Catarina Farms Co.

Dec. 10, 1929	72.45	Mar. 19, 1930	74.20	June 19	74.60
Jan. 15, 1930	72.15	Apr. 17	75.60	July 14	73.85
Feb. 18	73.70	May 16	92.80	Aug. 22	72.70

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S5-5--Continued					
Sept.23, 1930	71.80	Mar. 21, 1933	64.50	July 10, 1946	80.03
Dec. 10	70.80	Sept.18	64.40	July 22, 1947	77.04
Feb. 9, 1931	70.15	Aug. 27, 1936	68.30	Aug. 10, 1948	81.95
Mar. 3	69.40	Aug. 14, 1937	62.67	Sept.16	80.82
Apr. 24	68.85	Aug. 24, 1938	63.72	Aug. 13, 1949	82.13
May 26	68.70	Aug. 15, 1939	66.24	Aug. 15, 1950	85.68
June 26	68.20	Aug. 4, 1940	65.98	Sept.11, 1951	100.50
July 27	67.00	Aug. 4, 1941	64.48	Aug. 19, 1952	107.98
Sept.29	65.00	Aug. 10, 1942	68.13	Sept. 9, 1953	119.80
Dec. 3	65.10	Aug. 13, 1943	75.07	Oct. 13, 1954	122.92
Jan. 11, 1932	65.00	Dec. 18	75.16	Mar. 26, 1957	147.67
Feb. 4	65.40	July 7, 1944	78.27	June 11	151.60
Aug. 30	67.20	Aug. 12	77.08	July 11	155.47
Dec. 20	65.60	July 24, 1945	75.87		

Well S5-10

Owner: Catarina Farms Co.

Dec. 11, 1929	85.90	Sept.23, 1930	93.65	June 26, 1931	83.65
Jan. 15, 1930	86.50	Oct. 31	92.20	July 27	81.20
Feb. 18	96.15	Dec. 10	89.05	Sept.29	77.80
Mar. 19	97.45	Jan. 15, 1931	91.25	Dec. 3	81.85
May 16	100.90	Feb. 9	88.85	Jan. 11, 1932	80.70
July 14	95.85	Mar. 3	85.75	Feb. 4	80.00
Aug. 22	94.10	Apr. 24	89.40	Mar. 22	79.90

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S5-10--Continued					
May 6, 1932	85.25	Aug. 14, 1937	78.79	Sept.16, 1948	104.37
July 3	85.75	Jan. 13, 1938	82.38	Aug. 13, 1949	102.40
Aug. 30	85.50	Aug. 24	79.48	Aug. 15, 1950	109.91
Dec. 20	79.64	July 16, 1939	83.71	Sept.11, 1951	132.98
Mar. 21, 1933	75.25	Aug. 15	81.87	Aug. 19, 1952	142.78
Sept.18	77.90	July 7, 1944	96.56	Sept. 9, 1953	159.35
July 29, 1935	77.15	Aug. 12	96.76	Sept.20, 1955	119.45
Jan. 23, 1936	76.90	July 24, 1945	95.34	Sept.19, 1956	102.45
Aug. 27	75.13	July 10, 1946	97.27		
July 12, 1937	75.89	July 22, 1947	96.13		

Well S6-2

Owner: R. H. Sims.

Dec. 11, 1920	69.0	Sept.19, 1956	83.98	June 11, 1957	84.54
Oct. 4, 1954	91.21	Feb. 12, 1957	84.65		
Sept.20, 1955	84.08	Mar. 26	84.77		

Well S6-4

Owner: O. V. Ray.

Apr. 17, 1928	38.80	Apr. 17, 1930	38.80	Sept.23, 1930	26.30
Nov. 1	23.0	May 16	33.15	Oct. 31	20.43
Nov. 15	20.0	June 19	24.90	Dec. 10	18.60
Jan. 15, 1930	24.65	July 14	23.80	Feb. 9, 1931	16.70
Mar. 19	37.20	Aug. 22	24.80	Mar. 3	14.00

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S6-4--Continued					
Apr. 24, 1931	20.80	Jan. 23, 1936	10.50	July 24, 1945	20.39
May 26	13.80	Aug. 27	17.92	July 10, 1946	20.62
June 26	12.00	July 13, 1937	7.84	July 22, 1947	19.86
July 27	7.30	Aug. 14	13.68	May 15, 1948	19.52
Sept. 29	7.10	Jan. 13, 1938	10.21	Aug. 10	21.80
Dec. 3	12.15	Aug. 25	11.04	Sept. 15	22.32
Jan. 11, 1932	9.60	July 15, 1939	9.84	Aug. 13, 1949	21.26
Feb. 4	11.60	Aug. 15	10.71	Aug. 15, 1950	25.7
Mar. 22	13.15	Dec. 8	9.39	Sept. 11, 1951	34.68
May 6	18.60	May 16, 1940	9.08	Aug. 19, 1952	37.62
July 3	17.75	Aug. 3	7.09	Sept. 9, 1953	45.70
Aug. 30	14.75	Aug. 4, 1941	7.00	Oct. 5, 1954	44.70
Dec. 20	8.38	Aug. 10, 1942	10.66	Sept. 20, 1955	34.96
Mar. 21, 1933	1.05	Aug. 13, 1943	21.25	Sept. 20, 1956	34.96
Mar. 10, 1935	10.10	July 7, 1944	22.55	Mar. 26, 1957	31.68
July 29	6.80	Aug. 12	21.57		

Well S6-5

Owner: C. E. Luker.

Oct. 21, 1929	50.48	Jan. 15, 1930	49.47	May 16, 1930	50.23
Nov. 4	50.48	Jan. 29	49.72	June 19	49.44
Nov. 5	50.34	Feb. 18	49.71	June 27	49.52
Nov. 20	50.61	Mar. 19	50.40	July 11	49.33
Dec. 26	49.51	Apr. 17	50.37	Aug. 22	41.12

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Table 9.-Water levels in wells in Dimmit County--Continued

Date	Water level	Date	Water level	Date	Water level
Well S6-5--Continued					
Sept.23, 1930	49.12	May 26, 1931	64.00	Mar. 21, 1933	55.70
Mar. 3, 1931	48.15	June 26	51.80	Sept.18	49.00
Apr. 24	48.33	July 3, 1932	54.30		

Well T1-5

Owner: Jack Bowman.

Jan. 6, 1930	3.50	Apr. 30, 1931	1.75	Aug. 5, 1941	2.58
Feb. 24	3.50	July 2, 1932	.71	Aug. 10, 1943	13.75
Apr. 22	6.80	Aug. 30	1.05	Aug. 10, 1944	14.42
May 21	6.90	Aug. 28, 1934	7.50	July 25, 1945	15.19
June 26	4.90	Aug. 25, 1936	8.15	July 10, 1946	17.48
July 18	4.05	July 30, 1937	4.05	July 22, 1947	16.45
Aug. 23	4.30	Aug. 17	9.19	May 14, 1948	25.77
Sept.24	4.85	Jan. 15, 1938	6.17	Sept.21	29.34
Oct. 31	3.80	Aug. 22	8.51	Aug. 13, 1949	28.01
Dec. 12	2.95	July 14, 1939	6.93	Aug. 15, 1950	38.65
Jan. 13, 1931	2.95	Aug. 11	7.95	Sept.12, 1951	64.34
Feb. 5	1.65	July 30, 1940	1.79		

Table 10.-Drillers' logs of wells in Dimmit County, Texas

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N7-40

Owner: Lynch Bros. Driller: Frank Kellogg.

Caliche and white sand----	25	25	Sand, medium-fine, yellow-----	24	76
Shale, gray and blue-----	27	52	Sand, coarse, water-----	112	188

Well N7-46

Owner: State of Texas. Driller: Cribbs and Davidson.

Soil-----	3	3	Lime-----	2	472
Clay-----	17	20	Sand, little water-----	13	485
Sand, yellow-----	20	40	Shale, blue-----	45	530
Gumbo, yellow-----	20	60	Sand, water-----	5	535
Gumbo, blue-----	37	97	Shale, brown-----	5	540
Coal-----	3	100	Sand, water-----	15	555
Shale, blue-----	127	227	Lime-----	5	560
Sand, water-----	10	237	Shale, brown-----	75	635
Coal-----	2	239	Sand, water-----	5	640
Shale, brown, sandy-----	16	255	Shale, brown-----	23	663
Shale, blue-----	20	275	Sand-----	1	664
Sand, water-----	25	300	Shale, brown-----	71	735
Shale, blue-----	44	344	Sand, water-----	15	750
Shale, brown-----	26	370	Shale, brown, sandy-----	30	780
Sand, water-----	37	407	Sand, hard-----	10	790
Shale, blue-----	53	460	Sand-----	55	845
Shale, brown-----	10	470	Iron and sand-----	15	860

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N7-46--Continued					
Sand, coarse-----	40	900	Sand and gumbo-----	102	1,022
Gumbo-----	20	920			

Well N7-51

Owner: Sam McKnight. Driller: Elmo Owens.

Soil-----	4	4	Gumbo, blue, with pyrites-----	67	165
Caliche-----	20	24	Sand, water-----	40	205
Sand, dry-----	70	94	Clay, blue-----	77	282
Sand, water-----	4	98			

Well N7-65

Owner: L. A. Warren. Driller: Elmo Owens.

Soil-----	7	7	Sand and clay-----	35	105
Sandrock-----	40	47	Sand, water-----	20	125
Sand, water-----	23	70	Sand, clay, and shale----	105	230

Well N7-66

Owner: J. A. Heyman. Driller: W. D. Morrison.

Soil and caliche-----	20	20	Sand, water-----	15	255
Sandrock, soft-----	35	55	Shale, brown-----	5	260
Shale, gray-----	15	70	Sand, water-----	20	280
Sand, water-----	145	215	Shale, brown-----	52	332
Shale, gray-----	25	240			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well N7-77					
Owner: Sam McKnight. Driller: W. D. Morrison.					
Soil-----	3	3	Shale, sandy-----	5	200
Clay-----	9	12	Shale, gray-----	15	215
Sandstone-----	61	73	Sand and shale; water----	37	252
Shale, blue-----	29	102	Shale, gray-----	38	290
Shale, gray, sandy-----	22	124	Shale, white-----	15	305
Sandstone, hard-----	3	127	Shale, gray-----	113	418
Sand, water-----	18	145	Shale, gray, sandy-----	2	420
Shale, gray-----	43	188	Shale, gray-----	16	436
Sandstone, hard-----	7	195			

Well N7-96

Owner: Central Securities Co. Driller: W. D. Morrison.

Soil-----	3	3	Shale, brown-----	2	120
Clay-----	5	8	Sand, water-----	4	124
Sandstone-----	32	40	Shale, brown-----	2	126
Sand-----	25	65	Sand, water-----	19	145
Shale, brown-----	15	80	Shale, sandy-----	20	165
Sand, water-----	16	96	Sand, water-----	13	178
Shale, brown-----	2	98	Shale, gray-----	54	232
Sand, water-----	12	110	Sand, water-----	8	240
Lignite-----	1	111	Shale, gray-----	32	272
Sand, water-----	7	118			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N7-148					
Owner: J. S. Myers. Driller: Petty Bros.					
Soil-----	1	1	Shale, blue-----	7	193
Clay, brown and sand-----	5	6	Shale, brown-----	5	198
Sand, brown-----	4	10	Shale, brown and coal----	7	205
Clay, white, sandy-----	12	22	Shale, brown-----	4	209
Sand, white, dry-----	20	42	Rock, gray-----	3	212
Clay, yellow, sandy; water-----	8	50	Sand, blue-----	14	226
Shale, blue-----	3	53	Shale, blue-----	3	229
Shale, brown, sandy-----	14	67	Sand, blue-----	11	240
Shale, blue, sandy-----	7	74	Shale, blue-----	10	250
Shale, brown, sandy-----	11	85	Shale, brown-----	3	253
Sand, blue, salt water----	8	93	Sand, blue-----	5	258
Coal and brown mud-----	3	96	Shale, blue, sandy-----	26	284
Shale, brown-----	10	106	Sand, blue, fine-----	15	299
Shale, brown, sandy-----	13	119	Shale, blue-----	1	300
Coal (lignite)-----	7	126	Sand, blue, fine-----	5	305
Shale, brown, sandy-----	2	128	Shale, brown-----	2	307
Shale, blue, sandy-----	6	134	Sand, blue, fine-----	38	345
Shale, blue-----	4	138	Sand, blue, medium-----	12	357
Shale, blue, sandy-----	30	168	Shale, brown-----	2	359
Shale, blue-----	4	172	Sand, blue, fine-----	8	367
Shale, blue, sandy-----	14	186	Shale, blue, sandy-----	25	392
			Granite, blue-----	5	397

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N7-151					
Owner: E. Goodwin. Driller: Petty Bros.					
Surface soil-----	2	2	Shale, blue-----	12	160
Clay, yellow-----	17	19	Shale, brown-----	45	205
Clay, yellow, sandy-----	17	36	Shale, blue, sandy-----	7	212
Shale, dark-brown-----	6	42	Sand, gray-----	16	228
Shale, blue-----	24	66	Shale, blue, sandy-----	18	246
Shale, brown-----	6	72	Shale, brown-----	12	258
Shale, blue, sandy-----	20	92	Shale, blue-----	32	290
Sand, blue, salty-----	22	114	Sand-----	65	355
Shale, brown-----	34	148			

Well N7-153

Owner: -- Risinger. Driller: Petty Bros.

Soil-----	1	1	Shale, blue, sandy-----	32	83
Clay, yellow-----	4	5	Sand, light-blue-----	22	105
Sand, yellow-----	19	24	Sand, coarse, gray-----	17	122
Sand, gray-----	4	28	Sand, light-blue-----	46	168
Clay, yellow-----	18	46	Sand, hard, blue-----	3	171
Rock, brown-----	3	49	Shale, dark-brown-----	11	182
Coal-----	2	51	Shale, light-brown-----	33	215

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N7-156					
Owner: Ben Fleming. Driller: --					
Topsoil-----	1	1	Sand, water-----	27	162
Dirt, Badger-----	4	5	Shale, brown, sandy-----	36	198
Sandrock, yellow-----	15	20	Shale, brown-----	7	205
Sand, dry-----	32	52	Shale, brown, sandy-----	20	225
Shale, gray-----	5	57	Sand, water-----	15	240
Shale, brown-----	28	85	Shale, brown-----	35	275
Shale, brown, sandy-----	50	135			

Well N7-157					
Owner: H. Rouw. Driller: I. C. Cribbs.					
Sand, soil-----	3	3	Shale, white-----	30	300
Caliche-----	47	50	Sand, white, sweet-----	12	312
Shale, blue-----	90	140	Shale, white-----	18	330
Shale, sandy-----	10	150	Shale, brown-----	10	340
Shale, brown-----	50	200	Sand, water-----	10	350
Shale, blue-----	40	240	Gumbo-----	15	365
Sand, little sweet water--	20	260	Sand-----	200	565
Shale, brown-----	10	270			

Well N7-159					
Owner: H. Rouw. Driller: I. C. Cribbs.					
Soil-----	5	5	Shale, black, and lignite-----	35	75
Clay, yellow, and caliche-	35	40	Shale, blue-----	5	80

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N7-159--Continued					
Shale, sandy-----	10	90	Shale, gray-----	20	340
Shale, blue-----	60	150	Sand, some water-----	10	350
Shale, sandy-----	5	155	Shale-----	10	360
Shale, gray-----	95	250	Sand, fresh water-----	10	370
Sand, some water-----	15	265	Gumbo, brown-----	40	410
Shale, sandy, fresh water-	25	290	Sand, broken-----	40	450
Sand, broken-----	20	310	Sand, coarse-----	90	540
Shale, brown-----	10	320	Shale, blue-----	60	600

Well N7-160

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	4	4	Sand-----	10	260
Caliche, hard-----	3	7	Shale-----	25	285
Caliche, yellow-----	43	50	Sand-----	15	300
Shale, blue-----	50	100	Shale, blue-----	15	315
Shale, brown-----	20	120	Shale, brown-----	10	325
Shale, blue-----	30	150	Shale, blue-----	25	350
Shale, sandy, little water-----	10	160	Shale, brown-----	15	365
Shale, blue-----	20	180	Shale, sandy, little fresh water-----	5	370
Sand, salty water-----	10	190	Shale, brown-----	70	440
Shale, sandy-----	30	220	Sand, fresh water-----	10	450
Shale, blue-----	30	250	Gumbo, brown-----	60	510

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N7-160--Continued

Sand-----	140	650	Sand-----	20	700
Sand, loose-----	30	680	Gumbo, gray-----	8	708

Well N7-161

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	4	4	Shale, sandy-----	30	370
Caliche-----	8	12	Sand, dry-----	10	380
Rock-----	3	15	Sand-----	115	495
Clay, yellow-----	35	50	Gumbo-----	20	515
Shale, dark-----	30	80	Sand, loose-----	5	520
Shell, hard-----	5	85	Shale, blue-----	5	525
Shale, blue-----	145	230	Sand, loose-----	50	575
Shell, hard-----	5	235	Sand-----	15	590
Shale, blue-----	65	300	Shale, blue-----	20	610
Shale, brown-----	40	340			

Well N7-162

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	4	4	Shale, gray-----	25	285
Clay, yellow-----	36	40	Sand, salty-----	5	290
Shale, blue-----	60	100	Shale, brown-----	30	320
Sand, little water-----	5	105	Gumbo, brown-----	92	412
Shale, blue-----	135	240	Sand, fresh water-----	150	562
Shale, brown-----	20	260	Gumbo, brown-----	8	570

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N7-164

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	4	4	Sand-----	155	305
Caliche-----	11	15	Gumbo-----	25	330
Shale, blue-----	25	40	Sand, gray-----	40	370
Shale, brown-----	30	70	Shale, gray-----	25	395
Shale, blue-----	80	150			

Well N7-165

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	4	4	Shale, sandy-----	30	230
Caliche, hard-----	6	10	Sand, water-----	20	250
Clay, yellow-----	40	50	Shale, light-----	25	275
Shale, brown-----	50	100	Shale, brown-----	5	280
Shale, blue-----	80	180	Sand-----	135	415
Sand, water-----	20	200	Gumbo, brown-----	12	427

Well N7-166

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	3	3	Shale, brown-----	10	100
Caliche-----	27	30	Shale, blue-----	60	160
Shale, blue-----	25	55	Sand-----	100	260
Sand, rainy weather seep; fresh water, 1,000 gpd-----	10	65	Shale, gray-----	25	285
Shale, blue-----	25	90	Sand, gray and shale-----	65	350

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N7-167					
Owner: H. Rouw. Driller: I. C. Cribbs.					
Soil-----	2	2	Shale, blue-----	10	200
Sandrock-----	8	10	Shale, sandy-----	10	210
Caliche-----	10	20	Shale, white-----	30	240
Shale, blue-----	20	40	Shale, broken-----	50	290
Shale, brown-----	50	90	Sand-----	30	320
Shale, blue-----	30	120	Shale-----	50	370
Shale, brown-----	40	160	Sand-----	101	471
Shale, sandy-----	30	190			

Well N7-168

Owner: H. Rouw. Driller: I. C. Cribbs.

Caliche-----	35	35	Shale, blue-----	25	295
Shale, brown-----	45	80	Shale, brown, sandy-----	13	308
Shale, blue-----	50	130	Sand, coarse-----	22	330
Shale, sandy-----	45	175	Gumbo-----	25	355
Shale, blue-----	15	190	Sand-----	30	385
Shale, gray-----	10	200	Sand, broken-----	5	390
Shale, brown-----	10	210	Sand-----	40	430
Shale, sandy-----	20	230	Gumbo, brown-----	48	478
Sand-----	40	270			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well N7-169

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	5	5	Shale, sandy-----	20	180
Clay, yellow-----	15	20	Shale, blue-----	27	207
Sand, yellow, water-----	15	35	Sand-----	173	380
Shale, blue-----	55	90	Gumbo-----	10	390
Shale, brown-----	70	160	Sand, broken, and gumbo--	66	456

Well N7-170

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	4	4	Shale, sandy-----	10	224
Caliche-----	8	12	Sand, water-----	4	228
Sand, yellow-----	13	25	Shale, brown-----	62	290
Shale, dark-----	55	80	Shale, sandy-----	10	300
Shale, brown-----	20	100	Sand-----	10	310
Shale, blue-----	20	120	Sand, broken-----	10	320
Shale, sandy-----	35	155	Sand-----	75	395
Sand, little water-----	10	165	Shale, sandy-----	15	410
Shale, blue-----	35	200	Gumbo, brown-----	5	415
Shale, sandy-----	12	212	Shale, blue-----	45	460
Shell, hard-----	2	214			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N7-173

Owner: City of Carrizo Springs. Driller: Elmo Owens.

Caliche-----	20	20	Sand-----	137	255
Sand, dry-----	92	112	Shale, gray, tight sand--	15	270
Shale-----	3	115	Sand-----	55	325
Rock-----	3	118	Sand, bottom of well-----	13	338

Well N7-175

Owner: Quality Vegetable Growers. Driller: R. B. Owens.

Topsoil-----	2	2	Rock-----	1	35
Caliche-----	2	4	Sandrock-----	75	110
Sandrock, white-----	19	23	Sand, water-----	130	240
Clay, yellow-----	11	34	Shale, blue-----	10	250

Well N7-177

Owner: -- Bennett. Driller: R. B. Owens.

Topsoil-----	2	2	Shale, sandy-----	10	150
Sandrock, yellow-----	38	40	Shale, gray-----	40	190
Shale, sandy-----	15	55	Shale, sandy-----	30	220
Rock, blue-----	3	58	Shale, gray-----	40	260
Shale, brown-----	12	70	Sand, water-----	5	265
Shale, sandy-----	30	100	Shale, brown-----	15	280
Shale, brown-----	20	120	Sand, water-----	90	370
Shale, sandy-----	10	130	Shale, blue-----	20	390
Sand, water-----	10	140	Sand, water-----	10	400

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well N7-198

Owner: Quality Vegetable Growers. Driller: R. B. Owens.

Topsoil-----	3	3	Sand, water, tight-----	16	170
Clay, yellow-----	27	30	Shale, brown-----	35	205
Sandrock-----	48	78	Sand-----	85	290
Shale, sandy-----	45	123	Shale, blue-----	5	295
Sand, water-----	6	129	Sand-----	30	325
Shale, sandy-----	25	154			

Well N7-203

Owner: J. B. & L. S. Catlett. Driller: R. B. Owens.

Topsoil-----	1	1	Rock-----	2	242
Clay, yellow-----	17	18	Shale, gray, sandy-----	19	261
Clay, gray-----	12	30	Sand, water-----	14	275
Clay, yellow-----	13	43	Shale, gray, sandy-----	30	305
Rock-----	1	44	Shale, blue and sandy, with breaks-----	15	320
Sandrock-----	42	86	Shale, gray, sandy-----	27	347
Rock-----	2	88	Sand-----	103	450
Shale, gray-----	47	135	Shale, brown-----	2	452
Shale, brown, sandy-----	40	175	Sand-----	38	490
Shale, sandy with seep----	5	180	Shale, blue-----	6	496
Shale, brown, sandy-----	11	191			
Shale, gray, sandy-----	49	240			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well N7-204					
Owner: J. B. & L. S. Catlett. Driller: R. B. Owens.					
Topsoil-----	2	2	Shale, brown, sandy-----	10	240
Clay, yellow-----	13	15	Rock-----	1	241
Sandrock-----	7	22	Shale, brown-----	24	265
Clay, gray-----	23	45	Sand, water-----	5	270
Shale, gray-----	10	55	Shale, brown-----	25	295
Shale, brown, sandy-----	51	106	Shale, blue-----	23	318
Shale, gray, sandy-----	19	125	Shale, brown-----	16	334
Shale, brown, sandy-----	35	160	Shale, sandy-----	9	343
Shale, gray, sandy-----	5	165	Sand, water-----	211	554
Shale, brown, sandy-----	45	210	Shale, blue-----	8	562
Shale, brown-----	20	230			

Well N7-205					
Owner: J. B. Catlett. Driller: R. B. Owens.					
Topsoil-----	1	1	Shale, gray-----	5	175
Sandrock-----	25	26	Sand, water-----	6	181
Shale, gray-----	6	32	Shale, sandy-----	19	200
Shale, gray, sandy-----	17	49	Sand, water-----	7	207
Rock-----	2	51	Shale, brown-----	25	232
Shale, gray-----	34	85	Shale, gray-----	26	258
Shale, brown-----	20	105	Shale, sandy-----	12	270
Shale, sandy-----	65	170	Shale, brown-----	12	282

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N7-205--Continued

Sand, water-----	7	289	Sand, water-----	124	445
Shale, brown-----	13	302	Shale, blue-----	10	455
Shale, sandy-----	19	321			

Well N7-207

Owner: J. B. Catlett. Driller: R. B. Owens.

Topsoil-----	2	2	Shale, brown-----	23	155
Caliche and clay-----	7	9	Sand, water-----	5	160
Clay, yellow-----	14	23	Shale, sandy-----	10	170
Sandrock, yellow-----	11	34	Sand, water-----	6	176
Shale, gray, sandy-----	58	92	Shale, gray-----	11	187
Shale, brown-----	6	98	Rock-----	1	188
Shale, brown, sandy-----	10	108	Shale, gray-----	39	227
Rock-----	2	110	Shale, gray, sandy-----	53	280
Shale, brown-----	10	120	Sand, water-----	50	330
Shale, gray, sandy-----	12	132	Shale, blue-----	15	345

Well N7-208

Owner: J. B. Catlett. Driller: R. B. Owens.

Topsoil-----	1	1	Shale, brown-----	9	74
Caliche-----	8	9	Rock-----	1	75
Sandrock-----	18	27	Shale, brown-----	10	85
Shale, sandy-----	28	55	Sand, tight, water-----	19	104
Shale, blue-----	10	65	Shale, brown-----	45	149

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N7-208--Continued

Rock-----	1	150	Sand, water-----	43	300
Shale, blue-----	26	176	Shale, blue-----	18	318
Shale, sandy-----	49	225	Shale, brown-----	12	330
Shale, sandy, and sand, water, breaks-----	32	257	Shale, blue-----	70	400

Well N7-209

Owner: Quality Vegetable Growers. Driller: R. B. Owens.

Topsoil-----	2	2	Shale, brown-----	9	65
Caliche-----	3	5	Shale, sandy-----	20	85
Clay, yellow-----	19	24	Sand, water-----	27	112
Rock-----	2	26	Shale, brown-----	26	138
Sandrock-----	12	38	Shale, sandy-----	17	155
Shale, blue-----	7	45	Sand, water-----	130	285
Shale, sandy-----	11	56	Shale, blue-----	5	290

Well N7-210

Owner: Quality Vegetable Growers. Driller: R. B. Owens.

Topsoil-----	2	2	Shale, sandy-----	20	75
Caliche-----	8	10	Sand, water-----	28	103
Shale, blue-----	7	17	Shale, brown-----	42	145
Rock-----	2	19	Sand, water-----	140	285
Shale, gray-----	16	35	Shale, blue-----	15	300
Sandrock-----	20	55			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)		Thickness (feet)		Depth (feet)	
Well N7-211							
Owner: Quality Vegetable Growers. Driller: R. B. Owens.							
Topsoil-----	1	1	Shale, dark-brown-----	9	124		
Caliche-----	5	6	Shale, brown, sandy-----	6	130		
Sandrock-----	19	25	Sand-----	108	238		
Shell, brown-----	11	36	Shale, blue-----	72	310		
Shell, brown, sandy-----	24	60	"Indio formation"-----	35	345		
Shale, yellow, sandy-----	10	70	Shale, brown-----	7	352		
Shale, brown, sandy-----	25	95	"Indio formation"-----	50	402		
Shale, brown-----	5	100	Shale, blue-----	6	408		
Shale, brown, sandy-----	15	115					
Well N7-212							
Owner: Quality Vegetable Growers. Driller: R. B. Owens.							
Topsoil-----	2	2	Shale, sandy-----	5	185		
Caliche-----	3	5	Sand-----	70	255		
Clay, yellow-----	23	28	Shale, blue-----	12	267		
Sandrock-----	26	54	Sand-----	43	310		
Shale, brown-----	18	72	Shale, brown-----	16	326		
Sandrock-----	33	105	Sand-----	35	361		
Shale, sandy-----	12	117	Shale, brown-----	2	363		
Sand, water-----	63	180					

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N7-213

Owner: Quality Vegetable Growers. Driller: R. B. Owens.

Topsoil-----	1	1	Rock-----	1	76
Caliche-----	8	9	Shale, gray-----	9	85
Clay, yellow-----	11	20	Shale, sandy-----	35	120
Sandrock-----	9	29	Sand, water-----	10	130
Shale, brown-----	11	40	Shale, sandy-----	10	140
Shale, sandy-----	12	52	Sand, water-----	145	285
Rock-----	1	53	Shale, blue, breaks, and sand-----	10	295
Shale, sandy-----	9	62	Shale, blue-----	5	300
Shale, gray-----	13	75			

Well N7-214

Owner: Quality Vegetable Growers. Driller: R. B. Owens.

Topsoil-----	2	2	Shale, brown, sandy-----	22	97
Sandrock-----	6	8	Shale, gray, sandy-----	8	105
Clay, gray-----	14	22	Sand, dry-----	37	142
Shale, brown, sandy-----	13	35	Sand-----	72	214
Shale, gray, sandy-----	15	50	Shale, blue-----	26	240
Shale, brown-----	8	58	Shale, brown-----	10	250
Shale, gray, sandy-----	17	75			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N7-215

Owner: Quality Vegetable Growers. Driller: R. B. Owens.

Topsoil-----	2	2	Sand, water-----	25	145
Caliche-----	3	5	Shale, blue-----	5	150
Clay, yellow-----	25	30	Sand-----	25	175
Sand, dry-----	90	120	Shale, blue-----	100	275

Well N7-225

Owner: City of Carrizo Springs. Driller: R. B. Owens.

Topsoil-----	2	2	Shale, brown, sandy, with breaks-----	21	191
Sandrock-----	4	6	Shale, gray-----	6	197
Sand, dry-----	69	75	Shale, brown-----	8	205
Sand, water-----	2	77	Shale, gray-----	77	282
Sand, brown-----	3	80	Sand, brown, water-----	56	338
Shale, sandy-----	3	83	Sand-----	36	374
Shale, brown-----	4	87	Shale, brown, sandy, with breaks-----	11	385
Shale, brown, sandy-----	6	93	Sand, tight, water-----	15	400
Shale, gray, sandy-----	10	103	Shale, blue-----	15	415
Sand, tight, water-----	8	111	Sand, tight, water-----	17	432
Shale, brown, sandy-----	3	114	Shale, brown-----	14	446
Shale, brown-----	4	118	Shale, gray-----	14	460
Shale, brown, sandy-----	6	124			
Shale, brown-----	46	170			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well N7-227					
Owner: Bill Moats. Driller: R. B. Owens.					
Topsoil-----	2	2	Water, bad-----	6	74
Sandrock-----	13	15	Shale, gray-----	5	79
Shale, brown-----	20	35	Rock-----	2	81
Shale, sandy-----	18	53	Shale, sandy-----	32	113
Water, bad-----	5	58	Sand, water-----	127	240
Shale, gray-----	5	63	Shale, brown-----	14	254
Shale, sandy-----	5	68			

Well N7-229					
Owner: City of Carrizo Springs. Driller: R. B. Owens.					
Topsoil-----	3	3	Shale, gray, sandy-----	30	150
Clay, white and yellow----	22	25	Sand, water, small yield-	23	173
Shale, blue-----	35	60	Shale, gray, sandy-----	12	185
Shale, gray, sandy-----	20	80	Sand-----	112	297
Sand, water seep-----	7	87	Shale, light-brown, sandy (hard)-----	53	350
Shale, gray, sandy-----	19	106	Shale, blue-----	5	355
Shale, brown, sandy-----	14	120			

Well N7-230					
Owner: Nick Castellanos. Driller: R. B. Owens.					
Topsoil-----	3	3	Shale, gray, sandy, and brown sandy shale-----	155	183
Clay, yellow, seep of bad water-----	25	28	Sand-----	113	296
			Shale, brown-----	6	302

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N7-231				
Owner: City of Carrizo Springs. Driller: R. B. Owens.				
Topsoil-----	1	1	Shale, blue-----	2 189
Clay, red-----	3	4	Shale, brown-----	2 191
Clay and yellow sandrock, seep of bad water-----	16	20	Shale, brown, sandy-----	41 232
Clay and brown sandrock---	5	25	Sand, water-----	25 257
Shale, brown, sandy-----	23	48	Shale, brown-----	18 275
Sand, dry-----	96	144	Shale, gray-----	22 297
Sand, water-----	30	174	Shale, gray, sandy-----	26 323
Shale, gray, sandy-----	13	187	"Indio formation"-----	9 332
			Shale, gray-----	23 355

Well N7-232

Owner: City of Carrizo Springs. Driller: R. B. Owens.

Topsoil-----	2	2	Shale, brown-----	7 285
Clay and gray shale-----	3	5	Shale, blue-----	49 334
Caliche and yellow sand---	13	18	Shale, brown-----	57 391
Sand, dry-----	110	128	Shale, brown sandy-----	9 400
Shale, brown-----	88	216	Sand-----	12 412
Sand, water-----	62	278	Gumbo, brown and blue----	32 444

Well N7-237

Owner: Edward Gardner. Driller: R. B. Owens.

Topsoil-----	6	6	Shale, gray, sandy-----	15 45
Clay, yellow and sandrock-	24	30	Clay, gray-----	13 58

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N7-237--Continued					
Shale, brown-----	12	70	Sand, water-----	8	423
Shale, gray-----	33	103	Shale, sandy, break in water sand-----	22	445
Shale, brown, sandy with salt seep-----	42	145	Shale, brown, break in water sand-----	27	472
Shale, gray, sandy-----	50	195	Sand, water-----	67	539
Shale, brown, sandy, with salt seep-----	15	210	Shale, brown-----	9	548
Shale, gray, sandy-----	25	235	Shale, sandy-----	9	557
Shale, brown-----	10	245	Shale, brown-----	37	594
Shale, gray, sandy-----	15	260	Sand-----	6	600
Sand, water-----	5	265	Shale, brown-----	17	617
Shale, gray-----	10	275	Shale, gray-----	4	621
Shale, sandy-----	10	285	Shale, gray, sandy-----	3	624
Sand, water-----	87	372	Sand-----	33	657
Shale, gray-----	10	382	Sand and brown shale breaks-----	41	698
Shale, sandy, and sand with breaks-----	20	402	Shale, brown, sandy-----	22	720
Shale, brown, break in water sand-----	13	415			

Well N7-239

Owner: H. Rouw. Driller: I. Cribbs.

Topsoil-----	4	4	Caliche, white-----	20	40
Clay, yellow-----	11	15	Caliche, yellow-----	30	70
Sand, water-----	5	20	Shale, blue-----	130	200

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well N7-239--Continued					
Shale, brown-----	30	230	Shale, blue-----	40	520
Shale, blue-----	40	270	Shale, brown-----	10	530
Shale, sandy-----	60	330	Shale, sandy-----	10	540
Shale, brown-----	10	340	Shale, gray-----	62	602
Shale, blue-----	40	380	Sand-----	68	670
Shale, brown, sandy-----	20	400	Gumbo-----	20	690
Shale, blue-----	40	440	Sand-----	92	782
Shale, brown-----	25	465	Shale, and gumbo-----	8	790
Shale, sandy-----	15	480			

Well N7-242

Owner: E. R. Byrd. Driller: I. Cribbs.

Soil-----	3	3	Shale, brown-----	20	500
Clay, yellow-----	62	65	Shale, blue-----	150	650
Shale, blue-----	165	230	Shale, brown-----	50	700
Shale, brown-----	60	290	Shale, blue-----	83	783
Sand, fresh water-----	10	300	Sand-----	81	864
Shale, light-blue-----	50	350	Shale-----	14	878
Sand, water-----	5	355	Sand-----	82	960
Shale, blue-----	60	415	Gumbo-----	5	965
Shale, sandy-----	20	435	Sand-----	78	1,043
Shale, blue-----	45	480			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N7-246

Owner: W. S. Myers Estate. Driller: R. B. Owens.

Topsoil-----	3	3	Shale, brown-----	25	205
Sand, dry-----	142	145	Shale, gray-----	21	226
Shale, brown-----	25	170	Sand-----	22	248
Shale, sandy, with seep---	10	180	Sand, with shale breaks--	24	272

Well N8-43

Owner: A. N. Box. Driller: Frank Kellogg.

Soil-----	24	24	Clay, blue-----	30	160
Quicksand-----	6	30	Sand, salt water-----	8	168
Clay, blue-----	50	80	Clay, blue-----	203	371
Sand, salt water-----	2	82	Sand, fine to gradually coarse-grained-----	87	458
Clay, blue-----	46	128	Clay, bluish-gray, tough-	18	476
Sand, salt water-----	2	130	Sand, coarse-grained-----	46	522

Well N8-102

Owner: Jack Bowman. Driller: Layne-Texas Co.

Soil-----	15	15	Sand, water-----	13	268
Sand and gravel, water----	15	30	Shale, hard, sandy-----	102	370
Sand-----	25	55	Sand, hard-----	20	390
Shale, blue-----	120	175	Shale, blue-----	30	420
Quicksand; salt water-----	73	248	Sand, hard-----	20	440
Shale, blue-----	7	255	Shale, brown-----	20	460

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N8-102--Continued					
Shale, sandy-----	35	495	Sand, water-----	9	989
Rock, lime, hard-----	10	505	Shale, blue-----	46	1,035
Shale, sandy-----	55	560	Sand, water-----	7	1,042
Shale, blue-----	32	592	Shale, blue-----	8	1,050
Shale, sandy-----	10	602	Sand, water-----	10	1,060
Shale, soft, gray-----	16	618	Shale, blue-----	3	1,063
Shale, hard, sandy-----	67	685	Sand, water-----	7	1,070
Sand, water-----	85	770	Shale, blue-----	35	1,105
Gumbo-----	20	790	Sand, water-----	60	1,165
Sand, water-----	5	795	Shale, blue-----	10	1,175
Shale, blue-----	15	810	Shale, sandy-----	22	1,197
Shale, sandy, gray-----	57	867	Sand, water-----	8	1,205
Shale, blue-----	23	890	Shale, blue-----	5	1,210
Sand, water-----	55	945	Sand, water-----	7	1,217
Shale, blue-----	10	955	Shale, blue-----	7	1,224
Shale, sandy-----	25	980			

Well N8-104

Owner: Hiram G. Hines. Driller: G. A. Petty.

Soil-----	1	1	Sand and rock, blue-----	2	56
Clay, yellow-----	2	3	Shale, sandy, blue-----	18	74
Clay, sandy, yellow-----	46	49	Soapstone, blue-----	5	79
Sand, and gravel, yellow; salt water-----	5	54	Shale, sandy, blue-----	8	87

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
Well N8-104--Continued			
Shale, blue-----	27	114	Boulders, blue----- 2 400
Shale, brown-----	7	121	Shale, brown----- 5 405
Sand, gray, salt water----	6	127	Shale, blue----- 10 415
Shale, brown-----	8	135	Boulders, blue----- 1 416
Shale, sandy, blue-----	16	151	Shale, blue----- 18 434
Rock and pyrites-----	2	153	Rock and pyrite----- 1 435
Shale, blue, sandy-----	28	181	Sand, coarse, white----- 5 440
Shale, brown-----	2	183	Shale, sandy, blue----- 11 451
Shale, blue-----	13	196	Sand, fine, white----- 12 463
Sand, blue; salt water----	13	209	Shale, brown----- 4 467
Rock, blue, hard-----	5	214	Sand, fine, white----- 18 485
Sand, salty, blue-----	26	240	Shale, blue----- 7 492
Shale, blue-----	11	251	Sand, fine, white----- 16 508
Rock, blue-----	1	252	Sand, medium, white----- 43 551
Shale, sandy, blue-----	33	285	Sand, coarse, white----- 10 561
Shale, blue-----	27	312	Pyrite, coal and coarse sand----- 7 568
Shale, brown-----	25	337	Sand, medium, white----- 9 577
Shale, sandy, brown-----	61	398	Shale, brown----- 5 582

Well N8-106

Owner: R. Rodriguez. Driller: Petty Bros.

Soil-----	1	1	Clay, white (caliche)---- 6 9
Clay, yellow-----	2	3	Sand, fine, yellow, water----- 10 19

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N8-106--Continued					
Clay, sandy, yellow-----	19	38	Shale, sandy, brown-----	14	237
Mud, blue-----	3	41	Shale, sandy, blue-----	33	270
Sand, blue-----	15	56	Boulders, blue granite---	2	272
Shale, sandy, blue-----	21	77	Shale, blue, sandy-----	20	292
Shale, light-brown-----	14	91	Sand, white-----	12	304
Sand, blue-----	3	94	Shale, brown-----	10	314
Shale, sandy, blue-----	10	104	Sand, white-----	21	335
Shale, dark-brown-----	4	108	Sand, fine, white-----	53	388
Shale, sandy, blue-----	26	134	Sand, coarse, white-----	58	446
Shale, sandy, gray-----	38	172	Soapstone, blue-----	4	450
Rock and blue mud-----	51	223			

Well N8-124

Owner: -- Wagner. Driller: I. Cribbs.

Soil-----	6	6	Shale, blue-----	75	375
Clay, yellow, water-----	9	15	Shale, brown-----	10	385
Clay, yellow-----	65	80	Shale, blue-----	115	500
Sand, water-----	30	110	Shale, brown-----	50	550
Shale, brown-----	10	120	Shale, blue-----	130	680
Shale, blue-----	80	200	Sand, broken-----	20	700
Shale, brown-----	10	210	Shale, blue-----	80	780
Shale, blue-----	65	275	Shale, sandy-----	20	800
Sand, water-----	25	300	Shale, brown-----	70	870

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N8-124--Continued

Shale, sandy-----	40	910	Sand-----	200	1,140
Sand, hard-----	10	920	Gumbo-----	5	1,145
Shale, sandy-----	20	940			

Well N8-136

Owner: Adolph Fehlis. Driller: I. Cribbs.

Sand, brown-----	10	10	Shale, gray-----	10	470
Sand, yellow, water-----	15	25	Shale, sandy-----	45	515
Clay, yellow-----	35	60	Shale, brown-----	5	520
Shale, blue-----	90	150	Shale, blue-----	10	530
Shale, brown-----	20	170	Gumbo, brown-----	30	560
Shale, blue-----	75	245	Shale, sandy-----	50	610
Shell, hard-----	5	250	Shale, blue-----	50	660
Shale, blue-----	20	270	Sand, hard-----	28	688
Shale, sandy, little salt water-----	5	275	Gumbo, brown-----	12	700
Shale, blue-----	115	390	Sand, loose-----	70	770
Sand, fresh water-----	25	415	Shell, hard-----	5	775
Shale, blue-----	35	450	Shale, break-----	20	795
Shale, brown-----	10	460	Gumbo, brown-----	25	820
			Sand and gumbo-----	80	900

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N8-137					
Owner: Bill Simpson. Driller: I. Cribbs.					
Soil, yellow-----	30	30	Sand, fresh water-----	20	620
Sand and clay, water-----	44	74	Shale, blue-----	80	700
Shale, blue-----	166	240	Shale, brown-----	30	730
Shale and sand, water-----	40	280	Shale, light-----	90	820
Shale, blue-----	50	330	Sand-----	30	850
Shale, brown-----	10	340	Shale-----	35	885
Shale, sandy, water-----	10	350	Sand-----	115	1,000
Shale, blue-----	150	500	Sand, broken-----	20	1,020
Sand, water-----	20	520	Sand-----	87	1,107
Shale, blue-----	80	600			

Well N8-139

Owner: O. E. Bookout. Driller: I. Cribbs.

Soil-----	10	10	Shale, brown-----	30	430
Clay, yellow-----	60	70	Shale, blue-----	70	500
Shale, blue-----	80	150	Sand, water-----	10	510
Sand, water-----	50	200	Shale, blue-----	90	600
Gumbo, blue-----	24	224	Shale, sandy-----	10	610
Gumbo, brown-----	51	275	Shale, blue-----	30	640
Shale, blue-----	75	350	Shale, brown-----	15	655
Shell, hard-----	2	352	Shell, hard-----	15	670
Shale, blue-----	48	400	Sand-----	10	680

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N8-139--Continued

Shale, sandy-----	37	717	Sand, broken-----	43	780
Gumbo-----	20	737	Sand and brown gumbo-----	180	960

Well N8-141

Owner: O. E. Bookout. Driller: I. Cribbs.

Soil-----	10	10	Sand, water-----	10	510
Clay, yellow-----	60	70	Shale, blue-----	90	600
Shale, blue-----	80	150	Shale, sandy-----	10	610
Sand, water-----	50	200	Shale, blue-----	30	640
Gumbo, blue-----	24	224	Shale, brown-----	15	655
Shale, brown-----	51	275	Shell, hard-----	15	670
Shale, blue-----	75	350	Sand-----	10	680
Shell, hard-----	2	352	Shale, sandy-----	37	717
Shale, blue-----	48	400	Gumbo-----	20	737
Shale, brown-----	30	430	Sand, broken-----	43	780
Shale, blue-----	70	500			

Well N8-142

Owner: O. E. Bookout. Driller: I. Cribbs.

Soil-----	4	4	Shale, blue-----	60	210
Clay and sand, yellow, water-----	66	70	Lime hard-----	4	214
Shale, blue-----	70	140	Shale, blue-----	56	270
Shale, brown-----	10	150	Shale, sandy, water-----	10	280

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well N8-142--Continued					
Shale, brown, water-----	10	290	Shale, blue-----	38	650
Shale, blue-----	90	380	Shale, sandy-----	15	665
Shale, sandy, water-----	30	410	Sand, fresh water-----	15	680
Shale, blue-----	65	475	Shale, brown-----	14	694
Sand, fresh water-----	22	497	Sand-----	86	780
Shale, blue-----	53	550	Sand, broken-----	8	788
Shale, brown-----	45	595	Shale, gray-----	7	795
Shale, sandy-----	7	602	Sand-----	7	802
Shale, blue-----	7	609	Sand, loose-----	133	935
Lime, gray-----	3	612	Shale, gray-----	2	937

Well N8-146

Owner: H. J. Whitecotton. Driller: R. B. Owens.

Topsoil-----	2	2	Sand, water-----	10	380
Clay, yellow-----	13	15	Shale, gray-----	45	425
Shale, gray-----	89	104	Shale, brown-----	110	535
Shale, brown-----	16	120	Sand-----	55	590
Shale, sandy-----	25	145	Sand, water-----	65	655
Sand, water-----	8	153	Shale, sandy-----	58	713
Shale, gray-----	217	370	Shale, blue-----	51	764

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)		
Well N8-147					
Owner: Urban Farrow. Driller: --					
Surface soil and sand-----	30	30	Shale-----	270	435
Sand, hard, and shale-----	32	62	Sand-----	286	721
Shale, sticky-----	103	165			
Well N8-160					
Owner: Jack Bowman. Driller: I. Cribbs.					
Soil-----	4	4	Sand-----	32	670
Clay, yellow-----	51	55	Sand, broken-----	30	700
Sand-----	4	59	Sand-----	22	722
Shale, blue-----	116	175	Shale, brown-----	45	767
Sand, water-----	3	178	Sand, broken-----	33	800
Shale, blue-----	122	300	Sand-----	46	846
Shale, brown-----	64	364	Shale, blue-----	11	857
Sand-----	6	370	Shale, brown-----	18	875
Gumbo, brown-----	152	522	Sand-----	20	895
Shale, sandy-----	28	550	Gumbo-----	15	910
Shale, brown-----	20	570	Sand, gray-----	48	958
Sand, hard-----	20	590	Shale, blue-----	2	960
Shale, sandy-----	48	638			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N8-161					
Owner: Jack Bowman. Driller: I. Cribbs.					
Topsoil-----	4	4	Gumbo, blue-----	40	390
Clay, yellow-----	10	14	Gumbo, brown-----	50	440
Sand, hard-----	4	18	Sand, hard-----	5	445
Clay, yellow-----	37	55	Shale, blue-----	55	500
Shale, dark-----	15	70	Lime, hard-----	4	504
Shale, blue-----	60	130	Shale-----	10	514
Sand, water-----	3	133	Shale, sandy-----	150	664
Shale, blue-----	67	200	Sand-----	36	700
Sand, white-----	10	210	Shale, brown-----	12	712
Shale, blue-----	30	240	Shale, sandy-----	8	720
Sand-----	6	246	Sand-----	27	747
Shale, sandy-----	37	283	Shale, brown-----	6	753
Lime-----	4	287	Sand-----	62	815
Gumbo, blue-----	53	340	Gumbo, blue-----	85	900
Shale, brown-----	10	350			

Well N8-162

Owner: Jack Bowman. Driller: I. Cribbs.

Topsoil-----	4	4	Shale, blue-----	10	150
Clay, yellow-----	50	54	Sand, hard-----	25	175
Shale, blue-----	76	130	Shale, blue-----	10	185
Shale, sandy-----	10	140	Shale, sandy-----	53	238

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N8-162--Continued					
Gumbo-----	42	280	Shale, blue-----	54	535
Shale, blue-----	60	340	Shale, sandy-----	15	550
Shale, brown-----	15	355	Shale, blue-----	10	560
Shale, sandy-----	11	366	Sand, hard-----	60	620
Gumbo, brown-----	11	377	Sand-----	20	640
Shale, blue-----	71	448	Sand, good-----	80	720
Sand, hard-----	6	454	Sand, hard-----	5	725
Shale, blue-gray-----	25	479	Gumbo, brown-----	25	750
Lime-----	2	481	Gumbo, blue-----	86	836

Well N9-20

Owner: City of Big Wells. Driller: Cribbs and Davidson.

Clay, yellow-----	20	20	Shale, red-----	4	400
Shale, blue-----	140	160	Shale, blue-----	45	445
Sand, water-----	30	190	Shale, hard, gray-----	20	465
Shale, blue-----	17	207	Lignite, brown-----	14	479
Shale, gray-----	15	222	Shale, sandy, gray-----	19	498
Shale, blue-----	8	230	Shale, brown-----	17	515
Shale, brown-----	30	260	Shale, gray-----	35	550
Shale, gray-----	50	310	Shale, brown-----	15	565
Shale, sandy; small amount of water-----	10	320	Shale, gray-----	15	580
Sand; hole full of water--	10	330	Shale, blue-----	18	598
Shale, blue-----	66	396	Shale, gray-----	8	606

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well N9-20--Continued					
Sand, water-----	26	632	Shale, sandy-----	17	812
Shale, gray-----	18	650	Shale, blue-----	13	825
Shale, brown-----	5	655	Shale, brown-----	18	843
Shale, gray-----	10	665	Shale, blue-----	10	853
Shale, sandy-----	5	670	Gumbo, gray-----	42	895
Sand; hole full of water--	25	695	Sand, broken, water-----	55	950
Shale, blue-----	29	724	Shale, gummy-----	45	995
Shale, sandy, gray-----	26	750	Shale, sandy-----	15	1,010
Shale, sandy, brown-----	8	758	Shale, brown-----	160	1,170
Shale, red-----	7	765	Sand, water-----	90	1,260
Sand, broken-----	30	795	Shale, brown-----	95	1,355

Well N9-24

Owner: Jack Bowman. Driller: Cribbs and Davidson.

Soil-----	2	2	Sand, water-----	5	430
Gumbo, yellow-----	23	25	Shale, light-----	15	445
Lime-----	3	28	Sand, water-----	10	455
Shale, brown and blue-----	282	310	Shale, blue-----	17	472
Lime-----	5	315	Sand, water-----	5	477
Sand, water-----	5	320	Shale, sandy-----	13	490
Shale, blue-----	75	395	Sand, water-----	15	505
Sand, water-----	5	400	Gumbo or shale, brown and blue-----	145	650
Shale, brown and blue-----	25	425	Shale, sandy-----	10	660

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well N9-24--Continued

Sand, water-----	18	678	Shale, brown-----	237	1,035
Shale, brown and blue-----	72	750	Sand, artesian-----	175	1,210
Sand, water-----	25	775	Shale, brown-----	40	1,250
Shale, brown-----	3	778	Sand-----	5	1,255
Sand, water-----	20	798	Shale, brown-----	50	1,305

Well N9-33

Owner: P. J. Lewis. Driller: C. W. Wheeler.

Soil-----	4	4	Sand, hard, and pyrite---	253	1,280
Clay, yellow-----	34	38	Boulders-----	1	1,281
Gravel, coarse, yellow----	2	40	Gumbo, sticky, dark- blue-----	16	1,297
Shale, soft-blue-----	12	52	Sand and shale, lenses of white-----	174	1,471
Shale, blue to dark- colored, small boulders and pyrites-----	73	125	Sandrock, hard-----	1	1,472
Shale and few boulders----	681	806	Sand, hard-----	5	1,477
Shale-----	111	917	Shale, hard, black-----	17	1,494
Sand, medium-grained, dark-colored-----	7	924	Shell, hard, lime-----	5	1,499
Shale, hard, with dark- colored specks-----	96	1,020	No record-----	8	1,507
Sand, small amount of water-----	7	1,027	Sand, coarse, white, water-----	16	1,523

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well S1-18

Owner: E. G. Castellaw. Driller: W. D. Morrison.

Soil-----	4	4	Sandstone, brown-----	70	100
Clay, sandy, gray-----	26	30	Sand, gray and white, water-----	220	320

Well S1-50

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	5	5	Sand, gray-----	20	455
Caliche-----	25	30	Shale, gray-----	20	475
Shale, blue-----	70	100	Sand, gray-----	45	520
Sand-----	50	150	Shale, gray-----	40	560
Shale, brown-----	95	245	Sand, gray-----	20	580
Sand, white, fresh water--	30	275	Gumbo, brown-----	40	620
Shale-----	45	320	Sand, gray-----	30	650
Sand-----	80	400	Gumbo-----	20	670
Shale, gray-----	35	435			

Well S1-55

Owner: W. H. Burns. Driller: R. B. Owens.

Topsoil-----	5	5	Shale, sandy, with seep--	11	173
Clay, yellow-----	13	18	Shale, gray-----	6	179
Shale, gray-----	71	89	Shale, sandy-----	28	207
Shale, brown-----	48	137	Sand, water-----	10	217
Shale, gray-----	25	162	Shale, sandy-----	30	247

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well S1-55--Continued

Shale, brown-----	13	260	Shale, sandy-----	45	360
Shale, gray-----	15	275	Sand, water-----	100	460
Rock-----	1	276	Shale, brown-----	10	470
Shale, gray-----	39	315			

Well S1-56

Owner: -- Pittman. Driller: R. B. Owens.

Topsoil-----	2	2	Sand, water-----	36	243
Sandrock, and clay, yellow-----	23	25	Sand and shale-----	8	251
Clay, yellow-----	15	40	Shale, gray-----	11	262
Shale, gray-----	23	63	Rock-----	2	264
Shale, brown-----	8	71	Shale, gray-----	9	273
Shale, sandy, brown-----	20	91	Shale, brown-----	12	285
Shale, brown-----	14	105	Shale, sandy, with tight water, sand-----	43	328
Shale, gray-----	7	112	Shale, brown-----	34	362
Shale, brown-----	10	122	Sand, water-----	12	374
Shale, gray-----	4	126	Shale, brown-----	9	383
Shale, sandy, gray-----	14	140	Sand, tight-----	52	435
Shale, gray-----	5	145	Sand-----	65	500
Shale, sandy-----	16	161	Shale, brown-----	20	520
Shale, gray-----	25	186	Sand-----	27	547
Shale, sandy, brown-----	6	192	Shale, brown-----	9	556
Shale, gray-----	15	207			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well S1-57					
Owner: W. H. Burns. Driller: R. B. Owens.					
Topsoil-----	3	3	Rock-----	8	240
Clay, yellow, and sand- rock-----	12	15	Sand, water-----	23	263
Clay, yellow-----	9	24	Shale, gray-----	44	307
Sandrock-----	9	33	Shale, brown-----	63	370
Shale, gray-----	77	110	Shale, sandy-----	15	385
Shale, brown-----	40	150	Sand water-----	50	435
Shale, sandy, gray, with seep-----	20	170	Shale, blue-----	18	453
Shale, sandy, brown-----	30	200	Shale, sandy-----	3	456
Sand, water-----	32	232	Sand water-----	5	461
			Shale, brown-----	6	467

Well S1-58

Owner: W. H. Burns. Driller: R. B. Owens.

Topsoil-----	2	2	Shale, sandy, brown, with seep-----	20	165
Sandrock, yellow-----	42	44	Shale, sandy, brown-----	24	189
Shale, sandy, gray-----	21	65	Rock-----	1	190
Shale, gray-----	5	70	Shale, soft, gray-----	10	200
Rock-----	1	71	Shale, sandy, gray, with shale breaks-----	26	226
Shale, gray-----	19	90	Shale, sandy, brown, with shale breaks-----	11	237
Shale, brown-----	6	96	Shale, sandy, gray-----	7	244
Shale, gray-----	21	117			
Shale, sandy, brown-----	28	145			

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Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well S1-58--Continued

Shale, sandy, gray, with seeps-----	11	255	Shale, brown-----	11	368
Shale, sandy, gray-----	19	274	Sand, tight-----	37	405
Shale, gray-----	12	286	Shale, brown-----	9	414
Shale, sandy, brown-----	12	298	Sand with shale breaks, water-----	22	436
Sand-----	24	322	Sand, water-----	69	505
Shale, brown-----	2	324	Shale, brown-----	15	520
Sand-----	33	357	Shale, gray-----	30	550

Well S1-59

Owner: Leroy Jones. Driller: R. B. Owens.

Topsoil-----	2	2	Rock-----	6	86
Clay, yellow-----	10	12	Shale, and sandy shale, with breaks, brown----	190	276
Clay, gray-----	28	40	Sand, water-----	14	290
Shale, brown-----	21	61	Shale, sandy-----	10	300
Shale, sandy-----	19	80			

Well S1-60

Owner: W. H. Burns. Driller: R. B. Owens.

Topsoil-----	2	2	Sand, water-----	8	186
Clay, yellow-----	10	12	Shale, gray-----	94	280
Shale, gray-----	8	20	Sand, water-----	45	325
Clay, yellow-----	15	35	Shale, brown-----	2	327
Shale, brown-----	143	178			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well S1-62					
Owner: -- Pittman. Driller: R. B. Owens.					
Topsoil-----	2	2	Shale, brown-----	55	225
Clay, yellow-----	22	24	Shale, gray-----	17	242
Sandrock-----	13	37	Shale, brown-----	13	255
Clay, yellow-----	8	45	Shale, gray-----	20	275
Shale, gray-----	70	115	Shale, sandy, gray-----	15	290
Shale, brown-----	35	150	Sand, water-----	133	423
Shale, sandy, with seeps--	10	160	Shale, blue-----	7	430
Shale, gray-----	10	170			
Well S1-63					
Owner: -- Pittman. Driller: R. B. Owens.					
Topsoil-----	1	1	Shale, sandy, gray-----	52	210
Sandrock and clay-----	21	22	Shale, gray-----	10	220
Clay, yellow-----	8	30	Shale, sandy, gray-----	36	256
Shale, brown-----	15	45	Sand-----	119	375
Shale, gray-----	65	110	Shale, sandy, brown-----	5	380
Shale, brown-----	7	117	Sand-----	114	494
Shale, gray-----	32	149	Shale, brown-----	6	500
Shale, brown-----	9	158			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well S1-64					
Owner: R. G. Slocum. Driller: R. B. Owens.					
Topsoil-----	2	2	Shale, sandy, gray-----	33	153
Clay, gray, and sandrock--	7	9	Shale, brown-----	24	177
Clay, yellow-----	11	20	Shale, gray-----	13	190
Shale, brown-----	14	34	Shale, sandy-----	10	200
Shale, sandy, brown-----	33	67	Sand, water-----	12	212
Shale, sandy, gray-----	13	80	Shale, brown-----	18	230
Shale, gray-----	10	90	Shale, sandy-----	10	240
Shale, sandy, gray-----	10	100	Sand, break in water-----	40	280
Rock-----	1	101	Sand, water-----	68	348
Shale, brown-----	9	110	Shale, brown-----	4	352
Shale, sandy, brown, with seeps-----	10	120			
Well S1-66					
Owner: Damon White. Driller: R. B. Owens.					
Topsoil-----	3	3	Sandrock-----	115	130
Clay and sandrock-----	12	15	Sand, water-----	99	229
Well S1-72					
Owner: Strauss & Ewing. Driller: R. B. Owens.					
Topsoil-----	1	1	Sandrock, brown-----	10	75
Clay, red-----	3	4	Shale, sandy, gray-----	15	90
Sandrock, yellow-----	61	65	Sand, water-----	36	126

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well S1-72--Continued

Shale, gray-----	11	137	Sand, water-----	160	310
Shale, sandy, gray-----	13	150	Shale, brown-----	5	315

Well S1-76

Owner: Oak Grove Ranch. Driller: R. B. Owens.

Topsoil-----	1	1	Shale, sandy, brown, salt-water seep-----	4	216
Sandrock-----	17	18	Shale, brown-----	9	225
Clay, yellow-----	10	28	Shale, sandy, gray-----	5	230
Clay, gray-----	13	41	Salt water-----	8	238
Rock-----	1	42	Shale, gray-----	32	270
Shale, gray-----	55	97	Shale, sandy, gray-----	10	280
Shale, brown-----	26	123	Sand, water-----	95	375
Rock-----	2	125	Rock-----	2	377
Shale, brown-----	9	134	Sand, water-----	40	417
Rock-----	4	138	Shale, brown-----	2	419
Shale, sandy, gray-----	17	155	Sand, water-----	28	447
Shale, brown-----	20	175	Shale, brown-----	5	452
Shale, sandy, brown-----	37	212			

Well S1-77

Owner: Walker Burns. Driller: R. B. Owens.

Topsoil-----	2	2	Shale, sandy-----	77	95
Sandrock-----	10	12	Sand, water-----	108	213
Clay, yellow-----	6	18			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well S1-79					
Owner: Leroy Jones. Driller: W. J. Steeger.					
Topsoil-----	1	1	Shale, brown-----	50	300
Sandrock-----	4	5	Shale, sandy-----	35	335
Clay, blue-----	6	11	Sand, water-----	15	350
Sandrock-----	17	28	Shale, brown-----	54	404
Clay, yellow-----	37	65	Shale, sandy-----	11	415
Shale, gray-----	10	75	Shale, brown-----	31	446
Rock-----	3	78	Shale, sandy-----	13	459
Shale, gray-----	22	100	Rock-----	2	461
Shale, sandy-----	20	120	Shale, gray-----	14	475
Shale, brown-----	8	128	Shale, brown-----	78	553
Shale, gray-----	68	196	Shale, sandy-----	37	590
Shale, brown-----	14	210	Sand, water-----	15	605
Shale, sandy-----	25	235	Shale, sandy-----	45	650
Shale, gray-----	15	250	Shale, blue-----	4	654

Well S1-81

Owner: E. G. Castellaw. Driller: --

Topsoil-----	1	1	Sand, water-----	29	134
Caliche-----	3	4	Shale, brown-----	7	141
Sandrock, yellow-----	68	72	Sand, water-----	109	250
Sandrock, white-----	33	105			

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well S2-4					
Owner: W. E. Munson. Driller: Cribbs & Davidson.					
Soil-----	5	5	Sand, water-----	50	540
Clay, brown-----	10	15	Gumbo-----	28	568
Lime-----	2	17	Lime-----	2	570
Shale, blue-----	83	100	Sand, hard-----	5	575
Shale, brown-----	130	230	Shale, sandy, brown-----	15	590
Shale, sandy-----	65	295	Sand, water-----	10	600
Sand, water-----	10	305	Gumbo-----	20	620
Sand, brown-----	42	347	Sand-----	50	670
Gumbo-----	56	403	Gumbo-----	7	677
Sand, water-----	77	480	Sand, water-----	15	692
Gumbo, brown-----	10	490	Gumbo-----	2	694

Well S2-94

Owner: Catarina Farms. Driller: --

Soil-----	8	8	Sand, salt water-----	22	525
Clay, yellow-----	67	75	Shale, red-----	28	553
Shale, blue-----	103	178	Sand-----	74	627
Lime-----	5	183	Shale, brown, with some coal-----	5	632
Shale, gray-----	130	313	Sand-----	54	686
Shale, sandy-----	32	345	Shale, red-----	8	694
Shale, blue-----	45	390	Sand-----	36	730
Shale, sandy, gray-----	113	503			

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well S2-94--Continued					
Shale, brown and gray-----	76	806	Sand-----	35	1,118
Shale, sandy, hard-----	19	825	Shale, dark-brown-----	10	1,128
Shale, blue and sand-----	57	882	Sand-----	37	1,165
Shale, brown, gray and red-----	107	989	Shale, brown-----	15	1,180
			Sand-----	22	1,202
Shale, sandy-----	16	1,005	Shale, brown-----	13	1,215
Shale, brown-----	65	1,070	Sand, water-----	209	1,424
Sand, hard-----	13	1,083			

Well S2-96

Owner: L. Hester. Driller: --

Clay, yellow-----	40	40	Shale, blue-----	40	365
Shale, blue-----	30	70	Sand-----	5	370
Lime and lignite-----	5	75	Shale, sandy, blue-----	30	400
Shale, blue-----	15	90	Shale, sandy-----	15	415
Shale, sandy, brown-----	35	125	Sand-----	23	438
Shale, blue-----	25	150	Shale, blue-----	27	465
Sand, gray, water-----	15	165	Shale, red-----	15	480
Shale, brown-----	25	190	Shale, blue-----	20	500
Shale, blue-----	15	205	Sand-----	10	510
Shale, brown-----	5	210	Shale, blue-----	20	530
Sand-----	30	240	Sand-----	25	555
Shale, blue-----	55	295	Shale, blue-----	5	560
Sand-----	30	325	Sand-----	55	615

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)		
Well S2-96--Continued					
Shale, red-----	25	640	Sand-----	55	780
Sand-----	10	650	Shale, sandy-----	25	805
Shale, red-----	40	690	Sand, water-----	218	1,023
Sand-----	20	710	No record-----	58	1,081
Shale, blue-----	15	725			

Well S2-113

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	10	10	Shale, blue-----	35	485
Caliche-----	30	40	Shell, hard-----	5	490
Shale, blue-----	60	100	Shale, sandy, brown-----	40	530
Sand, water-----	60	160	Sand, dark-gray-----	15	545
Sand, blue-----	70	230	Shale, blue-----	25	570
Sand-----	30	260	Sand, dark-gray-----	80	650
Shale, brown-----	44	304	Shale, sandy-----	25	675
Sand-----	81	385	Sand, broken-----	35	710
Shale, gray-----	35	420	Shale, blue-----	90	800
Sand, gray-----	20	440	Shale-----	100	900
Shale, sandy, blue-----	10	450			

Well S2-114

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	3	3	Sand-----	13	23
Sandrock-----	9	12	Shale, blue-----	85	110

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well S2-114--Continued

Sand, fresh water-----	50	160	Shale, gray-----	15	455
Shale, brown-----	80	240	Shale, brown-----	105	560
Shale, blue-----	45	285	Sand, gray-----	15	575
Sand, hard-----	35	320	Shale-----	5	580
Sand-----	70	390	Sand, gray-----	70	650
Shale, blue-----	50	440	Shale, gray-----	10	660

Well S2-115

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	3	3	Shell, gray-----	5	240
Caliche, yellow-----	17	20	Sand-----	90	330
Shale, brown-----	30	50	Shale, brown-----	15	345
Shale, blue-----	70	120	Sand, gray-----	60	405
Shale, sandy-----	50	170	Gumbo, brown-----	45	450
Shale, brown-----	60	230	Sand, gray-----	20	470
Shale, hard-----	5	235	Gumbo, gray-----	36	506

Well S2-116

Owner: J. T. Stinnett. Driller: I. C. Cribbs.

Soil-----	5	5	Shale, sandy, little water-----	50	250
Sandrock, water seep-----	5	10	Sand, water-----	30	280
Caliche-----	20	30	Shale, brown-----	10	290
Shale, blue-----	110	140	Shale, sandy-----	90	380
Shale, brown-----	60	200			

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well S2-116--Continued

Sand-----	130	510	Sand and gumbo-----	32	572
Shale, sandy-----	30	540			

Well S2-128

Owner: Wm. Volbrect. Driller: A. E. Eardley.

Soil and clay, light-red--	3	3	Sandstone, fine-grained--	15	312
Clay, pale-blue-----	6	9	Sand and clay-----	20	332
Clay, and sand, yellow----	25	34	Clay, blue-----	45	377
Clay, yellow-----	30	64	Clay, dark-blue-----	40	417
Clay, pale to dark-blue---	35	99	Sand and clay-----	45	462
Sandstone, salt water-----	3	102	Sandrock, fine-grained, water-----	60	522
Clay, sticky, blue-----	50	152	Sandstone, water-----	160	682
Clay, blue, with thin lenses of coal-----	100	252	Sand, fine, and clay-----	38	720
Sand and clay-----	45	297			

Well S2-132

Owner: J. C. Oelkers. Driller: I. C. Cribbs.

Soil-----	3	3	Shale, gray-----	45	245
Sandrock-----	2	5	Sand and shale-----	85	330
Clay, yellow-----	25	30	Sand, fine-----	10	340
Shale, blue-----	40	70	Sand, broken and shale---	30	370
Shale, gray-----	80	150	Shale, loose-----	80	450
Shale, brown-----	50	200	Shale-----	15	465

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well S2-132--Continued

Sand-----	10	475	Sand, loose-----	20	560
Shale, sandy, brown-----	65	540	Gumbo-----	5	565

Well S2-136

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	8	8	No record-----	5	425
Rock-----	4	12	Sand, gray-----	10	435
Clay, yellow-----	18	30	Shale-----	5	440
Shale, blue-----	60	90	Sand-----	20	460
Shale, sandy-----	15	105	Shale, brown-----	55	515
Shale, blue-----	115	220	Shale, light-----	5	520
Shale, sandy-----	20	240	Shale, brown-----	65	585
Sand-----	15	255	Sand, gray-----	25	610
Shale, brown-----	35	290	Shale, brown-----	20	630
Sand-----	70	360	Sand, gray-----	33	663
Shale, brown-----	10	370	Shale, blue-----	2	665
Sand, white-----	50	420			

Well S2-137

Owner: H. Rouw. Driller: I. C. Cribbs.

Soil-----	2	2	Shale, brown-----	10	100
Sandrock-----	13	15	Shale, sandy-----	80	180
Clay, yellow-----	25	40	Sand, little water-----	10	190
Shale, blue-----	50	90	Shale, blue-----	50	240

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well S2-137--Continued					
Sand-----	20	260	Gumbo-----	95	565
Shale, brown-----	35	295	Sand, gray-----	25	590
Sand-----	105	400	Sand, broken-----	50	640
Sand, gray-----	40	440	Gumbo, blue-----	10	650
Shale, brown-----	10	450	Sand, gray-----	8	658
Shale, gray-----	20	470	Gumbo-----	17	675
Well S2-141					
Owner: Eagle Nest Ranch. Driller: R. B. Owens.					
Topsoil-----	1	1	Shale, sandy-----	25	190
Sandrock-----	37	38	Shale, gray-----	60	250
Shale, gray-----	47	85	Shale, sandy-----	5	255
Rock-----	2	87	Sand, water-----	10	265
Shale, sandy-----	28	115	Shale, gray-----	85	350
Sand, water-----	13	128	Shale, sandy, gray-----	50	400
Shale, gray-----	29	157	Sand, water-----	245	645
Rock-----	1	158	Shale, brown-----	4	649
Shale, gray-----	7	165			
Well S2-146					
Owner: -- Batey (Palo Blanco Ranch). Driller: R. B. Owens.					
Topsoil-----	2	2	Shale, brown-----	25	65
Clay, yellow-----	26	28	Shale, gray-----	37	102
Clay, gray-----	12	40	Shale, sandy-----	48	150

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well S2-146--Continued

Shale, brown-----	24	174	Shale, brown-----	85	310
Sand, bad water-----	6	180	Shale, gray-----	60	370
Shale, sandy-----	22	202	Shale, sandy-----	60	430
Sand, bad water-----	8	210	Sand, water-----	70	500
Shale, sandy-----	15	225	Shale, sandy-----	10	510

Well S3-18

Owner: Catarina Farms Co. Driller: --

Surface-----	3	3	Shale, red-----	4	224
Sandrock-----	5	8	Sand, hard-----	6	230
Shale, yellow-----	20	28	Shale, gray-----	3	233
Shale, blue-----	52	80	Sand, water-----	19	252
Shale, gray-----	20	100	Shale, red-----	5	257
Sand, hard-----	11	111	Shale, sandy-----	34	291
Shale, blue-----	14	125	Sand, water-----	7	298
Shale, gray-----	30	155	Shale, red-----	7	305
Shale, red-----	3	158	Shale, gray-----	12	317
Sand, water-----	5	163	Shale, blue-----	6	323
Shale, blue-----	20	183	Shale, brown-----	12	335
Shale, gray-----	9	192	Shale, sandy-----	11	346
Lime-----	4	196	Shale, blue-----	20	366
Shale, blue-----	14	210	Shale, sandy-----	12	378
Shale, gray-----	10	220	Sand, water-----	28	406

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well S3-18--Continued					
Shale, gray-----	4	410	Shale, brown-----	10	790
Shale, red-----	5	415	Sand-----	10	800
Sand, hard-----	12	427	Shale, sandy-----	9	809
Shale, gray-----	29	456	Sand, hard-----	14	823
Shale, sandy-----	17	473	Shale, red-----	10	833
Shale, gray-----	14	487	Shale, gray-----	11	844
Shale, blue-----	18	505	Shale, blue-----	26	870
Shale, red-----	8	513	Shale, red-----	23	893
Sand, water-----	15	528	Shale, sandy-----	14	907
Shale, blue-----	12	540	Sand, water-----	11	918
Shale, gray-----	10	550	Shale, gray-----	20	938
Sand, water-----	20	570	Sand, water-----	14	952
Shale, blue-----	5	575	Shale, red-----	8	960
Sand, water-----	25	600	Shale, sandy-----	25	985
Shale, sandy-----	10	610	Sand, water-----	35	1,020
Sand, hard-----	6	616	Shale, sandy, gray-----	5	1,025
Shale, gray-----	6	622	Sand, hard-----	18	1,043
Shale, hard, sandy-----	73	695	Sand, water-----	217	1,260
Shale, gray-----	8	703	Shale, red-----	6	1,276
Sand, hard-----	28	731	Sand, black-----	6	1,282
Shale, gray-----	9	740	Shale, gray-----	42	1,314
Lime, hard-----	6	746	Shale, black-----	6	1,320
Shale, blue-----	6	752	Shale, gray-----	6	1,326
Shale, gray-----	28	780	Shale, blue-----	9	1,335

Table 10.-Drillers' logs of wells in Dimmit County, Texas

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well S3-22					
Owner: BLZ Water Co. Driller: Floyd Trimm.					
Sand-----	5	5	Shale, red and blue-----	50	750
Clay, sandy-----	25	30	Sand, fresh water-----	40	700
Shale, blue-----	20	50	Shale, blue-----	5	755
Sand and coal-----	25	75	Sand-----	35	790
Shale, blue-----	90	165	Shale, blue-----	15	805
Shale, gray-----	60	225	Shale, black-----	45	850
Shale, blue-----	25	250	Sand, hard-----	15	865
Sand, gray, salt water----	35	285	Shale, red-----	25	890
Shale, blue-----	5	290	Sand-----	10	900
Shell and lime-----	5	295	Shale, black-----	20	920
Shale, blue-----	10	305	Shale, red-----	40	960
Shale, red, and lignite---	20	325	Shale, brown-----	10	970
Shale, blue-----	35	360	Sand, hard-----	10	980
Sand-----	55	415	Sand, fresh water-----	40	1,020
Shale, blue-----	15	430	Shale, red-----	5	1,025
Sand, salt water-----	35	465	Sand, artesian water-----	35	1,060
Shale, blue-----	30	495	Shale-----	10	1,070
Sand, gray, salt water----	15	510	Sand, artesian water-----	15	1,085
Shale, blue-----	50	560	Shale-----	5	1,090
Sand, fresh water-----	55	615	Sand, artesian water-----	15	1,105
Shale, white-----	25	640	Shale, red-----	10	1,115
Shale, red-----	20	660	Sand-----	15	1,130

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)		
Well S3-22--Continued					
Shale, red-----	5	1,135	Clay-----	4	1,334
Sand, artesian water-----	195	1,330			

Well S3-26

Owner: J. T. Baber. Driller: -- Dodd.

Soil-----	45	45	Shale, brown-----	15	638
Gravel-----	40	85	Sand, some water-----	20	658
Shale, black-----	25	110	Shale, brown-----	17	675
Sand-----	8	118	Sand, small flow of soda water-----	45	720
Shale, white-----	27	145	Shale, brown and white---	75	795
Sand-----	20	165	Sand-----	35	830
Shale, white-----	20	185	Shale, white-----	10	840
Sand, salt water-----	25	210	Sand-----	35	875
Shale, white-----	105	315	Shale, brown-----	37	912
Sand "shells"-----	15	330	Shell, brown-----	43	955
Shale, white-----	113	443	Sand-----	22	977
Sand, water-----	22	465	Lignite-----	2	979
Shale, white-----	45	510	Shale, brown-----	13	992
Sand, some water-----	8	518	Sand, water-----	33	1,025
Shale, white and shells---	37	555	Shale, white-----	10	1,035
Sand-----	20	575	Sand, green-----	30	1,065
Shale, white-----	41	616	Shale, brown-----	10	1,075
Sand-----	7	623	Sand-----	20	1,095

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well S3-26--Continued					
Shale, lignite, and asphalt?-----	25	1,120	Sand-----	21	1,458
Sand, 50 gpm flow-----	48	1,168	Sand, very hard-----	7	1,465
Shale, white and "shell"---	17	1,185	Sand, some water-----	25	1,490
Sand and "shell"-----	40	1,225	Shale, brown-----	15	1,505
Shale, sand and "shell"-----	130	1,355	Sand, water-----	40	1,545
Sand-----	10	1,365	Sand, good-----	90	1,635
Shale, sand, and "shell"---	53	1,418	Sand and shale-----	25	1,660
Sand-----	7	1,425	Sand, hard-----	5	1,665
Shale, sand, and "shell"---	12	1,437	Sand, water-----	35	1,700

Well S4-2

Owner: McRory Estate. Driller: A. E. Eardley.

Soil-----	3	3	Soapstone, blue-----	25	234
Clay, soft, yellow-----	57	60	Clay, brown-----	3	237
Soapstone, blue-----	7	67	Coal-----	2	239
Sandrock, hard-----	6	73	Sandrock with salt water-	25	264
Coal, hard, black-----	3	76	Sand and white clay-----	13	277
Clay, blue-----	62	138	Clay, blue and brown----	90	367
Sandrock, soft-----	8	146	Sandrock with bitter water-----	30	397
Coal, black-----	1	147	Clay, brown, and sand----	25	422
Clay, blue and brown-----	50	197	Sandrock with good water-----	18	440
Sandrock, soft-----	10	207			
Coal-----	2	209			

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
Well S4-2--Continued					
Clay, brown, sand and gravel-----	154	594	Clay, blue, and sand-----	16	861
Clay, brown, and sand-----	186	780	Sandrock with good water-	30	891
Sandrock, blue-----	3	783	Clay, blue, and sand-----	9	900
Clay, brown-----	42	825	Sand, white, water-----	41	941
Sandrock with good water--	20	845	Soapstone-----	19	960
Well S4-4					
Owner: Roy Jones. Driller: R. B. Owens.					
Topsoil-----	1	1	Sand, water-----	77	225
Sandrock, yellow-----	4	5	Shale, blue-----	4	229
Clay, yellow-----	40	45	Shale, sandy-----	24	253
Shale, sandy-----	103	148			
Well Ti-9					
Owner: L. W. Henrickson. Driller: L. W. Henrickson.					
Sand-----	14	14	Shale-----	25	360
Caliche-----	12	26	Sandrock-----	13	373
Clay, yellow streaks-----	59	85	Shale-----	108	481
Shale and rock streaks----	129	214	Shale, sandy-----	29	510
Shale, sandy-----	10	224	Shale-----	50	560
Shale-----	81	305	Shale, sandy-----	20	580
Shale, sticky-----	20	325	Shale, sticky-----	50	630
Shale, sandy-----	10	335	Shale, sandy-----	34	664

(Continued on next page)

Table 10.-Drillers' logs of wells in Dimmit County--Continued

Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well Tl-9--Continued				
Sand, shaley-----	31	695	Flint-----	3 1,240
Shale, sticky-----	55	750	Shale, sticky-----	25 1,265
Shale, sandy-----	35	785	Sand and shale-----	10 1,275
Sand-----	21	806	Slate-----	51 1,326
Shale-----	74	880	No record-----	64 1,390
Shale, sandy-----	30	910	Sand and shale-----	66 1,456
Shale, sticky-----	104	1,014	Sand-----	10 1,466
Shale-----	16	1,030	Shale, sticky-----	11 1,477
Sand-----	12	1,042	Shale, sandy-----	4 1,481
Shale-----	43	1,085	Shale, sticky-----	1 1,482
Shale, sand streaks-----	55	1,140	Shale, sandy-----	73 1,555
Shale-----	81	1,221	Sand-----	200 1,755
Shale, sandy-----	16	1,237		

Table 11. - Chemical analyses of water from wells and springs in Dimmit County, Texas

(Analyses are in parts per million except specific conductance, pH, sodium adsorption ratio and percent sodium)

Well	Owner	Depth of well (ft.)	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)		Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
								<u>Carrizo Sand</u>												
N7-11	J. H. Webb	450	July 5, 1957	-	-	-	-	---	-	-	-	78	-	-	-	-	-	-	587	-
N7-27	Quality Vegetable Growers	472	Apr. 4, 1930	16	0.06	32	11	75	4.2	259	38	31	-	0.0	326	125	57	2.9	-	-
N7-40	Lynch Bros.	188	June 26, 1930	44	.02	39	11	53	4.4	124	41	80	-	6.4	345	143	46	1.9	-	-
N7-42	Byrd Cattle Co.	-	Mar. 19, 1957	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	636	-
N7-46	State of Texas	1,022	July 24, 1930	21	.02	44	14	59	3.0	267	37	28	-	.05	335	167	44	2.0	-	-
N7-46	do	1,022	Nov. 29, 1938	-	-	-	-	-	-	310	92	108	0.3	.20	-	a69	-	-	-	-
N7-46	do	1,022	Dec. 28, 1948	19	-	45	14	55	-	260	38	26	-	.0	325	170	41	1.8	537	-
N7-56	H. H. Herrington	600	Dec. --, 1938	-	-	-	-	-	-	288	50	105	-	.15	-	a99	-	-	-	-
N7-67	Mrs. Willie Wilson	310	Feb. 2, 1928	21	.21	38	12	76	5.5	282	40	30	-	.15	355	144	54	2.8	-	-
*N7-69	G. E. Whitney.	504	Jan. 4, 1949	18	-	40	15	70	-	276	41	32	-	.2	353	162	48	2.4	590	-
N7-74	Sam McKnight	-	Mar. 28, 1930	26	1.4	111	22	56	6.6	265	81	141	-	.23	604	368	26	1.3	-	-
N7-74	do	-	Apr. 14, 1939	-	-	-	-	-	-	239	61	95	-	-	-	a315	-	-	-	-
N7-75	F. Kirk	306	June --, 1913	-	-	-	-	-	-	254	82	16	-	-	-	a100	-	-	-	-
N7-86	I. Villanueva	456	Mar. 11, 1957	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	670	-
N7-87	M. L. Norwood	312	do	-	-	-	-	-	-	-	-	79	-	-	-	-	-	-	785	-
N7-99	Mobley Bros.	410	Dec. 21, 1938	-	-	60	20	122	-	222	123	132	-	0.25	567	232	53	3.5	-	-
N7-107	Texas Calgary Refinery	321	Mar. 11, 1957	-	-	-	-	-	-	-	-	62	-	-	-	-	-	-	711	-
N7-109	R. T. Mooreman	315	do	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	632	-
N7-100	O. M. Hughes	312	Mar. --, 1913	-	-	-	-	-	-	260	43	36	-	-	-	a126	-	-	-	-
N7-125	A. J. Knaggs	133	Feb. 7, 1928	37	0.08	69	14	110	3.7	214	107	130	-	4.0	584	230	51	3.2	-	-
N7-126	City of Carrizo Springs	322	Mar. 15, 1930	23	.06	39	14	127	5.8	221	94	113	-	.26	515	155	65	4.4	-	-

*Boron (B), 1.0.

See footnotes at end of table.

Table 11. - Chemical analyses of water from wells and springs in Dimmit County--Continued

Well	Owner	Depth of well (ft.)	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)		Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
								<u>Carrizo Sand</u>												
N7-129	T. J. Haire	246	July 18, 1957	-	-	-	-	-	-	-	-	79	-	-	-	-	-	-	803	-
N7-142	A. Vasquez	420	Apr. 6, 1939	-	-	-	-	-	-	206	43	37	-	-	-	a100	-	-	-	-
N7-145	Mobley Bros.	340	Dec. 21, 1938	-	-	37	12	127	266	76	85	-	-	.0	468	142	66	4.6	-	-
N7-146	-- Wilson	300	Apr. 26, 1939	-	-	-	-	-	-	121	402	720	-	-	-	a938	-	-	-	-
N7-147	W. A. Robertson	180	July 8, 1957	-	-	-	-	-	-	-	-	21	-	-	-	-	-	-	623	-
N7-149	W. L. Measles	280	Feb. 20, 1939	-	-	-	-	-	-	288	52	46	-	-	-	a92	-	-	-	-
N7-152	-- Tisdell	375	Mar. 13, 1939	-	-	-	-	-	-	220	85	95	-	-	-	a75	-	-	-	-
N7-153	-- Risinger	215	Dec. 7, 1937	-	-	-	-	-	-	197	112	195	0.1	2.4	-	a321	-	-	-	-
N7-154	-- Finehoute	333	Mar. 11, 1957	-	-	-	-	-	-	-	-	680	-	-	-	-	-	-	3,110	-
N7-169	H. Rouw	456	Feb. 28, 1957	-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	633	-
N7-173	City of Carrizo Springs	338	May 10, 1945	24	0.18	58	16	117	24	221	113	136	0.6	4.0	606	210	51	3.5	1,050	7.5
N7-181	L. L. Arche	256	July 8, 1957	-	-	-	-	-	-	-	-	88	-	-	-	-	-	-	835	-
N7-199	W. G. Orr	-	July 5, 1957	-	-	-	-	-	-	-	-	62	-	-	-	-	-	-	631	-
N7-206	Quality Vegetable Growers	-	Mar. 19, 1957	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	482	-
N7-227	Bill Moats	254	Mar. 20, 1957	-	-	-	-	-	-	-	-	73	-	-	-	-	-	-	1,040	-
N7-236	W. Johnson	409	Apr. 4, 1957	-	-	-	-	-	-	-	-	62	-	-	-	-	-	-	720	-
N7-243	Paul Little	1,064	Mar. 14, 1957	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	524	-
N7-244	-- Templar	1,028	Mar. 19, 1957	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	527	-
N8-17	G. C. Crenshaw	-	Apr. 3, 1957	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	615	-
N8-18	J. E. Baylor	1,210	Mar. 12, 1957	-	-	-	-	-	-	-	-	4,190	-	-	-	-	-	-	13,600	-
N8-29	O. E. Bookout	1,005	May 24, 1930	19	.10	25	9.3	535	7.2	383	173	585	-	.10	1,550	101	92	23.0	-	-
N8-29	do	1,005	Feb. 27, 1957	-	-	-	-	-	-	-	-	800	-	-	-	-	-	-	3,460	-

See footnotes at end of table.

Table 11.- Chemical analyses of water from wells and springs in Dimmit County--Continued

Well	Owner	Depth of well (ft.)	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
								Carrizo Sand											
N8-42	A. N. Box	425	Mar. 15, 1939	-	-	-	-	-	306	139	136	-	-	-	a112	-	-	-	-
N8-47	Dimmit County Airport	500	Mar. 15, 1957	-	-	-	-	-	-	-	39	-	-	-	-	-	-	634	-
N8-56	-- Huffman	700	Jan. 4, 1949	24	-	39	19	97	284	63	62	-	.0	446	176	55	3.2	738	-
N8-61	F. A. Combs	1,170	June --, 1914	-	0.40	44	15	92	287	50	60	-	-	423	172	54	3.0	-	-
N8-64	City of Brundage	1,170	May 11, 1945	23	.73	36	11	112 9.1	323	54	47	1.0	0.8	454	135	62	4.2	770	7.8
N8-66	A. A. Swindell	408	Mar. 29, 1930	23	.71	23	9.0	107 5.0	284	47	38	-	.36	386	94	72	4.8	-	-
N8-67	S. P. Spalding	495	Dec. 7, 1937	-	-	-	-	-	292	60	82	.5	.0	-	a58	-	-	-	-
N8-72	Jack Bowman	866	Apr. 8, 1957	-	-	-	-	-	-	-	185	-	-	-	-	-	-	1,140	-
N8-75	Tommy Powers	440	Nov. 23, 1938	-	-	-	-	144	295	90	56	-	1.8	-	a102	-	-	-	-
N8-75	do	440	Mar. 20, 1957	-	-	-	-	-	-	-	61	-	-	-	-	-	-	730	-
N8-82	R. N. Mitchell	660	Mar. --, 1913	-	-	-	-	94	265	46	40	-	-	-	a118	-	-	-	-
N8-82	do	660	June 26, 1930	27	.22	27	9.2	-	281	48	38	-	.30	-	a105	-	-	-	-
N8-89	Essar Ranch	1,010	Mar. 27, 1957	-	-	-	-	-	-	-	35	-	-	-	-	-	-	614	-
N8-100	Jack Bowman	1,100	Apr. 8, 1957	-	-	-	-	-	-	-	85	-	-	-	-	-	-	893	-
N8-101	do	1,135	Feb. 7, 1928	20	.04	17	6.5	133 5.4	318	51	44	-	.18	427	69	81	7.0	-	-
N8-102	do	1,224	July 11, 1928	24	.27	18	9.4	493 3.2	499	154	420	-	.0	1,380	84	93	23.0	-	-
N8-102	do	1,224	Apr. 8, 1957	-	-	-	-	-	-	-	242	-	-	-	-	-	-	1,740	-
N8-104	Hiram G. Hines	582	Dec. 4, 1937	-	-	-	-	-	-	491	1,320	1.7	.0	-	-	-	-	-	-
N8-104	do	582	Sept. 1, 1941	-	-	39	44	1,110	390	633	1,210	-	-	3,230	228	91	29.0	-	-
N8-104	do	582	Dec. 19, 1943	-	-	-	-	-	376	887	1,380	-	-	-	-	-	-	-	-
N8-104	do	582	July 26, 1945	-	-	70	45	985	365	597	1,120	-	.5	3,000	360	86	23.0	-	-
N8-104	do	582	Mar. --, 1947	-	-	46	34	714	326	402	795	-	0.8	2,150	255	86	19.0	3,730	-
N8-104	do	582	Aug. 13, 1957	-	-	-	-	-	-	-	149	-	-	-	-	-	-	1,090	-

See footnotes at end of table.

Table 11. - Chemical analyses of water from wells and springs in Dimmit County--Continued

Well	Owner	Depth of well (ft.)	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
								<u>Carrizo Sand</u>											
N8-106	R. Rodriguez	450	Dec. 6, 1937	-	-	-	-	-	330	335	435	.0	.2	-	a348	-		-	-
N8-108	F. Webb	564	Dec. 2, 1937	-	-	-	-	-	280	133	185	.0	.2	-	a162	-		-	-
N8-126	E. L. Dismukes	1,212	Apr. 3, 1957	-	-	-	-	-	-	-	40	-	-	-	-	-		576	-
N8-129	Fred Miller	1,300	do	-	-	-	-	-	-	-	38	-	-	-	-	-		536	-
N8-131	do	1,300	do	-	-	-	-	-	-	-	40	-	-	-	-	-		534	-
N8-132	Jack Bowman	-	do	-	-	-	-	-	-	-	205	-	-	-	-	-		1,160	-
N8-133	Essar Ranch	-	Mar. 18, 1957	-	-	-	-	-	-	-	32	-	-	-	-	-		639	-
N8-135	-	Spring	Mar. --, 1957	-	-	-	-	-	-	-	179	-	-	-	-	-		1,580	-
N8-139	O. E. Bookout	960	Feb. 27, 1957	-	-	-	-	-	-	-	48	-	-	-	-	-		666	-
N8-141	do	780	do	-	-	-	-	-	-	-	39	-	-	-	-	-		606	-
N8-150	Essar Ranch	-	Mar. 18, 1957	-	-	-	-	-	-	-	34	-	-	-	-	-		609	-
N8-152	do	-	do	-	-	-	-	-	-	-	45	-	-	-	-	-		660	-
N9-3	Alton & Howard	1,236	Dec. 8, 1913	-	-	-	-	-	389	50	119	-	-	-	a184	-		-	-
N9-3	do	1,236	June 21, 1930	29	0.58	38	12	96 6.4	303	55	37	-	.25	410	144	60	3.5	-	-
N9-3	do	1,236	Apr. 11, 1957	-	-	-	-	-	-	-	49	-	-	-	-	-		646	-
N9-4	Clark & Howard	-	Apr. 11, 1957	-	-	-	-	-	-	-	95	-	-	-	-	-		786	-
N9-5	G. D. Price	1,353	Apr. 2, 1957	-	-	-	-	-	-	-	145	-	-	-	-	-		1,500	-
N9-6	O. H. Nance	1,448	Dec. 1, 1938	-	-	-	-	-	222	40	29	0.4	0.10	-	-	-		-	-
N9-7	J. T. Kinnard	1,600	Mar. 3, 1913	-	-	-	-	-	246	67	36	-	-	-	a130	-		-	-
N9-8	H. Brown	1,412	Dec. 1, 1938	-	-	-	-	-	347	85	340	-	1.0	-	a156	-		-	-
N9-15	City of Big Wells	1,520	Mar. --, 1913	-	-	-	-	-	294	50	60	-	-	-	a100	-		-	-
N9-20	do	1,355	Dec. 9, 1937	-	-	-	-	-	361	91	85	.8	.7	-	a10	-		-	-
N9-20	do	1,355	Feb. 27, 1939	-	-	-	-	-	343	96	85	-	-	-	a16	-		-	-

See footnotes at end of table.

Table 11. - Chemical analyses of water from wells and springs in Dimmit County--Continued

Well	Owner	Depth of well (ft.)	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)		Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
								<u>Carrizo Sand</u>												
N9-20	City of Big Wells	1,355	May 11, 1945	17	0.42	4.3	1.6	223	8.6	361	90	85	1.6	.2	612	17	95	24.0	1,060	8.4
N9-20	do	1,355	July 15, 1957	-	-	-	-	-	-	-	-	288	-	-	-	-	-	-	1,860	-
N9-25	Jack Bowman	1,300	Dec. 30, 1948	20	-	30	16	110	-	300	61	50	-	.0	442	141	63	4.0	723	-
N9-26	do	-	Apr. 5, 1957	-	-	-	-	-	-	-	-	468	-	-	-	-	-	-	2,130	-
N9-37	Frito Co.	1,500	May 15, 1940	-	-	27	10	119	-	304	59	40	-	.0	405	108	70	5.0	-	-
N9-45	Federal Land Bank	-	Feb. 27, 1939	-	-	-	-	-	-	266	72	49	-	-	-	a69	-	-	-	-
07-3	G. W. Hatch	1,800	Mar. 19, 1957	-	-	-	-	-	-	-	-	54	-	-	-	-	-	-	1,040	-
S1-11	R. A. Manter	150	July 17, 1957	-	-	-	-	-	-	-	-	79	-	-	-	-	-	-	563	-
S1-18	E. G. Castellaw	320	Mar. 18, 1930	38	.32	67	13	64	6.2	202	73	89	-	.05	456	221	40	1.9	-	-
S1-26	S. G. Taylor	350	Mar. 22, 1957	-	-	-	-	-	-	-	-	89	-	-	-	-	-	-	964	-
S1-32	W. J. Rott	300	Nov. 19, 1938	-	-	-	-	-	-	175	75	125	-	0.15	-	a231	-	-	-	-
S1-37	O. P. Leonard	-	Mar. 21, 1939	-	-	-	-	-	-	154	76	118	-	-	-	a213	-	-	-	-
S1-39	D. O. Leftwich	-	Mar. 25, 1957	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	908	-
S1-46	Walker Burns	355	Mar. 13, 1957	-	-	-	-	-	-	-	-	81	-	-	-	-	-	-	818	-
S1-51	Williams Produce Co.	675	Mar. 8, 1957	-	-	-	-	-	-	-	-	126	-	-	-	-	-	-	1,040	-
S1-55	W. H. Burns	470	Mar. 25, 1957	-	-	-	-	-	-	-	-	101	-	-	-	-	-	-	1,030	-
S1-57	do	467	do	-	-	-	-	-	-	-	-	95	-	-	-	-	-	-	1,060	-
S1-64	R. G. Slocum	352	do	-	-	-	-	-	-	-	-	121	-	-	-	-	-	-	949	-
S1-75	Citra Land Farms	-	do	-	-	-	-	-	-	-	-	118	-	-	-	-	-	-	769	-
S2-1	F. Guerrero	510	Oct. 13, 1913	-	-	-	-	-	-	268	168	272	-	-	-	a100	-	-	-	-
S2-1	do	510	Mar. 8, 1957	-	-	-	-	-	-	-	-	85	-	-	-	-	-	-	896	-
S2-2	J. C. Oelkers	600	Apr. 10, 1957	-	-	-	-	-	-	-	-	95	-	-	-	-	-	-	892	-
S2-3	do	600	Nov. 21, 1938	-	-	-	-	-	-	281	111	80	-	.25	-	a102	-	-	-	-

See footnote at end of table.

Table 11. - Chemical analyses of water from wells and springs in Dimmit County--Continued

Well	Owner	Depth of well (ft.)	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
								<u>Carrizo Sand</u>											
S2-4	W. E. Munson	694	Nov. 21, 1938	-	-	-	-	-	282	90	72	0.3	.20	-	a105	-		-	-
S2-5	do	634	do	-	-	-	-	-	292	90	116	-	.25	-	a132	-		-	-
S2-8	Tommy Powers	670	Nov. 22, 1938	-	-	-	-	-	302	60	49	-	.10	-	a90	-		-	-
S2-8	do	670	Apr. 1, 1957	-	-	-	-	-	-	-	55	-	-	-	-	-		705	-
S2-10	Fisher & Webb	670	Mar. 27, 1957	-	-	-	-	-	-	-	43	-	-	-	-	-		640	-
S2-11	do	640	Mar. 20, 1957	-	-	-	-	-	-	-	42	-	-	-	-	-		655	-
S2-13	Eagle Nest Farms	601	Mar. 22, 1957	-	-	-	-	-	-	-	43	-	-	-	-	-		642	-
S2-18	Sam Rayburn	670	Dec. 7, 1938	-	-	-	-	-	290	172	190	-	0.0	-	a87	-		-	-
S2-18	do	670	Mar. 22, 1957	-	-	-	-	-	-	-	136	-	-	-	-	-		1,130	-
S2-20	-- Reynolds	-	do	-	-	-	-	-	-	-	131	-	-	-	-	-		1,020	-
S2-24	Mrs. Geo. Gay	667	Apr. 4, 1930	23	0.08	26	7.3	152 6.4	281	84	86	-	.12	513	95	78	6.8	-	-
S2-24	do	667	Dec. 23, 1948	21	-	28	13	170	270	107	113	-	.0	585	124	75	6.6	967	-
S2-25	Victor Martinez	677	June 4, 1930	26	.26	350	207	1,610 23	321	1,610	2,350	-	3.0	6,400	1,720	67	17	-	-
S2-29	H. Rouw	680	Feb. 22, 1957	-	-	-	-	-	294	-	128	-	-	-	152	-		1,140	8.1
S2-32	Cochran & Cochran	693	May 20, 1957	-	-	-	-	-	-	-	98	-	-	-	-	-		956	-
S2-34	H. Petry	1,000	do	-	-	-	-	-	-	-	135	-	-	-	-	-		1,150	-
S2-43	Jack Votaw	700	May 14, 1957	-	-	-	-	-	-	-	157	-	-	-	-	-		1,070	-
S2-46	Silva & Rowdon	-	May 24, 1957	-	-	-	-	-	-	-	80	-	-	-	-	-		794	-
S2-47	do	803	do	-	-	-	-	-	-	-	76	-	-	-	-	-		816	-
S2-54	D. O. Leftwich	625	Apr. --, 1957	-	-	-	-	-	-	-	195	-	-	-	-	-		1,350	-
S2-56	P. D. Smith	499	July 23, 1957	-	-	-	-	-	-	-	195	-	-	-	-	-		1,470	-
S2-62	City of Asherton	640	Mar. 28, 1930	20	.08	53	14	172 6.8	246	198	123	-	.13	704	190	67	5.4	-	-
S2-62	do	640	May 11, 1945	17	.34	60	15	158 20	242	200	122	.8	.0	716	211	59	4.7	1,190	7.8

See footnotes at end of table.

Table 11. - Analyses of water from wells and springs in Dimmit County--Continued

Well	Owner	Depth of well (ft.)	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH	
								<u>Carrizo Sand</u>												
S2-62	City of Asherton	640	Aug. 12, 1957	-	-	-	-	-	-	-	114	-	-	-	-	-	-	1,140	-	
S2-78	-- McClendon	1,000	Apr. 8, 1947	-	-	-	-	-	240	340	208	-	-	-	a180	-	-	1,460	-	
S2-83	G. Grisham	1,100	Mar. --, 1947	-	-	24	9.4	171	288	81	105	-	1.0	537	98	79	7.5	970	-	
S2-83	do	1,100	Apr. 10, 1957	-	-	-	-	-	-	-	205	-	-	-	-	-	-	1,310	-	
S2-86	D. J. Hill	1,021	May 23, 1930	23	0.09	35	11	207	7.0	242	195	148	-	.21	742	133	78	7.8	-	-
S2-86	do	1,021	Apr. --, 1943	-	-	72	37	726	280	558	780	-	-	2,310	332	83	17	-	-	
S2-96	L. Hester	1,081	June 25, 1945	-	-	17	9.9	136	299	50	57	-	.0	463	83	78	6.5	-	-	
S2-96	do	1,081	July 19, 1957	-	-	-	-	-	-	-	445	-	-	-	-	-	-	2,290	-	
S2-103	R. A. Flood	512	Nov. 21, 1938	-	-	-	-	-	304	129	87	0.4	.15	-	a165	-	-	-	-	
S2-107	C. Jung	728	Mar. 22, 1957	-	-	-	-	-	-	-	2,480	-	-	-	-	-	-	11,900	-	
S2-110	E. F. Simpson	-	Mar. 28, 1939	-	-	-	-	-	238	195	261	-	-	-	a183	-	-	-	-	
S2-111	J. H. Long	-	May 17, 1940	-	-	28	11	286	248	225	212	-	-	884	115	84	12	-	-	
S2-116	J. T. Stinnett	572	Jan. 4, 1949	16	-	29	14	136	282	92	70	-	.0	506	130	69	5.2	829	-	
S2-117	Leonard Arche, Jr.	-	Apr. 12, 1957	-	-	-	-	-	-	-	93	-	-	-	-	-	-	922	-	
S2-129	W. E. Wroe	660	Mar. 27, 1957	-	-	-	-	-	-	-	63	-	-	-	-	-	-	726	-	
S2-133	E. D. Guerrero	420	Nov. 21, 1938	-	-	-	-	-	287	108	74	.2	.20	-	a192	-	-	-	-	
*S2-135	H. Rouw	-	Jan. 4, 1949	26	-	57	15	141	292	127	96	-	.0	607	204	60	4.3	975	-	
S3-1	Wm. O'Brien	1,800	Dec. 7, 1938	-	-	-	-	-	378	111	165	-	.0	-	a68	-	-	-	-	
S3-1	do	1,800	Jan. 15, 1949	58	-	8.6	6.7	745	704	314	540	-	3.7	2,020	49	97	46	3,250	-	
S3-4	-- Rasmussen et al	1,776	Dec. 7, 1938	-	-	-	-	-	398	115	165	-	.0	-	a58	-	-	-	-	
S3-4	do	1,776	May 5, 1957	-	-	-	-	-	-	-	910	-	-	-	-	-	-	4,700	-	
S3-6	C. Ward	900	Feb. 21, 1957	-	-	-	-	-	359	-	480	-	-	-	74	-	-	2,550	8.3	

*Boron (B) 0.82
See footnotes at end of table.

Table 11. - Chemical analyses of water from wells and springs in Dimmit County--Continued

Well	Owner	Depth of well (ft.)	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
								<u>Carrizo Sand</u>											
S3-10	H. H. Coffield	1,419	Apr. 17, 1930	20	0.04	9.5	4.2	195 4.8	205	102	116	-	.29	576	41	91	13	-	-
S3-10	do	1,419	Mar. 26, 1957	-	-	-	-	-	-	-	140	-	-	-	-	-	-	1,030	-
S3-22	B. L. Z. Water Co.	1,334	May 11, 1945	18	.30	16	6.9	392 25	240	212	378	1.0	1.2	1,170	68	89	21	2,090	7.9
S3-22	do	1,334	June 17, 1957	-	-	-	-	-	-	-	225	-	-	-	-	-	-	1,400	-
S3-23	L. Vivian	-	July 19, 1957	-	-	-	-	-	-	-	120	-	-	-	-	-	-	1,030	-
S3-29	Mrs. Dave W. Bouldin	1,441	Apr. 10, 1957	-	-	-	-	-	-	-	67	-	-	-	-	-	-	788	-
S3-31	A. Taylor	1,237	do	-	-	-	-	-	-	-	47	-	-	-	-	-	-	682	-
S5-4	Catarina Farms Co.	-	Mar. 26, 1957	-	-	-	-	-	-	-	650	-	-	-	-	-	-	2,920	-
S5-5	do	1,374	Mar. 19, 1930	46	.15	22	10	201 8.8	248	243	71	-	.32	720	96	82	8.9	-	-
S5-5	do	1,374	Mar. 26, 1957	-	-	-	-	-	-	-	73	-	-	-	-	-	-	1,090	-
S5-10	do	1,615	Mar. 14, 1957	-	-	-	-	-	-	-	5,150	-	-	-	-	-	-	16,100	-
S6-4	O. V. Ray	1,432	Apr. 17, 1930	14	.15	68	34	2,620 26	333	956	3,460	-	2.3	7,430	309	95	65	-	-
S6-6	J. S. Pearce	1,362	June 17, 1957	-	-	-	-	-	-	-	154	-	-	-	-	-	-	1,150	-
S6-8	R. W. Briggs	1,800	Dec. 12, 1948	53	-	5.5	2.6	245	282	131	133	-	2.0	711	24	96	22	1,120	-
S6-8	do	1,800	July 19, 1957	-	-	-	-	-	-	-	134	-	-	-	-	-	-	1,110	-
T1-1	Frank Schilds	-	Apr. 9, 1957	-	-	-	-	-	-	-	57	-	-	-	-	-	-	748	-
T1-2	Jack Ward	-	Dec. --, 1914	-	-	-	-	-	272	63	32	-	-	-	a53	-	-	-	-
T1-5	Jack Bowman	1,710	Mar. --, 1913	-	-	-	-	-	280	67	48	-	-	-	a94	-	-	-	-
T1-5	do	1,710	Apr. 22, 1930	23	0.54	11	5.8	153 4.6	282	72	60	-	.73	474	51	87	9.3	-	-
T1-6	Silverlake Ranch	-	May 16, 1940	-	-	-	-	-	786	132	178	-	.50	-	a20	-	-	-	-
T1-7	W. L. Moody	-	do	-	-	310	114	1,580	178	1,960	1,760	-	-	5,810	1,240	73	19	-	-
T1-9	L. W. Henrikson	1,755	Apr. 9, 1957	-	-	-	-	-	-	-	62	-	-	-	-	-	-	769	-

See footnote at end of table.

Table 11. - Chemical analyses of water from wells and springs in Dimmit County--Continued

Well	Owner	Depth of well (ft.)	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
								<u>Carrizo sand</u>											
T1-10	G. T. McCarley	1,770	Apr. 9, 1957	-	-	-	-	-	-	-	57	-	-	-	-	-		765	-
T1-13	H. G. Ritchie	2,050	do	-	-	-	-	-	-	-	80	-	-	-	-	-		980	-
T4-1	G. E. Light	2,040	July 19, 1957	-	-	-	-	-	-	-	114	-	-	-	-	-		979	-
								<u>Indio formation</u>											
M9-16	Ed Gardner	-	July 28, 1949	18	-	158	61	964	330	1,750	460	-	.80	3,570	646	76	17	5,030	7.8
M9-17	do	-	do	26	-	36	15	187	456	76	75	-	.20	664	152	73	6.6	1,080	7.8
M9-18	do	-	do	22	-	180	71	800	404	1,170	660	-	.50	3,100	741	70	13	4,640	7.6
M9-19	Ben Patterson	200	do	19	-	52	34	624	414	126	820	-	.0	1,880	270	83	17	3,530	7.8
M9-20	Ed Gardner	-	do	28	-	132	41	40	434	228	172	-	1.2	972	498	40	3.0	1,590	8.2
M9-21	do	-	do	36	-	52	29	197	474	158	86	-	3.2	832	249	63	5.5	1,320	7.9
N7-38	J. A. Webb	900	Nov. 21, 1938	-	-	-	-	-	162	1,090	139	-	.25	-	a892	-		-	-
N7-70	C. M. Burns	530	Nov. 20, 1938	-	-	-	-	-	183	1,000	875	-	1.6	-	a675	-		-	-
N7-182	Joe Gardner	247	July 18, 1949	34	-	184	41	115	310	302	220	-	.0	1,050	628	29	2.0	1,680	7.7
N7-183	do	183	do	54	-	69	22	170	236	81	246	-	9.5	816	262	58	4.5	1,350	7.9
N7-184	Ben Patterson	220	do	28	-	184	63	216	380	665	130	-	.80	1,470	718	40	3.5	2,130	7.8
N9-53	Jack Bowman	8,517	Jan. 10, 1957	19	-	12	4.1	1,900	808	660	2,000	-	-	4,990	47	99	120	8,050	8.0
R3-6	W. C. Ammann	475	May 20, 1930	33	0.10	116	25	291 9.5	502	385	169	-	.12	1,280	392	62	6.4	-	-
R3-9	Hal A. Hamilton	50	Nov. 20, 1938	-	-	-	-	-	302	165	123	-	1.0	-	a108	-		-	-
								<u>Bigford member of Mount Selman formation</u>											
N7-137	G. A. Hero Estate	31	Mar. --, 1913	-	-	-	-	-	366	574	1,580	-	-	-	1,210	-		-	-
N8-24	H. P. Bailey	66	Apr. 7, 1930	14	1.8	69	53	1,440 22	372	787	1,710	-	2.9	4,260	390	89	32	-	-
N8-30	I. J. New	435	May 6, 1930	12	1.1	385	218	3,390 50	278	4,070	3,420	-	2.1	11,790	1,860	80	34	-	-
N9-42	Wallace Rogers	120	Mar. --, 1913	-	-	-	-	-	158	574	564	-	-	-	a1,260	-		-	-

See footnote at end of table.

Table 11. - Chemical analyses of water from wells and springs in Dimmit County--Continued

Well	Owner	Depth of well (ft.)	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
<u>Bigford member of Mount Selman formation - Continued</u>																			
N9-51	Wallace Rogers	-	Apr. 2, 1957	-	-	-	-	-	-	-	1,760	-	-	-	-	-	-	6,870	-
07-6	Jim Standifer	140	Dec. 7, 1949	16	-	418	294	1,310	234	3,100	1,190	-	0	6,440	2,250	56	12	7,880	7.7
S6-7	Catarina Farms Co.	600 700	May 16, 1940	-	-	32	15	1,830	384	680	2,190	-	-	4,930	142	97	6.7	-	-

a Soap hardness.