TEXAS WATER DEVELOPMENT BOARD

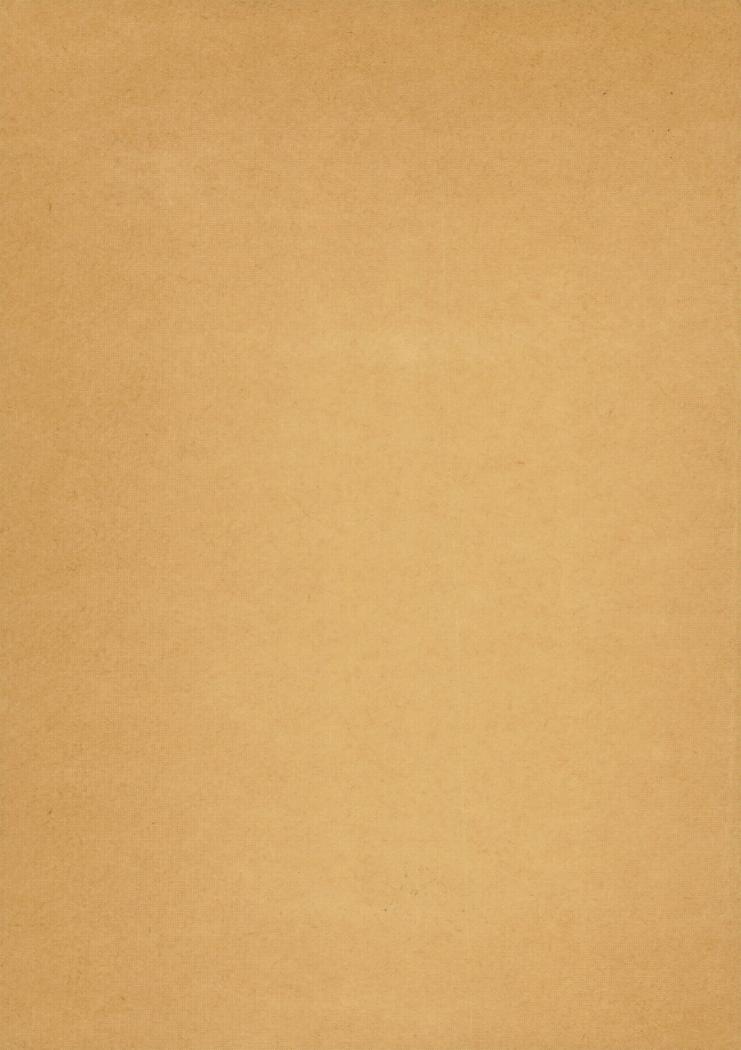




Report 119

# GROUND-WATER RESOURCES OF COLLINGSWORTH COUNTY, TEXAS

JULY 1970



# TEXAS WATER DEVELOPMENT BOARD

**REPORT 119** 

# GROUND-WATER RESOURCES OF COLLINGSWORTH COUNTY, TEXAS

By

James T. Smith United States Geological Survey

Prepared by the U.S. Geological Survey in cooperation with the Texas Water Development Board

## **TEXAS WATER DEVELOPMENT BOARD**

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# GROUND-WATER RESOURCES OF COLLINGSWORTH COUNTY, TEXAS

### ABSTRACT

Collingsworth County is in the southeastern part of the Texas panhandle adjacent to the eastern margin of the High Plains. Extensive Permian sediments and Quaternary alluvial deposits crop out in the county. The principal aquifers are the Blaine Formation of Permian age and the alluvial plain, terrace, and channel deposits of Quaternary age. Aquifers of minor importance are the Flowerpot Shale, Dog Creek Shale, and Whitehorse Group of Permian age; and the Ogallala Formation of Tertiary age.

The Blaine Formation yields small to large quantities of saline water to wells and is capable, in places where solution cavities are interconnected, of yielding more than 1,000 gallons per minute. Although the water is of poor quality, the Blaine is the major source of irrigation water in the county. The Quaternary alluvium yields small to large quantities of water that is generally low in dissolved solids, and is the major source of water for municipal supply.

Water levels in the aquifers have remained generally steady since about 1938, except in a few areas of concentrated pumpage for irrigation.

The major water quality problems in Collingsworth County are the concentrations of dissolved solids, sulfate, chloride, and sodium. No evidence was found of ground-water pollution from oil-field brines.

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# GROUND-WATER RESOURCES OF COLLINGSWORTH COUNTY, TEXAS

### INTRODUCTION

#### Location and Extent of the Area

Collingsworth County is an area of 899 square miles in the southeastern corner of the Texas Panhandle (Figure 1). The county is bordered by Wheeler County on the north; Donley County on the west; Hall and Childress Counties on the south; and Harmon and Beckham Counties, Oklahoma, on the east. Wellington, the county seat, is about 100 miles southeast of Amarillo and about 140 miles northwest of Wichita Falls.

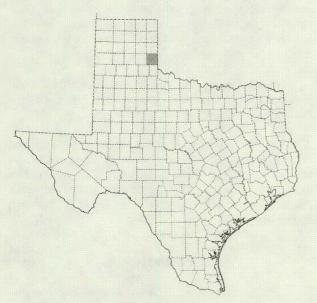


FIGURE 1.-LOCATION OF COLLINGSWORTH COUNTY

#### Purpose and Scope of the Investigation

The investigation of the ground-water resources of Collingsworth County began in January 1967 as a cooperative project of the U.S. Geological Survey and the Texas Water Development Board. The purpose of the study was to obtain data on the occurrence, location, and quality of the ground-water resources of the area, with particular reference to the sources of water suitable for public supply, industrial use, and irrigation. The scope of the investigation included determination of the location and extent of the water-bearing formations, the chemical quality of the water they contain, the quantity of water being withdrawn and the effects of these withdrawals on the water levels, the hydraulic characteristics of the aquifers, and estimates of the quantities of ground water available for development.

The following items were included in the investigation:

1. An inventory was made of approximately 1,100 water wells and springs, including all public supply, irrigation, and industrial wells, and a representative number of domestic and livestock wells (Table 7). Locations of wells and springs are shown on Figure 10.

2. Drillers' logs of approximately 100 wells were used in conjunction with other data to map the geologic units and to determine the thickness of the water-bearing units (Figure 6, Table 1).

3. Water samples were collected from wells to determine the chemical quality of the water (Figure 8, Table 8).

4. A map showing the approximate altitude of water levels in wells was constructed from water-level measurements and altitudes of wells (Figure 7).

#### **Previous Investigations**

Follett and Wilson (1939) compiled records of wells and springs, drillers' logs, and water analyses, and prepared a map showing the location of wells and springs in Collingsworth County. Rayner (1958) compiled records of water-level measurements in Collingsworth, Hemphill, Roberts, and Wheeler Counties for the period 1937-58. Baker and others (1963) published the results of a ground-water reconnaissance investigation that included data on Collingsworth County. Surface-water data are contained in reports by the Texas Board of Water Engineers (1954) and the U.S. Geological Survey (1967a, 1967b).

#### Climate, Topography, and Drainage

The average annual precipitation in Collingsworth County is 23 inches. About two-thirds of this amount results from thunderstorms that occur during the 6-month period April through September. The average annual-mean temperature was  $16^{\circ}$ C ( $61^{\circ}$ F) for the period 1931-60. The average temperatures for January and July are -3°C ( $26^{\circ}$ F), and 37°C ( $99^{\circ}$ F) respectively, but during any year the temperature may range from over  $38^{\circ}$ C ( $100^{\circ}$ F) to below - $18^{\circ}$ C ( $0^{\circ}$ F). The growing season is approximately 203 days, and the first killing frost is about November 8. The average annual gross lake-surface evaporation is about 73 inches (Kane, 1967).

Collingsworth County is situated just east of the Caprock escarpment which marks the eastern edge of the Southern High Plains. The highest elevation, 2,840 feet above mean sea level, is in the extreme northwest corner of the county. The lowest elevation, 1,750 feet above mean sea level, is in the southeast corner just south of Dodson. The areas of greatest local relief are in the southwestern part of the county along the valleys of Wet Salt Creek and Dry Salt Creek, and in the northeastern part of the county along the valleys of Elm Creek and North Elm Creek.

In the northeastern part of the county, in the outcrop area of the Blaine Formation, the topography is characterized by numerous sinkholes, caves, solution valleys, and other features similar in appearance to the karst topography developed in some limestone regions. The effects of solution weathering are shown in the photographs, Figures 2 and 3.

The major drainage systems in the county are Buck Creek, Salt Fork Red River, and Elm Creek. Recorded mean-daily discharge and maximum discharge in cfs (cubic feet per second) at U.S. Geological Survey stream-gaging stations in the area are as follows:

STATION NO.	LOCATION	MEAN-DAILY DISCHARGE (CFS)	MAXIMUM DISCHARGE (CFS)
7-3000.0	Salt Fork Red River near Wellington	72.6	146,000
7-3005.0	Salt Fork Red River near Mangum, Oklahoma	91.7	72,000
7-2995.5	Buck Creek near Wellington	3.2	-
7-3033.0	Elm Creek near Shamrock	2.1	-

#### **Economic Development**

The economy of the county is basically agricultural, with two-thirds of the income being derived from the production of beef cattle, cotton, grain sorghum, and wheat. Since 1953, irrigation has become increasingly important, alfalfa being one of the principal irrigated crops. The major industrial development is the production of oil and gas in the Panhandle East Field.

The estimated 1967 population of Collingsworth County was 5,626, and the populations of the larger communities were: Wellington, 3,015; Dodson, 321; Quail, 114; and Samnorwood, 110.

#### Well-Numbering System

Numbers assigned to wells and springs in this report conform to the statewide well-numbering system adopted by the Texas Water Development Board. This system is based on division of the State into quadrangles formed by degrees of latitude and longitude (Figure 4). Each 1-degree quadrangle is given a number consisting of two digits, which are the first two digits of the well number. Each 1-degree quadrangle is divided into 7½-minute quadrangles which are given 2-digit numbers from 01 to 64. These are the third and fourth digits of the well number. Each 71/2-minute quadrangle is divided into 21/2-minute quadrangles which are given a single digit number from 1 to 9. This is the fifth digit of the well number. Finally, each well within a 21/2-minute quadrangle is given a 2-digit number in the order in which it was inventoried, starting with 01. These are the last two digits of the well number.

In addition to the 7-digit well number, a 2-letter prefix is used to identify the county. The prefix for Collingsworth County is DU.

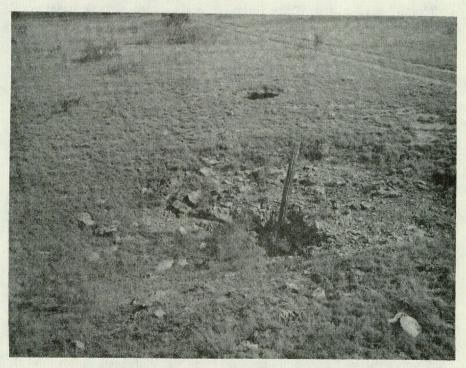
On the map showing the locations of wells and springs (Figure 10) only the last three digits of the well number are shown at each location. The second two digits are shown in the northwest corner of each 7½-minute quadrangle, and the first two digits are shown by the large block numerals 05 and 12.

#### Acknowledgments

The author gratefully acknowledges the cooperation of the many landowners, water-well drillers, and city and county officials who assisted in the collection of data for this report. Mr. Lynn Courtney and other personnel of the Salt Fork Conservation District, Mr. Jim Moss (deceased) of the Greenbelt Electric Cooperative, Inc., and Mr. Frank Anderson of the Mill Iron Ranches were especially helpful.



Close up View of the Effects of Weathering and Solution of the Typically Crystalline Gypsum Beds Exposed in Northeastern Collingsworth County.

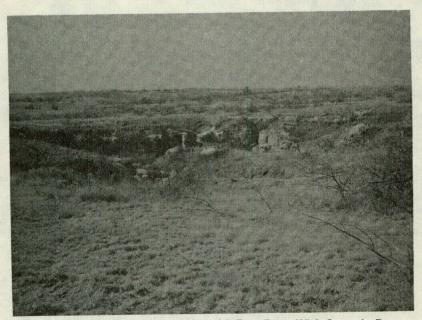


Early Surficial Development of Sinkhole in Blaine Formation.

FIGURE 2.-EFFECTS OF SOLUTION WEATHERING OF THE BLAINE FORMATION

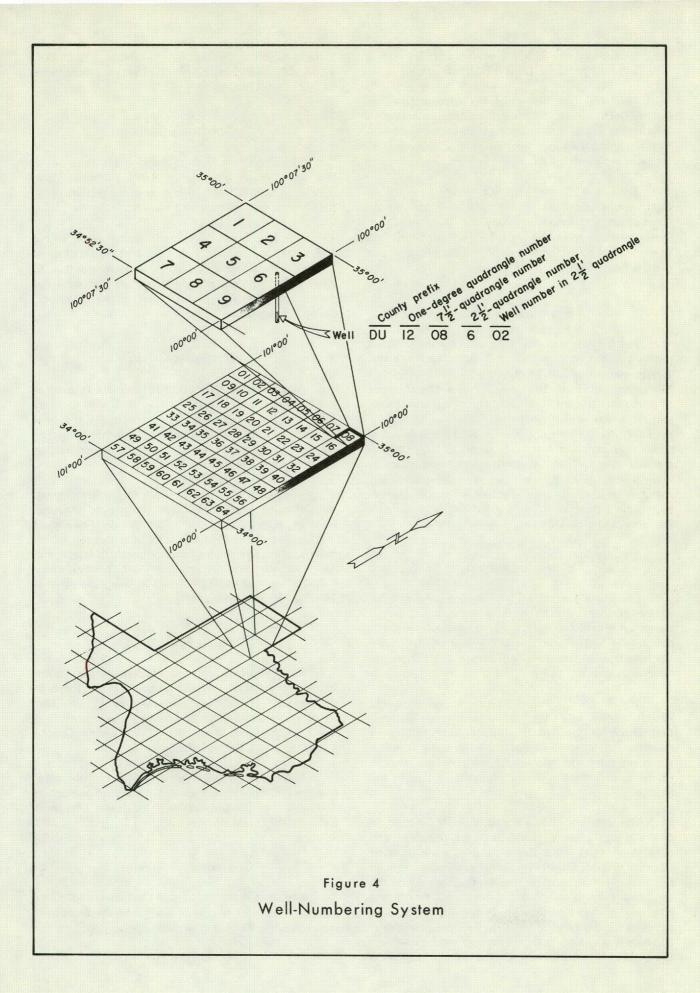


"Mouth" of Lost Creek Where Surface Runoff Becomes Ground Water in Blaine Formation, Near Well DU-05-64-303.



Sinkhole in Blaine Formation About 80 Feet Deep With Seeps in Bottom, Between Wells DU-05-64-303 and 603.

FIGURE 3.-"KARST TOPOGRAPHY" FORMED BY SOLUTION WEATHERING



#### GEOLOGIC UNITS AND THEIR WATER-BEARING PROPERTIES

The areal distribution of the rocks exposed in Collingsworth County is shown on the geologic map (Figure 5). Figure 6 is a north-south geologic section. The thickness, lithology, and hydrologic properties of the units are given in Table 1.

The most important water-bearing units in Collingsworth County are the Blaine Formation of Permian age and the alluvium of Quaternary age. Other units of lesser importance are the Flowerpot Shale, Dog Creek Shale, and Whitehorse Group of Permian age; and the Ogallala Formation of Tertiary age.

#### **Flowerpot Shale**

The Flowerpot Shale of Permian age is the oldest geologic unit that crops out in Collingsworth County. The formation, which is exposed only in the valleys of Elm Creek and North Elm Creek in the northeast corner of the county (Figure 5), consists of mottled blue, green, and red shales with disseminated lenses and crystals of gypsum. The maximum thickness of the Flowerpot is about 400 feet, but only the upper 30 to 50 feet is exposed. The unit yields small quantities of slightly saline water, generally less than 10 gpm (gallons per minute), to livestock wells. Because of its low permeability, the Flowerpot forms a confining layer beneath the more permeable overlying Blaine Formation.

#### **Blaine Formation**

The Blaine Formation, which crops out over most of the northeast quarter of Collingsworth County, is composed of red silty shale, gypsum, anhydrite, salt, and dolomite. On the geologic map (Figure 5), the Blaine Formation and the overlying Dog Creek Shale are mapped as a unit.

The Blaine Formation, which is approximately 400 feet thick in Collingsworth County, yields small (less than 50 gpm) to large (more than 500 gpm) quantities of fresh to moderately saline water to wells. Although the water generally is of poor quality, the Blaine is the major source of irrigation water in the county.

The water in the Blaine occurs chiefly in solution channels and caverns in the beds of anhydrite and gypsum. In most places the water occurs under watertable conditions; however, in some areas it is confined by relatively impervious beds within the Blaine or by the overlying Dog Creek Shale. Because of the varying effects of differential solution in the subsurface, it is common for dry holes or wells of low yield to be found adjacent to wells of moderate to high yield. Generally, the yields range from 400 to 600 gpm. A few wells (DU-05-62-810, 05-62-907, 12-06-201, 12-06-308, 12-14-901, 12-14-924, 12-15-401) have maximum yields of more than 1,000 gpm.

#### **Dog Creek Shale**

The Dog Creek Shale of Permian age crops out in the same general area as the Blaine Formation, and because of the difficulty in distinguishing the two units, they are mapped together on Figure 5.

The Dog Creek Shale, which is composed of red and green shale and silt, yields small quantities of water to large-diameter wells. Yields are generally less than 10 gpm. It is hydrologically significant in that locally it forms a confining layer for water in the underlying Blaine Formation.

#### Whitehorse Group

The Whitehorse Group of Permian age consists of interbedded red silt, siltstone, fine sand, silty to sandy shale, and fine to coarse sandstone with several thin beds of gypsum, anhydrite, and dolomite near the base. The maximum thickness of the unit, in the southwestern part of the county, is more than 300 feet.

The Whitehorse yields small to moderate quantities of water, generally less than 100 gpm, to domestic, livestock, public-supply, and irrigation wells. The highest yields are from wells in the vicinity of Wellington, which have reported discharges of approximately 100 gpm, and north of Memphis (in adjacent Hall County) where irrigation wells DU-12-12-906 and 907 were measured at 140 and 155 gpm, respectively.

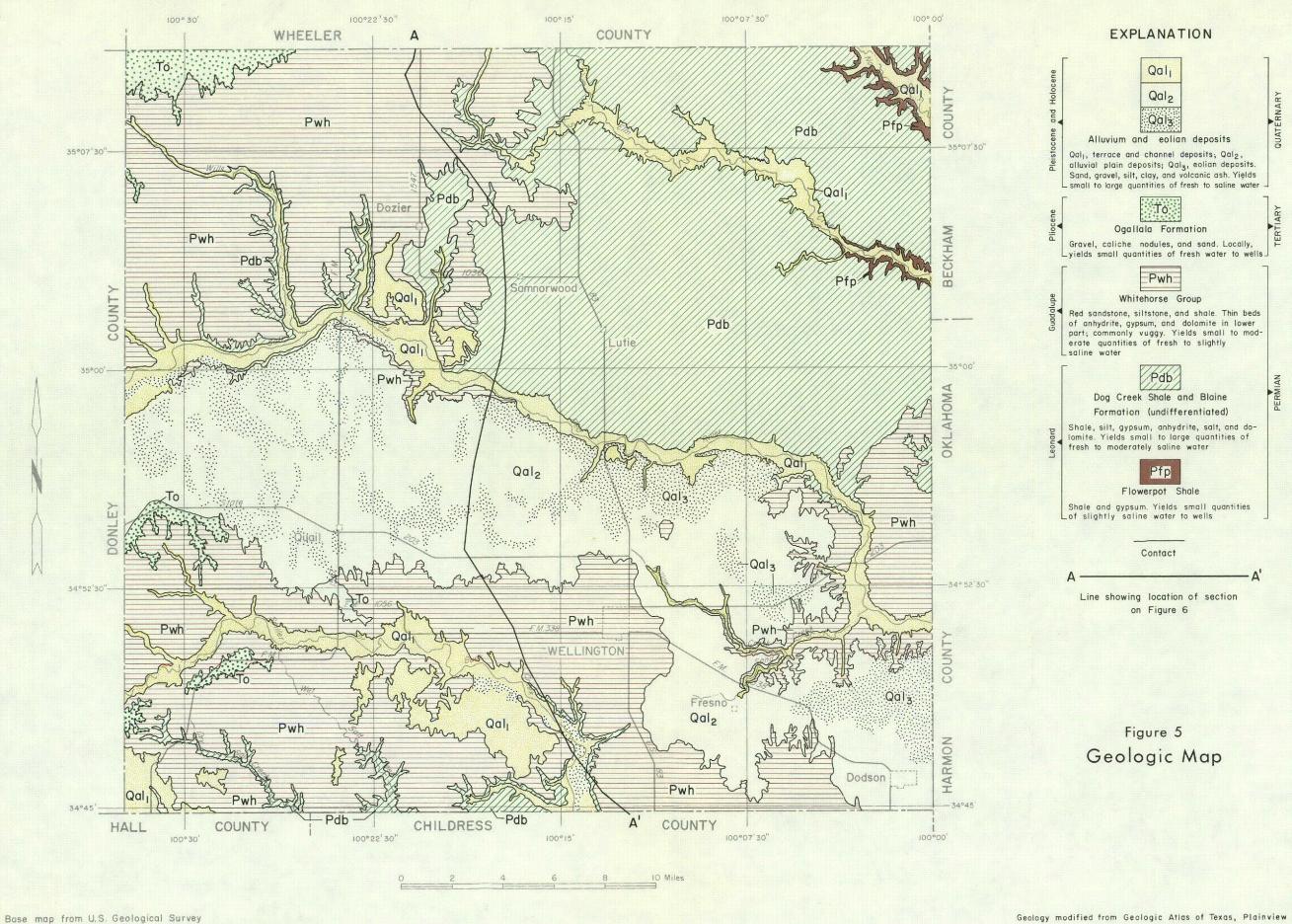
#### **Ogallala Formation**

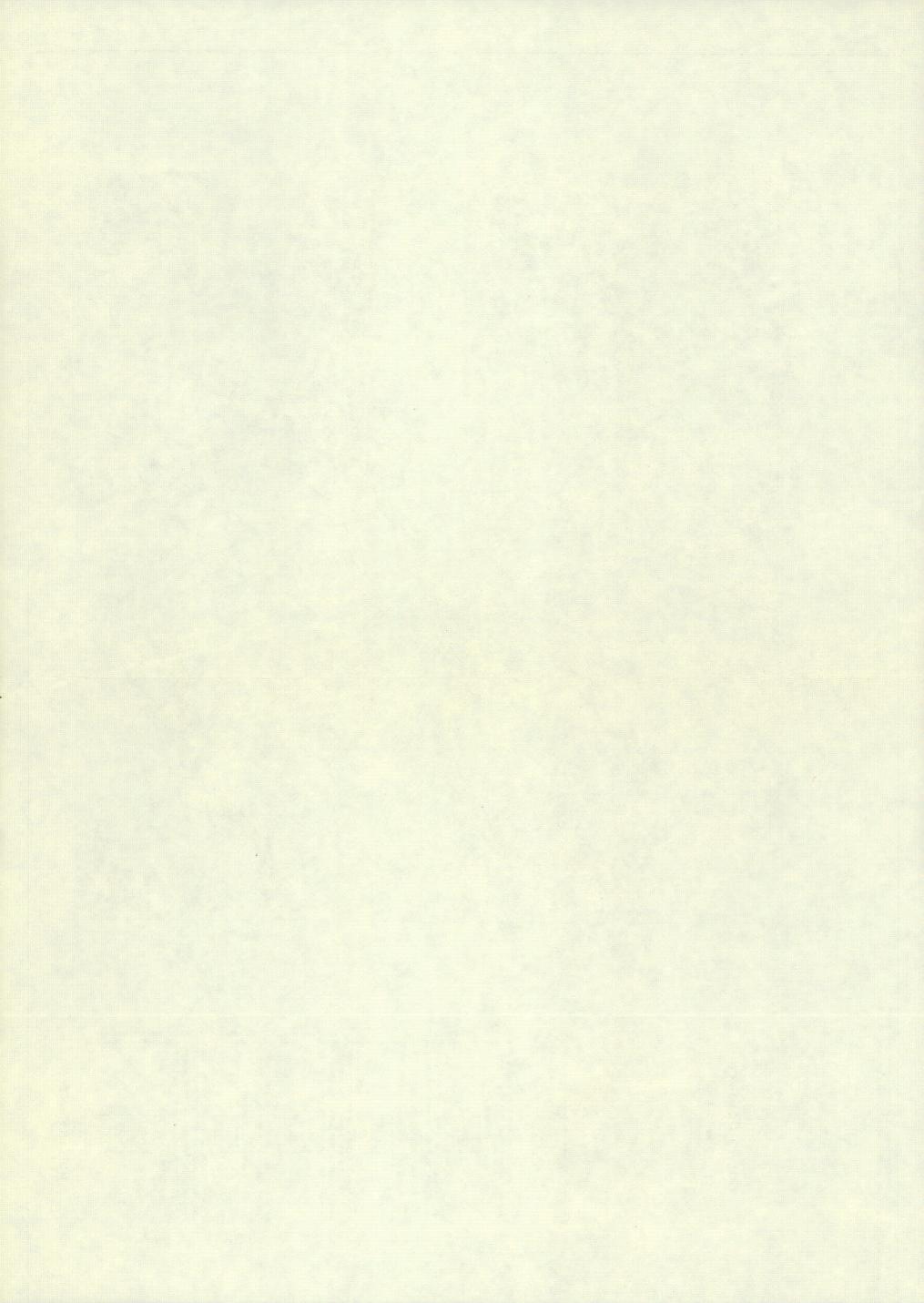
The Ogallala Formation of Tertiary age unconformably overlies the Permian sediments in small areas in the western part of the county (Figure 5). The unit consists of gravel, caliche nodules, and sand. The maximum thickness of the unit in Collingsworth County is approximately 40 feet.

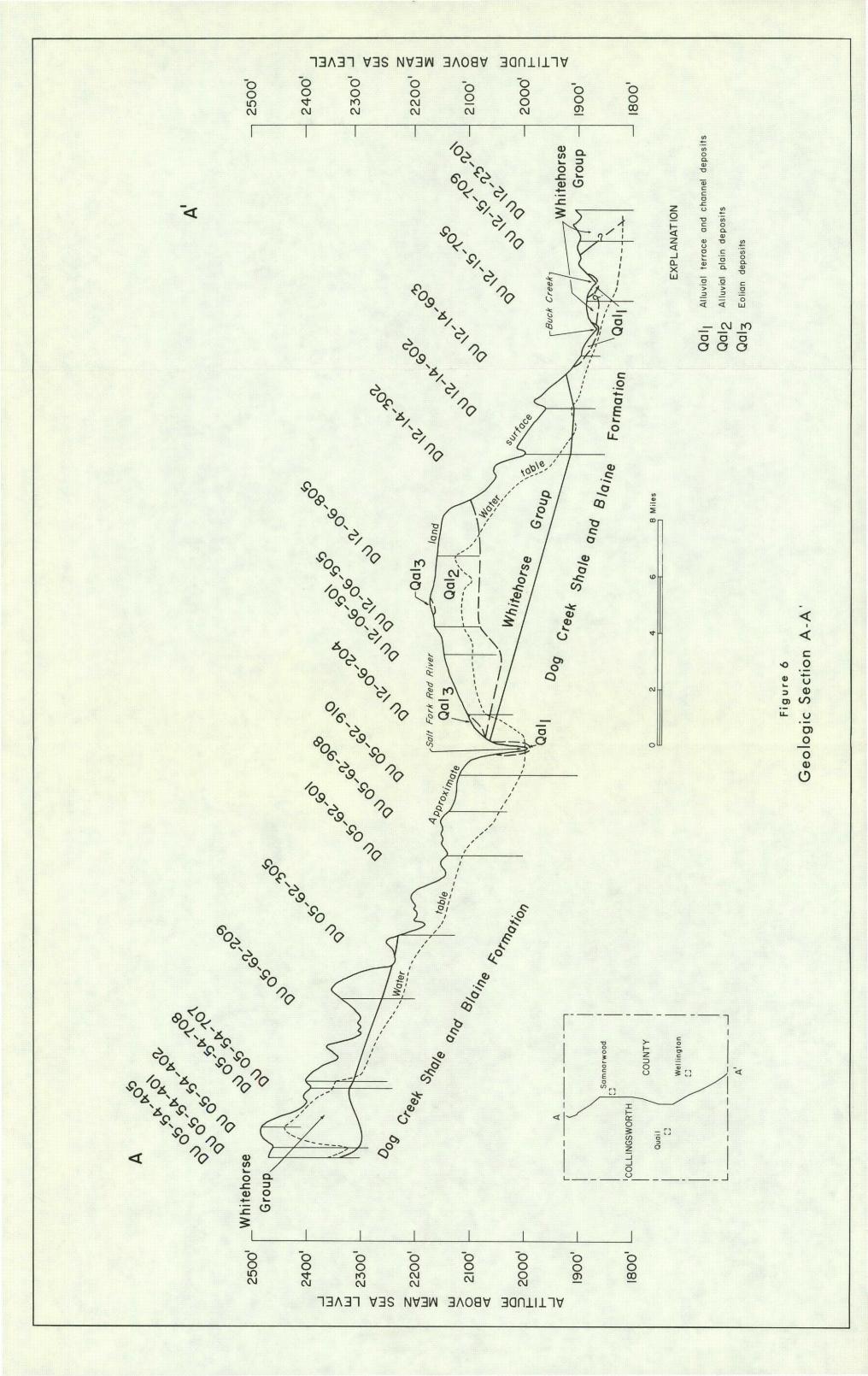
The Ogallala yields small quantities of fresh water to domestic and livestock wells, but yields of as much as 300 gpm may be possible in the extreme northwest corner of the county.

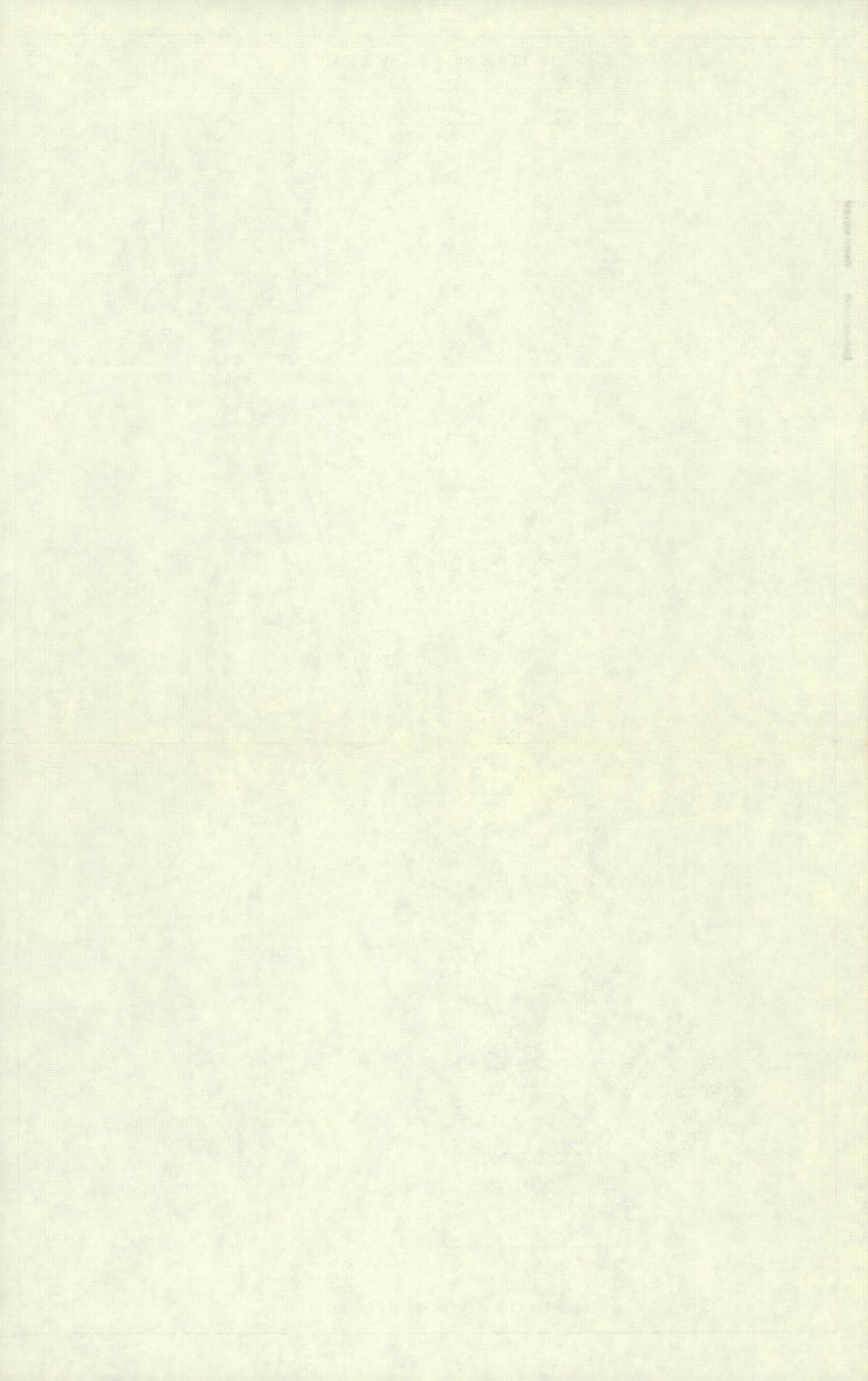
#### Quaternary Alluvium

The Quaternary alluvium in Collingsworth County consists of channel, terrace, and alluvial plain deposits of clay, silt, sand, gravel, and volcanic ash.









#### Table 1.-Geologic Units and Their Water-Bearing Properties

SYSTEM	SERIES		GROUP OR FORMATION	APPROXIMATE THICKNESS (FT)	LITHOLOGY	WATER-BEARING PROPERTIES
Quaternary	Holocene and Pleistocene		Alluvium and eolian deposits	0-340+	Clay, silt, sand, gravel, and vol- canic ash.	Yields small to large quantities of fresh to saline water, depending upon local thickness and quality of water in adjacent formations, to domestic, livestock, irrigation, and public- supply wells.
Tertiary	Pliocene		Ogallala Formation	0-40	Gravel, caliche nodules, and sand.	Yields small quantities of fresh water to domestic and livestock wells.
	Guadalupe		Whitehorse Group	0-300+	Interbedded red shale, siltstone, and fine to coarse sandstone with thin beds of gypsum, anhydrite, and dolomite in lower part.	Yields small to moderate quantities of fresh to slightly saline water to domestic, livestock, irrigation, and public-supply wells.
			Dog Creek Shale	0- 30	Red and green shale and silt.	Yields small quantities of slightly to moderately saline water to large- diameter wells. Yields are less than 10 gpm.
Permian	Leonard	rr Group	Blaine Formation	400	Red silty shales interbedded with gypsum, anhy- drite, salt, and dolomite beds which are com- monly honey- combed or cavernous.	Yields small to large quantities of fresh to moderately saline water to wells and springs.
		Pease River	Flowerpot Shale	400	Mottled blue, green, and red shales with dis- seminated gypsum. Only the upper 30 to 50 feet	Yields small quantities of slightly saline water to livestock wells. Yields are generally less than 10 gpm
					exposed in Elm Creek and North Elm Creek valleys.	

Yield of wells: Small, less than 50 gpm (gallons per minute); moderate, 50 to 500 gpm; large, more than 500 gpm.

Quality of water: Fresh, less than 1,000 mg/l (milligrams per liter) of dissolved solids; slightly saline, 1,000-3,000 mg/l; moderately saline, 3,000-10,000 mg/l; very saline, 10,000-35,000 mg/l; brine, more than 35,000 mg/l.

The channel and terrace deposits, which have a maximum thickness of about 90 feet, occur along most of the stream valleys, but only the major deposits are shown on Figure 5. These deposits yield small to moderate quantities of water to wells, but are an important source for municipal supply. All of the wells supplying the city of Wellington are in the alluvial channel of Willow Creek.

The alluvial plain deposits, which are derived from erosion of the Ogallala Formation, extend from west to southeast across the county (Figure 5). The deposits grade downward from silt and fine sand, with some clay lenses, to coarser sand and gravel. Many well logs show a coarse, well-sorted, white sand just above the basal gravel.

The thickness of the alluvial plain deposits ranges from 0 to more than 340 feet. The thickness is greatest in the northern half of the county near the Salt Fork Red River and west of U.S. Highway 83. Southeastward from Wellington to Dodson, the alluvium thins to less than 40 feet. Locally, however, thicknesses of several hundred feet have accumulated in channels and sinkholes in the underlying Blaine. Well DU-12-05-201, originally drilled to 340 feet, did not penetrate the entire section of alluvial deposits. The logs of some wells in the area of concentrated irrigation southeast of Wellington show sand and gravel as much as 230 feet deep, but other wells have encountered the underlying Permian beds at depths of a few feet.

The alluvial plain deposits yield small to large quantities of water that is generally low in dissolved solids. The measured yield of well DU-12-05-201 was 810 gpm; the specific capacity was 15.3 gpm per foot of drawdown.

#### **GROUND-WATER HYDROLOGY**

#### Source and Occurrence of Ground Water

The source of ground water in Collingsworth County is precipitation within the county and in areas mainly to the north and west. Most of the precipitation runs off or is consumed by evapotranspiration. Only a small part migrates downward until it reaches the zone of saturation, the upper surface of which is the water table.

Ground water in Collingsworth County occurs under water-table (unconfined) and artesian (confined) conditions. Under water-table conditions, the water will not rise above the level at which it is encountered in the formation. Under artesian conditions, the water will rise in a well to a level that is proportionate to the hydrostatic pressure within the aquifer. Ground water in the Blaine Formation is generally unconfined, but in some areas where the Dog Creek Shale acts as a confining bed, the water is under artesian conditions. Most of the artesian conditions occur south and west of Wellington. A few of the more productive artesian wells are DU-12-14-101,102, and 12-13-904. Water in the alluvial plain deposits occurs only under water-table conditions.

#### Recharge, Movement, and Discharge

Recharge is the addition of water to an aquifer by natural or artificial processes. Natural recharge in Collingsworth County results from infiltration of precipitation on the outcrops of the aquifers. The major areas of recharge in Collingsworth County are indicated on Figure 7 by the configuration of the water-level contours.

The areas of recharge to the Blaine Formation are along the broad divide between Elm Creek and Salt Fork Red River, and along the divide between Elm Creek and North Elm Creek (Figure 7).

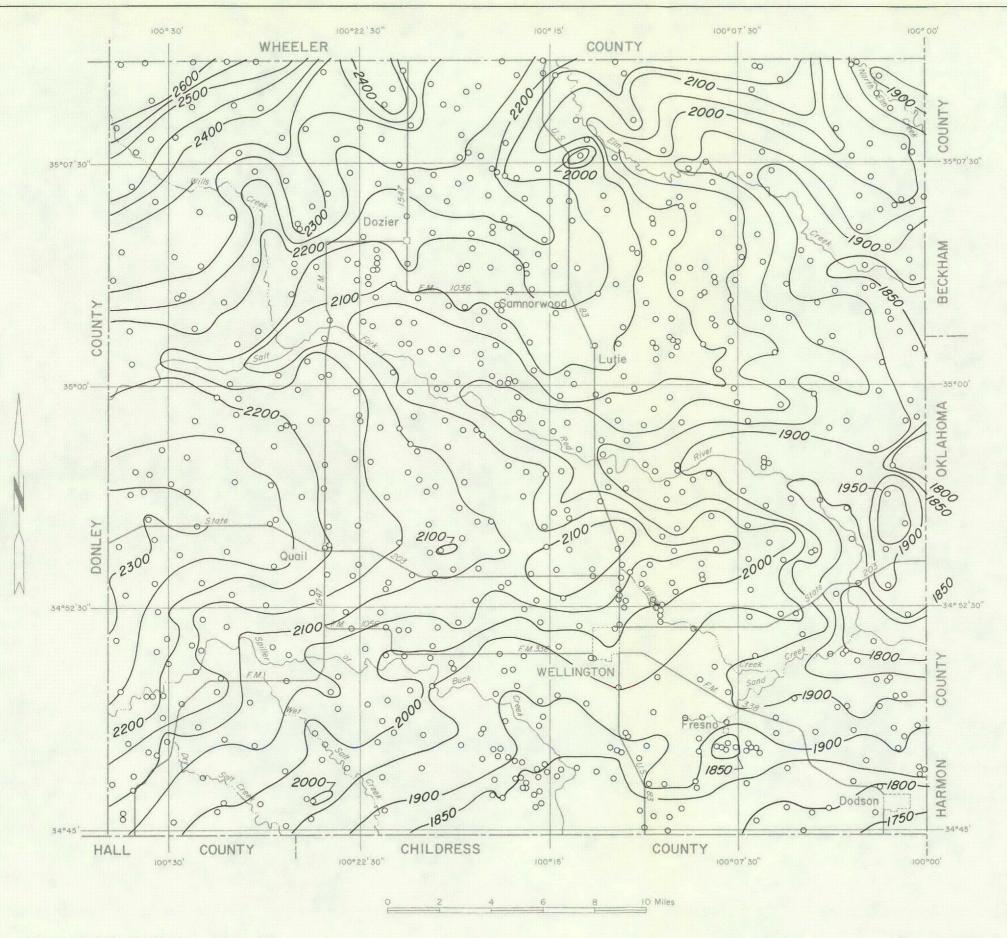
The major areas of recharge to the alluvial plain deposits are in the sand-dune areas near Dodson and Fresno; northwest of Wellington; and south of the Salt Fork Red River near the Donley County line (Figures 5 and 7).

Ground water moves slowly through the aquifers from areas of recharge to areas of discharge. The direction of movement is at right angles to the waterlevel contours (Figure 7), in the direction of decreasing altitude of the water table (or the hydraulic gradient, usually expressed in feet per mile).

The principal areas of natural discharge in Collingsworth County are in the major stream valleys where spring flow resulting from ground-water discharge constitutes the base flow of the streams. Ground water is discharged artificially by wells, and the direction of movement is from all directions toward the centers of pumping. This is indicated on Figure 7 by the depression in the water table in the area of concentrated irrigation in the Fresno Flats.

#### **Changes in Water Levels**

Water levels in the Blaine Formation have remained generally steady during the period of record. Changes in water levels in representative wells in the area south of Wellington are as follows:



# EXPLANATION

O Well used for control

\_\_\_\_ 2000 \_\_\_\_

Water-level contour Shows approximate altitude of water level

> Contour interval 50 feet Datum is mean sea level

Figure 7 Approximate Altitude of Water Levels

Base map from U.S. Geological Survey topographic quadrangles

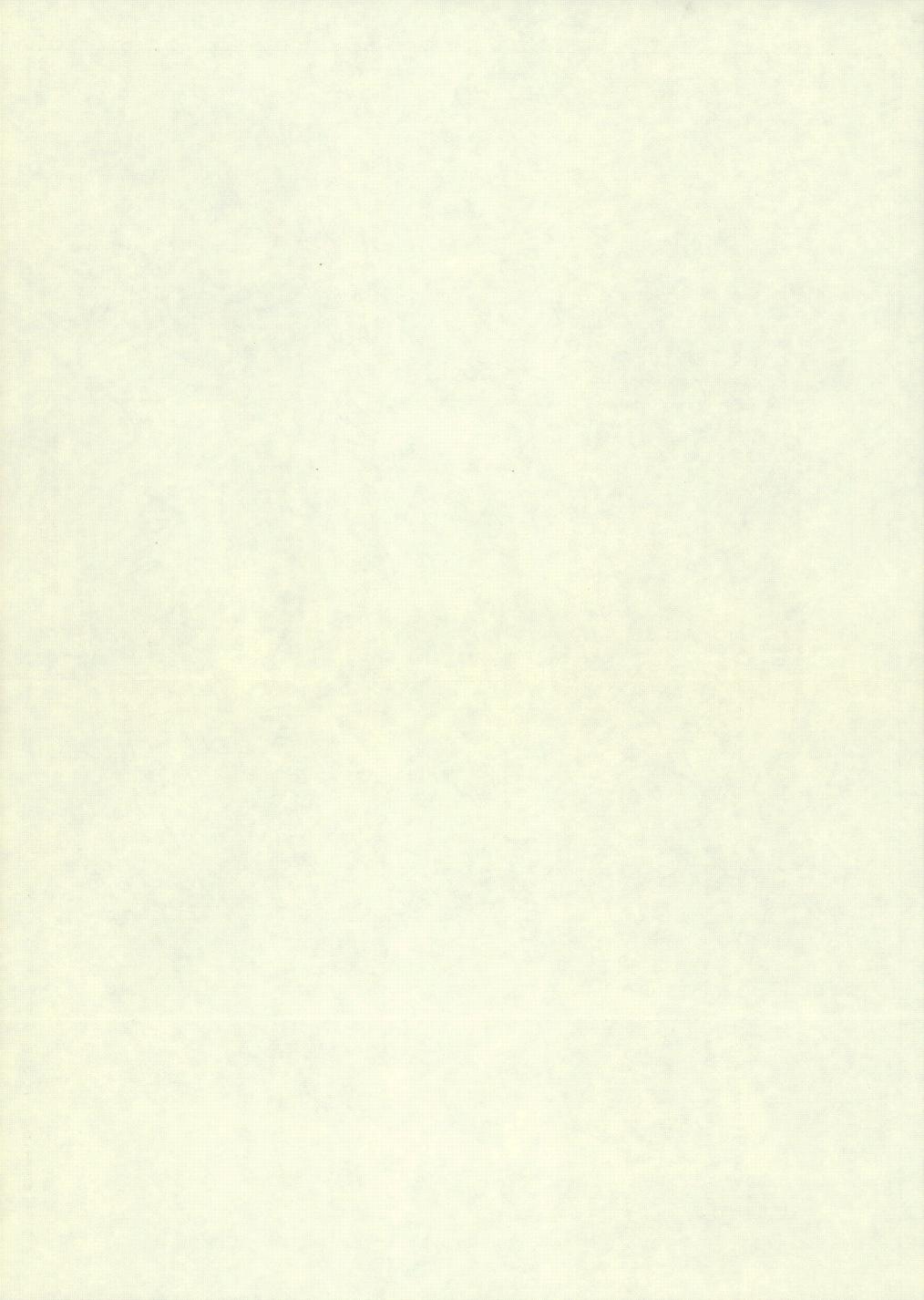


Table 2.-Water-Level Changes in the Blaine Formation

#### Table 3.—Water-Level Changes in the Quaternary Alluvium—Continued

D

WELL	CHANGE IN WATER LEVEL (FT)	PERIOD OF RECORD
DU-12-14-901	0	1956-68
12-14-904	- 3	1938-67
12-14-910	+2	1938-67
12-14-913	- 1	1938-67
12-15-501	- 1	1954-67
12-15-802	- 8	1958-67
12-15-809	- 11/	1938-67

1/Estimated from well 12-15-804

In general, water levels have remained fairly constant or have risen in the Quaternary alluvium. The maximum increase, during the period 1938-67, was 59 feet in well DU-12-05-501. The maximum decline, during the period 1955-67, was 60 feet in well DU-12-15-605. The maximum decline is probably due to concentrated pumping for irrigation; the maximum rise is probably due to the location of the well in a recharge area that has been cleared of phreatophytes since the early 1930's.

Representative water-level changes are given in Table 3; and the approximate altitudes of water levels in wells are shown on Figure 7.

#### Table 3.–Water-Level Changes in the Quaternary Alluvium

WELL	CHANGE IN WATER LEVEL (FT)	PERIOD OF RECORD
DU-12-04-303	+101⁄	1938-67
12-04-609	- 2	1956-67
12-05-201	- 1	1955-67
12-05-206	0	1964-67
12-05-306	+32	1938-67
12-05-501	+592/	1938-67
12-05-503	+51	1938-67
12-05-802	+38	1938-67
12-06-307	0	1938-67
12-06-607	+16	1938-67
12-07-401	+ 4	1956-67
12-07-410	+ 3	1938-67

WELL	CHANGE IN WATER LEVEL (FT)	PERIOD OF RECORD
DU-12-07-503	+ 3	1962-67
12-07-704	+ 5	1938-67
12-07-706	+19	1938-67
12-07-801	+12	1938-67
12-07-901	+10	1938-67
12-08-701	-14	1938-67
12-08-801	+ 1	1938-67
12-15-201	-13	1938-67
12-15-211	- 4	1955-67
12-15-214	+ 8	1956-67
12-15-501	- 1	1954-67
12-15-602	+ 1	1955-67
12-15-605	-60	1955-67
12-15-610	-59	1955-67
12-15-614	+ 5	1938-67
12-15-903	0	1938-67
12-15-904	+12	1938-67
12-15-906	+24	1938-67
12-16-101	+ 1	1938-67
12-16-201	- 2	1938-67
12-16-404	+25	1938-67
12-16-409	+ 6	1938-67
12-16-501	-10	1956-67
12-16-507	+11	1938-67
12-16-601	+ 4	1938-67
12-16-809	+11	1938-67
12-16-906	+ 1	1938-67
12-16-908	- 5	1938-67
12-24-101	+ 9	1938-67
12-24-301	0	1938-67

1/Estimated from well 12-04-301.

2/Corrected for differences in elevation of old well and new well.

Water levels in the Ogallala Formation have generally risen during the period of record. Changes in water levels in representative wells in the Ogallala are as follows: Table 4.-Water-Level Changes in the Ogallala Formation

WELL	CHANGE IN WATER LEVEL (FT)	PERIOD OF RECORD
DU-05-52-601	+11	Since 1938
05-52-602	+ 4	Since 1938
05-53-802	+ 8	Since 1938
05-54-602	+ 3	Since 1938
05-54-702	+ 1	Since 1938
05-61-202	+ 6	Since 1938
05-61-304	+12	Since 1938
05-61-402	0	Since 1938

#### **Ground-Water Development**

The development of the ground-water resources of Collingsworth County for other than rural domestic and livestock supplies began in 1910, when the city of Wellington dug several wells in the alluvium of Willow Creek, about 2 miles east of town. In the 1920's, more and deeper wells were drilled to meet the increasing demands. All of the wells have been abandoned or destroyed in favor of newer wells drilled along the same channel in the late 1940's and 1950's.

The alluvial fill in Willow Creek channel is generally less than 300 feet wide and about 40 to 50 feet thick. Maximum individual yields are about 200 to 250 gpm, and it appears that the maximum potential of the alluvium in the channel is probably exceeded by the summer peak demand.

The city of Wellington is now (1968) considering the development of a new well field about 7 miles northwest of the city. In this area, the alluvial plain deposits are about 140 feet thick with 50 to 80 feet of saturated thickness. The eastward hydraulic gradient and the major recharge area west of the new site makes this location very favorable.

Dodson is supplied by a well (DU-12-16-607) located in a small recharge area of the alluvial plain deposits. The well reportedly yields 350 gpm.

Samnorwood is supplied by wells in the Whitehorse Group, but considerable surface storage is required because of the low specific capacity (less than 1 gpm per foot of drawdown) of the wells.

Table 5 shows the total municipal pumpage in the county for selected years since the drought of the early 1950's. In 1966, the city of Wellington used about 88 percent of the total municipal pumpage in the county. The largest increase in municipal pumpage, about 25

percent, occured during the period 1958-64. This increase followed a pumpage decline during the wet years of 1957 and 1958.

The industrial use of water in Collingsworth County is mainly for cotton ginning and feed-lot operations. The industrial pumpage in Table 5 does not include water supplied by municipal systems. The sharp increase in 1966 was due to the establishment of feed lots. The major source of water for industrial use is Quaternary alluvium and the Blaine Formation.

Irrigation began on a small scale in the early 1950's. The number of irrigation wells in use in Collingsworth County increased to 83 in 1955 and to 151 in 1966, and the irrigated acreage increased from 4,290 to 10,010 (Table 5).

The principal areas of irrigation in 1955 were in the vicinity of Dozier and Samnorwood and south of Wellington. Since 1955, irrigation has expanded to many other parts of the county, and present indications are that many more irrigation wells will be drilled.

The major source of irrigation water is the Blaine Formation and Quaternary alluvium.

#### QUALITY OF GROUND WATER

#### Relationship of Quality of Water to Use

The major factors that determine the suitability of water supply are the limitations imposed by the intended use of the water. Among the various criteria established for water quality are: bacterial content; physical characteristics such as temperature, odor, color, and turbidity; and chemical constituents.

The dissolved-solids content is an indication of the chemical quality of the water. A general classification of water based on dissolved-solids content in mg/l (milligrams per liter), modified from Winslow and Kister (1956), is as follows:

DESCRIPTION	DISSOLVED-SOLIDS CONTENT (MG/L)
Fresh	Less than 1,000
Slightly saline	1,000 to 3,000
Moderately saline	3,000 to 10,000
Very saline	10,000 to 35,000
Brine	More than 35,000

The U.S. Public Health Service (1962) has established and periodically revises the standards for drinking water used on common carriers engaged in interstate commerce. The standards, which are designed to protect the travelling public, may be used to evaluate domestic and public water supplies. According to these standards, chemical constituents in a public water supply should not exceed the concentrations shown in the following table, except where more suitable supplies are not available.

SUBSTANCE	CONCENTRATION (MG/L)
Chloride(Cl)	250
Fluoride(F)	1.0*
Iron (Fe)	0.3
Nitrate (NO <sub>3</sub> )	45
Sulfate (SO <sub>4</sub> )	250
Dissolved solids	500

\* Based on the annual average of maximum daily air temperature of 71.3 F at Amarillo

The source and significance of dissolved-mineral constituents and properties of water are given in detail in Table 6.

According to the U.S. Salinity Laboratory Staff (1954), some of the principal factors that determine the quality of water for irrigation are the concentrations of dissolved solids, sodium, and boron. Sodium is a significant factor because a high SAR (sodium-adsorption ratio) may cause the soil structure to break down. According to Wilcox (1955), water containing more than 2.5 me/l (milliequivalents per liter) RSC (residual sodium carbonate) is not suitable for irrigation, 1.25 to 2.5 me/l is marginal, and less than 1.25 me/l probably is safe.

Relatively small amounts of boron in irrigation water are toxic to some plants. Wilcox (1955) indicated that a boron concentration of as much as 1.0 mg/l is permissible for irrigating sensitive crops.

Several factors other than the chemical quality are involved in determining the suitability of water for irrigation. The type of soil, adequacy of drainage, crops grown, climatic conditions, and the quantity of water used all have an important bearing on the continued productivity of irrigated land.

#### Chemical Quality of Ground Water in the Geologic Units

Chemical analyses of water samples from more than 200 wells and springs in Collingsworth County were tabulated during this investigation. Chemical analyses are given in Table 8. Water quality in relation to the geologic units is shown on Figure 8. In Collingsworth County, the major water quality problems are the concentrations of dissolved solids, sulfate, chloride, and sodium.

The quality of ground water in the Blaine Formation varies greatly, but generally the water is high in sulfate, usually ranging from 1,500 to 2,000 mg/l. Chloride content ranges from about 20 mg/l to more than 1,300 mg/l, but usually is less than 300 mg/l. The dissolved-solids content ranges from 494 to 4,482 mg/l. Water from the Blaine Formation is generally unsuitable for drinking, but has been used successfully for irrigation.

Water in the Whitehorse Group is generally moderate to high in calcium, sulfate, and dissolved solids. Where flushing of the formation occurs, as downgradient from the Ogallala Formation, the water may be intermediate between the normal properties of the contributing geologic sources. In some wells, the water has a very high concentration of sulfate and chloride because of salt and gypsum beds in the lower part of the Whitehorse.

Water from the Quaternary alluvium of the alluvial plain is generally acceptable for most uses. Sulfate content ranges from 11 to 110 mg/l, and chloride concentration is usually less than 20 mg/l. The dissolved-solids content ranges from 254 to 553 mg/l.

The quality of water in the alluvial terrace and channel deposits approximates the quality of water in the adjacent formations.

Four water samples were collected and analyzed for residual contamination from insecticides and herbicides in the water. Two springfed streams, Buck Creek at site DU-12-14-112, and Elm Creek at partial record streamflow station 7-3033 (immediately downstream from springs DU-05-54-801, 805, 806, 810, and 05-62-310), and two wells, DU-05-63-805 and 12-15-602, were sampled. An effort was made to obtain water from the various areas of concentrated cultivation, irrigation, ranching and petroleum production in order to evaluate any differences in residual concentrations. Results of all four samples indicate absolutely no present pollution of the water at these locations. All samples were analyzed for the following pesticides: Aldrin: DDD; DDE; DDT; Dieldrin; Endrin; Heptachlor; Heptachlor epoxide; Lindane; 2, 4-D; Silvex; and 2, 4, 5-T.

#### Production and Disposal of Oil-Field Brine

Only a small part of the Panhandle East Oil and Gas Field extends into the northern part of Collingsworth County. Unnamed minor oil and gas areas are in the southwest part of the county (Figure 9). Table 5. -- Ground - Water Pumpage for Selected Years, 1955-66

	MUNICIP	AL 1/	INDUST	RIAL 2/				]	RRIGATION				
	GALLONS	ACRE-FEET	GALLONS	ACRE-FEET	GALLONS	ACRE-FEET	IRRIGATED ACREAGE	NUMBER OF WELLS IN USE	AVERAGE YIELD PER WELL (GPM)	AVERAGE NUMBER OF IRRIGATED ACRES PER WELL	AVERAGE NUMBER OF DAYS WELLS OPERATE	AVERAGE DUTY OF WATER (AC-FT/ACRE)	TOTAL PUMPAGE (AC-FT)
1955	140,757,600	4,320	*1,500,000	*460	1,831,667,904	5,621	4,290	83	396	51.7	38.7	1.31	10,401
1958	131,294,000	4,029	*1,900,000	*583	2,216,757,550	6,803	6,930	54		128.3		. 98	11,415
1964	163,979,000	5,032	*1,600,000	*491	2,055,135,950	6,307	7,800	100		78.0		.81	11,830
1966	177,137,820	5,436	8,301,600	2,548	4,152,342,960	12,743	10,010	151	439	66.3	43.5	1.27	20,727
Primary water bearing units	Alluv	ium	Blaine Fo and Alluviu		Blaine Formation and Alluvium								

J/ Includes industrial usage supplied by municipal systems. 2/ Not serviced by municipal systems. \* Indicates estimated pumpage.

(Adapted from Doll and others, 1963, p. 39-43)

CONSTITUENT OR PROPERTY	SOURCE OR CAUSE	SIGNIFICANCE
Silica (SiO <sub>2</sub> )	Dissolved from practically all rocks and soils, commonly less than 30 mg/l. High concentra- tions, as much as 100 mg/l, gen- erally occur in highly alkaline waters.	Forms hard scale in pipes and boilers. Carried over in steam of high pressure boilers to form deposits on blades of turbines. Inhibits deterioration of zeolite-type water softeners.
Iron (Fe)	Dissolved from practically all rocks and soils. May also be derived from iron pipes, pumps, and other equipment.	On exposure to air, iron in ground water oxidizes to reddish- brown precipitate. More than about 0.3 mg/l stain laundry and utensils reddish-brown, Objectionable for food processing, tex- tile processing, beverages, ice manufacture, brewing, and other processes. U.S. Public Health Service (1962) drinking water standards state that iron should not exceed 0.3 mg/l. Larger quantities cause unpleasant taste and favor growth of iron bacteria.
Calcium (Ca) and Magnesium (Mg)	Dissolved from practically all soils and rocks, but especially from limestone, dolomite, and gypsum. Calcium and magnesium are found in large quantities in some brines. Magnesium is present in large quantities in sea water.	Cause most of the hardness and scale-forming properties of water; soap consuming (see hardness). Waters low in calcium and magnesium desired in electroplating, tanning, dyeing, and in textile manufacturing.
Sodium (Na) and Potassium (K)	Dissolved from practically all rocks and soils. Found also in oil-field brines, sea water, indus- trial brines, and sewage.	Large amounts, in combination with chloride, give a salty taste. Moderate quantities have little effect on the usefulness of water for most purposes. Sodium salts may cause foaming in steam boilers and a high sodium content may limit the use of water for irrigation.
Bicarbonate (HCO <sub>3</sub> ) and Carbonate (CO <sub>3</sub> )	Action of carbon dioxide in water on carbonate rocks such as lime- stone and dolomite.	Bicarbonate and carbonate produce alkalinity. Bicarbonates of calcium and magnesium decompose in steam boilers and hot water facilities to form scale and release corrosive carbon-dioxide gas. In combination with calcium and magnesium, cause carbon- ate hardness.
Sulfate (SO <sub>4</sub> )	Dissolved from rocks and soils containing gypsum, iron sulfides, and other sulfur compounds. Commonly present in some industrial wastes.	Sulfate in water containing calcium forms hard scale in steam boilers. In large amounts, sulfate in combination with other ions gives bitter taste to water. U.S. Public Health Service (1962) drinking water standards recommend that the sulfate content should not exceed 250 mg/l.
Chloride (Cl)	Dissolved from rocks and soils. Present in sewage and found in large amounts in oil-field brines, sea water, and industrial brines.	In large amounts in combination with sodium, gives salty taste to drinking water. In large quantities, increases the corrosiveness of water. U.S. Public Health Service (1962) drinking water stand- ards recommend that the chloride content should not exceed 250 mg/l.
Fluoride (F)	Dissolved in small to minute quantities from most rocks and soils. Added to many waters by fluoridation of municipal sup- plies.	Fluoride in drinking water reduces the incidence of tooth decay when the water is consumed during the period of enamel calcification. However, it may cause mottling of the teeth, depending on the concentration of fluoride, the age of the child, amount of drinking water consumed, and susceptibility of the individual (Maier, 1950, p. 1120-1132).
Nitrate (NO <sub>3</sub> )	Decaying organic matter, sewage, fertilizers, and nitrates in soil.	Concentration much greater than the local average may suggest pollution. U.S. Public Health Service (1962) drinking water standards suggest a limit of 45 mg/l. Waters of high nitrate content have been reported to be the cause of methemo- globinemia (an often fatal disease in infants) and therefore should not be used in infant feeding (Maxcy, 1950, p. 271). Nitrate shown to be helpful in reducing inter-crystalline cracking of boiler steel. It encourages growth of algae and other organisms which produce undesirable tastes and odors.
Boron (B)	A minor constituent of rocks and of natural waters.	An excessive boron content will make water unsuitable for irrigation. Wilcox (1955, p. 11) indicated that a boron concentration of as much as 1.0 mg/l is permissible for irrigating sensitive crops; as much as 2.0 mg/l for semitolerant crops; and as much as 3.0 mg/l for tolerant crops. Crops sensitive to boron include most deciduous fruit and nut trees and navy beans; semitolerant crops include most small grains, potatoes and some other vegetables, and cotton; and tolerant crops include alfalfa, most root vegetables, and the date palm.

CONSTITUENT OR PROPERTY	SOURCE OR CAUSE	٤
issolved solids	Chiefly mineral constituents dis- solved from rocks and soils.	U.S. Public Health Ser recommend that waters of solids not be used if oth For many purposes the limitation on the use of based on dissolved-solids and Kister, 1956, p. 5): of dissolved solids are slightly saline; 3,000 to to 35,000 mg/l, very sal
ardness as CaCO <sub>3</sub>	In most waters nearly all the hardness is due to calcium and magnesium. All of the metallic cations other than the alkali metals also cause hardness.	Consumes soap before a bathtubs. Hard water fo pipes. Hardness equivale called carbonate hardne called non-carbonate har are considered soft; 61 180 mg/l, hard; more tha
dium-adsorption tio (SAR)	Sodium in water.	A ratio for soil extracts relative activity of sodiu (U.S. Salinity Laborator the following equation:
		SA
		where Na <sup>+</sup> , Ca <sup>++</sup> , and milliequivalents per liter
esidual sodium Irbonate ISC)	Sodium and carbonate or bicar- bonate in water.	As calcium and magnesi the relative proportion (Eaton, 1950, p. 123-13 RSC = (CO3 <sup></sup>
		where CO3 <sup></sup> , HCO3 <sup>-</sup> , C tions in milliequivalents
pecific onductance nicromhos at 25 <sup>°</sup> C)	Mineral content of the water.	Indicates degree of mi measure of the capacit current. Varies with co the constituents.
ydrogen ion oncentration (pH)	Acids, acid-generating salts, and free carbon dioxide lower the pH. Carbonates, bicarbonates, hydroxides, phosphates, silicates, and borates raise the pH.	A pH of 7.0 indicates ne 7.0 denote increasing a increasing acidity. pH hydrogen ions. Corrosiv decreasing pH. Howeve attack metals.

Service (1962) drinking water standards rs containing more than 500 mg/l dissolved ther less mineralized supplies are available. the dissolved-solids content is a major of water. A general classification of water ids content, in mg/l, is as follows (Winslow 5): Waters containing less than 1,000 mg/l e considered fresh; 1,000 to 3,000 mg/l, to 10,000 mg/l, moderately saline; 10,000 saline; and more than 35,000 mg/l, brine.

SIGNIFICANCE

a lather will form. Deposits soap curd on forms scale in boilers, water heaters, and alent to the bicarbonate and carbonate is dness. Any hardness in excess of this is hardness. Waters of hardness up to 60 mg/l 1 to 120 mg/l, moderately hard; 121 to than 180 mg/l, very hard.

ts and irrigation waters used to express the dium ions in exchange reactions with soil tory Staff, 1954, p. 72, 156). Defined by 1.

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

nd Mg<sup>++</sup> represent the concentrations in er (me/l) of the respective ions.

esium precipitate as carbonates in the soil, on of sodium in the water is increased -133). Defined by the following equation:

$$RSC = (CO_3^{-+} + HCO_3^{-}) - (Ca^{++} + Mg^{++})$$

Ca<sup>++</sup>, and Mg<sup>++</sup> represent the concentrats per liter (me/l) of the respective ions.

mineralization. Specific conductance is a city of the water to conduct an electric concentration and degree of ionization of

neutrality of a solution. Values higher than alkalinity; values lower than 7.0 indicate H is a measure of the activity of the siveness of water generally increases with ever, excessively alkaline waters may also

carbonate (BSC)

Residual so

Dissolved so

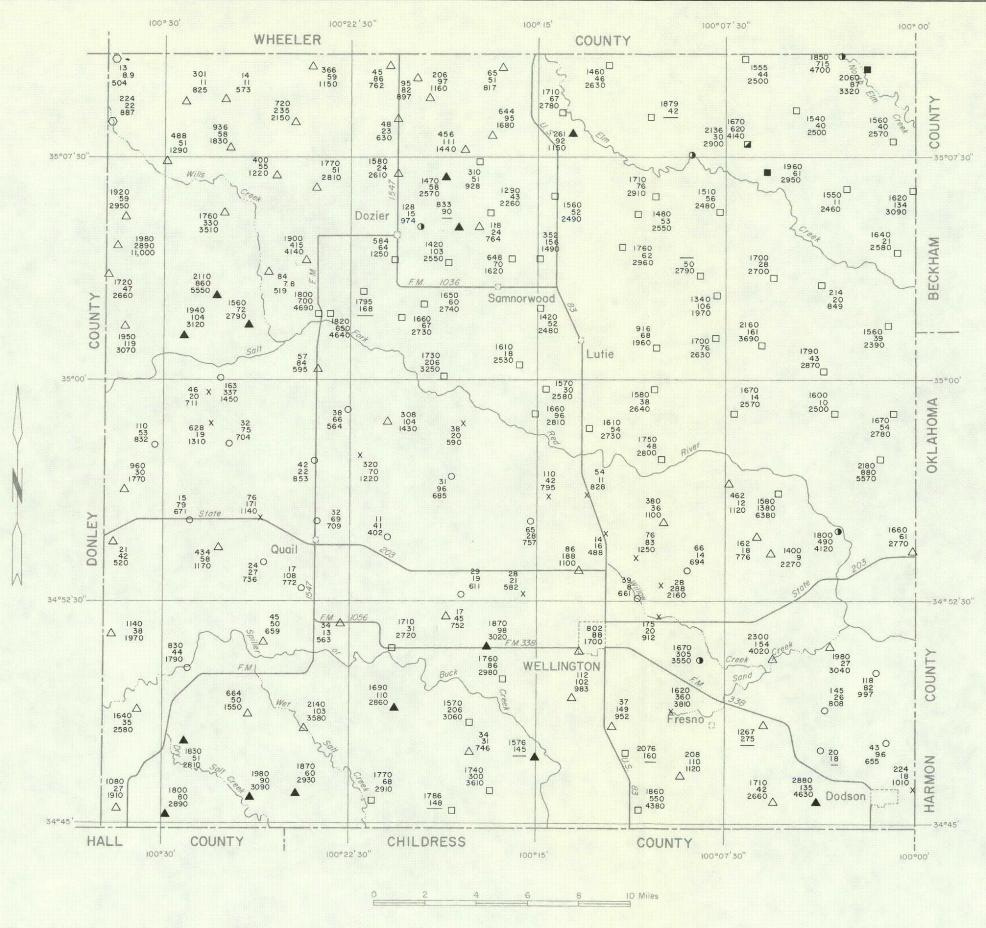
Hardness as

Sodium-ads

ratio (SAR)

Specific conductanc (micromho

Hydrogen i concentrati



# EXPLANATION

- O Alluvium
- Ogallala Formation
- △ Whitehorse Group
- Dog Creek Shale and Blaine Formation
- X Alluvium-Whitehorse Group
- Alluvium-Dog Creek Shale and Blaine Formation
- Alluvium-Flowerpot Shale
- Ogallala Formation-Whitehorse Group
- Whitehorse Group-Dog Creek Shale and Blaine Formation
- Dog Creek Shale and Blaine Formation-Flowerpot Shale

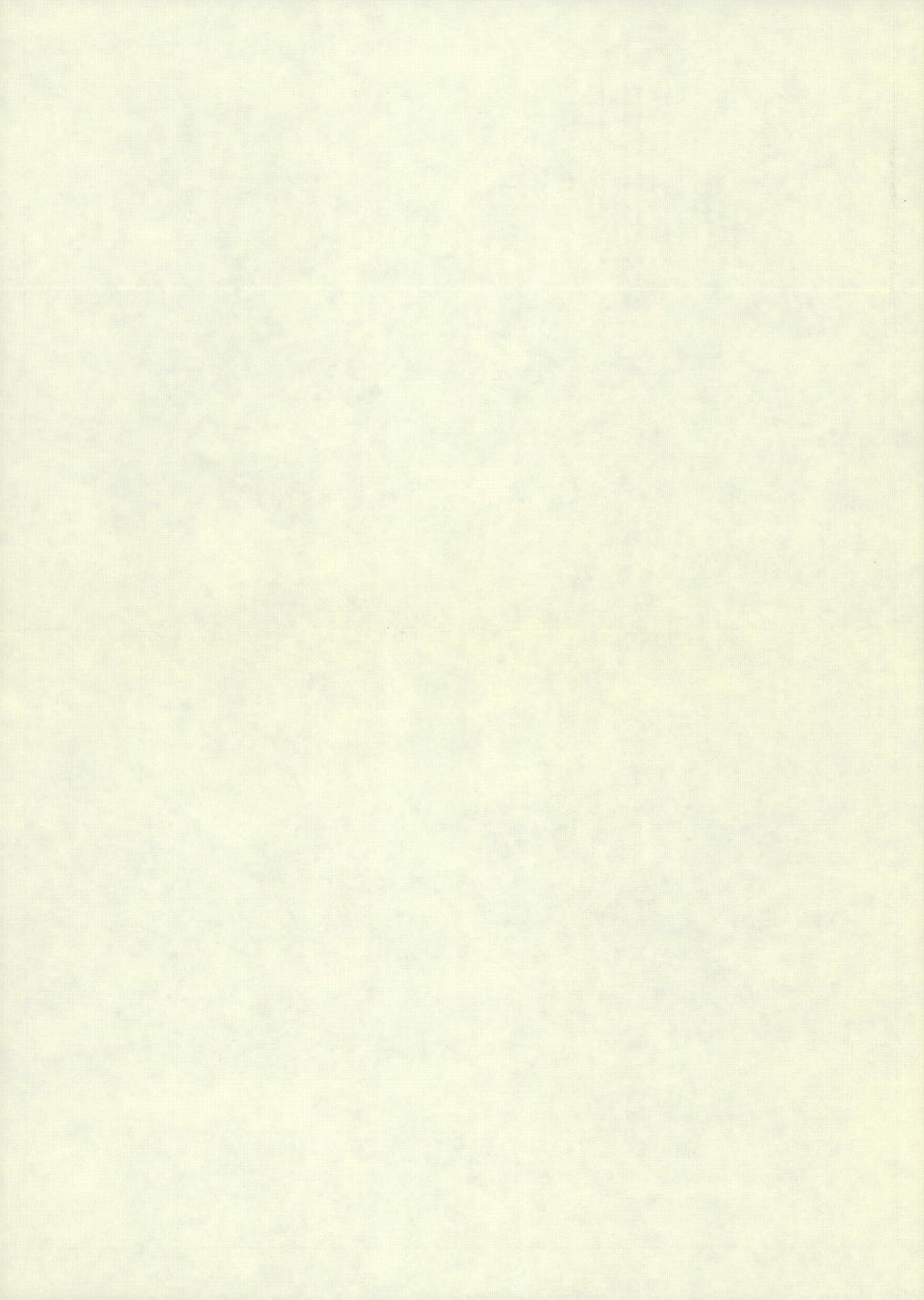
Sampled Well

△ 802 Sulfate, in milligrams per liter Chloride, in milligrams per liter 1700 Specific conductance, in micromhos

---- Indicates no data

# Figure 8 Chemical Quality of Ground Water

Base map from U.S. Geological Survey topographic quadrangles



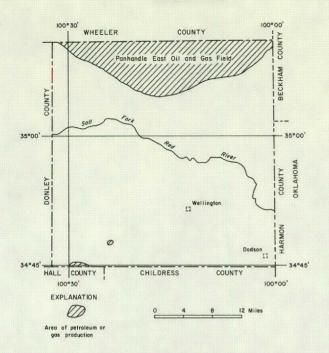


FIGURE 9.-LOCATION OF OIL AND GAS FIELDS

The total reported brine production in Collingsworth County in 1961 was 265,536 barrels (Texas Water Commission and Texas Water Pollution Control Board, 1963). Of this amount, 99.7 percent was disposed of in open-surface pits and may have caused ground-water contamination in some areas.

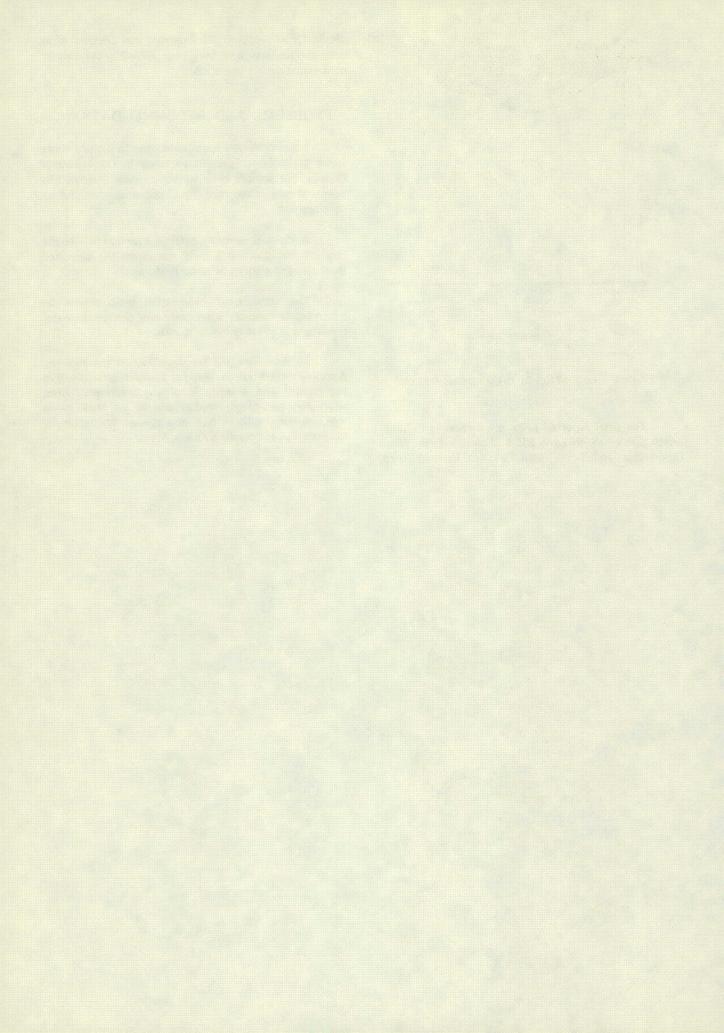
### PROBLEMS AND RECOMMENDATIONS

There are ample supplies of fresh to slightly saline water available for present demands in Collingsworth County, but a more detailed investigation is needed to quantitatively determine the potential for future development.

Additional subsurface data are needed to map the base of the alluvium and to determine the saturated thickness and amount of water in storage.

The network of observation wells should be expanded to monitor adequately any changes in water levels or changes in chemical quality.

To determine the transmissivity of the aquifers, pumping tests should be made at several locations within the county and possibly in adjacent counties. Also, additional hydrologic studies should be made on a regional basis rather than countywide to determine relationships among the aquifers.



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#### Table 7. -- Records of Wells and Springs in Collingsworth County

All Wells are drilled unless otherwise noted in remarks column.

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

Method of lift and type of power: B, bucket; C, centrifugal; E, electric; G, gasoline, natural gas, butane, or diesel engine: H. hand:

J, jet; N, none; P, piston; S, submergible: T, turbine: W, windmill. Number indicates horsepower.

Use of water

: H, domestic; I, irrigation; N, industrial; P, public supply; S, livestock; U, unused.

Water-bearing unit

4

: Qal<sub>1</sub>, alluvial terrace and channel deposits; Qal<sub>2</sub>, alluvial plain deposits; Pw, Whitehorse Group: Pdb, Dog Creek Shale and Blaine Formation: Pf, Flowerpot Shale; To, Ogallala Formation.

			DEPTH OF WELL (FT)		WATER- BEARING UNIT	ALTITUDE OF LAND SURFACE DATUM (FT)		TER LEVEL	METHOD OF LIFT	USE OF WATER	IRRIGATED ACRES (APPROXI- MATE) 1967		
WELL	OWNER	DATE COM- PLET- ED		ETER OF WELL (IN.)			BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT				REMARKS	
*DU-05-52-601	Mrs. E. T. Morris	1905	146	4	То	2,818	126.3 115.4	Oct. 7, 1938 July 26, 1967	Ρ,₩	H,S		Originally drilled to 180 ft; plugged back to 146 ft. Yield 3 gpm July 26, 1967.	
602	McDonald	1922	134	4	То	2,760	75.7 71.0	Oct. 7, 1938 July 26, 1967	Ρ,₩	H,S		Yield 2 gpm July 26, 1967.	
901	Jess O. Coleman	1938	89	6	Pw	2,517	38.4	Sept. 1, 1967	Ρ,₩	S		Cased to 60 ft. Yield 3 gpm Sept. 1, 1967.	
902	do	1930	17	36	Qalı	2,550	4.2	Sept. 7, 1938	N	U		Cased to 5 ft. Yield 15 gpm Sept. 7, 1938.	
903	do				Pw,Qalj	2,478	+ +	Nov. 9, 1938 July 26, 1967	Flows	S		Reported perennial supply. Flowed 5 gpm July 26, 1967.	
904	Jay D. Coleman	1956	133	5	Pw	2,687	65.4	July 26, 1967	Ρ,₩	S		Cased to 100 ft. Yield 3 gpm July 26, 1967.	
905	Jess O. Coleman		Spring		To,Qalı	2,590	+	do	Flows	S	-7	Reported strong flow during winter. Flowed 178 gpm July 26, 1967.	
401	Harry E. Franks	1939	111	6	To,Qal	2,657	31.1	Jan. 11, 1967	P,W	S		Yield 2 gpm Jan. 11, 1967	
402	C. M. Powell and T. T. Ellsworth		68	4	To,Qalı	2,634	55.1	do	Ρ,₩	S		Yield 3 gpm Jan. 11, 1967	
501	Louis Powell	1941	159	5	To,Qalı	2,669	139.1	July 27, 1967	Ρ,₩	H,S		Cased to 145 ft. Yield 3 gpm July 27, 1967.	

See footnote at end of table

				DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED		
1	WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS	
*DU-(	05-53-601	Dee D. McDowell	1933	103	4	Pw	2,414	77.8	Aug. 29, 1967	Ρ,₩	S		Yield 2 gpm Aug. 29, 1967.	
*	701	Jay D. Coleman	1923	62	5	Pw	2,524	43.1	July 27, 1967	Ρ,₩	S		Yield 3 gpm July 27, 1967.	
	703	Alfred McMurtry	1956	64	6	Pw	2,460	26.4	do	Ρ,₩	S		Cased to 60 ft. Yield 2 gpm July 27, 1967.	
	801	W. G. Hawkins	1920	116	5	To,Pw	2,520	109.2 83.5	Nov. 7, 1938 Júly 27, 1967	Ρ,₩	S		Whitehorse is flushed with water from Ogallala. Yield 3 gpm July 27, 1967.	
	802	Mrs. George Green	1920	63	6	Pw	2,402	35.5	July 27, 1967	P,W	S		Whitehorse is flushed with water from Ogallal <b>a</b> . Yield 3 gpm July 27, 1967.	
*	803	Jay D. Coleman	1930	61	6	Pw	2,467	33.2	July 25, 1967	Ρ,₩	S		Whitehorse is flushed with water from Ogallala. Yield 3 gpm July 25, 1967.	
*	804	Hugh J. Grogan	1936	129	6	Pw	2,412	103.4	do	P,W	S		Yield 3 gpm July 25, 1967.	
	902	Mrs. George Green	1945	123	6	To,Pw	2,369	76.8	July 27, 1967	Ρ,₩	S		Whitehorse is flushed with water from Ogallala. Yield 3 gpm July 27, 1967.	
	903	do	1945	119	5	Pw	2,387	116.0	do	Ρ,₩	S		Yield 2 gpm July 27, 1967.	
*	904	do	1945	175	5	Pw	2,432	151.4	do	P,W	S		Yield 3 gpm July 27, 1967.	
*	54-401	W. Q. Budd	1962	198	16	Pw	2,482	160.9	July 28, 1967	T,G	1	60	Cased to 180 ft. Yield 300 gpm July 28, 1967.	
	402	Bobby Troxell	1967	75	6	Pw	2,495	55.0	Aug. 4, 1967	P,W	S		Cased to 60 ft. Yield 3 gpm Aug. 4, 1967.	
	403	W. Q. Budd	1965	300		Pw	2,471	60	Dec. 1965	N	U		Irrigation well, test hole.	
	404	do	1965	319	6	Pw	2,545	103	Dec 1965	N	U	4-	Do.	

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

See footnote at end of table

# Table 7.--Records of Wells and Springs in Collingsworth County--Continued

WELL				DEPTH	DIAM-		NG SURFACE		TER LEVEL		USE OF WATER	IRRIGATED ACRES (APPROXI- MATE) 1967		
		OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT		BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT			REMARKS	
DU-05-54	-405	W. Q. Budd	1965	240	6	Pw	2,497	197 187.9	Nov. 1965 July 28, 1967	P,G	S		Cased to 229 ft. Gas smell, but reported good water. Yield 6 gpm July 28, 1967.	
*	501	Jack Stafford	1927	75	6	Pw	2,356	63.1 65.1	Nov. 2, 1938 July 28, 1967	Ρ,₩	S		Yield 3 gpm July 28, 1967.	
	502	Alva Clark	1964	85	6	Pw	2,335	46.8	Apr. 28, 1967	S,E	Н		Cased to 45 ft. Yield 20 gpm Apr. 28, 1967.	
	503	Jack Clark	1930	39	6	Qalı	2,310	27.5	Nov. 2, 1938	N	U		Abandoned about 1948.	
*	601	Sam Scott	1964	117	6	Pw	2,339	58.5	Aug. 1, 1967	S,E	Н		Cased to 40 ft. Yicld 10 gpm Aug. 1, 1967.	
	602	Oscar T. Nicholson	1937	63	6	Pdb	2,276	38.1 34.9	Sept. 21, 1938 Aug. 1, 1967	P,W	U		Yield 3 gpm Aug. 1, 1967.	
	603	do	1923	42	5	Pw	2,244	28.6	Sept. 21, 1938	Ρ,₩	U		Formerly many people hauled water from well. Plugged at 2 ft. Unused in 1967.	
	604	J. D. Morgan	1937	85	6	Pw	2,362	66.1 60	Nov. 2, 1938 Aug. 1967	P,W	S		Yield 3 gpm Aug. 1967.	
	605	Nora Wheeler	1925	65	6	Pw	2,274	40	Aug. 1967	P,W	S		Yield 2 gpm Aug. 1967.	
	702	Mrs. George Green	1930	120	4	Pw	2,395	111.2 110.3	Nov. 4, 1938 July 27, 1967	N	U		Yield 2 gpm July 27, 1967.	
	703	A. H. Taylor	1938	75	6	Pw	2,456	35 34.3	Nov. 1938 July 28, 1967	P,W	S		Yield 2 gpm July 28, 1967.	
	704	Emma Williams	1938	160	6	Pw	2,410	65	Apr. 1967	P,W	S		Yield 2 gpm Apr. 1967.	
	705	John C. Breeding	1938	77	6	Pw	2,378	74.1	Nov. 2, 1938	P,W	S		Yield 2 gpm Nov.2, 1938.	
	706	Samnorwood Water Supply Corp.	1965		6	Pw	2,392	212	Apr. 1967	S,E	Р		Yield 50 gpm Apr. 1967.	
÷	707	do	1965	223	6	Pw	2,471	125 202.8	Feb. 1965 Apr. 4, 1967	S,E	Р		Cased to 192 ft. Yield 15 gpm Apr. 4, 1967.	

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See footnote at end of table

			DEPTH	DIAM-		ALTITUDE		ATER L	EVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)		ATE OF SUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
00-05-54-703	Henry Morgan	1967	165	. 6	Pw	2,405	55			P,W	S		
801	Robert L. Baxter		Spring	*	Pdb	2,200	++++	Nov. Apr.	10, 1938 18, 1967	Flows	S		Reported sulfur odor. Flowed 382 gpm Apr. 18, 1967.
802	Oliver Wischkaemper		Spring		Pdb	2,260	+++	Nov. Apr.	2, 1938 18, 1967	Flows	S		Flowed 22 gpm Apr. 18, 1967.
804	H. Massey		Spring		Pdb	2,260	+++	Nov. Aug.	10, 1938 1, 1967	Flows	S		Flowed 2 gpm Aug. 1, 1967.
805	J. A. Coleman		Spring		РdЬ	2,212	+	Apr.	18, 1967	Flows	U		Flowed 25 gpm Apr. 18, 1967.
806	do		Spring		Pdb	2,212	+		do	Flows	U		Sulfur odor with black slime. Flowed 76 gpm Apr. 18, 1967.
807	Jack Clark	1954	52	12	Qalı	2,300	17.4	Apr.	28, 1967	T,G	I	35	Yield 300 gpm Apr. 28, 1967.
808	John H. Christner	1964	28	6	Qal <sub>l</sub>	2,284	16	Feb.	1967	C,G	I	70	Manifold system of 10 wells. Yield 550 gpm Feb. 1967.
809	F. J. Purkey		45	6	Pdb,Pw	2,308	38.6	July	28, 1967	P,W	S		Yield 2 gpm July 28, 1967.
810	J. A. Coleman		Spring		Pdb	2,245	+	Aug.	1, 1967	Flows	S		Flowed 25 gpm aug. 1, 1967.
902	Christine Schoonover	1929	150	6	Pw	2,324	77.1		do	P,W	s		Yield 3 gpm Aug. 1, 1967.
903	do		109	6	Pw,Pdb	2,288	103.9		do	P,W	S		Yield 2 gpm Aug. 1, 1967.
55-401	W. C. Scruggs		Spring		Pdb	2,150	+ +		1, 1938 2, 1967	Flows	S		Flowed 25 gpm Aug. 2, 1967.
501	E. C. Sidwell	1920	120	4	Pdb	2,266	66.0 66.9		10, 1938 2, 1967	Ρ,₩	S		Originally drilled to 84 ft, but reworked since 1938. Yield 2 gpm Aug. 2, 1967.
503	do		115	6	Pdb	2,281	87.7	Aug.	2, 1967	P.W	S		Yield 2 gpm Aug. 2, 1967.

See footnote at end of table

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				DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
	WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	. REMARKS
*DL	1-05-55-701	George W. Davis	1943	77	6	Pdb	2,069	30.4	Aug. 2, 1967	J,E	н		Yield 5 gpm Aug. 2, 1967.
*	702	do		Spring		Pdb	2,150	+	do	Flows	S		Flowed 232 gpm Aug. 2, 1967.
	703	Maude Tinsley	1940	65	6	Pdb	2,248	45.4	do	P,W	H,S		Yield 2 gpm Aug. 2, 1967.
¥	704	do		Spring		Pdb	2,120	+	do	Flows	S		Flowed 2 gpm Aug. 2, 1967
	705	T. C. Newkirk		96	6	Qalı,Pdb	2,047	41.4	Aug. 2, 1967	Ρ,₩	U		Yield 3 gpm Aug. 2, 1967.
*	801	B.L. Betenbough		Spring		Pdb	2,030	+ +	Nov. 1, 1938 Aug. 2, 1967	Flows	S		Reported water in cavernous gypsum bed <b>s</b> . Flowed 1 gpm Aug. 2, 1967.
	802	Mrs. Clarence B. Lutes		109	6	Pdb	2,191	78.8	Aug. 2, 1967	P,W	S		Yield 3 gpm Aug. 2, 1967.
	803	D. J. Betenbough		103	6	Pdb	2,220	84.1	do	P,W	S		Do.
*	901	S. Wattenburger Estate		Spring		QalıPdb	1,940	++++	Sept.23, 1938 Aug. 3, 1967	Flows	S		Flowed 3 gpm Aug. 3, 1967.
¥	56-402	Milt Williams	1936	100	6	Pdb	2,271	100	Aug. 1967	P,W	S		Yield 2 gpm Aug. 1967.
	406	0. A. Laycock	1941	79	5	Pdb	2,208	52.6	Aug. 3, 1967	P,G	S		Cased to 80 ft. Yield 4 gpm Aug. 3, 1967.
	407	Milt Williams	1960	115	6	Pdb	2,260	96.0	do	Ρ,₩	S		Yield 3 gpm Aug. 3, 1967.
	501	James H. Hobbs	1935	103	6	Pf	1,980	34.4 31.2	Sept.30, 1938 Aug. 30, 1967	P,W	U		Reported well deepened since 1938. Yield 2 gpm Aug. 30, 1967.
*	502	do		Spring		Qal <sub>l</sub> ,Pdb	1,948	+	Aug. 30, 1967	Flows	S		Flowed 229 gpm Aug. 30, 1967.
1	601	L. R. Neely		105	6	Pdb,Pf	1,958	69.9	do	P,W	S		Yield 2 gpm Aug. 30, 1967.
	701	Gideon Bell		Spring		РЬ	2,105	++++	Sept.21, 1938 Aug. 3, 1967	Flows	S	10	Flowed 35 gpm Aug. 3, 1967.

See footnote at end of table

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				DEPTH	DIAM-		ALTITUDE	WA	TER LEVEL			IRRIGATED	
WE	LL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05	-56-702	do		Spring		Pb	2,105	+	Sept.20, 1938	Flows	S		Flowed 10 gpm Sept. 20, 1938.
·	704	Barney Glenn		Spring		Pf,Qalı	1,945	++++	Sept.22, 1938 Aug. 3, 1967	Flows	S		Flowed 12 gpm Aug. 3, 1967.
	801	A. J. Laycock		Spring		Pb	1,990	+	Oct. 31, 1938	Flows	S		Total flow and field Conductance taken at site DU-05-56-907, Aug. 31, 1967.
*	802	0. A. Laycock	1940	103	4	РЬ	2,192	93.5	Aug. 3, 1967	P,W	S		Cased to 80 ft. Yield 3 gpm Aug. 3, 1967.
	803	do	1941	81	4	РЬ	2,151	73.8	do	Ρ,₩	S		Cased to 80 ft. Yield 4 gpm Aug. 3, 1967.
	804	do	1941	81	4	РЬ	2,152	75.1	do	P,W	S		Yield 4 gpm Aug. 3, 1967.
	805	L. M. Tittle		110	6	Pb	2,126	78.6	do	P,W	s		Yield 3 gpm Aug. 3, 1967.
	901	J. C. Emmert	1930	34	4	Pf	1,933	28.1 17.3	Sept.26, 1938 Aug. 30, 1967	N	U		Yield 3 gpm Aug. 30, 1967.
	902	Mrs. Ike E. Emmert		Spring		РЬ	2,005	+ +	Oct. 31, 1938 Aug. 30, 1967	Flows	S		Flowed 15 gpm on Aug. 30, 1967.
*	903	do		Spring		РЬ	2,005	+ +	Oct. 31, 1938 Aug. 30, 1967	Flows	S		Flowed 30 gpm Aug. 30, 1967.
	905	J. C. Emmert	1952	39	6	Ρf	1,931	15.0	Aug. 30, 1967	P,W	S		Yield 3 gpm Aug. 30, 1967.
	906	Mrs. Ike E. Emmert	1952	22	4	Qal <sub>l</sub> ,Pf	1,923	5.9	Aug. 31, 1967	P,W	S		Yield 2 gpm Aug. 31, 1967.
	907	do		Spring		Pdb,Pf	1,915	+	do	Flows	S		Flowed 81 gpm Aug. 31, 1967.
	908	do	1943	124	6	Pdb	2,136	99.4	do	Ρ,₩	S		Yield 3 gpm Aug. 31, 1967.
	909	do		Spring		Pdb	1,980	+	Aug. 30, 1967	Flows	S		Flowed 20 gpm Aug. 30, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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		and the second second	DEPTH	DIAM-	1	ALTITUDE	WA	TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
00-05-60-301	Jess O. Coleman	1930	119	6	Pw	2,490	48.1 34.0	Oct. 7, 1938 Aug. 30, 1967	Ρ,₩	S.		Yield 2 gpm Oct. 7, 1967.
303	Faris J. Hess	1940	143	6	Pw	2,500	119.0	Aug. 30, 1967	P,W	S		Do.
* 304	Evan L. Sitter	1942	41	6	Pw	2,421	20.4	do	P,W	S		Do.
* 601	do	1940	90	6	Pw	2,396	88.7	do	Ρ,₩	S	11	Do.
* 602	do	1940	134	6	Pw	2,415	107.5	Sept. 1, 1967	P,W	S		Yield 3 gpm Sept. 1, 1967.
603	Faris J. Hess	1940	119	6	Pw	2,374	106.8	do	P,W	S		Do.
* 901	Evan L. Sitter	1940	139	6	Pw,Pdb	2,325	138.1	Aug. 30, 1967	Ρ,₩	S		Yield 1 gpm Aug. 30, 1967.
902	do	1940	25	6	Pw	2,205	21.9	do	Ρ,₩	S		Yield 3 gpm Aug. 30, 1967.
61-102	J. W. Gooch	1962	71	6	Pw,Pdb	2,377	66.2	July 24, 1967	Ρ,₩	S		Yield 3 gpm July 24, 1967.
103	Alfred McMurtry	1953	113	6	Pw	2,441	73.3	July 26, 1967	P,W	S		Yield 1 gpm July 26, 1967.
<sup>6</sup> 104	do	1949	138	6	Pw	2,495	71.0	do	Ρ,₩	S		Yield 3 gpm July 26, 1967.
201	Hugh J. Grogan	1934	132	6	Pw,Pdb	2,371	79.9	Nov. 7, 1938	Ρ,₩	U		Reported well destroyed in 1952. Yield 1 gpm Nov. 7, 1938.
202	do	1909	107	4	Pw	2,405	84.3 78.3	Nov. 7, 1938 July 25, 1967	P,W	H,S		Yield 2 gpm July 25, 1967.
203	do	1952	25	6	Pw,Pdb	2,287	11.0	July 25, 1967	P,W	S		Do.
301	Mettie F. Brown	1951	5,710		Pw,Pdb	2,333				U		Test well.
× 302	John E. Holton	1935	59	6	Pw	2,314	50.3	Nov. 4, 1938	P,E	H,S		Yield 3 gpm Nov. 4, 1938.

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Table 7Records of Wells and Springs in Collingsworth Cour	tyContinued
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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-61-303	John E. Holton		Spring		Pw	2,350	+ +	Nov. 4, 1938 July 25, 1967	Flows	S		Flows in to Big Sandy Creek. Flowed 3 gpm July 25, 1967.
304	Mettie F. Brown	1933	13	24	Pw	2,313	18.6	Nov. 4, 1938 July 25, 1967	P,W	U		Yield 8 gpm July 25, 1967.
305	John E. Holton	1935	80	6	Pw,Pdb	2,353	78.5	July 25, 1967	P,W	S		Yield 2 gpm July 25, 1967.
306	Mettie F. Brown	1958	60	6	Pw	2,324	21.7	do	Ρ,₩	S		Cased to 40 ft. Yield 2 gpm July 25, 1967.
307	Mrs. George Green	1964	110	6	Pw	2,280	72.8	July 27, 1967	Ρ,₩	S	-	Yield 3 gpm July 27, 1967.
401	W. R. Breeding	1935	113	6	Pw	2,412	106 94.0	Oct. 1938 July 18, 1967	P,W	S		Reported water dark and murky. Yield 1 gpm July 18, 1967.
402	Jake L. Hess	1930	138	6	Pw	2,446	78.7 78.6	Nov. 9, 1938 July 24, 1967	Ρ,₩	S		Yield 2 gpm July 24, 1967.
403	John E. Dwyer		Spring		Pdb	2,270	+ +	Nov. 9, 1938 July 21, 1967	Flows	S		Flows into McCormick Creek. Flowed 3 gpm July 21, 1967.
404	do	1923	118	4	Pw,Pdb	2,347	104.4 89.8	Nov. 9, 1938 July 21, 1967	P,W	S		Casing: 4-in. steel inside original 5 1/2-in. galvanized casing. Yield 2 gpm July 21, 1967.
405	Ruth Hess Magee	1940	296	7	Pdb	2,274	45.1	July 18, 1967	P,W	S		Yield 2 gpm July 18, 1967.
501	D. A. Kincannon	1923	139	6	Pw,Pdb	2,285	118.8 118.6	Oct. 7, 1938 July 18, 1967	P,W	S		Yield 1 gpm July 18, 1967.
502	do		Spring		Pw	2,230	+ +	Oct. 26, 1938 July 18, 1967	Flows	P,S		Flows into Richardson Creek. Flowed 30 gpm July 18, 1967.
503	T. N. Field		Spring		Pw	2,160	+	Oct. 26, 1938	Flows	S		Flows into Richardson Creek. Dry in July 1967. Flowed 10 gpm Oct. 26, 193

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-61-504	Dan Henard	1966	151	6	Pdb	2,261	105	June 1966	Ρ,₩	s		Cased to 121 ft. Yield 60 gpm June 1966.
505	Mettie F. Brown	1888	67	4	Pdb,Pw	2,285	80 61.0	Oct. 1938 July 18, 1967	Ρ,₩	U		
506	John S. Coleman		136	6	Pdb	2,250	98.3	July 18, 1967	P,W	S		Yield 4 gpm July 18, 1967.
* 507	Dan Henard	1965	120	6	Pw	2,252	87.4	do	Ρ,₩	S		Yield 3 gpm July 18, 1967.
601	Jay Dee Coleman	1955	64	16	Qalı	2,141	18 13.8	Aug. 1955 Apr. 26, 1967	T,G	U	40	Irrigation well not in use because of silt problems; replaced by well DU-05-62-411. Yield 500 gpm Apr.26, 1967.
602	Tommie R. Tate	1930	22	36	Pw	2,304	18.7	Oct. 7, 1938	Ρ,₩	U		Well destroyed early in 1940. Yield 5 gpm Oct 7, 1938.
* 603	Pearl Strong	1934	117	5	Pdb	2,227	95.6 85.5	Oct. 25, 1938 July 18, 1967	P,W	S		Yield 4 gpm July 18, 1967.
604	Pat Bradley		95	5	Pw	2,213	71.1	July 12, 1967	P,W	S		Yield 3 gpm July 12, 1967.
605	Mrs. J. A. Coleman		Spring		Pdb	2,130	+	Apr. 26, 1967	Flows	S		Flows into Big Sandy Creek Flowed 48 gpm Apr. 26, 1967.
* 701	Fred W. Bourland	1923	11	35	Qalı	2,144	2.6	May 25, 1967	P,W	S		Yield 17 gpm May 25, 1967.
* 702	John E. Dwyer	1940	101	6	Pdb,Pw	2,236	86.8	July 21, 1967	P,W	S		Yield 2 gpm July 21, 1967.
703	do	1930	88	5	Pdb,Pw	2,284	59.0	do	P,W	S		Yield 3 gpm July 21, 1967.
801	Raymond Ross		53	6	Qalı	2,185	51.7	July 12, 1967	Ρ,₩	S		Yield 2 gpm July 12, 1967.
* 802	Pat S. Bradley		30	6	Qal <sub>l</sub> ,Pdb	2,151	21.7	July 18, 1967	P,W	S		Yield 4 gpm July 18, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-61-803	Bessie E. Hess		150	6	Pw,Pdb	2,259	59.6	July 21, 1967	N	N		Windmill now blown down. Yield 3 gpm July 21, 1967.
901	Lewis Morris	1919	48	6	Qal <sub>l</sub>	2,220	43.8	Oct. 17, 1938	N	U		Well now unused, replaced by well DU-05-61-902. Yield 2 gpm Oct. 17, 1938.
902	do	1964	51	5	Qalı	2,220	38.2	July 11, 1967	J,E	S		Yield 8 gpm July 11, 1967.
* 903	Wood R. Coleman		Spring		Pdb	2,080	+	do	Flows	U		Flows into Gyp Creek. Flowed 170 gpm July 11, 1967.
904	Pat S. Bradley		53	5	Pw,Pdb	2,120	21.6	July 12, 1967	Ρ,₩	S		Yield 2 gpm July 12, 1967.
905	John S. Coleman	1966	57	6	Pdb	2,120	28.4	July 12, 1967	P,W	S		Cased to 35 ft. Red beds at 5 ft. Yield 80 gpm July 12, 1967.
* 906	Johnny Carson	1967	79	6	Pw	2,218	35 33.3	Feb. 1967 July 11, 1967	J,E	н		Cased to 49 ft. Yield 5 gpm Feb. 1967.
907	Ben F. Farmer	1967	75	6	Pw	2,222	40	Feb. 1967	J,E	Н		Cased to 45 ft. Yield 10 gpm Feb. 1967.
908	John S. Coleman	1937	8		Qalı	2,105	5.7	Oct. 26, 1938	N	U		Well now destroyed. Yield 20 gpm Oct. 26, 1967.
* 909	Wood R. Coleman		Spring		Pdb	2,080	+	Apr. 26, 1967	Flows	S		Flows into Big Sandy Creek. Flowed 128 gpm Apr. 26, 1967.
62-101	Mrs. Texola Carreker	1916	67	4	Pw	2,201	46.1 45.6	Aug. 25, 1938 Apr. 27, 1967	Ρ,₩	H,S		Yield 2 gpm Apr. 27, 1967.
102	W. C. Barnett	1937	116	5	Pw,Pdb	2,372	106.3 99.1	Nov. 10, 1938 Apr. 27, 1967	P,W	S		Yield 4 gpm Apr. 27, 1967.
103	Lula Laycock	1938	97	6	Pdb	2,254	77.0 75.1	Oct. 26, 1938 Apr. 27, 1967	N	Ů		Yield 2 gpm Apr. 27, 1967.
* 104	W. C. Barnett		94	6	Pw,Pdb	2,318	92.1	Jan. 11, 1967	P,W	S		Yield 2 gpm Jan. 11, 1967.

See footnote at end of table

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Table 7.--Records of Wells and Springs in Collingsworth County--Continued

			DEPTH	DIAM-		ALTITUDE	WA	TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-62-10	A. L. Laycock		108	4	Pw,Pdb	2,264	80.7	Apr. 27, 1967	P,W	S		Yield 4 gpm Apr. 27, 1967.
106	A. R. Clay Estate		181	6	Pw	2,375	166.4	do	P,W	S		Yield 3 gpm Apr. 27, 1967.
20	William J. Thompson	1955	105	12	Pdb	2,199	30 25	July 1955 Dec. 1967	N	U	60	Well collapsed replaced by well DU-05-62-213. Yield 1,000 gpm July 1955.
\$ 202	Mrs. Joe O. Coleman	1955	134	12	Pdb	2,256	95.4	Apr. 5, 1967	T,G	1	60	Underground system. Yield 600 gpm Apr. 5, 1967.
203	J. R. Morgan	1924	96	6	Pdb	2,291	87.6	Oct. 13, 1938	N	U		Unused; now replaced by well DU-05-62-207. Yield 3 gpm Oct. 13, 1938
201	Sam Saego		Spring		Pdb	2,160	+ +	Oct. 24, 1938 Apr. 6, 1967	Flows	S		Flows into Dozier Creek. Flowed 60 gpm Apr. 6, 1967.
205	do	1938	- 67	6	Pdb	2,236	64.1	Oct. 13, 1938	P,W	S		Yield 3 gpm Oct. 13, 1938
* 206	William J. Thompson		Spring		Qal <sub>l</sub> ,Pdb	2,180	+	Apr. 6, 1967	Flows	S		Flows into Dozier Creek. Flowed 1 gpm Apr. 6, 1967.
207	J. R. Morgan	1954	101	6	Pdb	2,291	80.0	Apr. 21, 1967	P,W	S		Yield 2 gpm Apr. 21, 1967.
208	Robert L. Baxter		92	6	Pdb	2,283	62.0	do	Ρ,₩	S		Yield 5 gpm Apr. 21, 1967.
* 209	John Bergman	1948	133	4	Pdb	2,336	114.9	do	P,W	H,S		Cased to 209 ft. Yield 3 gpm Apr. 21, 1967.
210	Mrs. Theodoer Nichols	1906	62	5	Pw,Pdb	2,275	52.8	do	P,W	U		Yield 2 gpm Apr. 21, 1967.
211	David Clark	1950	65	6	Qal <sub>l</sub> ,Pw	2,280	55.5	Apr. 28, 1967	J,E	H,S		Yield 8 gpm Apr. 28, 1967.

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			DEPTH	DIAM-		ALTITUDE	and the second se	TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
00-05-62-212	John S. Coleman		72	6	Pw	2,301	56.6	Apr. 28, 1967	Ρ,₩	S		Yield 5 gpm Apr. 28, 1967.
213	William J. Thompson	1967	89	12	Pdb	2,208	32	Dec. 1967	T,G	1	60	Replaced well DU-05-62-201. Yield 450 gpm Dec. 1967.
301	Dee A. Kincannon	1920		6	Pw	2,158			N	U		Plugged at 2 ft. below surface.
302	J. M. Morgan	1930	127	5	Pdb	2,273	70.5 62.7	Nov. 2, 1938 Apr. 19, 1967	Ρ,₩	S		Yield 15 gpm Apr. 19, 1967.
303	do	1940	93	5	Pw	2,257	74.1	Apr. 5, 1967	P,W	U		Cased to 63 ft. Yield 2 gpm Apr. 5, 1967.
304	Samnorwood Water Supply Corp.	1965	71	16	Pw	2,255			N	U		Abandoned public supply well. Cased to 1 ft. Well dry to total depth on Apr. 4, 1967.
305	do	1965	109	6	Pdb	2,253	72 75.0	Feb. 1965 Apr. 4, 1967	S,E	Ρ		Cased to 40 ft. Yield 30 gpm Apr. 4, 1967.
306	do	1965	140	6	Pdb	2,244	62 93.0	Feb. 1965 Apr. 4, 1967	S,E	Р		Yield 18 gpm Apr. 4, 1967.
307	Dee A. Kincannon	1929	65	4	Pdb	2,230			N	U		Destroyed, replaced by well DU-05-62-308.
308	do	1967	90	6	Pw	2,232	58 61.8	Jan. 1967 Apr. 5, 1967	Ρ,₩	S		Cased to 60 ft. Yield 15 gpm Apr. 5, 1967.
309	Alfred F. Knoll		152	6	Pdb	2,262	90.9	Apr. 19, 1967	P,W	S		Yield 4 gpm Apr. 19, 1967.
* 310	Robert L. Baxter		Spring		Pdb	2,205	+ +	Nov. 2, 1938 Apr. 18, 1967	Flows	H,S		Dog Wood Springs on Elm Creek. Flowed 15 gpm Apr. 18, 1967.
311	Mrs. C. Mary Smith		Spring		Pdb	2,150	+	Mar. 21, 1967	Flows	S		Flowed 3 gpm Mar. 21, 1967.
312	do	1947	39	4	Pdb	2,164	19.3	do	Ρ,₩	s		Yield 4 gpm Mar. 21, 1967

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

Table 7Records of Wells and Springs in Collingsworth CountyCont	Inued	d
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			DEPTH	DIAM-		ALTITUDE	WA	TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-62-313	Mrs. C. Mary Smith		Spring		Pdb	2,142	+	Mar. 21, 1967	Flows	S		Flowed 4 gpm Mar. 21, 1967.
314	R. C. Bryan		129	6	Pdb	2,281	106.6	Apr. 19, 1967	Ρ,₩	S		Yield 3 gpm Apr. 19, 1967.
315	Robert L. Baxter	1947	73	6	Pdb,Qalı	2,242	48.4	Apr. 18, 1967	J,E	Н		Cased to 43 ft Yield 6 gpm Apr. 18, 1967.
316	J. M. Morgan	1963	86	6	Pdb	2,257	70	Apr. 1967	Ρ,₩	H,S		Cased to 50 ft. Yield 4 gpm Apr. 1967.
401	Mrs. J. A. Coleman	1954	136	12	Pdb	2,219	72 81.4	July 1955 Apr. 7, 1967	T,G	I	50	Cased to 80 ft. Yield 800 gpm Apr. 7, 1967.
402	do	1920	80	6	Pdb	2,227	92.7	Apr. 4, 1938	N	U		Replaced by well DU-05- 62-416. Well dry to total depth on Apr. 7, 1967.
403	do	1955	121	10	Pdb	2,193	60 59.6	July 1955 Apr. 7, 1967	T,G	I	60	Cased to 61 ft. Yield 700 gpm Apr. 7, 1967.
404	Jim C. Jones	1954	175	16	Pdb	2,179	85 78.5	July 1955 Apr. 7, 1967	T,G	1	48	Yield 518 gpm Apr. 7, 1967.
405	A. F. Wischkaemper, Jr.	1954	57	15	Pdb	2,094	20 20.0	July 1954 Mar. 24, 1967	T,G	U	40	Reported well sealed. Cased to 44 ft. Yield 800 gpm July 1954.
406	A. F. Wischkaemper, Jr.	1930	89	6	Pdb	2,172 🐁	84.3	Nov. 10, 1938	Ρ,₩	U		
407	Lenora Phillips	1930	120	5	Pdb	2,247	49.8 68.0	0ct. 24, 1938 Apr. 6, 1967	N	U		Replaced by well DU-05-62-412.
408	Mrs. A. J. Shields	1938	130	6	Pdb	2,196	100.8	Nov. 4, 1938	P,W	S		Yield 1 gpm Nov. 4, 1938.
409	Douglas Coleman	1959	126	14	Pdb	2,165	73.4	Mar. 24, 1967	T,G	I	100	Cased to 65 ft. Yield 600 gpm Mar. 24, 1967.
410	do	1966	140	12	Pdb	2,235	92.3	Apr. 7, 1967	T,G	. 1	40	Cased to 90 ft. Yield 400 gpm Apr. 7, 1967.
411	Dee Coleman	1966	108	14	Pdb	2,190	53.9	do	T,G	1	40	Cased to 78 ft. Yield 500 gpm Apr. 7, 1967.

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Table 7.	Records of	Wells.	and	Springs	in	Coll	ingsworth	County-	-Conti	nued	

				DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL		OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
≎DU-05-62-	412	Leonora Phillips	1939	255	6	Pdb	2,246	148.9	Apr. 6, 1967	Ρ,₩	S		Replaced wellDU-05-62-407 Yield 3 gpm Apr. 6, 1967.
	413	Wood R. Coleman	1957	200	16	Pdb	2,191	111.4	Apr. 25, 1967	T,G	1	220	Cased to 140 ft. Yield 600 gpm Apr. 25, 1967.
1	414	Douglas Coleman	1963	48	6	Pdb	2,190	25.4	Apr. 27, 1967	P,W	S		Yield 4 gpm Apr. 27, 1967.
L	415	do	1964	111	6	Pdb	2,229	85 89.7	Mar. 1964 Apr. 27, 1967	P,W	S		Yield 80 gpm Apr. 27, 1967.
		Mrs. J. A. Coleman	1940	128	5	Pdb	2,234	101.4	Apr. 7, 1967	J,E	Н		Replaced well DU-05-62-402 Yield 4 gpm Apr. 7, 1967.
5	501	A. F. Wischkaemper, Jr.	1954	160	12	Pdb	2,202	117	July 1955	T,G	U		Unused for several years. Yield 117 gpm July 1955.
	502	do	1954	160	15	Pdb	2,177	98 90	July 1954 Mar. 1967	T,G	í	40	Cased to 125 ft, well sealed. Yield 145 gpm July 1954.
		Robert Oldham	1942	92	4	Pdb	2,180	79.0	May 12, 1967	Ρ,₩	S		Cased to 90 ft. Yield 1 gpm May 12, 1967.
		Rudy Tate	1953	170	12	Pdb	2,187	44.3	Apr. 5, 1967	T,G	1	90	Cased to 40 ft. Yield 500 gpm Apr. 5, 1967.
		A. F. Wischkaemper, Jr.		Spring		Pdb	2,080	+	Mar. 24, 1967	Flows	S		Flows into Dozier Creek. Flowed 105 gpm Mar. 24, 1967.
5(	06 B	3. H. Walker		Spring		Pdb	2,120	+	May 12, 1967	Flows	S		Flows into Lake Creek. Flowed 10 gpm May 12, 1967.
50	07 A	A. F. Wischkaemper, Jr.	1930	107	6	Pdb	2,223	125.8	Oct. 25, 1938	Ρ,₩	U		Well caved in and destroyed, Apr. 1967. Yield 2 gpm Oct. 25, 1938
50	08	Mrs. Dorothy K. Thurston	1919	92	6	Pdb	2,191		Oct. 24, 1938 Apr. 4, 1967	P,W	U		Abondoned. Yield 1 gpm Apr. 4, 1967.

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Table 7 Records	of Wells	and	Springs	in Col	lingsworth	CountyCont	inued
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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-62-509	Douglas Coleman	1938	105	6	Pdb	2,210	92.4	Oct. 13, 1938	P,W	S		Yield 2 gpm Oct. 13, 1938
510	Preston W. Phillips	1921	97	6	Pdb	2,195	71.5	Apr. 6, 1967	P,W	S		Cased to 65 ft. Yield 11 gpm Apr. 6, 1967.
511	A. F. Wischkaemper, Jr.	1965		6	Pdb	2,234	155.5	Mar. 24, 1967	S,E	S		Yield 6 gpm Mar. 24, 1967.
601	J. C. Snead	1955	80	16	Pdb	2,160	79 49.3	Aug. 1955 Mar. 10, 1967	N	U		Abandoned irrigation well. Yield 250 gpm Mar. 10, 1967.
602	Samnorwood Rural High School	1938	140	5	Pdb	2,214	70	Feb. 1961	S,E,P	P		Water not used for drink- ing. Cased to 105 ft. Yield 14 gpm Feb. 1961.
603	Worth W. Shields	1920	89	6	Pdb	2,188	69.0 60.2	Oct. 25, 1983 Apr. 6, 1967	J,E	U		Reworked for cotton gin supply, but now abandoned Yield 8 gpm Apr. 6, 1967.
604	Bill Bruton	1927	147	5	Pw	2,305	77.0	Apr. 21, 1967	N	U		
605	J. C. Snead	1930	14	6	Pdb	2,135		-	N	U		Well dry to total depth on Oct. 13, 1938. Destroyed when visited. Mar. 10, 1967.
606	Essie Browder	1930	100	6	Pdb	2,230	88.7	do	N	U		Abandoned Windmill well.
607	J.T. Slay	1938	138	6	Pdb	2,256	104.4	Oct. 25, 1938	P,W	U		Destroyed when visited Apr. 25, 1967.
608	J. C. Snead	1948	108	12	Pdb	2,175	71.0	Mar. 10, 1967	T,G	1	77	Yield 390 gpm Mar. 10, 1967.
609	Frank W. Knoll	1964	110	12	Pdb	2,212	63.1	Mar. 22, 1967	T,G	I	44	Yield 200 gpm Mar. 22, 1967. Reported will pump about 500 gpm for 1 day then suck air.
610	do	1963	120	12	Pdb	2,231	76.8	do	N	U		Yield 100 gpm Mar.22, 1967. Reported not enough water for irrigation.

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL		DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-05-62-611	Herbert Knoll	1956	90	8	Pdb	2,223	68.6	Mar. 22, 1967	Ρ,₩	S		Yield 2 gpm Mar. 22, 1967.
612	do	1915	106	5	Pdb	2,250	94.9	do	P,W	S		Do.
613	John Lister	1966	125	6	Pdb	2,230	87.4	Apr. 21, 1967	P,W	S		Cased to 103 ft. Yield 30 gpm Apr. 21, 1967.
614	do	1915	103	4	Pdb	2,230	79.2	do	N	U		Well replaced by well DU-05-62-613 because of caving and silting. Yield 2 gpm Apr. 21, 1967.
615	Essie Browder	1954	67	6	Pdb	2,215	56.3	Apr. 25, 1967	P,W	S		Yield 3 gpm Apr. 25, 1967.
701	Mrs. Albert M. Oldham	1954	63	14	Pdb	2,072	26.6	Mar. 23, 1967	T,G	U	35	Reported not used in a few years. Cased to 20 ft. Yield 500 gpm Mar. 23, 1967.
702	do	1954	53	14	Pdb	2,078	24.9	do	T,G	1	80	Cased to 20 ft. Current observation well. Yield 700 gpm Mar. 23, 1967.
703	do	1954	53	14	Pdb	2,070	27.1	do	T,G	1	60	Cased to 20 ft. Yield 700 gpm Mar. 23, 1967.
704	Elzie F. White	1930	116	5	Pdb	2,151	96.6 97.4	Oct. 24, 1938 Apr. 26, 1967	P,W	S	-	Yield 4 gpm Apr. 26, 1967.
705	Richard Peters	1944	183	4	Pdb	2,152	86.8	May 18, 1967	P,W	S		Cased to 155 ft. Yield 2 gpm May 18, 1967.
706	Wood R. Coleman	1956	188	6	Pdb	2,188	131.1	Apr. 26, 1967	P,W	S		Cased to 140 ft. Yield 30 gpm Apr. 26, 1967.
707	Elzie F. White	1966	94	6	Pdb	2,120	76 71.4	Apr. 1966 Apr. 26, 1967	P,G	S		Yield 4 gpm Apr. 26, 1967
708	Wood R. Coleman	1915	127	5	Pdb	2,162	106.2	Apr. 26, 1967	P,W	S		Do.
801	John D. Knoll	1954	120	16	Pdb	2,132	80	1954	T,G	1	60	Cased to 92 ft. Tape caught at 56 ft. Mar. 23, 1967. Yield 450 gpm in 1954.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-62-802	Tom R. Cunningham	1955	148	12	Pdb	2,134	92 85.6	Aug. 1955 Mar. 23, 1967	T,G	1	116	Cased to 103 ft. Reported usually pumps at about 250 gpm.
803	Mrs. Albert M. Oldham	1954	143	12	Pdb	2,140	114.2	Mar. 23, 1967	T,G	1	100	Cased to 93 ft. Yield 400 gpm Mar. 23, 1967.
804	Clyde C. Brown	1955	157	12	Pdb	2,085	69.4	do	T,G	I	150	Cased to 107 ft. Yield 360 gpm Mar. 23, 1967.
805	Merle Walker	1955	198	16	Pdb	2,117	85.3	Mar. 22, 1967	T,G	1	80	Cased to 60 ft. Yield 500 gpm Mar. 22, 1967.
806	Herman Oldham	1955	100	16	Pdb	2,060	20	Aug. 1955	N	U		Destroyed irrigation well. Cased to 28 ft. Yield 175 gpm Aug. 1955.
807	do	1930	103	6	Pdb	2,120	81.4	Oct. 24, 1938	Ρ,₩	S		Yield 2 gpm Oct. 24, 1938.
808	Leonard Bagwell	1955	46	10	Pdb	2,100	30	July 1955	T,G	1	90	Cased to 42 ft. Yield 550 gpm July 1955.
809	W. W. Oldham	1954	63	12	Pdb	2,101	26.4	Mar. 10, 1967	T,G	1	70	Usually pumps at about 400 gpm. Cased to 43 ft.
810	Herman Oldham	1955	220	14	Pdb	2,120	70.1	Mar. 10, 1967	T,G	1	100	Cased to 100 ft. Yield 1,210 gpm Mar. 10, 1967.
* 811	J. W. Neely	1956	70	6	Pdb	2,058	39	Mar. 1967	J,E	н		Cased to 50 ft. Test pumped 75 gpm Mar. 1967; usual yield 6 gpm.
812	Clara Scott	1908	171	6	Pdb	2,108	96.1	Oct. 11, 1938	P,W	S		Yield 2 gpm Oct. 11, 1938.
901	Herman Oldham	1925	133	6	Pdb	2,142	105.8	Nov. 4, 1938	N	U		Filled to 84 ft; well dry Mar. 10, 1967.
902	Claude W. Caison		107	5	Pdb	2,197	82.2 82.7	Aug. 25, 1938 Apr. 4, 1967	S,E	S		Replaced well drilled before 1938 to 144 ft. Yield 1 gpm Apr. 4, 1967.
* 903	Lovella and Nellie Austin		94	4	Pdb	2,140	71.5	Jan. 12, 1967	P,W	S		Yield 3 gpm Jan. 12, 1967.

		DEPTH	DIAM-		ALTITUDE	WA	FER LEVEL			IRRIGATED		
WELL		DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-62-904	Earl L. Bartlett	1965	180	13	Pdb	2,108	98.3	Mar. 9, 1967	T,E	I	50	Yield 525 gpm Mar. 9, 1967.
905	do	1963	150	16	Pdb	2,111	99.8	do	T,E	1	90	Cased to 70 ft. Yield 750 gpm Mar. 9, 1967.
906	Herman Belew	1965	240	14	Pdb	2,112	101.1	do	T,G	1	215	Yield 600 gpm Mar. 9, 1967.
907	Oren D. Starkey	1963	220	12	Pdb	2,116	108.0	do	T,G	I	107	Cased to 160 ft. Yield 1,000 gpm Mar. 9, 1967.
908	Mary Coleman	1925	110	4	Pdb	2,141	93.9	Mar. 22, 1967	P,G	S		Yield 14 gpm Mar. 22, 1967.
909	Benjamin D. Glazner	1961	200	15	Pdb	2,145	91.8	Mar. 10, 1967	T,G	1	40	Yield 405 gpm Mar. 10, 1967.
910	Donald C. VanPelt	1964	225	14	Pdb	2,126	115 119.4	Dec. 1964 Apr. 3, 1967		1	100	Reported usually pumps about 500 gpm.
911	Eugene F. Marrow	1938	98		Pdb	2,112	91.3	Oct. 11, 1938	Ρ,₩	S		Yield 2 gpm Oct. 11, 1938.
* 63-101	Mrs. Roe Green	1953	80	8	Pdb	2,212	64.2	Apr. 20, 1967	T,E	I,H	18	Current observation well. Water from cavity. Cased to 60 ft. Yield 60 gpm Apr. 20, 1967.
105	E. Wischkaemper	1930	137	4	Pdb	2,296	138.4	Sept.21, 1938	N	U		Well dry to total depth on May 12, 1967.
106	Austin Cantrell	1930	127	5	Pdb	2,267	113.2 111.6	Aug. 23, 1938 Mar. 9, 1967	Ρ,₩	S		Yield 3 gpm Mar. 9, 1967.
* 107	Robert Seeds	1967	149	6	Pdb	2,268	113.3	Mar. 9, 1967	S,E	1	10	Reported water rose 10 ft. when hit in honey- comb dolomite at 123 ft. Cased to 86 ft. Yield 60 gpm Mar. 9, 1967.
108	Frank J. Knoll		90	4	Pdb	2,228	76.8	Apr. 20, 1967	P,E	н		Yield 3 gpm Apr. 20, 1967.

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-63-201	Edgar Wischkaemper, Jr.		Spring		Pdb	2,060	+ +	Sept.10, 1938 Aug. 3, 1967	Flows	H,S,I		Flows into unnamed tributary to Elm Creek. Yield 1 gpm Aug. 3, 1967.
208	Edgar Wischkaemper, Jr.		Spring		Pdb	2,040	+ +	Sept.23, 1938 Apr. 20, 1967	Flows	S		Outflow from cave in South Fork of Corral Creek. Flowed 380 gpm Apr. 20, 1967.
209	M. F. Tonguet	1930	145	4	Pdb	2,117	103.6 104	Sept.10, 1938 Jan. 12, 1967	Ρ,₩	S		Yield 2 gpm Jan. 12, 1967.
210	L. Dederick	·	Spring		Pdb	2,080	+	Apr. 27, 1967	Flows	S		Flow estimated 20 gpm Sept. 20, 1938. Flows into South Fork of Corral Creek. Flowed 123 gpm Apr. 27, 1967.
211	John Shadid	1930	83	6	Pdb	2,143	78.4 81.3	Sept.10, 1938 Apr. 20, 1967	N	U		
212	L. Dederick		Spring		Pdb	2,080	+	Apr. 20, 1967	Flows	s		Flowed 21 gpm Apr. 20, 1967.
213	Hubert Tindall	1966	55	6	Pdb	2,098	32.6	do	Ρ,₩	S		Yield 2 gpm Apr. 20, 1967.
301	Mrs. Clarence B. Lutes	1938	50	5	Pf	1,967	36.1 32.4	Sept.22, 1938 Aug. 3, 1967	Ρ,₩	s		Yield 3 gpm Aug. 3, 1967.
302	do		Spring		Рdb	2,020	+ +	Sept.30, 1938 Apr. 21, 1967	Flows	S		Flows into tributary to Elm Creek. Flowed 2 gpm Apr. 21, 1967.
303	do		Spring		Pdb	2,050	+ +	Sept.30, 1938 Apr. 21, 1967	Flows	S		Flows into tributary to Elm Creek. Flowed l gpm Apr. 21, 1967.
304	do		119	6	Pdb	2,138	96.4	Apr. 21, 1967	P,W	s		Yield 2 gpm Apr. 21, 1967.
305	Hubert Tindall	1947	37	5	Pdb	2,078	21.8	May 2, 1967	P,W	S		Flowed 5 gpm May 2, 1967.
306	Mrs. Clarence B. Lutes		Spring		Pdb	1,965	+	do	Flows	S		Do.

See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL		DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-63-307	Mrs. Clarence B. Lutes		Spring		Pdb Qalı	1,935	+	Aug. 3, 1967	Flows	S		Elm Creek base flow. Flowed 1,440 gpm Aug. 3, 1967.
. 401	W. D. Simpson	1920	149	5	Pdb	2,249	90.6 83.9	Sept.30, 1938 Apr. 25, 1967		U		Yield 2 gpm Apr. 25, 1967
402	Mrs. Tom B. Whitson	1930	63	5	Pdb	2,220			Ρ,₩	U		Well dry at total depth on Sept. 30, 1938. Destroyed in 1952; Replaced by well DU-05-63-404.
* 403	Willie C. Knoll	1944	133	8	Pdb	2,266	104.3	Apr. 21, 1967	P,E	S		Yield 5 gpm Apr. 21, 1967.
404	Mrs. Tom B. Whitson	1952	101	. 5	Pdb	2,227	77.9	May 9, 1967	J,E	S	14	Yield 12 gpm May 9, 1967.
501	Selba Rainey	1923	121	6	Pdb	2,214	89 81.7	Sept. 1938 May 3, 1967	N	U		Yield 3 gpm May 3, 1967.
502	L. A. Sparlin	1915	80	4	Pdb	2,152	72.0 63.8	Sept.30, 1938 May 3, 1967	P,W	S		Do.
503	E. Eslinger	1930	71	5	Pdb	2,142	74.8	Sept.23, 1938	N	U		Mud at total depth on Apr. 20, 1967.
504	L. A. Sparlin	1917	91	6	Pdb	2,104	71.3	Sept.10, 1938	P,W	H,S		Yield 2 gpm Sept. 10, 1938.
505	L. A. Sparlin	1926	89	6	Pdb	2,209	87.4 78.8	Sept.23, 1938 May 3, 1967	N	U		
506	W. E. Brashears		109	6	Pdb	2,146	70.6	Apr. 20, 1967	P,W	S		Yield 2 gpm Apr. 20, 1967.
507	Lee Roark		157	3	Pdb	2,117	78.7	May 3, 1967	N	U		
* 508	L. A. Sparlin		114	6	Pdb	2,176	62.2	do	P,W	S		Yield 3 gpm May 3, 1967.
509	Joe Rountree	1958	86	12	Pdb	2,126	42.8	May 10, 1967	T,G	1	140	Cased to 66 ft. Water rose from 76 ft. when drilled. Yield 650 gpm May 10, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL		DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-63-601	M. G. Tarver, Jr.	1960	125	12	Pdb	2,082	57.2	May 2, 1967	T,G	1	70	Yield 275 gpm May 2, 1967
602	Mrs. Tom B. Whitson	1957	125	12	Pdb	2,085	60	May 1967	T,G	1	100	Yield 500 gpm May 1967.
603	M. G. Tarver, Jr.	1955	60	12	Pdb	2,052	32.4	May 1, 1967	N	U		
606	Elmer Smith	1935	63	4	Pdb	2,056	41.2 31.1	Sept.10, 1938 May 2, 1967	N	U		
607	P. Ammons		Spring		Pdb	1,990	+ +	0ct. 27, 1938 May 1, 1967	Flows	S		Flows into north fork of Wolf Creek. Flowed 8 gpm May 1, 1967.
608	M. G. Tarver	1965	120	6	Pdb	2,106	82.7 84.4	Oct. 8, 1965 Apr. 20, 1967	Ρ,₩	S		Cased to 87 ft. Yield 3 gpm Apr. 20, 1967.
609	Evert E. Sims	1925	87	5	Pdb	2,108	80.5	Sept.30, 1938	Ρ,₩	S		Destroyed when visited May 1, 1967. Yield 3 gpm Sept. 30, 1938.
610	William V. Lister	1930	60	6	Pdb	2,072	48.3 48.8	Sept.10, 1938 Apr. 20, 1967	Ρ,₩	S		Yield 3 gpm Apr. 20, 1967
612	Bill James		Spring		Pdb	2,015	+ +	Sept. 9, 1938 May 1, 1967	Flows	S,I		Artesian; in middle fork of Wolf Creek. Flow estimated 400 gpm in 1938. Flowed 763 gpm May 1, 1967.
613	M. G. Tarver, Jr.	1965	140	12	Pdb	2,054	36.7	May 1, 1967	T,F	1	80	Cased to 125 ft. Yield 800 gpm May 1, 1967.
614	Bill James	1956	125	12	Pdb	2,049	31.2	do	T,G	1	80	Cased to 118 ft. Usually pumps about 700 gpm. Yield 800 gpm May 1, 1967.
615	M. G. Tarver, Jr.	1964	158	12	Pdb	2,072	54.0	do	T,G	1	120	Cased to 135 ft. Yield 900 gpm May 1, 1967.
616	Hubert Tindall	1930	52	6	Pdb	2,084	16.4	May 2, 1967	Ρ,Ε	Н		Yield 3 gpm May 2, 1967.
617	do	1941	130	10	Pdb	2,094	48.3	do	P,W,E	S		Reported blackish-red, murky water. Yield 5 gpm May 2, 1967.

See footnote at end of table

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Table 7 Records	of Wells	and	Springs	in	Co11	lingsworth	CountyContinued
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		DATE	DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-05-63-618	C. R. Hankins	1960	37	6	Qalı	2,032	32.3	May 2, 1967	J,E	Н		Cased to 20 ft. Yield 6 gpm May 2, 1967.
619	Elmer Smith	1953		12	Pdb	2,037	36.9	do	T,G	I	68	Yield 870 gpm May 2, 1967.
620	M. G. Tarver, Jr.	1967	60	14	Pdb	2,059	36.9	May 1, 1967	P,W	S		Yield 5 gpm May 1, 1967.
621	Hubert Tindall	1959	62	6	Pdb	2,050	47.3	May 11, 1967	P,W	S		Cased to 42 ft. Yield 3 gpm May 11, 1967.
701	Ray Peeples	1955	185	16	Pdb	2,130	53.9	Jan. 12, 1967	N	U		Cased to 15 ft. Abandoned irrigation well. Yield 175 gpm Jan. 12, 1967.
703	E. G. Morton	1938	150	6	Pdb	2,235	121.4	Oct. 25, 1938	P,W	S		
704	Ray Peeples	1955		12	Pdb	2,131	55.3	Jan. 12, 1967	N	U		Abandoned irrigation well.
705	Paul E. Starr	1963	207	15	Pdb	2,117	48.3	May 3, 1967	T,G	1	100	Cased to 180 ft. Yield 600 gpm May 3, 1967.
706	J. M. Tindall Gin Co.		136	4	Pdb	2,227	101.6	May 10, 1967	P,E	N		Yield 6 gpm May 10, 1967.
* 707	Elmer Lineberger	1926	109	6	Pdb	2,250	102.6	May 12, 1967	P,W	S		Yield 3 gpm May 12, 1967.
708	Mrs. W. W. McClaskey	1919	87	6	Pdb	2,190	68.1	Oct. 11, 1938	Р,Н	H,S		
801	Joe Rountree	1956	100	12	Pdb	2,109	28.2	May 4, 1967	T,G	I	120	Yield 700 gpm May 4, 1967.
802	John E. Holton	1961	120	1	Pdb	2,110	31.2	do	T,G	-1	240	Cased to 100 ft. Yield 600 gpm May 4, 1967. Connected with well. DU-05-63-813.
803	Jess Deger	1958	110	12	Pdb	2,099	80	May 1958	T,G	1	80	Cased to 80 ft. Yield 600 gpm May 1958.
804	Joe Rountree	1955	104	12	Pdb	2,097	27.8	May 11, 1967	N	U		Abandoned irrigation well.
* 805	Jess Deger	1961	58	6	Pdb	2,092	25.5	May 10, 1967	P,W	H,S		Cased to 17 ft. Yield 5 gpm May 10, 1967.

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-63-806	Joe Rountree	1920	5	5		2,185			N	U		Destroyed when visited May 4, 1967.
807	Jack W. Lowry	1930	104		Pdb	2,177	80.4	Sept.10, 1938	Ρ,₩	U		Abandoned when visited May 4, 1967.
808	Lee Rark	1928	119	5	Pdb	2,201	112.1 104.0	Aug. 27, 1938 May 5, 1967	P,W,E	S		Yield 6 gpm May 5, 1967.
809	L. E. Ward	1920	89		Pdb	2,155	85.6 80.4	Oct. 19, 1938 May 4, 1967		U		
810	Joe Rountree	1916	51	6	Pdb	2,112	30.7	May 10, 1967	P,W	U		
811	E, R. Hamlet	1962	87	12	Pdb	2,094	23.0	Jan. 12, 1967	T,G	1	80	Cased to 84 ft. Yield 600 gpm Jan. 12, 1967.
812	Joe Rountree	1957	120	12	Pdb	2,160	72.9	May 4, 1967	T,G	1	40	Yield 500 gpm May 4, 1967.
813	John E. Holton	1962	105	14	Pdb	2,118	58.4	ob	T,G	1		Connected with well DU-05-63-802. Cased to 100 ft. Yield 600 gpm May 4, 1967.
814	Mrs. J. W. Deger	1957		12	Pdb	2,096	26.8	May 5, 1967	N	U		Abandoned irrigation wel
815	Jess Deger		110	10	Pdb	2,157	67.7	May 9, 1967	P,W	S		Yield 4 gpm May 9, 1967.
816	M. W. Paschall, Jr.	1910	101	5	Pdb	2,170	68.0	May 11, 1967	P,W	S		Yield 4 gpm May 11, 1967
901	Mrs. Jack Reding	1920	24	31	Qalı	2,068	17.7 11.5	Aug. 27, 1938 May 9, 1967	N	U		
902	do	1930	22	5	Pdb	2,076	27.8	Aug. 27, 1938	N	U		Well dry to total depth May 2, 1967.
903	E. S. Hale, Jr.		Spring		Pdb	2,012	+	May 2, 1967	Flows	١,٢	30	Flowed 160 gpm May 2, 1967.
904	do		Spring		Pdb	2,025	+ +	Sept. 9, 1938 May 2, 1967	Flows	S		Flowed 14 gpm May 2, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-63-905	Mrs. J. W. Deger	1965	110	6	Pdb	2,083	58	May 22, 1965	S,E	H,S	-	Cased to 87 ft. Bailed over 100 gpm when drilled Yield 10 gpm May 22, 1965
906	Paul E. Starr		113	5	Pdb	2,110	68.1	May 9, 1967	P,W	S		Yield 3 gpm May 9, 1967.
907	Mrs. J. W. Deger	1962	93	12	Pdb	2,088	30.0	Apr. 27, 1962	T,G	I	100	Cased to 72 ft. Yield 500 gpm Apr. 22, 1962.
* 908	Roland C. Bryan		Spring		Pdb	2,040	+	May 11, 1967	Flows	S		Estimated flow 35 gpm, Sept. 9, 1938. Flowed 98 gpm May 11, 1967.
909	do	1930	58	6	Pdb	2,050	41.6 11.1	Oct. 19, 1938 May 11, 1967	N	U		
* 910	Miss Willie G. Willard		40	4	Pdb	2,071	30.0	May 11, 1967	Ρ,₩	H,S		Yield 4 gpm May 11, 1967.
* 64-101	Barbara Jean Hill	1925	78	5	Ρf	1,949	43.2	Aug. 3, 1967	Ρ,₩	S		Cased to 74 ft. Yield 2 gpm Aug. 3, 1967.
102	Harvey Walker	1920	92	6	Ρf	1,940	43.5	Sept.22, 1938	N	U		Abandoned when visited Aug. 3, 1967.
103	J. F. Walker	1911	45	60	Ρf	1,937	35.4 34.2	Sept.19, 1938 Aug. 3, 1967	P,H,W	S		Yield 4 gpm Aug. 3, 1967.
104	Robert B. Etter	1946	143	6	Pdb	2,094	107.1	Sept.22, 1967	P,W	S		Yield 3 gpm Sept. 22, 1967.
* 201	L. M. Tittle	1930	46	6	Pdb	2,028	38.4	Nov. 7, 1967	P,S	S		Yield 2 gpm Nov. 7, 1967.
202	W. E. Brashears	1938	55	6	Pf	1,922	39.4	Sept.19, 1938	B,H	S		Yield 2 gpm Sept. 19, 1938.
203	L. M. Tittle		86	6	Pdb	2,025	50.5	Nov. 7, 1967	P,W	S		Yield 3 gpm Nov. 7, 1967.
204	do		Spring		Рdb	2,100	+	Sept.25, 1967	Flows	S		Flowed 2 gpm Sept. 25, 1967.
301	do		Spring		Pdb	2,100	+	Sept.20, 1938	Flows	S		Flows into Lost Creek.
302	Mrs. Ike E. Emmert	1930			Pdb	2,100	88.9	Aug. 31, 1967	P,W	U		Yield 3 gpm Aug. 31, 1967.

See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-64-303	A. O. Francis		39	6	Pdb	1,945	36.9	Nov. 10, 1967	P,G	S		Yield 4 gpm Nov. 10, 1967.
304	Mrs. Agnes G. Francis		109	6	Pdb	2,048	78.3	Aug. 31, 1967	P,W	S	-	Yield 3 gpm Aug. 31, 1967.
305	do		81	6	Pdb	2,096	64.6	do	N	U		Do.
306	J. J. Francis		93	6	Pdb	2,050	83.1	do	Ρ,₩	S		Do.
* 307	do		110	5	Pdb	2,043	74.3	do	Ρ,₩	s		Do.
308	do		146	5	Pdb	2,048	78.8	do	Ρ,₩	U		Do.
309	do		69	6	Pdb	1,946	34.9	do	Ρ,₩	S		Do.
310	L. M. Tittle		59	6	Pdb	2,005	36.7	Nov. 7, 1967	Ρ,₩	s		Yield 3 gpm Nov. 7, 1967.
401	Robert B. Etter	1936	107	6	Pdb	1,985	95.5 96.0	Sept.10, 1938 Sept.22, 1967	Ρ,₩	S		Yield 3 gpm Sept. 22, 1967.
402	Hubert Tindall	1938	136	5	Pdb	2,111	110.7	Sept.10, 1938	N	U		Abandoned when visited Sept. 22, 1967. Plugged at 4 ft. Yield 3 gpm Sept. 10, 1938.
403	P. Ammons		Spring		Pdb	1,950	+ +	Oct. 27, 1938 Sept.21, 1967	Flows	S		Flows into Wolf Creek. Flowed 40 gpm Sept. 21, 1967.
404	Edgar Wischkaemper, Jr.	1936	111	5	Pdb	2,058	56.0	May 2, 1967	P,W	U		Abandoned. Yield 2 gpm May 2, 1967.
* 405	A. B. Boyd		54	6	Pdb	1,941	39.4	Sept.21, 1967	Ρ,₩	S		Yield 2 gpm Sept. 21, 1967.
406	Robert B. Etter	1945	87	6	Pdb	2,012	45.2	Sept.22, 1967	Ρ,₩	S		Yield 3 gpm Sept. 22, 1967.
504	Chester M. Fires		Spring		Pdb	1,875	+ +	Sept.12, 1938 Oct. 26, 1967	Flows	S		Flows into Elm Creek. Flowed 44 gpm Oct. 26, 1967.

See footnote at end of table

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Tabl	e 7	Records	of	Wells	and	Springs	in	Collingsworth	Count	yContinued
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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
:DU-05-64-505	Maymie W. Tindall	1964	94	6	Pdb	1,972	74.5	Sept.20, 1967	P,W	S		Blaine water is flush- ed with recharge from local sanddune cover. Yield 3 gpm Sept. 20, 1967.
506	John R. Henard, Jr.		122	6	Pdb	1,874	49.7	Sept.21, 1967	Ρ,₩	S		Yield 2 gpm Sept. 21, 1967.
507	Robert B. Etter	1945	119	6	Pdb	1,953	79.0	Sept.22, 1967	Ρ,₩	S		Yield 3 gpm Sept. 22, 1967.
601	Chester M. Fires	1965	112	6	Pdb	1,950	84.4	Oct. 26, 1967	P,E	S		Replaces well drilled in 1920 to 118 ft. Yield 5 gpm Oct. 26, 1967.
602	John R. Henard, Jr.	1940	88	5	Pdb	1,978	61.5	Sept.21, 1967	P,W	S		Yield 2 gpm Sept. 21, 1967.
603	do		97	5	Pdb	1,965	81.9	do	P,W	S		Do.
604	Ada Martin		Spring		Pdb	1,850	+	do	Flows	S		Flows into Hinton Creek. Flowed 45 gpm Sept. 21, 1967.
605	Chester M. Fires		Spring		Pdb	1,860	+	Oct. 26, 1967	Flows	S		Flows into Elm Creek. Flowed 30 gpm Oct. 26, 1967.
606	do		Spring		Pdb	1,860	+	do	Flows	S		Flows into Elm Creek. Flowed 45 gpm Oct. 26, 1967.
701	Miss Willie G. Willard	1913	119	4	Pdb	2,114	88.4	Sept.12, 1938	Ρ,₩	U		Destroyed in 1940. Yield 2 gpm Sept. 12, 1938.
702	E. M. Hunter	1930	70	6	Pdb	2,010	57.9	Sept.14, 1938	Ρ,₩	U		Abandoned since 1936. Yield 2 gpm Sept. 14, 1938.
703	Douglas Johnson	1928	71	6	Pdb	2,041	64.0 56.0	Sept.19, 1938 Sept.21, 1967	Ρ,₩	S		Yield 3 gpm Sept. 21, 1967.
704	Wayne Johnson		136	6	Pdb	2,097	96.5	Sept.21, 1967	Ρ,₩	S		Yield 3 gpm Sept. 21, 1967.

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-05-64-705	A. B. Boyd		122	5	Pdb	2,037	74.8	Sept.21, 1967	P,W	S		Yield 1 gpm Sept. 21, 1967.
802	Charlie Hill	1938	89	5	Pdb	1,996	62.6 54.8	Aug. 27, 1938 Sept.20, 1967	Ρ,₩	S		Yield 3 gpm Sept. 20, 1967.
803	J. L. Reaves	1912	54	5	Pdb	1,982	41.9 33.4	Sept.12, 1938 Sept.20, 1967	Ρ,₩	S.		Do
* 804	Zook Thomas	1896	179	6	Pdb	2,087	123.5 92.9	Aug. 27, 1938 Sept.20, 1967	Ρ,₩	H,S		Do.
901	Paul E. Starr	1908	125	5	Рdb	2,008	113.1	Oct. 26, 1967	Ρ,₩	H,S		Blaine water is flushed with recharge from local sand dune cover. Yield 3 gpm Oct. 26, 1967.
902	Mrs. G. M. Thompson	1956	127	6	Pdb	2,006	102.4	Sept.19, 1967	Ρ,₩	S	7	Yield 4 gpm Sept. 19, 1967.
903	Chester M. Fires	1964	89	6	Pdb	1,980	74.2	Oct. 26, 1967	P,W	S		Yield 4 gpm Oct. 26, 196;
* 904	Paul E. Starr	1950	125	6	Pdb	1,985	106.6	do	P,W	S		Blaine water is flushed with recharge from local sanddune cover. Yield 3 gpm Oct. 26, 1967.
905	Nevin E. Willard		Spring		Pdb	1,865	+	Sept.21, 1967	Flows	s		Flowed 70 gpm Sept. 21, 1967.
906	Chester M. Fires	1963	132	6	Pdb	1,989	117.0	Oct. 26, 1967	P,W	s		Yield 4 gpm Oct. 26, 1967
* 12-04-301	James C. Doneghy	1963	154	6	Qal2	2,368	110.2	June 6, 1967	Ρ,₩	S		Cased to 140 ft. Yield 3 gpm June 6, 1967.
302	R. L. Nivens	1934	97	4	Pw	2,305	58.1	Sept.16, 1938	Ρ,₩	S,H		
303	Ring Public School	1900	163	5	Pw,Qal <sub>2</sub>	2,362	125.9	do	₽,₩	U		School now abandoned.
304	Robert S. Thomas	1938	200	6	Pw,Qal2	2,365	140	Nov. 1938	P,W	s		
* 602	James C. Doneghy	1920	124	4	Pw	2,383	73.9	June 6, 1967	P,W	s		Yield 3 gpm June 6, 1967.
603	do	1950	177	6	Qal <sub>2</sub> ,Pw	2,456	155.1	do	Ρ,₩	s		Do.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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				DEPTH	DIAM-		ALTITUDE	WA	TER LEVEL			IRRIGATED	
	WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU	-12-04-604	James C. Doneghy	1950	146	6	Qal2	2,412	130.6	June 6, 1967	P,W	S		Yield 2 gpm June 6, 1967.
	605	do	1954	106	6	Qal2	2,382	97.7	do	P,W	S	(	Cased to 100 ft. Yield 12 gpm June 6, 1967.
	606	do	1920	160	4		2,417			P,W	U		Not measured in 1967. Well dry to total depth Sept. 16, 1938.
	607	Mrs. Earl G. Allen, J. J. Wilson Estate	1938	139		Pw	2,390	117.0	Nov. 8, 1938	P,W	S		
	608	R. C. Duggins	1938	97	6	Qal2	2,345	77.1	do	P,W	S		
	609	Mrs. Earl G. Allen	1954	360	16	Qal <sub>2</sub> ,Pw	2,423	122.7 125.2	Jan. 13, 1956 June 5, 1967	T,G	I	93	Cased to 190 ft. Yield 800 gpm June 5, 1967.
	901	Tom Wilson	1943	182	4	Pw	2,432	138.4	June 6, 1967	P,W	S		Yield 3 gpm June 6, 1967.
*	902	Mrs. Earl G. Allen	1914	115	4	Pw	2,425	79.4	June 7, 1967	Ρ,₩	S		Whitehorse is flushed with recharge from overlying gravel terrace. Cased to 102 ft. Yield 3 gpm June 7, 1967.
	903	do	1950	101	6	Pw	2,347	88.5	do	P,W	S		Yield 4 gpm June 7, 1967.
	904	W. E. Harrison		59	4	Pw	2,359	29.2	do	P,W	S		Yield 3 gpm June 7, 1967.
	905	do		126	4	Pw	2,372	83.4	do	P,W	S		Yield 4 gpm June 7, 1967.
*	05-101	Rufus F. Hays	1940	Spring		Pw	2,200	+	May 25, 1967	Flows	S		Flows into Salt Fork of Red River. Flowed 33 gpm May 25, 1967.
	102	Jim L. O'Hair	1915	122	4	Qal2,Pw	2,315	73.0	May 26, 1967	N	U		Abandoned.
	103	Gay Neil Davis	1962	138	6	Qal2,Pw	2,367	97.1	May 26, 1967	P,E	S		Yield 5 gpm May 26, 1967.
*	104	Fred W. Bourland	1965	119	6	Qal <sub>2</sub> ,Pw	2,285	48.0	do	Ρ,₩	S		Reported red beds at 115 ft. Cased to 80 ft. Yield 10 gpm May 26, 1967.

See footnote at end of table

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				DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL		OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-05	5-105	Jim L. O'Hair	1910	141	4	Qal <sub>2</sub> ,Pw	2,339	100.5	Sept.28, 1938	P,W	U		Abandoned; not measured in 1967.
	201	Fred W. Bourland	1954	300	16	Qal2	2,265	56 57.0	Aug. 1955 May 24, 1967	T,G	1	185	Reported usually pumps at 500-600 gpm. Yield 810 gpm May 24, 1967. Red beds below 340 ft.
	202	Lewis Morris	1958	186	12	Qal2	2,265	64.2	May 25, 1967	N	U	125	Irrigation well caved-in. Red beds at 200 ft. Yield 700 gpm May 25, 1967.
*	203	do	1958	200	12	Qal2	2,262	65.5	do	T,G	L	125	Well beginning to cave; will not use until repairs are made. Yield 700 gpm May 25, 1967. Red beds at 200 ft.
	204	do	1966	200	16	Qal2	2,272	68.2	do	T,G	1	108	Red beds at 200 ft. Yield 650 gpm May 25, 1967. Cased to 110 ft.
	205	Raymond Ross	1964	138	6	Pw	2,234	58 62.8	Mar. 1964 May 24, 1967	S,E	H,S		Cased to 88 ft. Red beds at 51 ft. Yield 8 gpm May 24, 1967.
*	206	R. H. Langford	1964	94	6	Qal <sub>2</sub>	2,340	90 89.5	Feb. 1964 May 26, 1967	P,W	S		Cased to 90 ft. Red beds at 117 ft. Yield 1 gpm May 26, 1967.
	207	Fred W. Bourland	1954	125	6	Qal2,Pw	2,258	75.4	May 25, 1967	P,E	S		Cased to 88 ft. Yield 6 gpm May 25, 1967.
	208	Lonnie Neely		112	4	Qal <sub>2</sub>	2,287	77.6	May 26, 1967	P,W	S		Yield 3 gpm May 26, 1967.
	209	Fred W. Bourland	1938	112	5	Qal2,Pw	2,261	79.9	Sept.28, 1938	P,W	S		Yield 2 gpm Sept. 28, 1938.
	210	R. H. Langford	1900	144	4	Qal <sub>2</sub> ,Pw	2,340	115.8 89.1	Sept.28, 1938 May 26, 1967	N	U		Abandoned; replaced by well DU-12-05-206.
	301	E. G. Pierce Estate	1903	75	4	Qal2	2,216	52.0	Jan. 11, 1967	P,E	S		Yield 4 gpm Jan. 11, 1967.

See footnote at end of table

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				DEPTH	DIAM-		ALTITUDE	WA	TER LEVEL			IRRIGATED	
	WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU	1-12-05-302	Monty Mitchell	1961	100	6	Qal2	2,217	53.9	May 24, 1967	S,E	н		Yield 15 gpm May 24, 1967.
	303	Oie Pettett	1902	110	4	Qa 1 <sub>2</sub>	2,240	62.1	May 25, 1967	Ρ,₩	U		Abandoned; old Marilla School supply. Yield 4 gpm May 25, 1967.
	304	N. E. Childress	1963	71	6	Qal2	2,222	52.4	May 24, 1967	Ρ,₩	S		Cased to 47 ft. Yield 3 gpm May 24, 1967.
	305	do	1903	130	4	Qal2	2,261	74.8	May 25, 1967	P,E	S		Yield 4 gpm May 26, 1967.
	306	Monty Mitchell	1915	164	4	Qal <sub>2</sub> ,Pw	2,217	85.4 53.5	Sept.15, 1938 May 24, 1967	N	U		Red beds at approximately 120 ft.
	307	Richard Gilbreath	1908	140	4	Qal2	2,257	106.5	Sept.15, 1938	P,W	S		
	308	E. G. Pierce Estate	1938	96	6	Qal2	2,240	86.1	Oct. 25, 1938	P,W	S		
	401	James C. Doneghy	1963	173	6	Qal <sub>2</sub>	2,442	150.9	June 6, 1967	P,W	S		Red beds at 140 ft. Yield 1 gpm June 6, 1967.
	402	do		153	6	Qal2	2,412	117.2	do	P,W	S		Yield 3 gpm June 6, 1967.
*	403	Troy B. Johnson		133	4	Qal2	2,388	71.0	do	P,W,E	н		Do.
	404	W. R. Peggram	1925	179	4	Qal2	2,384	156.0	Sept.16, 1938	P,W	U		Abandoned. Yield 2 gpm Sept. 16, 1938.
*	501	J. R. Godbey	1930	115	5	Pw,Qal <sub>2</sub>	2,300	80.9	Sept.16, 1938	Ρ,₩	H,S		Replaces well drilled to 115 ft before 1930. Yield 3 gpm Sept. 16, 1938. Red beds at 40 ft.
	502	Paul E. Starr		40	6	Qal2	2,287	16.6	May 23, 1967	P,W	S		Yield 3 gpm May 23, 1967.
	503	Mrs. Nannie D. Johnson	1916	144	4	Pw	2,303	93.4 42.3	Oct. 17, 1938 May 25, 1967	Ρ,₩	S		Yield 3 gpm May 25, 1967.
	504	W. R. Peggram	1966	144	6	Pw	2,368	98.6	May 26, 1967	P,W	S		Cased to 113 ft. Red beds at 105 ft. Yield 20 gpm May 26, 1967.
	505	Otis M. Emmert	1938	150	5	Qal2	2,287	65.4	Sept.16, 1938	P,W	U		Abandoned; not measured in 1967.

See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE		FER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12-05-506	J. R. Godbey	1963	104	6	Pw,Qal2	2,302	19.8	May 23, 1967	J,E	Н,І		Red beds at 40 ft. Yield 30 gpm May 23, 1967.
601	Paul J. Bell	1955	123	12	Qal2	2,245	41.9	May 23, 1967	N	U		Cased to 86 ft. Yield 250 gpm May 23, 1967.
602	do	1930	107	4	Qal2	2,258	85.4 40.9	Sept.16, 1938 May 23, 1967	N	U		Reported not used last 4 years.
* 603	Roy Canada	1963	64	6	Qal2	2,242	47 48.8	Nov. 1963 May 25, 1967	Ρ,₩	S		Cased to 42 ft. Yield 4 gpm May 25, 1967.
604	Paul J. Bell	1967	90	6	Qa 12	2,222	58.0 58.3	Jan. 14, 1967 May 25, 1967	Ρ,₩	S		Cased to 70 ft. Yield 4 gpm May 25, 1967.
605	do	1967	90	6	Qa 12	2,242	56 50.1	Oct. 1967 Nov. 8, 1967	Ρ,Ε	S		Cased to 22 ft. Yield 10 gpm Nov. 8, 1967.
606	J. Ira Morgan	1962	100	6	Qal2	2,247	66.1	May 18, 1967	Ρ,₩	S		Cased to 70 ft. Red beds at 90 ft. Yield 3 gpm May 18, 1967.
* 607	Quail Rural High School	1938	62	6	Qal2	2,220	22.2	Nov. 8, 1967	J,E	Ρ		Yield 15 gpm Nov. 8, 1967.
608	Paul E. Starr	1930	133	5	Qal2	2,239	92.2	Sept.15, 1938	Ρ,₩	H,S		Reported not measured in 1967.
609	T. M. Lamb	1938	138	6	Qal2, Pw	2,248			P,W	S		Do.
610	L. L. Boyce	1930	62	6	Qal2	2,232	40.2	Nov. 8, 1938	P,W	U		Abandoned.
* 701	Frank B. Lindsey		93	4	Pw	2,335	62.0	May 23, 1967	P,W	S		Yield 4 gpm May 23, 1967.
702	Tom Wilson	1947	160	5	Pw	2,395	116.7	June 6, 1967	P,W	S		Yield 3 gpm June 6, 1967.
703	do	1930	152	6	Pw .	2,333	111.7	do	P,W	H,S		Whitehorse flushed by local recharge. Yield 4 gpm June 6, 1967.
704	do		42	6	Qall	2,188	29.2	do	Ρ,₩	S		Yield 3 gpm June 6, 1967.

See footnote at end of table

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				DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WE	ELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12	2-05-705	W. R. Peggram	1936	147	4	Qal <sub>2</sub> ,Pw	2,327	107.4	Sept. 7, 1938	P,W	U		Old public school well, now abandoned and collapsed, May 1967. Yield 3 gpm Sept. 7, 1938
	801	Paul E. Starr	1925	139	4	Qal2, Pw	2,273	91.2	May 23, 1967	P,W	H,S		Yield 3 gpm May 23, 1967.
*	802	do	1930	135	4	Qal2	2,285	69.3 31.1	Oct. 18, 1938 May 23, 1967	Ρ,₩	H,S		Yield 2 gpm May 23, 1967.
	803	Mildred Starr	1918	141	4	Qal2	2,292	69.7 30	Sept.28, 1938 May 1967	Ρ,₩	H,S		Yield 3 gpm May 1967.
	804	W. R. Peggram	1920	161	4	Qal2	2,322	101.7	Sept.28, 1938	Ρ,₩	U		Destroyed when visited May 26, 1967.
	805	Paul E. Starr		Spring		Pw	2,157	+	Oct. 20, 1938	Flows	S		Flows during winters and wet weather. Flowed 15 gpm Oct. 20, 1938.
	806	Vannie May Godwin	1938		4	Qal2	2,274	92	May 23, 1967	P,W	S		
*	901	J. Ira Morgan	1955	250	16	Qal <sub>2</sub> ,Pdb	2,215	49.4	Jan. 11, 1967	T,E	1	60	Cased to 65 ft. Red beds at 120 ft. Yield 250 gpm Jan. 11, 1967.
	902	James C. Doneghy	1938	139	5	Qal <sub>2</sub> ,Pw	2,231	87.4	Oct. 18, 1938	P,W	U		Destroyed when visited May 23, 1967.
	903	John F. Bishop	1964	61	6	Qa 1 <sub>2</sub>	2,227	26.5	June 9, 1967	J,E	Η		Cased to 33 ft. Red beds at 43 ft. Yield 12 gpm June 9, 1967.
*	904	Wilbur De Pauw	1907	100	4	Qal2	2,252	58.0	May 23, 1967	P,E	H,S		Yield 7 gpm May 23, 1967.
	905	Lonnie Neeley	1961	73	6	Qal2	2,240	28.3	do	S,E	Н		Cased to 38 ft. Red beds at 35 ft. Yield 10 gpm May 23, 1967.
	906	J. Ira Morgan	1966	220	12	Qal <sub>2</sub> ,Pw	2,225	63 62.8	Apr. 1966 May 17, 1967	T,G	1	300	Cased to 147 ft. Yield 600 gpm May 17, 1967.
	907	J. M. Tindall Gin		77	7	Qal2	2,235	33.2	Nov. 8, 1967	J,E	N		Red beds at 35 ft. Yield 12 gpm Nov. 8, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

Table 7Records of Wells and Springs in Collingsworth CountyC	ontinued
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				DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL		OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-0	05-908	Z. J. Neeley	1938	70	5	Qal2	2,241	65.8	Oct. 18, 1938	P,W	Н		
	909	J. Ira Morgan	1920	120		Qal2	2,230	69.8	Sept. 6, 1938	P,W	H,S		
	910	Pat O'Hair		Spring		Qal2	2,135	+ +	Oct. 20, 1938 May 23, 1967	Flows	S		Flowed 18 gpm May 23, 1967.
C	06-101	Jess J. Burns	1940	84	6	Pw	2,202	65.5	May 17, 1967	P,W	Н		Yield 3 gpm May 17, 1967.
	102	Austin Welch		95	6	Pw	2,178	64.8	May 18, 1967	P,W	U		
	103	Monte Mitchell	1916	77	4	Pw	2,134	49.3	do	P,W	U		
	104	Carl Wischkaemper	1936	84	6	Pw	2,097	59.6	do	P,E	H,S		Yield 5 gpm May 18, 1967.
*	105	do		Spring		Qal <sub>2</sub> ,Pw	2,100	+	do	Flows	S		Reported springs began in 1941-42, and have since increased in flow. Flowed 736 gpm May 18, 1967.
	106	J. P. Cummings	1930	92	5	Pw	2,145	45.9	Aug. 25, 1938	P,W	U		Destroyed in 1950.
	201	J. W. Neely	1954	43	12	Pdb	2,034	15.7	Mar. 22, 1967	T,G	1	70	Red beds at 18 ft. Yield 1,180 gpm Mar. 22, 1967.
	202	do	1950	47	6	Pdb	2,041	24	Mar. 1967	P,W	U		
	203	James Sullivan		119	6	Pw	2,128	82.9	May 18, 1967	Ρ,₩	S		Yield 2 gpm May 18, 1967.
*	204	James A. Stavenhagen	1965	94	6	Qal2	2,110	42.1	do	P,W	S		Red beds at 56 ft. Yield 3 gpm May 18, 1967.
	205	James Sullivan		103	4	Qal2	2,166	74.8	do	N	U		
	206	T. C. Fike	1899	56	5	Qal2	2,088	28.9	Sept.14, 1938	Ρ,₩	H,S		Yield 1 gpm Sept. 14, 1938.
	207	James A. Stavenhagen	1938	165	5	Pw	2,126	86.7	do	Ρ,₩	S		Red beds at 50 ft.

	OWNER	DATE COM- PLET- ED	DEPTH OF WELL (FT)	H DIAM- ETER OF WELL (IN.)	WATER- BEARING UNIT	ALTITUDE OF LAND SURFACE DATUM (FT)		WATER LEVEL			IRRIGATED	
WELL							BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12-06-301	Oran D. Starkey	1954	127	13	Pdb	1,996	30 20.0	Mar. 1954 May 3, 1967		U	280	Cased to 107 ft. Apandoned irrigation well Reported not enough water and high sulfate. Yield 175 gpm May 3, 1967.
302	do	1955	30	6	Qalı	1,991	6	May 1967	C,G	1,5		Cased to 10 feet. Yield 20 gpm May 1967.
303	do	1955	30	6	Qalı	1,991	6	May 1967	C,G	١,٢		Do.
304	do	1955	30	6	Qalı	1,991	6	May 1967	C,G	1,5		Do.
305	Yates Brewer	1948	104	6	Pdb	2,092	92.6	May 3, 1967	J,E	s		
306	Oran D. Starkey	1955	84	12	Pdb	2,002	25.1	May 3, 1967	N	U		Abandoned irrigation well
307	do	1930	59	5	Pdb	2,041	51.2 50.7	Sept.11, 1938 May 3, 1967	N	U		
308	Robert Barjenbruck	1963	133	12	Pdb	2,009	35.1	May 3, 1967	T,G	I	64	Yield 1,000 gpm May 3, 1967.
309	H. M. Small	1950	134	6	Pdb	2,048	77.8	do	Ρ,₩	S		Test pumped 60 gpm when drilled. Cased to 100 ft. Yield 4 gpm May 3, 1967.
310	Oran D. Starkey		25	6	Pdb	1,995	6	May 1967	S,E	S		Yield 20 gpm May 1967.
401	J. D. Crook	1953	188	12	Qal2	2,251	67.4	May 17, 1967	T,G	1	80	Cased to 183 ft. Yield 725 gpm May 17, 1967.
402	W. W. Baker	1964	120	6	Qa12	2,173	45.2	do	Ρ,₩	S		Cased to 59 ft. Red beds at 80 ft. Yield 3 gpm May 17, 1967.
403	R. T. Bender	1964	110	6	Qal2, Pw	2,176	50.7	do	P,W	н		Yield 4 gpm May 17, 1967.
404	Fred Squires	1935	128	5	Qal2	2,202	91.6	Oct. 17, 1938	P,W	U		Destroyed when visited May 17, 1967; replaced by well DU-12-06-406.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

- 61 -

			DEPTH	DIAM-	WATER- BEARING UNIT	ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)		OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12-06-405	Paul J. Bell	1967	175	16	Qal <sub>2</sub> ,Pw	2,212	42.0	May 23, 1967	T,G	I	50	Cased to 125 feet. Yield 560 gpm May 23, 1967.
406	Fred Squires	1964	88	6	Qal2	2,202	61.5	May 17, 1967	Ρ,₩	S		Cased to 73 feet. Red beds at 118 ft. Yield 3 gpm May 17, 1967.
407	Frank E. Kennedy	1910	160	4	Qal2	2,221	99.5	Sept.13, 1938	P,W	U		Abandoned.
* 501	L. E. Gribble	1920	95	6	Qal2	2,151	59.8	May 4, 1967	P,W	S		Yield 3 gpm May 4, 1967.
502	Luther Thompson	1966	94	6	Qal2	2,171	52.5	May 14, 1967	P,W	S		Yield 4 gpm May 14, 1967.
503	Mrs. W. C. Harwell	1964	77	6	Qal2	2,178	53.2	do	P,W	S		Cased to 47 ft. Red beds at 77 feet. Yield 4 gpm May 14, 1967.
504	Mrs. J. W. Chapman	1956	84	6	Qa 12	2,194	65.8	do	J,E	Н		Replaces well DU-12-06-507. Yield 12 gpm May 14, 1967.
505	Mrs. W. C. Harwell	1964	74	6	Qal2	2,162	52.0	May 4, 1967	Ρ,₩	S		Cased to 57 feet. Red beds at 75 ft. Yield 3 gpm May 4, 1967.
506	M. C. Cleveland	1957	101	6	Qal <sub>2</sub> ,Pw	2,152	44.7	Nov. 8, 1967	J,E	H,S		Cased to 90 ft. Red beds at 90 ft. Yield 10 gpm Nov. 8, 1967.
507	Mrs. J. W. Chapman	1910	29	4	Qal2	2,198			Ρ,₩	U		Abandoned when visited May 19, 1967. Casing caved in.
508	John Alf Thomas	1938	113	3	Qal <sub>2</sub> ,Pw	2,153	81.5 60	Sept.15, 1938 May 1967	Ρ,₩	U		Abandoned when visited May 4, 1967.
601	R. Elmers Feemster	1955	130	12	Qal2	2,133	30 29.8	Sept. 1938 May 4, 1967	T,G	I	20	Cased to 70 ft. Red beds at 130 ft. Yield 580 gpm May 4, 1967. Usually pumps at 400 gpm because of silt.
602	Zook Thomas	1955	160	14	Qal2	2,105	39.7	May 4, 1967	T,G	I	120	Cased to 100 ft. Red beds at 160 ft. Yield 520 gpm May 4, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

- 62 -

			DEPTH	DIAM- ETER OF WELL (IN.)	WATER- BEARING UNIT	ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)			OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12-06-60	03 Mrs. W. W. Suggs	1963	54	6	Qal2	2,083	32.4	May 16, 1967	P,W	S		Cased to 48 ft. Red beds at 70 ft. Yield 3 gpm May 16, 1967.
60	J. D. Crook		126	5		2,120	69.9	May 4, 1967	Ν	U		
60	05 E. L. Tarpley		116	4		2,111	50.2	Nov. 8, 1967	P,W	S		Yield 3 gpm Nov. 8, 1967.
60	06 H. E. Little		86	4	Qal2	2,113	47.6	do	P,N	U		BERT BERT
60	7 Zook Thomas	1921	125	4	Qal <sub>2</sub> ,Pw	2,118	68.8 53.1	Sept.13, 1938 Nov. 8, 1967	Ρ,₩	н		Yield 3 gpm Nov. 8, 1967.
60	08 W. L. Needham	1938	63	5	Qal2,Pw	2,121	52.7	Sept.13, 1938	Ρ,₩	H,S		
* 70	Mrs. Troy B. Johnson	1962	108	6	Qal2	2,196	44.9	June 16, 1967	P,W	S		Cased to 90 ft. Red beds at 117 ft. Yield 2 gpm June 16, 1967.
70	2 Mrs. George Creed		90	6	Qal2	2,166	38.0	May 17, 1967	P,W	S		Yield 3 gpm May 17, 1967.
70	3 Aubrey Baggett	1918	80	4	Pw,Qal <sub>2</sub>	2,137	18.6	do	P,W	H,S		Whitehorse flushed with water from overlying terrace alluvium. Yield 3 gpm May 17, 1967.
* 70	4 Aubrey Baggett		Spring		Pw,Qal2	2,125	+	May 17, 1967	Flows	S		Flows into Buck Creek. Flowed 117 gpm May 17, 1967.
70	5 E. L. Ewing	1938	158	5	Pw,Qal2	2,205	110	Oct. 1938	Ρ,₩	H,S		
70	6 T. C. Crabtree	1938	161	5	Pw,Qal2	2,242	106.6	Sept.28, 1938	P,W	S		
80	1 Shelton Nunnalley	1959	99	6	Pw,Qal2	2,163	41.3	May 14, 1967	P,W	S		
80	2 James C. Doneghy	1953	91	6	Pw,Qal2	2,163	66 50	1953 May 1967	Ρ,₩	S		
80	3 do	1953	103	6	Pw,Qal2	2,185	75 60	1953 May 1967	P,W	S		
80	4 do	1950	57	6	Qal2	2,168	61 52.2	1953 May 19, 1967	P,W	S		Yield 1 gpm May 19, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

- 63 -

			DEPTH	DIAM-		ALTITUDE	WA	TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-06-805	Dudley Phipps	1964	79	6	Qal2	2,162	35 36.8	Oct. 1964 May 16, 1967	P,G	S		Cased to 54 ft. Red beds at 80 ft. Yield 5 gpm May 16, 1967.
806	do	1935	163	6	Qal <sub>2</sub> ,Pw	2,169	105.2	0ct. 18, 1938	Ρ,₩	U		Destroyed when visited May 16, 1967.
807	Jack Phipps	1958	189	16, 12	Pw	2,147	59.7	May 16, 1967	N	U		Abandoned irrigation well due to crooked casing. Reported yield 200 gpm.
808	Ollie C. Turley	1938		4	Qal2	2,181	135.9	Aug. 26, 1938	N	U		
* 809	Emory Hunter		142	4	Qal2	2,125	68.2	May 16, 1967	P,G	S		Yield 4 gpm May 16, 1967.
810	R. Elmers Feemster	1930	83	5	Qal2	2,141	56.4	Sept.13, 1938	N	U		Well destroyed when visited Nov. 8, 1967.
901	Earl F. Bartlett, Sr.	1910	167	4	Qal <sub>2</sub> ,Pw	2,167	95.0 46	Aug. 31, 1938 May 15, 1967	N	U		Cross Roads Public School well; now plugged at 10 ft. Replaced by well DU-12-06-903.
902	H. F. Watkins	1900	93	4	Qal <sub>2</sub> ,Pw	2,150	108.9 79.9	Sept.29, 1938 May 16, 1967	N	U		Abandoned since 1937.
903	Earl F. Bartlett, Sr.	1958	86	6	Pw	2,167	46.1	May 15, 1967	N	U		Cased to 80 ft.
904	Mrs. W. W. Sugg	1960	86	6	Pw	2,120	12.2	May 16, 1967	J,E	Н		Cased to 66 ft. Yield 12 gpm May 16, 1967. This well supplements well DU-12-06-908. Red beds at 30 ft.
905	Shelton Nunnelley	1962	55	16	Pw	2,127	22.3	do	T,G	1	65	Yield 400 gpm May 16, 1967.
906	Auburn Keller	1916	174	4	Pw,Qal <sub>2</sub>	2,175	110.9	do	Ρ,₩	Н		Cased to 140 ft. Yield 3 gpm May 16, 1967.

See footnote at end of table

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Table 7Records of Wells and Springs in Collingsworth Cou	untyContinue	ued
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			DEPTH	DIAM-		ALTITUDE	WA	TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12-06-907	Marcus B. Parrigin	1948	138	4	Qa 12	2,155	91.9	June 8, 1967	Ρ,₩	S,H		Cased to 135 ft. Red beds reported at 130 ft. Yield 3 gpm June 8, 1967.
908	Mrs. W. W. Sugg	1908	95	5	Pw	2,120	45 12	Sept. 1938 May 16, 1967	Ρ,₩	H,S		Red beds at 30 ft.
909	D. C. Thomason	1938	68	6	Qal2, Pw	2,134	54.2	Sept.13, 1938	Ρ,₩	H,S		Cased to 55 feet.
07-101	Bill Janes	1964	99	12	Pdb	2,028	58	June 1967	T,E	1	18	Yield 100 gpm June 1967.
* 102	Horace M. Smell	1920	75	4	Pdb	2,098	36.2	May 3, 1967	S,E	H,S		Yield 10 gpm May 3, 1967.
. 103	W. L. Green		42	6	Pdb	2,001	38.7	May 24, 1967	N	U		
104	R. L. Seale	1915	146	5	Pdb	2,052	77.2	do	Ρ,₩	s		Yield 3 gpm May 24, 1967.
105	S. E. Henard	1955	25	10	Pdb,Qalj	1,955	12 11.9	Aug. 1955 June 14, 1967	N	U		Abandoned irrigation well. Originally pumped 70 gpm in 1956. Red beds at 30 ft.
106	do	1955	50	12	Pdb,Qalı	1,955	12 11.9	Aug. 1955 June 14, 1967	N	U		Abandoned irrigation well Originally pumped 100 gpm in 1956. Red beds at 30 ft.
107	S. E. Henard	1955	41	16	Pdb,Qalı	1,955	11 11.0	Aug. 1955 June 14, 1967	N	U		Abandoned irrigation well. Originally pumped 70 gpm in 1956. Red beds at 30 ft.
108	do	1938	35	6	Pdb	1,990	38	Oct. 1938	Ρ,₩	H,S	1	
109	Dan Henard	1935	102	5	Pdb	2,050	75.2	Oct. 11, 1938	Ρ,₩	U		
110	J. W. Seale	1938	72	5	Pdb	2,063	68.0	do	P,W	S		
* 111	Bill Janes		Spring		Pdb	1,985	+ +	Oct. 19, 1938 June 9, 1967	Flows	S		Flows into Indian Creek. Flowed 20 gpm June 9, 1967.
112	John R. Henard, Jr.	1930	114	5	Pdb	2,097	49.1	Oct. 11, 1938	N	U		

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				DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL		OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-0	07-113	Paul E. Starr	1938	172	5	Pdb	2,185	121.1	Oct. 11, 1938	Ρ,₩	S		
	114	Melvin Seale	1967	28	6	Pdb	1,996	16.1	Nov. 8, 1967	Ρ,₩	S		Yield 3 gpm Nov. 8, 1967.
*	201	L. A. Sparlin	1925	52	5	Pdb	2,044	27.3 20.1	Aug. 27, 1938 May 9, 1967	Ρ,₩	S		Yield 3 gpm May 9, 1967.
	202	Marvin Seale		137	6	Pdb	2,115	96.6	May 26, 1967	P,W	S		Yield 4 gpm May 26, 1967.
	203	Dan Henard		73	6	Pdb	2,078	55.0	May 26, 1967	P,W	S		
	204	Mrs. W. W. McClaskey	1956	62	12	Pdb	2,052	42.2	June 9, 1967	T,G	1	55	Yield 250 gpm June 9, 1967.
	205	do		64	5	Pdb	2,020	42.9	June 15, 1967	Ρ,₩	S		Yield 2 gpm June 15, 1967.
	206	D. M. Tucker	1938	68	5	Pdb	2,120	52.6	Sept.19, 1938	P,W	S		
	207	Guy Bumpass	1930	76	4	Pdb	2,032	38.3	Oct. 11, 1938	N	U		
*	208	do		Spring		Pdb	2,195	+ +	Oct. 12, 1938 May 9, 1967	Flows	1,5	0	Flows into Panther Creek. Estimated flow 40 gpm Oct. 12, 1938. Flowed 60 gpm May 9, 1967.
	301	Eva D. Starr	1938	76	5	Pdb	2,080	63.7	Sept.19, 1938	Ρ,₩	U		Destroyed when visited June 14, 1967. Replaced by well DU-12-07-305.
	302	Bob Glenn		86	6	Pdb	2,060	69.1	June 14, 1967	Ρ,₩	S		Yield 3 gpm June 14, 1967.
	303	do		115	12	Pdb	2,036	32.7	June 15, 1967	P,W	S		Yield 3 gpm June 14, 1967.
	304	do		Spring		Pdb	1,915	* *	Oct. 28, 1938 June 15, 1967	Flows	S		Flows into Willow Creek. Estimated flow 30 gpm Oct. 28, 1938. Flowed 40 gpm June 15, 1967.
	305	Eva D. Starr		170	6	Pdb	2,080	61.1	June 14, 1967	Ρ,₩	S		Replaces well DU-12-07-301. Yield 3 gpm June 14, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

Table 7 Records	of Wells	and Springs	in Collingsworth	CountyContinued
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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-07-401	Charles Allen	1953	58	12	Qalı	1,975	21.2	May 3, 1967	T,G	I	35	Yield 635 gpm May 3, 1967.
402	do				Qalı	1,960	20	Oct. 1967	C,G	1	35	Yield 450 gpm Oct. 1967.
* 403	R. L. Seale	1952	80	8	Qal2	2,105	54.4	May 24, 1967	J,E	Н		Cased to 60 ft. Yield 3 gpm May 24, 1967.
404	J. Clyde Emmert	1966	72	6	Pw,Qal <sub>2</sub>	2,064	28.3	May 25, 1967	P,E	S		Whitehorse flushed with water from overlying alluvium. Yield 4 gpm May 25, 1967.
× 405	do		Spring		Qalı	2,033	+ +	Oct. 25, 1938 May 25, 1967	Flows	S		Estimated flow 25 gpm Oct. 25, 1938. Flowed 390 gpm May 25, 1967.
406	do	1930		- 5	Qal <sub>l</sub> ,Pw	2,045			N	U		Cottonwood Public School well; now abandoned and plugged at 3 ft.
407	A. Y. Bell		Spring		Qal <sub>l</sub> ,Pw	2,025	+	Oct. 25, 1938	Flows	S		Flows into Salt Fork of Red River. Flowed 20 gpm Oct. 25, 1938.
408	S. R. Davis	1908	49	4	Qal <sub>2</sub> ,Pw	2,092	38.1 35.4	Sept.13, 1938 Nov. 8, 1967	Ρ,₩	S		Cased to 38 ft. Yield 3 gpm Nov. 8, 1967.
409	Dan Henard	1927	95	4	Qal2, Pw	2,048	78.2	Aug. 31, 1938	P,W	S		
410	A. Y. Bell	1930	84	3	Qal2	2,074	42.8 40.0	Sept.13, 1938 Nov. 8, 1967	Ρ,₩	U		
411	C. E. Sullivan	1938	79	6	Qal 2	2,175	56.6	Aug. 31, 1938	Ρ,₩	U		Abandoned when visited May 22, 1967.
412	R. L. Seale	1926	82	4	Pw,Qal <sub>2</sub>	2,100	51.3	do	Ρ,₩	U		Not used much anymore, when visited Nov. 8, 1967. Replaced by well DU-12-07-403.
413	Henry C. Langford	1964	96	6	Qa 12	2,094	63.8	Jan. 17, 1968	S,E	H,S		Cased to 70 ft. Red beds at 90 ft. Yield 8 gpm Jan. 17, 1968.

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-07-501	Dan Henard	1954	68	16	Pdb,Qal,	1,930	3	Aug. 1955	N	U		Abandoned irrigation well, reported yield was 150 gpm. Red beds at 68 ft.
503	Leon Roberts	1962	37	6	Qalı	1,935	14 10.9	Dec. 1962 June 29, 1967	Ρ,₩	S		Cased to 18 ft. Red beds at 38 ft. Yield 2 gpm June 29, 1967.
504	Dan Henard		102	6	Pw,Qal2	2,030	83.0	May 25, 1967	P,W	S		Yield 3 gpm May 25, 1967.
505	Henard Gray		69	5	Pw,Pdb	1,990	54.7	do	P,W	U		
* 506	Pan Fork Baptist Encampment		74	6	Pdb	1,958	46.0	May 26, 1967	S,E	Ρ		Used for church camp- ground. Yield 10 gpm May 26, 1967.
507	Dan Henard				Qalı	1,920	15	June 1967	C,G	. 1	22	Yield 1,000 gpm June 1967.
508	Eva D. Starr	1938	26	4	Pdb	1,949	20.2	Aug. 31, 1938	Ρ,₩	S		
601	Arthur J. Bailey	1938	45	4	Pw	1,995	42.6	do	P,W	H,S		Yield 1 gpm Aug. 31, 1938.
602	do	1938	43	4	Pdb	1,963	39.8	do	P,W	S	*	
603	John R. Henard, Sr.	1955	48	8	Qal2	2,092	48	May 1967	N	U		
604	do		80	4	Qal <sub>2</sub> ,Pw	2,071	55.3	May 25, 1967	P,W	S		
605	Pan Fork Baptist Encampment	1948	30	6	Pdb	1,920	15.4	May 26, 1967	J,E	Н		Used for church camp- ground. Yield 15 gpm May 26, 1967.
606	William E. Hughes	1949	226	5	Pdb	2,067			Ρ,₩	S		Red beds at 45 ft. Reported bailed 20 gpm.
607	Pan Fork Baptist Encampment	1966	116	6	Pdb	1,920	15.2	May 26, 1967	-N	U		Abandoned. Reported pumps too much sand.
608	Eva D. Starr		68	16	Pdb	1,925	16.1	June 14, 1967	T,G	1	150	
609	do		140	14	Pdb	1,935	17.4	do	T,G	1	150	

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-07-610	Richard Bailey		40	6	Pdb	1,929	26.9	June 15, 1967	P,W	S		Yield 4 gpm June 15, 1967.
* 611	Donald C. Van Pelt		53	6	Pw	2,029	38.5	June 29, 1967	Ρ,₩	S		Yield 2 gpm June 29, 1967.
701	W. Raymond Ward	1953	150	16	Qal <sub>2</sub> ,Pw	2,162	40	Oct. 1967	N	U	-	Cased to 40 ft. Abandoned irrigation well. Reported yield 120 gpm when drilled. Red beds at 83 ft.
702	R. L. Karnes	1930	20	5	Qa12	2,128	9.0	Aug. 31, 1938	N	U		Destroyed when visited May 24, 1967.
703	do	1930	17	5	Qal2	2,128	9.2	do	N	U		Do.
* 704	Jack Davis	1930	44	6	Pw	2,120	20.8 15.9	Aug. 31, 1938 May 22, 1967	J,E	н		Yield 12 gpm May 22, 1967.
705	James C. Doneghy	1964	110	6	Pw	2,141	23 22.2	Apr. 1964 May 24, 1967	S,E	H,S		Cased to 70 ft. Red beds at 41 ft. Yield 10 gpm May 24, 1967.
706	Earl Bartlett	1930	84	6	Qal2	2,138	21.9 2.4	Sept.29, 1938 June 29, 1967	Ρ,₩	S		Yield 4 gpm June 29, 1967.
707	William M. Williams		39	5	Qal2	2,141	16.7	May 24, 1967	P,W	S		Yield 2 gpm May 24, 1967.
708	Sara Smith	1910	60	4	Pw	2,120	90	1910	P,E	н		Yield 8 gpm in 1910.
801	Jerry E. Nix	1925	34	5	Qal <sub>2</sub> ,Pw	2,094	45.5 33.2	Aug. 30, 1938 May 22, 1967	N	U		Abandoned; old Bean Hill Public School well.
802	do	1938	51	6	Qal <sub>2</sub> ,Pw	2,078	34.5	Sept. 1, 1938	P,W	U		Abandoned when visited May 22, 1967.
* 803	J. C. Cason	1936	34	6	Qal <sub>2</sub> ,Pw	2,040	25.3 31.2	Aug. 31, 1938 Oct. 21, 1966	J,E	H,S		Well reworked since 1938.
804	T. C. Fike		13	24	Qal2	2,091	13.0	Oct. 21, 1966	N	U		Cased to 3 ft. Dug well, rock lined.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

Table 7 Records of Wells and Springs	in Collingsworth CountyContinued
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WELL	OWNER	DATE	OF				WA		and the second state of th		IRRIGATED	
		COM- PLET- ED	WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12-07-8	Horace Mallard	1964	50	6	Pw	2,172	30 32.8	Oct. 1964 May 22, 1967	J,E	S		Cased to 30 ft. Red beds at 19 ft. Yield 12 gpm May 22, 1967.
8	06 W. Raymond Ward	1966	102	6	Pw	2,143	41	Feb. 1966	S,E	H,S		Cased to 53 ft. Red beds at 28 ft. Yield 6 gpm Feb. 1966.
* 8	07 G. L. White	1930	29	36	Qal2,Pw	2,092	12.7	Oct. 20, 1966	J,E	Н		Dug well, concrete lined.
8	D. F. Langley	1958	118	12	Pw	2,070	10.5	do	T,E	1		Cased to 60 ft. Yield 160 gpm Oct. 20, 1966.
* 8	do do	1910	60	36	Qal <sub>2</sub> ,Pw	2,074			J,E	H,S		
* 8	10 Jerry E. Nix	1946	35	6	Qal2,Pw	2,060	18.0	Oct. 20, 1966	J,E	H,S		
* 8	11 Henry R. Wolf		12	4	Qal2,Pw	2,010	3.5	Oct. 19, 1966	Ρ,₩	S		Yield 3 gpm Oct. 19, 1966.
* 8	12 Mrs. Mattie Maddox	1956	47	8	Qal2,Pw	2,028			J,E	H,S		
* 8	13 J. L. Harris	1957	35	6	Pw,Qal2	2,016	15	1963	J,E	H,S	*	
* 8	14 Les White	1951	65	6	Qal2,Pw	2,030			P,E	S		
* 8	15 A. R. Nelson	1954	42	6	Pw,Qal2	2,047	6	Oct. 1966	J,E	Н		Yield 3 gpm Oct. 1966.
* 8	16 Jerry E. Nix	1949	38	4	Pw,Qal2	2,082	18.7	Oct. 20, 1966	P,E	S		
* 8	17 Charles Cason	1947	21	6	Qal2,Pw	2,041	4.2	Oct. 21, 1966	J,E	H,S		Cased to 10 ft.
8	18 Jerry E. Nix	1939	17	5	Qalı	2,025	.3	Oct. 20, 1966	N	U		Abandoned.
* 8	19 Louis E. Allred	1950	34	6	Qal2,Pw	2,068	18.0	Oct. 21, 1966	P,W	s		
* 8	20 City of Wellington well 1	1965	50	10	Qal	2,010	2.4 6.7	Oct. 19, 1966 Oct. 25, 1967	Τ,Ε	Ρ		Cased to 15 ft. Yield 250 gpm Oct. 25, 1967.
8	21 Charles Cason	1955	240	6	Pdb	2,095	32.9	May 22, 1967	Ρ,₩	U		Cased to 70 ft. Artesian head caused water to rise in well when drilled. Yield 3 gpm May 22, 1967.

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-07-822	Claude Groves	1953	118	10	Pw	2,072	22 23.6	1953 Oct. 27, 1967	T,G	I	6	Cased to 58 ft. Yield 175 gpm Oct. 27, 1967.
823	Rufus C. Sweat	1955	113	10	Pw	2,061	14.3	Oct. 27, 1967	T,G	I	35	Cased to 80 ft. Yield 200 gpm Oct. 27, 1967.
824	N. E. Childers	1938	6	22	Qal2	2,104	3.5	Aug. 30, 1938	Р,Н	U		
825	Charles Cason	1928	53	33	Qal2	2,073	26.3	Aug. 31, 1938	Ρ,₩	H,S		
901	John R. Henard, Sr.	1918	125	4	Qal2	2,110	58.1 47.9	Aug. 30, 1938 May 25, 1967	N	U.		
902	Paul E. Starr	1964	48	6	Pw	2,057	12 17.4	Nov. 1964 May 22, 1967	S,E	Н		Cased to 22 feet. Yield 7 gpm May 22, 1967. Red beds at 24 feet.
903	Emmit Cook	1964	24	6	Pw	2,025	12 9.0	Feb. 1964 May 22, 1967	N	U		Cased to 24 feet. Yield 25 gpm May 22, 1967. Red beds at 12 feet. Abandoned industrial well
904	Vada Nipper	1938	12	5	Qal2	2,009	8.3	Aug. 31, 1938	B,H	U		Abandoned.
* 905	Emmit Cook	1938	23	5	Qa 1 <sub>2</sub>	2,032	11.3	Aug. 30, 1938	Ρ,Η	U		Old Midway Baptist Church well. Destroyed and replaced by well DU-12-07-906.
* 906	do	1954	42	6	Qa12	2,032	11.8	May 22, 1967	J,E	Н		Cased to 34 feet. Yield 7 gpm May 22, 1967. Replaces old well DU-12-07-905.
08-101			Spring		Pdb	2,000	* *	Oct. 19, 1938 June 14, 1967	Flows	S		Estimated flow in 1938 was 40 gpm. Flowed 60 gpm June 14, 1967. Flows into Roundup Creek.
* 102	Bob Glenn		160	6	Pdb	2,095	143.0	June 14, 1967	P,W	S		Yield 3 gpm June 14, 1967.
103	Paul E. Starr		95	6	Pdb	2,042	25.3	June 15, 1967	Ρ,₩	S		Yield 3 gpm June 15, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-08-201	William E. Hughes	1951	123	5	Pdb	2,022	80.8	Sept.13, 1967	P,W	S		Mill Iron Ranches well 129. Bailed 30 gpm when drilled. Yield 3 gpm Sept. 13, 1967.
* 202	do	1940	49	6	Pdb	1,979	33.6	Sept. 9, 1967	Ρ,₩	S		Mill Iron Ranches well 165. Bailed 30 gpm when drilled. Yield 2 gpm Sept. 9, 1967.
203	Waunetta M. Johnson		84	6	Pdb	1,995	35.3 43.4	Aug. 27, 1938 June 14, 1967	P,W	S		Replaces old well which was 49 feet deep in 1938. Yield 3 gpm June 14, 1967.
301	William E. Hughes	1940	111	6	Pdb	1,994	69.6	Sept.13, 1967	Ρ,₩	S		Mill Iron Ranches well 164. Yield 3 gpm Sept. 13, 1967.
302	do	1950	65	5	РdЪ	1,910	26.8	Sept.15, 1967	P,W	S	-	Mill Iron Ranches well 135. Yield 3 gpm Sept. 15, 1967.
303	William E. Hughes	1940	108	4	Pdb	1,983	76.3	Sept.15, 1967	Ρ,₩	S		Mill Iron Ranches. Yield 1 gpm Sept. 15, 1967.
304	do	1940	98	5	Pdb	2,029	86.1	do	Ρ,₩	S		Mill Iron Ranches well 167. Yield 3 gpm Sept. 15, 1967.
305	do	1950	154	5	Pdb	2,042	68.9	do	P,W	S		Mill Iron Ranches well 134. Reported bailed 20 gpm when drilled. Yield 3 gpm Sept. 15, 1967.
306	Bob S. Allen	1963	103	6	Pdb	1,930	55	Feb. 1963	P,W	S		Cased to 87 ft Yield 3 gpm Feb. 1963.
401	William E. Hughes	1930	98	5	Pw	2,084	89.9 94.6	Sept. 1, 1938 Sept.12, 1967	N	U		Mill Iron Ranches well 153. Abandoned. Replaced by well DU-12-08-411.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-08-402	Lewis Green	1956	42	12	Pdb	1,890	12.4	June 14, 1967	S,E	S		Cased to 25 ft. Yield 10 gpm June 14, 1967.
403	do	1960	31	12	Qalı	1,890	16.1	do	T,G	U		Unused since about 1963, because pumps too much sand and mud, and not enough water.
404	Lewis Green	1956	38	12	Qa1 <sub>1</sub>	1,882	11.8	June 14, 1967	N	U		Unused since about 1963, because pumps too much sand and mud, and not enough water.
405	do	1956	21		Qalı	1,882	12	June 1967	C,G	1	50	Manifold system of 12 wells.
* 406	William E. Hughes	1948	97	6	Pw	1,953	71.8	Sept.12, 1967	P,W	S		Mill Iron Ranches well 154. Yield 2 gpm Sept. 12, 1967.
* 407	do	1949	193	5	Pdb	1,966	115.4	do	P,E,W	H,S		Yield 6 gpm Sept. 12, 1967.
408	do	1949	111	6	Pdb	1,974	87.0	do	Ρ,₩	U		Mill Iron Ranches well 139. Bailed 10 gpm when drilled. Replaced by well DU-12-08-412. Red beds at 35 ft. Yield 2 gpm Sept. 12, 1967.
409	do	1951	88	5	Pdb	1,913			Ρ,₩	S		Mill Iron Ranches well 132. Bailed 25 gpm when drilled. Red beds at surface. Yield 2 gpm Sept. 12, 1967.
410	William E. Hughes	1953	65	6	Qalı	1,881	12	Sept. 1967	P,W	S		Mill Iron Ranches well 170. Bailed 20 gpm when drilled. Red beds at 63 feet.
411	do	1949	125	5	Pw	2,085	91.9	Sept.12, 1967	P,W	S		Mill Iron Ranches well 153-A; replaces well DU-12-08-40!. Yield 3 gpm Sept. 12, 1967.

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-08-412	William E. Hughes	1966	148	6	Pdb	1,975	88.0	Sept.12, 1967	P,W	S		Mill Iron Ranches well 139-A; replaces well DU-12-08-408. Bailed 7 gpm when drilled. Yield 3 gpm Sept. 12, 1967. Red beds at 45 feet. Cased to 143 ft.
501	do	1954	31	6	Pdb,Qal <sub>l</sub>	1,854	22.5	Sept.13, 1967	Ρ,₩	S		Mill Iron Ranches well 159-A. Yield 2 gpm Sept. 13, 1967.
502	do	1940	30	6	Pdb,Pw	1,862	22.5	do	P,W,G	S		Mill Iron Ranches well 162. Yield 4 gpm Sept. 13, 1967
503	do	1940	205	5	Pdb	1,955	163.9	do	P,W	S		Mill Iron Ranches well 163. Yield 3 gpm Sept. 13, 1967.
* 601	do	1950	233	5	Pdb	2,034	225.3	do	P,W	S		Mill Iron Ranches well 140. Yield 2 gpm Sept. 13, 1967.
602	Elmer G. Black		101	4	Pw,Pdb	2,031	47.1	Sept.14, 1967	P,E	S		Yield 5 gpm Sept. 14, 1967.
603	D. C. Lacy		38	4	Pw	1,991	29.7	do	P,E	S		Yield 4 gpm Sept. 14, 1967.
701	William E. Hughes	1930	98	8	Pw	2,097	51.0 64.7	Sept. 1, 1938 Sept.12, 1967	N	U		Mill Iron Ranches well 152. Well destroyed and replaced by well DU-12-08-703.
702	do	1940	66	5	Pw	2,025	52.9	Sept.12, 1967	P,W	S		Mill Iron Ranches well 150. Yield 2 gpm Sept. 12, 1967.
703	do	1954	103	6	Pw,Pdb	2,097	64.7	do	Ρ,₩	S		Mill Iron Ranches well 152-A. Reported bailed 8 gpm when drilled. Yield 3 gpm Sept. 12, 1967.

Table 7 Records of Wells	and Springs	in Collingsworth	CountyContinued
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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12-08-704	William E. Hughes	1953	29	6	Pw	1,980	15.0	Sept.12, 1967	Ρ,₩	S		Mill Iron Ranches well 155-A. Replaces old dug well which went dry in 1952. Red beds at 18 ft. Bailed 2 to 6 gpm when drilled. Yield 3 gpm Sept. 12, 1967.
* 705	do	1949	82	6	Pw,Qal <sub>2</sub>	2,063	60.5	do	P,W	S		Mill Iron Ranches well 156. Yield 2 gpm Sept. 12, 1967.
706	do	1938	25	5	Qal2	2,005	20.4	Sept. 1, 1938	N	U		Abandoned when visited Sept. 12, 1967.
801	J. W. Brock	1920	28	6	Pw	1,820	14.5 13.6	Oct. 5, 1938 Sept.14, 1967	P,W	S		Yield 2 gpm Sept. 14, 1967.
802	E. H. Yarborough	1920	35	5	Qa 1 2	1,820	21.6	Aug. 26, 1938	Р,Н	U		Abandoned when visited Sept. 14, 1967. 01d campground.
* 803	William E. Hughes	1953	32	6	Qalı	1,845	19.6	Sept.12, 1967	Ρ,₩	S		Mill Iron Ranches well 181. Bailed at 15 gpm when drilled. Yield 2 gpm Sept. 12, 1967.
804	do	1951	340	5	Pdb,Pw	2,024	101.1	Sept.13, 1967	Ρ,Ε	н		Mill Iron Ranches well 141. Yield 5 gpm Sept. 13, 1967.
805	do	1948	112	6	Pdb,Pw	2,027	101.1	do	Ν	U		Mill Iron Ranches well 128. Abandoned. Bailed 1 gpm when drilled. Replaced by well DU-12-08-804.
806	E. H. Yarborough		29	6	Pw	1,828	16.1	Sept.14, 1967	Ρ,₩	S		Yield 3 gpm Sept. 14, 1967.
807	William E. Hughes	1954	150		Pdb	1,875				U		Mill Iron Ranches well 161–A. Abandoned, not enough water.

Table 7 Records of	Wells and	Springs in	Collingsworth	CountyContinued

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				DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
	WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU	-12-08-808	William E. Hughes	1954	103		Pdb	1,850			N	U		Abandoned, not enough water
*	901	Don F. Lacy		32	48	Pw	1,938	16.0	Sept.14, 1967	Pw	S		Yield 3 gpm Sept. 14, 1967.
	902	Wayne Yarborough		46	6	Pw	1,946	28.4	do	J,E	S		Yield 8 gpm Sept. 14, 1967.
	903	Fred Yarborough	1967	115	6	Pw	1,982	63	Jan. 1967	Ρ,₩	S		Cased to 85 ft. Yield 3 gpm Jan. 1967.
	12-301	Mrs. Earl G. Allen		49	4	Pw	2,229	19.6	June 6, 1967	P,W	U		Apparently abandoned. Yield 3 gpm June 6, 1967.
*	302	D. C. Browder		135	6	Pw	2,335	64.8	June 7, 1967	Ρ,₩	S		Yield 3 gpm June 7, 1967.
	303	Vera Dickey	1950	160	6	Pw	2,298	100.4	June 29, 1967	Ρ,₩	S		Yield 2 gpm June 29, 1967.
	304	do	1950	67	6	Pw	2,300	62.7	do	P,W	s		Do.
	305	do		113	6	Pw	2,326	105.9	do	Ρ,₩	s		Do.
	601	Paul Montgomery	1961	143	6	Pw	2,232	33.3	do	P,W	S		Yield 3 gpm June 29, 1967.
¥	602	do	1965	215	6	Pw	2,375	174.7	do	Ρ,₩	S		Yield 2 gpm June 29, 1967.
	603	do	1959	170	16	Pw	2,233	25.5	June 29, 1967	N	U		Abandoned irrigation well. Reported to have pumped 125 gpm when used as manifold system.
	604	do	1959	61	16	Qalı,Pw	2,233	25.6	do	N	U		Do.
	605	do	1950	112	6	Pw	2,281	30.9	June 30, 1967	P,W	s		Cased to 80 ft. Yield 3 gpm June 30, 1967.
	606	do	1965	30	6	Pw	2,255	14.8	do	P,W	S		Cased to 20 ft. Yield 3 gpm June 30, 1967.
	607	do	1920	18	42	Qal <sub>l</sub> ,Pw	2,255	14.4	do	N	U		Abandoned, replaced by well DU-12-12-606.

See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE		FER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-12-608	Paul Montgomery	1962	168	6	Pw	2,265	97.7	June 30, 1967	P,W	S		Yield 3 gpm June 30, 1967.
609	do	1950	109	6	Pw	2,250	73.2	do	Ρ,₩	S		Cased to 90 ft. Yield 3 gpm June 30, 1967.
610	do	1965	131	6	Pw,Pdb	2,135	64.0	July 11, 1967	Ρ,₩	S		Cased to 80 ft. Yield 3 gpm July 11, 1967.
901	Brook Hollow Country Club	1940	130	9	Pw,Pdb	2,142	35.7	do	Ρ,₩	H,P		Yield 4 gpm July 11, 1967
902	E. H. Neel	1955	149	6	Pw	2,210	81.9	July 11, 1967	Ρ,₩	S		Bailed at 17 gpm when drilled. Yield 3 gpm July 11, 1967.
903	do	1920	98	5	Pw,Pdb	2,184	58.5	Sept. 7, 1938	P,W	S		Yield 3 gpm Sept. 7, 1938.
904	Mrs. T. J. Dunbar	1925	30	42	Qalı	2,130	27.9 24.5	Sept. 7, 1938 July 11, 1967	N	U		Abandoned.
905	John D. Evans	1957	88	6	Qalı	2,105	45.1	July 11, 1967	S,E	S		Yield 10 gpm July 11, 1967.
906	do	1954	125	14	Pw	2,135	64.0	do	S,E	1	50	Reported red beds at 10 ft. Cased to 90 ft. Yield 140 gpm July 11, 1967.
907	do	1954	127	10	Pw	2,135	63.1	do	S,E	1	50	Cased to 90 ft. Yield 155 gpm July 11, 1967.
908	Brook Hollow Country Club		Spring		Pw,Pdb	2,090	+ +	Sept. 7, 1938 July 11, 1967	Flows			Spring supplies 200 acre-foot reservoir on West Salt or Cousin's Creek. Flowed 28 gpm July 11, 1967.
909	John Deaver		Spring		Pdb	2,070	+ +	Sept. 7, 1938 July 11, 1967		S		Seepage pond, partial source is probably from well DU-12-12-908. Flowed 1 gpm July 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-13-101	Tom Draper	1938	161	6	Pw,To	2,280	119.4 97.8	Sept. 6, 1938 June 27, 1967	P,W	S		Yield 3 gpm June 27, 1967.
102	Paul E. Starr	1935	56	6	Pw	2,160	24.8	June 28, 1967	Ρ,₩	S		Yield 2 gpm June 28, 1967.
103	Vera Dickey	1940	146	4	Pw	2,236	78.5	do	P,W	S		Do.
104	do	1964	28	6	Qalı	2,151	5.6	do	C,E	1	30	Five wells on manifold system connected with 4-inch main line. Yield 200 gpm June 28, 1967.
105	do		83	6	Pw,Qal	2,172	9.8	do	Ρ,₩	S		Yield 2 gpm June 28, 1967.
106	do	1964	28	6	Qalı	2,168	6.4	do	C,E	1	35	Water from the White- horse recharges the alluvium. Yield 150 gpm June 28, 1967.
107	do	1963	144	6	Pw	2,236	57.8	June 29, 1967	Ρ,₩	S		Yield 3 gpm June 29, 1967.
108	Tom Wilson	1935	48	6	Pw	2,168	16.8	June 6, 1967	P,W	S		Yield 3 gpm June 6, 1967.
109	Paul E. Starr	1923	28	24	Pw	2,157	17.5	June 28, 1967	N	U		Abandoned and replaced by well DU-12-13-102.
110	Vera Dickey		Spring		Pw,Qalı	2,128	+ +	Oct. 20, 1938 June 28, 1967	Flows	S		Flows into Buck Creek. Flowed 5 gpm June 28, 1967.
201	Katharine Milam	1930	101	4	Pw	2,160	90.5 87.3	Sept. 6, 1938 June 27, 1967	Ρ,Ε	H,S		Yield 8 gpm June 27, 1967.
202	Leola True	1930	71	4	Pw	2,132	44.1	June 28, 1967	P,W	S		Yield 2 gpm June 28, 1967.
203	do		11	36	Qalı	2,074	7.7	do	P,W	S		Yield 3 gpm June 28, 1967.
204	do		93	6	Pw	2,190	70.4	do	P,W	S		Yield 2 gpm June 28, 1967.
301	A. V. Atkinson	1920	106	4	Pw	2,161	86.4	Aug. 26, 1938	N	U		Destroyed when visited June 27, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12-13-302	A. V. Atkinson	1963	39	6	Pw	2,103	30.0	June 27, 1967	J,E	Η		Yield 9 gpm June 27, 1967. Reported pumps dry in about 1 hour. Cased to 35 feet.
303	Palo C. Cummings, Sr.	1915	27	5	Qalı	2,057	18.3	ob	Ρ,₩	S		Yield 2 gpm June 27, 1967.
304	Pat O'Hair		Spring		Pw	2,105	+ +	Jan. 24, 1967 June 13, 1967	Flows	S	-	Flow from all springs along tributary was 584 gpm Jan. 24, 1967. Flow is totally absorbed by evapotranspiration and channel fill during summers.
305	R. V. Sweatt	1938	77	4	Pw	2,120	54.2	Sept. 6, 1938	P,W	H,S		
306	E. T. Vaughn	1903	135	4	Pw	2,223	60	Sept. 1938	P,W	H,S		
401	Paul Montgomery	1938	140	5	Pw,Pdb	2,317	118.6	Sept. 7, 1967	P,W	H,S		
402	Paul Montgomery	1956	168	6	Pw,Pdb	2,305	116.9	June 30, 1967	N	U		Reported yield was 8 to 10 gpm, but pumped too much silt.
403	J. W. Smith	1940	99	4	Pw	2,180	61.8	July 12, 1967	P,W	S		Yield 3 gpm July 12, 1967.
404	do	1939	157	5	Pw	2,278	106.9	do	P,W,E	н		Yield 4 gpm July 12, 1967.
405	do	1953	93	5	Pw	2,080	30.7	July 13, 1967	P,W	S		Yield 2 gpm July 13, 1967.
* 406	do	1953	184	4	Pw	2,198	121.2	do	P,W	S		Yield 3 gpm July 13, 1967.
407	do	1955	67	6	Pw	2,126	16.1	do	P,W	S		Yield 4 gpm July 13, 1967.
501	do	1942	63	4	Pw	2,134	39.2	July 12, 1967	P,W	S		Yield 3 gpm July 12, 1967.
* 502	do	1953	93	6	Pw	2,127	58.8	do	Ρ,₩	S		Cased to 70 feet. Yield 3 gpm July 12, 1967.
503	do	1953	148	6	Pw	2,185	135.7	do	Ρ,₩	S		Cased to 120 feet. Yield 4 gpm July 12, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL				IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREME		METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-13-504	Katharine Milam	1967	110	6	Pw	2,117	80	Oct.	1967	Ρ,₩	S		Red beds at 3 feet. Yield 3 gpm Oct. 1967.
602	Noel T. Cudd Estate	1918	66	4	Pw	2,156	41.2	Sept. 6,	1938	P,W	S		Yield 3 gpm Sept. 6, 1938.
603	John Deaver	1930	107	4	Pw	2,124	86.1	Sept.27, June 27,		P,W	S		Yield 1 gpm June 27, 1967.
604	do		Spring		Pw,Qalı	1,984	85.0 + +	Sept. 6, June 27,	1938	Flows	S		Flows into Wet Salt Creek. Flowed 1 gpm June 27, 1967.
605	S. S. Coleman	1967	65	6	Pw	2,060	30	Mar.	1967	P,W	S		Cased to 43 feet. Bailed at 7 gpm when drilled.
606	do	1967	160	6	Pw	2,173	120	Mar.	1967	P,W	S		Cased to 130 feet. Yield 2 gpm Mar. 1967.
♦ 607	John Deaver	1963	90	6	Pdb	2,006	19.1	July 14,	1967	P,W	H,S		Cased to 60 feet. Yield 4 gpm July 14, 1967.
701	do	1920	20	24	Pdb	2,150	20	July	1967	N	U		Abandoned open oil well.
702	do	1952	152	6	Pw	2,148	135.3	July 14,	1967	P,W	S		Yield 2 gpm July 14, 1967.
703	do		117	6	Pw	2,101	114.4	July 14,	1967	Ρ,₩	S		Yield 1 gpm July 14, 1967.
704	do		31	6	Pw,Qalı	2,034	9.4	do		P,W	S		Yield 2 gpm July 14, 1967
* 705	do	1934	110	4	Pdb	2,137	105.7	do		P,W	S		Yield 3 gpm July 14, 1967.
706	do		Spring		Pdb	2,015	+	do		Flows	S		Flows into Dry Salt or Cousins Creek. Flowed 3 gpm July 14, 1967.
* 801	do	1930	69	4	Pdb	2,014	51.9 51.1	Sept. 7, July 13,		Ρ,₩	S		Yield 2 gpm July 13, 1967
802	do	1954	104	5	Pw	2,114	96.8	July 13,	1967	P,W	S		Do.
803	James C. Doneghy	1963	233	6	Pdb	1,955	85	July	1963	Ρ,₩	S		Cased to 150 ft. Yield 3 gpm July 1963.
804	do	1935	106	6	Pdb	2,015	55.5	Sept. 7,	1938	P,W	S		Cased to 105 ft.

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-13-903	John Deaver	1930	200	6	Pdb	1,960	60	Sept. 19	38 P,W	S		
904	James C. Doneghy	1954	165	5	Pdb	1,961	20 2.9	Apr. 199 Sept.14, 190		S		Well reported to flow often when irrigation pumps are shut down. Yield 4 gpm Sept. 14, 1967.
905	do	1963	117	6	Pw	2,065	121	Oct. 196	53 P,W	S		Red beds at 5 feet. Yield 3 gpm Oct. 1963.
906	do	1963	90	6	Pw	1,988	18	Oct. 196	3 P,W	S		Do.
907	do	1940	56	5	Pw	2,045	41.0	Sept.13, 190	57 P,W	S		Yield 3 gpm Sept. 13, 1967.
* 908	do	1940	73	5	Pw	2,030	53.0	Sept.14, 196	57 P,W	s		Yield 1 gpm Sept. 13, 1967.
* 14-101	C. E. Pitts	1937	154	10	Pdb	2,006	+	Aug. 199 Jan. 24, 190		1	50	This well was reworked in 1953 for irrigation. Flows about 120 gpm, but is pumped at rate of 400 gpm.
* 102	R. N. McAlister	1955	180	6	Pdb	2,005	+ + +	Aug. 199 Feb. 10, 196 Jan. 24, 196	51	I	30	Well flows at about 100 gpm, but is pumped at about 350 gpm.
103	Flossie C. Neeley	1938	20	5	Pw	2,105	27.1 19.5	Aug. 26, 193 Jan. 11, 196	8 P,W	U		Observation well.
104	W. T. Tow		68	6	Pw	2,077	41.6	Jan. 23, 196	7 P,W	S		Yield 2 gpm Jan. 23, 1967
105	Pálo F. Cummings	1957	70	6	Pw	2,057	29.9	Jan. 23, 196	57 P,W	S		Cased to 40 ft. Yield 2 gpm Jan. 23, 1967.
106	Elbert Watts		24	5	Pw	2,060	18.7	do	N	U		Abandoned.
107	Billy Joe Patterson	1966	110	6	Pw	2,050	24.3	do	J,E	S		Cased to 70 ft. Yield 20 gpm Jan. 23, 1967.
108	Frank Campbell		52	8	Pw	2,075	49.2	Jan. 24, 196	7 P,W	S		Yield 1 gpm Jan. 24, 1967.

	A CONTRACT OF AN		DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	Contraction of the second second
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-14-109	L. W. Hartman	1930	19	36	Pw,Qalı	2,008	8.7	Jan. 24, 1967	J,E	н		Cased to 10 ft. Yield 5 gpm Jan. 24, 1967.
110	Roscoe Land	1956	27	5	Qalı	2,008	12.6	Jan. 24, 1967	P,G	S		Yield 4 gpm Jan. 24, 1967.
111	do	1930	19	4	Qalı	2,004	14.0	Aug. 24, 1938	Ρ,₩	U		Buck Creek Public School well, now destroyed.
112	do		Spring		Qal <sub>l</sub> ,Pw	1,980	+	Mar. 26, 1968	Flows	S		Composite flow was 760 gpm Mar. 26, 1968. Flow is lost to channel alluvium within 3 to 4 miles down stream.
201	George Patterson	1955	62	6	Pw	2,075	30.6	Jan. 23, 1967	P,W	U		
202	C. J. Johnson	1935	98	6	Pw	2,105	54.2	Sept.29, 1938	Ρ,₩	U		Abandoned and plugged at 3 ft, when visited June 12, 1967. Replaced by well DU-12-14-208.
203	M. Richardson	1900	34	5	Pw	2,028	19.9 9.7	Oct. 1, 1938 June 12, 1967	Ρ,₩	U		
204	do	1900	39	5	Pw	2,034	26.6	Oct. 1, 1938	в,Н	U		Destroyed when visited June 12, 1967.
205	Travis McGuire	1966	90	6	Pw	2,034	42 44.0	Jan. 1966 June 12, 1967	J,E	D		Yield 8 gpm June 12, 1967.
206	Don F. Lacy		Spring		Pdb	1,965	+ +	Oct. 1, 1938 June 12, 1967	Flows	S		Flows into Buck Creek. Flowed 3 gpm June 12, 1967.
207	do	1925		5	Pw	1,990	47.7	Sept.26, 1938	P,W	U		Destroyed when visited June 13, 1967.
208	C. J. Johnson	1950	46	6	Pw	2,101	36.5	June 12, 1967	J,E	S		Yield 8 gpm June 12, 1967.
209 301	Don F. Lacy J. C. Hartman, Jr.	1955 1965	36 186	4	Pdb Pdb	1,968 2,002	14.5 83.5	June 13, 1967 June 8, 1967	P,W S,E	S H		Yield 3 gpm June 13, 1967 Cased to 150 ft. Usually pumps about 8 gpm. Yield 18 gpm June 8, 1967.

See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-14-302	Herbert Beardin	1965	140	6	Pdb	2,005	97 98.8	Jan. 1965 June 8, 1967	Ρ,₩	S		Cased to 135 ft. Red beds at 8 ft. Yield 4 gpm June 8, 1967.
303	E. H. Hartman	1966	145	12	Pdb	1,985	80.2	Jan. 10, 1967	T,G	1	50	Test pumped at 600 gpm. Cased to 110 ft.
304	Mrs. L. A. Gilmore	1913	124	5	Pw	2,130	113.3	June 8, 1967	P,W	S		Yield 8 gpm June 8, 1967
305	Tiny Taylor	1929	87	6	Pw	2,105	79.8	Sept.29, 1938	P,W	Ų		Abandoned. Plugged at 9 ft when visited June 8 1967.
306	Mrs. L. A. Gilmore	1915	49	5	Pw	2,056	65.6 39.5	Sept.29, 1938 June 8, 1967	N	U		Abandoned.
307	C. M. Hawkins	1914	124	4	Pdb	1,998	95.7 90.2	Aug. 24, 1938 June 8, 1967	Ρ,₩	S		Yield 3 gpm June 8, 1967.
308	E. H. Hartman	1956	245	12	Pdb	1,992	84.1	June 8, 1967	T,G	I	100	Yield 550 gpm June 8, 1967. Reported usually pumps about 450 gpm.
309	J. C. Hartman, Jr.	1966	200	6	Pdb	1,992	72	June 1967	J,E	S		Yield 10 gpm June 1967.
401	Travis McGuire	1910	55	42	Pw	2,075	52.8	Aug. 24, 1938	Ρ,₩	U		Destroyed and replaced by wells DU-12-14-403 an DU-12-14-404.
402	Robert M. Lacy	1940	78	4	Pw	2,068	40.6	Jan. 24, 1967	C,E	H,S		Yield 6 gpm Jan. 24, 1967.
403	Travis McGuire	1963	52	6	Pw	2,075	42.3	do	Ρ,₩	S		Replaces well DU-12-14-401 and DU-12-14-404. Yield 3 gp Jan. 24, 1967
404	do	1942	57	6	Pw	2,077	43.9	do	N	U		Abandoned. Replaced by well DU-12-14-403.
405	Palo F. Cummings	1962	103	6	Pw	2,098	68.4	do	S,E	н		Cased to 60 ft. Yield gpm Jan. 24, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-14-406	Harold C. Parks	1938	118	5	Pw	2,074	94.3 83.1	Sept.27, 1938 Jan. 24, 1967	P,W	S		Yield 1 gpm Jan. 24, 1967.
407	George Roberts	1948	134	6	Pw	2,081	95.3	Jan. 25, 1967	P,G	S		Yield 6 gpm Jan. 25, 1967.
408	Ralph Messer	1915	26	6	Pw	2,035	19.8	do	C,E	H,S		Cased to 16 ft. Yield 7 gpm Jan. 25, 1967.
409	J. C. Hartman		175	6	Pw,Pdb	2,008	19.6	do	P,W	S		Yield 3 gpm Jan. 25, 1967.
410	Raymond V. McGill	1938	105	4	Pw	2,050	91.2 78.8	Aug. 24, 1938 Jan. 25, 1967	Ρ,₩	S		Yield 2 gpm Jan. 25, 1967.
501	Robert M. Lacy	1960	18	6	Qalı	1,958	7.9	Jan. 24, 1967	P,W	S		Cased to 10 ft. Yield 3 gpm Jan. 24, 1967.
502	Merritt L. James	1961	71	6	Pw	2,008	35 31.9	Sept. 1961 June 13, 1967	S,E	I	1	Cased to 39 ft. Yield 10 gpm June 13, 1967.
503	L. A. Davis	1964	200	12	Pdb	2,002	68.8	Jan. 10, 1967	T,E	I	40	Cased to 130 ft. Yield 180 gpm Jan. 10, 1967. Pump tested also at 180-200 gpm when drilled.
504	Mrs. E. N. Lewis	1900	31	6	Pw	1,980	25.2	Sept.26, 1938	P,W	U	3	
505	Mrs. L. A. Gilmore		58	6	Qall	2,014	40.4 31.9	Sept.26, 1938 June 13, 1967	Ρ,₩	S		This well replaces older well bored to 70 ft. deep in 1914. Yield 2 gpm June 13, 1967.
506	James C. Doneghy	1936	73	6	Qal <sub>l</sub> ,Pw	2,035	65.1 48	Sept.26, 1938 1953	P,W	S		Yield 3 gpm in 1953.
507	William O'Rear	1967	41	6	Qalı	1,970	15	May 1967	P,W	S		Cased to 20 ft. Yield 3 gpm May 1967.
601	Mrs. W. E. Thomas	1955	144	4	Pw	1,929	20.6	June 8, 1967	T,G	I		Cased to 4 ft. Normally pumps about 300 gpm. Red beds at 55 ft.
			1.00									

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12-14-602	Ray Nell	1965	97	6	Pdb	1,974	61 61.4	Dec. 1965 Feb. 2, 1967	P,W	S		Cased to 82 ft. Red beds at 5 ft. Yield 3 gpm Feb. 2, 1967.
603	Porter Loving Estate	1965	41	6	Qalı	1,900	23 22.4	Oct. 1965 June 13, 1967	C,G	S		Cased to bottom. Red beds at 38 ft. Yield 10 gpm June 13, 1967.
604	A. A. Spear	1938	100	6	Pw	1,995	84.7	Aug. 24, 1938	Ρ,₩	U		Apparently abandoned June 13, 1967.
605	E. F. White	1938	80	5	Pw	1,980	84.8 75.7	Aug. 24, 1938 June 13, 1967	N	U		Abandoned.
606	J. C. Hartman, Jr.		48	5	Pw	1,935	36.0	Feb. 10, 1967	P,W	U		Do.
607	W. Raymond Ward	1955	1 <u></u>	16	Pw	1,980	60.8	Feb. 27, 1967	T,G	I	35	Yield 180 gpm Feb. 27, 1967.
608	Ralph Long	1915	78	4	Pw	1,966	23.1	Mar. 2, 1967	P,W	Н		Yield 2 gpm Mar. 2, 1967.
609	W. Ray Clubb	1925	48	4	Pw	1,960	15.0	Mar. 3, 1967	P,W	U		
610	Raymond Barton	1955	65	14	Pw,Pdb	1,934	48.3	June 13, 1967	T,G	I	60	Yield 450 gpm June 13, 1967.
701	James C. Doneghy		129	6	Pw	2,022	100.6	Jan. 25, 1967	P,W	S		Yield 3 gpm Jan. 25, 1967.
702	do	1940	40	5	Pw	1,992			P,W	S		
* 703	Marion E. Posey	1956	90	5	Pdb	1,925	27.6	Sept.13, 1967	P,W	S		Yield 3 gpm Sept. 13, 1967.
704	James C. Doneghy		76	6	Pdb	1,969	17.3	Jan. 25, 1967	P,W	S		Yield 1 gpm Jan. 25, 1967.
705	Bettic D. Baker		Spring		Pdb	1,895	+ +	Sept.27, 1938 Sept.13, 1967	Flows	S		Flows into Wet Salt Creek. Flowed 5 gpm Sept. 13, 1967.
* 801	M. Blanton	1965	85	6	Pw	2,003	52.9	Mar. 3, 1967	P,S	S		Whitehorse flushed with recharge water from terrace. Yield 6 gpm Mar. 3, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

			DEPTH	DIAM-		ALTITUDE	and the second se	TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-14-802	Mrs. Tom B. Berry	1920	48	4	Pw,Pdb	1,987	94.4 48	Sept.26, 1938 Feb. 1967	N	U		Abandoned.
* 803	James C. Doneghy	1930	99	4	Pdb	1,938	73.1	Sept.26, 1938	Ρ,₩	S		Yield 4 gpm Sept. 26, 1938.
804	do				Pdb	1,933	45	1966	P,W	S		
805	do				Pdb	1,954	80	1966	P,W	S		
806	do	1952	110	6	Pdb	1,931	50	1966	P,W	S		Bailed at 15 gpm when drilled.
807	do				Pw	2,075	90	1966	P,W	S		
808	J. B. Trew	1940	144	5	Pdb	2,000	73.6	Mar. 3, 1967	P,E	S		Yield 1 gpm Mar. 3, 1967.
901	Robert E. Copeland	1955	174	12	Pdb	1,917	99.9 99.6	Jan. 13, 1966 Jan. 20, 1968	T,G	1	80	Observation well. Yield 1,000 gpm Jan. 20, 1968.
* 902	W. Raymond Ward	1953	123	16	Pdb	1,912	53.8	Jan. 12, 1955	T,G	I	65	Observation well. Yield 711 gpm Jan. 12, 1955. Usually pumps about 480 gpm.
903	Roy Keith Smith	1955	159	12	Pdb	1,908	83 86.2	Aug. 1955 Mar. 5, 1967	N	U		Abandoned irrigation well. Reported yield 360 gpm when drilled.
904	Bill L. Langford	1956	93	6	Pdb	1,890	68.7 72.0	Sept.26, 1938 Mar. 20, 1967	Ρ,₩	U		Observation well. Reported well replaces old 4-in. well drilled before 1938. Abandoned since 1958.
905	W. Raymond Ward	1954	148	16	Pdb	1,917	75.0	Mar. 5, 1967	T,G	1	65	Yield 600 gpm Mar. 5, 1967. Reported usually pumps about 480 gpm.
906	W. Ray Clubb	1955	190	12	Pdb	1,971	90 116.4	Dec. 1960 Jan. 10, 1967	T,G	1	98	Originally pump tested at 640 gpm, now pumps at 500 gpm slowing to 100 gpm in about 20 days.

Table 7.--Records of Wells and &prings in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-14-907	H. Frank Thomas	1955	180	16	Pdb	1,924	62	Dec. 1955	N	U		Well destroyed in 1957 because of saline water.
908	J. M. Greer	1955	130	12	Pdb	1,901	58.7	Feb. 27, 1967	T,G	1,5	70	Cased to 100 ft. Yield 400 gpm Feb. 27, 1967.
909	Roy Keith Smith	1955	188	12	Pdb	1,890	69.7	Mar. 5, 1967	T,G	1	90	Cased to 7 ft. Water rose rapidly in well to 59 ft below land surface datum when drilled. Yield 900 gpm Mar. 5, 1967.
* 910	Frank Fourmentin	1920	80	4	Pdb	1,917	61.8 59.8	Sept.26, 1938 Mar. 3, 1967	N	U		Abandoned. Replaced by well DU-12-14-914 about 120 ft east.
911	Mrs. A. N. Wiseman	1958	122	6	Pdb	1,903	90	Mar. 1967	P,E	s		Yield 5 gpm Mar. 1967.
912	Roy Keith Smith	1955	250	12	Pdb	1,912	90.1	Mar. 5, 1967	N	U		Abandoned irrigation well. Reported yield 340 gpm when drilled.
913	W. Ray Clubb	1938	113	4	Pw	1,973	99.8 100.5	Oct. 20, 1938 Feb. 28, 1967	Ρ,₩	U		Yield 1 gpm Feb. 28, 1967.
* 914	Frank Fourmentin	1966	120	6	Pdb	1,919	65 59.3	Feb. 1966 Feb. 28, 1967	P,W,E	S		Replaced well DU-12-14-910. Cased to 82 ft. Yield 4 gpm Feb. 28, 1967.
915	Virgil Estes	1962	172	12	Pdb	1,910	62.4	Feb. 8, 1967	T,G	1	120	Cased to 127 ft. Yield 400 gpm Feb. 8, 1967.
916	Claude W. Caison	1955	125	12	Pdb	1,925	74.5	do	T,G	1	140	Cased to 95 ft. Yield 600 gpm Feb. 8, 1967.
917	H. Frank Thomas	1957	210	16	Pdb	1,918	74.2	do	T,G	I	110	Cased to 70 ft. Replaces well DU-12-14-907. Yield 400 gpm Feb. 8, 1967.
918	Henry Gray	1955	180	12	Pw,Pdb	1,931	80.0	Feb. 10, 1967	N	U		Abandoned irrigation well. Reported yield 100 gpm when drilled.

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
00-12-14-919	Essie Helvey	1963	200	16	Pdb	1,912	75 87.4	June 1963 Feb. 10, 1967	T,G	1	100	Cased to 180 ft. Yield 600 gpm Feb. 10, 1967.
920	do	1960	160	14	Pdb	1,902	76.2	Feb. 10, 1967	T,N	U		Abandoned irrigation well. Reported will pump about 400 gpm in winter and slow to 140 gpm in summer. Cased to 160 ft.
921	W. Raymond Ward	1960	120	16	Pdb	1,907	67.2	Mar. 6, 1967	T,G	I	45	Yield 270 gpm Mar. 6, 1967.
922	J. M. Greer	1956	90	6	Pw	1,895	58.4	Feb. 27, 1967	Ρ,₩	S		Yield 2 gpm Feb. 27, 1967.
923	Bill L. Langford	1957	177	12	Pdb	1,880	40 60.5	Jan. 1957 Mar. 20, 1967	T,G	1	65	Cased to 97 ft. Yield 760 gpm Mar. 20, 1967.
924	Roy Keith Smith	1966	210	16	Pw,Pdb	1,880	72.5	Mar. 6, 1967	T,G	1	90	Cased to 18 ft. Yield 1,000 gpm Mar. 6, 1967.
925	Robert E. Copeland		222	6	Pdb	1,893	73.3	Mar. 4, 1967	P,W	S		Yield 3 gpm Mar. 4, 1967.
926	Roy Keith Smith	1965	86	7	Pdb	1,876	56.8	do	Ρ,₩	S		Cased to 83 ft. Yield 2 gpm Mar. 4, 1967.
927	Ralph Long	1966	58	6	Pw	1,975	48.9	Mar. 1, 1967	P,E	S		Cased to 43 ft. Yield 2 gpm Mar. 1, 1967.
928	Virgil Estes	1967	175		Pdb	1,906	90	June 1967		U		Destroyed irrigation well. Bailed 50 gpm so pulled casing.
929	J. M. Greer	1930	92	5	Pw	1,920	89.9	Sept.26, 1938	P,W	U		Destroyed when visited Mar. 5, 1967.
15-101	C. E. Christian	1930	49	5	Pw	2,060	47.6 46.6	Sept.29, 1938 June 14, 1967	N	U		Abandoned, replaced by well DU-12-15-102.
102	do	1950	71	6	Pw	2,060	47.3	June 14, 1967	Ρ,₩	H,S		Replaces well DU-12-15-101. Yield 2 gpm June 14, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-15-10;	City of Wellington	1957	130	10	Pw	2,036	23.7	Nov. 1, 1967	N	U		Cased to 40 ft. Abandoned irrigation well. Reported yield 100 gpm when drilled.
* 106	L. Fred Cox	1964	120	6	Pw	2,034	65.1	Sept.11, 1967	S,E	Н		Cased to 66 ft. Yield 4 gpm Sept. 11, 1967.
107	do	1963	260	5	Pdb	2,035	103.4	do	S,E	H,S		Cased to 220 ft. Yield 12 gpm Sept. 11, 1967.
108	Harold Keller	1966	90	6	Pw	2,026	63 66.2	May 1966 June 14, 1967	P,E	S		Cased to 70 ft. Yield 4 gpm June 14, 1967.
201	City of Wellington	1910	61	20	Qalı	1,990	13.1 25.7	Oct. 10, 1938 Oct. 25, 1967	N	U		Abandoned public supply well. Reported not enough water.
* 202	City of Wellington well 12	1956	120	8	Qal <sub>l</sub> ,Pdb	1,980	23.4	Jan. 16, 1968	T,E	Ρ		Yield 150 gpm Jan. 16, 1968.
203	City of Wellington well 11	1948	62	8	Qalı	1,983	22.9	do	T,E	Ρ		Cased to 22 ft. Yield 75 gpm Jan. 16, 1968.
* 204	City of Wellington well 10	1950	120	10	Qall	1,987	20.2	do	T,E	Ρ		Yield 150 gpm Jan. 16, 1968.
205	City of Wellington well 9	1964	89	12	Pw,Qal1	1,985	18.4	do	T,E	Ρ		Cased to 82 ft. Yield 75 gpm Jan. 16, 1968.
206	City of Wellington	1942	50	8	Qalı	1,993			N	U		Abandoned and plugged public supply well, when visited Oct. 25, 1967. Cased to 15 ft.
207	do	1935	27	8	Qalı	1,996	12.2 27	Oct. 10, 1938 Oct. 1967		U		Abandoned public supply well. Reported yield 40 gpm in 1938.
208	do	1935		8	Qalı	1,997	10.1	Oct. 10, 1938	N	U		Abandoned public supply well.
209	do	1932		8	Qalı	1,998	10.4	do	N	U		Do.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL	~		IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
*DU-12-15-210	City of Wellington well 5	1950	120	12	Qal <sub>l</sub> ,Pw	2,001	27.1 36.0	Oct. 19, 1966 Oct. 25, 1967	T,E	Ρ		Red beds at 80 ft. Yield 200 gpm Oct. 25, 1967.
211	City of Wellington	1949	167	8	Pdb	2,011	90 93.6	Aug. 1955 Jan. 17, 1967	S,E	Ρ		Test pumped at 750 gpm when drilled. Used for municipal swimming pool. Yield 40 gpm Jan. 17, 1967. Cased to 230 ft.
212	Bob Glenn	1953	95	12	Pw	1,984	36.0	June 23, 1967	S,E	I	8	Yield 60 gpm June 23, 1967.
213	do	1955	92	12	Pw	1,988	22.3	do	T,G	1	17	Yield 140 gpm June 23, 1967.
214	Dick Sweat	1953	108	8	Pw	2,055	26.7 18.4	Jan. 13, 1956 Nov. 8, 1967	J,E	1	4	Observation well, Yield 15 gpm Nov. 8, 1967. Reported originally pumped about 125 gpm. Cased to 28 ft.
215	Roy Tisdal	1962	97	6	Pw	2,037	35 24.1	July 1962 Jan. 16, 1968	S,E	н		Cased to 52 ft. Yield 12 gpm Jan. 16, 1968.
216	City of Wellington	1965	134	10	Qalı	2,002	17 15.9 19.5	Apr. 1965 Oct. 29, 1966 Oct. 25, 1967	T,E	Р		Cased to 40 ft. Yield 150 gpm Oct. 25, 1967.
217	do	1938	62	4	Pw	2,010	37.5	Sept. 2, 1938	P,W	U		Destroyed in early 1940.
218	Mrs. Tom Berry	1910	13	4	Pw	2,021	12.4 13	Aug. 30, 1938 Jan. 1968	N	U		Abandoned. Plugged at 13 ft.
\$ 219	City of Wellington	1962	105	12	Qal <sub>l</sub> ,Pw	1,997	20.1 43.2	Oct. 19, 1966 Oct. 25, 1967	T,E	Ρ		This well replaces wells DU-12-15-226 and DU-12-15-227. Yield 150 gpm Oct. 25, 1967. Red beds at 80 ft.
220	Claude W. Caison	1957	104	6	Pw	2,041	24.8	Jan. 16, 1968	T,E	I	14	Cased to 73 ft. Yield 125 gpm Jan. 16, 1968.
221	Oran D. Starkey	1964	71	6	Pw	2,033	23.0	Nov. 1, 1967	S,E	Н		Cased to 65 ft. Yield 12 gpm Nov. 1, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
U-12-15-222	City of Wellington	1956	39	18	Qal <sub>l</sub> ,Pw	1,997	27.1	Oct. 25, 1967	N	U		Test pumped at 125 gpm when drilled. However, silted in and abandoned
223	City of Wellington well 8	1950	94	8	Qal <sub>l</sub> ,Pw	1,990	16.0 21.4	Oct. 19, 1966 Oct. 25, 1967	T,E	Ρ		Yield 150 gpm Oct. 25, 1967.
224	John C. Harper	1953	100	12	Pw	2,047	29.9 19.4	Jan. 13, 1956 Nov. 8, 1967	T,E	I	20	Historical observation well. Yield 160 gpm Nov. 8, 1967.
225	do	1954	104	8	Pw	2,049	17.1	Nov. 8, 1967	J,E	Н,І	3	Cased to 20 ft. Yield 45 gpm Nov. 8, 1967.
226	City of Wellington	1922	35	20	Qalı	1,992	9.2	Oct. 10, 1938				Well destroyed, origina public supply replaced I well DU-12-15-219.
227	do	1915	35	20	Qalı	1,997	13.6	do				Abandoned. Plugged with concrete cover. Replaced by well DU-12-15-219.
228	do	1915	35	20	Qalı	1,997	13.6	do				Abandoned. Plugged at 4 ft.
229	do	1923	35	20	Qalı	1,993	12	Oct. 1938				Abandoned when visited Oct. 25, 1967.
230	do	1930	20	20	Qalı	1,993	12	Oct. 1938				Destroyed.
301	Mrs. F. O. Masten	1938	27	5	Pw	1,971	12.3	Sept. 2, 1938	Р,Н	U		Destroyed when visited June 23, 1967.
302	W. R. Adams	1963	54	6	Pw	1,942	31 28.7	July 1963 June 22, 1967	Ρ,₩	S		Cased to 30 ft. Yield 3 gpm June 22, 1967.
303	Harold Caldwell	1938	22	5	Qalı,Pw	1,961	16.7	Aug. 26, 1938	P,W	U		Abandoned.
304	Odessa Bowen	1938	47		Qal <sub>l</sub> ,Pw	1,974	22.4	Aug. 29, 1938	P,W	H,S		
305	Paul Guthrie	1962	46	6	Pw	1,970	12.8	June 23, 1967	S,E	н		Cased to 31 ft. Yield 10 gpm June 23, 1967.
306	W. A. Colson	1950	65	6	Pw,Pdb	1,970	37	July 1966	J,E	Н		

See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-15-307	J. B. Killian		28	6	Pdb	1,950	15.9	June 23, 1967	Ρ,₩	S		Yield 2 gpm June 23, 1967.
401	N. Clarence Tennison Estate	1954	139	12	Pdb	1,954	50.0	June 14, 1967	N	U		Unused irrigation well since 1965; usually pumped 600 gpm.
402	John E. Forbis		50	6	Pw	1,955	26.3	do	Ρ,₩	s		
403	Henard Gray	1962	220	16	Pdb	1,931	71.5	Mar. 2, 1967	T,G	I		Used for irrigation in emergency since it plugs up with shale balls. Yield 350 gpm Mar. 2, 1967.
404	B. Skelly	1938	2	2	Pdb	1,919	72.1	Aug. 24, 1938	N	U		Abandoned. Plugged at 2 ft when visited Mar. 2 1967.
405	Otis Emmert	1962	200	12	Pdb	1,928	60	Dec. 1962	T,G	1	40	Cased to 186 ft. Yield 600 gpm Dec. 1962.
501	J. B. Castleberry	1953	238	16	Pdb	1,940	81.4 82.1	Jan. 11, 1954 Mar. 2, 1967	T,G	I	110	Observation well. Cased to 178 ft.
502	Lloyd Wooldridge	1960	63	4	Pw	1,951	32.1	June 15, 1967	P,W	S		Cased to 40 ft. Yield 2 gpm June 15, 1967.
503	Elbert Watts	1957	47	10	Pw	1,962	16.2	June 23, 1967	N	U		Abandoned irrigation wel
504	do	1930	74	5	Pw	1,966	51.7	Oct. 21, 1938	Ρ,₩	U		Destroyed when visited June 15, 1967.
505	Robert Posey	1925	196	5	Pdb	1,983	109.3 109.6	Sept. 8, 1938 June 15, 1967	P,W	S		Yield 3 gpm June 15, 1967.
506	Mrs. R. C. Patrick	1935	171	6	Pdb	1,999	69.9 48.0	Sept. 8, 1938 June 14, 1967	P,E	S		Yield 4 gpm June 14, 1967.
507	J. B. Baumgardner, et al.	1920	83	5	Pdb	1,982	57.5	Sept. 8, 1938	N	U		Destroyed when visited June 15, 1967.
508	J. B. Castleberry		53	6	Pw	1,936	28.1	Mar 2, 1967	N	U		Abandoned.

See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-15-509	Henard Gray	1963	205	16	Pdb	1,930	70.4	Mar. 2, 1967	T,G	I	74	Cased to bottom. Yield 500 gpm Mar. 2, 1967.
510	Lloyd Wooldridge	1957	250	16	Pdb	1,951	32	June 1967	T,G	I	50	Cased to 210 ft. Yield 375 gpm June 1967.
601	Mrs. Sidney E. Elmore	1955	200	12	Qal <sub>l</sub> ,Pw	1,964	71.5 64.0	Jan. 13, 1956 June 20, 1967	T,G	I	55	Cased to 140 ft. Observation well. Yield 400 gpm June 20, 1967. Red beds at 200 ft.
602	Barney Glenn	1954	130	14	Qalı	1,964	64.1 62.9	Jan. 12, 1955 June 20, 1967	J,S	S		Observation well. Red beds at 127 ft. Cased to 97 ft. Yield 10 gpm June 20, 1967. Originally pumped about 175 gpm.
603	do	1953	135	14	Qalı	1,964	64.7 63	Jan. 12, 1955 June 1967	Ν	U		Observation well. Abandoned irrigation well. Red beds at 135 ft. Plugged with cans, when visited June 20, 1967. Reported yield 200 gpm.
604	Elvis D. Crawley	1966	344	16	Pw	1,956	117.1	Nov. 11, 1967	T,E	Ι	85	Cased to 193 ft. Red beds at 20 ft. Yield 600 gpm Nov. 11, 1967. Replaces well DU-12-15-628; edge of collapsed sink or channel fill.
605	do	1951	204	14	Qalı	1,947	61.6 121.3	Jan. 12, 1955 June 22, 1967	T,G	I	40	Collapsed sink or channel fill. Yield 600 gpm June 22, 1967. Cased to 140 ft.
606	J. A. Killian	1956	53	5	Pw	1,948	15.1	June 20, 1967	J,E	S		Yield 12 gpm June 20, 1967.
607	R. F. Jaquier	1920	50	5	Pw	1,951			Р,Н	U		Old Fresno Public School well; now destroyed when visited June 20, 1967.

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Table 7.--Records of Wells and Springs in Collingsworth County--Continued

See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-15-608	Pink Sullivan Estate	1955	235	12	Qalı,Pw, Pdb	1,958	119.4	Nov. 11, 1967	T,G	1	110	Collapsed sink or channel fill. Yield 420 gpm Nov. 11, 1967.
609	Barney Glenn	1957	172	12	Qal <sub>l</sub> ,Pw, Pdb	1,962	118.9	June 22, 1967	N	U		Abandoned irrigation well. Broken casing. Reported yield was 500 gpm. Replaced by well DU-12-15-611.
610	Elvis D. Crawley	1965	352	16	Qalı,Pw, Pdb	1,957	60 118.9	Sept. 1965 Nov. 11, 1967	T,E	1		Well on underground system with well DU-12-15-604, collapsed sink or channel fill. Yield 600 gpm Nov. 11, 1967.
611	Barney Glenn	1964	214	12	Qal <sub>l</sub> ,Pw	1,961	92 120.5	July 1964 June 22, 1967	T,G	1	40	Collapsed sink or channel fill. Yield 250 gpm June 22, 1967.
612	Mrs. Sidney E. Elmore			6	Qal <sub>l</sub> ,Pw	1,964	58.8 64.0	Sept. 8, 1938 June 20, 1967	P,W	S		Old well drilled in early 1900; replaced by new well. Yield 3 gpm June 20, 1967.
613	Maude and Lora Glenn	1938	36	6	Pw	1,935	31.2	Oct. 21, 1938	P,W	U		Destroyed when visited June 22, 1967.
614	Lewis E. Allred	1953	45	6	Qal2	1,942	28.0 22.6	Aug. 25, 1938 June 22, 1967	P,W	S		Yield 3 gpm June 22, 1967.
615	J. H. Wood	1920	54	4	Qal2	1,965	33.1	Aug. 26, 1938	P,W	U		Destroyed when visited June 20, 1967.
616	Robert Posey		63	5	Qal2	1,961	34.6	June 20, 1967	P,W	S		Yield 2 gpm June 20, 1967.
617	Barney Glenn	1957	175	12	Qal <sub>l</sub> ,Pw	1,963	117.4	June 22, 1967	T,G	1	50	Collapsed sink or channel fill. Yield 300 gpm June 22, 1967.
618	do	1956	225	12	Qal <sub>l</sub> ,Pw	1,961	120.5	do	T,G	1	120	Collapsed sink or channel fill. Yield 700 gpm June 22, 1967.

Table 7.--Records of Wells and 9prings in Collingsworth County--Continued

			DEPTH	DIAM-	-	ALTITUDE	WA	TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-15-619	Dan Henard	1961	47	9	Qal2	1,929	7.4	June 20, 1967	S,E	1	60	Nine wells DU-12-15-619- 627 on manifold system. Yielding 450 gpm June 20, 1967.
620	do	1961	50	12	Qal2	1,928	5.1	do	S,E	T		
621	do	1961	44	12	Qal2	1,930	8.7	do	S,E	1		Reported red beds at 50 ft.
622	do	1961	49	9	Qal2	1,940	14.0	do	S,E	1		
623	do	1961	47	10	Qal2	1,932	9.9	do	S,E	1		
624	do	1963	48	8	Qal2	1,930	7.1	do	S,E	T.		
625	do	1961	49	8	Qal2	1,933	8.4	do	S,E	I		
626	do	1963	47	8	Qal2	1,933	6.9	do	S,E	T		
627	do	1963	46	8	Qal2	1,933	7.0	do	S,E	1		
628	Elvis D. Crawley	1951	230	16	Qalı	1,956	50 117	Aug. 1955 Mar. 1967	Ν	U		Abandoned irrigation well. Original reported yield was 600 gpm, but corroded or silted in; replaced by well DU-12-15-604.
701	Palo C. Cummings	1955	124	10	Pdb	1,869	25 37.0	Aug. 1955 Mar. 2, 1967	N	U		Abandoned irrigation well. Reported yield was 300 gpm.
702	Fred Covey	1965	225	12	Pdb	1,916	76.3	June 16, 1967	T,G	I	60	Yield 740 gpm June 16, 1967.
703	Robert Barjenbruch	1962	90	12	Pdb	1,845	34.9	June 21, 1967	T,G	1	120	Cased to 60 ft. Yield 600 gpm June 21, 1967.
704	Delbert Seal	1964	170	14	Pdb	1,885	63.7	do	T,G	1	75	Yield 500 gpm June 21, 1967.
705	Palo C. Cummings	1966	97	12	Pdb	1,891	51 46.4	Mar. 1966 Mar. 2, 1967	T,G	1	50	Cased to 72 ft. Yield 400 gpm Mar. 2, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-15-706	C. Lewis	1935	24	4	Pw,Pdb	1,910	66.8	Sept. 8, 1938	P,W	U		Abandoned; caved in at 23 ft when visited June 16, 1967.
707	Delbert Seal	1964	160	14	Pdb	1,875	56.0	June 21, 1967	T,G	Т	75	Yield 500 gpm June 21, 1967.
708	C. E. Roberts	1967	118	6	Pdb	1,883	40.0	Aug. 13, 1967	P,W	H,S		Driller estimated yield at 100 gpm with air test when drilled. Yield 3 gpm Aug. 13, 1967. Cased to 107 ft.
709	Douglas Seal	1963	157	6	Pdb	1,898	87 81.1	June 1963 June 21, 1967	S,E	Н		Cased to 150 ft. Yield 10 gpm June 21, 1967.
801	Robert E. Copeland	1955	170	12	Pdb	1,870	40 40	Aug. 1955 June 1967	T,G	1	75	Cased to 153 ft. Yield 700 gpm June 1967.
802	Garland Motley Estate	1957			Pdb	1,892	53.6 61.9	Jan. 7, 1958 June 15, 1967	T,G	1	60	Observation well. Yield 600 gpm June 15, 1967.
803	John L. Brim	1957	311	12	Pdb	1,876	42 49.9	Apr. 1957 June 15, 1967	T,G	1	100	Cased to 190 ft. Yield 820 gpm June 15, 1967. Drawdown at 550 gpm is estimated at 8 ft.
804	Willie West	1950	134	6	Pdb	1,850	20.1	June 21, 1967	S,E	S		Replaced old well DU-12-15-809. Yield 13 gpm June 15, 1967.
805	Allen L. Graves	1961	64	6	Pw	1,968	55.7	June 15, 1967	Ρ,₩	S		Cased to 115 ft. Red beds at surface. Yield 13 gpm June 21, 1967. Cased to 63 ft.
806	J. Hunsaker	1938	149	6	Pdb	1,906	70.4	Aug. 25, 1938	Ρ,₩	U		
807	Selma Lee McAlister	1938	5	4	Pdb	1,970	128.7 64	Sept. 8, 1938 June 1967	N	U		Abandoned; replaced by well DU-12-15-810.
808	Howard Gray	1938	50	5	Pdb	1,961	50	Sept. 1938	N	U		Abandoned when visited June 16, 1967.

See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-15-809	Willie West	1900	53	4	Pdb	1,851	18.1 19	Sept.24, 1938 June 1967	Ρ,₩	S		Destroyed when visited June 21, 1967; replaced by well DU-12-15-804.
810	Selma Lee McAlister	1966	138	6	Pdb	1,968	62.9	June 15, 1967	S,E	S		Replaces well DU-12-15-807. Yield 8 gpm June 15, 1967. Cased to 120 ft.
* 811	Robert E. Copeland	1960	300	16	Pdb	1,892	58.8	do	T,G	1	65	Yield 600 gpm June 15, 1967.
* 812	Robert Posey	1957	247	12	Pdb	1,976	91.6	June 16, 1967	N	U		Abandoned irrigation well. Original yield reported 400 gpm, but shaled in too much.
901	L. F. Watts	1966	194	6	Pdb	1,894	55.0	June 21, 1967	S,E	H,S		Cased to 158 ft. Replaces old well drilled in 1938. Yield 10 gpm June 21, 1967.
902	Tiffin Young	1938	144	6	Pdb	1,886	47.6 51.2	Oct. 21, 1938 June 21, 1967	Ρ,₩	S		Yield 2 gpm June 21, 1967.
903	C. C. Smith	1925	99	6	Qal <sub>2</sub> ,Pw	1,968	69.9 69.9	Sept. 2, 1938 June 22, 1967	P',W	H,S		Yield 3 gpm June 22, 1967.
\$ 904	Lonnie Hollingsworth	1938	85	6	Pw	1,955	66.5 54.8	Sept. 8, 1938 June 20, 1967	P,W	S		Yield 3 gpm June 20, 1967.
905	Mrs. Lester R. Harwell	1963	45	6	Pw	1,930	32 46.5	Jan. 1963 June 20, 1967	Ρ,₩	S		Cased to 40 ft. Yield 2 gpm June 20, 1967.
906	Mrs. R. B. Young	1921	111	4	Pw	1,958	100.5	Sept. 2, 1938 June 21, 1967	P,W	U		Abandoned.
907	Barney Glenn	1954				1,966	57.4 57.8	Jan. 12, 1955 Jan. 13, 1956	N	U		Historical observation well. Destroyed. Originally used for irrigation.
16-101	George H. Brewer	1938	34	5	Qal2	1,991	23.0 21.5	Aug. 26, 1938 June 22, 1967	Ρ,₩	U		Abandoned. Yield 2 gpm June 22, 1967.

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See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE	WA	TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-16-102	John Coffee	1920	27	6	Qa12	1,968	18.9 27	Aug. 26, 1938 June 1967	Ρ,₩	U		Abandoned.
103	Kelly Pigg	1967	342	6	Pw,Pdb	1,970	24	Aug. 1967	Ρ,₩	S		Yield 5 gpm Aug. 1967.
104	Dick Swpat	1938	35		Qa12	1,943	9.5	Sept. 2, 1938		U		Destroyed when visited Sept. 15, 1967.
105	T. D. Nored	1953	70	6	Qal2	1,973	17.6	Aug. 9, 1967	S,E	H,S		Yield 12 gpm Aug. 9, 1967.
106	Mrs. Quinton Brewer	1965	40	6	Pw	1,991	21 26.3	Nov. 1965 June 28, 1967	P,W	S		Red beds at 23 ft. Yield 2 gpm June 28, 1967.
* 107	William E. Hughes	1942	23	5	Pw	1,861	13 13.2	Oct. 1953 Sept.15, 1967	Ρ,₩	S		Mill Iron Ranches well 127. Red beds at 30 ft. Yield 2 gpm Sept. 15, 1967.
108	do	1951	32	6	Qal <sub>2</sub> ,Pw	1,924	23.1	Sept.15, 1967	Ρ,₩	S		Mill Iron Ranches well 127. Red beds at 30 ft. Yield 1 gpm Sept. 15, 1967.
109	do	149	365	6	Pdb	1,907			N	U		Mill Iron Ranches well 145. Well abandoned in 1954, because water too salty.
201	Herbert L. Bearden	1938	14	48	Qal <sub>l</sub> ,Pw	1,890	11.5 13.6	Oct. 5, 1938 Sept.15, 1967	N	U		Dug well. Abandoned.
202	do	1938	32	6	Qal <sub>l</sub> ,Pw	1,890	11.5 13.6	Oct. 5, 1938 Sept.15, 1967	P,W	S		Yield 2 gpm Sept. 15, 1967.
203	William E. Hughes		Spring		Pw	1,815	+ +	Oct. 5, 1938 Jan. 12, 1967	Flows	S		Flows into Sand Creek. Flowed 675 gpm Jan. 12, 1967.
204	do	1930	35	6	Pw	1,840	34	Oct. 1938	Ρ,₩	U		Mill Iron Ranches well 36. Destroyed when visited Sept. 15, 1967.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

			DEPTH	ETER	WATER- BEARING UNIT	ALTITUDE		TER LEVEL			IRRIGATED ACRES (APPROXI- MATE) 1967	REMARKS
WELL OWNER	OWNER	OWNER COM- PLET- ED	OF WELL (FT)			OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER		
*DU-12-16-205	William E. Hughes		45	8	Pw	1,838	28.8	Sept.15, 1967	P,W	H,S		Mill Iron Ranches well 140. Replaces well DU-12-16-204. Yield 2 gpm Sept. 15, 1967.
206	do	1950	53		Pw	1,870	28	Sept. 1953	P,W	S		Mill Iron Ranches well 35.
207	do	1952	31	6	Qa11	1,840			Ρ,Ν	U		Mill Iron Ranches well 147. Reported bailed 10 gpm when drilled. Red beds at 27 ft.
208	do	1951	98	5	Pw	1,841	77	Oct. 1953	P,W	S		Mill Iron Ranches well 126. Red beds at 20 ft.
209	do	1952	91	6	Pw	1,895	50	Nov. 1967	Ρ,₩	S		Mill Iron Ranches well 148. Reported bailed 10 gpm when drilled. Red beds at 6 ft.
210	do	1950	35		Qalı	1,841	15	Oct. 1953	Ρ,₩	S		Mill Iron Ranches well 37.
211	do	1940	47		Qal2	1,953	18	Sept. 1953	₽,₩	S		Mill Iron Ranches well 38.
301	do	1955	150	6	Pw	1,880			Ρ,₩	S		Mill Iron Ranches well 189. Reported bailed 6 gpm when drilled. Cased to 71 ft.
302	Truman Estes		60	4	Pw	1,890	37.9	Sept.14, 1967	P,W	S		Yield 2 gpm Sept. 14, 1967.
303	William E. Hughes	1940	24	6	Qal <sub>l</sub>	1,796	5	Oct. 1953	Ν	U		Mill Iron Ranches well 34. Abandoned and replaced by well DU-12-16-304.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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WELL OWN		OWNER COM- PLET- ED	DEPTH	ETER L OF	WATER- BEARING UNIT	ALTITUDE OF LAND SURFACE DATUM (FT)		TER LEVEL		USE OF WATER	IRRIGATED ACRES (APPROXI- MATE) 1967	REMARKS
	OWNER		OF WELL (FT)				BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT			
DU-12-16-304	William E. Hughes	1966	26	5	Qal <sub>l</sub>	1,796	9.8	Sept.15, 1967	Ρ,₩	S		Mill Iron Ranches well 34-A. Reported bailed 10 gpm when drilled. Yield 3 gpm Sept. 15, 1967. Red beds at 28 ft.
305	do		Springs		Qalı	1,870	+	Sept. 9, 1967	Flows	S		Springs at Hay Camp Headquarters. Flowed 45 gpm Sept. 9, 1967.
306	do	1951	102	5	Pw	1,954	36	0ct. 1953	Ρ,₩	S		Mill Iron Ranches well 131. Reported bailed 3 gpm when drilled. Red beds at 75 ft.
307	do	1925	24	45	Qal <sub>l</sub>	1,890	14.9	Sept.15, 1967	J,E	Н		Mill Iron Ranches well 32. Three pumps supplies Hays Camp Headquarters. Yield 50 gpm Sept. 15, 1967.
401	H. Deskin Wells	1955	140	12	Qalı	1,954	75.3	Nov. 11, 1967	T,E	1	160	Cased to 85 ft. Yield 350 gpm Nov. 11, 1967.
402	Earl Janes	1956	180	12	Pdb	1,958	74.6	June 22, 1967	T,G	T	100	Cased to 100 ft. Yield 650 gpm June 22, 1967.
403	Pink Sullivan Estate	1938	61	5	Qal2	1,961	58.5 61	Sept. 2, 1938 June 1967	N	U		Abandoned.
404	Mrs. T. L. Scott	1938	94	5	Pw,Qal2	1,970	60.9 36.1	Oct. 21, 1938 June 22, 1967	P,W	U		Abandoned. Yield 2 gpm June 22, 1967.
405	J. W. White	1962	68	6	Pw	1,930	30	May 1962	N	U		Abandoned.
406	do	1962	40	6	Pw	1,945	22.9	June 22, 1967	S,E	Н		Yield 4 gpm June 22, 1967.
407	Claude C. Smith	1966	180	16	Qalı	1,956	85.3	do	T,G	1	80	Cased to 120 ft. Yield 450 gpm June 22, 1967.
408	Floyd Teutsch	1938	30	5	Qalı	1,929	18.1	Aug. 26, 1938	P,W	S		Destroyed when visited June 22, 1967.
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Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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WELL	OWNER		DEPTH	ETER	WATER- BEARING UNIT	ALTITUDE OF LAND SURFACE DATUM (FT)		TER LEVEL	METHOD OF LIFT	USE OF WATER	IRRIGATED ACRES (APPROXI- MATE) 1967	REMARKS
		DATE COM- PLET- ED	OF WELL (FT)				BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT				
DU-12-16-409	Wayne Reynolds	1938	56	5	Qal2	1,942	41.6 35.7	Oct. 5, 1938 June 28, 1967	N	U		Abandoned.
410	A. B. Hicks & John Jackson				Qal <sub>2</sub> ,Pw	1,955	73.1	Nov. 11, 1967	T,G	1	80	Yield 400 gpm Nov. 11, 1967.
411	Pink Sullivan Estate		34	6	Qal2	1,956	74.7	June 22, 1967	N	U		
501	Cliff Camp	1955	102	12	Qa12	1,954	53.2 63.0	Jan. 11, 1956 June 23, 1967	N	U		Abandoned irrigation well Reported yield 200 gpm when drilled. Cased to 56 ft.
502	do	1955	106	12	Qal2	1,956	54.6 54.1	Jan. 11, 1956 June 23, 1967	T,E	1	60	Observation well. Cased to 66 ft. Yield 400 gpm June 23, 1967.
503	Thomas L. Carter	1956	125	12	Pw	1,959	38.1	June 28, 1967	T,E	I	20	Reported pumps about 90 gpm. Yield 100 gpm June 28, 1967.
504	Walter H. Camp	1960	239	14	Qal <sub>2</sub> ,Pw	1,974	65	June 1967	T,G	I	100	Cased to 30 ft. Pumping level measured at 90.1 ft below land surface datum. Yield 560 gpm June 1967.
505	Mrs. J. H. Birchfield	1965	97	6	Qal <sub>2</sub> ,Pw	1,949	63 61.8	Aug. 1965 June 23, 1967	S,E	H,S		Cased to 46 ft. Yield 12 gpm June 23, 1967.
506	Walter H. Camp	1938	8	4	Qal2,Pw	1,950	54	Oct. 1938	N	U		Abandoned.
507	F. L. White	1908	65	6	Qal2	1,971	61.0 52.2	Oct. 5, 1938 June 27, 1967	N	U		Do.
508	Joe E. Tarver	1904	61	4	Qal2	1,966	56.4	Aug. 26, 1938	P,W	U		Destroyed when visited June 23, 1967.
509	Fred Paterson	1964	80	6	Qal2	1,970	43.8	June 27, 1967	S,E	Н		Yield 8 gpm June 27, 1967.
510	Mrs. Dayro C. Camp	1965	80	6	Pw,Qal2	1,954	42	May 1965	S,E	Н		Yield 6 gpm May 1965.
601	Walter H. Camp	1938	61	4	Pw,Qal2	1,945	48.0 44.2	Oct. 5, 1938 June 23, 1967	N	U		

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

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	OWNER	DATE COM- PLET- ED	DEPTH	F ETER	WATER- BEARING UNIT	ALTITUDE OF LAND SURFACE DATUM (FT)	WATER LEVEL				IRRIGATED	
WELL			OF WELL (FT)				BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	OF	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-16-602	W. Orville Vaughn	1956	115	18	Pw,Qal2	1,940	29.9	June 21, 1967	T,E	I	54	Cased to 90 ft. Yield 250 gpm June 21, 1967.
603	William E. Hughes	1940	66	5	Qal2	1,949	56.1	June 23, 1967	Ρ,₩	S		Mill Iron Ranches well 130. Yield 3 gpm June 23, 1967.
604	W. M. White	1938	34	6	Qal2	1,905	16.1	Oct. 5, 1938	Ρ,₩	U		Abandoned and plugged when visited June 23, 1967.
605	W. Orville Vaughn	1962	79	6	Qal2	1,958	44.5	June 21, 1967	Ρ,₩	S		Cased to 53 ft. Yield 3 gpm June 21, 1967.
606	Louis E. Patterson	1962	189	14	Pdb,Qal2	1,942	40	July 1962	T,G	1	88	Cased to 176 ft. Yield 600 gpm June 21, 1967. Pumping level measured at 82.5 below land surface.
607	City of Dodson	1966	55	10	Qal2	1,936	25.4	June 22, 1967	T,E	Р		Yield 350 gpm June 22, 1967.
608	William E. Hughes	1955	100	6	Qal2	1,957	70	Nov. 1967	N	U		Abandoned. Mill Iron Ranches well 190. Red beds at 80 ft.
701	John E. Forbis	1938	86	5	Qal2	1,950	72.5	Sept. 2, 1938	Ρ,₩	U		Destroyed in 1966, replaced by well DU-12-16-704.
702	E. C. Alexander	1929	120	5	Pw	1,865	96.9 159.8	Aug. 25, 1938 June 16, 1967	Ρ,₩	S		Yield 2 gpm June 16, 1967.
703	John E. Forbis	1959	146	6	Pw	1,889	98.8	June 16, 1967	P,W	S		Yield 2 gpm June 16, 1967.
704	do	1965	90	6	Qal 2	1,950	66.2	June 20, 1967	S,E	S		Cased to 60 ft. Yield 6 gpm June 20, 1967. Replaced well DU-12-16-701.
705	R. J. Holland		200	6	Pw,Pdb	1,920	193.6	June 27, 1967	P,W	S		Yield 2 gpm June 27, 1967.

Table 7 Records	of Wells and	Springs in Collingsworth	CountyContinued
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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-16-801	L. W. Alexander	1935	99	6	Pw	1,821	39.7	Sept. 2, 1938	N	U		Destroyed when visited June 22, 1967.
802	J. B. Hollis	1938	130	6	Pw,Pdb	1,819	36.5	Oct. 21, 1938	N	U		Abandoned and plugged at 4 ft June 22, 1967.
* 803	do	1964	75	6	Pw,Pdb	1,819	26 18.1	Apr. 1964 June 22, 1967	S,E	S		Cased to 50 ft. Red beds at 5 ft. Yield 2 gpm June 22, 1967.
805	M. D. Younger		140	9	Pw	1,814	18.6	June 22, 1967	Ρ,₩	U		Yield 2 gpm June 22, 1967.
806	C. E. Hightower	1938	70	4	Pw,Qal2	1,880	39.6	Aug. 25, 1938	P,W	U		Abandoned and plugged at 5 ft when visited June 23, 1967.
807	W. E. Patterson	1938	57	6	Qal <sub>2</sub> ,Pw	1,931	48.2	Oct. 21, 1938	Ρ,₩	U		Destroyed and replaced by well Du-12-16-811 when visited June 20, 1967.
808	Garland Hightower	1938	14	48	Qalı	1,847	9 13.3	Jan. 1938 Oct. 5, 1938	P,H	U		Destroyed when visited June 22, 1967.
809	do	1938	36	6	Pw	1,852	30.0 18.7	Oct. 5, 1938 June 27, 1967	В,Н	U		Abandoned when visited June 22, 1967.
810	do	1930	33	30	Pw	1,853	31.1	Oct. 5, 1938	Ρ,₩	U		Destroyed when visited June 22, 1967.
811	W. E. Patterson	1953	55	6	Qal <sub>2</sub> ,Pw	1,935	47.5	June 20, 1967	P,E	H		Yield 4 gpm June 20, 1967.
* 901	City of Dodson	1935	57	6	Qal <sub>2</sub> ,Pw	1,888	30 29	Aug. 1955 June 1967	N	U		Abandoned public supply well. Reported original yield 22 gpm. Red beds at 57 ft.
* 902	do	1942	83	6	Qal <sub>2</sub> ,Pw	1,930	70 40.4	Aug. 1955 June 20, 1967	N	U		Abandoned public supply well. Reported original yield 50 gpm in 1943 and 18 gpm in 1955. Red beds at 100 ft.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

See footnote at end of table

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			DEPTH	DIAM-		ALTITUDE		TER LEVEL			IRRIGATED	
WELL	OWNER	DATE COM- PLET- ED	OF WELL (FT)	ETER OF WELL (IN.)	WATER- BEARING UNIT	OF LAND SURFACE DATUM (FT)	BELOW LAND- SURFACE DATUM (FT)	DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-16-903	City of Dodson	1953	76	8	Qal <sub>2</sub> ,Pw	1,920	33.7	June 20, 1967	N	U		Abandoned public supply well.
904	Murray J. Dodson	1938	62	5	Qal2,Pw	1,893	41.3	June 23, 1967	Ρ,₩	Н		Yield 2 gpm June 23, 1967.
905	do	1965	45	6	Qal <sub>2</sub> ,Pw	1,815	21 30.6	Apr. 1965 June 20, 1967	Ρ,₩	S		Cased to 27 ft. Yield June 20, 1967.
906	Mrs. Mattie E. Jameson	1915	22	48	Qal <sub>2</sub> ,Pw	1,778	15.4 14.4	Sept. 2, 1938 June 20, 1967	Ρ,₩	S		Yield 4 gpm June 20, 1967.
* 907	Mrs. B. T. Webb	1950	61	5	Qal <sub>2</sub> ,Pw	1,813	14.5	June 21, 1967	S,E	Н		Yield 8 gpm June 21, 1967.
908	Murray J. Dodson	1965	80	6	Pw	1,895	18 23.1	Apr. 1965 June 27, 1967	P,W	S		Cased to 34 ft. Yield 3 gpm June 27, 1967.
909	City of Dodson	1935	26	6	Qal <sub>2</sub> ,Pw	1,888	26	June 1967	N	U		Abandoned public supply well.
910	do	1935	26	6	Qal2,Pw	1,888	26	June 1967	N	U		Do.
911	do	1936	37	10	Qal2,Pw	1,888	28.6	June 22, 1967	N	U		Do.
23-101	E. N. Lewis	1938	83	6	Pw,Pdb	1,860	49.6	Aug. 24, 1938	P,W	U		Destroyed when visited June 21, 1967.
102	Robert Barjenbruch	1956	23	2	Qal <sub>l</sub>	1,813	5	June 21, 1967	C,G	1	30	Cased to 21 ft. There are 31 sand point wells all alike on 6-in. manifold system. Yield 250 gpm June 21, 1967.
103	Lucille A. Greer		Spring		Pdb	1,810	+	June 21, 1967	Flows	S		Flows into Buck Creek at Collingsworth-Childress county line. Flowed 4 gpm June 23, 1967. Most of water goes as under- flow into alluvium channel.
201	J. Temple Slay	1935	139	4	Pdb	1,880	46.2	do	Ρ,₩	U		Abandoned.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

See footnote at end of table

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WELL	OWNER	DATE COM- PLĘT- ED	DEPTH OF WELL (FT)	DIAM- ETER OF WELL (IN.)	WATER- BEARING UNIT	ALTITUDE OF LAND SURFACE DATUM (FT)	WA BELOW LAND- SURFACE DATUM (FT)	TER LEVEL DATE OF MEASUREMENT	METHOD OF LIFT	USE OF WATER	IRRIGATED ACRES (APPROXI- MATE) 1967	REMARKS
DU-12-24-101	Carroll W. Watts	1938	76	6	Qalı	1,847	45.4 36.2	Sept. 2, 1938 June 20, 1967	N	U		Abandoned.
201	Fred Corey	1963	180	14	Pdb	1,795	82.6	June 22, 1967	T,G	1	88	Yield 575 gpm June 22, 1967.
202	do	1930	93	6	Pw,Pdb	1,797	66.4	Sept. 2, 1938	P,W	S		Destroyed when visited June 22, 1967.
301	Mrs. Dolly Whisenant	1900	60	5	Pw,Pdb	1,748	13.8 14.0	Sept. 2, 1938 June 20, 1967	N	U		Abandoned; high salt content.

Table 7.--Records of Wells and Springs in Collingsworth County--Continued

\* For chemical analyses of water from wells and springs, see Table 8.

#### Table 8. -- Chemical Analyses of Water from Wells and Springs in Collingsworth County

Water-bearing unit: Qal<sub>1</sub>, alluvial terrace and channel deposits; Qal<sub>2</sub>, alluvial plain deposits; Pw, Permian Whitehorse Group; Pdb, Permian Dog Creek Shale and Blaine Formation; Pf, Permian Flowerpot Shale; To, Ogallala Formation.

(Analyses Given are in Milligrams Per Liter except Percent Sodium, SAR, RSC, Specific Conductance and pH.)

WELL	DEPTH OR PRODUC ING INTERVAL (FT)	DATE OF COLLECTION		SILICA (SiO <sub>2</sub> )		CAL- CIUM (Ca)	MAGNE - SIUM (Mg)	SODIUM (Na)	POTAS - SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )		CHLO- RIDE (C1)	FLUO- RIDE (F)	NI- TRATE (NO3)	BORON (B)	DIS- SOLVED SOLIDS	NESS AS	PER - CENT SO - DIUM	SODIUM ADSORP- TION RATIO (SAR)	RESI- DUAL SODIUM CAR- BONATE (RSC)	SPECIFIC CONDUCT- ANCE (MICROMHOS AT 25°C)	рН
DU-05-52-601	170	Oct. 7, 1938	То			43	9	*22		201	16	9	0.3	<20		199	146					
601	146	July 26, 1967	То							292	13	8.9	1				234			0.11	504	7.5
905	Spring	do	To, Qal <sub>1</sub>	32		120	24	46	1.9	296	224	22	.9	2.5		619	398	20	1.0	.00	887	8.0
53-601	103	Aug. 29, 1967	Pw	24		154	42	48	2.0	268	366	59	.6	3.5		831	556	16	.9	.00	1,150	7.7
701	62	July 26, 1967	Pw							158	301	11					424			.00	825	7.5
803	61	July 25, 1967	Pw							344	14	11					268			.28	573	7.6
804	129	do	Pw							130	936	58					1,060			.00	1,830	7.5
904	175	July 27, 1967	Pw							216	720	235					888			.00	2,150	7.3
54-401	180-198	July 28, 1967	Pw	29		76	25	27	1.8	216	45	86	.4	12		408	292	17	.7	.00	762	7.8
501	75	Sept. 22, 1967	Pw	29		108	26	44	2.0	298	95	82	.3	25		558	376	20	1.0	.00	897	7.4
601	117	Aug. 1, 1967	Pw							296	65	51					288			.00	817	7.6
<u>1</u> / 707	192-223	Mar. 8, 1965	Pw		<0.02	62	22	36		270	48	23	.6	12		474	244				630	7.7
801	Spring	Apr. 18, 1967	Pdb							216	456	111					600			.00	1,440	7.5
809	45	Sept. 22, 1967	Pdb, Pw							348	206	97					514			.00	1,160	7.4
903	109	do	Pw, Pdb	22		282	40	67	1.9	248	644	95	.7	18		1,290	868	14	1.0	.00	1,680	7.2
55-503	115	do	Pw, Pdb							372	1,460	46					1,800			.00	2,630	7.5
701	77	Aug. 2, 1967	Pw, Pdb							121	1,710	67					1,880			.00	2,780	7.7
702	Spring	do	Pw, Pdb							176	1,540	101					1,740			.00	2,750	7.7
704	Spring	do	Pw, Pdb	22		138	27	74	1.7	250	261	92	1.2	20		760	456	26	1.5	.00	1,150	7.7
801	Spring	Nov. 1, 1938	Pdb			654	82	*42		55	1,879	42		<20		2,726	1,970					
901	Spring	Sept. 22, 1938	Qalı, Pdb			614	218	*41		311	2,136	30		<20		3,192	2,434				2,900	
56-402	100	Sept. 21, 1938	Pdb			606	59	*72	1	256	1,555	44		26		2,488	1,756					

See footnotes at end of table.

WELL	DEPTH OR PRODUC ING INTERVAL (FT)		ATE (		WATER - BEARING UNIT	SILICA (SiO <sub>2</sub> )		CAL- CIUM (Ca)	MAGNE - SIUM (Mg)	SODIUM (Na)	POTAS - SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> ) 4	SUL - FATE (SO <sub>4</sub> )	CHLO- RIDE (C1)	FLUO- RIDE (F)	NI- TRATE (NO <sub>3</sub> )	BORON (B)	DIS- SOLVED SOLIDS	NESS AS	PER - CENT SO - DIUM	TION	RESI- DUAL SODIUM CAR- BONATE (RSC)	SPECIFIC CONDUCT- ANCE (MICROMHOS AT 25°C)	рН
DU-05-56-50	2 Spring	Aug.	30	, 1967	Qal <sub>1</sub> , Pdb							148	1,850	715					2,400			0.00	4,700	7.5
60	1 105		do		Pdb, Pf	12		530	136	205	8.6	88	2,060	87	0.2	0.5		3,080	1,880	19	2.0	.00	3,320	7.7
70	4 Spring	Sept	. 22	, 1938	Pf, Qalı			591	98	*53		134	1,752	43		<20		2,603	1,880					
70	4 Spring	Aug.	3	, 1967	Pf, Qalı	9.1		740	99	194	5.9	126	1,670	620		.8		3,400	2,250	16	1.8	.00	4,140	7.6
80	2 80-103		do		Pdb							198	1,540	40					1,790			.00	2,500	7.5
90	3 Spring	Oct.	31	, 1938	Pdb			604	75	*57		207	1,642	38		<20		2,525	1,816					
90	3 Spring	Nov.	7	, 1967	Pdb							124	1,560	40		13			1,780			.00	2,570	6.8
60-30	4 41	Aug.	30	, 1967	Pw							161	1,920	59		7.1			2,220			.00	2,950	7.4
60	1 90	Sept	. 1	, 1967	Pw	23		695	173	1,680	4.6	92	1,980	2,890				7,490	2,450	60	148		11,000	7.1
60	2 134		do		Pw							71	1,720	47					1,960			.00	2,660	7.2
90	1 139	Aug.	30	, 1967	Pw, Pdb	17		583	153	64	3.0	61	1,950	119		2.5		2,920	2,080	6	.6	.00	3,070	7.2
61-10	2 70- 71	July	24	, 1967	Pw, Pdb							112	1,760	330					2,200			.00	3,510	7.3
10	4 138	July	26	, 1967	Pw						)	216	488	51					660			.00	1,290	7.6
20	2 107	Nov.	7	, 1938	Pw			154	43	*80		92	554	58	. 03	<20		937	562					
20	2 99	July	25	, 1967	Pw							216	400	55					532			.00	1,220	7.4
30	5 80		do		Pw, Pdb							106	1,770	51					1,910			.00	2,810	7.3
40	5 296	July	21	, 1967	Pdb	11	7.2	608	173	576	8.3	126	2,110	860		1.8		4,410	2,230	36	5.3	.00	5,550	7.2
50	7 120	July	18	, 1967	Pw							200	84	7.8	3				242			.00	519	7.7
60	3 117		do		Pdb							152	1,900	415					2,060			.00	4,140	7.5
2 <i>j</i> 70	1 6- 11	Apr.	6	, 1955	Qal1			146		252		235 45	163	337				1,178					1,450	7.6
70	2 101	July	21	, 1967	Pdb, Pw	1.6		555	134	121	3.3	57	1,940	104		4.3		2,910	1,940	12	1.2	.00	3,120	7.7
80	2 30	July	18	, 1967	Qal <sub>l</sub> , Pdb							210	1,560	72					1,640			.00	2,790	7.7
90	Spring	July	11	1967	Pdb							152	1,800	700					2,000			.00	4,690	7.6
90	5 79	Sept.	. 21,	, 1967	Pw	21		67	18	41	1.5	268	57	84	1.2	45		392	241	27	1.1	.00	595	7.9
90	Spring	Apr.	26	1967	Pdb	19		650	94	420	4.3	190	1,820	650	.8	3.9		3,760	2,010	31	4.1	.00	4,640	7.4

### Table 8. -- Chemical Analyses of Water from Wells and Springs in Collingsworth County -- Continued

See footnotes at end of table.

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Table 8. -- Chemical Analyses of Water from Wells and Springs in Collingsworth County -- Continued

	WELL	DEPTH OR PRODUC ING INTERVAL (FT)		ATE O		WATER - BEARING UNIT	SILICA (SiO <sub>2</sub> )	IRON (Fe)	CAL- CIUM (Ca)	MAGNE - SIUM (Mg)	SODIUM (Na)	POTAS - SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	FATE	CHLO- RIDE (C1)	FLUO- RIDE (F)	NI- TRATE (NO <sub>3</sub> )	BORON (B)	DIS- SOLVED SOLIDS	AS	PER- CENT SO- DIUM	SODIUM ADSORP- TION RATIO (SAR)	RESI- DUAL SODIUM CAR- BONATE (RSC)	SPECIFIC CONDUCT- ANCE (MICROMHOS AT 25°C)	5 pH
	DU-05-62-104	94	Sept.	21,	1967	Pw, Pdb	21		620	62	42	3.4	252	1,580	24	0.9	22		2,500	1,800	5	0.4	0.00	2,610	7.7
2/	2.02	134	Feb.	16,	1955	Pdb			425		86		314	833	90				1,747						
	206	Spring	Apr.	6,	1967	Qal <sub>l</sub> , Pdb							432	128	15					420			.00	974	6.8
	209	133	Sept.	21,	1967	Pdb			610	42			184	1,470	58					1,690			.00	2,570	7.5
	302	77-127		do		Pdb	31		500	60	34	33	196	1,290	43	0.9	11		2,070	1,490	5	.4	.00	2,260	7.4
у	304	71	Mar.	8,	1965	Pw		<0.02	66	13	20		207	53	11	.3	33		403	218				546	8.1
у	306	140		do		Pdb		< .02	77	24	31		211	118	24	.8	39		530	294				764	8.0
	310	Spring	Nov.	2,	1938	Pdb			117	19	*24		207	178	40	.4	<20		494	372					
	310	Spring	Apr.	18,	1967	Pdb							268	196	51					432			.00	928	7.3
	405	57	Feb.	11,	1955	Pdb	23		602	81	*63		203	1,640	62	1.0	10		2,580	1,840	7			2,770	7.5
	412	255	Sept.	21,	1967	Pdb							32	584	64					670			.00	1,250	7.0
3/	413	200	May	22,	1957	Pdb			617	83	*183		140 36	1,795	168				3,022	110	17				
	502	160	Feb.	11,	1955	Pdb	20		598	89	*59		214	1,650	60	1.2	7.8		2,590	1,860	6			2,740	7.6
**	505	Spring		do	•	Pdb	19		592	80	*72		180	1,640	70	1.0	7.8		2,570	1,810	8			2,800	7.7
	510	97	Sept.	21,	1967	Pdb	15		538	65	68	2.9	182	1,420	103	.9	1.8		2,300	1,610	8	.7	.00	2,550	7.4
	602	140	Aug.	12,	1941	Pdb			628	.90	*13		248	1,616	44	.9	20		2,530	1,938					
	602	140	Feb.	14,	1961	Pdb	23		618	102	*55		278	1,620	83	.3	59		2,700	1,960	6	.5		2,910	6.7
	611	90	Sept.	21,	1967	Pdb							264	648	70					860			.00	1,620	7.6
	707	94		do		Pdb	16		600	83	60	3.2	192	1,660	67	.7	7.7		2,590	1,840	7	.6	.00	2,730	7.3
	811	70		do		Pdb							204	1,730	206					2,000			.00	3,250	7.7
	903	94		do		Pdb	19		600	76	17	3.3	176	1,610	8	.4	14		2,440	1,810	2	.2	.00	2,530	7.7
	63 - 101	80	Feb.	9,	1961	Pdb	23		602	43	29	1.8	203	1,460	20	.4	39	0.13	2,320	1,680	4	.3		2,520	6.7
	107	149	Sept.	20,	1967	Pdb	3.0		585	45	39	2.5	80	1,560	52	.5	.2		2,330	1,640	5	.4	.00	2,490	7.2
	209	145	Sept.	21,	1967	Pdb							200	1,710	76					1,960		2	.00	2,910	7.5
L	210	Spring	Sept	. 30,	1938	Pdb							214	1,519	46		<20		2,400			!			

See footnotes at end of table.

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WELL	DEPTH OR PRODUCING INTERVAL (FT)	DATE OF COLLECTION	WATER - BEAR ING UNIT	SILICA (SiO <sub>2</sub> )	CAL- CIUM (Ca)	MAGNE - SIUM (Mg)	SODIUM (Na)	POTAS - SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SUL- FATE (SO <sub>4</sub> )	CHLO- RIDE (C1)	FLUO- RIDE (F)	NI- TRATE (NO3)	BORON (B)	DIS- SOLVED SOLIDS	AS	CENT SO-	SODIUM ADSORP- TION RATIO (SAR)	RESI- DUAL SODIUM CAR- BONATE (RSC)	SPECIFIC CONDUCT- ANCE (MICROMHOS AT 25°C)	s pH
**DU-05-63-210	Spring	Apr. 20, 1967	Pdb		 				206	1,480	53					1,700			0.00	2,500	7.3
305	37	Sept. 21, 1967	Pdb	17	 600	65	14	4.4	284	1,510	5.6	0.2	0.2		2,360	1,760	2	0.1	.00	2,480	7.3
403	133	Sept. 20, 1967	Pdb		 				264	352	156					730			.00	1,490	7.6
508	114	Sept. 21, 1967	Pdb	21	 605	121	60	3.4	252	1,760	62	.4	63		2,820	2,010	6	.6	.00	2,960	7.7
612	Spring	Sept. 9, 1938	Pdb		 623	81	*47		220	1,675	40	.4	<20		2,589	1,890				4	
612	Spring	May 1, 1967	Pdb		 				230		50					1,890			.00	2,790	7.4
618	37	Sept. 21, 1967	Qal <sub>1</sub>		 				196	1,340	106					1,420			.00	1,970	7.5
707	109	Sept. 20, 1967	Pdb	16	 515	86	37	5.6	228	1,420	52	. 7	9.1		2,250	1,640	5	.4	.00	2,480	7.1
805	58	do	Pdb		 				252	916	68					1,160			.00	1,960	7.6
903	Spring	Sept. 9, 1938	Pdb		 				195	1,656	66	.4	<20		2,617						
903	Spring	May 2, 1967	Pdb		 				192		69					1,880			.00	2,860	7.2
908	Spring	Sept. 9, 1938	Pdb		 				183	1,656	53		<20		2,587						
908	Spring	May 11, 1967	Pdb		 				98	1,710	88					1,860			.00	2,840	7.6
. 910	40	Sept. 20, 1967	Pdb	17	 605	107	59	3.7	254	1,700	76	.5	12		2,710	1,950	6	.6	.00	2,630	7.5
64-101	95	Sept. 19, 1938	Pf		 562	147	*76		61	1,978	46		<20		2,839	2,010					
101	78	Sept. 25, 1967	Pf		 				50	1,960	61		.2			2,060			.00	2,950	7.0
201		Sept. 20, 1938	Pdb		 				195	1,517	12		20		2,354						
201	46	Nov. 7, 1967	Pdb	11	 625	51	16	2.9	192	1,550	11	.3	6.5		2,370	1,770	2	.2	.00	2,460	7.6
307	110	Aug. 31, 1967	Pdb	12	 625	115	58	10	344	1,620	134		13		2,760	2,030	6	.6	.00	3,090	6.9
405	54	Sept. 21, 1967	Pdb	19	 590	108	27	4	182	1,700	28	.7	5.1		2,570	1,920	3	.3	.00	2,700	7.4
505	94	Sept. 20, 1967	Pdb		 				210	214	20					440			.00	849	7.4
603	97	Sept. 21, 1967	Pdb	18	 612	80	26	4.0	186	1,640	21	.5	7.7		2,500	1,860	3	.3	.00	2,580	7.6
704	136	do	Pdb		 				220	2,160	161					2,360			.00	3,690	7.4
804	179	Sept. 20, 1967	Pdb	14	 585	123	56	5.9	198	1,790	43	.8	3.2		2,720	1,970	6	.5	.00	2,870	7.7
904	125	Oct. 26, 1967	Pdb		 				119	1,560	3.9		8.5			1,770			.00	2,390	7.3

# Table 8.--Chemical Analyses of Water from Wells and Springs in Collingsworth County--Continued

See footnotes at end of table.

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### Table 8. -- Chemical Analyses of Water from Wells and Springs in Collingsworth County -- Continued

WELL		DEPTH OR PRODUCING INTERVAL (FT)		TE OF LECTI		WATER- BEARING UNIT	SILICA (SiO <sub>2</sub> )		CAL- CIUM (Ca)	MAGNE - SIUM (Mg)	SODIUM (Na)	POTAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	FATE	CHLO- RIDE (C1)	FLUO- RIDE (F)	NI- TRATE (NO <sub>3</sub> )	BORON (B)	DIS- SOLVED SOLIDS		PER - CENT SO - DIUM	SODIUM ADSORP- TION RATIO (SAR)	RESI- DUAL SODIUM CAR- BONATE (RSC)	SPECIFIC CONDUCT- ANCE (MICROMHOS AT 25°C)	5 pH
DU-12-04	4-301	154	Sept.	18,	1967	Qal2	46		98	35	27	2.9	304	110	53	0.4	24		545	388	13	0.6	0.00	832	7.7
	602	124	June	6,	1967	Pw							156	960	30					1,180			.00	1,770	7.6
	902	102-115	Sept.	14,	1967	Pw	53	0.01	62	32	14	2.7	274	21	42	.8	15		378	286	10	.4	.00	590	7.9
0	5-101	Spring	May	25,	1967	Pw							396	46	20					216			2.17	711	8.2
	104	119	Sept.	18,	1967	Qal <sub>2</sub> , Pw							178	628	19					780			.00	1,310	7.8
3/	203	200	Jan.	20,	1958	Qal2	1		61	15	59		238 1	89	25				488	13					
	206	94	Sept.	18,	1967	Qal2							92	32	75		102			252			.00	704	7.1
	302	100		do		Qal2	28		76	12	27	2.8	264	38	6.6	.4	45		366	239	19	.8	.00	564	7.6
	403	133		do		Qal2							284	15	79					328			.00	671	7.8
and the second	501	115	Sept.	16,	1938	Pw, Qal <sub>2</sub>			57	38	*3		275	23	39		< 20		295	298					
	506	104	Sept.	18,	1967	Pw, Qal <sub>2</sub>	39		92	75	27	2.6	344	76	171	.3	0.0		652	538	10	.5	.00	1,140	7.2
	603	64		do		Qal2							464	42	22					378			. 04	853	7.8
	607	62	Nov.	8,	1967	Qal2							376	32	6.9		90			180			2.56	709	7.6
	701	93	Sept.	14,	1967	Pw							158	434	58		9.0			660			. 00	1,170	7.6
	705	147	Sept.	7,	1938	Qal <sub>2</sub> , Pw		21	99	63	*<5		116	316	53		5.9		594	506					
	802	135	Oct.	18,	1938	Qal2			67	28	*26		329	19	17		31		350	282					
	802	133	Sept.	18,	1967	Qal2	51		76	33	28	2.9	292	24	27	.3	113	0.06	499	325	16	.7	.00	736	7.8
	901	65-250	Feb.	10,	1961	Qal <sub>2</sub> , Pdb	27		84	41	45	2.3	268	130	80	.3	12	.13	554	378	20	1.0		917	7.0
	904	100	Sept.	19,	1967	Qal2							270	17	108					364			.00	772	7.3
1/ 06	6-105	Spring	Oct.	18,	1966	Qal <sub>2</sub> , Pw	29		113	55	*137		443	252	121	.7	3		930	510				1,450	8.1
	105	Spring	May			Qal <sub>2</sub> , Pw							412	308	104					520			.00	1,430	7.6
	204	94	Sept.			Qa12	25		76	18	30	1.0	316	38	20	.8	5.3		369	264		.8	.00	590	7.4
	301	127	Feb.	17,	1955	Pdb	20		588	119	144	2.8	167	1,790	198	1.2	5.0	.38	2,950		14				8.0
	309	134	Sept.	20,	1967	Pdb							172	1,660	96					1,930			.00	2,810	7.4
1.1.1.1.1.1.1	405	175	May	25,	1967	Qal2, Pw							300	320	70					516			.00	1,220	7.5

See footnotes at end of table.

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Table 8.--Chemical Analyses of Water from Wells and Springs in Collingsworth County--Continued

	6	0	00	5	00	0	01		2	00		0	0		0	57	10	10	10		0	6	00	5	
PH S	7.9	8.0	7.8	7.5	7.8	7.8	7.2	1	7.7	7.8	1	7.0	7.9	!	8.0	7.4	7.6	7.6	7.5	1	7.3	7.9	7.8	7.5	
CONDUCT- ANCE (MICROMHOS AT 25°C)	685	757	402	898	611	582	2,580	1	2,730	2,640	;	2,680	828	1	904	795	2,800	1,100	1,100	1	2,160	488	626	875	
DUAL DUAL SODIUM CAR- BONATE (RSC)	1.69	1.0	.50	.00	.19	.43	.00	1	1	.00	;	:	2.70	1	;	.00	.00	.00	.00	1	1	.38	;	1	
SOD IUM ADSORP - TION RATIO (SAR)	2.6	:	.8	:	1	1.3	.2	1	:		:	:	3.6	;	1	1.7	.5	;	1	1	1	.6	;	;	
PER- CENT SO- DIUM	48	;	24	;	1	30	e	+	4	e	;	4	56	;	;	33	2	ł	;	;	;	17	;	1	
HARD - 1 NESS 0 AS 2 CaCO <sub>3</sub> 1	191	242	162	386	248	221	1,780	1,758	1,790	1,830	;	1,870	202	350	333	284	1,910	504	410	307	880	220	275	405	
DIS - SOLVED SOLIDS	452	;	254	1	;	365	2,440	2,460	2,450	2,470	2,501	2,530	553	482	570	514	2,640	;	1	487	1,370	307	383	550	
BORON (B) 9	1	1	;	1	1	;	1	;	0.12	1	;	.28	;	;	1	1	1	-	;	;	1	1	1	1	ġ.
NI- TRATE (NO3)	62	;	20	;	1	18	30	<20	12	22	<20	3.0	61	<20	12	12	1.5	1	1	159	480	21	32	130	
FLUO- RIDE (F)	0.3	:	4.	;	;	.2	.6	;	;	.4	1	;	.1	1	.6	9.	.7	:	;	;	.4	.2	1.2	1.1	
CHLO- 1 RIDE 1 (C1)	9.6	28	4.1	61	19	21	30	34	54	38	28	41	11	36	50	42	48	36	188	36	288	1.6	4	21	
	31	65	11	;	29	28	,570	1,641	1,610	,580	1,607	,630	54	160	108	110	1,750	380	86	33	28	14	20	38	
BICAR - SUL - BONATE FATE (HCO <sub>3</sub> ) (SO <sub>4</sub> )	336	358	228	328	314	296	196 1	122 1	110 1	232 1	201 1	225 1	412	256	356	296	174 1	220	230	220	292	292	357	342	
POTAS - 1 SIUM 1 (K)	2.4	;	2.8	1	1	3.1	2.7	1	3.6	3.4	.1	1	1.5	1	1	2.0	3.9	;	;	;	1	3.7	;	1	
SOD IUM (Na)	81	1	24	1	;	44	22	*50	38	30	1	*32	119	*36	72	66	51	;	;	*40	06	21	37	27	
MAGNE - S S LUM (Mg.)	7.7	1	7.8	;	;	15	62	63	87	77	;	91	80	24	23	20	115	1	;	19	47	87	25	40	
CAL - M CIUM (Ca)	64	;	52	;	;	64	610	600	574	605	;	600	68	100	96	81	575	;	1	92	276	74	68	96	
	;	;	;	;	;	:	:	:	0.30	;	;	:	:	;	;	;	:	:	;	!	;	1	+	1	
STLICA IRON (SiO <sub>2</sub> ) (Fe)	29	:	20	;	:	26	21	;	20	0.	:	22	27	;	35	34	13	;	1	;	17	19	20	24	
WATER- BEARING UNIT	Qa12	Qa12	Qa12	Pw, Qal2	Qa12	Qa12	Pdb	Pdb	Pdb	Pdb	Pdb	Pdb	Qa12	Qall	Qall	Qall	Pdb	Pw	Pw	Qal2, Pw	Pw, Qal2	Pw	Qal2, Pw	Qal2, Pw	
DATE OF COLLECTION	Sept. 19, 1967	do	do	May 17, 1967	Sept. 19, 1967	op	May 3, 1967	Oct. 19, 1938	Aug. 25, 1953	Sept. 20, 1967	Oct. 12, 1938	Sept. 7, 1952	Sept. 19, 1967	Oct. 25, 1938	Oct. 31, 1966	May 25, 1967	Sept. 20, 1967	Sept. 19, 1967	qo	Aug. 31, 1938	Oct. 21, 1966	Sept. 19, 1967	Oct. 20, 1966	do	
DEPTH OR PRODUC ING INTERVAL (FT)	95	54	108	Spring	142	138	75	Spring	Spring	52	Spring	Spring	80	Spring	Spring	Spring	74	53	44	34	37	30- 50	29	60	
MELL	DU-12-06-501	603	701	704	809	907	07-102	111	111	201	2 08	208	403	405	405	405	506	611	704	803	803	805	807	809	

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See footnotes at end of table.

Table 8 Chemical	Analyses of Water	from Wells and S	prings in	Collingsworth	CountyContinued
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WELL		DEPTH OR PRODUC ING INTERVAL (FT)		TE C		WATER - BEAR ING UNIT	SILICA (SiO <sub>2</sub> )		CAL- CIUM (Ca)	MAGNE- SIUM (Mg)	SODIUM (Na)	POTAS - SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	FATE	CHLO- RIDE (C1)	FLUO- RIDE (F)	NI- TRATE (NO <sub>3</sub> )	DIS- SOLVED SOLIDS	NESS AS	PER - CENT SO - DIUM	SODIUM ADSORP- TION RATIO (SAR)	RESI- DUAL SODIUM CAR- BONATE (RSC)	SPECIFIC CONDUCT- ANCE (MICROMHOS AT 25°C)	5 pH
1 DU-12-07-8	810	35	Oct.	20,	1966	Qal2, Pw	20		47	12	160		475	53	27	0.5	21	 580	166				92.0	7.5
y e	811	12	Oct,	19,	1966	Qal2, Pw	27		4	53	129		455	59	33	.7	23	 550	230				922	7.6
y e	812	47		do		Qal2, Pw	21		52	12	82		345	30	8	1.1	41	 417	179				666	7.7
y e	813	35		do		Qal <sub>2</sub> , Pw	22		225	62	185		325	396	320	1.1	93	 1,460	820				2,230	7.4
<u>μ</u> ε	814	65	Oct.	20,	1966	Qal <sub>2</sub> , Pw	19		58	12	56		277	22	20	.3	52	 375	195				614	7.6
y e	815	42		do		Qal <sub>2</sub> , Pw	21		114	27	176		328	266	130	1.4	33	 930	395				1,460	7.4
y e	816	38		do		Qal <sub>2</sub> , Pw	26		117	32	111		384	76	83	.7	168	 800	. 424				1,250	7.3
y e	817	21		do		Qal <sub>2</sub> , Pw	22		65	51	76		494	84	12	1.1	15	 570	371				915	7.6
<u>1</u> / 8	819	34	Oct.	21,	1966	Qal <sub>2</sub> , Pw	26		106	34	74		372	132	43	1.0	75	 670	405				1,030	7.5
<u>1</u> / 8	820	50	Oct.	19,	1966	Qall	28		75	20	46		367	39	8	.7	15	 412	271				661	7.5
9	905	23	Aug.	30,	1938	Qal2			77	16	*7		244	28	11		38	 297	260					
ŝ	906	42	Sept.	19,	1967	Qal2							336	66	14			 	316			0.00	694	7.6
08 -1	102	160	Sept.	20,	1967	Pdb							158	1,670	14			 	1,860			.00	2,570	7.4
2	2 02	49	Sept.	13,	1967	Pdb							184	1,600	10			 	1,830			.00	2,500	7.6
3	303	108	Sept.	15,	1967	Pdb	19		605	89	60	4.1	236	1,670	54	.4	9.4	 2,630	1,880	6	0.6	.00	2,780	7.4
2	406	97	Sept.	12,	1967	Pw	23		167	45	28	1.7	196	462	12	.3	15	 850	602	9	.5	.00	1,120	7.7
4	407	193		do		Pdb							124	1,580	1,380			 	1,860			.00	6,380	7.3
(	601	233	Sept.	13,	1967	Pdb							64.63	2,180	880			 	1,960			. 00	5,570	7.2
7	704	29	Sept.	12,	1967	Pw	23		535	49	29	1.3	174	1,400	90	.3	2.2	 2,130	1,540	4	.3	.00	2,270	7.6
	705	82		do		Pw, Qal <sub>2</sub>							248	162	18			 	370			.00	776	7.6
	803	32		do		Qal <sub>1</sub>							154	1,800	490			 	2,020			.00	4,120	7.4
	901		Sept.		1967	Pw	24	0.03	552	93	96	6.9	180	1,660	61	1.9	17	2,600	1,760		1.0	.00	2,770	7.2
12-3		135		do		Pw							84	1,140	38	19.77		 	1,300				1,970	7.6
	602	215		do		Pw				5			92	1,640	35			 	1,760			.00	2,580	7.5
-	906	125	July	11,	1967	Pw							120	1,080	27			 	1,220			.00	1,910	7.4

See footnotes at end of table.

WELL	DEPTH OR PRODUCING INTERVAL (FT)			TE LEC			WATE BEAR UNI	ING		IRON (Fe)	CAL- CIUM (Ca)	MAGNE- SIUM (Mg)	SODIUM (Na)	POTAS - SIUM (K)	BICAR- BONATE (HCO3)		CHLO- RIDE (C1)	FLUO- RIDE (F)	NI- TRATE (NO <sub>3</sub> )	BORON (B)	DIS- SOLVED SOLIDS	AS	PER - CENT SO - DIUM	SODIUM ADSORP- TION RATIO (SAR)	RESI- DUAL SODIUM CAR- BONATE (RSC)	SPECIFIC CONDUCT- ANCE (MICROMHOS AT 25°C)	PH
DU-12-13-106	28	Se	pt.	14	i,	1967	Qa	L <sub>1</sub>	32		260	95	37	3.4	236	830	44	0.7	0.2		1,420	1,040	7	0.5	0.00	1,790	7.5
202	71			dc	•		P	4	28		51	47	20	2.4	304	45	50	.8	3.2		396	320	12	. 5	.00	659	8.2
302	39			do	,		P	v							3 08	34	13					224			.57	563	8.0
406	184	Ju	1y	13	, :	1967	Pr	7							56	1,830	51					2,000			.00	2,810	7.2
502	93	Ju	1y	12	·, ·	1967	Pt	,							234	664	50					848			.00	1,550	7.5
607	90	Ju	ly	14	, :	1967	Pdl	,	16		560	225	124	2.4	192	2,140	103		80		3,340	2,320	10	1.1	.00	3,580	7.4
705	110			do	•		Pdl	,							56	1,800	80					1,900			.00	2,890	7.5
801	69	Ju	1y	13	, 1	1967	Pdl	,							53	1,980	90					1,990			. 00	3,090	7.1
908	73	Se	pt.	14	, 1	1967	Pv	,	17		555	132	.72	3.3	70	1,870	60	.2	3.8		2,750	1,930	7	.7	.00	2,930	7.3
14-101	154	Se	pt.	13	, 1	1967	Pdb		18		590	103	28	4.0	128	1,710	31	.8	1.5		2,550	1,900	3	.3	.00	2,720	7.4
102	180	Fe	Ь.	10	, 1	961	Pdł		19		572	112	29	3.7	123	1,720	34	.9	1.0	0.66	2,550	1,890	3	.3		2,700	7.0
2 08	46	Se	pt.	13	, 1	967	Pw		25		97	19	24	1.5	238	17	45	.5	129		475	320	14	.6	.00	752	7.7
301	186			do			Pdb								94	1,870	98					2,000			.00	3,020	7.4
406	147	Se	pt.	27	, 1	.938	Pw				594	113	*63		159	1,805	54		<20		2,707	1,950					
406	118	Se	pt.	13	, 1	.967	Pw		18		590	109	50	4.0	152	1,690	110	1.1	15		2,660	1,920	5	.5	.00	2,860	7.8
503	200	Ma	1	25	, 1	967	Pdb								140	1,570	206					1,810			.00	3,060	7.4
602	97	Sej	ot.	13	, 1	967	Pdb		18		600	118	70	4.3	202	1,760	86	.8	15		2,770	1,980	7	.7	.00	2,980	7.3
703	90			do			Pdb								200	1,770	68					2,000			.00	2,910	7.1
801	85			do			Pw		14		34	7.0	124	1.3	330	34	31	.6	54		462	114	70	5.0	3.13	746	7.5
803	99	Sej	ot.	26	, 1	938	Pdb								207	1,786	148		<20		2,931						
3/ 902	123	Dee	•	7	, 1	953	Pdb				561	105	84		207	1,576	145				2,678	1,834					
910	80	Sei	ot.	26	, 1	938	Pdb				633	108	*284		220	1,862	370	.8	< 20		3,365	2,026					
914	120	Sej	t.	13,	, 1	967	Pdb								220	1,740	300					2,040			.00	3,610	7.5
15-106	120	Ser	t.	11,	, 1	967	Pw		9.4		300	54	38	2.8	110	802	88	1.3	.0		1,350	970	8	.5	.00	1,700	7.5
y 202	120	0c t	·	19,	, 1	966	Qal <sub>1</sub> ,	Pdb	29		128	23	40		316	175	20	.6	25		600	413				912	7.5

## Table 8. -- Chemical Analyses of Water from Wells and Springs in Collingsworth County-- Continued

See footnotes at end of table.

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Table 8. -- Chemical Analyses of Water from Wells and Springs in Collingsworth County-- Continued

	WELL	DEPTH OR PRODUC ING INTERVAL (FT)		ATE	OF CTION	WATER - BEARING UNIT	SILICA (SiO <sub>2</sub> )		CAL- CIUM (Ca)	MAGNE - SIUM (Mg)	SODIUM (Na)	POTAS - SIUM (K)	BICAR - BONATE (HCO <sub>3</sub> )	FATE	CHLO- RIDE (C1)	FLUO- RIDE (F)	NI- TRATE (NO <sub>3</sub> )		DIS- SOLVED SOLIDS	NESS AS	PER - CENT SO - DIUM	SODIUM ADSORP- TION RATIO (SAR)	RESI- DUAL SODIUM CAR- BONATE (RSC)	SPECIFIC CONDUCT- ANCE (MICROMHOS AT 25°C)	pH
	DU-12-15-204	120	Dec.	٤	8, 1960	Qal1	29	0.00	110	23	44	1.4	295	152	33	0.6	24	0.15	562	369	20	1.0		876	7.1
у	210	40-120	Oct.	19	, 1966	Qal <sub>1</sub> , Pw	29		83	20	64		357	86	24	.6	19		500	291				789	7.5
1y	216	134	L See	do	,	Qal1	31		72	19	56		351	58	12	.6	9		431	258				685	7.5
Ŋ	219	105		do	•	Qal <sub>1</sub> , Pw	27		87	17	48		300	85	21	.6	26		460	286				724	7.5
	307	28	Sept	. 12	, 1967	Pdb	24		635	61	220	2.8	172	1,670	305		17		3,020	1,840	21	2.2	0.00	3,550	7.5
	402	50		do	,	Pw							272	112	102					212			.22	983	7.5
	502	63		do		Pw	4.9		54	21	112	2.9	274	37	149	.2	0.0		516	221	52	3.3	.07	952	7.4
	606	53		do	·	Pw							238	1,620	360					1,760			.00	3,810	7.6
3/	803	310	Apr.	27	, 1957	Pdb			645	100	632		165	2,295	638				4,482	119		1 o			
	803	311	June	15	, 1967	Pdb							148	1,860	550					2,090			.00	4,380	7.7
	811	300				Pdb																			
2	812	247	Jan.	31	, 1957	Pdb					114		168	2,076	160				3,430						7.6
	904		Sept	. 8	, 1938	Pw			79	10	*39		220	105	26		<20		367	241					
	904	85	Sept	. 12	, 1967	Pw	24		125	22	78	2.4	204	208	110	.6	- 55		725	402		1.7	.00	1,120	7.7
	16-107	23	Sept	. 15	, 1967	Pw							286	2,300	154					2,120			.00	4,020	7.6
	205	45		do		Pw	14		560	128	132	2.5	174	1,980	27		.2		2,930	1,920		1.3	.00	3,040	7.4
	307	24		do		Qa11	30		115	21	72	1.8	310	118	82	.4	52		644	374		1.6	.00	997	7.9
	404	94			, 1938	Qal <sub>2</sub> , Pw	0.50		470	116	*90		159	1,267	275	.3	<20		2,307	1,652					
	504	239			, 1967	Qal <sub>2</sub> , Pw							268	145	26					308			.00	808	7.8
	607	55			, 1967	Qal2	23		75	13	46	2.3	296	43	9.6 29	.8	57 <20	.29	416	240		1.3	. 04		7.5
	702	120			, 1938	Pw							116	1,669	42		< 20			1,840			.00	2,660	7.5
	702	214	Sept		, 1967	Pw				364	272	5.2	100 230	1,710 2,880	135		87		and the second	2,790		2.2	.00	4,630	7.4
	803 901	75	Der	do		Pw, Pdb	12	.00	520 94	364	37	.9	296	154	135	.4	32	.18	564	366		.8	.00	810	7.2
	901	57	Dec.	8	, 1960	Qal <sub>2</sub> , Pw	27	.00	74	52	57	.9	290	134	14		52	.10	504	500				010	
																			·						

See footnotes at end of table.

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Table 8.--Chemical Analyses of Water from Wells and Springs in Collingsworth County--Continued

WELL	DEPTH OR PRODUC ING INTERVAL (FT)	DATE OF COLLECTION		SILICA (SiO <sub>2</sub> )		CAL- CIUM (Ca)		SODIUM (Na)	POTAS - SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	FATE	RIDE	2 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	NI- TRATE (NO <sub>3</sub> )	(B)	DIS- SOLVED SOLIDS	NESS AS	CENT SO-	SODIUM ADSORP- TION		(MICROMHOS	рН
DU-12-16-902	83	June 22, 1948	Qal <sub>2</sub> , Pw	29	0.00	67	21	9.2	5.2	290	23	6.1	0.8	17	0.20	320	254	9.3			517	7.9
907	61	Sept. 12, 1967	Qal <sub>2</sub> , Pw							348	224	18					316			0.00	1,010	8.0

\* Sodium and potassium calculated as sodium (Na).
\*\* Combined spring flow.
1/ Analysis by Texas State Department of Health.
2/ Analysis by Midwestern University.
3/ Analysis by Texas A&M Experiment Station.
4/ Includes any carbonate (CO<sub>3</sub>) present.

