

TEXAS WATER COMMISSION

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BULLETIN 6209

GROUND-WATER RESOURCES OF
HASKELL AND KNOX COUNTIES, TEXAS

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Prepared in cooperation with the Geological Survey
United States Department of the Interior

August 1962

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GROUND - WATER RESOURCES OF
HASKELL AND KNOX COUNTIES, TEXAS

ABSTRACT

Haskell and Knox Counties in north-central Texas are underlain by unconsolidated sand, gravel, and clay of Quaternary (Pleistocene and Recent) age and by shale, sandstone, dolomite, gypsum, and limestone of Permian age. The land surface is characterized by high, relatively flat interstream areas trenched by the deep valleys of the Brazos and Wichita Rivers and their tributaries.

The largest supply of potable ground water is found in the Seymour formation of Pleistocene age. Much smaller supplies are found in the Permian rocks and Recent alluvium.

In 1956 the thickness of saturated material in the Seymour ranged from less than 1 foot near the boundaries of the reservoir to about 60 feet near the central part. About 790,000 acre-feet of ground water was stored within the two counties in 1956. Pumping decreased the amount of water in storage appreciably during the dry years 1951-56; however, part of the loss was replaced during the wetter years 1957-58.

Ground water in the Seymour formation is derived solely from precipitation on the outcrop within the two counties. Prior to 1900, the Seymour formation was nearly dry. It was filled with water between 1900 and 1935, a period when the rainfall was generally above normal and during which a large part of the land was cleared and placed in cultivation. Most light rain is lost by evapotranspiration, but heavy rains recharge the aquifer appreciably in the sandy areas by seepage from many shallow depression ponds. The largest sandy area is in northwestern Haskell County and southwestern Knox County.

The water table slopes generally 8 to 10 feet per mile toward the northeast. Water is discharged through many springs and seeps along the Brazos River.

The water from the Seymour formation in Haskell and Knox Counties generally is hard and in many places has a high concentration of nitrate. However, most of the water is suitable for irrigation, public supply, and domestic use.

The Permian rocks contain small amounts of highly mineralized water in many parts of the two-county area. Much of the water is saline and is unsuitable for domestic use but can be used for watering livestock.

Artificial recharge and other conservation measures will extend the life of large-scale irrigation, although the amount that can be conserved annually is small compared to the 1956 withdrawal.

GROUND - WATER RESOURCES OF
HASKELL AND KNOX COUNTIES, TEXAS

INTRODUCTION

Purpose and Scope

This report describes the occurrence, development, and chemical quality of ground water in Haskell and Knox Counties, Texas, with special reference to the Seymour formation. The report includes information on the relationship between geology and the occurrence of ground water, the amount of water stored in the principal water-bearing formation, the amount of water used for various purposes, the density and distribution of withdrawals by wells, the principal areas of natural recharge and discharge, the hydraulic properties of the principal water-bearing formation, the effect of recharge and discharge on water levels, and the factors affecting the potential development of ground water. The report is based on records of 1,159 wells and springs, of which 936 were used for irrigation. Maps included in the report show the outcrops of geologic formations and the locations of wells. The configuration of the water table, the thickness of saturated material, and the change in water levels are shown for the principal water-bearing formation.

The investigation was conducted during 1956 and 1957 as part of a statewide program of study of the ground-water resources of Texas made cooperatively by the U. S. Geological Survey and the Texas Board of Water Engineers [now the Texas Water Commission]. Additional water-level measurements were made early in 1959 to determine the effect of the nearly normal precipitation in 1957 and 1958. The study was made under the supervision of R. W. Sundstrom, district engineer in charge of ground-water investigations in Texas.

Location and Economic Development

Haskell and Knox Counties include an area of 1,742 square miles in north-central Texas (Figure 1). Haskell, the county seat of Haskell County, is about 90 miles southwest of Wichita Falls and 60 miles north of Abilene. The counties lie between 32°57' and 33°50' north latitude and 99°28' and 99°59' west longitude. The population of the two counties was 26,818 in 1950 and 19,031 in 1960.

Transportation facilities in Haskell and Knox Counties include U. S. Highways 82 and 277, State Highways 24 and 222, and many paved farm-to-market roads. The Panhandle & Santa Fe Railroad serves Rule, Rochester, O'Brien, Knox City, Benjamin, and Truscott; the Fort Worth & Denver Railroad serves Haskell, Weinert, Munday, and Goree. The nearest scheduled airline service is at Abilene.

The principal source of income in Haskell and Knox Counties is farming and ranching. Approximately 60 percent of the land area is under cultivation, and

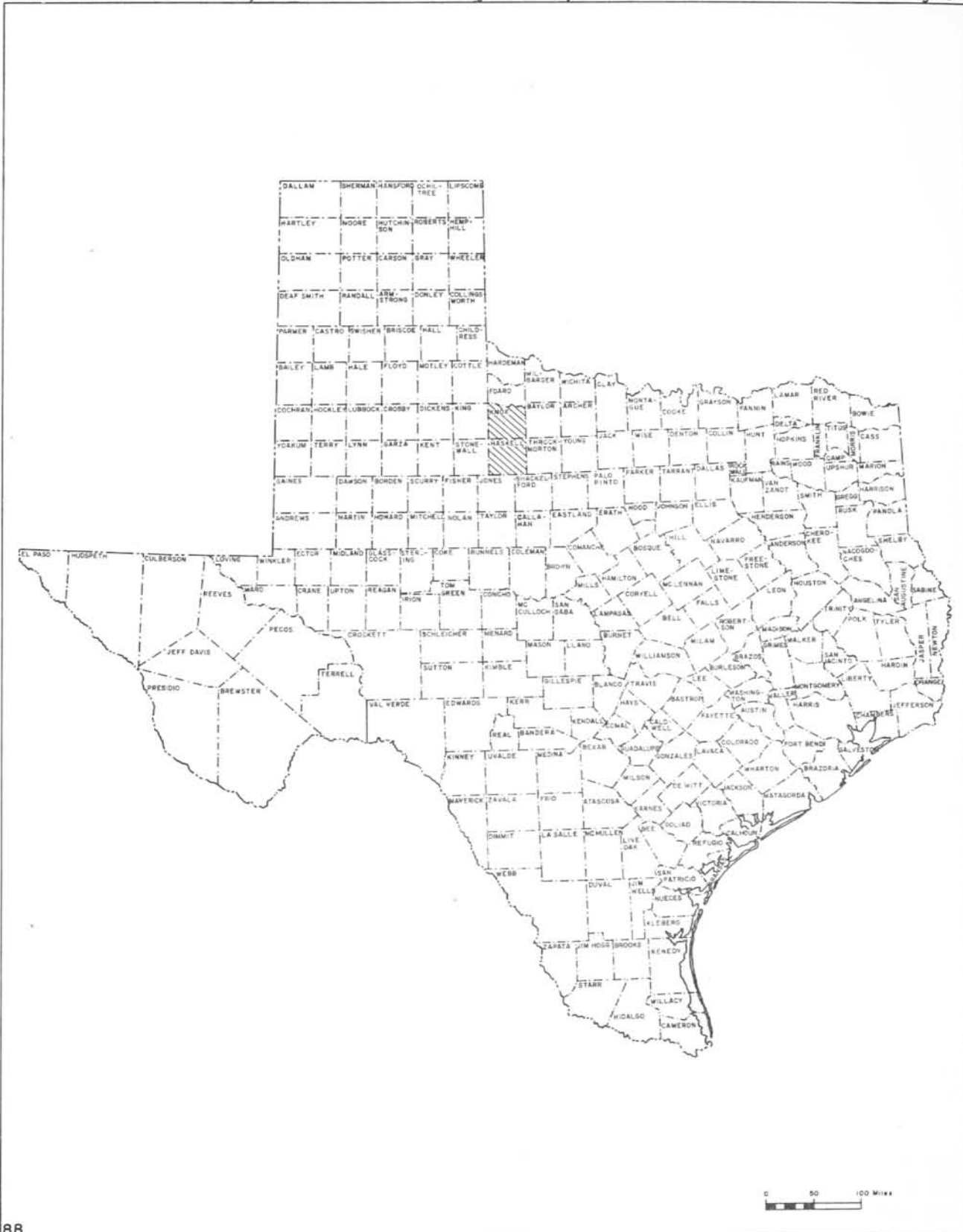


FIGURE 1.-Map of Texas showing location of Haskell and Knox Counties

about 10 percent of the cultivated land is irrigated. In Haskell County the average yearly production from 1949 to 1954 was 57,036 bales of cotton and 460,000 bushels of wheat; and in Knox County, 34,994 bales of cotton and 606,167 bushels of wheat. Other crops include grain sorghums, alfalfa, corn, and vegetables. Cattle ranching, although it showed a marked decline during the drought years 1951 to 1957, is a major occupation in western Knox County and southeastern Haskell County.

Oil provides a large percentage of the income in both Haskell and Knox Counties. The 1954 oil production totaled 3,241,907 barrels in Haskell County and 1,071,440 barrels in Knox County. Most of the oil is produced from rocks of Pennsylvanian age at depths of 4,000 to 6,000 feet, but some is produced from rocks of Permian age at a depth of about 2,000 feet. Gravel from deposits near the surface is used locally for road surfacing, construction, and gravel packing of irrigation wells.

Most of the industries in the area are associated with agriculture and include cotton gins, cottonseed mills, grain elevators, and shipping. Electric power is generated at a plant on Lake Stamford, about 12 miles southeast of Haskell.

Well-Numbering System

Plates 1 and 2 show the locations of wells and springs for which records were collected. The map is divided into 10-minute quadrangles of latitude and longitude, and these are lettered alphabetically from west to east starting in the northwest corner of each county. The wells are numbered consecutively within each quadrangle beginning in the northwest corner and proceeding in a west-to-east, north-to-south progression. The following table shows well numbers used in this report and corresponding numbers used in a report by Follett (1955) for the same wells.

Well number in this report	Well number in report by Follett (1955)	Well number in this report	Well number in report by Follett (1955)
<u>Haskell County</u>		E-147	4b
		E-148	4
A- 30	36a	E-149	5
A- 50	36b	E-150	1
A- 55	36d	E-151	2
A- 71	36		
A-104	37	<u>Knox County</u>	
A-127	38	H- 11	12a
B- 51	102a	H-133	10
B- 59	103a	H-151	6
B-104	101	H-152	6a
B-168	100	H-154	6c
B-174	102	J- 34	4
B-175	103	J- 61	2a
D- 22	14a	J- 62	1
D- 23	14	J- 63	2
D- 24	15	J- 81	3a
D- 48	31a	J- 82	3b
E-123	5a	J- 83	3
E-141	3	J- 95	13
E-142	4c		
E-146	4a		

Previous Investigations

Several reports containing general information on the geology and ground-water resources of Haskell and Knox Counties and a few reports of local investigations for municipal water supplies are available; however, no detailed investigation of the entire area has been made prior to this study. The geology and water resources of the area were discussed briefly in 1913 (Gordon, 1913, p. 63-67). Huggins and Turner (1937) recorded the inventory of 553 wells in Knox County and included logs of 22 wells and chemical analyses of 185 water samples. A preliminary report on the ground-water resources near Stamford, in Jones and Haskell Counties, was made by Broadhurst and Follett in 1944, and a ground-water investigation in the vicinity of Benjamin, Knox County, was made by Follett and Dante in 1945. The public water supplies of Haskell, Rochester, Rule, Goree, Benjamin, Knox City, and Munday were described a few years later by Sundstrom, Broadhurst, and Dwyer (1949, p. 62-64, 76-78). Records of water levels in selected observation wells in Haskell and Knox Counties were compiled by Follett in 1955. Other reports relating to the geology and hydrology of the area are listed at the end of this report in the section headed "Selected References."

Acknowledgments

Appreciation is expressed to the many farmers, ranchers, well drillers, pump dealers, oil companies, and Rural Electrification Association cooperative electric companies who generously contributed information and cooperated in gathering field data. Acknowledgment of information furnished is also made to the officials of the several cities and the Federal and State agencies, especially the Soil Conservation Service of the U. S. Department of Agriculture and the U. S. Weather Bureau.

Topography and Drainage

The land surface in Haskell and Knox Counties is characterized by relatively level interstream areas and by deep stream channels. The interstream areas form high, nearly flat east-west-trending surfaces which are capped by sand and gravel deposits of the Seymour formation. The terrain in and near the deeply trenched streams in Knox County and southeastern Haskell County is a rough, badlands-type topography, whereas the southwestern part of Haskell County is rough to rolling. The stream valleys are wide and are bounded by abrupt escarpments. The average regional slope of the area is toward the east about 5 to 6 feet per mile. Locally, however, the land surface slopes toward the northeast about 8 to 10 feet per mile. Similarly, the regional drainage is to the east, whereas local drainage is to the northeast.

The total relief in the counties is about 370 feet; the altitude ranges from a high of 1,690 feet (above sea level) in Haskell County to a low of 1,320 feet in Knox County. Prominent topographic features include the steep cliffs that outline the interstream areas between the North and South Forks of the Wichita River in Knox County and the bluffs along California and Paint Creeks in southeastern Haskell County.

The area is drained by tributaries of the Brazos and Wichita Rivers. The North and South Forks of the Wichita River drain the northern half of Knox County; the Brazos River and its tributaries drain the area between Benjamin and Haskell. Paint and California Creeks are intermittent streams which drain the southern part of Haskell County and flow into the Clear Fork of the Brazos River.

Smaller intermittent streams include Lake Creek in southeastern Knox and northeastern Haskell Counties and Millers Creek in northeastern Haskell County.

Drainage is poorly developed on the outcrop of the Seymour formation. In Haskell County the only established drainage is on the extreme edges of the formation. In Knox County a few minor spring-fed streams flow north into the Brazos River. The longest is about 5 miles and flows from a point near State Highway 222 north to the Brazos River. The interstream areas contain numerous shallow dish-shaped basins which form ephemeral lakes during periods of heavy rainfall. The basins were dry for several years prior to the investigation, and many were placed under cultivation.

Climate

The climate in Haskell and Knox Counties is characterized by a wide range in temperature and precipitation and by a high rate of evaporation.

The annual precipitation at Haskell during the 68-year period of 1891-1958 averaged 23.15 inches, ranging from 10.14 inches in 1956 to 48.20 inches in 1941 (Figure 2). More than 75 percent of the precipitation during the period of record was concentrated during the 7-month growing season of April through October. The highest mean monthly precipitation was in May and the lowest in January (Figure 3).

Figure 2 illustrates past precipitation trends. During the 14-year dry period starting in 1891 and terminating in 1904, the precipitation was above normal in only 3 years. After a wet period, another dry period started in 1910 and continued through 1918 except for slightly above-normal precipitation in 1913-15. Although the annual precipitation during the 23-year wet period starting in 1919 was above normal, in only 9 of the years was there more than 30 inches. The period 1942-55 was dry, especially after 1950, the precipitation being above normal in only 3 years during the 14-year period. In 1957 heavy rains brought relief to the drought-stricken area.

The mean annual temperature at Haskell was 63.9°F. for the period 1891-1958 (Figure 3). The average growing season is about 224 days; the approximate date of the last killing frost in the spring is April 1, and of the first killing frost in the fall is November 5.

The closest station to the Haskell-Knox County area having a long-term record of evaporation is at Chillicothe, Hardeman County, Texas, about 30 miles north of Knox County. Records from a Bureau of Plant Industry-type evaporation pan at the Texas Agriculture Experiment Station at Chillicothe (Figure 3) indicate that the annual evaporation from a free water surface is about 67 inches, or more than twice the average annual precipitation.

GENERAL GEOLOGY

Rocks of Permian age and unconsolidated sediments of Quaternary age crop out in Haskell and Knox Counties (Plates 1 and 2). The sand and gravel deposits of Quaternary age are the principal water-bearing beds in both counties, and only small amounts of moderate to highly mineralized water are available from the rocks of Permian age. Descriptions of the geologic formations and their water-bearing properties are summarized in Table 1.

Table 1.--Geologic formations and their water-supply characteristics, Haskell and Knox Counties

Era	System	Series	Group	Stratigraphic unit	Approximate maximum thickness (ft.)	Lithologic character	Water-supply	
Cenozoic	Quaternary	Recent		Alluvium	40	Sand, gravel, silt, and clay in flood plain and terrace deposits.	Yields small quantities of water from sand and gravel along the Brazos River in Knox County.	
				unconformity				
		Pleistocene			Seymour formation	85	Stratified sand, sandy clay, and lentils of gravel. Basal layers in most places are sand and gravel, containing well rounded chert and quartz pebbles and some limestone cobbles.	Principal aquifer in Haskell and Knox Counties. Yields range from 50 to 1,300 gpm. The water is of suitable chemical quality for most purposes.
Paleozoic	Permian	Guadalupe	Pease River	Blaine Gypsum	200	Red and blue shale, GYPSUM, and dolomite.	Yields small quantities of water in Knox County used chiefly for livestock.	
				San Angelo sandstone	150±	Brown, green, white, and red sandstone interbedded with red and gray shale and thin layers of GYPSUM.	Yields small quantities of saline water in Knox County used chiefly for livestock.	
				unconformity				
		Leonard	Clear Fork		Choza formation	600	Red shale, sandy clay, GYPSUM, and dolomite.	Yields small quantities of saline water, used chiefly for livestock.
					Merkel dolomite member	16	The Merkel dolomite member contains two strata of ripple-marked dolomite.	
					Vale formation	400±	Shale, sandstone, and dolomite.	Yields small quantities of saline water, used chiefly for livestock.
					Bullwagon dolomite member	3	The Bullwagon dolomite member - two thin strata separated by a shale parting - represents the top of the Vale formation.	
		Wichita			Arroyo formation	150±	Shale, limestone, marl, sandstone, and GYPSUM.	Not known to yield water to wells in Haskell and Knox Counties.
					Rainy limestone member	10±	The Rainy limestone member consists of dark fossiliferous limestone much of which is weathered.	
					Lueders limestone	200	Fossiliferous limestone and shale.	Not a source of water.
				Clyde formation	475	Shale and limestone.	Not a source of water.	

The rocks of Permian age were deposited in and near an elongated troughlike sea which extended from the south through Mexico into an extensive region of the western Great Plains (Schuchert and Dunbar, 1941, p. 274). The depositional environment in the area was marine during the early part of Permian time but changed to arid and continental in the latter part. The Permian rocks are characterized by a large variety of sedimentary facies which include clastic and calcareous sediments, anhydrite, gypsum, salt and other evaporites, and nonmarine red beds.

The rocks of the Wichita group consist chiefly of beds of fossiliferous marine limestone and shale.

The rocks of the Clear Fork group consist of deposits of shale and red beds interfingering with thin beds of limestone, dolomite, gypsum, and salt.

The Upper Permian rocks, known as the Pease River group, overlie the Clear Fork group. In early Late Permian time a marked increase in clastic deposition formed the San Angelo sandstone. The period of clastic deposition was followed by arid conditions, which caused the deposition of thick beds of evaporites interfingering with red beds and beds of clay and dolomitic limestone.

The Permian rocks in the vicinity of Haskell and Knox Counties dip northwest about 50 feet per mile, forming a broad westward-dipping homocline (Sellards and others, 1934, p. 91). Locally the beds dip west-northwest at about 40 feet per mile. Regionally the land surface slopes about 6 feet per mile toward the east. Thus, in progressing eastward across the area, successively older beds of the Permian crop out in north-northeast-trending bands.

The geologic events between the Permian and Quaternary periods are not recorded by rock deposition in Haskell and Knox Counties.

Early in the Pleistocene epoch, only rocks of Permian age were exposed in the area, and they formed a nearly flat plain sloping gently toward the east. Deposition during Pleistocene time was controlled by successive cycles of terrestrial alluviation and erosion caused principally by climatic changes associated with the advance and retreat of glacial ice sheets far to the north (Van Siclen, 1957, p. 56, 57).

The deposits of Pleistocene age at one time probably formed a continuous blanket of alluvium overlying the Permian rocks throughout a large area that included Haskell and Knox Counties. The deposits were subjected to erosion and, largely during the Recent epoch, have been partly removed, leaving as remnants of the once continuous alluvial deposits discontinuous patches capping the tabular eastward-extending interstream areas. These deposits are known as the Seymour formation. The structural and stratigraphic relationships between the Seymour and the underlying Permian rocks are shown in Figure 4.

The present valleys of the major streams contain unconsolidated terrace deposits and alluvium of Pleistocene and Recent age.

Permian SystemWichita Group

The oldest rocks cropping out in Haskell and Knox Counties are in the Wichita group, the lowest division of the Permian system in north-central Texas. The Wichita group crops out in a general north-northeastward-trending belt. It has a total thickness of 1,500 to 1,600 feet, but it is thinner toward the north.

The Wichita group consists chiefly of massive fossiliferous beds of blue, gray, and yellowish limestone alternating with beds of blue, gray, and black shale. Some of the limestone is semicrystalline and compact, and some has an earthy texture. The limestone generally contains an abundance of marine fossils, but well-preserved specimens are difficult to obtain.

The Wichita group contain six recognizable formations, only two of which, the Clyde formation and the Lueders limestone, crop out in Haskell and Knox Counties.

Clyde Formation

The Clyde formation, as defined by Plummer and Moore (1921, p. 192, 197-198), crops out in several small areas in southeastern Haskell County (Plate 1). The material exposed consists largely of shale; however, beds of limestone are present in the subsurface. The total thickness of the formation ranges from 200 to 475 feet.

The Clyde formation is not a source of water in Haskell and Knox Counties.

Lueders Limestone

The Lueders limestone, described by Wrather (1917, p. 94), lies at the top of the Wichita group and is the uppermost marine limestone of Permian age in the Haskell-Knox County area.

The Lueders limestone crops out in the southeastern part of Haskell County. It can be traced in a north-northeast direction in the vicinity of California and Paint Creeks to Highway 24, just east of Irby, and thence into Throckmorton County (Plate 1). The Lueders does not crop out in Knox County but can be identified in the subsurface.

Moderately thick beds of light- to dark-gray fossiliferous limestone separated by blue, gray, and black shale make up the Lueders limestone. At some places the formation is fossiliferous, containing numerous large bivalves. Its maximum thickness in Haskell and Knox Counties is about 200 feet.

The Lueders limestone is not a source of water in this area.

Clear Fork Group

The Clear Fork group, named by Cummins (1890, p. 188), lies conformably upon the Lueders limestone of the Wichita group. It consists largely of red and gray shale, containing relatively thin layers of limestone, gypsum, dolomite, and marl. The group ranges in thickness from 1,200 to 1,900 feet and dips to the west-northwest about 40 feet per mile. The outcrop area of the Clear Fork group in Texas is a north-south-trending belt about 30 to 35 miles wide.

The Clear Fork group comprises the Arroyo, Vale, and Choza formations, in ascending order. These formations consist largely of shale but contain a few beds of limestone or dolomite and sandstone. In general the shale beds are not distinguishable from one formation to another and are difficult to map, whereas the prominent limestone or dolomite beds are persistent and can be mapped readily. The mappable beds are considered to be members of the formations and are given names. Because the contacts of the formations in the Clear Fork group in Haskell and Knox Counties cannot be mapped, except where a recognizable limestone or dolomite member forms the contact, the formations are not differentiated in Knox County (Plate 2); however, the prominent limestone or dolomite members are shown on the geologic map of Haskell County (Plate 1).

The Clear Fork group furnishes small supplies of water to wells for domestic and livestock use. Although the water is potable locally, it is of poor chemical quality generally, being slightly to moderately saline. The Clear Fork should not be considered a reliable source of potable water.

Arroyo Formation

The basal formation of the Clear Fork group is the Arroyo formation, named by Beede and Waite (1918, p. 45). Resting conformably upon the Lueders limestone, the Arroyo consists of about 150 feet of shale, limestone, marl, and smaller amounts of sandstone and gypsum. The Arroyo formation crops out in southeastern Haskell County, where it strikes generally northeast. Two prominent limestone beds in the area south of Haskell County have been named as members of the Arroyo--the Rainy limestone, which includes the Lytle that was mapped by Lloyd and Thompson (1929, p. 949), and the Standpipe limestone (Cheney, 1929, p. 27). The outcrop of the Rainy is shown on Plate 1; however, the Standpipe was not recognized in Haskell and Knox Counties.

No potable water has been reported in the Arroyo formation. However, moderately saline water (3,000 to 10,000 ppm [parts per million] of dissolved solids) was observed seeping from a thin bed of sandstone along the banks of California Creek and it is possible that small quantities of such water could be obtained from wells in the outcrop area of the formation.

Rainy Limestone Member

The Rainy limestone member of the Arroyo formation crops out east of California Creek in the extreme southern part of Haskell County and can be traced northeastward to a point just east of Irby (Plate 1). The Rainy is approximately 10 feet thick and crops out in a thin band. The upper one-third of the member consists of dark-gray to purple, highly weathered fossiliferous limestone; the lower two-thirds consists of gray to buff slightly porous (clayey) limestone. The limestone exhibits a black mottled effect and shows a characteristic nodular weathering.

Vale Formation

The Vale formation, as described by Beede and Waite (1918, p. 47), consists of shale containing thin beds of gypsum, some sandstone, and a thin dolomite member named the Bullwagon dolomite. The Vale crops out in the south-central part of Haskell County, the outcrop area extending northward to about 3 miles south of Haskell, where the formation is overlain by the Seymour formation. It probably reappears along the banks of the Brazos and Wichita Rivers in Knox County, but the exact location is not known because the formations of the Clear Fork group were not differentiated. The Vale formation has an approximate thickness of 400 feet in Haskell County.

Small quantities of slightly to moderately saline water (water containing 1,000 to 10,000 ppm of dissolved solids) are produced from wells that draw from the Vale formation, but no significant quantities of potable water have been found. The chief use of the water is for livestock. The water appears to be seeping from minute solution cavities and fissures in the thin layers of gypsum interbedded with the shale. It is also possible that small amounts of water are coming from disconnected sandstone layers.

Bullwagon Dolomite Member

The Bullwagon dolomite member (Wrather, 1917) at the top of the Vale formation consists of two distinct beds separated by a reddish shale parting. The Bullwagon is 1 to 3 feet thick in Haskell County, but is reported to be thicker to the south.

In Haskell County the Bullwagon dolomite is a light-gray dense nonfossiliferous dolomite. It can be traced as a thin band from a point 4 miles west of U. S. Highway 277 at the Haskell-Jones County line to a point about 2 miles west of Haskell, where it disappears beneath the Seymour formation (Plate 1). The Bullwagon was not recognized in Knox County. The Bullwagon member is not water-bearing in Haskell County, although small quantities of water of poor quality are taken from it to the south in Jones County.

Choza Formation

The Choza formation, named by Beede and Waite (1918, p. 49), lies conformably upon the Vale formation and is the uppermost formation of the Clear Fork group. The Choza can be traced from southwestern Haskell County northeastward through central Knox County. In Haskell and Knox Counties the Choza consists of red shale, gray to green very sandy clay, gypsum, and a thin dolomite member, the Merkel dolomite. The thickness of the formation ranges from 450 to 600 feet in the two-county area.

Most of the water in the Choza formation is too highly mineralized for human consumption, but is suitable for livestock. In some localities small quantities of potable water are found; however, generally the water has a high sulfate content and is commonly referred to as "gyp water." Some slightly saline water similar to that in the Vale formation occurs in solution cavities in thin gypsum beds. Water occurs also in fractures in a friable red clay. In Knox County a gray to green very sandy shale yields small quantities of slightly saline water to wells (1,000 to 3,000 ppm of dissolved solids).

Merkel Dolomite Member

The Merkel dolomite member (Wrather, 1917) caps Flat Top Mountain, 2.5 miles southwest of Sagerton, Haskell County, near the Haskell-Stonewall County line. It also crops out in Haskell County for a short distance about 1 mile north of State Highway 24 near the Stonewall County line. The Merkel consists of two beds of light-gray to green dolomite each of which is less than 8 feet thick. The dolomite beds exhibit imprints of raindrops, mud cracks, ripple marks, and other shallow-water phenomena and characteristically weather into thin plates. The member was not found in Knox County, where it either has been removed by erosion or has been terminated by a change in lithologic facies. No water has been found in the Merkel dolomite member in the two-county area.

Pease River Group

The Pease River group is the uppermost group of the Permian system in north-central Texas. The rocks consist largely of sandstone, shale, gypsum, and dolomite and have a maximum thickness of 1,500 to 2,000 feet. The formations in the group include the San Angelo, Blaine, and Peacock--of these, the San Angelo and Blaine crop out in Knox County. Rocks of the Pease River group are not present in Haskell County.

San Angelo Sandstone

The San Angelo sandstone, named by Lerch (1891, p. 77), rests disconformably upon formations of the Clear Fork group. It consists of sandstone, shale, and a few beds of conglomerate. The San Angelo forms a very important stratigraphic unit for regional correlation because of its distinctive characteristics in contrast to the shales of the Clear Fork below and the Blaine gypsum above. It underlies the first great gypsum series of the Permian system.

The outcrop of the San Angelo can be traced from the southwest corner of Knox County near Farm Road 143 north-northeastward across the county, crossing Farm Road 1756 about 2 miles west of Truscott. The outcrop forms an irregular band ranging in width from less than 1 to about 5 miles according to the topography (Plate 2). The formation is not present in Haskell County.

The San Angelo sandstone, which is about 150 feet thick in Knox County, consists predominantly of dark-brown, red, green, or white sandstone interbedded with shale and thin layers of gypsum and at least one bed of conglomerate. The sandstone is irregularly bedded and shows signs of crossbedding. It forms a sandy soil, and some outcrops are covered by dune sand.

Records were obtained of three wells in Knox County (A-2, A-7, and D-3) that draw from the San Angelo. Wells A-2 and D-3 were used only for livestock, owing to the high dissolved-solids content of more than 1,000 ppm. Well A-7 yielded potable water which was used for domestic purposes. The San Angelo probably has a very low permeability in Knox County, and only small quantities of mostly saline water should be expected from wells that draw from the formation.

Blaine Gypsum

The Blaine gypsum in Oklahoma, as described by Gould (1902, p. 42; 1924, p. 331), consists of thick beds of gypsum, shale partings, and thin beds of dolomite.

In Knox County the Blaine rests conformably upon the San Angelo sandstone and is characterized by its regularity of stratification and numerous thick beds of gypsum. The Blaine crops out in Knox County just south of U. S. Highway 82; it is crossed by the highway about a mile east of the Knox-King County line and extends north-northeastward across the county (Plate 2). The formation is not present in Haskell County.

The thickness of the Blaine gypsum ranges from about 150 to 200 feet in Knox County. The individual gypsum beds are lenticular, ranging in thickness from a few inches to as much as 30 feet, and are separated by beds of red and blue shale and numerous thin beds of fossiliferous dolomite.

Very small quantities of water are produced from the Blaine in Knox County, where the water is used chiefly for livestock. In other places in Texas, north of Knox County, large quantities of water for irrigation are obtained from solution channels in the gypsum beds in the upper part of the Blaine, which is not present in Knox County. It is unlikely that large supplies of water will be found in the Blaine in Knox County.

Quaternary System

Pleistocene Series

Seymour Formation

The Seymour formation, named by Cummins (1893, p. 181), is the surface formation in nearly 50 percent of Haskell and Knox Counties, occupying the high east-west-trending tabular divides between the major stream valleys.

The Seymour formation consists of coarse-grained sand and gravel, fine-grained sand and silt, red and gray clay, caliche, and some volcanic ash. The upper part of the formation generally is composed of beds of fine-grained sand and silt and deposits of caliche consisting of small white to buff nodules mixed with clay or silt. The caliche generally occurs near the land surface beneath several feet of topsoil. The lower part of the formation consists of coarser material containing beds of red to white sand and gravel interstratified with lenses of clay. The gravel consists largely of rounded pebbles of chert, quartz, igneous rock, and limestone.

The Seymour generally is unconsolidated, but locally thin beds of sandstone and conglomerate are slightly cemented. Drillers' logs indicate that the individual beds of sand, gravel, and clay are not continuous over wide areas but tend to grade laterally into beds of finer or coarser material.

The thickness of the Seymour ranges from 0 to 85 feet, its maximum being in the vicinity of Rochester in Haskell County; from there the formation thins both to the north and to the south.

The Seymour formation lies unconformably on the Permian rocks and probably is of middle Pleistocene (probably Yarmouth) age (Van Sicklen, 1957, p. 54). A middle Pleistocene age for the Seymour appears to be substantiated by the occurrence of a bed of volcanic ash between the basal sand and gravel and the overlying fine-grained materials in an outcrop about 12 miles north of Munday, near Farm Road 267. All but one of the Pleistocene ash deposits in Texas have been

identified as being from one ash fall (Sidwell and Bronaugh, 1946, p. 15), and these deposits have been correlated with the Pearlette ash identified as early Yarmouth by Frye and others (1948, p. 501). The Seymour formation, as mapped on Plates 1 and 2, includes all the deposits of Pleistocene age in Haskell and Knox Counties and may include some post-Seymour terrace deposits of Recent age.

The largest deposit of the Seymour formation covers an area of about 430 square miles in southern Knox and northern Haskell Counties, bounded on the north and west by the valley of the Brazos River and on the east by Lake Creek. It extends a short distance west of the Stonewall county line and a short distance south beyond the towns of Rule and Haskell. Irrigation is practiced extensively in this area, the water being produced chiefly from the sand and gravel in the lower part of the formation. Yields as large as 1,300 gpm (gallons per minute) have been reported from wells in the area.

The deposits in the upland areas in northeastern Haskell County between Lake Creek and State Highway 24 were mapped as Seymour formation; however, the deposits are very thin, consisting of a few feet of silt and sand; the basal gravel so characteristic of the Seymour is missing. The deposits are not water bearing in this area.

In central and east-central Knox County on the divide between the South Fork Wichita and the Brazos Rivers, a deposit of the Seymour formation extends in a narrow belt eastward from Benjamin into Baylor County. About 20 irrigation wells were drilled in 1956 in this area west of Vera. Their yields range from 50 to 100 gpm. In the area northeast of Benjamin, smaller supplies of water are sufficient only for domestic or livestock use.

In north-central Knox County on the upland between the North and South Forks Wichita River, an irregular patch of the Seymour formation extends from the vicinity of Truscott eastward beyond Gilliland. The maximum thickness of the Seymour in this area is about 30 feet, and in the vicinity of Truscott practically no water is found in the Seymour. Small quantities of water suitable for domestic and public supply are available in the eastern part of the area. A few wells were drilled for irrigation water east of Gilliland but were unsuccessful because of the small yields.

Other areas underlain by the Seymour formation are in south-central Haskell County between Paint and California Creeks and in southwestern Haskell County in the vicinity of Sagerton. In these areas the Seymour is thin and contains little or no potable water.

The Seymour formation is the principal source of ground water in Haskell and Knox Counties. The water is hard and much of it has a high nitrate content; however, it is practically the only water available and is used for all purposes. Irrigation is limited largely to the area of northern Haskell and southern Knox Counties; in most of the rest of the two-county area, the Seymour formation is thin and large supplies of water are not available. Ground water from the Seymour formation in the two-county area is discussed in more detail in a later section of this report.

Recent Series

Rocks of Recent age in Haskell and Knox Counties occur principally as floodplain and terrace deposits in the valleys of the principal streams. The deposits

consist of red to brown crossbedded sand and gravel overlain by red clay and silt. The maximum thickness is probably about 40 feet. The Recent deposits are similar to the Seymour formation, and at some places it is difficult to differentiate the two. Some water is found in the sand and gravel in the lower part of these deposits in the stream valleys. The water tends to be more mineralized than the water from the Seymour formation, but it is used for irrigation at a few places.

The surface material at some places, particularly in northwestern Haskell County, consists of windblown sand and forms a dune topography. Most of the dune sand is underlain by the Seymour formation and has been mapped as a part of the Seymour.

QUALITY OF GROUND WATER

During the investigation in Haskell and Knox Counties, water samples were collected from 163 wells and 3 springs to determine the chemical quality of the water; during previous investigations, water samples were collected from 24 wells. The samples were analyzed in the laboratory of the U. S. Geological Survey and the results are on file in that office.

Standards for the chemical suitability of water depend upon the proposed use. Analyses data of water used for domestic and public supplies are often compared to the standards established by the U. S. Public Health Service (1946, p. 384) for water used by common carriers in interstate commerce. The limits recommended or considered permissible by the Public Health Service for some of the more common minerals found in ground water are as follows:

Iron (Fe) and manganese (Mn) together should not exceed 0.3 ppm (parts per million).

Magnesium (Mg) should not exceed 125 ppm.

Chloride (Cl) should not exceed 250 ppm.

Sulfate (SO₄) should not exceed 250 ppm.

Fluoride (F) must not exceed 1.5 ppm.

Total solids should not exceed 500 ppm in water of good chemical quality; however, if such water is not available, a total-solids content of 1,000 ppm may be permitted.

The average individual, however, can become adjusted to drinking water having higher concentrations than those listed above.

Fluoride in drinking water has a definite effect on the teeth of growing children (Dean, Dixon, and Cohen, 1935). Water containing more than 1.5 ppm fluoride may produce mottling of the teeth, whereas concentrations of less than 1.5 ppm tend to lessen the occurrence of dental caries. The Texas State Board of Health now recommends a fluoride content of 1.0 to 1.5 ppm as desirable for municipal water supplies. The fluoride content of 17 samples in Haskell and Knox Counties averaged 1.3 ppm and ranged from 0.2 to 2.4 ppm. Of the 17 samples, 7 had a fluoride content of more than 1.5 ppm.

The relation between the presence of nitrate in drinking water and the incidence of methemoglobinemia in infants ("blue babies") was advanced first by Comly (1945). Waring (1949, p. 149) stated that drinking water containing a higher content of nitrate expressed in terms of nitrogen--10 to 20 ppm (44 to 88 ppm as nitrate)--appears to be the cause of methemoglobinemia in infants. Maxcy (1950, p. 271), who substantiated Comly's hypothesis, reported that sterilizing the water by boiling did not reduce the toxic effect of the nitrate and could increase the nitrate content by evaporation. The Texas State Board of Health (Dabney, H. L., personal communication) recommends that nitrates not exceed 10 to 20 ppm expressed in terms of nitrogen. The nitrate content of 62 samples of water from the Seymour formation ranged from 21 to 183 ppm and averaged 67 ppm; whereas, the nitrate content in 16 samples from the Permian rocks averaged only 7 ppm.

Factors that determine the suitability of water for irrigation are the composition and concentration of dissolved constituents. The most important factors of irrigation water used to determine its quality are as follows: the total amount of soluble salts, the relative proportion of sodium to calcium and magnesium, the amount of boron or other elements toxic to plants, and under certain conditions the bicarbonate content as related to calcium and magnesium content (U. S. Salinity Laboratory Staff, 1954; Wilcox, 1955, p. 11, 12).

The analyses data for water samples from the Seymour formation (Tables 6 and 10) show that the dissolved constituents are within standard limits for irrigation considering the climate and soils of the area.

According to the classification proposed by Scofield (1936, p. 286), water having less than 1.0 ppm of boron is permissible for use on sensitive crops and less than 2.0 ppm is permissible on semitolerant crops. Only 1 of 21 samples of water from the Seymour contained boron in excess of 1.0 ppm, the greatest concentration being 1.8 ppm. In a few small areas the boron content of the water may have a toxic effect on crops sensitive to boron. No serious boron problem has been encountered nor is it likely that there will be one in the Haskell-Knox County area.

Most of the water obtained from the Permian formations at depths of less than 100 feet probably could be used for livestock, if the quantities were sufficient. However, much of this water would be extremely undesirable for most other uses. The high salinity and boron content of the water in the Permian rocks make it generally unsuitable for irrigation, even if it should be found in sufficient quantities.

In the western half of Haskell and Knox Counties, the water from the Permian rocks has a high percentage of sulfate salts, a low chloride content, and is very hard, a property attributable to the presence of calcium and magnesium. In general, the water is considered unsuitable for domestic use, but it may be used for watering livestock. In the eastern part of the area the Permian contains water that is lower in calcium and magnesium but higher in bicarbonate content. Although not very desirable, the water from the Permian in the eastern part of the area could be used for domestic purposes as well as for livestock.

GROUND WATER IN THE SEYMOUR FORMATION

The principal ground-water reservoir in a large part of Haskell and Knox Counties is the Seymour formation; it is the sole source of irrigation supplies. A relatively small amount of slightly to moderately saline water is available in the major stream valleys from terrace deposits and alluvium of Recent age and

from some of the Permian formations. Wells that draw from the Permian formations furnish water for livestock but generally the water is not suitable for domestic use.

Extent of the Aquifer

The principal aquifer, the saturated part of the Seymour formation, is in the central part of the Haskell-Knox County area. It extends a considerable distance beyond the boundary of Knox County on the east, and a very short distance beyond the boundary of Haskell County on the west. The principal area of discussion extends from the Brazos River Valley on the north to the vicinity of the towns of Rule and Haskell on the south, nearly to Lake Creek on the southeast, and to the Double Mountain Fork Brazos River on the southwest.

The principal aquifer underlies an area of about 430 square miles, of which 185 square miles is in Knox County and 245 square miles is in Haskell County. The beds of sand and gravel in the basal part of the Seymour are the chief source of ground water. The upper part of the formation generally consists of beds of fine-grained sand and silt, but in some places even these materials are coarse enough to yield water to wells.

Source and Occurrence

The source of water to the Seymour formation in Haskell and Knox Counties is precipitation on its outcrop area. A part of the precipitation runs off to streams, a part is evaporated, and some is absorbed by the soil. Part of the water in the soil is lost to the atmosphere by evapotranspiration, and some percolates downward through permeable material until it reaches the water table (surface of the saturated zone).

Water is stored in pore spaces or voids between the rock particles. The amount of water that can be stored is determined by the number and size of voids in the rock. Those in the Seymour range in size from very small pores in clay and silt deposits to large spaces in gravel deposits.

The water in the Seymour formation is said to be under water-table conditions because the upper surface of the zone of saturation is unconfined; however, owing to the lenticularity of the clay in the Seymour, the water locally may be under sufficient hydrostatic pressure to rise in a well a short distance above the top of the water-bearing bed.

Most of the ground water in the Seymour formation in Haskell and Knox Counties is probably of recent origin. Wells drilled in about 1900 through the Seymour formation to the underlying Permian rocks were reported to be dry or to contain a very small amount of water that was too salty for domestic or stock use. Long-time residents in the two-county area reported rises in water levels in several wells during the period 1875-1934. In one well the water level reportedly rose about 60 feet from about 1900 to 1933. In 1934 W. A. Bandy of the Texas Board of Water Engineers [now the Texas Water Commission] investigated briefly the rising water levels and in a written communication reported in part as follows:

"Mr. Hudspeth, manager of the City Water Works of Rochester connected with the Water plant for seven years stated that the water level in 1926 in the city well (sheet water in fine gravel) stood at 45 feet below the ground level. At

this date it stands at 35 feet, 4 feet of this rise having occurred during the last two years. Pumps and motors had to be moved on this account. Mr. Hudspeth was raised 5 miles west of Rochester. Twenty-five years ago the water on his home place was 70 to 75 feet below the surface, the water was hard and gip so much that water was hauled for domestic uses. Now this same well has water standing 45 feet from the ground level and the water is soft and fresh. Laundry work is done without breaking the water. This is a rise of 20 to 25 feet in twenty-five years."

"A. M. Allen, a resident of the vicinity for 33 years and a well digger in his youth, states that he dug a well on his father's place in 1906. The well was located in a canyon near the Brazos River and a well was made at 16 feet. The water level gradually rose until 1918 when it began to run over the top of the well which it still does. Please note that 1917 and 1918 were the driest years of all history of the county and this drouth affected all west Texas. A well on the B. E. Carr place 8 miles west of Rochester was dug to a depth of 78 feet, where water was found that rose to a depth of 4 feet. The water was very hard. Now the water stands 13 feet from the top and is soft and fresh. He dug a well in a canyon to a depth of 44 feet near Judd and obtained water to a depth of less than 10 feet in the well. Water is now running over the top of the well."

"J. H. Wolf, a resident since 1906, stated that in one well on his place one mile west of Rochester the water level was 75 feet below the top and the water was gip. Now the same well is soft water standing at 47 feet from the top. Another well was dug 108 feet finding gip water; this well now has an abundance of soft water at 45 feet."

"Numerous others were interviewed and their statements all tended to show the same thing: that the rise of ground water in this area is no myth, but a fact, that the rise has been about a foot per year with some little acceleration during the last few years, and the water has changed from hard, gip and salt water to soft, fresh water."

"This was all very beneficial to this county until recent years; for fresh water had been very hard to obtain, but in 1928 numerous small spots of water-logged land began to appear here and there, the following year changing to a salt marsh which was wholly non-productive. These spots have increased in size year by year until at this date there are some of from five to one hundred twenty acres; they would aggregate probably 200 acres at the present time."

"...Jewel Day has lived on this place since boyhood. His house formerly stood in what is now the marsh. He had a good well of water which did not fail in 1917-1918. In 1928 a small spot appeared near his house and at the same time small spots appeared on his neighbors' lands. The land became boggy, water rose to the top of his well and he was afraid to use it. This condition gradually increased until he found it necessary to move his house and dig another well on higher ground. Land that produced 2 bales per acre in 1932 became nonproductive in 1933. The spread was very rapid in 1933 and now the spots that appeared on his neighbors' land and on his are now one big salt marsh, producing nothing, and the condition is becoming the same on other adjacent ground. His experience is typical of that of all his neighbors. It is my opinion that fully 3,000 acres will be reduced to this condition within five years unless drastic steps are taken to control this water."

"Day set his house when it was moved on a little rise 15 feet above the marsh which appeared first at the foot of this rise. The water in the well stands two feet above the ground level of the marsh and it is soft water and not salty to

taste. Another house stands nearby on the Castlemen place. The well is likewise on the rise and stands about 75 feet from the rim of the marsh, but the water level is one foot above the level of the marsh. This water is not salty to taste."

In 1951 an area west of O'Brien was reported to be waterlogged.

The period of rising water levels corresponds with the period of rapid agricultural development and also approximately corresponds with a period of above-normal precipitation. Both conditions may be factors in causing the rise in water levels.

The development of the land for cultivation appears to have increased the opportunities for recharge and probably has decreased the amount of water lost by evapotranspiration. The soil overlying the Seymour formation is predominantly sandy, ranging from a clayey or loamy sandy soil to a very sandy soil. The subsoil differs from place to place but generally is very permeable. Thus, in places where sandy soil overlies the permeable subsoil, conditions are favorable for natural recharge.

About 90 percent of the land surface overlying the principal ground-water reservoir in Haskell and Knox Counties is now under cultivation. Most of the cultivated land lies dormant for a large part of the year. Row crops, which are predominant in the area, leave a large percentage of the land surface exposed. These conditions help to increase the recharge opportunities.

Terracing and contour farming, which have been common practice in the area for 20 to 30 years, tend to reduce overland runoff and enable rain to be absorbed where it falls. Other conservation practices such as land leveling and deep plowing expose the more permeable sandy subsoil, thereby increasing the opportunities for infiltration of precipitation.

Records at Haskell show a decided increase in precipitation during the period 1919 to 1941, inclusive (Figure 2). During this period the precipitation was above normal in 11 years, and was more than 30 inches in 9 of the years. The curve showing cumulative departure from average (Figure 2) shows a decided rise from a low in 1918 to a high in 1941--more or less corresponding with the rapid rise in the water table.

The dominant factor causing the rise in water levels during the period 1900 to about 1940 probably was the increased opportunity for recharge resulting from the development of agriculture because if the principal cause for the rising water levels was the change in climatic conditions, then an extended drought such as the one ending in 1957 would have caused a large decrease in storage. Although long-term water-level data are scanty, it appears that most of the declines during the drought can be accounted for by the pumpage during the period 1951-56.

Recharge, Movement, and Discharge

The principal areas of recharge to the Seymour formation are the sandhills west of O'Brien, the thick sandy soils south of Rochester, and numerous small depression ponds in various parts of the counties. The area most favorable for recharge is the area of sand dunes, which extends from about 2 miles southeast of Rochester northwest to the Haskell-Knox County line. Little or no surface drainage has developed on the sandhills because the highly permeable sand absorbs precipitation almost immediately. The water level in well B-171 rose 2.18 feet from

February 25 to May 21, 1957, in response to abundant spring rains, 11.4 inches being recorded at Haskell during this period. Water levels in two wells south-east of Rochester rose about 2.5 feet between January 10 and May 21, 1957. In the area west of Rochester and O'Brien the rises were slightly less, ranging from 1.5 to 2 feet, and in other areas in Haskell County they averaged only about 1 foot. Measurements made in Knox County during the same period also showed relatively small rises, ranging from 0.2 to 0.9 foot. They suggest that recharge conditions are less favorable there than in the areas of greater rise. Part of the rise may have been the recovery of water levels resulting from a cessation of pumping; however, a large part probably was due to recharge.

Shallow depressions which impound water during periods of heavy precipitation are common in north-central Haskell and south-central Knox Counties. They are less than 10 feet deep and generally cover an area of 10 to 150 acres. Some of the depressions appear to lose water rapidly, part of the water undoubtedly recharging the aquifer.

Conditions for recharge are favorable also near the heads of the small drainageways in the Seymour formation, but the areas involved are small. Recharge in these areas is of little importance to the aquifer as a whole because of the small amount and the nearness to the edge of the aquifer and because a large part is discharged from springs farther down the drainageways. The principal streams in the Haskell-Knox County area are cut below the Seymour formation and, therefore, are not a source of recharge to it.

Ground water moves under the influence of gravity through the pore spaces in the rocks from areas of recharge until the water is discharged through wells, by seepage into streams, or by evapotranspiration. The water moves very slowly (a few feet per day) in the direction of the hydraulic gradient, which varies from place to place because of variations in permeability, rates of recharge and discharge, and slope of the contact between the Seymour and the underlying formations.

Plate 3 and Figure 5 show the altitude of the water table in the Seymour formation in Haskell and Knox Counties during the winter of 1956-57. Plate 3 shows that the water table slopes generally toward the north and northeast at an average rate of about 10 feet per mile. The slope of the water table conforms generally to the slope of the land surface and to the slope of the surface of Permian rocks underlying the Seymour (Plate 4 and Figure 5).

Ground water is discharged naturally from the Seymour formation by seeps and springs, by evapotranspiration, and to a smaller extent by leakage to underlying formations. Ground water is discharged artificially through wells, as discussed on page 31. Numerous seeps and springs occur where the land surface intersects the water table along the small drainageways and along the blufflike boundaries of the Seymour overlooking the Brazos River. The aggregate flow from all the seepage areas has not been measured; however, the flow from individual areas ranges from a few gallons to several hundred gallons per minute. Local residents report that the flow of springs was less in 1956 than in previous years; the decline in flow was due, in part, to drought and, in part, to the increased withdrawals of ground water for irrigation in recent years.

Ground water is discharged by evaporation or by transpiration chiefly in areas where the water table is at or very near the land surface. Some of these areas are waterlogged and are too wet to support the growth of crops; the discharge,

therefore, is considered to be nonbeneficial. The areas generally are marked by a dense growth of wild grass and mesquite trees. The largest of the areas is about 2 miles wide and extends northward about 5 miles from a point about 5 miles west of Rochester. Another area about 3 miles north of Knox City occupies about 2 square miles. The total of these and smaller areas overgrown with grass and mesquite is less than 15 square miles. The total ground-water discharge by evapotranspiration is not known, but it probably is a large part of the total natural discharge.

The discharge from the Seymour formation to the underlying Permian rocks is probably small compared with the total ground-water discharge. Although the Permian rocks yield small quantities of water to wells in the Haskell-Knox area, the formations are relatively impermeable compared to the Seymour. The poor hydraulic connection between the Seymour and the Permian rocks is further indicated by the dissimilarity of the chemical quality of the water from the formations.

Hydraulic Properties of the Aquifer

The ability of an aquifer to yield water to wells is dependent upon physical properties such as its coefficients of transmissibility, permeability, and storage. These are dependent on the size, distribution, and continuity of the pore spaces in the aquifer and on the saturated thickness of the aquifer.

The coefficient of transmissibility is the number of gallons a day of water that will flow through a vertical strip of the aquifer 1 foot wide and having the height of the aquifer when the hydraulic gradient is unity. The field coefficient of permeability is computed by dividing the transmissibility by the saturated thickness of the aquifer.

The coefficient of storage is the volume of water an aquifer releases from or takes into storage per unit surface area of the aquifer per unit change in the component of head normal to that surface.

Short-term recovery tests were made on several wells to provide information on the coefficient of transmissibility of the Seymour formation and on well performance. More elaborate tests of longer duration are necessary to determine the coefficient of storage, but such tests are beyond the scope of this investigation. However, other data have been used to estimate the storage properties of the Seymour.

The tests were made on 13 irrigation wells that had been pumping for periods ranging from 6 hours to several days. After the pumping rates were measured, the pumps were turned off, and measurements were made of the water levels as they recovered. The coefficients of transmissibility were computed from these data.

The computations using the recovery data are based on certain idealized conditions assumed in an equation developed by Theis (1935, p. 522). However, field conditions at the test sites in Haskell and Knox Counties were far from ideal, and the calculated values of transmissibility and permeability shown in Table 2 are subject to considerable error and should be used with caution.

Similar tests near Amarillo, Texas (Moulder and Frazor, 1957, p. 12) indicate that short-duration tests such as the tests in Haskell and Knox Counties may give apparent coefficients of transmissibility much higher than the true coefficients. It is, therefore, probable that the values in Table 2 are the highest expectable and that the true values may be considerably smaller.

Table 2.--Tentative values of aquifer properties and well performance

Well	Owner	Transmissi- bility (gpd/ft.) <u>1/</u>	Field per- meability (gpd/ft. ²) <u>1/</u>	1-hour specific capacity (gpm/ft.)	Pumping rate (gpm)
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Haskell County

B-114	Roy Tankersley	81,000	2,700	85	355
B-162	R. J. Strickland	222,000	7,100	62	590
E-17	Joe W. Cloud	32,000	3,900	23	95
E-85	Norman Nanny	123,000	7,000	57	255
E-100	C. A. Thomas, Jr.	93,000	10,000	77	110

Knox County

G-10	W. H. Lankford	177,000	14,000	86	180
H-56	S. D. Jones	107,000	1,000	29	145
H-108	Mrs. Ada M. Jarvis	23,000	1,500	29	255
H-141	Morris Wallace	81,000	3,200	97	545
H-164	D. H. Henry	51,000	1,600	18	335
H-171	J. P. Jones	99,000	4,200	178	915
J-85	B. B. Bowden	79,000	2,000	51	540
J-123	M. A. Bumpus	61,000	1,800	66	355

1/ Values are based on questionable data and may be considerably too high.

The ratio of the amount of water withdrawn from wells to the amount of material dewatered during a particular period of time is equal to the coefficient of storage if the pumping has not affected the natural recharge-discharge relationship of the reservoir. A water-level-decline map was prepared from water-level measurements made in Knox County in the spring of 1956 and winter of 1956-57 (Plate 5). The volume of dewatered material was estimated from the map to be 270,000 acre-feet; the pumpage for the same period was about 37,000 acre-feet. If there was no change in the recharge-discharge relationship, the coefficient of storage was about 0.14. If the recharge to that part of the reservoir treated in Plate 5 exceeded the natural discharge, or if drainage were incomplete, the coefficient would be larger, and conversely, if the recharge were less than the natural discharge, the coefficient would be smaller. If an appreciable amount of the irrigation water seeped back to the aquifer, the computed coefficient would be too large. Similar data collected for the whole reservoir over a period of years are needed for a more reliable estimate of the coefficient of storage.

Utilization

The early ranchers in Haskell and Knox Counties obtained most of their water from springs at the edge of the Seymour formation near the larger streams. Many of the early wells were failures because of the scanty supplies and poor chemical quality of the water. As the aquifer filled, the supplies became larger and the quality improved.

Prior to 1951 ground water in Haskell and Knox Counties was used principally for domestic and public supplies and for watering livestock. The first irrigation supplies were developed in 1938, but until 1951 all the supplies were obtained from three dug wells, two of which are still in use (Haskell County well A-67 and Knox County well H-193). It is estimated that the total use for irrigation prior to 1951 was less than 500 acre-feet per year.

Starting in 1951 irrigation gained in popularity. In that year 22 wells were drilled for irrigation, though most were drilled during the latter part of the year and were not used until 1952. The number of irrigation wells increased to nearly 300 in 1954 and to about 1,100 in 1956.

The following table summarizes the irrigation development in Haskell and Knox Counties.

Year	Number of wells	Estimated pumpage (acre-feet)	Estimated acres irrigated
1951	25	--	--
1952	115	9,000	5,700
1953	170	13,000	8,500
1954	290	22,000	14,500
1955	600	45,000	30,000
1956	1,100	76,500	50,000

The irrigation pumpage for 1956 was estimated from measurements of the water pumped per unit power consumed by electric motors in selected wells, from the total amount of electricity used at the individual wells, and from the number of wells. The irrigation pumpage for the years 1952 to 1955 was estimated by using the duty-of-water figure obtained in 1956.

Approximately 76,500 acre-feet of water was pumped to irrigate about 50,000 acres of land during 1956. This represents an average irrigation application of about 1.5 acre-feet of water per acre. The average irrigation requirement over a long period may be less because the rainfall in 1956 was below normal (Figure 2); however, the figure is probably nearly correct for the 1952-55 period because the precipitation during the entire period was below normal.

The use of ground water for irrigation in Haskell and Knox Counties represents about 96 percent of the total water use in the area. It is estimated that the water used in 1956 for purposes other than irrigation was about 2,900 acre-feet. This includes water for public supplies at Haskell, Knox City, Rule, Munday, O'Brien, Benjamin, and Rochester, and small quantities of water for industrial and domestic use. The total use of ground water in the two-county area in 1956 was estimated to be about 79,400 acre-feet.

In areas developed for irrigation the density of the wells generally is about 6 to 9 per square mile, although locally it may be as much as 15 per square mile. The density depends not only on the availability of water but also on the suitability of the land for irrigation. In some of the most heavily developed areas, such as one between Rule and Haskell and another northwest of Knox City, the saturated thickness of the formation is only about 10 to 20 feet, whereas in other areas less suitable for irrigation the saturated thickness may be as great as 60 feet (Plate 6).

In some places wells are drilled close together, commonly less than 100 feet apart. In Knox County it is common practice to drill wells in pairs 50 to 100 feet apart. Water from one of the wells is pumped into an adjoining well from which it is subsequently pumped into a closed irrigation sprinkling system. The discharge from one well generally is too small to operate efficiently a sprinkler system; the discharge from several wells is great enough to provide sufficient volume and pressure for irrigation by sprinkling. In many areas several wells are drilled in a line and spaced about 50 feet apart. The wells are connected to a common discharge line so that all the wells can be pumped with a single centrifugal pump. The number of wells joined together in this type of operation ranges from 4 to 11. The yield from one well may be reduced by the pumping of a nearby well, or, if the power is increased so as to prevent a decrease in yield, the pumping level will be lowered. Figure 6 shows the theoretical effect on water levels by pumping one well or two wells 500 feet apart.

The average discharge from 302 wells in Haskell and Knox Counties was 280 gpm. In Haskell County the discharge ranged from 21 gpm in well E-63 to 1,300 gpm in well B-59, and in Knox County it ranged from 66 gpm in well F-32 to 917 gpm in well H-171. Most of the wells of large capacity are in the central part of the irrigation area near the Haskell-Knox County line.

All the wells drilled for irrigation penetrate the complete thickness of the Seymour formation, which ranges from 85 feet in Haskell County well A-85 to 16 feet in Knox County well G-64.

The performance of a well is dependent not only on hydraulic properties and boundaries of the aquifer but also on the construction and degree of development

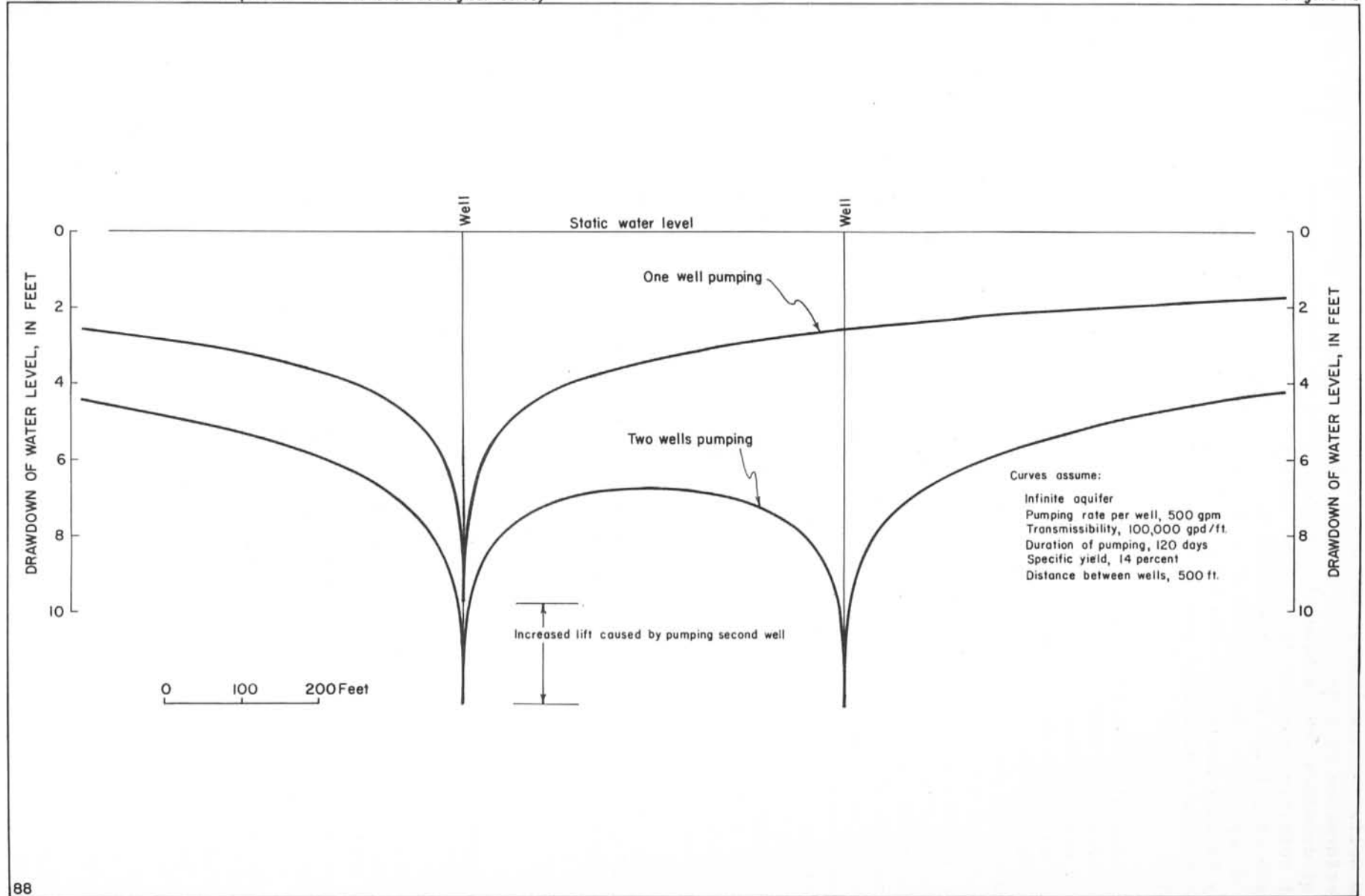


FIGURE 6.- Idealized cross section showing drawdown interference between two pumping wells

of the well. Well drillers commonly use the term specific capacity to describe the performance of a well. It is defined as the rate of yield of the well per unit of drawdown and is generally expressed in gallons per minute per foot. Values of specific capacity are a good measure of relative well performance only if they are calculated from data taken at comparable times. The values shown in Table 2 represent the specific capacities after pumping 1 hour. The specific capacity becomes smaller as the time of pumping becomes greater, and hence the long-term yield of a well cannot be estimated accurately from the 1-hour specific capacity.

In recent years all the irrigation and municipal wells in the Haskell-Knox County area have been drilled by a modified rotary rig equipped with a 24- or 36-inch auger bucket. The bottom of the bucket is equipped with a knifelike cutting edge with an opening above the knife through which the loosened material enters the bucket as it is rotated. When the bucket has been filled, it is lifted to the surface and emptied. Water or drilling mud is used to condition the sides of the hole during the drilling operation. This method of drilling has proven highly successful in this area where the material is unconsolidated and the wells are relatively shallow. The wells are cased to the bottom with slotted steel casing and are gravel packed. In the older wells the casings were slotted from the water table to the bottom of the wells, but in the more recently drilled wells only the bottom sections opposite the basal gravel deposits have been slotted. Little effort is made to relate the width of the slot to the size of the sand particles. Consequently, in many areas the wells pump large quantities of sand which results in excessive wear on pumps and casings and, in a few instances, loss of a well due to cave-ins. The use of smaller slots reduces the amount of sand pumped but may also reduce the yield of the well by causing excessive entrance losses. Well screens have not been used because of the higher cost.

Most of the pumps in the two-county area are high-speed turbines powered by electric motors or internal-combustion engines. In areas where the water level is within the limit of suction lift, electric-powered centrifugal pumps are used.

Fluctuations of Water Levels

Changes in water levels in the Seymour formation reflect changes in groundwater storage in the aquifer. The maps showing changes in water levels (Plates 5 and 7) show that for nearly any time interval water levels have risen in some areas and declined in others. The greatest change in water level was recorded in Haskell County well B-174, which showed a net decline of 14.42 feet from February 1952 to February 1959. From the spring of 1956 to the following winter, water-level changes ranged from a rise of 3.8 feet in Haskell County well A-35 to a decline of 9.5 feet in Knox County well H-203. The average decline in 444 wells was 2.0 feet. The rainfall at Haskell in 1956 was only 10.14 inches. From the winter 1956-57 to February 1959, the average change in water levels in 199 wells was a rise of 0.8 foot, the greatest rise being 8.4 feet in Haskell County well A-108 and the greatest decline being 5.2 feet in Haskell County well A-88. Rainfall at Haskell was 28.25 inches in 1957 and 24.11 inches in 1958. Thus, during the 1956 period a substantial amount of water was lost from storage, whereas the heavier precipitation and a reduction in pumping that started in 1957 caused a net gain in storage by February 1959, the gain probably being less than half the 1956 loss.

Although the period of record is too short to show definite trends, certain recorded events indicate the general history of water-level fluctuations in the

Seymour. Prior to cultivation of the land, water levels fluctuated in response to changes in the climatic cycle, but in general they remained near the base of the Seymour formation. From about 1900 they rose, somewhat irregularly, as more and more land was being cultivated. During the 1930's the water levels reached their maximum altitude, causing the waterlogging of some of the low-lying lands. The water table remained at near-maximum height until about 1951 when drought and withdrawals for irrigation started a decline that continued until 1957. Rainfall, more than 4 inches above normal in 1957 and about normal in 1958, and a decrease in withdrawals caused the water table to rise slightly. It appears unlikely, however, that accretions from a normal rainfall pattern will be sufficient to sustain withdrawals for irrigation indefinitely if irrigation is maintained at or above the 1956-58 level. Thus, in the long run water levels are expected to decline.

Availability

Several factors should be considered in evaluating the availability of ground water from the Seymour formation. Water enters the aquifer at places of recharge and moves slowly through it to places of discharge. Thus, the aquifer can be considered as having two functions--that of a reservoir in which the water is in transient storage and that of a conduit through which the water moves.

As the Seymour formation has physical limits, the amount of water in transient storage is limited. The amount of water in storage is sufficient to sustain the 1956 withdrawal rate for only a few years; therefore, the relationship of recharge, rate of pumping, and natural discharge are of primary importance in evaluating the availability of the water.

The total volume of saturated material at the end of 1956 is computed from Plate 6 to be about 5.3 million acre-feet. If the specific yield (coefficient of storage) is 14 percent, the aquifer contains approximately 740,000 acre-feet of water in storage. However, it is impractical to recover all the water in storage because as the aquifer becomes dewatered, the yields of the wells will decline to a point where it will no longer be economical to pump water for irrigation. At the 1956 rate of withdrawal (estimated to be 79,400 acre-feet), the amount of water in storage would be depleted in less than 10 years if there were no recharge. Thus, long-term supplies are dependent on recharge.

The 1956 rate of pumping is several times greater than the computed average rate of accretion and probably is much greater than the average rate of recharge. The amount of water in transient storage in 1956, when the aquifer was slightly less than full, was estimated to be 740,000 acre-feet. Assuming that the aquifer filled to 740,000 acre-feet from 1900 to 1935, the average rate of accretion was about 20,000 acre-feet per year. The average rate of recharge was somewhat greater, the amount depending upon the amount of discharge during the 35-year period.

These estimates indicate that somewhat more than 20,000 acre-feet of water may be withdrawn annually from the aquifer without permanently depleting the water in storage. A longer period of record of pumpage and water-level measurements is needed to determine the maximum amount of water available perennially. It appears unlikely, however, that the aquifer is capable of indefinitely sustaining withdrawals sufficient to irrigate the amount of land irrigated in 1956.

Artificial Recharge

The prospects appear dim for appreciably increasing the amount of ground water available from the Seymour by artificial recharge, although some methods of increasing recharge have been attempted and others have been considered. A few attempts have been made to drain through wells the water that collects in the shallow depressions during periods of heavy precipitation. On the farm of S. N. Reed, about 2 miles west of O'Brien, a well was drilled to drain water from about 120 acres of land. A small depression pond on the Mattie Reed farm north of Gililand also was drained by a well. The primary purpose of the recharging, however, was to reclaim land--not to conserve water. Experiments using wells for artificial recharge have been tried in several parts of the Southern High Plains of Texas, but many have proved unsatisfactory because the wells soon became clogged with silt (Leggat, 1957, p. 18, 20).

Some farmers have made plans to install dual-purpose wells for irrigating their farms and draining their ponds. A dual-purpose well is equipped to drain ponded water through the annular space between the pump column and the casing; the well also is equipped with a pump so that it can be surged, thus removing the silt deposited in the well and the formation near the well by the injected water. During periods when no recharge water is available, the well is used for irrigation. The dual-purpose well is being used at several places in the High Plains of Texas with moderate success (Broadhurst, 1957a, p. 3-4, and 1957b, p. 3).

Recharge might be increased by digging trenches and building small dams to collect water during periods of heavy rainfall. However, after the water is collected, methods for injecting the water into the aquifer may be necessary because the bottom surface of the trench or tank may become sealed with silt and clay. Owing to the small amount of surface water available for recharge, the water supply cannot be increased substantially over the natural rate. Artificial recharge and other water-conservation practices appear worthwhile, however, considering the value of water and the effect they will have on extending the life of irrigation.

A proposal to recharge the Seymour formation from a reservoir on the Double Mountain Fork Brazos River appears impractical, because the dam would have to be more than 200 feet high to permit gravity flow to the Seymour outcrop.

Future Development

Further development of ground water for irrigation is possible in two principal areas. The largest area is in extreme northwest Haskell County northwest of Rochester, where the land is sandy and has a rolling or dunelike surface at some places covered with mesquite. The other large area lies between the towns of Rochester and Rule. The land in these areas could be cleared, leveled, cultivated, and irrigated. The sandy area appears to have the most promising water supply, but the land is the least favorable for irrigation. Irrigation development in either area, however, will reduce to some extent the supply in nearby areas that are already irrigated. Owners of new developments will be faced with problems similar to those encountered by owners of presently irrigated land.

Outlined below are a few suggestions for obtaining the maximum beneficial use of ground water:

- (1) Conserve soil moisture and decrease runoff and evaporation by latest land-conservation practices.

- (2) Grow crops that have a low water requirement.
- (3) Prevent waste of irrigation water by improving the method and timing of irrigation applications.
- (4) Conduct water from the pump to the fields through pipes or lined ditches to reduce seepage and evaporation losses.
- (5) Construct and develop wells so that well-entrance losses and the pumping of sand will be minimized.
- (6) Clean and inspect wells periodically to avoid unnecessary reductions in yield.



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*Name of agency changed to Texas Water Commission January 30, 1962.

Table 3.--Records of wells and springs in Haskell County

All wells are drilled unless otherwise noted in Remarks.
 Water level : Reported water levels given in feet; measured water levels given in feet and tenths.
 Method of lift and type of power: A, airlift; B, bucket; C, cylinder; Cf, centrifugal; E, electric; G, gasoline, butane or Diesel engine; H, hand;
 J, Jet; N, none; T, turbine, W, windmill. Number indicates horsepower.
 Use of water : D, domestic; Ind, industrial; Irr, irrigation; N, none; P, public supply; S, stock.

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
A-1	Stonewall Gas Production, Inc.	John Kale	1954	36	14	Seymour formation	20.6	Aug. 28, 1956	N	N	Abandoned.
A-2	do	do	1954	36	14	do	--	--	N	N	do
A-3	do	Sonny Hughes	--	--	--	do	--	--	N	N	do
A-4	do	do	1955	27	12	do	--	--	N	N	do
*A-5	Joe T. Williams	J. M. Rea	1956	36	14	do	18.0 18.9 20.7	May 22, 1956 Dec. 10, 1956 Feb. 4, 1959	T,G, 25	Irr	Discharge measured 220 gpm, Aug. 28, 1956; pumping level 27.3 ft.
A-6	-- McGregor	do	1955	41	14	do	--	--	T,G, 25	Irr	Discharge decreases after pumping 1 week.
A-7	O. B. Ratliff	do	1955	33	12	do	18.7 19.0 18.0	May 8, 1956 Dec. 10, 1956 Feb. 4, 1959	T,G, 20	Irr	Pump: 6 in., set at 30 ft.
A-8	McGregor Estate	do	1956	39	14	do	26.6 27.0 25.0	May 9, 1956 Jan. 9, 1957 Feb. 4, 1959	T,G, 25	Irr	Pump: 4 in.
A-9	Chris Fletcher	--	1954	52	14	do	17.6	May 9, 1956	T,G	Irr	Drawdown reported 8 ft. after 6 hours pumping 580 gpm. Struck water at 18 ft. Last 8 ft. sand and gravel.
A-10	W. A. Bryant	John Kale	1954	48	16	do	27.1 28.5 27.6	May 9, 1956 Dec. 11, 1956 Feb. 5, 1959	T,E, 10	Irr	Pump set 47 ft.
A-11	E. L. Adkins	J. M. Rea	1955	50	14	do	29.1 29.3	May 28, 1956 Dec. 11, 1956	T,E, 10	Irr	Discharge reported 150 gpm; pump: 4 in.
A-12	do	do	1955	60	14	do	39.1 36.5	May 28, 1956 Dec. 11, 1956	T,G, 56	Irr	Discharge reported 550 gpm.
A-13	Bush & Burnett	do	1956	52	16	do	20.4 25.2	May 9, 1956 Dec. 11, 1956	T,E, 25	Irr	Discharge reported 350 gpm. Drawdown reported 8 ft. after 30 hours pumping 500 gpm.
*A-14	do	do	1956	55	16	do	15.5 20.9	May 9, 1956 Dec. 11, 1956	T,E, 30	Irr	Discharge measured 550 gpm; pumping level 33.3 ft. Temp. 68°F. 1/

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
A-73	E. H. Martingale	Hollis Davis	1956	55	14	Seymour formation	27.5	Dec. 11, 1956	T,G, 105	Irr	Discharge measured 322 gpm, Aug. 30, 1956; pumping level 43.9 ft. Pump: 6 in.
A-74	L. A. Jones	John Wright	1952	35	10	do	29.3 30.0 28.1	May 22, 1956 Dec. 18, 1956 Feb. 4, 1959	T,G	Irr	Discharge reported 75 gpm. Pump: 4 in.
*A-75	A. B. Kempton	--	--	20	36	do	--	--	C,W	D	Dug.
*A-76	Roy Carter	Casey and Kevil	1955	40	14	do	19.3 20.2 17.5	May 24, 1956 Dec. 18, 1956 Feb. 4, 1959	T,G	Irr	Discharge measured 793 gpm, Aug. 16, 1956. Pump: 6 in.
A-77	do	do	1955	39	14	do	21.4 26.3	May 24, 1956 Dec. 18, 1956	T,G	Irr	Discharge measured 250 gpm, Aug. 16, 1956; pumping level 35.0 ft. Pumps into well A-73. Pump: 6 in.
A-78	do	Doris Dickerson	1954	39	14	do	23.1 27.8	May 24, 1956 Dec. 18, 1956	T,G	Irr	Discharge reported 250 gpm. Pump: 6 in.
A-79	do	Hollis Davis	1956	42	14	do	31.9	Dec. 18, 1956	T,E, 5	Irr	Discharge estimated 125 gpm, Aug. 16, 1956; pumping level 43.8 ft. <u>1/</u>
A-80	Bailey Foster	J. M. Rea	1955	36	14	do	19.3 23.1 22.0	May 21, 1956 Dec. 18, 1956 May 20, 1957	T,E, 25	Irr	Discharge reported 460 gpm.
A-81	T. L. Chambers	Hollis Davis	1956	34	14	do	22.5 24.8	May 21, 1956 Dec. 18, 1956	T,E, 10	Irr	Pump set 30 ft. <u>1/</u>
A-82	Scott White	Scott White and Casey and Kevil	1956	28	12	do	17.4 19.0 18.0	May 24, 1956 Dec. 18, 1956 Feb. 4, 1959	Cf,G	Irr	Discharge measured 295 gpm, Aug. 30, 1956; pumping level 29.12 ft. A centrifugal pump pulls the water into a pit. Water level measurement taken from the extreme northeast hole. Eleven wells. <u>1/</u>
A-83	D. H. Person	--	1956	66	12	do	42.7 44.5	May 16, 1956 Jan. 9, 1957	T,E	Irr	Discharge measured 105 gpm, Aug. 30, 1956; pumping level 58.1 ft. Pump: 4 in. <u>1/</u>
A-84	Bailey Foster	Claude Covey	1956	69	14	do	37.2 38.7 37.2	May 18, 1956 Dec. 18, 1956 Feb. 4, 1959	T,G	Irr	Discharge reported 275 gpm. Pump set 69 ft. <u>1/</u>
A-85	Johnny L. Wyatt	O. V. Covey	1955	85	14	do	41.7 42.6	June 6, 1956 Dec. 17, 1956	T,G, 132	Irr	Drawdown reported 12 ft. after several minutes pumping 1,200 gpm. Pump: 8 in. <u>1/</u>

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
A-86	L. B. White	Scott White	1956	67	14	Seymour formation	24.8 27.4	May 24, 1956 Dec. 17, 1956	T,G	Irr	Discharge reported 400 gpm. Pump: 6 in.
A-87	Paul Milton	Don Combs	1955	70	14	do	26.6 27.8	May 16, 1956 Dec. 17, 1956	T,G	Irr	Discharge measured 470 gpm, Aug. 30, 1956; pumping level 40.5 ft. Pump set at 66 ft.
A-88	H. W. Buckner	--	1955	55	14	do	31.4 34.0 39.2	May 18, 1956 Dec. 17, 1956 Feb. 4, 1959	T,G	Irr	Discharge measured 224 gpm, Sept. 2, 1956.
A-89	do	--	1955	55	14	do	36.8 33.2	May 16, 1956 Dec. 17, 1956	T,G	Irr	Discharge reported 600 gpm. <u>1</u>
A-90	E. L. Adkins	John Kale	1954	59	14	do	23.0 26.0 25.1	May 23, 1956 Dec. 17, 1956 May 20, 1957	T,G	Irr	Discharge reported 1,500 gpm. Drawdown 8 ft. after 24 hours pumping 1,500 gpm.
A-91	A. W. Adkins	J. M. Rea	1955	81	14	do	24.5 26.1 26.2	May 30, 1956 Dec. 17, 1956 Feb. 5, 1959	T,G	Irr	Reported 80 acres irrigated in 1956.
A-92	W. Z. Wadzeck	--	1953	52	12	do	16.6 19.9	May 13, 1956 Dec. 11, 1956	T,E, 5	Irr	Discharge estimated 85 gpm, Aug. 30, 1956; pumping level 46.9 ft. Pump: 4 in.
A-93	do	Doris Dickerson	1955	42	14	do	15.1 18.7	May 13, 1956 Dec. 11, 1956	T,G	Irr	Discharge reported 380 gpm. Pump: 6 in.
A-94	G. F. Mullino, Jr.	--	1951	53	14	do	21.3 23.4	May 21, 1956 Dec. 17, 1956	T,G	Irr	Discharge measured 610 gpm; pumping level 31.1 ft. Pump: 8 in.
A-95	do	John Covey	1955	54	14	do	17.6 21.3	May 17, 1956 Dec. 17, 1956	T,E, 10	Irr	Discharge reported 340 gpm. Pump: 4 in. Set at 45 ft.
A-96	do	do	1955	53	14	do	17.3 20.7	May 17, 1956 Dec. 17, 1956	T,G	Irr	Discharge reported 800 gpm. Drawdown 14 ft. after 24 hours pumping 800 gpm. Pump set at 40 ft.
A-97	Pat Ballard	--	1954	52	14	do	17.6 20.7	May 18, 1956 Dec. 17, 1956	T,G	Irr	Discharge measured 330 gpm, Aug. 30, 1956; pumping level 26.5 ft.
A-98	H. W. Buckner	John Kale	1954	53	14	do	22.1 23.9	May 28, 1956 Feb. 25, 1957	T,G	Irr	Discharge reported 750 gpm. Pump: 6 in. Drawdown 14 ft. after 24 hours pumping 750 gpm. Pump set at 40 ft.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
A-99	G. F. Mullino, Jr.	John Kale	1954	54	14	Seymour formation	18.6 21.9 21.3	June 6, 1956 Dec. 17, 1956 Feb. 4, 1959	T,G	Irr	Discharge reported 720 gpm. Pump: 6 in. Drawdown 14 ft. after 24 hours pumping 720 gpm. Pump set at 40 ft.
A-100	Pat Ballard	--	1951	73	14	do	34.3 37.5	May 18, 1956 Dec. 17, 1956	T,G	Irr	Discharge measured 575 gpm, Aug. 31, 1956; pumping level 57.5 ft.
A-101	do	-- Covey	1955	57	14	do	--	--	T,G	Irr	Discharge reported 1,100 gpm. Pump set at 52 ft. <u>1</u>
A-102	Mrs. C. M. Speck	John Darnell	1956	54	14	do	18.1 21.6 21.7	May 23, 1956 Dec. 17, 1956 Feb. 5, 1959	T,G	Irr	Pump: 6 in.
A-103	City of Rochester	Walter Harris	1926	54	144	do	22.6	Aug. 2, 1956	T,E, 20	P	Dug. Discharge reported 500 gpm. Pump: 8 in., set at 39 ft.
*A-104	do	--	1926	54	144	do	22.9 21.5	Mar. 24, 1944 Jan. 14, 1958	T,E, 15	P	Dug. Discharge reported 350 gpm. <u>2</u>
A-105	V. Alvis	John Kale	1954	63	16	do	27.0	May 28, 1956	T,G	Irr	Discharge reported 500 gpm.
A-106	Mrs. J. M. Hicks	do	1954	56	14	do	15.1 18.5	May 29, 1956 Dec. 12, 1956	T,G	Irr	Pump: 8 in.
A-107	Truett Alvis	Claude Covey	1956	57	14	do	17.0 19.9	May 18, 1956 Dec. 12, 1956	T,G	Irr	Discharge reported 600 gpm. Pump: 6 in. Drawdown 8 ft. after 24 hours pumping 600 gpm.
A-108	do	John Kale	1953	63	14	do	20.9 23.6 15.2	May 18, 1956 Dec. 12, 1956 Feb. 5, 1959	T,G	Irr	Discharge measured 550 gpm, Sept. 2, 1956; pumping level 34.3 ft.
A-109	Mrs. Ann Whaley	John Darnell	1956	39	14	do	13.0	Dec. 12, 1956	T,G, 95	Irr	Discharge reported 300 gpm, May 1956. Pump: 4 in.
*A-110	W. A. Ivey	W. A. Ivey	1950	38	--	do	19.3 17.4	Dec. 18, 1956 Feb. 4, 1959	--	--	Dug well, about 15 by 10 ft., completed in 2 years. Water reported to stand at about 25 ft. when reservoir pumps are running and about 10 to 12 ft. when shut down. Well breaks suction in a short while.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
A-111	W. A. Ivey	Claude Covey	1952	75	--	Seymour formation and Clear Fork Group	20.5	Dec. 18, 1956	Cf,E	Irr	Casing: 30 ft. Discharge reported 50 gpm. Two wells at northwest and southeast corner of reservoir behind Mr. Ivey's house.
A-112	do	do	1952	100	14	Clear Fork group	19.5	do	Cf,E	Irr	
A-113	do	do	1953?	60	16, 14	do	19.5	do	Cf,E	Irr	Seven wells, 150 ft. apart, pump into a 4 in. pipe. The pumps are set at 1/2 ft. and will pump down in a short time.
A-114	Joe Mathis	Hollis Davis	1956	29	14	Seymour formation	20.8 22.1	May 21, 1956 Jan. 9, 1957	Cf,E, 2	Irr	Discharge reported 70 gpm. Pump: 2 in.
A-115	do	do	1956	34	14	do	23.9 24.6	May 21, 1956 Jan. 9, 1957	Cf,E, 2	Irr	do
A-116	do	John Kale	1953	34	14	do	22.8	Jan. 1955 Feb. 4, 1959	T,E, 3	Irr	Discharge reported 100 gpm. 2/
A-117	Richard E. Mathis	Hollis Davis	1956	69	14	do	49.6 50.4	May 21, 1956 Dec. 18, 1956	T,G	Irr	Discharge measured 175 gpm, Aug. 30, 1956; pumping level 66.4 ft. Pump: 4 in.
A-118	Zora Wood	do	1956	70	14	do	37.2 39.7 40.5	May 18, 1956 Dec. 18, 1956 Feb. 4, 1959	T,G	Irr	Discharge measured 460 gpm, Aug. 30, 1956; pumping level 57.0 ft. Pump: 6 in.
A-119	Jalea Glover	Elgin Wright	1956	66	12	do	30.0 33.6 32.9	May 21, 1956 Dec. 18, 1956 Feb. 4, 1959	T,G	Irr	Discharge reported 420 gpm. Pump: 5 in. Drawdown 8 ft. after 24 hours pumping 420 gpm.
A-120	E. W. Simpson	Casey and Kevill	1955	73	14	do	31.2 33.3	May 30, 1956 Dec. 18, 1956	T,G	Irr	Discharge reported 200 gpm. Pump: 5 in. 1/
A-121	Mrs. J. M. Reeves	Hollis Davis	1956	68	16	do	30.6 32.5	May 30, 1956 Dec. 18, 1956	T,G	Irr	Discharge reported 650 gpm. Pump: 6 in.
*A-122	J. M. Reeves	--	--	57	5	do	32.2	Mar. 24, 1944	C,W	D	Dug.
*A-123	R. O. Henry	Elgin Wright	1956	73	14	do	33.1 34.6	May 23, 1956 Feb. 4, 1959	T,G	Irr	Discharge reported 320 gpm. Pump: 5 in. Drawdown 30 ft. after pumping 1/2 hour at 280 gpm. 2/
A-124	Scott White	-- Casey	1955	47	14	do	27.1 25.4	Dec. 18, 1956 Feb. 4, 1959	T,G	Irr	Discharge reported 350 gpm. 1/

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*A-125	J. L. Reid, Jr.	--	--	25	30	Seymour formation	9.1 15.6	Mar. 24, 1944 Feb. 5, 1959	C,W	D	Dug. <u>2</u> /
A-126	Buford Sholson	J. M. Rea	1954	40	10, 6	do	18.2 23.0 14.7	June 8, 1956 Dec. 12, 1956 Feb. 5, 1959	Cf,E, 20	Irr	Discharge reported 80 to 100 gpm from 3 wells with one centrifugal pump.
*A-127	A. C. Foster	--	--	40	24	do	18.9	Mar. 24, 1944	C,W	D	Dug.
B-1	James Tankersley	J. M. Rea	1954	53	14	do	38.6 37.1	July 20, 1956 Jan. 3, 1957	T,G, 23	Irr	Discharge reported 100 gpm. Pump: 4 in.
B-2	do	do	1956	53	14	do	39.2	July 20, 1956	T,E, 3	Irr	do
B-3	S. J. Reeves	do	1956	47	16	do	--	--	T,E, 10	Irr	do
B-4	C. M. Wallsworth	Claude Covey	1954	58	16	do	42.6	Jan. 4, 1957	T,G, 100	Irr	Pump: 6 in.
B-5	do	do	1954	56	16	do	--	--	T,E, 30	Irr	do
B-6	Banner Estate	John Wright	1951	64	7	do	--	--	T,E, 5	Irr	Pump: 4 in.
B-7	John Covey	John Covey	1954	53	14	do	30.7 30.2	Jan. 3, 1957 Feb. 5, 1959	T,E, 5	Irr	Discharge reported 200 gpm. Pump: 4 in.
B-8	do	do	--	53	12	do	--	--	T,E, 20	Irr	Discharge reported 400 to 450 gpm. Pump: 6 in.
B-9	Ancel Waldrip	John Shanks	1951	54	14	do	35.9 37.0 37.1	May 10, 1956 Jan. 3, 1957 May 21, 1957	T,G, 23	Irr	Discharge reported 200 gpm. Measured 80 gpm Sept. 1, 1956; pumping level 55.05 ft. Temp. 67°F.
B-10	do	-- Kale	1954	54	12	do	35.8 37.1	May 10, 1956 Jan. 3, 1957	T,E, 5	Irr	Discharge reported 100 gpm.
B-11	S. J. Reeves	J. M. Rea	1955	53	16	do	--	--	T,E, 15	Irr	Discharge 125 gpm. Pump: 4 in.
B-12	James Tankersley	do	1954	53	14	do	40.5 37.0	July 20, 1956 Jan. 3, 1957	T,G	Irr	Discharge reported 150 gpm. Pump: 6 in.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
B-13	James Tankersley	J. M. Rea	1956	53	14	Seymour formation	41.5	July 20, 1956	T, E, 5	Irr	Discharge reported 100 gpm. Pump: 4 in.
B-14	S. J. Hester	do	1956	52½	16	do	37.7	May 10, 1956	T, E	Irr	
B-15	do	do	1955	59½	12	do	39.8 40.1 40.7	May 10, 1956 Jan. 3, 1957 Feb. 5, 1959	T, E, 5	Irr	Discharge measured 55 gpm, Sept. 1, 1956.
B-16	Roy L. Hester	Doris Dickerson	1952	56	12	do	38.6 39.4	May 10, 1956 Jan. 3, 1957	T, E, 5	Irr	Discharge reported 200 gpm.
B-17	do	J. M. Rea	1956	56	16	do	38.6 39.5	May 10, 1956 Jan. 3, 1957	T, E, 5	Irr	do
B-18	do	do	1956	53	16	do	--	--	T, --	Irr	Discharge reported 200 gpm. 1/
B-19	do	do	1956	55	16	do	--	--	T, E, 3	Irr	Discharge reported 150 gpm.
B-20	Alton E. Hester	do	1955	53	14	do	32.2 32.1	Jan. 4, 1957 Feb. 5, 1959	T, E, 5	Irr	Discharge reported 225 gpm. Measured 100 gpm, Aug. 23, 1956, Pump: 4 in. 1/
B-21	do	Doris Dickerson	1952	53	14	do	--	--	T, E, 3	Irr	Discharge reported 150 gpm. Measured 70 gpm Aug. 23, 1956, Pump: 4 in.
B-22	J. T. Macbeth	John Kale	1954	54	16	do	33.4	Jan. 4, 1957	T, E, 5	Irr	Discharge measured 120 gpm, Aug. 23, 1956; pumping level 43.5 ft.
B-23	C. G. Burson	J. M. Rea	1956	50	14	do	29.4	do	T, E, 7	Irr	Discharge measured 125 gpm, Aug. 21, 1956; pumping level 47.6 ft. Pump: 5 in. 1/
B-24	do	do	1956	50	14	do	33.1	do	T, E, 3	Irr	Discharge measured 90 gpm, Aug. 21, 1956; pumping level 42.3 ft. Pump: 4 in. 1/
B-25	C. J. Reese	do	--	57	16	do	--	--	T, E, 7½	Irr	Discharge measured 120 gpm, Aug. 22, 1956, Pump: 5 in.
B-26	do	John Shanks	1952	64	16	do	33.1	Jan. 4, 1957	T, E, 15	Irr	Discharge measured 160 gpm, Aug. 22, 1956; pumping level 45.0 ft. Pump: 8 in.
B-27	G. W. Reese	-- Kuntz	1953	56	14	do	--	--	T, E, 10	Irr	Discharge reported 400 gpm. Pump: 6 in.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
B-28	G. W. Reese	J. M. Rea	1955	50	14	Seymour formation	--	--	T,E, 5	Irr	Probably will be abandoned.
B-29	E. L. Tankersley	Claude Covey	1955	51	14	do	28.3 27.8	Jan. 4, 1957 Feb. 5, 1959	T,E, 30	Irr	Discharge measured 150 gpm, Aug. 22, 1956; pumping level 45.2 ft. Pump: 6 in.
B-30	do	J. M. Rea	1956	51	14	do	31.2	Jan. 5, 1957	T,E, 7½	Irr	Discharge measured 100 gpm, Aug. 21, 1956; pumping level 41.4 ft. Pump: 5 in. Temp. 68°F.
B-31	do	Claude Covey	1955	51	14	do	26.1	Jan. 4, 1957	T,E, 30	Irr	Discharge measured 155 gpm, Aug. 21, 1956; pumping level 37.6 ft. Pump: 6 in. Temp. 67°F.
B-32	do	John Kale	1955	51	14	do	28.8	do	T,E, 5	Irr	Discharge measured 170 gpm, Aug. 21, 1956; pumping level 40.0 ft. Pump: 5 in. Temp. 67°F.
B-33	S. L. Stanley	do	1953	51	14	do	27.5	Jan. 5, 1957	T,G	Irr	Pumping level 42.0 ft. Pump: 8 in.
B-34	Roy Tankersley	do	1955	50	14	do	--	--	T,E, 10	Irr	Pump: 6 in.
B-35	do	Claude Covey	1955	50	14	do	26.1	Jan. 4, 1957	T,E, 7½	Irr	Discharge measured 90 gpm, Aug. 23, 1956; pumping level 37.6 ft. Pump: 5 in.
B-36	do	John Shanks	1953	50	14	do	--	--	T,E, 10	Irr	Discharge measured 225 gpm, Aug. 24, 1956. Pump: 8 in.
B-37	do	John Kale	1955	50	16	do	--	--	T,E, 15	Irr	Discharge measured 200 gpm, Aug. 24, 1956. Pump: 8 in.
B-38	do	J. M. Rea	1954	50	14	do	28.4	Jan. 4, 1957	T,E, 7½	Irr	Discharge measured 95 gpm, Aug. 24, 1956; pumping level 36.8 ft. Pump: 5 in.
B-39	S. L. Stanley	John Kale	1953	53	14	do	36.2	Aug. 22, 1956	T,G	Irr	Pumping level 48.3 ft. Pump: 8 in.
B-40	G. W. Reese	--	1905	--	39	do	26.9 27.4	Jan. 4, 1957 May 21, 1957	T,E, 7½	Irr	Dug. Discharge measured 140 gpm, Aug. 22, 1956; pumping level 35.9 ft.
B-41	T. W. Barton	J. M. Rea	1956	59	16	do	31.1	Jan. 9, 1957	T,E, 3	Irr	Pump: 4 in.
B-42	do	do	1956	54	16	do	30.8	do	T,E, 3	Irr	do

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
B-43	T. W. Barton	J. M. Rea	1956	56	14	Seymour formation	30.3	Jan. 9, 1957	T, E, 5	Irr	Pump: 4 in.
B-44	do	Claude Covey	1955	57	14	do	--	--	T, E, 7½	Irr	Pump: 6 in.
B-45	do	do	1955	56	14	do	--	--	T, E, 3	Irr	Pump: 4 in.
B-46	do	John Kale	1954	54	14	do	30.6 32.2	Jan. 4, 1957 Feb. 5, 1959	T, E, 5	Irr	Pump: 5 in.
B-47	S. L. Stanley	do	1954	54	14	do	31.6	Jan. 4, 1957	T, E, 5	Irr	Pump: 5 in. Pumping level 44.9 ft.
B-48	Roy Tankersley	John Shanks	1952	59	16	do	33.0 33.5	Jan. 4, 1957 Feb. 5, 1959	T, E, 15	Irr	Discharge measured 215 gpm, Aug. 15, 1956; pumping level 40.0 ft. Pump: 8 in. Temp. 67°F.
B-49	do	J. M. Rea	1955	50	14	do	--	--	T, E, 10	Irr	Discharge measured 395 gpm, Aug. 24, 1956. Pump: 6 in. Temp. 66°F.
B-50	J. L. Stephens	John Kale	1955	55	14	do	18.6 26.6	Jan. 6, 1955 Feb. 5, 1959	T, G	Irr	Discharge measured 375 gpm, Aug. 24, 1956. Pump: 6 in. 2/
B-51	do	John Shanks	1952	56	16	do	21.2 32.9	Jan. 6, 1953 Feb. 5, 1959	T, E	Irr	Discharge measured 120 gpm, Aug. 24, 1956; pumping level 38.8 ft. Pump: 8 in. 2/
B-52	J. C. Angle	J. M. Rea	1955	50	14	do	24.9	Jan. 5, 1957	T, G	Irr	Discharge measured 330 gpm, Aug. 24, 1956; pumping level 44.0 ft. 1/
B-53	do	John Kale	1955	47	16	do	--	--	T, G	Irr	Discharge estimated 315 gpm, Aug. 24, 1956.
B-54	Mrs. -- Cole	Doris Dickerson	1953	54	12	do	35.9	Jan. 5, 1957	T, G, 17	Irr	Discharge reported 500 gpm. Pump: 6 in.
B-55	do	do	1953	58	12	do	--	--	T, -	Irr	Discharge reported 550 gpm. Pump: 6 in.
B-56	Milton Roan	John Kale	1954	50	14	do	32.7	Jan. 5, 1957	T, E, 5	Irr	Discharge measured 110 gpm, Aug. 22, 1956; pumping level 45.8 ft.
B-57	do	John Kolby	1955	52	14	do	24.8	do	T, G	Irr	Discharge measured 214 gpm, Aug. 22, 1956.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
B-58	E. H. Tankersley, Jr.	John Kale	1954	51	14	Seymour formation	30.9	Jan. 5, 1957	T,E, 30	Irr	Discharge reported 350 gpm; pumping level 43.9 ft. Pump: 8 in.
B-59	M. T. Lowery	John Shanks	1951	54	16	do	17.9 27.9	Jan. 6, 1953 Feb. 5, 1959	T,G	Irr	Discharge measured 1,300 gpm, Aug. 12, 1956; pumping level 38.8 ft. Pump: 8 in. 2/
B-60	do	J. M. Rea	1954	55	16	do	22.9 29.5	Jan. 4, 1955 Feb. 5, 1959	T,G	Irr	Discharge reported 600 gpm. Pump: 6 in. 2/
B-61	M. S. Denton	John Kale	1954	52	14	do	26.0	Jan. 5, 1957	T,G	Irr	Discharge reported 700 to 800 gpm. Pump: 6 in.
B-62	W. H. Cornett	-- Smelly	1953	57	14	do	23.7	do	T,G, 35	Irr	Discharge measured 465 gpm, Sept. 1, 1956; pumping level 46.1 ft. Pump: 8 in. Temp. 66°F.
B-63	do	J. M. Rea	1954	57	14	do	24.6	do	T,G, 35	Irr	Pump: 8 in.
B-64	R. J. Reynolds	John Shanks	1952	74	14	do	22.0	do	T,G, 38	Irr	Discharge measured 471 gpm, Aug. 1, 1956; pumping level 39.2 ft. Pump: 6 in.
B-65	do	Doris Dickerson	1955	68	14	do	23.9 23.2	Jan. 5, 1957 Feb. 5, 1959	T,G	Irr	Pump: 6 in.
B-66	Welton Leflar	do	1955	59	14	do	20.1	Jan. 5, 1957	T,G	Irr	Discharge reported 850 gpm. Pump: 6 in.
*B-67	Ellwood Hackney	do	1956	70	12	do	25.1 25.4	July 12, 1956 Jan. 5, 1957	T,G	Irr	Discharge measured 320 gpm, Sept. 1, 1956. Pump: 6 in.
B-68	Adolph Haven	John Kale	1956	70	14	do	23.0	Jan. 5, 1957	T,G, 200	Irr	Discharge measured 640 gpm, July 13, 1956; pumping level 38.2 ft. Pump: 6 in.
B-69	W. J. Haveran	Doris Dickerson	1956	64	12	do	20.5 20.1	Jan. 5, 1957 Feb. 5, 1959	T,G	Irr	Discharge reported 650 gpm. Pump: 6 in.
B-70	Claude Hill	J. M. Rea	1956	61	16	do	19.9 18.4	Jan. 5, 1957 Jan. 14, 1958	T,G	Irr	Discharge measured 405 gpm. Pump: 6 in.
B-71	--	do	1955	54	16	do	--	--	T,E	Irr	Pump: 6 in.
B-72	J. T. Reddell	John Kale	1956	66	14	do	22.0	Jan. 5, 1957	T,G	Irr	Discharge measured 640 gpm, Aug. 1956. Pump: 6 in.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
B-73	L. L. Huckabee	Don Combs	1956	54	14	Seymour formation	21.6 20.8	Jan. 5, 1957 May 21, 1957	T,E	Irr	Pump: 6 in.
B-74	do	do	1952	50	14	do	--	--	T,G, 100	Irr	Pump: 8 in.
B-75	do	do	1955	63	14	do	22.5	Jan. 5, 1957	T,G	Irr	Pump: 6 in.
B-76	Vernon Jenkins	Doris Dickerson	1952	73	14	do	--	--	T,G	Irr	Discharge measured 380 gpm, Aug. 8, 1956. Pump: 8 in.
B-77	Claude Hill	John Kale	1955	66	14	do	27.6 27.8 27.5	Jan. 5, 1957 May 21, 1957 Feb. 5, 1959	T,G, 42	Irr	Discharge measured 410 gpm, Aug. 8, 1956; pumping level 34.5 ft. Pump: 6 in.
B-78	--	J. M. Rea	1955	69	16	do	27.9	Jan. 5, 1957	T,G, 15	Irr	Pump: 6 in.
B-79	W. A. King	Doris Dickerson	1956	52	14	do	20.1 19.2 19.9	Jan. 5, 1957 May 21, 1957 Feb. 5, 1959	T,E, 10	Irr	Discharge measured 310 gpm; pumping level 38.5 ft. Pump: 6 in.
B-80	Harvey LaGrove	John Shanks	1952	50	14	do	--	--	T,G, 160	Irr	Pump: 8 in.
B-81	Jack Gauntt	Casey and Kevil	1956	49	14	do	24.5 22.7	July 25, 1956 Jan. 3, 1957	T,G	Irr	Discharge measured 465 gpm, Aug. 22, 1956; pumping level 41.3 ft. Pump: 6 in.
B-82	Allan Hester	-- Hendricks	1952	56	14	do	--	--	T,E, 7½	Irr	Pump: 5 in.
B-83	do	J. M. Rea	1955	54	14	do	30.6	Jan. 3, 1957	T,E, 5	Irr	Pump: 4 in.
B-84	do	do	1956	53	14	do	31.7	do	T,E, 5	Irr	Discharge measured 80 gpm, Aug. 23, 1957. Pump: 4 in.
B-85	J. W. LaDak	do	1956	58	16	do	42.0 36.8	Aug. 23, 1956 Jan. 3, 1957	T,E, 5	Irr	Pump: 4 in.
B-86	J. L. Barnard	John Shanks	1951	60	16	do	--	--	T,G, 75	Irr	Discharge measured 220 gpm, Aug. 23, 1957. Pump: 8 in.
B-87	do	do	1951	66	14	do	--	--	T,G, 75	Irr	Discharge measured 160 gpm, Aug. 23, 1957.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
B-88	Allan Hester	J. M. Rea	1956	59	14	Seymour formation	34.3	Jan. 3, 1957	T, E, 7½	Irr	Pump: 5 in.
B-89	J. L. Grindstaff, Sr.	do	1956	56	16	do	--	--	T, E, 25	Irr	Discharge measured 310 gpm. Pump: 6 in.
B-90	do	do	1955	58	14	do	36.9	Jan. 3, 1957	T, E, 5	Irr	Discharge measured 100 gpm, Aug. 23, 1957; pumping level 46.1 ft. Pump: 5 in.
B-91	J. W. Tankersley	--	1951	65	14	do	33.2	do	T, G	Irr	Discharge measured 145 gpm, Aug. 22, 1957; pumping level 45.3 ft. Pump: 6 in.
B-92	do	--	1906	55	14	do	32.1 37.2	Jan. 4, 1955 Feb. 5, 1959	T, E, 5	Irr	Dug. Discharge measured 155 gpm, Aug. 23, 1957. Pump: 6 in. <u>2</u>
B-93	R. P. Barnard	--	1906	65	2	do	--	--	T, E, 75	Irr	Dug. Pump: 6 in. Used as supplemental well.
B-94	do	J. M. Rea	1956	55	16	do	36.0 33.2	July 24, 1956 Jan. 9, 1957	T, G, 30	Irr	Pumping level 43.7 ft. Pump: 6 in.
B-95	C. A. Barnard	Claude Covey	1954	61	14	do	36.1	Jan. 3, 1957	T, G	Irr	Pump: 8 in.
B-96	James Huitt	Dickerson and Combs	1952	60	14	do	37.0	do	T, G, 29	Irr	Discharge measured 275 gpm, Aug. 8, 1956; pumping level 48.6 ft. Pump: 6 in. Temp. 67°F.
B-97	C. A. Barnard	J. M. Rea	1956	60	16	do	--	--	T, E, 10	Irr	Discharge measured 150 gpm, Aug. 23, 1956. Pump: 4 in.
B-98	R. P. Barnard	do	1955	55	14	do	32.8 34.3	July 24, 1956 Jan. 3, 1957	T, G, 30	Irr	Pump: 6 in.
B-99	H. M. Cooner	John Kale	1955	54	14	do	33.2	Jan. 3, 1957	T, E, 10	Irr	Discharge reported 300 gpm. Pump: 6 in.
B-100	do	J. M. Rea	1956	53	14	do	32.5	do	T, E, 20	Irr	Discharge reported 200 gpm. Pump: 5 in.
B-101	J. S. Macbeth	do	1956	58	16	do	32.1 33.3	Jan. 4, 1957 Feb. 5, 1959	T, E, 10	Irr	Pump: 6 in.
B-102	do	John Kale	1954	55	16	do	29.1	Jan. 4, 1957	T, G, 30	Irr	Discharge measured 200 gpm, Aug. 23, 1956; pumping level 41.2 ft. Pump: 6 in.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
B-103	L. E. Walker	J. M. Rea	1955	58	14	Seymour formation	36.0 32.6	Aug. 3, 1956 Jan. 4, 1957	T,G, 20	Irr	Discharge measured 265 gpm, Aug. 23, 1956; pumping level 44.9 ft. Pump: 6 in.
*B-104	do	-- Henderson	1951	58	14	do	20.3 32.7	Feb. 12, 1952 Feb. 6, 1959	T,G, 37	Irr	Discharge measured 285 gpm, Aug. 15, 1956. Pump: 8 in. $\frac{2}{3}$ / Pump: 6 in.
B-105	do	J. M. Rea	1955	64	14	do	33.2 31.6	Aug. 3, 1956 Jan. 4, 1957	T,G	Irr	
B-106	do	John Shanks	1952	64	14	do	32.4 29.2	Aug. 3, 1956 Jan. 4, 1957	T,G	Irr	Discharge measured 400 gpm, Aug. 23, 1956; pumping level 41.1 ft. Pump: 8 in.
*B-107	do	J. M. Rea	1955	58	14	do	--	--	T,G	Irr	Discharge measured 335 gpm, Aug. 15, 1956. Pump: 6 in.
B-108	Roy Tankersley	John Shanks	1952	60	14	do	33.0	Jan. 4, 1957	T,E, 15	Irr	Discharge measured 295 gpm, Aug. 24, 1956; pumping level 45.0 ft. Pump: 8 in.
B-109	do	Claude Covey	1955	50	14	do	28.0	do	T,E, 7 $\frac{1}{2}$	Irr	Discharge measured 340 gpm, Aug. 15, 1956; pumping level 37.6 ft. Pump: 5 in. Temp. 67°F.
B-110	Roy L. Hester	J. M. Rea	1956	55	16	do	31.8	Apr. 18, 1957	T,E, 10	Irr	Discharge measured 430 gpm, Aug. 24, 1956; pumping level 46.8 ft. Pump: 6 in.
B-111	do	Doris Dickerson	1952	60	16	do	--	--	T,G, 29	Irr	Discharge reported 900 gpm. Pump: 8 in.
B-112	Roy Tankersley	J. M. Rea	1954	52	14	do	29.4	Jan. 4, 1957	T,E, 10	Irr	Discharge estimated 300 gpm, Aug. 24, 1956; pumping level 38.7 ft. Pump: 6 in. Temp. 67°F.
B-113	do	do	1955	44	14	do	28.2	do	T,E, 15	Irr	Discharge estimated 225 gpm, Aug. 24, 1956; pumping level 39.0 ft. Pump: 6 in.
B-114	do	John Shanks	1952	60	14	do	29.6	do	T,E, 15	Irr	Pump: 8 in. Discharge measured 355 gpm.
B-115	do	do	1952	70	16	do	28.7 27.2	Jan. 4, 1957 Feb. 6, 1959	T,E, 15	Irr	do
B-116	do	do	1952	70	16	do	--	--	T,E, 15	Irr	do
B-117	do	John Kale	1953	50	14	do	--	--	T,E, 15	Irr	do

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
B-118	Roy Tankersley	John Kale	1953	50	16	Seymour formation	27.2	Jan. 4, 1957	T,E, 15	Irr	Pump: 8 in.
B-119	W. G. Barnett	do	1955	55	14	do	--	--	T,G	Irr	Discharge measured 240 gpm, Aug. 24, 1956. Pump: 6 in. Temp. 67°F.
B-120	do	do	1955	55	14	do	26.7	Jan. 4, 1957	T,G	Irr	Discharge measured 280 gpm, Aug. 24, 1956; pumping level 36.9 ft. Pump: 6 in.
B-121	Roy Tankersley	J. M. Rea	1954	50	14	do	21.6 21.4	Jan. 4, 1957 Feb. 6, 1959	T,E, 10	Irr	Discharge measured 273.6 gpm, Aug. 8, 1956; pumping level 29.1 ft. Pump: 6 in. Temp. 67°F.
B-122	E. C. Thompson	John Kale	1956	66	16	do	21.0 18.1	Aug. 1, 1956 Jan. 5, 1957	T,G, 85	Irr	Pumping level 29.8 ft. Pump: 8 in.
B-123	M. C. Josselet	do	1955	63	14	do	19.6 18.4	Jan. 5, 1957 Feb. 5, 1959	T,G	Irr	Discharge measured 660 gpm, Sept. 1, 1956; pumping level 42.7 ft. Pump: 8 in.
B-124	Leroy Leflar	Doris Dickerson	1952	59	14	do	--	--	T,G, 64	Irr	Discharge reported 850 gpm. Pump: 6 in.
B-125	Sam Reed	J. M. Rea	1956	51	14	do	--	--	T,E, 3	Irr	
B-126	do	Doris Dickerson	1952	51	14	do	27.3	Jan. 3, 1957	T,E, 15	Irr	Pump: 8 in.
B-127	do	Hollis Davis	1953	52	14	do	28.5	do	T,E, 15	Irr	Pump: 6 in.
B-128	do	Doris Dickerson	1952	52	14	do	29.7 28.5	Jan. 3, 1957 Feb. 5, 1959	T,E, 15	Irr	Pump: 7 in.
B-129	do	do	1952	52	14	do	29.6	Jan. 3, 1957	T,G	Irr	Discharge measured 120 gpm, Aug. 22, 1956; pumping level 42.8 ft. Pump: 5 in.
B-130	do	John Kale	1953	52	14	do	36.2 34.5 34.0	Aug. 22, 1956 Jan. 3, 1957 Feb. 5, 1959	--	--	Turbine-electric 10 hp pump removed May 21, 1957. Pump: 5 in.
B-131	do	J. M. Rea	1954	52	14	do	28.5	Jan. 3, 1957	T,E, 15	Irr	Pump: 7 in.
B-132	V. M. Wilson	John Shanks	1952	50	14	do	--	--	T,G, 180	Irr	Pump: 8 in.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*B-133	Ira Hester	Knox Plain Drilling Co.	1952	57	14	Seymour formation	22.6	Apr. 18, 1957	T,G, 150	Irr	Discharge measured 275 gpm Sept. 1, 1956. Pump: 8 in.
B-134	do	John Darnell	1956	61	16	do	35.7	Jan. 3, 1957	T,G, 150	Irr	Pump: 6 in.
B-135	V. M. Wilson	J. M. Rea	1955	50	14	do	26.0 27.0	Jan. 3, 1957 Feb. 6, 1959	T,G, 180	Irr	do
B-136	T. D. Emerson	---	1920	55	30	do	--	--	T,G, 22	N	Dug. Abandoned. Well dry.
B-137	C. G. Burson	John Shanks	1953	65	14	do	28.7	Jan. 3, 1957	T,G	N	Discharge reported 1,000 gpm. Pump: 8 in.
B-138	Joe Jenkins	John Kale	1953	59	14	do	25.3	Apr. 18, 1957	T,G, 22	Irr	Pump: 8 in.
B-139	J. H. Neathery	--	--	50	36	do	19.0	Nov. 20, 1956	C,W	N	Dug. Reported first well to become salty in area.
B-140	Jack H. Neathery	J. M. Rea	1956	68	16	do	20.7	Nov. 14, 1956	T,G, 185	Irr	Drawdown 33 ft. after 11 hours pumping.
B-141	do	do	1956	58	16	do	20.5	do	T,G, 185	Irr	Drawdown 32 ft. after 11 hours pumping.
*B-142	do	do	1956	63	16	do	21.5	do	T,E, 15	Irr	Drawdown 31 ft. after 11 hours pumping.
B-143	do	do	1956	57	16	do	19.0	do	T,E, 15	Irr	Water rose to top of ground. Hit water at 31 ft.
B-144	do	do	1956	54	16	do	21.4	do	T,-	N	Water salty. Not in use.
B-145	John Behringer	John Shanks	1953	65	14	do	26.9	Jan. 4, 1957	T,E, 15	Irr	Discharge estimated 275 gpm, Aug. 23, 1956. Pump: 8 in.
B-146	do	do	1952	70	14	do	33.5	do	T,E, 15	Irr	Pump: 8 in.
B-147	do	J. M. Rea	1954	50	14	do	--	--	T,E, 15	Irr	Discharge measured 200 gpm, Aug. 23, 1956; pumping level 44.8 ft. Pump: 6 in.
B-148	do	do	1954	50	14	do	--	--	T,E, 10	Irr	Pump: 8 in.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
B-149	J. T. Berryhill	Doris Dickerson	1954	60	14	Seymour formation	29.4	Jan. 4, 1957	T, E, 15	Irr	Pump: 8 in. Water rose 40 ft. when drilled.
B-150	B. T. Redwine	Don Combs	1952	56	14	do	--	--	T, E, 31	Irr	Pump: 8 in.
B-151	S. W. Kelso	John Kale	1954	55	12	do	18.0	Jan. 4, 1957	T, G, 80	Irr	Discharge measured 550 gpm. Pump: 8 in.
B-152	Virgil Sonnemaker	Jack Miles	1952	73	14	do	26.2 26.0	Jan. 4, 1957 Feb. 6, 1959	T, G, 32	Irr	Discharge reported 600 to 700 gpm. Pump: 8 in.
B-153	C. G. Burson Sr.	John Shanks	1952	86	16	do	24.3	Feb. 25, 1957	T, G, 45	Irr	Discharge measured 1,080 gpm, July 1952; pumping level 34.1 ft. Pump: 8 in.
*B-154	Bert M. Davenport	do	1952	79	16	do	23.4	Jan. 4, 1957	T, G, 200	Irr	Discharge reported 800 gpm. Pump: 8 in.
B-155	do	-- Smelly	1973	68	16	do	24.9	do	T, G, 240	Irr	Pump: 8 in.
B-156	C. C. Childress	Doris Dickerson	1952	72	16	do	19.5 19.9 19.1	Aug. 3, 1956 Jan. 4, 1957 May 21, 1957	T, G	Irr	Discharge reported 700 to 800 gpm. Pump: 8 in.
B-157	Haskell County Water Supply District	do	1956	61	24	do	--	--	T, E, 5	P	Pump: 3 in.
B-158	do	do	1956	61	24	do	--	--	T, E, 5	P	Reported pumping 50 gpm in June 1956. Pump: 3 in.
B-159	Truman Winchester	Rudolph Hackfield	1956	50	16	do	14.6 13.8	Jan. 5, 1957 Feb. 5, 1959	T, G, 48	Irr	Pumping level 48.6 ft. Pump: 6 in.
B-160	Roy L. Hester	Doris Dickerson	1953	55	14	do	24.6 25.4	Jan. 3, 1957 Feb. 5, 1959	T, G	Irr	Pump: 8 in.
B-161	R. J. Strickland	John Shanks	1952	67	14	do	24.7	Jan. 3, 1957	T, G	Irr	do
B-162	do	Claude Covey	1957	50	16	do	18.9	Apr. 9, 1957	T, G	Irr	Pump: 6 in. <u>1/</u>
B-163	Mark Cook Ellis	J. M. Ren	1956	57	6	do	20.5	Mar. 12, 1957	--	Irr	
B-164	Mrs. B. H. Jones	Doris Dickerson	1955	50	14	do	18.8	Jan. 4, 1957	T, G	Irr	Pump: 8 in. <u>1/</u>

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
B-165	Grace Hitt	J. M. Rea	1955	70	--	Seymour formation	31.0	Jan. 3, 1957	T,G, 5	Irr	Discharge measured 250 gpm, Aug. 30, 1956; pumping level 63.6 ft. Pump: 6 in.
B-166	A. A. Gauntt	Doris Dickerson	1954	56	16	do	16.6	do	T,G, 75	Irr	Discharge measured 325 gpm, Sept. 1, 1956; pumping level 23.0 ft. Pump: 6 in.
B-167	Mary Cook Ellis	J. M. Rea	1956	68	16	do	18.9 19.3	Jan. 3, 1957 Feb. 5, 1959	T,E, 10	Irr	Discharge measured 455 gpm, Sept. 1, 1956. Pump: 6 in.
B-168	do	-- Henderson	1952	60	16	do	13.4 20.6	Feb. 12, 1952 Feb. 5, 1959	T,G, 30	Irr	Pump: 8 in. <u>2/</u>
B-169	do	John Shanks	1952	68	16	do	20.7	Jan. 5, 1957	T,G, 30	Irr	Pump: 8 in.
B-170	do	J. M. Rea	1955	65	16	do	19.6 19.8	Jan. 5, 1957 Feb. 6, 1959	T,G, 30	Irr	Discharge measured 320 gpm, Aug. 30, 1956. Pump: 8 in.
B-171	Ira Grinstead	Don Combs	1952	61½	12	do	19.3 22.7 20.6	July 11, 1956 Feb. 25, 1957 May 21, 1957	T,E, 40	Irr	Pump: 6 in.
B-172	Evie Hamilton	John Darnell	1956	68	14	do	26.2	Jan. 5, 1957	T,G	Irr	Discharge estimated 700 gpm; pumping level 44.11 ft. Pump: 6 in. <u>2/</u>
B-173	T. W. Barton	--	1945	35	--	Clear Fork group	14.2	Oct. 31, 1956	C,W	D	Dug. Water is from a white sand. Has soda taste.
B-174	J. L. Stephens	--	--	41	30	Seymour formation	13.0 27.4	Feb. 12, 1952 Feb. 5, 1959	T,G	Irr	Dug. Pump: 6 in. <u>2/</u>
B-175	M. S. Lowery	--	--	35	24	do	13.3 26.4	Feb. 12, 1952 Feb. 5, 1959	T,G	Irr	do
*C-1	E. J. Brazell	--	1926	26	48	Clear Fork group	16.7	Nov. 15, 1956	C,G	S	Dug. Water reported from below 6 in. thick hard rock layer about 20 to 24 ft. into the Permian red clay.
*C-2	C. C. McDonald	--	1906	60	36	do	17.0	Nov. 13, 1956	C,W	D	Dug. Reported EYP water.
C-3	L. W. Hobart	--	1900	28	--	do	15.8	Nov. 16, 1956	C,W	D,S	Dug. Water reported from red clay.
*C-4	Sammy Griffis	John Kale	1955	60	36	do	41.2	Nov. 1, 1956	J,E	D,S	Water reported from blue clay - small seep at 20 ft. and hard rock formation at 40 ft. Has a soda taste.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*C-5	E. D. Earl	Curtis Matthews	1956	30	36	Clear Fork group	15.7	Nov. 14, 1956	J,E	S	Water reported from brittle blue clay at 23 ft.; has sweet GYP taste.
*C-6	Dwight Key	--	1925	50	72	do	21.7	do	J,E, 1/3	D,S	Dug. Water reported from sandstone in red beds; has no noticeable GYP taste, but is slightly hard.
*C-7	C. P. Baker	--	1955	45	11	do	19.4	Nov. 13, 1956	J,E	D,S	Reported good soft water.
C-8	M. E. Opitz	-- Whittaker	1937	50	6	do	18.1	Nov. 20, 1956	C,W	D,S	Water reported from red clay at 37 ft.; has soda or GYP taste.
*C-9	J. L. Mayfield Estate	Ree Gardner	1953	65	6	do	38.9	Nov. 15, 1956	C,W	D,S	Reported GYP water.
*C-10	S. J. Josselet	--	--	32	30	do	16.5	Nov. 1, 1956	C,W	D,S	Dug. Water reported from jointed red clay; GYP water.
*C-11	J. C. Vaught	--	1920	45	36	do	36.4	Oct. 31, 1956	J,E	D,S	Dug. Reported GYP water.
*C-12	Mattson Rural High School	O. M. Matthews	1953	41	6	do	23.0	do	J,E	D	Supplies water for school and surrounding community.
D-1	S. E. May	Elgin Wright	1956	72	12	Seymour formation	33.8 35.6 35.2	May 24, 1956 Dec. 20, 1956 Feb. 4, 1959	T,E, 15	Irr	Discharge measured 125 gpm, June 26, 1956; pumping level 40.8 ft.
D-2	H. E. Braus	do	1956	53	14	do	37.6 39.6 39.2	May 21, 1956 Dec. 20, 1956 May 20, 1957	T,G, 162	Irr	Discharge reported 230 gpm; pumping level 49.3 ft. <u>1/</u>
*D-3	Carl Medford	do	1956	50	11	do	24.0 24.6 22.4	May 28, 1956 Dec. 21, 1956 Feb. 4, 1959	T,E, 10	Irr	Discharge measured 150 gpm, Aug. 31, 1956. Pump: 4 in. <u>1/</u>
*D-4	E. N. Wilson	--	--	65	5	do	56.6 53.9 53.7 54.7	Mar. 20, 1944 Jan. 4, 1955 Jan. 4, 1956 Jan. 14, 1958	C,W	D,S	
D-5	Stonewall County Water District	--	1953	76	16	do	44.1 45.2 48.1	Jan. 4, 1955 Jan. 4, 1956 Jan. 14, 1958	N	N	Abandoned.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
D-6	Stonewall County Water District	Scott White and John Kale	1956	82	16	Seymour formation	42.6 46.2 46.8	Aug. 1, 1956 Jan. 7, 1957 Jan. 14, 1958	T,E, 25	P	Discharge reported 150 gpm. Pump: 4 in.
D-7	George L. Smith	Hollis Davis	1956	78	16	do	49.5 52.1 51.3 52.5	Jan. 6, 1956 Dec. 19, 1956 May 20, 1957 Feb. 4, 1959	T,E, 20	Irr	Discharge measured 285 gpm, Aug. 15, 1956. Pump: 5 in. Drawdown 12.01 ft. <u>1</u> /
D-8	Stonewall County Water District	--	1953	90	16	do	46.6 52.1 52.4	Jan. 4, 1955 Jan. 7, 1957 Jan. 14, 1958	T,E, 25	P	Discharge reported 200 gpm; pumping level 68 ft., Aug. 3, 1956; well shut down 3 hours before Jan. 1957 measurement. Pump: 6 in.
D-9	do	--	1953	90	14	do	48.9 51.1 53.6	Jan. 4, 1955 Jan. 4, 1956 Jan. 7, 1957	T,E, 15	P	Discharge reported 100 gpm. Pump: 4 in. Used as a reserve pump.
*D-10	G. B. Tanner	--	1906?	59	5	do	41.8 42.4 42.4 42.8	Mar. 20, 1944 Jan. 4, 1955 Jan. 4, 1956 Jan. 14, 1958	C,H	D,S	Dug.
D-11	Mrs. Nora H. Turner	Scott White	1956	62	14	do	32.8 31.7 30.9	June 12, 1956 Dec. 20, 1956 Feb. 4, 1959	T,E, 10	Irr	Discharge measured 185 gpm, Aug. 17, 1956; pumping level 43.5 ft. Pump: 5 in.
D-12	do	-- Hama	1954	60	12	do	32.2 32.5	June 12, 1956 Dec. 20, 1956	T,E, 15	Irr	Discharge measured 460 gpm, Aug. 17, 1956; pumping level 44.5 ft. Pump: 5 in.
D-13	W. A. Beard	Elgin Wright	1956	54	14	do	28.4 29.7 28.3	May 30, 1956 Dec. 20, 1956 Feb. 4, 1959	T,G	Irr	Discharge reported 250 gpm. Pump: 5 in.
*D-14	Humble Pipeline Co.	--	--	45	120	do	15.3	Mar. 23, 1944	--	Ind	Dug.
D-15	O. W. Kieke	Elgin Wright	1956	48	14	do	23.4	May 30, 1956	T,E, 5	Irr	Discharge measured 75 gpm, Aug. 17, 1956; pumping level 41.4 ft.
D-16	Carl Medford	do	1956	47	11	do	22.8 23.9 23.9 22.5	May 30, 1956 Dec. 21, 1956 May 20, 1957 Feb. 4, 1959	T,E, 15	Irr	Discharge measured 60 gpm, Aug. 17, 1956; pumping level 42.0 ft. Pump: 4 in.
D-17	Roy Norman	Hollis Davis	1956	36	14	do	31.9 33.5	May 30, 1956 Dec. 21, 1956	T,E, 2	Irr	Discharge reported 50 gpm. Pump: 4 in.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
D-18	Roy Norman	--	1896	36	--	Seymour formation	29.0 30.6 31.1	May 30, 1956 Dec. 21, 1956 Feb. 4, 1959	Cf,E, 3/4	Irr	Dug. Discharge estimated 10 gpm; pumping level 33.1 ft.
D-19	Charlie Jackson	--	1945	49	36	Clear Fork group	43.8	Oct. 22, 1956	J,E	D,S	Dug. Water reported to have become much softer since well first dug.
D-20	C. O. Davis	Casey and Kevill	1952	68	14	Seymour formation	43.8 45.0 44.9	May 27, 1956 Dec. 20, 1956 Feb. 4, 1959	T,E; 7 1/2	Irr	Discharge reported 100 gpm. Pump: 4 in.
D-21	City of Rule	do	1956	56	16	do	43.0	Jan. 7, 1957	T,E, 20	P	Discharge estimated 250 gpm, Aug. 2, 1956. Pump: 6 in.
D-22	do	Duncan Head and Son	1950	51	20	do	40.6 47.6	Mar. 1, 1951 Jan. 7, 1957	T,E, 20	P	Dug. Pump: 6 in. 2/
*D-23	do	do	1923	45	18	do	32.0 40.1	Mar. 21, 1944 Jan. 13, 1958	T,E, 15	P	Dug. Discharge estimated 125 gpm, Aug. 2, 1956. Pump: 4 in. 2/
*D-24	Santa Fe RR	--	1921	49	21 1/2	do	31.7 38.6	Mar. 21, 1944 Jan. 13, 1958	Cf,E; 7 1/2	Ind	Dug. 2/
D-25	Pete Eaton	Casey and Kevill	1955	48	12	do	36.9 38.5	May 29, 1956 Jan. 2, 1957	T,E, 2	Irr	Discharge measured 10 to 15 gpm, Aug. 17, 1956; pumping level 45.1 ft.
D-26	do	J. M. Rea	1955	45	12	do	28.7 30.1	May 29, 1956 Jan. 2, 1957	T,E, 2	Irr	Discharge measured 70 gpm, Aug. 17, 1956; pumping level between 38 and 40 ft., rising and falling.
D-27	do	Casey and Kevill	1954	48	14	do	30.5 30.8	May 29, 1956 Jan. 2, 1957	T,E, 2	Irr	Discharge measured 70 gpm, Aug. 17, 1956; pumping level 40.5 ft.
D-28	do	do	1956	45	12	do	30.0 30.6	May 29, 1956 Jan. 2, 1957	T,E, 5	Irr	Discharge reported 350 gpm.
D-29	W. J. Cole	Leroy Casey	1956	42	12	do	32.6 32.2	July 3, 1956 Jan. 2, 1957	T,E, 5	Irr	Discharge reported 300 gpm; pumping level 38.32 ft.
D-30	R. W. Cole Estate	J. M. Rea	1954	46	12	do	33.6 35.2 35.9	May 29, 1956 Jan. 2, 1957 Feb. 4, 1959	T,E, 2	Irr	Discharge measured 65 gpm, Aug. 18, 1956; pumping level 41.4 ft. Pump: 4 in.
D-31	do	-- Matthews	1955	42	10	do	28.5 29.8	May 29, 1956 Jan. 2, 1957	T,E, 3	Irr	Discharge estimated 125 gpm, Aug. 18, 1956; pumping level 35.6 ft.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
D-32	E. O. Morgan	Leroy Casey	1954	56	14	Seymour formation	33.8 33.7	Aug. 20, 1956 Dec. 21, 1956	T,E, 2	Irr	Discharge measured 80 gpm, Aug. 15, 1956; pumping level 37.63 ft. Pump: 4 in.
D-33	Lamar Casey	Scott White	1956	46	--	do	31.1 33.0	May 29, 1956 Jan. 2, 1957	T,G, 75	Irr	Discharge reported 90 gpm. Pump: 6 in.
D-34	do	do	1956	46	12	do	32.2 33.9	May 29, 1956 Jan. 2, 1957	T,E, 2	Irr	Discharge reported 90 gpm. Pump: 4 in.
D-35	do	do	1956	48	14	do	33.1 34.6	May 29, 1956 Jan. 2, 1957	T,E, 3	Irr	Discharge reported 160 gpm. Pump: 4 in.
D-36	John Behringer	Leroy Casey	1953	47	12	do	33.2 34.4	May 29, 1956 Jan. 2, 1957	T,E, 3	Irr	Reported weak well.
D-37	do	do	1953	47	12	do	32.5 33.6 35.6	May 29, 1956 Jan. 2, 1957 Feb. 4, 1959	T,E, 3	Irr	Discharge estimated 100 gpm, Aug. 28, 1956.
D-38	do	do	1955	51	12	do	36.1 37.4	May 29, 1956 Dec. 21, 1956	T,E, 2	Irr	Reported weak well.
D-39	Newt Cole	do	1955	41	14	do	26.5 28.6	May 26, 1956 Dec. 21, 1956	T,G	Irr	Discharge reported 550 gpm. Pump: 6 in.
D-40	do	do	1956	43	14	do	28.0 29.8	May 26, 1956 Dec. 21, 1956	T,G	Irr	Discharge reported 325 gpm.
D-41	do	do	1955	52	14	do	30.3 32.1	May 25, 1956 Dec. 21, 1956	T,E, 10	Irr	Discharge reported 400 gpm. Pump: 5 in.
D-42	Mrs. R. E. Norman	--	1956	41	12	do	29.9 31.7	May 30, 1956 Dec. 21, 1956	T,E, 7½	Irr	Discharge measured 235 gpm, Aug. 18, 1956; pumping level 39.0 ft. Pump: 5 in.
D-43	Mrs. Alma Cole	Leroy Casey	1956	43	14	do	31.1 32.9	May 26, 1956 Dec. 21, 1956	T,E, 5	Irr	Discharge reported 275 gpm. Pump: 5 in.
D-44	Newt Cole	do	1956	51	14	do	30.1 32.1	May 25, 1956 Dec. 21, 1956	T,E, 7½	Irr	Discharge reported 350 gpm.
D-45	John Behringer	do	1956	48	12	do	32.3 34.0	May 29, 1956 Dec. 20, 1956	N	N	Abandoned.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
D-46	John Behringer	Leroy Casey	1953	47	12	Seymour formation	33.4 34.6	May 29, 1956 Dec. 20, 1956	T,E, 3	Irr	
D-47	Newt Cole	do	1956	49	14	do	33.9 35.4	May 30, 1956 Dec. 20, 1956	T,G	Irr	Discharge reported 350 gpm. <u>1/</u>
D-48	do	do	1954	57	14	do	29.1 38.4	Jan. 4, 1954 Feb. 4, 1959	T,E, 7 1/2	Irr	Discharge reported 550 gpm. Pump: 6 in. <u>2/</u>
D-49	Francis J. Hill	Casey and Kevil	1955	52	14	do	35.0 37.7	June 7, 1956 Dec. 20, 1956	T,E, 5	Irr	Discharge measured 50 gpm, Aug. 17, 1956; pumping level 45.5 ft. Pump: 5 in.
D-50	Mrs. J. E. Geer	do	1954	44	14	do	33.8 33.9	Jan. 2, 1957 Feb. 3, 1959	T,E, 3	Irr	Discharge measured 70 gpm, Aug. 17, 1956; pumping level 42.9 ft., Aug. 17, 1956.
D-51	do	do	1954	40	14	do	33.3	Jan. 2, 1957	T,E, 3	Irr	Discharge reported 110 gpm; pumping level, 36.1 ft., June 7, 1956.
D-52	Joe W. Cloud	do	1956	40	12	do	29.6 31.5 31.4	June 7, 1956 Jan. 2, 1957 Feb. 3, 1959	T,E, 3	Irr	Discharge measured 85 gpm, Aug. 18, 1956; pumping level 36.9 ft.
D-53	do	do	1954	38	14	do	31.0 32.1	June 7, 1956 Jan. 2, 1957	T,E, 2	Irr	Discharge reported 100 gpm.
D-54	Mrs. Jack Davis	-- Kevil	1952	48	6	do	--	--	C,W	D,S	Water reported from 4 ft. of sand and gravel at 41 ft.
D-55	Don Davis	John Kale	1953	51	12	do	44.2 45.7 45.3	May 29, 1956 Dec. 19, 1956 Feb. 4, 1959	T,G	Irr	Discharge reported 175 gpm. Pump: 4 in.
D-56	Newt Cole	Leroy Casey	1956	45	12	do	35.6 36.2 39.2	May 26, 1956 Dec. 20, 1956 Feb. 4, 1959	T,E, 2	Irr	Discharge measured 60 gpm, Aug. 17, 1956; pumping level 43.0 ft. Pump: 4 in. <u>1/</u>
D-57	do	do	1956	43	12	do	34.6 34.6	May 26, 1956 Dec. 20, 1957	T,E, 3	Irr	Discharge measured 75 gpm, Aug. 17, 1956; pumping level 41.4 ft. Pump: 4 in. <u>1/</u>
D-58	W. O. Macon	Hollis Davis	1955	42	14	do	31.3 32.5 32.9	June 7, 1956 Dec. 20, 1956 Feb. 4, 1959	T,E, 2	Irr	Discharge reported 90 gpm. Pump: 3 in.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
D-59	A. A. Lott	Casey and Kevill	1952	50	14	Seymour formation	33.1 35.2	June 7, 1956 Feb. 4, 1959	T,E, 3	Irr	Discharge reported 120 gpm.
*D-60	R. B. Neal	--	--	42	5 4	do	27.2	Mar. 23, 1944	C,W	D	
D-61	L. W. Jones, Sr.	Casey and Kevill	1955	46	14	do	36.0 36.6 38.2	June 22, 1956 Dec. 20, 1956 Feb. 4, 1959	T,E, 2	Irr	Discharge reported 70 gpm. Pump: 4 in. 1/
*D-62	Mrs. G. W. May	--	--	47	30	do	31.5	Mar. 23, 1944	--	D	Dug.
D-63	A. D. May	John Kale	1954	54	14	do	41.6 43.9	June 6, 1956 Dec. 20, 1956	T,E, 4	Irr	Discharge reported 200 gpm. Pump: 4 in.
D-64	do	Casey and Kevill	1955	60	14	do	37.0 40.1	June 6, 1956 Dec. 20, 1956	T,E, 10	Irr	Discharge reported 550 gpm. Pump: 6 in.
D-65	L. W. Norman	do	--	56	14	do	42.4	Dec. 20, 1956	T,E, 5	Irr	Discharge measured 129 gpm, June 8, 1956, and 43 gpm, Aug. 20, 1956; pumping level 53 ft. Aug. 20, 1956. 1/
D-66	do	do	1955	53	14	do	44.4 43.3	Aug. 20, 1956 Dec. 20, 1956	T,E, 3	Irr	Abandoned. 1/
D-67	do	do	1955	58	14	do	43.7	Dec. 20, 1956	T,E, 10	Irr	Discharge reported 300 gpm; decreases during latter part of pumping season. Pump: 6 in. 1/
D-68	do	do	1955	55	14	do	41.5 45.0	June 8, 1956 Dec. 20, 1956	T,E, 3	Irr	Discharge reported 100 gpm; decreases during late summer. Pump: 4 in.
D-69	Elmer Penick	--	1921	40	30	Clear Fork group	37.3	Oct. 17, 1956	C,W	D,S	Dug. Water reported soft.
D-70	Mrs. T. K. Kevill	-- Kevill	1954	35	12	do	--	--	C,W	D,S	Reported to have struck water at about 28 ft. - from blue clay streaks in Permian.
D-71	do	do	1956	42	6	do	27.3	Oct. 17, 1956	C,W	D,S	Water reported from 29 to 32 ft.
D-72	Mrs. W. O. Elliott	--	1951	75	6	do	35.1	Oct. 18, 1956	J,E	S	Water unfit for drinking.
*D-73	H. I. Martin	John Wright	--	50	6	do	32.6	Oct. 17, 1956	C,W	D,S	Water reported from 32 ft.
D-74	Elmer Penick	--	--	40	6	do	33.2	Oct. 16, 1956	C,W	D	

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
D-75	Mrs. Johanna Walla	--	1936	60	66	Clear Fork group	28.0	Oct. 18, 1956	C,W	D,S	
*D-76	J. E. Place	Scott White	1956	60	5	do	18.2 20.4	May 25, 1956 Jan. 2, 1957	C,E, 5	Irr	Discharge reported 200 gpm. Drawdown 7 ft. after 4½ hours pumping 200 gpm.
*D-77	G. E. Davis	John Wright	1955	71	6	do	37.4	Oct. 18, 1956	J,E, 3/4	D,S	Water reported from sand at 50 to 60 ft. Water is softened for drinking; EYP water.
*D-78	John May	--	--	56	5	Seymour formation	25.0	Mar. 23, 1944	C,W	D,S	
*D-79	E. A. Howard	Ree Gardner	1947	81	6	Clear Fork group	50.6	Oct. 19, 1956	C,W	D,S	Water reported from two strata in clay at 56 and 75 ft.; EYP water.
D-80	R. H. Hightnote	do	1956	50	6	do	26.8	do	J,E, 3/4	D,S	
*D-81	W. W. Kittley	John Wright	1950	76	6	do	52.3	Oct. 17, 1956	J,E, 1/2	D	Reported stratum of sand about 2 ft. thick, containing water at 52 ft.; EYP water.
D-82	C. F. Hertel	J. M. Rea and Sons	1946	60	6	do	44.0	do	J,E, 1/3	D	
D-83	Gilbert Nerhing	--	--	70	--	do	33.9	Oct. 18, 1956	C,W	S	Dug.
D-84	J. H. Laughlin	--	1914	50	36	do	32.7	Oct. 17, 1956	J,E	D	do
*D-85	G. M. Sims	--	1936	29	36	do	26.1	Oct. 18, 1956	C,W	S	Dug. Reported water in seismic hole 100 yards east of well in 2 strata of green clay at 28 or 29 ft. and at 50 ft.
D-86	Mrs. Mary A. Carter	--	--	40	36	do	29.9	do	C,W	S	
*D-87	R. E. Mathis	--	1952	38	6	do	3.4	Apr. 18, 1957	J,E, 1	D,S	Dug.
D-88	J. A. Hertel	Floyd Wallace	1956	42	9	do	13.5	Mar 25, 1957	Cf,E	Irr	Four wells - one on each side of a concrete tank; seep comes in about 8 ft. from surface in two wells (north and west), runs into main stream. Water level stood 15.7 ft. in east well, and 13.5 in others. Struck water from 21 to 29 ft. Discharge measured 80 gpm per well May 25, 1956.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*D-89	A. E. Fouts	T. K. Kevill	1956	38	8	--	--	--	Cf, E	Irr <u>1/</u>	
D-90	J. E. Kittley	John Wright	1948	51	10	Clear Fork group	32.9	Oct. 18, 1956	J, E, $\frac{1}{2}$	D, S	
*D-91	Mrs. Zila Collins	Rube Keith	1939	52	30	do	36.1	Oct. 19, 1956	C, W	D	Dug. Water reported from 50 ft. in GYP rock - 6 to 8 inches thick.
*D-92	M. W. Sedberry	--	--	42	6	do	39.7	do	C, W	D, S	Old well.
E-1	A. B. Barnett	John Darnell	1956	33	13	Seymour formation	13.4 11.2	Jan. 3, 1957 Feb. 3, 1959	T, E, 5	Irr	
*E-2	James Mullino	Claude Covey	1955	43	16	do	15.1 17.7 15.2 15.3	June 8, 1956 Jan. 3, 1957 May 20, 1957 Feb. 3, 1959	T, E, 5	Irr	Discharge reported 173 gpm. Quicksand but no gravel in well. Pump: 6 in.
*E-3	Fred Buerger	--	--	33	36	Clear Fork group	22.6	Oct. 31, 1956	J, E	D	Reported two strata of water at 20 and 30 ft.
*E-4	E. B. Calloway	--	--	50	5	do	24.3	Mar. 22, 1944	--	D	
*E-5	--	--	--	23	30	Seymour formation	19.6	do	C, W	D, S	Dug.
*E-6	Earl Livengood	--	--	24	5	do	11.3	Mar. 23, 1944	--	D	
*E-7	do	--	--	26	30	do	9.6	do	--	D	Dug.
*E-8	Cloud Estate	-- Wright	--	45	5	do	18.3	do	--	D	
E-9	Mrs. Angie Mullino	Doris Dickerson	1952	51	14	do	42.7 40.2	Jan. 3, 1957 Feb. 3, 1959	T, E, 5	Irr	Pumping level 52.22 ft., Aug. 10, 1956. Reported to have weakened considerably since drilled.
E-10	do	Casey and Kevill	1954	50	14	do	44.6 42.5	Aug. 10, 1956 Jan. 3, 1957	T, E, 5	Irr	Wells E-6 and 7, were being pumped at time of Jan. 1957 measurement, E-10 located 0.1 mile NE and east of this well
E-11	C. H. Herren	do	1956	50	14	do	--	--	T, E, 10	Irr	Pump: 6 in. Pumping level 50.0 ft. Aug. 10, 1956. <u>1/</u>

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
E-12	C. H. Herren	Casey and Kevill	1954	48	14	Seymour formation	43.9	Feb. 25, 1957	T,G	Irr	Pump: 6 in. Pumping level 50.2 ft. Aug. 10, 1956. Well E-6, 0.1 mile northwest, was being pumped during February 1957 measurement.
E-13	Robert H. Sego	do	1955	53	14	do	40.6 41.4	July 4, 1956 May 20, 1957	T,E, 3	Irr	Discharge reported 140 gpm; pumping level 50.3 ft. Pump: 4 in. Temp. 67°F. <u>1/</u>
E-14	do	do	1956	53	14	do	40.1 39.5	July 4, 1956 May 20, 1957	T,E, 5	Irr	Discharge reported 190 gpm; pumping level 52.1 ft. Pump: 5 in. <u>1/</u>
E-15	D. H. Brown	Doris Dickerson	1951	70	14	do	26.3 27.3 29.1	Jan. 3, 1957 May 20, 1957 Feb. 3, 1959	T,E, 3	Irr	Pump: 3 in. Pumping level 31.6 ft.
*E-16	M. Brown	-- Hayner	--	36	36	do	21.6	Mar. 22, 1944	C,W	D,S	Dug.
E-17	Joe W. Cloud	Casey and Kevill	1953	46	14	do	31.4 32.3	Jan. 7, 1956 Feb. 25, 1957	T,E, 3	Irr	Discharge measured 120 gpm, Aug. 18, 1956, and 95 gpm, Apr. 15, 1957; pumping level 39.34 ft. Pump: 4 in.
*E-18	do	do	1953	43	14	do	26.3 32.7	Jan. 4, 1954 Feb. 3, 1959	T,E, 3	Irr	Discharge reported 120 gpm. <u>2/</u>
E-19	do	do	1954	43	14	do	28.3 32.9	Jan. 3, 1955 Feb. 3, 1959	T,E, 2	Irr	Discharge measured 50 gpm, Aug. 20, 1956. <u>2/</u>
E-20	do	-- Kuntz	1952	50	14	do	28.5 33.0	Jan. 3, 1955 Jan. 13, 1958	T,E, 2	Irr	Discharge reported 60 gpm. Discharge progressively decreasing. <u>2/</u>
E-21	do	Casey and Kevill	1955	44	12	do	30.1 31.6	June 7, 1956 Jan. 4, 1957	T,E, 3	Irr	Discharge reported 110 gpm.
*E-22	Ruby Wilson	do	1954	40	14	do	28.6 30.1	June 9, 1956 Jan. 4, 1957	T,E, 3	Irr	Discharge measured 50 gpm, Aug. 16, 1956; pumping level 34.8 ft. Pump: 4 in.
E-23	do	do	1954	40	14	do	29.0 30.2	June 9, 1956 Jan. 4, 1957	T,E, 3	Irr	Discharge reported 55 gpm; pumping level 32.4 ft. Pump: 4 in.
E-24	Mrs. E. M. Kimbrough	do	1953	40	14	do	29.2 30.4	July 2, 1956 Jan. 3, 1957	T,E, 3	Irr	Discharge reported 200 gpm.
E-25	do	do	1954	40	14	do	30.0 31.2	July 2, 1956 Jan. 3, 1957	T,E, 3	Irr	Discharge reported 80 gpm. Pump: 4 in.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
E-26	John Kimbrough	Doris Dickerson and Combs	1952	--	--	Seymour formation	26.8 31.4	Jan. 4, 1954 Feb. 25, 1957	T,E	Irr	Discharge measured 45 gpm, Aug. 20, 1956; pumping level 46.4 ft. <u>2</u> /
E-27	do	Casey and Kevill	1954	40	14	do	29.7 30.8	June 27, 1956 Jan. 4, 1957	T,E 3	Irr	Discharge reported 150 gpm.
E-28	do	Knox Plains Pump Co.	1952	40	14	do	31.9	Jan. 4, 1957	T,E	Irr	Discharge reported 125 gpm.
E-29	do	Casey and Kevill	1953	44	14	do	--	--	T,E, 4	Irr	Discharge measured 60 gpm, Aug. 20, 1956; pumping level 42.2 ft., Aug. 20, 1956.
E-30	Orville Hamilton	Doris Dickerson and Don Combs	1953	50	14	do	28.8	Aug. 7, 1956	T,G	Irr	Discharge measured 60 gpm, Aug. 20, 1956; pumping level 55.5 ft. Pump: 6 in.
E-31	John Kimbrough	Casey and Kevill	1953	38	14	do	30.2 30.8	Feb. 25, 1957 Feb. 3, 1959	T,E, 3	Irr	Discharge measured 65 gpm, Aug. 20, 1956; pumping level 34.3 ft. Pump: 4 in.
E-32	L. B. Laird	Hollis Davis	1955	54	12	do	38.8	Jan. 3, 1957	T,E, 3	Irr	Pump: 4 in. Pumping level 50.3 ft. Temp. 67°F.
E-33	do	do	1955	54	12	do	37.8	do	T,E, 5	Irr	Pump: 5 in. Pumping level 50.5 ft. Temp. 67°F. <u>1</u> /
E-34	Mrs. J. E. Cloud	Casey and Kevill	1955	56	14	do	37.2 38.2	July 2, 1956 Jan. 3, 1957	T,E, 10	Irr	Discharge reported 500 gpm. Pump: 6 in.
E-35	C. V. Oates	do	1955	55	14	do	32.6 35.1	June 6, 1956 Jan. 3, 1957	T,E, 10	Irr	Discharge reported 650 gpm.
E-36	do	do	1955	55	14	do	32.9 35.0	June 6, 1956 Jan. 3, 1957	T,E, 10	Irr	Discharge reported 600 gpm. Pump: 6 in.
E-37	S. W. Treat	do	1955	51	14	do	31.2 32.3	Jan. 3, 1957 Feb. 3, 1959	T,E, 5	Irr	Discharge reported 300 gpm, Jan. 1, 1956. Pump: 4 in.
E-38	Robert H. Segó	do	1956	45	14	do	34.4	Jan. 3, 1957	T,E, 3	Irr	Discharge reported 90 gpm. Pump: 4 in. <u>1</u> /
E-39	A. D. May	do	1955	46	14	do	32.1 35.6	June 6, 1956 Jan. 3, 1957	T,E, 3	Irr	Discharge measured 130 gpm, July 2, 1956; pumping level 41.4 ft. Temp. 67°F. <u>1</u> /
E-40	do	Scott White	1956	45	10	do	35.1	Jan. 3, 1957	T,E, 3	Irr	Discharge reported 70 gpm; pumping level 42.0 ft. Temp. 67°F.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
E-41	A. D. May	Casey and Kevill	1955	44	14	Seymour formation	32.4 35.2	June 6, 1956 Jan. 3, 1957	T, B, 3	Irr	Discharge reported 130 gpm; pumping level 41.8 ft.
E-42	do	do	1956	42	12	do	36.3	Jan. 3, 1957	T, B, 3	Irr	Discharge reported 100 gpm. 1/
E-43	do	do	1953	35	14	do	28.6	do	Cf, B, 1 1/2	Irr	Discharge reported 90 gpm. Reported to pump dry after one week during summer. 1/
E-44	do	do	1953	33	14	do	29.5	do	T, B, 3	Irr	Discharge reported 90 gpm.
E-45	do	do	1952	31	14	do	28.4 29.5	Jan. 3, 1957 Feb. 4, 1959	T, B, 1 1/2	Irr	Discharge reported 80 gpm.
E-46	V. W. Meadows	do	1950	46	14	do	30.5 32.7	Jan. 3, 1957 Feb. 3, 1959	T, B, 5	Irr	Discharge measured 260 gpm, July 2, 1956; pumping level 39.3 ft. Pump: 5 in. Temp. 66°F. 1/
E-47	do	do	1956	50	14	do	30.2	Jan. 3, 1957	T, B, 5	Irr	Pump: 5 in. Pumping level 44.68 ft. Temp. 66°F. 1/
E-48	do	do	1956	48	14	do	30.9	do	T, B, 10	Irr	Discharge measured 370 gpm, July 2, 1956; pumping level 41.2 ft. Pump: 6 in. 1/
E-49	Norman Nanny	do	1954	44	14	do	30.4 29.9	July 2, 1956 Jan. 3, 1957	T, B, 10	Irr	Pump: 6 in. Pumping level 38.3 ft. Temp. 66°F.
E-50	Mrs. W. E. Welsh	Knox Plain Pump Co.	1952	50	12	do	33.1 30.9	July 4, 1956 Jan. 3, 1957	T, G, 28	Irr	Discharge reported when first drilled 450 gpm. Pump: 6 in.
E-51	T. A. Rhoades	Casey and Kevill	1954	48	14	do	32.5 30.8	July 2, 1956 Jan. 3, 1957	T, B, 10	Irr	Pump: 6 in. Pumping level 39.5 ft. Temp. 66°F.
E-52	Mrs. W. E. Welsh	Don Davis Pump Co.	1954	50	14	do	30.6	Jan. 5, 1957	T, G	Irr	Pump: 6 in. Pumping level 40.8 ft. Temp. 66°F.
E-53	Tom Davis	Casey and Kevill	1955	50	14	do	31.1 32.3	Jan. 5, 1957 Feb. 3, 1959	T, B, 7 1/2	Irr	Pump: 6 in. Pumping level 43.8 ft. 1/
E-54	do	do	1956	51	14	do	31.0	Jan. 5, 1957	T, B, 5	Irr	Pump: 5 in. Pumping level 46.6 ft. Temp. 66°F. 1/
E-55	do	do	1956	50	14	do	31.5	do	T, B, 5	Irr	Discharge measured 160 gpm, July 2, 1956; pumping level 47.7 ft. Pump: 1 in. Temp. 66°F.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
E-56	Tom Davis	Casey and Kevil	1955	50	14	Seymour formation	31.2	Jan. 5, 1957	T, E, 5	Irr	Discharge measured 250 gpm, Aug. 10, 1956; pumping level 47.8 ft. Pump: 3 in. Temp. 66°F.
E-57	Mrs. -- Harrell	Claude Covey	1955	30	12	do	27.6	do	T, E, 2	Irr	Discharge reported 40 gpm. Pump: 2 3/4 in. Temp. 66°F. 1/
E-58	do	do	1955	30	12	do	29.6	do	N	N	Abandoned.
E-59	do	do	1955	30	12	do	29.2 31.6	Jan. 7, 1957 Feb. 4, 1959	T, E, 2	Irr	Pump: 2 3/4 in. Pumping level 27.4 July 26, 1956.
E-60	Delma Williams	Leon Roberts	1956	38	12	do	30.6	Jan. 3, 1957	T, E, 3	Irr	Discharge measured 130 gpm, June 27, 1956; pumping level 36.1 ft. Pump: 4 in. Temp. 66°F.
E-61	do	do	1956	40	12	do	31.1	Jan. 4, 1957	T, E, 3	Irr	Discharge measured 110 gpm, June 27, 1956; pumping level 35.9 ft. Pump: 4 in. Temp. 66°F. 1/
E-62	J. B. Pittman	Hollis Davis	1956	40	12	do	29.6	June 12, 1956	Cf, E, 2	Irr	Discharge measured 40 gpm, Aug. 18, 1956. 1/
E-63	do	do	1956	40	14	do	--	--	Cf, E, 1 1/2	Irr	Discharge measured 20 gpm, Aug. 18, 1956.
E-64	do	do	1956	43	14	do	31.5	Jan. 4, 1957	Cf, E, 1 1/2	Irr	Discharge reported 65 gpm; pumping level 41.4 ft. Temp. 66°F.
E-65	Delma Williams	do	1955	46	12	do	34.6 34.4 35.5	July 4, 1956 Jan. 4, 1957 Feb. 3, 1959	T, E, 3	Irr	Discharge estimated 50 gpm, June 27, 1956. Pump: 4 in.
E-66	Roy Wiseman	Reed Gardner	1954	43	12	do	28.7 30.0	June 8, 1956 Jan. 4, 1957	T, E, 3	Irr	Discharge reported 70 gpm in 1954. 1/
E-67	do	Hollis Davis	1955	44	14	do	30.4 32.1	June 8, 1956 Jan. 4, 1957	T, E, 2	Irr	Discharge reported 60 gpm. 1/
E-68	Mrs. Linnie Teague	do	1956	49	--	do	32.5 35.2	June 13, 1956 Jan. 4, 1957	T, E, 3	Irr	Discharge measured 45 gpm, Aug. 17, 1956; pumping level 45.6 ft. Temp. 67°F.
E-69	do	do	1956	49	--	do	33.0 35.9	June 13, 1956 Jan. 4, 1957	T, E, 3	Irr	Discharge measured 50 gpm, Aug. 17, 1956; pumping level 43.3 ft. Pump: 4 in. Temp. 67°F.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
E-70	Roy Wiseman	Reed Gardner	--	43	10	Seymour formation	30.0 31.1	June 13, 1956 Jan. 4, 1957	T, E, 3	Irr	Discharge reported 70 gpm when drilled. 1/
E-71	Grace McKelvain	Casey and Kevill	1955	56	14	do	31.0 31.8 32.1 33.6	June 13, 1956 Jan. 4, 1957 May 20, 1957 Feb. 3, 1959	T, E, 10	Irr	Discharge measured 150 gpm, Aug. 16, 1956; pumping level 48.0 ft. Pump: 6 in. Temp. 67°F. 1/
*E-72	Tobe Griffin	--	1890?	42	30	do	--	--	C, G	D, S	Dug.
E-73	John J. Thomas	Leroy Casey	1953	38	14	do	28.7	Jan. 3, 1957	T, E, 3	Irr	Discharge reported 150 gpm. Pump: 4 in.
E-74	do	do	1953	38	14	do	28.0	do	T, E, 2	Irr	Pump: 4 in.
E-75	do	do	--	38	14	do	27.4	do	T, E, 3	Irr	Discharge reported 75 gpm. Decreased in summer of 1956.
E-76	Ed F. Fouts	Casey and Kevill	1956	36	12	do	25.5	do	T, E, 2	Irr	Pumping level 30 to 40 ft., July 26, 1956. Pump: 4 in.
E-77	do	--	1954	36	14	do	25.7	do	T, E, 3	Irr	Pumping level 31.3 ft., July 26, 1956. Pump: 4 in.
E-78	do	--	1953	53	16	do	25.6	do	T, E, 2	Irr	Pumping level 33.8 ft., July 26, 1956. Pump: 4 in.
E-79	do	--	1954	35	14	do	25.7 27.2	Jan. 3, 1957 Feb. 3, 1959	T, E, 2	Irr	Pumping level 30.3 ft. Pump: 3 in.
E-80	Taylor Estate	Hollis Davis	1956	35	14	do	--	--	Cf, E, 2	Irr	North well of three which together are reported to discharge 700 gpm.
E-81	do	do	1956	36	16	do	24.9	June 11, 1956	T, E, 5	Irr	Discharge measured 150 gpm, June 13, 1956. Pump: 4 in. 1/
E-82	do	-- Shanks	1952	60	16	do	29.7	Jan. 3, 1957	T, G, 12	Irr	Discharge reported 170 gpm. Pumping level 40.0 ft. Pump: 6 in. Temp. 66°F.
E-83	Norman Nanny	do	1952	36	14	do	33.3	June 28, 1956	N	N	Abandoned.
E-84	do	J. M. Rea	1954	48	14	do	34.3 32.2	June 28, 1956 Jan. 5, 1957	T, G	Irr	Discharge measured 220 gpm, June 13, 1956; pumping level 46.4 ft. Pump: 6 in. Temp. 66°F.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*E-85	Norman Nanny	Hollis Davis	1956	50	14	Seymour formation	31.5 32.4	Jan. 5, 1957 May 20, 1957	T,E, 5	Irr	Discharge measured 255 gpm, Apr. 11, 1957; pumping level 38.6 ft. Pump: 5 in. $\frac{1}{2}$
E-86	Tom B. Roberson	Casey and Kelvin	1955	38	14	do	28.6 30.4	June 13, 1956 Jan. 4, 1957	T,E, 3	Irr	Discharge estimated 130 gpm, June 11, 1956; pumping level 34.0 ft. Pump: 4 in. Temp. 66°F.
E-87	do	do	1955	38	14	do	30.7 31.0	June 13, 1956 Jan. 4, 1957	T,E, 3	Irr	Discharge measured 135 gpm, June 11, 1956; pumping level 36.2 ft. Temp. 65°F.
E-88	do	do	1955	40	14	do	30.8 32.2	June 13, 1956 Jan. 4, 1957	T,E, 5	Irr	Discharge measured 230 gpm, June 22, 1956; pumping level 37.0 ft. Temp. 65°F.
E-89	do	Hollis Davis	1956	37	14	do	29.8	June 13, 1957	T,E, 3	Irr	Discharge reported 95 gpm.
E-90	do	do	1956	52	12	do	31.2 31.5	June 13, 1956 Jan. 4, 1957	T,E, 10	Irr	Discharge measured 505 gpm, June 27, 1956; pumping level 38.0 ft. Temp. 66°F.
E-91	do	Doris Dickerson	1954	33	14	do	26.2 28.2	June 13, 1956 Jan. 4, 1957	T,E, 3	Irr	Discharge reported 80 gpm; pumping level 31.4 ft. Pump: 4 in. $\frac{1}{2}$
*E-92	T. A. Rhoades	--	--	38	30	do	22.5	Mar. 22, 1944	C,W	D	Dug.
E-93	Mrs. Z. M. Flannery	Hollis Davis	1955	45	14	do	33.9 31.2	June 28, 1956 Jan. 4, 1957	T,E, 10	Irr	Pump: 4 in. Pumping level 39.5 ft., Aug. 10, 1956.
E-94	Norman Nanny	Casey and Kevill	1955	45	14	do	--	--	T,E, 5	Irr	Pump: 6 in. Pumping level 45.2 ft., June 28, 1956. Considerable amount of quicksand in well. Temp. 66°F.
E-95	do	Hollis Davis	1956	45	14	do	30.1	Jan. 4, 1957	T,E, 5	Irr	Pumping level 42.2 ft. Temp. 66°F. $\frac{1}{2}$
E-96	C. G. Burson, Sr.	Casey and Kevill	1954	39	14	do	--	--	T,E, 5	Irr	Discharge measured 220 gpm, June 13, 1956; pumping level 36.0 ft., June 28, 1956. Pump: 5 in.
E-97	do	do	1954	40	14	do	29.0 29.8	Jan. 4, 1957 Feb. 3, 1959	T,E, 10	Irr	Discharge measured 330 gpm, June 13, 1956; pumping level 37.4 ft. Pump: 6 in.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
E-98	C. G. Burson, Sr.	Casey and Kevill	1953	38	14	Seymour formation	26.3 27.9	June 27, 1956 Jan. 4, 1957	T,E, 3	Irr	Pumping level 33.5 ft., Aug. 9, 1956.
E-99	C. A. Thomas, Jr.	Hollis Davis	1955	38	14	do	28.2 27.8 29.2	July 2, 1956 July 26, 1956 Jan. 4, 1957	T,E, 5	Irr	Discharge measured 235 gpm, June 27, 1956. Pump: 5 in.
E-100	do	do	1955	38	12	do	28.8 30.2	July 2, 1956 Feb. 3, 1959	T,E, 5	Irr	Discharge measured 110 gpm, Apr. 8, 1957, was 235 gpm, June 27, 1956. Pumping level 32.8 ft. Temp. 65°F. 1/
E-101	do	do	1956	34	14	do	27.9	Jan. 4, 1957	T,E, 3	Irr	Discharge measured 41 gpm, pumping level 31.6 ft., June 27, 1956. Pump: 3 in. Temp. 65°F. 1/
E-102	W. S. Cole	Casey and Kevill	1955	58	14	do	40.7 43.7 43.0	June 12, 1956 Jan. 4, 1957 Feb. 3, 1959	T,E, 10	Irr	Discharge reported 260 gpm.
E-103	do	J. M. Ren	1955	59	14	do	41.4 44.8	June 12, 1956 Jan. 4, 1957	T,E, 10	Irr	Discharge reported 375 gpm.
E-104	M. W. Lees	do	1955	48	12	do	45.2	Jan. 4, 1957	T,E, 2	Irr	Discharge measured 15 gpm, Aug. 18, 1956. Pump: 3 in.
E-105	do	do	1954	48	12	do	43.2	July 3, 1956	T,E, 2	Irr	Discharge reported 85 gpm, Feb. 1, 1956.
E-106	W. S. Cole	Casey and Kevill	1956	64	14	do	47.0 50.2	June 9, 1956 Jan. 4, 1957	T,E, 10	Irr	
E-107	M. W. Lees	Hollis Davis	1956	55	12	do	43.1	Jan. 4, 1957	T,E, 5	Irr	Discharge measured 115 gpm, June 27, 1956. Pump: 4 in. Pumping level 37 ft. June 27, 1956. Temp. 67°F.
E-108	do	Casey and Kevill	1955	60	14	do	--	--	T,E, 5	Irr	Discharge reported 80 gpm; pumping level 44 ft., July 3, 1956. Pump: 4 in. Temp. 68°F.
E-109	Mrs. Jesse Parmelly	do	1954	53	16	do	--	--	T,E, 5	Irr	Discharge measured 125 gpm, June 13, 1956.
E-110	do	do	1956	61	14	do	--	--	T,E, 7 1/2	Irr	Discharge measured 260 gpm, June 13, 1956.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
E-111	M. W. Lees	Casey and Kevill	1954	61	14	Seymour formation	41.8	Jan. 4, 1957	T,E, 7 $\frac{1}{2}$	Irr	Pumping level 50.0 ft., July 3, 1956. Pump: 6 in.
E-112	T. Alvis	John Darnell	1956	61	12	do	45.9	do	T,E, 3	Irr	Discharge measured 135 gpm, June 21, 1956; pumping level 49.2 ft. Pump: 4 in.
*E-113	R. Alvis	--	--	37	30	do	--	--	--	D	Dug.
E-114	C. G. Burson, Sr.	Leroy Casey	--	41	12	do	26.7	Jan. 4, 1957	T,E, 3	Irr	Pump: 4 in. Pumping level 39.5 ft., Aug. 9, 1956.
E-115	do	Claude Covey	1956	42	14	do	--	--	T,G, 27	Irr	Discharge reported 200 gpm. $\frac{1}{2}$
E-116	do	Casey and Kevill	1955	44	14	do	27.2	Jan. 4, 1957	T,G, 27	Irr	Discharge reported 200 gpm - 600 gpm during the first weeks pumping. $\frac{1}{2}$
E-117	R. G. Foot	Hollis Davis	1956	44	14	do	27.1	do	T,E, 5	Irr	Discharge measured 132 gpm. Pump: 4 in.
E-118	do	Claude Covey	1956	40	8	do	35.0 32.1 29.1	Aug. 9, 1956 Jan. 4, 1957 Feb. 3, 1959	Cf. E, 1 $\frac{1}{2}$	Irr	Discharge reported 385 gpm, Jan. 1956; down to 100 gpm, July 3, 1956.
E-119	R. L. Foot	Hollis Davis	1956	40	14	do	--	--	T,E, 5	Irr	Discharge measured 290 gpm, July 3, 1956. Pump: 6 in. $\frac{1}{2}$
E-120	John M. Gannaway	Casey and Kevill	1955	41	14	do	26.3	July 2, 1956	T,E, 10	Irr	Discharge reported 270 gpm; pumping level 38.4 ft. Pump: 4 in. $\frac{1}{2}$
E-121	do	do	1955	42	14	do	27.7	do	T,E, 5	Irr	Discharge reported 225 gpm; pumping level 39.7 ft.
E-122	do	Knox Plains Pump Co.	1952	35	14	do	--	--	T,E, 3	Irr	Discharge reported 75 gpm; pumping level 28.3 ft., June 27, 1956.
E-123	City of Haskell	Doris Dickerson	1951	38	12	do	--	--	T,E, 20	P	Discharge reported 150 gpm.
E-124	do	--	1952	54	14	do	25.8 30.0	Jan. 6, 1953 Jan. 13, 1958	T,E	P	Abandoned. $\frac{2}{1}$
E-125	C. A. Thomas, Jr.	Hollis Davis	1956	43	14	do	--	--	T,E, 10	Irr	Discharge reported 440 gpm. Pump: 4 in. $\frac{1}{2}$

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
E-126	H. C. King	Claude Covey	1955	52	16	Seymour formation	--	--	T,E, 5	Irr	Discharge measured 160 gpm, July 3, 1956.
E-127	City of Haskell	John Darnell	1956	48 ⁷	12	do	38.7	Aug. 13, 1956	T,E, 20	P	Pump: 6 in.
E-128	do	Reed Gardner	1951	33	12	do	--	--	T,E, 15	P	Discharge reported 125 gpm. Pump: 5 in.
E-129	do	John Darnell	1956	35	12	do	23.5 24.3	Jan. 3, 1955 Jan. 4, 1956	T,E, 7 ¹ / ₂	P	Discharge reported 125 gpm. Pump: 4 in.
E-130	Giles Kemp	Casey and Kevill	--	41	14	do	32.7 33.1	June 28, 1956 May 20, 1957	T,E, 5	Irr	Discharge reported 60 gpm. Pump: 4 in.
E-131	do	do	1955	43	14	do	37.2 38.0	June 28, 1956 May 20, 1957	T,E, 5	Irr	do
E-132	do	Hollis Davis	1956	53	12	do	41.0	May 20, 1957	T,E, 3	Irr	Discharge reported 150 gpm. Pump: 4 in.
*E-133	Mrs. Ada Mae Bach	--	--	56	38	do	43.0	Mar. 23, 1944	C,G	D	Dug.
E-134	W. S. Cole	--	1953	63	14	do	55.0 57.6	June 9, 1956 Jan. 4, 1957	T,E, 5	Irr	Pump: 4 in. Pumping level 61.2 ft., July 3, 1956.
E-135	do	Casey and Kevill	1954	70	14	do	53.8 56.6 54.4	June 9, 1956 Jan. 4, 1957 Feb. 3, 1959	T,E, 15	Irr	Pump: 4 in.
E-136	Haskell Stone	J. M. Rea	1954	71	12	do	55.0 57.0	June 12, 1956 Feb. 25, 1957	T,E, 5	Irr	Discharge reported 200 gpm; reported water level dropped about 10 ft. in Sept. 1955.
E-137	do	Hollis Davis	1955	71	12	do	56.4	May 20, 1957	T,E, 5	Irr	Discharge reported 200 gpm.
E-138	do	Casey and Kevill	1906	70	12	do	55.6 57.4	June 12, 1956 Feb. 25, 1957	T,E, 10	Irr	Discharge reported 200 gpm. Originally a dug well, it was drilled 10 ft. deeper in Oct. 1954.
E-139	do	Hollis Davis	1955	70	12	do	55.1 56.8	June 12, 1956 Feb. 25, 1957	T,E, 15	Irr	Discharge reported 200 gpm. 1/
E-140	J. M. Miller	Reed Gardner	1948	72	6	Clear Fork group	40.9	Oct. 22, 1956	J,E, 3/4	D,S	Water reported good.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*E-141	City of Haskell	--	1922	32	300	Seymour formation	23.6 23.5	Mar. 1, 1951 Jan. 13, 1958	Cf, E, 15	P	Dug. Discharge reported 175 gpm; pumping level 27.7 ft., Aug. 13, 1956. <u>2/</u>
E-142	do	--	1945	27	300	do	16.0 21.1	Mar. 1, 1951 Feb. 3, 1959	T, E, 15	P	Discharge reported 350 gpm. Pump: 5 in. <u>1/2/</u>
E-143	do	John Darnell	1956	33	12	do	25.5 21.1 20.8	Aug. 13, 1956 Jan. 7, 1957 Jan. 13, 1958	T, E, 15	P	Discharge reported 150 gpm; pumping level 26.3 ft., Aug. 13, 1956. Pump: 5 in. <u>1/</u>
E-144	do	do	1956	36	12	do	--	--	T, E, 10	P	Discharge reported 150 gpm; pumping level 27.8 ft., pumped continuously since drilled. Pump: 4 in.
E-145	do	Doris Dickerson	--	36	12	do	27.3 26.7 28.6	Jan. 3, 1955 Jan. 4, 1956 Jan. 7, 1957	T, E, 15	P	Discharge reported 200 gpm. Pump: 4 in.
E-146	do	--	1942	28	192	do	16.4 22.4	Mar. 1, 1951 Jan. 13, 1958	Cf, E, 20	P	Dug. Reported 10 ft. of water in well if shut down overnight. <u>2/</u>
E-147	do	--	1946	28	300	do	16.3 21.8	Mar. 1, 1951 Feb. 3, 1959	Cf, E, 20	P	Discharge reported 200 gpm. <u>2/</u>
E-148	do	Mart Clifton	1936	28	11	do	19.0 19.5	Mar. 17, 1944 Jan. 13, 1958	T, E, 15	P	Dug. Discharge reported 250 gpm; pumping level 24.2 ft., Aug. 13, 1956. <u>2/</u>
E-149	do	do	1936	28	300	do	19.0 18.8	Mar. 17, 1944 Jan. 13, 1958	T, E, 15	P	Dug. Discharge reported 250 gpm; pumping level 22.3 ft., Aug. 13, 1956. Pump: 5 in. <u>2/</u>
E-150	do	--	1918	18	336	do	7.4 7.4	Mar. 1, 1951 Jan. 13, 1958	T, E, 15	P	Dug. Discharge reported 250 gpm; pumping level 12.9 ft., Aug. 13, 1956. Pump: 5 in. <u>2/</u>
E-151	do	--	1920	21	300	do	9.3 10.3	Mar. 1, 1951 Jan. 13, 1958	Cf, E, 15	P	Dug. Discharge reported 200 gpm. Pump from well E-140 pulls water from this well. <u>2/</u>
*E-152	do	--	--	Spring	--	do	--	--	--	--	Reported no flow for several years. Rice Spring.
E-153	do	Reed Gardner	1954	34	12	do	22.8	Jan. 3, 1955	T, E, 10	P	Discharge reported 175 gpm.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
E-154	Martin G. Rueffer	Hollis Davis	1955	34	14	Seymour formation	27.1 24.2 23.0 23.8	Aug. 9, 1956 Jan. 7, 1957 May 20, 1957 Feb. 3, 1959	T,E, 5	Irr	Pump: 4 in.
E-155	A. M. Turner	Claude Covey	1955	38	12	do	31.1	Aug. 9, 1957	T,E, 5	Irr	Discharge measured 14 gpm; pumping level 34.5 ft., July 3, 1956. Pump: 4 in.
*E-156	A. H. Becker	Hollis Davis	1955	36	14	do	--	--	T,E, 10	Irr	Discharge measured 175 gpm, July 4, 1956. Pump: 4 in. <u>1</u> / ₂
E-157	G. A. Roberts, Sr.	--	1931	20	30	Clear Fork group	17.9	Oct. 22, 1956	C,W	D,S	Dug. Water from red clay; reported water contains soda.
E-158	W. H. Carothers	--	1955	17	36	Seymour formation	13.0	Oct. 26, 1956	C,W	S	Dug. Reported water from 8 ft. of sand which is 9 ft. below the surface.
E-159	R. M. Middleton	--	1956	22	--	do	--	--	Cf,G	S,Irr	Dug. Discharge reported 350 gpm. Pump: 4 in.
E-160	E. W. Andrews	--	1956	12	--	do	--	--	Cf,G	Irr	Dug.
E-161	N. H. Boone	--	1955	14	--	do	--	--	Cf,G	S,Irr	Original spring tank was dug 50 or 60 years ago - present owner deepened it and dug a small adjoining pit.
E-162	Albert W. Barnett	Hollis Davis	1955	40	12	do	24.2 23.1	Aug. 9, 1956 May 20, 1957	T,E, 5	Irr	Discharge measured 205 gpm, Aug. 10, 1956; pumping level 30.2 ft. Pump: 4 in. <u>1</u> / ₂
E-163	Killingsworth Estate	--	--	21	30	Clear Fork group	18.6	Nov. 21, 1956	C,W	D,S	Dug. Water from red clay.
*E-164	Cliff Berry	--	1956	30	36	do	18.3	Oct. 29, 1956	J,E, 3/4	S	do
*E-165	Leslie Medford	Reed Gardner	1950	55	6	do	37.8	Oct. 30, 1956	J,E, <u>1</u> / ₂	D,S	Water reported at 38 ft., but much stronger at 42 ft.
*E-166	W. H. Haynes	do	1950	90	6	do	83.6	do	C,G	D	
F-1	Elmer Wheatley	Raymond Craine	1945	60	6	do	38.0	Nov. 19, 1956	C,W	S	Water reported at 40 and 50 ft., from red clay. Supplies about 12 barrels a day.
F-2	John Stievert	-- Whittaker	1906	80	6	do	50.8	Nov. 21, 1956	C,W	D,S	Reported water has soda taste.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Remarks
							Below land surface (ft.)	Date of measurement	
F-3	E. H. Burnett	Continental Rig Co.	1945	--	6	Clear Fork group			Cased to 60 ft. Reported drilled to 1,500 ft., water unfit for drinking.
F-4	George Fouts	--	1916	26	36	do			Dug. Reported unfit for drinking or watering stock.
F-5	Peter Katate	--	1910	40	5	do			
F-6	Farland Roote	--	1947	43	6	do			
F-7	Bobby Tidwell	--	--	60	6	do			
F-8	W. S. Cox	--	1909	26	30	do			Dug.
*G-1	C. E. Stegemoller	--	1910	60	5	do			Water reported from red clay.
G-2	E. A. Schake	-- Wallace	1956	51	8	do			
G-3	do	do	1956	45	8	do			
G-4	do	do	1956	50	8	do			
G-5	do	do	1956	48	8	do			
*G-6	A. H. Teichelman	John Grumbauer	1955	40	6	do			
*G-7	John Wendeborn	--	1956	36	6	do			Water reported from red clay at 20 ft.
*G-8	do	Walter Ellis	1922	50	6	do			Supplies water for 35 to 40 head of stock.
G-9	Hebert Mueller	John Kale	1953	28	30	do			
*G-10	Svenson Land & Cattle Co.	Jack Clark	1931	60	5	do			Discharge reported 8 to 10 gpm.
*G-11	A. C. Ender	do	1926	34	6	do			
*G-12	Svenson Land & Cattle Co.	--	--	60	5	do			Discharge reported 8 to 10 gpm.
G-13	do	-- Murdock	1942	60	5	do			do
*G-14	F. J. Boedeker	--	1906	50	6	do			

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
G-15	Svenson Land & Cattle Co.	--	1916	35	60	Clear Fork group	22.4	Apr. 16, 1957	C,W	S	Dug. Casing changed to 6 in. steel.
*G-16	do	--	1915	35	48	do	26.3	do	C,W	S	Dug.
*G-17	do	-- Murdock	1942	40	5	do	16.9	do	C,W	S	Discharge reported 8 to 10 gpm.
*G-18	do	--	--	10	48	do	3.1	do	C,W	S	Dug. Discharge reported 8 to 10 gpm.
*G-19	do	-- Murdock	1942	60	5	do	--	--	C,W	S	Discharge estimated 3 gpm. Pumping level 21.7 ft., Apr. 16, 1957.
G-20	do	John Selman	1956	28	3	do	10.9	Nov. 27, 1956	C,W	S	
*G-21	do	-- Lee	--	40	3	do	15.4	Dec. 6, 1956	C,W	S	
*G-22	Al Smith	--	1925	66	6	do	25.5	Nov. 27, 1956	C,W	S	Water reported unfit for drinking.
*H-1	Clyde L. Bland	--	1920	32	30	do	25.0	Apr. 15, 1957	C,W	S	Dug. Reported used only when necessary for stock.
*H-2	M. L. Tipton	--	1946	50	6	do	20.1	Nov. 26, 1956	C,W	S	
H-3	M. E. Overton	W. A. Montgomery	1934	45	5	do	26.9	Apr. 16, 1957	C,W	N	Water reported from red clay.
*H-4	Allen Overton	do	1936	50	6	do	--	--	J,E, I	S	
*H-5	J. L. Earls	--	1900	42	6	do	24.5	Apr. 15, 1957	C,W	D	
H-6	E. A. Schaeke	-- Wallace	1956	78	6	do	54.9	Dec. 7, 1956	J,E, 2	N	
H-7	Elmer Wedeking	--	--	51	30	do	17.0	Nov. 26, 1956	J,E	D,S	Dug.
H-8	F. J. Pustajovesky	--	--	81	5	do	22.9	Apr. 15, 1957	C,W	N	
H-9	N. M. Hanson	Fred Buerger	1946	100	6	do	67.1	Nov. 26, 1956	C,W	D	Water reported from 75 ft.; well pumped continuously and supplies sufficient water for bathing and washing, but water not used for drinking.
H-10	do	do	1947	50	6	do	43.1	do	C,W	D	Water reported from 35 ft.

* See footnotes at end of table.

Table 3.--Records of wells and springs in Haskell County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*J-1	John B. Nanny	Arthur Montgomery	1937	23	36	Alluvium	16.7	Dec. 7, 1956	J,E	D,S	Water reported from sand and gravel at 16 ft.
*J-2	R. V. Earls	--	1929	26	24	Clear Fork group	18.0	Apr. 11, 1957	J,E, 1/3	D	Dug.
*J-3	do	--	1957	20	33	Alluvium(?)	15.0	do	Cf,E, 1	Irr	Dug. Discharge reported 50 gpm, March 1957. <u>1/</u>
J-4	do	Otis M. Matthews	1957	20	8	do	18.5	do	Cf,E	Irr	Discharge measured 45 gpm, Mar. 8, 1957. <u>1/</u>
*J-5	John Watson	-- Lee	1918	60	6	Clear Fork group	19.8	Dec. 7, 1956	C,W	D	Water reported from about 40 ft.

1/ See Table 4 for driller's log.

2/ See Table 5 for water level.

* See Table 6 for analysis of water.

Table 4.--Drillers' logs of wells in Haskell County

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well A-14

Owner: Bush and Burnett. Driller: J. M. Rea.

Soil -----	4	4	Quicksand -----	9	29
Caliche -----	11	15	Red beds (broken) -----	2	31
Sand, red -----	2	17	Gravel -----	4	35
Caliche -----	3	20	Clay, red, and gravel --	20	55

Well A-15

Owner: Mrs. M. A. Busch. Driller: J. M. Rea.

Soil -----	4	4	Caliche -----	3	23
Caliche -----	9	13	Quicksand -----	5	28
Quicksand, red -----	4	17	Red beds -----	2	30
Caliche -----	2	19	Sand and gravel -----	26	56
Sand -----	1	20	Red beds -----	1	57

Well A-26

Owner: Grady Ellis. Driller: J. M. Rea.

Soil -----	23	23	Sand and gravel -----	13	45
Clay and gravel -----	9	32			

Well A-32

Owner: O'Brien Cooperative Gin. Driller: Hollis Davis.

Soil -----	5	5	Rock and red sand -----	25	40
Clay, sandy -----	7	12	Sandrock and sand -----	5	45
Caliche -----	3	15	Red beds, sand, and gravel (water) -----	11	56

Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well A-44

Owner: L. E. Hughes. Driller: J. M. Rea.

Soil -----	4	4	Sand and gravel -----	14	35
Caliche -----	13	17	Red beds -----	1	36
Gravel, sandy, and clay-	4	21			

Well A-53

Owner: D. R. Brown. Driller: John Kale.

Soil -----	7	7	Quicksand -----	4	36
Clay -----	10	17	Sandstone -----	10	46
Sand -----	10	27	Sand and gravel -----	13	59
Sand and sandstone -----	5	32	Red beds -----	1	60

Well A-79

Owner: Roy Carter. Driller: Hollis Davis.

Soil -----	4	4	Sand, gravel, and clay -	4	25
Sand and clay -----	11	15	Clay -----	5	30
Sand and gravel -----	6	21	Sand and gravel -----	12	42

Well A-81

Owner: T. L. Chambers. Driller: Hollis Davis.

Soil -----	5	5	Sand and gravel -----	23	33
Sand, red, and clay -----	5	10	Red beds -----	1	34

Well A-82

Owner: Scott White. Driller: Scott White and Casey & Kevil.

Topsoil -----	4	4	Sand and fine gravel ---	11	26
Caliche -----	4	8	Sandstone -----	2	28
Sand, red -----	7	15			

Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well A-83

Owner: D. H. Person. Driller: --

Soil -----	2	2	Sand and small gravel --	8	55
Sand, red -----	5	7	Sand and gravel -----	9	64
Clay and sand -----	40	47	Red beds -----	2	66

Well A-84

Owner: Bailey Foster. Driller: Claude Covey.

Soil -----	1	1	Clay -----	4	55
Sand, red -----	5	6	Sand and gravel -----	10	65
Clay -----	8	14	Clay and gravel -----	1	66
Sand -----	37	51	Red beds -----	3	69

Well A-85

Owner: Johnny L. Wyatt. Driller: O. V. Covey.

Soil -----	8	8	Sand and caliche (water)	8	68
Sand -----	32	40	Sand, coarse, and gravel	15	83
Sand, coarse (water) ---	15	55	Red beds -----	2	85
Caliche, white -----	5	60			

Well A-89

Owner: H. W. Buckner. Driller: --

Soil -----	14	14	Sand and gravel -----	14	54
Sand and clay -----	2	16	Gravel, cemented -----	1	55
Sand and caliche -----	24	40			

Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well A-101

Owner: Pat Ballard. Driller: -- Covey.

Soil -----	3	3	Sand and clay -----	5	44
Caliche -----	18	21	Sand and gravel -----	8	52
Sand and sandstone -----	11	32	Sandstone -----	1	53
Sandstone -----	1	33	Clay -----	2	55
Clay, sandy -----	5	38	Red beds -----	2	57
Sandstone -----	1	39			

Well A-120

Owner: E. W. Simpson. Driller: Casey & Kevil.

Soil -----	5	5	Sand and fine gravel ---	9	64
Sand and caliche -----	13	18	Sand, hard -----	1	65
Sand, red -----	12	30	Gravel -----	8	73
Sand, coarse -----	25	55			

Well A-124

Owner: Scott White. Driller: -- Casey.

Soil -----	4	4	Sand -----	20	36
Sand and clay -----	12	16	Sand and gravel -----	11	47

Well B-18

Owner: Roy L. Hester. Driller: J. M. Rea.

Soil -----	3	3	Sand and clay -----	24	47
Caliche -----	20	23	Sand and gravel -----	6	53

Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well B-20

Owner: Alton E. Hester. Driller: J. M. Rea.

Soil -----	7	7	Sand and gravel -----	11	53
Clay -----	35	42			

Well B-23

Owner: C. G. Burson. Driller: J. M. Rea.

Soil -----	4	4	Sand -----	3	38
Clay and caliche -----	9	13	Sandstone -----	2	40
Clay, sandy -----	6	19	Sand and coarse gravel -	9	49
Sand, red -----	6	25	Red beds -----	1	50
Clay, sandy -----	10	35			

Well B-24

Owner: C. G. Burson. Driller: J. M. Rea.

Soil -----	3	3	Sand and gravel -----	8	33
Caliche -----	12	15	Gravel, cemented -----	8	41
Sand and gravel -----	4	19	Sand and gravel -----	8	49
Clay -----	5	24	Red beds -----	1	50
Rock -----	1	25			

Well B-52

Owner: J. C. Angle. Driller: J. M. Rea.

Soil -----	19	19	Sand, coarse, and gravel	11	49
Caliche and sand -----	19	38	Red beds -----	1	50

Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well B-162

Owner: R. J. Strickland. Driller: Claude Covey.

Soil -----	3	3	Sand and clay -----	3	22
Sand and clay -----	4	7	Sand -----	11	33
Caliche -----	9	16	Sand and sandrock -----	4	37
Sand -----	3	19	Sand and gravel -----	13	50

Well B-164

Owner: Mrs. B. H. Jones. Driller: Doris Dickerson.

Soil -----	8	8	Caliche -----	4	38
Sand and caliche -----	16	24	Gravel -----	11	49
Sand -----	10	34	Red beds -----	1	50

Well B-172

Owner: Evie Hamilton. Driller: John Darnell.

Soil, sandy -----	11	11	Clay -----	9	52
Caliche -----	11	22	Gravel -----	16	68
Sand -----	21	43			

Well D-2

Owner: H. E. Brass. Driller: Elgin Wright.

Sand -----	16	16	Sand, coarse -----	14	48
Caliche -----	6	22	Quicksand and gravel ---	5	53
Sand -----	12	34			

Table 4.--Drillers' logs of wells in Haskell County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well D-3

Owner: Carl Medford. Driller: Elgin Wright.

Soil -----	4	4	Clay, sandy -----	13	38
Clay and caliche -----	10	14	Clay, brown -----	7	45
Clay, sandy -----	7	21	Gravel and clay -----	5	50
Sand, yellow -----	4	25			

Well D-7

Owner: George L. Smith. Driller: Hollis Davis.

Soil -----	5	5	Gravel -----	13	73
Clay, red -----	3	8	Rock -----	1	74
Caliche -----	10	18	Gravel -----	3	77
Sand and caliche -----	7	25	Red beds -----	1	78
Quicksand -----	35	60			

Well D-33

Owner: Lamar Casey. Driller: Scott White.

Soil -----	2	2	Clay -----	2	37
Sand and clay -----	6	8	Sand and small gravel --	4	41
Caliche -----	12	20	Gravel, cemented -----	4	45
Sand and gravel -----	15	35	Red beds -----	1	46

Well D-35

Owner: Lamar Casey. Driller: Scott White.

Soil -----	10	10	Sand and small gravel --	11	41
Caliche -----	10	20	Clay -----	3	44
Sand, gravel, and clay -	10	30	Sand, gravel, and clay -	4	48

Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well D-42

Owner: Mrs. R. E. Norman. Driller: --

Soil -----	3	3	Sand and gravel -----	15	40
Clay -----	22	25	Red beds -----	1	41

Well D-47

Owner: Newt Cole. Driller: Leroy Casey.

Soil -----	4	4	Clay -----	7	39
Clay and caliche -----	14	18	Sandstone -----	1	40
Sand, red -----	3	21	Sand and gravel -----	9	49
Sand and gravel -----	11	32			

Well D-56

Owner: Newt Cole. Driller: Leroy Casey.

Soil -----	4	4	Sand and gravel -----	17	37
Clay and caliche -----	12	16	Gravel, tight -----	2	39
Clay, sandy -----	4	20	Gravel, large -----	6	45

Well D-57

Owner: Newt Cole. Driller: Leroy Casey.

Soil -----	4	4	Sand and gravel -----	14	38
Clay and caliche -----	12	16	Sandstone, soft, and clay	2	40
Clay, sandy, and soft sandstone -----	8	24	Gravel, compact -----	3	43

Well D-61

Owner: L. W. Jones, Sr. Driller: Casey & Kevil

Soil -----	7	7	Sand and gravel -----	19	46
Sand and caliche -----	20	27			

Table 4.--Drillers' logs of wells in Haskell County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well D-65

Owner: L. W. Norman. Driller: Casey & Kevil.

Soil -----	3	3	Sand and gravel -----	2	41
Clay -----	3	6	Gravel, cemented -----	10	51
Caliche -----	11	17	Sand and gravel -----	3	54
Sand and gravel -----	21	38	Red beds -----	2	56
Sandstone -----	1	39			

Well D-66

Owner: L. W. Norman. Driller: Casey & Kevil.

Soil -----	5	5	Sand and gravel -----	15	53
Caliche and sand -----	33	38			

Well D-67

Owner: L. W. Norman. Driller: Casey & Kevil.

Soil -----	6	6	Sand and gravel -----	32	56
Caliche and sand -----	18	24	Red beds -----	2	58

Well D-89

Owner: A. E. Fouts. Driller: T. K. Kevil.

Soil -----	4	4	Sand and clay -----	1	29
Clay -----	2	6	Sandstone -----	2	31
Caliche -----	13	19	Sand and gravel -----	3	34
Sand and gravel -----	6	25	Red beds -----	4	38
Sandstone -----	3	28			

Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well E-11

Owner: C. H. Herren. Driller: Casey & Kevil.

Soil -----	6	6	Sand and gravel -----	17	45
Caliche -----	22	28	Red beds -----	5	50

Well E-13

Owner: Robert H. Segó. Driller: Casey & Kevil.

Soil -----	4	4	Sand and gravel -----	20	52
Caliche -----	16	20	Red beds -----	1	53
Clay -----	12	32			

Well E-14

Owner: Robert H. Segó. Driller: Casey & Kevil.

Soil -----	2	2	Sand and gravel -----	17	52
Caliche and clay -----	26	28	Red beds -----	1	53
Sand, gravel, and clay -	7	35			

Well E-33

Owner: L. B. Laird. Driller: Hollis Davis.

Soil -----	3	3	Sand, fine, and gravel -	6	45
Clay -----	5	8	Sand, coarse, and gravel	5	50
Caliche and clay -----	13	21	Gravel, cemented -----	1	51
Clay, sandy, and some gravel -----	9	30	Gravel, coarse -----	2	53
Clay -----	9	39	Red beds -----	1	54

Well E-38

Owner: Robert H. Segó. Driller: Casey & Kevil.

Soil -----	7	7	Sand -----	10	17
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Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well E-38--Continued

Sand and caliche -----	8	25	Red beds -----	1	45
Sand and gravel -----	19	44			

Well E-39

Owner: A. D. May. Driller: Casey & Kevil.

Soil -----	3	3	Sand and gravel -----	4	39
Caliche -----	16	19	Gravel, cemented -----	1	40
Sand and gravel -----	5	24	Gravel, large -----	5	45
Sand, gravel, and clay -	11	35	Red beds -----	1	46

Well E-42

Owner: A. D. May. Driller: Casey & Kevil.

Soil -----	4	4	Sand and gravel -----	4	38
Caliche and sandy clay -	18	22	Sandstone -----	2	40
Sand and gravel -----	11	33	Red beds -----	2	42
Sandstone and conglomerate	1	34			

Well E-43

Owner: A. D. May. Driller: Casey & Kevil.

Soil -----	7	7	Sand (water) -----	12	30
Caliche -----	11	18	Red beds -----	5	35

Well E-46

Owner: V. W. Meadows. Driller: Casey & Kevil.

Soil -----	3	3	Sand, gravel, and clay -	2	16
Caliche and clay -----	11	14	Clay -----	9	25

(Continued on next page)

Table 4.--Drillers' logs of wells in Haskell County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well E-46--Continued

Sand and gravel -----	4	29	Clay -----	2	36
Gravel, cemented -----	5	34	Sand and gravel -----	10	46

Well E-47

Owner: V. W. Meadows. Driller: Casey & Kevil.

Soil -----	3	3	Gravel, cemented -----	6	37
Caliche -----	10	13	Sand, gravel, and clay -	8	45
Sand, gravel, and clay -	3	16	Sand and gravel -----	4	49
Clay -----	10	26	Red beds -----	1	50
Sand and gravel -----	5	31			

Well E-48

Owner: V. W. Meadows. Driller: Casey & Kevil.

Soil -----	3	3	Sand and gravel -----	7	35
Clay and caliche -----	12	15	Gravel, cemented -----	10	45
Sand -----	6	21	Red beds, sand, and gravel	3	48
Clay -----	7	28			

Well E-53

Owner: Tom Davis. Driller: Casey & Kevil.

Soil -----	2	2	Clay -----	9	27
Caliche -----	13	15	Sand and gravel -----	21	48
Sand and gravel -----	3	18	Red beds -----	2	50

Table 4.--Drillers' logs of wells in Haskell County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well E-54

Owner: Tom Davis. Driller: Casey & Kevil.

Soil -----	4	4	Sand, soft, and clay ---	21	45
Clay and sand -----	20	24	Sand and gravel -----	6	51

Well E-57

Owner: Mrs. -- Harrell. Driller: Claude Covey.

Soil -----	4	4	Sand and gravel -----	5	28
Caliche -----	19	23	Red beds -----	2	30

Well E-61

Owner: Delma Williams. Driller: Leon Roberts.

Soil -----	8	8	Sand and gravel -----	21	39
Sand and caliche -----	10	18	Red beds -----	1	40

Well E-62

Owner: J. B. Pittman. Driller: Hollis Davis.

Soil -----	3	3	Caliche and clay -----	15	22
Clay -----	4	7	Sand and gravel -----	18	40

Well E-66

Owner: Roy Wiseman. Driller: Reed Gardner.

Soil -----	4	4	Sand and gravel -----	4	36
Caliche -----	18	22	Soapstone, soft -----	2	38
Sand, red, and gravel ---	4	26	Sand and gravel -----	4	42
Caliche and sandstone --	6	32	Red beds -----	1	43

Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well E-67

Owner: Roy Wiseman. Driller: Hollis Davis.

Soil -----	4	4	Sand and gravel -----	5	43
Caliche -----	32	36	Red beds -----	1	44
Sandstone -----	2	38			

Well E-70

Owner: Roy Wiseman. Driller: Reed Gardner.

Soil -----	4	4	Gravel, soft, cemented -	4	38
Caliche -----	20	24	Sand and gravel -----	4	42
Sand and gravel -----	10	34	Red beds -----	1	43

Well E-71

Owner: Grace McKelvain. Driller: Casey & Kevil.

Soil -----	8	8	Sand and gravel -----	16	56
Caliche -----	32	40			

Well E-81

Owner: Taylor Estate. Driller: Hollis Davis.

Soil -----	4	4	Sandstone -----	1	30
Caliche -----	12	16	Sand -----	1	31
Sand and gravel -----	9	25	Sandstone -----	2	33
Clay -----	2	27	Red beds -----	3	36
Sand and gravel -----	2	29			

Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well E-85

Owner: Norman Nanny. Driller: Hollis Davis.

Soil -----	2	2	Sand and gravel, tight -	10	42
Sand and gravel -----	23	25	Sand and gravel -----	7	49
Gravel, cemented -----	7	32	Red beds -----	1	50

Well E-91

Owner: Tom B. Roberson. Driller: Doris Dickerson.

Soil -----	3	3	Sand and gravel -----	17	32
Caliche -----	12	15	Red beds -----	1	33

Well E-95

Owner: Norman Nanny. Driller: Hollis Davis.

Soil -----	3	3	Sand and gravel -----	2	28
Caliche -----	10	13	Clay, yellow -----	4	32
Sand and gravel -----	12	25	Sand and gravel -----	11	43
Clay -----	1	26	Red beds -----	2	45

Well E-100

Owner: C. A. Thomas, Jr. Driller: Hollis Davis.

Soil -----	5	5	Sand and gravel -----	1	31
Caliche -----	4	9	Sandstone -----	4	35
Sand -----	20	29	Sand and gravel -----	3	38
Gravel, cemented -----	1	30			

Table 4.--Drillers' logs of wells in Haskell County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well E-101

Owner: C. A. Thomas, Jr. Driller: Hollis Davis.

Soil -----	2	2	Clay -----	1	24
Caliche -----	11	13	Sand and gravel -----	10	34
Sand and gravel -----	10	23			

Well E-115

Owner: C. G. Burson, Sr. Driller: Claude Covey.

Soil -----	4	4	Gravel -----	3	38
Caliche -----	6	10	Sandstone and cemented gravel -----	2	40
Sand, coarse, and gravel	15	25	Gravel and red beds ----	2	42
Gravel, cemented -----	10	35			

Well E-116

Owner: C. G. Burson, Sr. Driller: Casey & Kevil.

Soil -----	3	3	Sand, gravel, and clay -	6	34
Caliche -----	10	13	Gravel, cemented -----	1	35
Sand and gravel -----	12	25	Sand and gravel -----	9	44
Gravel, cemented -----	3	28			

Well E-119

Owner: R. L. Foot. Driller: Hollis Davis.

Soil -----	2	2	Gravel, cemented -----	2	28
Caliche and clay -----	14	16	Sand and gravel -----	11	39
Sand and gravel -----	10	26	Red beds -----	1	40

Table 4.--Drillers' logs of wells in Haskell County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well E-120

Owner: John M. Gannaway. Driller: Casey & Kevil.

Soil -----	5	5	Sand and gravel -----	22	39
Caliche -----	5	10	Red beds -----	2	41
Caliche and gravel -----	7	17			

Well E-125

Owner: C. A. Thomas, Jr. Driller: Hollis Davis.

Soil -----	2	2	Sand and gravel -----	6	31
Clay -----	5	7	Gravel, cemented -----	4	35
Sand -----	18	25	Sand and gravel -----	8	43

Well E-129

Owner: City of Haskell. Driller: John Darnell.

Soil -----	4	4	Sand and gravel, tight -	1	29
Caliche and sand -----	7	11	Sandstone and gravel ---	4	33
Sand and gravel -----	15	26	Sand and gravel -----	2	35
Sandstone -----	2	28			

Well E-132

Owner: Giles Kemp. Driller: Hollis Davis.

Soil -----	3	3	Clay and gravel streaks-	10	31
Caliche and caliche rock	6	9	Clay, sandy, and some gravel -----	11	42
Gravel -----	2	11	Clay, blue and brown ---	3	45
Clay -----	3	14	Sand and gravel -----	7	52
Sand, red, and clay ----	7	21	Sandrock -----	1	53

Table 4.--Drillers' logs of wells in Haskell County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well E-139

Owner: Haskell Stone. Driller: Hollis Davis.

Soil -----	4	4	Clay and gravel -----	9	44
Caliche -----	12	16	Sand and gravel, rocky -	4	48
Sand and gravel -----	9	25	Sand and gravel -----	21	69
Clay, sandy, and gravel-	10	35	Red beds -----	1	70

Well E-142

Owner: City of Haskell. Driller: --

Soil -----	2	2	Sandstone and gravel ---	3	24
Caliche -----	7	9	Clay -----	2	26
Sand, gravel, and clay -	12	21	Red beds -----	1	27

Well E-143

Owner: City of Haskell. Driller: John Darnell.

Soil -----	3	3	Clay -----	1	28
Caliche -----	7	10	Sand and gravel -----	4	32
Sand and gravel -----	17	27	Red beds -----	1	33

Well E-156

Owner: A. H. Becker. Driller: Hollis Davis.

Soil -----	1	1	Sand, fine, and gravel -	3	24
Caliche -----	5	6	Clay, sandy -----	2	26
Sand, red, and soft sandstone -----	4	10	Sand and large gravel --	7	33
Sand, fine, and gravel -	9	19	Gravel, cemented -----	1	34
Sandstone -----	2	21	Red beds -----	2	36

Table 4.--Drillers' logs of wells in Haskell County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well E-162

Owner: Albert W. Barnett. Driller: Hollis Davis.

Soil -----	7	7	Sand and gravel -----	11	24
Sand and caliche -----	6	13	Sand and gravel -----	16	40

Well J-3

Owner: R. V. Earls. Driller: --

Soil -----	2	2	Sandstone -----	1	14
Clay -----	6	8	Sand, gravel, and clay -	6	20
Sand and gravel -----	5	13			

Well J-4

Owner: R. V. Earls. Driller: Otis M. Matthews.

Soil -----	2	2	Sand, gravel, and clay -	11	20
Clay -----	7	9			

Table 5.--Water levels in wells in Haskell County
(In feet below land-surface datum)

Date	Water level	Date	Water level	Date	Water level
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Well A-30

Owner: S. N. Reed.

Mar. 1, 1951	15.07	Jan. 4, 1954	17.76	Jan. 7, 1957	21.66
Feb. 11, 1952	16.75	Jan. 4, 1955	18.15	Jan. 14, 1958	18.91
Jan. 5, 1953	18.03	Jan. 4, 1956	16.77	Feb. 5, 1959	19.51

Well A-50

Owner: J. R. Hitchcock.

Jan. 5, 1953	19.32	Jan. 4, 1956	18.72	Jan. 14, 1958	20.36
Jan. 4, 1954	20.03	Dec. 12	20.50	Feb. 5, 1959	21.06
Jan. 4, 1955	21.11	Jan. 8, 1957	22.68		

Well A-55

Owner: D. R. Brown.

Jan. 5, 1953	16.85	Jan. 4, 1956	16.70	Feb. 5, 1959	22.77
Jan. 4, 1954	17.63	Jan. 8, 1957	22.74		
Jan. 4, 1955	18.88	Jan. 14, 1958	21.71		

Well A-71

Owner: D. R. Brown.

Mar. 24, 1944	42.55	Jan. 4, 1956	37.46	Jan. 14, 1958	39.63
Jan. 4, 1954	37.03	May 15	36.63	Feb. 5, 1959	40.78
Jan. 4, 1955	37.68	Jan. 8, 1957	39.80		

Well A-104

Owner: City of Rochester.

Mar. 24, 1944	b22.90	Mar. 1, 1951	17.29	Feb. 11, 1952	15.83
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(Continued on next page)

Table 5.--Water levels in wells in Haskell County--Continued

Date	Water level	Date	Water level	Date	Water level
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Well A-104--Continued

Jan. 5, 1953	18.69	Jan. 4, 1955	a22.62	Jan. 8, 1957	22.94
Jan. 4, 1954	b19.33	Jan. 5, 1956	17.9	Jan. 14, 1958	21.53

a/ Pumping.

b/ Pumped recently.

Well A-116

Owner: Joe Mathis.

Jan. 4, 1955	22.27	Jan. 7, 1957	23.46	Feb. 4, 1959	22.76
Jan. 4, 1956	22.40	May 20	23.22		
May 21	22.97	Jan. 14, 1958	23.31		

Well A-123

Owner: R. O. Henry.

May 23, 1956	33.13	May 20, 1957	34.32	Feb. 4, 1959	34.62
Dec. 18	35.33	Jan. 14, 1958	34.29		

Well A-125

Owner: J. L. Reid, Jr.

Mar. 24, 1944	9.11	Jan. 4, 1954	15.32	Jan. 9, 1957	18.34
Mar. 1, 1951	11.66	Jan. 3, 1955	17.40	Jan. 13, 1958	14.91
Feb. 11, 1952	12.83	Jan. 4, 1956	16.28	Feb. 5, 1959	15.64
Jan. 5, 1953	15.00				

Well B-50

Owner: J. L. Stephens.

Jan. 4, 1955	18.60	Jan. 5, 1957	25.3	Jan. 14, 1958	25.07
Jan. 4, 1956	19.83	Jan. 9	25.17	Feb. 5, 1959	26.62

Table 5.--Water levels in wells in Haskell County--Continued

Date	Water level	Date	Water level	Date	Water level
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Well B-51

Owner: J. L. Stephens.

Jan. 6, 1953	21.22	Jan. 4, 1956	25.05	Jan. 14, 1958	31.30
Jan. 5, 1954	22.94	Jan. 5, 1957	30.80	Feb. 5, 1959	32.9
Jan. 4, 1955	23.38				

Well B-59

Owner: M. T. Lowery.

Jan. 6, 1953	17.86	Jan. 4, 1955	19.90	Jan. 14, 1958	25.72
Jan. 5, 1954	18.98	Jan. 5, 1957	28.57	Feb. 5, 1959	27.92

Well B-60

Owner: M. T. Lowery.

Jan. 4, 1955	22.87	Aug. 10, 1956	27.82	Jan. 14, 1958	27.80
Jan. 4, 1956	23.82	Jan. 5, 1957	29.17	Feb. 5, 1959	29.49

Well B-92

Owner: J. W. Tankersley.

Jan. 4, 1955	32.10	Jan. 3, 1957	35.49	Jan. 14, 1958	36.48
Jan. 4, 1956	31.91	Jan. 7	31.04	Feb. 5, 1959	37.24

Well B-104

Owner: L. E. Walker.

Feb. 12, 1952	20.27	Jan. 4, 1955	25.41	Jan. 8, 1957	31.04
Jan. 6, 1953	20.20	Aug. 3, 1956	32.58	Jan. 14, 1958	31.52
Jan. 4, 1954	22.70	Jan. 4, 1957	30.76	Feb. 6, 1959	32.70

Table 5.--Water levels in wells in Haskell County--Continued

Date	Water level	Date	Water level	Date	Water level
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Well B-168

Owner: Mary Cook Ellis.

Feb. 12, 1952	13.41	Jan. 4, 1955	15.06	Jan. 8, 1957	20.07
Jan. 6, 1953	13.72	Jan. 4, 1956	15.40	Jan. 14, 1958	16.65
Jan. 4, 1954	14.66	Jan. 3, 1957	20.19	Feb. 5, 1959	20.63

Well B-174

Owner: J. L. Stephens.

Feb. 12, 1952	12.99	Jan. 4, 1955	19.03	Jan. 14, 1958	25.95
Jan. 6, 1953	16.62	Jan. 4, 1956	20.53	Feb. 5, 1959	27.41
Jan. 5, 1954	18.30	Jan. 9, 1957	26.05		

Well B-175

Owner: M. T. Lowery.

Feb. 12, 1952	13.78	Jan. 4, 1955	18.59	Jan. 14, 1958	25.05
Jan. 6, 1953	15.94	Jan. 4, 1956	19.94	Feb. 5, 1959	26.44
Jan. 5, 1954	17.30	Jan. 9, 1957	25.66		

Well D-22

Owner: City of Rule.

Mar. 1, 1951	40.58	Jan. 6, 1953	44.27	Jan. 4, 1955	b46.11
Feb. 12, 1952	41.50	Jan. 4, 1954	44.52	Jan. 7, 1957	b47.64

b/ Pumped recently.

Well D-23

Owner: City of Rule.

Mar. 21, 1944	32.04	Mar. 1, 1951	b36.84	Feb. 12, 1952	b38.05
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Table 5.--Water levels in wells in Haskell County--Continued

Date	Water level	Date	Water level	Date	Water level
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Well D-23--Continued

Jan. 6, 1953	a40.97	Jan. 4, 1956	39.12	Jan. 13, 1958	40.10
Jan. 4, 1955	a42.70	Jan. 7, 1957	40.98		

a/ Pumping.

b/ Pumped recently.

Well D-24

Owner: Santa Fe RR.

Mar. 21, 1944	31.74	Jan. 5, 1953	b38.32	Jan. 9, 1957	44.2
Mar. 1, 1951	34.19	Jan. 4, 1954	37.74	Jan. 13, 1958	38.60
Feb. 11, 1952	34.97	Jan. 4, 1956	38.48		

b/ Pumped recently.

Well D-48

Owner: Newt Cole.

Jan. 4, 1954	29.05	Jan. 4, 1956	32.15	Jan. 13, 1958	37.07
Jan. 3, 1955	30.21	Jan. 7, 1957	36.58	Feb. 4, 1959	38.41

Well E-18

Owner: Joe W. Cloud.

Jan. 4, 1954	26.31	June 7, 1956	31.87	May 20, 1957	33.27
Jan. 3, 1955	27.67	Jan. 7, 1957	33.45	Jan. 13, 1958	32.18
June 7	31.87	Feb. 25	33.15	Feb. 3, 1959	32.71

Well E-19

Owner: Joe W. Cloud.

Jan. 3, 1955	28.33	Jan. 7, 1957	a41.75	Jan. 13, 1958	32.86
June 7, 1956	32.38	Feb. 25	33.39	Feb. 3, 1959	32.87

a/ Pumping.

Table 5.--Water levels in wells in Haskell County--Continued

Date	Water level	Date	Water level	Date	Water level
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Well E-20

Owner: Joe W. Cloud.

Jan. 3, 1955	28.48	Jan. 7, 1957	a41.85	Jan. 13, 1958	33.01
June 7, 1956	32.03	Feb. 25	33.21		

a/ Pumping.

Well E-26

Owner: John Kimbrough.

Jan. 4, 1954	26.76	Jan. 4, 1956	29.75	Feb. 25, 1957	31.38
Jan. 3, 1955	27.58	Jan. 7, 1957	a33.86		

a/ Pumping.

Well E-124

Owner: City of Haskell.

Jan. 6, 1953	25.8	Jan. 4, 1956	26.69	Jan. 13, 1958	29.95
Jan. 3, 1955	26.32	Jan. 7, 1957	31.24		

Well E-141

Owner: City of Haskell.

Mar. 1, 1951	a23.61	Jan. 4, 1954	19.34	Jan. 7, 1957	22.85
Feb. 12, 1952	a20.93	Jan. 3, 1955	20.36	Jan. 13, 1958	23.48
Jan. 6, 1953	a22.91	Jan. 4, 1956	20.83		

a/ Pumping.

Well E-142

Owner: City of Haskell.

Mar. 1, 1951	16.03	Jan. 4, 1954	17.71	Jan. 7, 1957	20.61
Feb. 12, 1952	16.65	Jan. 3, 1955	18.50	Jan. 13, 1958	21.31
Jan. 6, 1953	17.96	Jan. 4, 1956	18.69	Feb. 3, 1959	21.13

Table 5.--Water levels in wells in Haskell County--Continued

Date	Water level	Date	Water level	Date	Water level
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Well E-146

Owner: City of Haskell.

Mar. 1, 1951	16.36	Jan. 4, 1954	17.55	Jan. 7, 1957	22.34
Feb. 12, 1952	16.35	Jan. 3, 1955	19.36	Jan. 13, 1958	22.38
Jan. 6, 1953	20.55	Jan. 4, 1956	19.75		

Well E-147

Owner: City of Haskell.

Mar. 1, 1951	16.33	Jan. 4, 1954	a22.03	Jan. 7, 1957	22.01
Feb. 12, 1952	18.78	Jan. 3, 1955	18.14	Jan. 13, 1958	21.09
Jan. 6, 1953	18.03	Jan. 4, 1956	18.18	Feb. 3, 1959	21.8

a/ Pumping.

Well E-148

Owner: City of Haskell.

Mar. 17, 1944	19.0	Jan. 4, 1954	16.34	Jan. 7, 1957	b21.03
Mar. 1, 1951	16.36	Jan. 3, 1955	16.87	Jan. 13, 1958	19.53
Jan. 6, 1953	17.90	Jan. 4, 1956	b18.99		

b/ Pumped recently.

Well E-149

Owner: City of Haskell.

Mar. 17, 1944	19.0	Jan. 3, 1955	15.08	Jan. 7, 1957	b22.10
Jan. 6, 1953	17.34	Jan. 4, 1956	b17.28	Jan. 13, 1958	18.78
Jan. 4, 1954	17.41				

b/ Pumped recently.

Table 5.--Water levels in wells in Haskell County--Continued

Date	Water level	Date	Water level	Date	Water level
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Well E-150

Owner: City of Haskell.

Mar. 1, 1951	7.38	Jan. 4, 1954	7.40	Jan. 7, 1957	10.14
Feb. 12, 1952	c10.37	Jan. 3, 1955	6.40	Jan. 13, 1958	7.37
Jan. 6, 1953	c7.65	Jan. 4, 1956	4.52		

c/ Nearby well being pumped.

Well E-151

Owner: City of Haskell.

Mar. 1, 1951	a9.34	Jan. 3, 1955	9.22	Jan. 7, 1957	6.98
Jan. 6, 1953	a9.75	Jan. 4, 1956	7.67	Jan. 13, 1958	10.54
Jan. 4, 1954	10.19				

a/ Pumping.

Table 6.--Chemical analyses of water from wells and springs in Haskell County
(Results are in parts per million, except specific conductance, pH, percent sodium and sodium adsorption ratio.)
Water-bearing unit: A, alluvium; C, Clear Fork group; S, Seymour formation.

Well	Owner	Depth of well (ft.)	Water-bearing unit	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃) _a	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Boron (B)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (microhms at 25°C)	pH	
A-5	Joe T. Williams	36	S	Aug. 28, 1956	-	-	-	-	-	332	-	47	-	-	-	-	296	-	-	927	7.5	
A-14	Bush and Burnett	55	S	Aug. 16, 1956	39	-	85	23	126	328	97	112	-	59	0.28	724	306	47	3.1	1,140	7.7	
A-40	L. E. Hughes	44	S	do	29	-	51	25	62	294	47	29	-	39	.25	445	229	37	1.8	696	7.7	
A-53	D. R. Brown	60	S	do	32	-	71	38	202	215	248	200	-	68	.50	1,050	334	57	4.8	1,550	8.0	
A-71	do	65	S	Mar. 24, 1944	-	-	131	41	250	286	286	320	-	70	-	1,240	496	52	4.9	-	-	
A-75	A. B. Kempton	20	S	Mar. 18, 1944	-	-	-	-	-	545	130	79	-	65	-	-	-	-	-	-	-	-
A-76	Roy Carter	40	S	Aug. 16, 1956	32	-	53	17	29	266	21	5.5	-	22	.10	312	203	24	.9	495	7.7	
A-88	H. W. Buckner	55	S	Aug. 30, 1956	-	-	-	-	-	306	-	53	-	-	-	-	232	-	-	765	8.4	
A-104	City of Rochester	54	S	Mar. 24, 1944	21	0.14	75	17	109	333	99	43	0.6	129	-	623	257	47	3.0	888	7.6	
A-110	W. A. Ivey	38	S	Aug. 15, 1956	-	-	-	-	-	303	-	162	-	-	-	-	1,310	-	-	2,960	8.1	
A-122	J. M. Reeves	57	S	Mar. 24, 1944	-	-	-	-	-	269	40	45	-	116	-	-	-	-	-	-	-	-
A-123	R. O. Henry	73	S	Aug. 16, 1956	31	-	74	14	78	323	41	38	-	58	.20	496	242	41	2.2	792	7.4	
A-125	J. L. Reid, Jr.	25	S	Mar. 24, 1944	-	-	-	-	-	421	50	38	-	76	-	-	-	-	-	-	-	-
A-127	A. C. Foster	40	S	do	-	-	-	-	-	336	60	60	-	104	-	-	-	-	-	-	-	-
B-48	Roy Tankersley	59	S	Aug. 15, 1956	40	-	76	51	179	380	172	170	-	66	.54	975	400	49	3.9	1,520	8.2	
B-67	Ellwood Hackney	70	S	Sept. 1, 1956	26	-	81	27	120	336	99	103	1.0	54	.44	684	312	45	3.0	1,110	7.5	
B-104	L. E. Walker	58	S	Jan. 4, 1956	37	-	91	37	175	348	179	165	-	71	-	930	380	50	3.9	1,440	7.6	
B-107	do	58	S	Aug. 15, 1956	-	-	-	-	-	335	-	285	-	-	-	-	516	-	-	2,020	7.4	
B-133	Ira Hester	57	S	Sept. 1, 1956	-	-	-	-	-	335	-	47	-	-	-	-	232	-	-	871	7.6	
B-142	Jack H. Neathery	63	S	Nov. 14, 1956	-	-	-	-	-	232	-	87	-	-	-	-	203	-	-	956	8.1	
B-154	Bert M. Davenport	79	S	Sept. 1, 1956	-	-	-	-	-	320	-	148	-	-	-	-	408	-	-	1,310	7.4	
C-1	E. J. Bruzell	26	C	Nov. 15, 1956	-	-	-	-	-	151	-	14	-	-	-	-	126	-	-	292	7.8	
C-2	C. C. McDonald	60	C	Nov. 13, 1956	-	-	-	-	-	413	-	70	-	-	-	-	40	-	-	924	8.7	
C-4	Sammy Griffiths	60	C	Nov. 1, 1956	-	-	-	-	-	636	-	878	-	-	-	-	365	-	-	3,940	8.6	
C-5	E. D. Earl	30	C	Nov. 14, 1956	-	-	-	-	-	261	-	348	-	-	-	-	403	-	-	1,910	8.0	

a/ Includes equivalent of any carbonate (CO₃) present.

Table 6.--Chemical analyses of water from wells and springs in Haskell County--Continued

Well	Owner	Depth of well (ft.)	Water-bearing unit	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃) _a	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Boron (B)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (microhos at 25°C)	pH
C-6	Dwight Key	50	C	Nov. 14, 1956	-	-	-	-	-	587	-	165	-	-	-	-	500	-	-	1,480	8.1
C-7	C. F. Baker	45	C	Nov. 13, 1956	-	-	-	-	-	561	-	24	-	-	-	-	160	-	-	989	8.8
C-9	J. L. Mayfield Estate	65	C	Nov. 15, 1956	-	-	-	-	-	480	-	460	-	-	-	-	83	-	-	3,010	8.3
C-10	S. J. Jousselet	32	C	Nov. 1, 1956	-	-	-	-	-	730	-	148	-	-	-	-	220	-	-	2,340	8.8
C-11	J. C. Vaught	45	C	Oct. 31, 1956	-	-	-	-	-	524	-	495	-	-	-	-	210	-	-	3,370	8.8
C-12	Mattson Rural High School	41	C	Nov. 8, 1956	26	0.01	33	24	547	2.2	355	382	0.4	28	-	1,660	180	87	18	2,660	7.9
D-3	Carl Medford	50	S	Sept. 1, 1956	-	-	-	-	-	369	-	57	-	-	-	-	330	-	-	968	7.6
D-4	E. N. Wilson	65	S	Mar. 20, 1944	-	-	-	-	-	292	46	87	-	68	-	-	-	-	-	-	-
D-10	G. B. Tanner	59	S	do	-	-	-	-	-	303	24	99	-	126	-	-	-	-	-	-	-
D-14	Humble Pipeline Co.	45	S	Mar. 23, 1944	-	-	-	-	-	415	48	38	-	25	-	-	-	-	-	-	-
D-23	City of Rule	45	S	Mar. 21, 1944	21	.05	91	24	114	6.6	57	73	.4	152	-	717	326	43	2.7	1,060	7.8
D-24	Santa Fe RR	49	S	do	-	-	-	-	-	356	120	148	-	62	-	-	-	-	-	-	-
D-60	R. B. Neal	42	S	Mar. 23, 1944	-	-	-	-	-	315	220	312	-	37	-	-	-	-	-	-	-
D-62	Mrs. G. W. May	47	S	do	-	-	-	-	-	276	60	148	-	59	-	-	420	-	-	1,290	8.2
D-73	H. L. Martin	50	C	Oct. 24, 1956	-	-	-	-	-	292	-	149	-	-	-	-	1,710	-	-	4,260	8.0
D-76	J. E. Place	60	C	Aug. 16, 1956	-	-	-	-	-	176	-	610	-	-	-	-	910	-	-	2,180	8.0
D-77	G. E. Davis	71	C	Oct. 24, 1956	-	-	-	-	-	212	-	302	-	-	-	-	-	-	-	-	-
D-78	John May	56	S	Mar. 23, 1944	-	-	-	-	-	335	64	155	-	90	-	-	-	-	-	-	-
D-79	E. A. Howard	81	C	Oct. 24, 1956	-	-	-	-	-	321	-	196	-	-	-	-	475	-	-	1,300	8.6
D-81	W. W. Kittley	76	C	do	-	-	-	-	-	148	-	355	-	-	-	-	2,060	-	-	4,210	8.2
D-85	G. M. Sims	29	C	do	-	-	-	-	-	187	-	765	-	-	-	-	2,330	-	-	5,150	8.2
D-87	R. E. Mathis	38	C	Aug. 30, 1956	-	-	-	-	-	177	-	195	-	-	-	-	1,910	-	-	3,470	7.6
D-89	A. E. Fouts	38	-	Aug. 16, 1956	21	-	368	105	134	176	1,210	172	-	14	1.4	2,110	1,350	18	1.6	2,610	7.6
D-91	Mrs. Zila Collins	52	C	Oct. 24, 1956	-	-	-	-	-	162	-	93	-	-	-	-	1,220	-	-	2,570	8.0
D-92	M. W. Sedberry	42	C	do	-	-	-	-	-	129	-	805	-	-	-	-	2,070	-	-	4,870	8.1

a/ Includes equivalent of any carbonate (CO₃) present.

Table 6.--Chemical analyses of water from wells and springs in Haskell County--Continued

Well	Owner	Depth of well (ft.)	Water-bearing unit	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Micrate (NO ₃)	Boron (B)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (microhmhos at 25°C)	pH
E-2	James Mullino	43	S	Aug. 30, 1956	-	-	-	-	-	410	-	108	-	-	-	-	610	-	-	1,900	8.1
E-3	Fred Buerger	33	C	Oct. 31, 1956	-	-	-	-	-	411	-	1,430	-	-	-	-	2,920	-	-	8,390	8.2
E-4	E. B. Callaway	50	C	Mar. 22, 1944	-	-	-	-	-	541	170	135	-	8.7	-	-	-	-	-	-	-
E-5	--	23	S	do	-	-	-	-	-	401	80	250	-	47	-	-	-	-	-	-	-
E-6	Earl Livengood	24	S	Mar. 23, 1944	-	-	-	-	-	370	38	43	-	76	-	-	-	-	-	-	-
E-7	do	26	S	do	-	-	-	-	-	352	120	335	-	165	-	-	-	-	-	-	-
E-8	Cloud Estate	45	S	do	-	-	-	-	-	314	358	520	-	150	-	-	-	-	-	-	-
E-16	M. Brown	36	S	Mar. 22, 1944	-	-	-	-	-	378	120	255	-	104	-	-	-	-	-	-	-
E-18	Joe Cloud	43	S	Jan. 4, 1956	31	-	92	31	130	357	109	128	-	66	-	763	356	44	3.0	1,210	7.5
E-22	Ruby Wilson	40	S	Aug. 16, 1956	30	-	104	39	151	344	144	190	-	56	0.24	927	420	44	3.2	1,400	7.5
E-72	Tobe Griffin	42	S	Mar. 23, 1944	-	-	-	-	-	321	130	170	-	35	-	-	-	-	-	-	-
E-85	Norman Nanny	50	S	Aug. 16, 1956	30	-	130	61	217	311	255	322	-	75	.40	1,240	575	45	3.9	2,070	7.5
E-92	T. A. Rhoades	38	S	Mar. 22, 1944	-	-	-	-	-	313	260	365	-	39	-	-	-	-	-	-	-
E-113	R. Alvis	37	S	Mar. 23, 1944	-	-	-	-	-	273	160	445	-	61	-	-	-	-	-	-	-
E-133	Mrs. Ada Mae Bach	56	S	do	-	-	-	-	-	299	180	382	-	78	-	-	-	-	-	-	-
E-141	City of Haskell	32	S	Mar. 17, 1944	21	0.02	151	92	221	399	251	365	1.2	177	-	1,490	756	38	3.5	2,290	7.6
E-152	do	Spring	S	do	-	-	-	-	-	511	190	225	-	30	-	-	-	-	-	-	-
E-156	A. H. Becker	26	S	Aug. 30, 1956	-	-	-	-	-	291	-	188	-	-	-	-	334	-	-	1,470	8.1
E-164	Cliff Berry	30	C	Oct. 29, 1956	-	-	-	-	-	440	-	72	-	-	-	-	205	-	-	1,300	8.6
E-165	Leslie Medford	55	C	Oct. 30, 1956	-	-	-	-	-	414	-	252	-	-	-	-	430	-	-	1,470	8.4
E-166	W. H. Haynes	90	C	Nov. 14, 1956	-	-	-	-	-	472	-	610	-	-	-	-	200	-	-	2,970	8.5
F-6	Farland Foote	43	C	Oct. 30, 1956	-	-	-	-	-	1,040	-	422	-	-	-	-	58	-	-	3,510	8.8
G-1	C. E. Stegemoller	60	C	Dec. 5, 1956	-	-	-	-	-	105	-	358	-	-	-	-	2,220	-	-	4,200	7.6
G-6	A. H. Twichelman	40	C	Nov. 27, 1956	-	-	-	-	-	249	-	328	-	-	-	-	2,230	-	-	4,110	7.7
G-7	John Wendebora	36	C	Dec. 5, 1956	-	-	-	-	-	217	-	85	-	-	-	-	1,180	-	-	2,890	7.9

u/ Includes equivalent of any carbonate (CO₃) present.

Table 6.--Chemical analyses of water from wells and springs in Haskell County--Continued

Well	Owner	Depth of well (ft.)	Water-bearing unit	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃) ^a	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Boron (B)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (microhmohms at 25°C)	pH
G-8	John Wendeborn	50	C	Dec. 6, 1956	-	-	-	-	-	130	-	1,100	-	-	-	-	2,460	-	-	6,720	7.7
G-10	Svenson Land & Cattle Co.	50	C	Apr. 16, 1957	-	-	-	-	-	263	-	92	-	-	-	-	1,330	-	-	2,900	7.7
G-11	A. C. Ender	34	C	Dec. 5, 1956	-	-	-	-	-	165	-	202	-	-	-	-	1,900	-	-	3,890	8.1
G-12	Svenson Land & Cattle Co.	60	C	Apr. 16, 1957	-	-	-	-	-	219	-	148	-	-	-	-	1,620	-	-	3,190	7.7
G-14	F. J. Boedaker	50	C	Nov. 27, 1956	-	-	-	-	-	146	-	690	-	-	-	-	2,100	-	-	5,020	7.7
G-16	Svenson Land & Cattle Co.	35	C	Apr. 16, 1957	-	-	-	-	-	201	-	125	-	-	-	-	1,570	-	-	2,950	7.9
G-17	do	40	C	do	-	-	-	-	-	298	-	255	-	-	-	-	2,320	-	-	4,220	7.8
G-18	do	10	C	do	-	-	-	-	-	165	-	228	-	-	-	-	1,930	-	-	3,580	7.3
G-19	do	60	C	do	-	-	-	-	-	257	-	70	-	-	-	-	708	-	-	1,740	8.0
G-21	do	40	C	Dec. 6, 1956	-	-	-	-	-	172	-	328	-	-	-	-	1,880	-	-	4,690	8.1
G-22	Al Smith	66	C	Nov. 27, 1956	-	-	-	-	-	72	-	1,100	-	-	-	-	2,030	-	-	6,180	7.7
H-1	Clyde L. Bland	32	C	Apr. 16, 1957	-	-	-	-	-	559	-	940	-	-	-	-	1,080	-	-	6,160	7.3
H-2	M. L. Tipton	50	C	Nov. 26, 1956	-	-	-	-	-	61	-	1,000	-	-	-	-	1,980	-	-	6,160	7.7
H-4	Allen Overton	50	C	Aug. 30, 1956	-	-	-	-	-	400	-	860	-	-	-	-	285	-	-	4,460	7.9
H-5	J. L. Earls	42	C	Jan. 15, 1957	-	-	-	-	-	569	-	198	-	-	-	-	161	-	-	1,820	7.9
J-1	John B. Nanny	23	A	Dec. 7, 1956	-	-	-	-	-	509	-	224	-	-	-	-	514	-	-	1,780	8.3
J-2	R. V. Earls	26	C	Jan. 15, 1957	-	-	-	-	-	603	-	100	-	-	-	-	434	-	-	1,460	7.7
J-3	do	20	A	do	-	-	-	-	-	283	-	108	-	-	-	-	178	-	-	1,090	8.0
J-5	John Watson	60	C	Dec. 7, 1956	-	-	-	-	-	380	-	203	-	-	-	-	65	-	-	1,630	8.2

a/ Includes equivalent of any carbonate (CO₃) present.

Table 7.--Records of wells and springs in Knox County

All wells are drilled unless otherwise noted in remarks column.

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

Method of lift and type of power: A, airlift; B, bucket; C, cylinder; Cf, centrifugal; E, electric; G, gasoline, butane or Diesel engine; H, hand; J, jet; N, none; T, turbine; W, windmill. Number indicates horsepower.

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

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
A-1	Big Four Ranch	--	--	20	36	Blaine gypsum	17.5	Nov. 27, 1956	C,W	S	Dug.
*A-2	Kincaid Estate	--	--	37	36	San Angelo sandstone	35.8	do	C,W	S	do
*A-3	Chris Moody	--	1952	48	6	Clear Fork group	23.8	Nov. 28, 1956	C,W	S	Seismograph shothole.
*A-4	E. J. Jones	--	--	40	--	do	30.8	do	C,W	S	
*A-5	Leon Spears	Guy Edwards	1948	51	6	do	22.5	do	C,W	S	
*A-6	W. O. Solomon	--	--	81	6	do	72.8	do	C,W	S	
*A-7	Elmo Todd	--	--	26	36	San Angelo sandstone	19.2	do	J,E	D	Dug.
*A-8	Big Four Ranch	--	--	Spring	--	--	--	--	N	S	
*B-1	Leon Spears	Guy Edwards	1953	55	6	Clear Fork group	35.2	Nov. 29, 1956	C,W	S	
*B-2	J. M. Chowning	--	--	27	36	do	22.8	Nov. 30, 1956	C,W	S	Dug.
*B-3	T. M. Westbrook	--	1895	43	--	do	41.8	Nov. 28, 1956	C,W	S	do
*B-4	R. R. Myers	--	--	40	--	do	--	--	T,E	D	do
*B-5	J. R. Spivey	--	1936	46	36	do	23.4	Nov. 30, 1956	C,W	S	do
*B-6	L. B. Baty	--	1924	56	36	Seymour formation	30.9	do	T,E	D	do
*B-7	Farmers' Coop Gin	--	1925	45	36	do	--	--	J,E, 2	P,Ind	Dug. Supplies water for 20 families in Gilliland area. Reportedly pumped 5 gpm 15 hours per day.
*B-8	Gilliland School	--	--	42	--	do	36.7	Apr. 25, 1957	T,E	P	Dug.
*C-1	Glenn Fox	J. M. Rea	1956	33	--	do	--	--	--	Irr	Six nearby wells to be used in conjunction for irrigation.
*C-2	W. A. Shaw	--	1948	32	36	do	24.7	Dec. 6, 1956	C,W	S	Dug.
*C-3	J. A. Hertel	--	--	42	--	do	34.6	Apr. 25, 1957	T,E	D	do

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
C-4	A. L. Kinnibrough	L. Welsh	1956	31	8	Seymour formation	--	--	T,E, 1½	Irr	Pump: 2½ in.
*C-5	do	do	1956	31	12	do	--	--	T,E, 1½	Irr	Pump: 3 in.
*C-6	Mrs. Lola Scott	--	1956	35	12	do	--	--	Cf,E, 1½	Irr	Dug.
C-7	do	Les Jameson	1956	38	12	do	28.2	Apr. 12, 1956	Cf,E, 1½	Irr	Pump: 2 in.
C-8	Waggoner Estate	--	--	Spring	--	do	--	--	--	--	--
C-9	Bruce and Bobby Burnett	--	--	Spring	--	do	--	--	--	S	--
*D-1	W. P. H. McFaddin	--	--	15	36	Clear Fork group	11.2	Nov. 1, 1956	C,W	S	Dug.
*D-2	do	--	--	18	48	do	16.3	Nov. 27, 1956	C,W	S	do
*D-3	Fant Ranch	L. E. Lyles	--	61	4	San Angelo sandstone	29.3	Nov. 29, 1956	C,W	S	--
*D-4	W. P. H. McFaddin	--	--	30	48	Clear Fork group	24.4	Nov. 1, 1956	C,W	S	Dug.
*D-5	do	--	--	33	36	do	24.8	do	C,W	S	Dug. Near bottom of stream bed.
D-6	W. A. Polster	--	1941	34	30	do	23.7	Oct. 11, 1945	C,W	D,S	Dug. Breaks suction after pumping 10 gpm 6 to 8 hours. Temp. 66°F.
*D-7	do	--	--	34	30	do	28.2	do	C,W	D,S	Dug. Reported stronger than well D-6.
D-8	R. C. Hamilton	--	--	23	36	do	--	--	C,W	D,S	Dug.
*D-9	do	--	--	15	36	do	11.4	Nov. 27, 1956	C,W	S	do
*D-10	W. P. H. McFaddin	--	--	21	36	do	16.1	Nov. 1, 1956	C,W	S	do
*E-1	--	--	--	22	22	do	18.0	Oct. 11, 1945	C,G	D,S	do
*E-2	Mrs. Pearl Sams	--	--	33	36	do	26.2	Dec. 7, 1956	C,W	D,S	do
*E-3	E. B. Sams	--	1945	42	--	do	32.7	Oct. 10, 1945	--	--	Dug. Water reported below white rock at about 22 ft.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*E-4	I. T. Wright	--	--	37	6	Clear Fork group	32.7	Oct. 11, 1945	C,H	D,S	Dug.
*E-5	O. D. Propps	--	--	31	30	do	14.8	Oct. 10, 1945	C,W	S	do
*E-6	Mrs. Emma Sams	--	--	50	24	do	44.0	Oct. 11, 1945	C,W	S	do
*E-7	J. D. Brockson	--	--	38	48	do	32.4 34.6	Oct. 11, 1945 Dec. 7, 1956	C,W	S	do
*E-8	John A. Jones	--	--	23	24	do	11.0	Oct. 11, 1945	B,H	S	do
*E-9	Mrs. J. B. Moorhouse	--	--	23	48	do	11.8 16.4	Oct. 10, 1945 Dec. 6, 1956	C,W	S	do
*E-10	E. B. Sams	--	--	19	24	do	13.1	Oct. 10, 1945	C,W	S	Dug. Slowly pumping during water level measurement.
*E-11	W. C. Glenn	--	--	23	36	do	5.6	Oct. 11, 1945	C,W	S	
*E-12	Lee Estate	--	--	48	5	do	24.8	Oct. 10, 1945	C,W	D,S	Dug.
*E-13	Joe Redder	--	--	16	36	Alluvium	11.7	Dec. 7, 1956	B,H	D,S	Dug. Water reported from 1½ ft. of gravel, probably recharged by surface tank nearby.
*E-14	Hugh Jones	--	--	--	30	Clear Fork group	8.1	Oct. 10, 1945	C,G	S	Dug.
*E-15	R. C. Hamilton	--	--	30	36	do	16.5	Oct. 31, 1956	C,W	S	do
*E-16	League-Davis Estate	--	--	22	36	Alluvium	20.5	Dec. 6, 1956	J,E	D,S	do
E-17	H. G. Carnahan	John Kale	1956	44	12	Seymour formation	--	--	T,G	Irr	Pump set at 39 ft.
*E-18	Frank Zeissel	Don Combs	1955	42	12	do	16.4 20.9 16.4	May 15, 1956 Dec. 20, 1956 Jan. 11, 1958	T,E	Irr	Pump set at 41 ft.
E-19	do	do	1956	43	12	do	--	--	T,G	Irr	Pump set at 42 ft.
E-20	do	Doris Dickerson	1956	45	14	do	--	--	T,G	Irr	
E-21	do	Don Combs	1955	47	12	do	17.2 20.9	May 15, 1956 Dec. 20, 1956	T,G	Irr	Pump set at 45 ft.
E-22	Mrs. Geneva Connack	--	--	Spring	--	do	--	--	--	--	W Cross Spring.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*F-1	Bruce Burnett	--	1938	21	36	Alluvium	19.8	Dec. 7, 1956	C,W	D,S	Dug.
*F-2	B. F. Hughes	--	--	72	36	Seymour formation	52.1	do	J,E	D,S	Dug. <u>1</u> /
F-3	A. K. Boyd	J. M. Rea	1955	35	14	do	24.6 27.1 22.3	May 16, 1956 Dec. 20, 1956 Jan. 12, 1958	T,E, 2	Irr	Dug. Pump: 4 in.
F-4	do	do	1955	33	16	do	--	--	T,G, 26	Irr	Pump: 4 in.
F-5	A. E. Boyd	do	1955	40	14	do	26.1 27.3	May 16, 1956 Dec. 20, 1956	T,G, 26	Irr	Discharge measured 75 gpm, Aug. 30, 1956. Pump: 4 in.
F-6	do	do	1955	39	14	do	26.5	May 16, 1956	T,E, 2	Irr	Pump: 3 in.
*F-7	do	Les Jameson	1956	36	14	do	26.3 28.2	May 16, 1956 Dec. 20, 1956	T,E, 10	Irr	Discharge measured 65 gpm, Aug. 30, 1956. Pump: 4 in.
F-8	Albert Boyd	J. M. Rea	1955	34	14	do	27.7	May 16, 1956	T,G	Irr	
F-9	do	Les Jameson	1956	33	14	do	--	--	T,E, 15	Irr	Discharge measured 115 gpm, Aug. 30, 1956.
F-10	do	--	1920	34	16	do	--	--	Cf,E, 15	Irr	Dug. Discharge estimated 60 gpm. Pump: 3-in. Well cleaned and cased with 16 in. casing in 1956.
F-11	do	-- Covey	1956	35	12	do	24.7 26.3	May 16, 1956 Dec. 20, 1956	T,G, 26	Irr	Discharge measured 60 gpm, Aug. 30, 1956.
F-12	Weston Parris	Les Jameson	1956	31	12	do	24.4 25.3	May 16, 1956 Dec. 20, 1956	Cf,E, 2	Irr	Pump: 2 in.
*F-13	do	J. M. Rea	1955	31	14	do	23.7 26.4 26.7 24.7	Jan. 5, 1956 Dec. 20, 1956 Jan. 12, 1957 Jan. 12, 1958	T,E, 15	Irr	Pump: 4 in.
F-14	A. K. Boyd	Les Jameson	1956	44	14	do	33.7 35.0	May 16, 1956 Dec. 20, 1956	T,E, 5	Irr	Discharge measured 80 gpm, Aug. 30, 1956. Pump: 5 in.
F-15	R. D. Atkeison	Don Combs	1956	37	12	do	23.1 24.7 24.3	May 16, 1956 Dec. 20, 1956 Jan. 12, 1958	N	N	

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
F-16	H. A. Robertson	Les Jameson	1956	30	10	Seymour formation	--	--	Cf, E, $\frac{1}{2}$	Irr	Pump: 2 in.
F-17	do	do	1956	32	10	do	--	--	Cf, E, $\frac{3}{4}$	Irr	do
F-18	do	do	1956	30	10	do	--	--	Cf, E, $\frac{3}{4}$	Irr	do
F-19	do	do	1956	30	10	do	24.9	May 16, 1956	Cf, E, $\frac{3}{4}$	Irr	do
*F-20	J. W. Kinnibrough	--	--	28	36	do	26.5	Apr. 24, 1957	C, W	S	Dug.
F-21	Calvin Christian	Les Jameson	1956	21	8	do	--	--	Cf, E, $1\frac{1}{2}$	Irr	
F-22	do	do	1956	21	8	do	--	--	Cf, E, $1\frac{1}{2}$	Irr	
F-23	do	do	1956	21	8	do	9.5 11.1	May 16, 1956 Dec. 20, 1956	Cf, E, $1\frac{1}{2}$	Irr	
*F-24	M. E. Taylor	--	--	19	42	do	15.5	Apr. 24, 1957	C, W	D, S	Dug.
*F-25	Jack Idol	Les Jameson	1956	24	6	Alluvium	12.7	Apr. 25, 1956	Cf, E	Irr	Pump: 3 in.
F-26	do	do	1956	26	14	do	11.6	do	Cf, E	Irr	do
F-27	George Steinbach	D. Dickerson	1955	24	14	Seymour formation	18.0 18.5	May 15, 1956 Dec. 20, 1956	Cf, E, $\frac{1}{2}$	Irr	do
F-28	J. A. Brown	J. M. Rea	1956	25	14	do	--	--	Cf, E	Irr	
F-29	do	D. Dickerson	1955	21	12	do	--	--	T, E, $\frac{2}{2}$	Irr	Pump: 4 in. Pumping level 21.16 ft.
F-30	do	--	1955	23	36	do	13.9 16.9	May 15, 1956 Dec. 20, 1956	Cf, E, $1\frac{1}{2}$	Irr	Dug. Discharge measured 30 gpm, Aug. 15, 1956.
*F-31	George Steinbach	Les Jameson	1956	29	12	do	16.3 18.0 16.0	May 15, 1956 Dec. 20, 1956 Jan. 11, 1958	T, E	Irr	Discharge measured 265 gpm, Aug. 28, 1956. Pump: 5 in. Temp. 68°F. $\frac{1}{2}$
F-32	Erna Mae Lee	do	1956	26	12	do	16.3 19.4	May 15, 1956 Dec. 20, 1956	Cf, E, $\frac{3}{3}$	Irr	Discharge measured 65 gpm, Aug. 28, 1956; pumping level 23.8 ft. Pump: 3 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
F-33	Erna Mae Lee	Les Jameson	1956	32	12	Seymour formation	19.8 23.1 19.9 19.8	May 15, 1956 Dec. 20, 1956 Jan. 11, 1958 Feb. 7, 1959	T,E, 5	Irr	Discharge measured 150 gpm, Aug. 28, 1956; pumping level 27.5 ft. Pump: 4 in.
F-34	W. M. Huskinson	do	1956	40	12	do	24.4 26.3	May 15, 1956 Dec. 20, 1956	T,E, 5	Irr	Discharge measured 195 gpm, Aug. 28, 1956; pumping level 32.0 ft. Pump: 4 in.
*F-35	C. E. Haskins	do	1955	33	14	do	30.1 29.2 28.5	May 16, 1956 Dec. 20, 1956 Feb. 7, 1959	T,E, 2	Irr	Pump: 2½ in.
F-36	do	Don Ratlift	1951	33	14	do	--	--	Cf,E	Irr	Pump: 4 in.
F-37	A. L. Haskins	Les Jameson	1955	34	14	do	--	--	Cf,E, 1	Irr	Pump: 1½ in.
F-38	do	do	1955	34	14	do	28.2	May 16, 1956	Cf,E, 3	Irr	Discharge measured 45 gpm, Aug. 31, 1956. Pump: 3 in.
F-39	W. C. Hertel	John Kale	1955	25	14	do	--	--	Cf,E, 1½	Irr	Pump: 3 in. 1/
F-40	do	do	1955	28	14	do	18.4 19.1 17.4	May 15, 1956 Dec. 20, 1956 Feb. 7, 1959	T,E, 5	Irr	Discharge from 2 wells measured 220 gpm, Aug. 30, 1956. Pump: 5 in.
F-41	Mrs. Anna Kuehler	D. Dickerson	1955	34	12	do	18.6 19.6	May 15, 1956 Dec. 20, 1956	T,E, 3	Irr	Discharge measured 150 gpm, Aug. 30, 1956; pumping level 25.5 ft. Pump: 4 in.
F-42	do	do	1955	34	12	do	--	--	T,E, 5	Irr	Discharge measured 185 gpm, Aug. 30, 1956. Pump: 4 in. Temp. 67°F. 1/
F-43	do	do	1956	34	14	do	--	--	T,E, 5	Irr	Discharge measured 255 gpm, Aug. 30, 1956. Pump: 4 in. Temp. 67°F.
*F-44	Mrs. Virginia Moore	John Kale	1955	37	14	do	20.7 22.0 21.9	May 15, 1956 Dec. 20, 1956 Feb. 7, 1959	T,G, 26	Irr	Discharge measured 155 gpm, Aug. 30, 1956; pumping level 33.2 ft. Pump: 6 in.
F-45	do	D. Dickerson	1956	40	14	do	25.0 26.5	May 15, 1956 Dec. 20, 1956	T,E	Irr	Pump: 4 in. 1/

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
F-46	C. H. Herring	D. Dickerson	1955	32	14	Seymour formation	20.9 21.5 21.0 21.6	May 15, 1956 Dec. 20, 1956 Jan. 11, 1958 Feb. 7, 1959	T, E, 5	Irr	Pump: 4 in.
F-47	W. A. Jungman	--	1952	28	7	do	--	--	T, E, 3	Irr	do
F-48	H. L. Butler	Dickerson and Combs	1952	48	16	do	19.4 20.3 19.4	May 16, 1956 Dec. 20, 1956 Feb. 7, 1959	T, G, 26	Irr	Discharge measured 176 gpm, Aug. 28, 1956; pumping level 36.5 ft. Pump: 6 in.
F-49	Mrs. A. B. Urbanezyk	J. M. Rea	1955	29	14	do	--	--	T, E	Irr	do
F-50	do	Don Combs	1955	35	14	do	25.0 27.3 21.7	May 16, 1956 Dec. 20, 1956 Feb. 7, 1959	T, G, 26	Irr	Discharge estimated 100 gpm, Aug. 31, 1956. Pump: 6 in.
F-51	do	J. M. Rea	1955	36	14	do	--	--	Cf, E, 2	Irr	Pump: 3 in.
F-52	W. L. Jackson	Dickerson and Combs	1952	50	12	do	23.3 24.3	May 16, 1956 Dec. 20, 1956	T, G	Irr	Discharge measured 245 gpm, Aug. 28, 1956; pumping level 36.5 ft. Pump: 6 in.
F-53	Mrs. Lessie Jackson	D. Dickerson	1955	55	12	do	--	--	T, G	Irr	Pump: 6 in.
F-54	C. C. Moorman	Dickerson and Combs	1954	47	14	do	24.6 26.3 24.6	May 16, 1956 Dec. 20, 1956 Feb. 7, 1959	T, G, 26	Irr	Discharge measured 280 gpm, Aug. 28, 1956. Pump: 6 in.
F-55	do	do	1954	48	14	do	29.2 30.3	May 16, 1956 Dec. 20, 1956	T, G, 25	Irr	Discharge measured 130 gpm, Aug. 28, 1956; pumping level 39.6 ft. Pump: 6 in.
*F-56	Ruben Bates	John Kale	1954	49	14	do	26.4 28.5 26.3	May 23, 1956 Dec. 20, 1956 Feb. 7, 1959	T, G, 25	Irr	Discharge measured 110 gpm, Aug. 15, 1956; pumping level 40.0 ft. Pump: 6 in.
F-57	do	do	1954	46	14	do	--	--	T, E, 5	Irr	Discharge measured 150 gpm, Aug. 28, 1956. Pump: 4 in.
F-58	Truman Winchester	D. Dickerson	1956	47	14	do	30.7 30.3	Dec. 20, 1956 May 21, 1957	T, E	Irr	Pump: 4 in.
F-59	do	do	1956	47	14	do	--	--	T, E	Irr	do

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
F-60	Mrs. Jesse M. Jones	John Kale	1955	38	12	Seymour formation	29.5 30.5 28.9	May 16, 1956 Dec. 20, 1956 Feb. 7, 1959	Cf,E, 7 $\frac{1}{2}$	Irr	Pump: 6 in.
F-61	A. L. Roden	Don Combs	1955	46	12	do	--	--	T,E	Irr	Pump: 3 in.
F-62	do	do	1955	41	12	do	27.0 28.2 28.3	May 16, 1956 Dec. 20, 1956 Feb. 7, 1959	T,E	Irr	do
F-63	A. A. Brown	-- Smelly	1951	50	15	do	25.2 26.8	May 16, 1956 Dec. 20, 1956	T,G	Irr	Discharge measured 155 gpm, Aug. 28, 1956; pumping level 35.0 ft. Pump: 6 in.
F-64	Claude Reed	John Kale	1955	52	14	do	--	--	T,E, 7	Irr	Discharge measured 110 gpm, Aug. 28, 1956. Pump: 5 in. <u>1/</u>
F-65	do	do	1955	52	14	do	--	--	T,E	Irr	Discharge measured 85 gpm, Aug. 28, 1956. Pump: 4 in.
F-66	do	do	1955	52	14	do	--	--	T,E	Irr	Pump: 6 in. <u>1/</u>
*F-67	do	do	1955	52	14	do	24.3 28.7 27.7 25.5	Mar. 9, 1956 Dec. 20, 1956 May 21, 1957 Feb. 7, 1959	T,E	Irr	Discharge measured 100 gpm, Aug. 28, 1956; pumping level 42.4 ft. Pump: 5 in.
F-68	E. F. Yeager	D. Dickerson	1955	52	14	do	25.7 29.0	Mar. 9, 1956 Dec. 20, 1956	T,G	Irr	Discharge measured 145 gpm, Aug. 28, 1956; pumping level 39.7 ft. Pump: 6 in.
F-69	Boyd Meers	Dickerson and Combs	1952	56	14	do	--	--	T,G	Irr	Discharge measured 190 gpm, Aug. 28, 1956. Pump: 5 in.
F-70	Claude Reed	John Kale	1955	52	14	do	26.4 28.7 28.2	Mar. 9, 1956 Dec. 20, 1956 Feb. 7, 1959	T,E, 7	Irr	Discharge measured 155 gpm, Aug. 28, 1956. Pump: 5 in. <u>1/</u>
F-71	Boyd Meers	Dickerson and Combs	1953	51	14	do	23.7 26.5	Mar. 9, 1956 Dec. 20, 1956	T,G	Irr	Discharge measured 175 gpm, Aug. 28, 1956; pumping level 35.7 ft. Pump: 4 in.
F-72	Mrs. Helen Smith McClure	J. M. Rea	1955	39	14	do	25.1	May 16, 1956	T,E	Irr	Pump: 4 in.
F-73	Mrs. Claudia Jones	Don Ratlift	1953	54	14	do	25.3 26.9	May 16, 1956 Dec. 20, 1956	T,G	Irr	

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
F-74	Gus Steinbach	--	--	Spring	--	Seymour formation	--	--	--	--	H Cross Springs.
F-75	State of Texas	--	--	Spring	--	do	--	--	--	--	
G-1	R. C. Hamilton	--	--	30	36	Clear Fork group	--	--	C,W	S	Dug.
G-2	do	--	--	27	36	do	--	--	C,W	S	do
G-3	W. P. H. McFaddin	--	--	28	4	do	20.8	Oct. 31, 1956	C,W	S	do
G-4	Mrs. J. T. Darr	--	1935	22	36	do	15.9	do	J,E	S	
G-5	Bobby Burnett	John Kale	1955	27	18	Seymour formation	16.5	May 10, 1956	Cf,E	Irr	Pump: 4 in.
G-6	B. B. Campbell	do	1956	40	14	Alluvium, River terrace	16.4	Dec. 11, 1956	Cf,E	Irr	Water reported possibly from old stream channel.
G-7	do	do	1955	40	14	do	15.1	Feb. 6, 1959	Cf,E	Irr	Discharge measured 220 gpm, Aug. 24, 1956. Water reported possibly from old stream channel.
G-8	W. H. Lankford	do	1956	29	12	Seymour formation	5.2	Mar. 29, 1956	Cf,E, ₂	Irr	Pump: 3 in.
G-9	do	do	1956	41	12	do	7.0	Dec. 10, 1956	T,E, ₁₀	Irr	Discharge measured 325 gpm, Aug. 21, 1956; pumping level 33.5 ft. Pump: 6 in.
G-10	do	do	1956	40	12	do	24.4	Apr. 5, 1956	T,E, _{7 1/2}	Irr	Discharge measured 225 gpm, Aug. 21, 1956; pumping level 31.2 ft. Pump: 5 in.
G-11	do	do	1956	37	12	do	25.2	Dec. 10, 1956	Cf,E, ₂	Irr	Pump: 3 in.
G-12	Carl Chapin	do	1956	29	12	do	26.0	Feb. 6, 1959	Cf,E, ₅	Irr	do
G-13	B. B. Campbell	Don Ratlift	1952	29	12	do	24.0	Apr. 5, 1956	N	N	
G-14	do	J. M. Rea	1956	28	12	do	26.2	Dec. 10, 1956	Cf,E, ₂	Irr	Pump: 3 in.
							27.0	May 21, 1957	Cf,E, ₂	Irr	Pump: 3 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
G-15	B. B. Campbell	J. M. Rea	1956	30	10	Seymour formation	--	--	Cf, E, 2	Irr	Pump: 3 in. <u>1</u> /
G-16	do	do	1955	31	14	do	20.9 22.7 22.2 20.4	Mar. 29, 1956 Dec. 10, 1956 Apr. 4, 1957 Feb. 6, 1959	T, E, 3	Irr	Pump: 4 in. Temp. 68°F.
G-17	do	do	1955	31	14	do	21.1	Mar. 29, 1956	T, E, 3	Irr	Pump: 4 in.
G-18	do	do	1955	33	14	do	20.6	do	T, E, 5	Irr	Pump: 5 in. <u>1</u> /
G-19	Carl Chapin	John Kale	1956	28	12	do	17.8 19.2 19.2	Apr. 5, 1956 Dec. 10, 1956 Apr. 4, 1957	Cf, E, 2	Irr	Pump: 3 in. <u>1</u> /
G-20	do	do	1954	29	12	do	--	--	Cf, E, 3	Irr	Pump: 3 in.
G-21	Bryan Lee	do	1954	36	14	do	23.3 22.0	May 10, 1956 Dec. 10, 1956	T, E, 3	Irr	Pump: 4 in.
G-22	do	J. M. Rea	1956	36	14	do	23.0	Dec. 10, 1956	T, E, 3	Irr	Discharge measured 70 gpm, from 3 wells Aug. 25, 1956. Pump: 4 in.
G-23	Joe S. Smith	do	1955	39	14	do	23.9 26.4 24.6 24.5	May 10, 1956 Dec. 10, 1956 Jan. 11, 1958 Feb. 6, 1959	T, E, 3	Irr	Pump: 4 in.
G-24	do	do	1955	38	14	do	25.4 24.8	Dec. 10, 1956 Jan. 11, 1958	T, E, 10	Irr	do
G-25	A. P. Denton	do	1955	28	14	do	22.8	Dec. 11, 1956	T, E, 5	Irr	Pump: 3 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
G-26	Mrs. J. S. Wilson	John Kale	1956	29	12	Seymour formation	20.5	Apr. 3, 1956	Cf,E, 2	Irr	Pump: 4 in.
G-27	do	do	1956	29	12	do	20.8	do	Cf,E, 2	Irr	
G-28	do	do	1956	32	12	do	--	--	--	--	
G-29	O. A. Green	do	1955	43	14	do	23.3 24.2 23.1	May 10, 1956 Dec. 10, 1956 Feb. 6, 1959	T,E, 20	Irr	Discharge measured 495 gpm, Aug. 28, 1956; pumping level 37.2 ft. Pump: 6 in.
G-30	B. F. Cornett	J. M. Rea	1956	39	14	do	--	--	T,E, 7 $\frac{1}{2}$	Irr	Pump: 4 in. <u>1/</u>
G-31	do	do	1956	31	14	do	24.4 26.2 20.4	May 10, 1956 Dec. 21, 1956 Feb. 6, 1959	Cf,E, 2	Irr	Pump: 3 in.
G-32	J. C. McGee	John Kale	1956	38	14	do	20.9 23.8	Apr. 5, 1956 Dec. 10, 1956	T,E, 15	Irr	Pump: 5 in. Pumping level 27.7 ft.
G-33	do	do	1956	49	14	do	28.3 31.6 31.4 31.5	Apr. 5, 1956 Dec. 10, 1956 Mar. 4, 1957 May 21, 1957	T,E, 25	Irr	Pump: 6 in. Pumping level 35.4 ft.
*G-34	A. P. Denton	J. M. Rea	1955	55	14	do	36.3 34.8	Dec. 10, 1956 Feb. 6, 1959	T,E, 10	Irr	Discharge measured 205 gpm, Aug. 21, 1956; pumping level 39.2 ft. Pump: 5 in.
G-35	Mrs. Ross Oliver	do	1955	50	12	do	--	--	T,E	Irr	
G-36	do	do	1955	50	14	do	--	--	T,E	Irr	Discharge measured from 3 wells, 345 gpm, Aug. 23, 1956.
G-37	B. F. Cornett	do	1956	37	14	do	21.8 26.0 26.2	Apr. 18, 1956 Dec. 10, 1956 Feb. 6, 1959	T,E, 7 $\frac{1}{2}$	Irr	Discharge reported from 2 wells, 150 gpm, Aug. 24, 1956. Pump: 5 in.
G-38	do	do	1956	38	14	do	--	--	T,E, 5	Irr	Pump: 4 in. Pumping level 34.6 ft.
G-39	do	do	1956	38	14	do	--	--	T,E, 3	Irr	Pump: 4 in. Pumping level 36.5 ft.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
G-71	E. R. Carpenter	John Kale	1955	44	14	Seymour formation	35.1 36.2	Mar. 29, 1956 Dec. 10, 1956	T, E, 10	Irr	Pump: 4 in.
G-72	do	do	1955	43	14	do	33.3 33.7	Mar. 29, 1956 Dec. 10, 1956	T, E, 3	Irr	Discharge measured from 2 wells 70 gpm, Aug. 24, 1956. Pump: 3 in.
G-73	Russell Boyd	do	1956	24	14	do	16.3 15.4	Mar. 29, 1956 Dec. 10, 1956	Cf, E, 30	Irr	Discharge measured 95 gpm, Aug. 29, 1956. Five closely spaced wells with one pump and 5 intake pipes.
G-74	Bush and Burnett Estate	---	---	Spring	---	do	---	---	---	Irr	Mocking Bird Spring
*G-75	B. B. Campbell	---	---	Spring	---	do	---	---	---	Irr	Chalk Springs.
H-1	League Davis Estate	J. M. Rea	1956	30	10	do	16.5	Mar. 30, 1956	Cf, E, 1½	Irr	Discharge measured 120 gpm, Aug. 21, 1956. Three wells (H-1, H-2, and H-3) pumping into one discharge pipe.
H-2	do	D. Dickerson	1956	30	14	do	15.9	do	Cf, E, 1½	Irr	See well H-1.
H-3	do	J. M. Rea	1956	30	10	do	15.8 17.6	Mar. 30, 1956 Dec. 13, 1956	Cf, E, 1½	Irr	do
H-4	T. Hertel	---	1956	---	---	do	23.4 23.9	Dec. 13, 1956 Feb. 7, 1959	T, E, 5	Irr	
H-5	H. F. Jungman	John Kale	1956	36	14	do	20.0 18.9 19.4	May 24, 1956 Dec. 13, 1956 Apr. 5, 1957	T, G, 26	Irr	Discharge measured 195 gpm, Aug. 21, 1956. Pump: 5 in.
H-6	J. D. Wright	Don Combs	1955	51	12	do	22.3	Apr. 5, 1956	T, E	Irr	Pump: 4 in.
H-7	do	do	1956	49	12	do	19.0 21.9 21.6	May 15, 1956 Dec. 13, 1956 Feb. 7, 1959	T, G, 26	Irr	Discharge measured 380 gpm, Aug. 27, 1956; pumping level 29.1 ft. Pump: 6 in.
H-8	Eugene Michels	do	1954	47	12	do	---	---	T, G, 26	Irr	Pump: 6 in.
H-9	do	do	1953	45	12	do	19.4	May 15, 1956	T, E, 10	Irr	Pump: 4 in.
H-10	do	do	1954	43	12	do	---	---	N	N	

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-11	W. M. Rowan	John Kale	1955	24	14	Seymour formation	--	--	T,E, 3	Irr	Pump: 4 in.
H-12	do	do	1955	24	14	do	15.9 16.2 14.8	May 18, 1956 Dec. 11, 1956 Feb. 6, 1959	T,E, 5	Irr	Pump: 4 in. <u>1/</u>
H-13	do	do	1955	24	14	do	--	--	T,E, 5	Irr	do
H-14	do	do	1955	24	14	do	--	--	T,E, 3	Irr	do
H-15	E. N. Montandon	do	1955	38	14	do	20.5 22.3	May 10, 1956 Dec. 11, 1956	T,E, 20	Irr	Discharge measured 190 gpm, Aug. 15, 1956. Pump: 6 in.
H-16	A. H. Word	do	1955	33	14	do	--	--	T,E, 10	Irr	Discharge measured 100 gpm, Aug. 21, 1956. Pump: 5 in. <u>1/</u>
*H-17	do	do	1954	31	14	do	18.7	May 10, 1956	T,E, 20	Irr	Discharge measured 100 gpm, Aug. 15, 1956; pumping level 27.8 ft. Pump: 5 in. Temp. 68°F.
H-18	do	do	1956	31	14	do	--	--	T,E, 20	Irr	Discharge measured 190 gpm, Aug. 21, 1956. Pump: 5 in. <u>1/</u>
H-19	do	do	1955	29	14	do	18.4 19.4 18.4	May 10, 1956 Dec. 21, 1956 Feb. 6, 1959	Cf,E, 30	Irr	
H-20	Earl Watson	J. M. Rea	1956	28	16	do	17.8 18.6 17.9 18.2	May 10, 1956 Dec. 21, 1956 Jan. 11, 1958 Feb. 6, 1959	T,E, 7 $\frac{1}{2}$	Irr	Pump: 4 in. <u>1/</u>
H-21	do	do	1956	27	16	do	16.9	Jan. 11, 1958	T,E, 7 $\frac{1}{2}$	Irr	Discharge measured from 2 wells, 165 gpm, Aug. 24, 1956.
H-22	J. Michels	Don Combs	1955	38	14	do	--	--	N	N	
H-23	do	do	1955	39	14	do	15.8	May 14, 1956	T,G, 26	Irr	Pump: 4 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-24	George Wall	John Kale	1956	49	14	Seymour formation	19.5 22.3 22.4 22.8	May 23, 1956 Dec. 13, 1956 Apr. 5, 1957 Feb. 7, 1959	T, G	Irr	Discharge measured 455 gpm, Aug. 25, 1956; pumping level 34.7 ft. Pump: 6 in.
H-25	do	do	1955	54	14	do	22.7 25.4	May 23, 1956 Dec. 13, 1956	N	N	
*H-26	City of Benjamin	D. Dickerson	1954	48	12	do	15.3 17.9 23.4 21.4	Jan. 5, 1955 Jan. 5, 1956 Jan. 11, 1957 Jan. 11, 1958	T, E, 5	P	Pump: 4 in.
H-27	do	J. M. Rea	1955	55	12	do	--	--	T, E, 5	P	Pump: 4 in. 1/2
H-28	J. Michels	Don Combs	1955	52	14	do	25.5 29.3 23.8	Apr. 4, 1956 Dec. 13, 1956 Feb. 7, 1959	T, G, 31	Irr	Discharge measured 110 gpm, Aug. 29, 1956; pumping level 39.6 ft. Pump: 6 in. 1/2
H-29	Mrs. A. B. Urbanczyk	J. M. Rea	1955	43	14	do	17.2 20.7	May 15, 1956 Dec. 13, 1956	T, G, 26	Irr	Pump: 6 in.
H-30	do	do	1955	53	14	do	23.2 22.7	Dec. 13, 1956 Apr. 5, 1957	T, E	Irr	Discharge measured 360 gpm, Aug. 27, 1956; pumping level 46.4 ft. Pump: 6 in.
H-31	Jack Idol	D. Dickerson	1954	48	14	do	16.8	May 15, 1956	T, G	Irr	Discharge measured 155 gpm, Aug. 24, 1956. Pump: 6 in.
*H-32	Herbert Partridge	J. M. Rea	1954	68	14	do	28.0 32.7	Jan. 5, 1955 Feb. 7, 1959	T, G	Irr	Discharge measured 370 gpm, Aug. 25, 1956; pumping level 42.6 ft. Pump: 6 in. 2/2
H-33	J. G. Hawkins	do	1955	55	14	do	21.4 24.7	Mar. 21, 1956 Dec. 13, 1956	T, E, 10	Irr	Discharge measured 410 gpm, Aug. 29, 1956; pumping level 42.6 ft. Pump: 6 in.
H-34	do	John Kale	1955	52	14	do	--	--	T, G, 26	Irr	Discharge measured 235 gpm, Aug. 29, 1956. Pump: 6 in.
H-35	do	do	1955	46	14	do	16.9 21.5 24.9	Mar. 21, 1956 Dec. 13, 1956 May 21, 1957	T, E, 7 1/2	Irr	Discharge measured 140 gpm, Aug. 29, 1956; pumping level 39.4 ft. Pump: 4 in.
*H-36	do	do	1955	47	14	do	21.0 22.9 21.9	May 15, 1956 Dec. 13, 1956 Feb. 7, 1959	T, E, 7 1/2	Irr	Pump: 5 in. Temp. 68°F.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-37	W. J. Wallace	J. Ratliff	1951	63	14	Seymour formation	--	--	T,G	Irr	Pump: 8 in.
H-38	Eugene Michels	Don Combs	1956	37	12	do	--	--	T,G, 26	Irr	Pump: 5 in.
H-39	do	do	1956	36	12	do	14.4 20.5 16.3	May 14, 1956 Dec. 13, 1956 Feb. 7, 1959	T,E, 5	Irr	Pump: 4 in.
H-40	W. P. Denton	J. M. Rea	1956	27	14	do	16.6 17.7	May 10, 1956 Dec. 11, 1956	Cf,E, 2	Irr	Discharge measured 105 gpm, Aug. 21, 1956; pumping level 23.8 ft. Pump: 3 in.
H-41	do	do	1956	28	14	do	--	--	Cf,E, 2	Irr	Pump: 3 in.
H-42	do	do	1956	28	14	do	17.1 18.1 18.1 17.2	May 10, 1956 Dec. 11, 1956 Apr. 4, 1957 Feb. 6, 1959	T,E, 10	Irr	Discharge measured 195 gpm, Aug. 21, 1956; pumping level 26.9 ft. Pump: 6 in. 1/2
H-43	Joe S. Smith	do	1955	36	14	do	--	--	T,E, 2	Irr	Pump: 3 in.
H-44	Ancel Waldrup	John Kale	1954	39	14	do	--	--	T,E, 15	Irr	Discharge reported 380 gpm. Pump: 5 in.
H-45	do	do	1954	38	14	do	20.8	May 10, 1956	T,E	Irr	Pump: 4 in.
H-46	do	do	1954	38	14	do	20.6 22.6 21.7	May 10, 1956 Dec. 10, 1956 Feb. 6, 1959	T,E, 15	Irr	Discharge measured 190 gpm. Pump: 5 in.
H-47	Roy Smith	do	1955	42	14	do	18.2 19.3	May 10, 1956 Dec. 11, 1956	T,E, 10	Irr	Discharge measured from 2 wells 215 gpm, Aug. 30, 1956. Pump: 4 in.
H-48	G. F. Stubbs	do	1955	42	12	do	21.2 26.9 22.8	May 10, 1956 Dec. 11, 1956 Feb. 6, 1959	T,E, 10	Irr	Discharge measured 80 gpm, Aug. 23, 1956; pumping level 31.4 ft. Pump: 4 in. 1/2
H-49	J. R. White	Les Jameson	1955	35	14	do	16.9	May 14, 1956	T,G, 26	Irr	Discharge measured 145 gpm, July 26, 1956; pumping level 29.7 ft. Pump: 6 in.
H-50	S. D. Jones	John Kale	1956	43	14	do	24.2 27.5	Mar. 29, 1956 Dec. 12, 1956	T,E, 5	Irr	Discharge measured 295 gpm, Aug. 23, 1956; pumping level 30.0 ft. Pump: 6 in. 1/2

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-51	C. A. Richardson	John Kale	1955	49	14	Seymour formation	26.9 33.7	May 14, 1956 Dec. 12, 1956	T,E, 15	Irr	Discharge measured from 2 wells, 155 gpm, Aug. 29, 1956. Pump: 5 in.
H-52	S. D. Jones	do	1955	41	14	do	29.3 31.6	Mar. 29, 1956 Dec. 12, 1956	T,E, 5	Irr	Discharge measured 110 gpm, Aug. 23, 1956; pumping level 37.6 ft. Pump: 4 in.
H-53	H. G. Egenbacher	do	1953	38	14	do	23.7	Dec. 12, 1956	T,E, 10	Irr	Pump: 4 in.
H-54	do	do	1955	38	14	do	--	--	T,E, 15	Irr	Discharge measured 240 gpm, Aug. 29, 1956. Pump: 5 in. 1/
H-55	do	do	1954	38	14	do	23.7	Dec. 12, 1956	T,E, 15	Irr	Discharge measured from 2 wells, 240 gpm, Aug. 29, 1956. Pump: 5 in.
*H-56	S. D. Jones	do	1955	40	14	do	25.6 29.2 28.4 29.1	Mar. 29, 1956 Dec. 12, 1956 Apr. 4, 1957 May 21, 1957	T,E, 5	Irr	Discharge measured 140 gpm, July 26, 1956; pumping level 37.5 ft. Pump: 5 in.
H-57	do	-- Henderson	1952	55	14	do	--	--	T,E, 3	Irr	Pump: 4 in.
H-58	G. F. Stubbs	John Kale	1956	41	12	do	27.3	May 14, 1956	T,E, 3	Irr	Pump: 3 in.
H-59	do	do	1956	42	12	do	--	--	T,E, 3	Irr	do
H-60	G. F. Stubbs	J. M. Rea	1956	42	12	do	29.0 32.0	May 14, 1956 Dec. 12, 1956	T,E, 3	Irr	do
H-61	do	do	1956	41	12	do	--	--	T,E, 3	Irr	do
H-62	do	John Kale	1956	37	12	do	24.3 26.0	May 14, 1956 Dec. 12, 1956	N	N	1/
H-63	J. C. Saunders	J. M. Rea	1956	43	14	do	27.1 27.1 25.8	May 14, 1956 Dec. 12, 1956 Feb. 6, 1959	T,E, 10	Irr	Discharge measured 175 gpm, July 27, 1956; pumping level 38.0 ft. Pump: 6 in.
H-64	do	John Kale	1954	42	14	do	--	--	T,E, 3	Irr	Pump: 4 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-65	J. C. Saunders	John Kale	1955	34	14	Seymour formation	17.8	Dec. 12, 1956	Cf, E, 3	Irr	Pump: 4 in.
H-66	W. D. Thomas	do	1955	36	12	do	--	--	Cf, E, 1 1/2	Irr	Pump: 2 in.
H-67	do	do	1955	36	12	do	19.4	May 14, 1956	Cf, E, 3	Irr	Discharge measured 80 gpm, Aug. 23, 1956. Pump: 3 in. 1/2
H-68	S. N. Reed	J. M. Rea	1956	34	14	do	--	--	T, E, 20	Irr	Pump: 5 in.
H-69	do	do	1956	34	16	do	12.5 14.6 12.5	May 24, 1956 Dec. 12, 1956 Feb. 6, 1959	T, E, 20	Irr	Pump: 5 in. 1/2
H-70	do	do	1956	34	16	do	12.7	May 24, 1956	T, E, 7 1/2	Irr	Discharge measured from 4 wells, 530 gpm, Aug. 25, 1956. Pump: 4 in. 1/2
H-71	J. W. Ward	do	1956	48	14	do	20.1	Dec. 13, 1956	T, G	Irr	Pump: 6 in. 1/2
H-72	do	do	1956	49	14	do	20.2	do	T, G, 26	Irr	Pump: 6 in.
H-73	do	do	1956	55	14	do	--	--	T, G, 26	Irr	do
H-74	R. C. Farbridge	D. Dickerson	1956	46	12	do	10.7 12.4 13.1	May 15, 1956 Dec. 13, 1956 Feb. 7, 1959	T, G	Irr	Discharge measured 240 gpm, Aug. 28, 1956; pumping level 42.2 ft. Pump: 6 in. Temp. 68°F.
H-75	do	Don Combs	1952	42	12	do	16.0 17.9	May 15, 1956 Dec. 13, 1956	T, G, 26	Irr	Discharge measured 130 gpm, Aug. 29, 1956. Pump: 6 in.
H-76	Alvie Resael	D. Dickerson	1953	52	14	do	19.6 20.7 19.6	May 15, 1956 Dec. 13, 1956 Feb. 7, 1959	T, G, 26	Irr	Pump: 6 in.
H-77	H. E. Jungman	Don Combs	1955	52	14	do	20.1 20.9	May 24, 1956 Dec. 13, 1956	T, G, 26	Irr	Discharge measured 290 gpm, July 27, 1956; pumping level 35.6 ft. Pump: 6 in.
H-78	do	do	1955	52	14	do	21.7	May 25, 1956	T, G, 26	Irr	Discharge measured 335 gpm, July 27, 1956; pumping level 33.2 ft. Pump: 6 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-79	Lila Stroud	D. Dickerson	1954	66	14	Seymour formation	26.7 29.7 27.7 26.3	Mar. 1, 1956 Dec. 13, 1956 Jan. 11, 1958 Feb. 7, 1959	T,G, 32	Irr	Discharge reported 1,000 gpm by the Soil Conservation Service of the U. S. Dept. Agric. Temp. 68°F.
H-80	Joe Voss	Jim Smelly	1952	62	14	do	24.1 27.4 25.0	Mar. 1, 1956 Dec. 13, 1956 Jan. 11, 1958	T,G, 30	Irr	Discharge reported 600 gpm.
H-81	F. A. Hardin	John Darnell	1956	61	14	do	--	--	T,G	Irr	Pump: 6 in.
H-82	C. G. Yost	Dickerson and Combs	1952	50	16	do	--	--	T,G, 26	Irr	Discharge measured 170 gpm, Aug. 28, 1956. Pump: 6 in.
H-83	Elmer Dickerson	D. Dickerson	1951	58	14	do	26.6 28.0 27.2	May 2, 1956 Dec. 13, 1956 Feb. 7, 1959	T,G, 26	Irr	Discharge measured 130 gpm, Aug. 30, 1956; pumping level 36.9 ft. Pump: 5 in.
H-84	J. M. Rea	J. M. Rea	1956	55	14	do	--	--	T,E, 5	Irr	Pump: 3 in.
H-85	Tom Richardson	do	1956	60	16	do	40.5 42.7	Mar. 24, 1956 Dec. 11, 1956	T,E, 15	Irr	Discharge measured 100 gpm, Aug. 30, 1956. Pump: 5 in. $\frac{1}{2}$
H-86	Russell Boyd	John Kale	1956	47	14	do	--	--	T,E, $1\frac{1}{2}$	Irr	Pump: 3 in.
H-87	do	do	1956	47	14	do	33.9	Mar. 29, 1956	T,E, $1\frac{1}{2}$	Irr	do
H-88	do	do	1956	49	14	do	33.3	do	T,E, $1\frac{1}{2}$	Irr	do
H-89	C. Bohannon	do	1956	26	14	do	12.2 12.6 11.4	May 9, 1956 Dec. 12, 1956 Jan. 11, 1958	T,E, 5	Irr	Discharge measured 150 gpm, July 26, 1956; pumping level 23.8 ft. Pump: 4 in. $\frac{1}{2}$
*H-90	W. H. Freeman	do	1956	43	14	do	13.6 21.5	Mar. 30, 1956 Dec. 12, 1956	T,E, 15	Irr	Discharge measured 160 gpm, July 27, 1956; pumping level 37.5 ft. Pump: 5 in. Temp. 68°F. $\frac{1}{2}$
H-91	do	do	1956	43	14	do	14.3 16.8	May 15, 1956 Dec. 12, 1956	T,E, 10	Irr	Pump: 4 in.
H-92	V. F. Thomas	do	1956	54	14	do	18.2 22.4	Mar. 22, 1956 Dec. 12, 1956	T,E, 10	Irr	Discharge measured 260 gpm, Aug. 15, 1956; pumping level, 31.0 ft. Pump: 6 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-93	D. B. Whitford	John Kale	1954	42	14	Seymour formation	15.2 21.9	Mar. 30, 1956 Dec. 12, 1956	T,G	Irr	Discharge measured 115 gpm, Aug. 25, 1956; pumping level 35.8 ft. Pump: 6 in. <u>1/</u>
H-94	do	do	1955	45	14	do	--	--	N	N	
H-95	J. G. Hawkins	do	1955	47	14	do	--	--	T,E, 10	Irr	Pump: 6 in.
H-96	do	do	1955	46	14	do	19.2 23.7	Mar. 21, 1956 Dec. 12, 1956	T,E, 10	Irr	Discharge measured 185 gpm, May 27, 1956; pumping level 44.1 ft. Pump: 6 in. <u>1/</u>
H-97	Mrs. M. Partridge	Hughes Irrigation Co.	1956	25	10	do	13.3	May 9, 1956	N	N	Abandoned.
H-98	G. A. Branton	John Kale	1956	41	14	do	23.1 25.0 24.6	May 9, 1956 Dec. 12, 1956 Feb. 7, 1959	T,G, 25	Irr	Pump: 6 in. Pumping level 36.2 ft.
H-99	do	do	1955	46	14	do	--	--	T,G, 25	Irr	Pump: 8 in.
H-100	R. R. Jarvis	--	1922	50	36	do	18.4 19.9	May 9, 1956 Dec. 12, 1956	T,E, 5	Irr	Dug. Pump: 4 in.
H-101	do	Don Combs	1954	53	12	do	--	--	T,E, 5	Irr	do
H-102	do	do	1954	51	12	do	25.0 23.6 23.0	May 9, 1956 Dec. 12, 1956 Feb. 7, 1959	T,G, 26	Irr	do
H-103	G. A. Branton	John Kale	1955	34	14	do	14.0	May 9, 1956	T,E, 5	Irr	Discharge measured 335 gpm, July 27, 1956; pumping level 32.8 ft. Pump: 6 in.
H-104	do	do	1955	36	14	do	18.4	do	N	N	
H-105	Mrs. Ada M. Jarvis	D. Dickerson	1956	50	12	do	28.9	Dec. 12, 1956	T,G, 26	Irr	Discharge measured 180 gpm, May 27, 1956; pumping level, 45.8 ft. Pump: 6 in. <u>1/</u>
H-106	do	Hughes Irrigation Co.	1954	48	12	do	--	--	T,E, 10	Irr	Pump: 5 in. <u>1/</u>

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-107	Mrs. Ada M. Jarvis	Dickerson and Combs	1952	56	14	Seymour formation	26.7	Mar. 16, 1956	T, E, 5	Irr	Pump: 4 in.
H-108	do	D. Dickerson	1956	46	14	do	20.3	Apr. 2, 1956	T, E, 5	Irr	Pump: 5 in. <u>1</u> /
*H-109	do	do	1955	49	12	do	18.8	Mar. 16, 1956	T, G, 26	Irr	Pump: 6 in.
H-110	A. C. Tackitt	John Kale	1954	59	14	do	32.4 37.4	Jan. 5, 1955 Feb. 6, 1959	T, E, 15	Irr	Pump: 5 in. <u>2</u> /
H-111	do	do	1956	56	14	do	27.4 30.3 31.5	Mar. 23, 1956 Dec. 12, 1956 Feb. 6, 1959	T, G	Irr	Discharge measured 135 gpm, Aug. 25, 1956; pumping level 42.6 ft. Pump: 6 in.
H-112	C. A. Hull	J. M. Rea	1955	47	14	do	24.9	Dec. 12, 1956	T, G, 26	Irr	Pump: 4 in.
H-113	G. L. Hunter	--	1915	47	12	do	15.6 18.4	May 4, 1956 Dec. 13, 1956	T, G	Irr	Dug. Discharge measured 290 gpm, July 20, 1956. Pump: 6 in.
H-114	Mrs. Allie Wire	Dickerson and Combs	1955	41	12	do	--	--	T, G, 26	Irr	Pump: 6 in.
H-115	R. M. Meyer	D. Dickerson	1955	49	12	do	21.2	Mar. 1, 1956	T, E, 5	Irr	Pump: 5 in. <u>1</u> /
*H-116	do	do	1955	50	12	do	21.9 24.7	Jan. 5, 1955 Feb. 6, 1959	T, E, 10	Irr	Discharge measured 265 gpm, Sept. 20, 1956. Pump: 5 in. <u>2</u> /
H-117	do	do	1955	51	12	do	22.8	Mar. 1, 1956	T, E, 10	Irr	Pump: 6 in. Temp. 68°F.
H-118	H. F. Jungman	Don Combs	1956	49	12	do	--	--	T, G, 26	Irr	do
H-119	do	do	1956	48	12	do	26.2 29.2	May 4, 1956 Dec. 13, 1956	T, G	Irr	do
H-120	Claude Hill	John Kale	1955	49	12	do	24.1 26.9	May 16, 1956 Dec. 13, 1956	T, G, 19	Irr	Discharge reported 600 gpm.
H-121	Clay F. Grove	D. Dickerson	1954	49	12	do	18.5 21.5	Mar. 1, 1956 Dec. 13, 1956	T, E	Irr	Discharge measured 260 gpm, July 20, 1956; pumping level 35.9 ft.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-122	O. L. Jamison	John Kale	1955	45	14	Seymour formation	--	--	N	N	
H-123	W. H. Clonts	do	1956	48	14	do	10.0 11.8 11.8	May 9, 1956 Dec. 12, 1956 Feb. 6, 1959	T,E, 20	Irr	Pump: 6 in. Pumping level 38.5 ft.
H-124	do	do	1956	48	14	do	--	--	T,E, 20	Irr	Pump: 6 in.
H-125	O. L. Jamison	do	1956	47	14	do	30.6	Dec. 12, 1956	T,E, 10	Irr	Pump: 4 in. <u>1</u>
H-126	do	do	1955	46	14	do	28.0 27.9	May 24, 1956 Dec. 12, 1956	T,E, 5	Irr	Pump: 4 in. Temp. 68°F.
*H-127	O. L. Jamison	do	1954	49	14	do	26.6 28.7	Jan. 5, 1955 Feb. 6, 1959	T,G, 25	Irr	Discharge measured 210 gpm, July 9, 1956; pumping level 35.6 ft. Pump: 6 in. Temp. 68°F. <u>2</u>
H-128	do	do	1954	51	14	do	26.3 30.7 32.1 31.4	Jan. 5, 1955 May 3, 1956 Dec. 11, 1956 Jan. 12, 1957	T,G, 25	Irr	Discharge measured 520 gpm, July 9, 1956; pumping level 39.9 ft. Pump: 6 in. Temp. 68°F.
H-129	do	do	1954	51	14	do	27.5	May 3, 1956	T,G, 25	Irr	Discharge measured 425 gpm, July 9, 1956; pumping level 40.56 ft. Pump: 6 in. Temp. 68°F.
H-130	W. H. Clonts	do	1956	47	14	do	23.3 23.3	May 9, 1956 Dec. 12, 1956	T,E, 7½	Irr	Discharge measured 245 gpm, July 26, 1956; pumping level 34.8 ft. Pump: 5 in.
H-131	do	do	1956	47	14	do	--	--	T,E, 5	Irr	Pump: 4 in.
H-132	do	do	1956	47	14	do	--	--	T,E, 5	Irr	do
H-133	C. H. Clarke	do	1953	50	14	do	24.5 30.2	Jan. 6, 1953 Jan. 12, 1958	T,G, 30	Irr	Pump: 8 in. Pumping level 40.1 ft.; Mar. 21, 1956. <u>2</u>
H-134	do	do	1955	50	14	do	23.3 29.5	Jan. 5, 1955 Jan. 12, 1958	T,G, 24	Irr	Pump: 6 in. Pumping level 35.8 ft.; Mar. 21, 1956. <u>2</u>
H-135	C. A. Hull	J. M. Rea	1955	56	16	do	27.6 31.4	May 9, 1956 Dec. 21, 1956	T,G	Irr	Discharge measured 210 gpm, Aug. 23, 1956; pumping level 31.4 ft. Pump: 6 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-136	G. A. Branton	John Kale	1955	51	14	Seymour formation	--	--	T,G, 25	Irr	Pump: 8 in.
H-137	do	do	1955	51	14	do	34.1 34.6	May 9, 1956 Dec. 21, 1956	T,G	Irr	Pump: 6 in.
H-138	do	do	1955	70	14	do	35.6 39.2 39.1	Mar. 23, 1956 Dec. 21, 1956 Feb. 6, 1959	T,G	Irr	do
H-139	E. F. Branton	do	1956	50	12	do	27.6 29.7	Mar. 22, 1956 Dec. 12, 1956	T,E, 5	Irr	Discharge measured 110 gpm, Aug. 27, 1956; pumping level 45.3 ft. Pump: 5 in.
H-140	Morris Wallace	Dickerson and Combs	1952	61	16	do	--	--	T,G, 30	Irr	Discharge measured 455 gpm, Aug. 25, 1956. Pump: 8 in.
H-141	do	John Kale	1956	56	14	do	29.7	Dec. 12, 1956	T,G, 30	Irr	Discharge measured 425 gpm, Aug. 27, 1956; 543 gpm, Apr. 19, 1957; pumping level, 41.0 ft. Pump: 6 in.
H-142	Mary Hope Smith Busey	do	1955	48	14	do	18.6 22.2	May 4, 1956 Dec. 11, 1956	T,G, 30	Irr	Discharge measured 370 gpm, July 20, 1956; pumping level, 45.2 ft. Pump: 6 in. Temp. 68°F.
H-143	J. Michels	do	1956	54	14	do	--	--	T,G, 25	Irr	Discharge measured 210 gpm, July 20, 1956. Pump: 5 in.
H-144	Ed Whittemore	Don Ratliff	1952	55	16	do	25.2 27.5 27.7 23.1	Mar. 27, 1956 Dec. 13, 1956 Apr. 5, 1957 Feb. 6, 1959	T,G, 30	Irr	Discharge measured 275 gpm, July 20, 1956; pumping level 44.6 ft. Pump: 8 in.
H-145	W. G. Leflar	D. Dickerson	1956	48	12	do	20.0 23.8	Mar. 15, 1956 Dec. 13, 1956	T,G, 25	Irr	Pump: 6 in.
H-146	do	do	1955	50	12	do	19.5	Mar. 15, 1956	T,G, 29	Irr	do
H-147	E. A. Egenbacher	John Kale	1956	45	14	do	--	--	T,E, 3	Irr	Pump: 4 in.
H-148	do	do	1956	45	14	do	25.7 26.0 25.3	May 18, 1956 Dec. 11, 1956 Feb. 6, 1959	T,E, 3	Irr	do

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-149	E. A. Egenbacher	John Kale	1956	47	14	Seymour formation	--	--	T,E, 7½	Irr	Pump: 4 in.
H-150	do	do	1956	48	14	do	--	--	T,E, 5	Irr	do
*H-151	Knox City	--	1930	38	144	do	18.5 21.1	Mar. 22, 1944 Jan. 14, 1958	T,E, 15	P	Dug. <u>2/</u>
*H-152	do	-- Clouse	1944	35	288	do	27.4 31.0	Mar. 1, 1951 Jan. 14, 1958	T,E, 10	P	do
H-153	E. R. Carpenter	-- Henderson	1951	54	12	do	29.2 30.1	May 9, 1956 Dec. 11, 1956	T,E, 10	Irr	Pump: 4 in.
H-154	Knox City	--	1953	54	14	do	29.4 31.1	Jan. 5, 1954 Jan. 14, 1958	T,E	P	<u>2/</u>
H-155	C. H. Cornett	J. M. Rea	1956	56	14	do	--	--	T,E, 10	Irr	Pump: 4 in.
H-156	do	do	1956	56	14	do	40.4	Dec. 11, 1956	T,E, 10	Irr	Pump: 6 in.
H-157	O. A. Roberts Estate	John Kale	1955	51	14	do	30.9 31.1	May 9, 1956 Dec. 11, 1956	T,G, 26	Irr	Discharge measured 100 gpm, July 25, 1956; pumping level 43.5 ft. Pump: 5 in.
*H-158	J. M. Bradberry	do	1955	50	14	do	32.9 33.7 34.9	May 20, 1956 Dec. 21, 1956 Feb. 6, 1959	T,E, 5	Irr	Pump: 4 in.
H-159	do	J. M. Rea	1956	52	14	do	31.5	Mar. 20, 1956	T,E, 5	Irr	Pump: 4 in. <u>1/</u>
H-160	Lynn Tankersley	do	1955	61	14	do	29.7	do	T,G, 26	Irr	Discharge measured 220 gpm, July 25, 1956; pumping level 59.8 ft. Pump: 6 in. Temp. 68°F.
H-161	do	do	1954	58	14	do	36.0 37.2	Mar. 20, 1956 Dec. 11, 1956	N	N	
H-162	D. H. Henry	John Kale	1955	46	14	do	22.1 22.9	May 9, 1956 Dec. 11, 1956	T,E, 10	Irr	Pump: 6 in.
H-163	do	do	1955	45	14	do	20.5	May 9, 1956	T,E, 5	Irr	Pump: 5 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-164	D. H. Henry	J. M. Rea	1956	58	14	Seymour formation	22.2 24.9 25.6	May 9, 1956 Dec. 11, 1956 Apr. 5, 1957	T,E, 15	Irr	Discharge measured 255 gpm, July 25, 1956; pumping level 46.2 ft. Pump: 6 in.
H-165	Mrs. V. L. Hamm	Hughes Irrigation Co.	1956	60	14	do	23.4 27.8	May 4, 1956 Dec. 11, 1956	T,G	Irr	Discharge measured 300 gpm, Aug. 30, 1956; pumping level 42.0 ft. Pump: 6 in.
H-166	J. G. Hawkins	John Kale	1955	62	14	do	--	--	T,G, 26	Irr	Pump: 8 in.
H-167	do	-- Henderson	1952	71	14	do	30.3 32.3	May 9, 1956 Dec. 12, 1956	T,G, 29	Irr	do
H-168	Bertha Sweatt	J. M. Rea	1955	62	16	do	26.2 30.7	Mar. 21, 1956 Dec. 12, 1956	T,E, 15	Irr	Pump: 6 in. <u>1/</u>
H-169	do	Dickerson and Combs	1952	61	14	do	28.2 32.7	Mar. 21, 1956 Dec. 12, 1956	T,G	Irr	Pump: 8 in.
H-170	J. P. Jones	John Kale	1955	60	14	do	28.3 31.3 31.8	May 4, 1956 Dec. 11, 1956 Feb. 6, 1959	T,G, 26	Irr	Pump: 8 in. Pumping level 49.6 ft.
H-171	do	-- Henderson	1952	74	14	do	32.8 36.2	Mar. 20, 1956 Dec. 11, 1956	T,G, 30	Irr	Discharge measured 640 gpm, July 25, 1956; pumping level 48.0 ft. Pump: 8 in. Temp. 68°F.
H-172	Mrs. Leona Thomison	John Kale	1955	62	14	do	23.3 25.2	May 4, 1956 Dec. 11, 1956	T,E, 15	Irr	Discharge measured 275 gpm, July 27, 1956; pumping level 51.8 ft. Pump: 6 in. <u>1/</u>
H-173	do	J. M. Rea	1952	61	14	do	22.8 28.0	Mar. 21, 1956 Dec. 11, 1956	T,E, 15	Irr	Pump: 8 in.
H-174	E. H. Tankersley	John Kale	1955	50	14	do	16.9 23.5	Apr. 4, 1956 Dec. 21, 1956	T,G, 25	Irr	Discharge measured 405 gpm, July 25, 1956; pumping level 43.8 ft. Pump: 8 in.
H-175	do	do	1955	60	14	do	25.9 29.3	May 4, 1956 Dec. 21, 1956	T,E, 15	Irr	Discharge measured 240 gpm, July 20, 1956; pumping level 48.6 ft. Pump: 6 in.
H-176	Clifford Cornett	John Shanks	1952	58	16	do	22.1	May 24, 1956	T,E, 10	Irr	Discharge measured 265 gpm, July 20, 1956; pumping level 36.5 ft. Pump: 6 in.
H-177	R. B. Burton Estate	Dickerson and Combs	1952	54	14	do	--	--	T,G, 30	Irr	Pump: 8 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-178	R. B. Burton Estate	J. M. Rea	1956	51	14	Seymour formation	19.2 22.8 23.3	May 4, 1956 Dec. 11, 1956 Feb. 6, 1959	T,E, 10	Irr	Pump: 8 in.
H-179	Ed Whittemore	D. Dickerson	1956	56	12	do	19.0 23.2 23.3	May 4, 1956 Dec. 11, 1956 Apr. 5, 1957	T,G, 30	Irr	Discharge measured 395 gpm, July 20, 1956; pumping level 40.9 ft. Pump: 6 in.
H-180	Lee R. Burnison	do	1955	56	12	do	22.5 26.7 28.1	May 4, 1956 Dec. 11, 1956 Feb. 6, 1959	T,G, 30	Irr	Pump: 6 in.
H-181	John Michels	Don Combs	1954	62	14	do	--	--	T,G, 26	Irr	Discharge measured 430 gpm, July 20, 1956. Pump: 6 in.
H-182	Fred Lane	J. L. Ratlift	1953	53	16	do	--	--	T,G, 26	Irr	Pump: 8 in.
H-183	do	Don Combs	1954	54	16	do	15.3 20.5	Mar. 27, 1956 Dec. 13, 1956	T,G, 26	Irr	Discharge measured 530 gpm, July 23, 1956; pumping level 30.0 ft. Pump: 8 in.
*H-184	B. F. Cornett	J. M. Rea	1955	65	14	do	15.8 21.3	Mar. 27, 1956 Dec. 13, 1956	T,E, 25	Irr	Discharge measured 800 gpm, July 23, 1956; pumping level 40.0 ft. Pump: 6 in.
H-185	do	do	1956	60	16	do	--	--	T,G, 26	Irr	Pump: 6 in.
H-186	do	do	1955	56	14	do	20.4 24.9 25.7	Mar. 27, 1956 Dec. 13, 1956 Feb. 6, 1959	T,E, 15	Irr	do
H-187	Mrs. Lillian Cole	D. Dickerson	1956	56	12	do	--	--	T,E, 3	Irr	Pump: 4 in.
H-188	Lynn Tankersley	J. M. Rea	1954	58	14	do	27.9 32.4	Mar. 20, 1956 Dec. 21, 1956	T,E, 7½	Irr	Pump: 5 in. Pumping level 51.0 ft.
H-189	do	do	1955	58	14	do	24.9	Mar. 20, 1956	T,G, 26	Irr	Discharge measured 300 gpm, July 25, 1956; pumping level 43.9 ft. Pump: 6 in. 1/
H-190	E. L. Tankersley	do	1955	58	14	do	20.9	do	T,G, 26	Irr	Pump: 8 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water Level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
H-191	B. L. Lovery	J. M. Rea	1956	58	14	Seymour formation	22.1 24.8	May 24, 1956 Dec. 11, 1956	T,E, 15	Irr	Pump: 6 in. Pumping level 49.5 ft.
H-192	do	John Shanks	1954	58	14	do	--	--	T,G, 26	Irr	Pump: 8 in.
*H-193	E. G. Parkhill	--	1933	40	36, 16	do	22.3 26.3 27.1	May 20, 1956 Dec. 11, 1956 Feb. 6, 1959	T,E, 15	Irr	Dug. Discharge measured 810 gpm, July 25, 1956; pumping level 35.9 ft. Pump: 8 in. Temp. 68°F.
H-194	G. A. Branton	John Kale	1956	68	14	do	16.1 20.2	May 9, 1956 Dec. 11, 1956	T,E, 15	Irr	Pump: 6 in.
H-195	do	do	1956	68	14	do	17.3 21.6 23.0	May 9, 1956 Dec. 11, 1956 Feb. 6, 1959	T,E, 15	Irr	do
H-196	do	do	1956	70	14	do	--	--	T,E, 15	Irr	do
H-197	J. E. Hunter	John Kale	1956	72	16	do	19.0 25.7	Mar. 22, 1956 Dec. 11, 1956	T,G, 30	Irr	Pump: 8 in.
H-198	do	-- Smelly	1953	71	16	do	15.1 22.5	Mar. 22, 1956 Dec. 11, 1956	T,E, 15	Irr	Discharge measured 450 gpm, July 23, 1956; pumping level 40.4 ft. Pump: 6 in.
H-199	W. A. Smith	J. M. Rea	1956	64	16	do	14.6 21.8 21.7	Mar. 22, 1956 Dec. 11, 1956 Feb. 6, 1959	T,G, 30	Irr	Discharge measured 850 gpm, July 23, 1956; pumping level, 52.2 ft. Pump: 8 in.
H-200	H. R. Hicks	D. Dickerson	1955	68	14	do	17.1 22.9	May 3, 1956 Dec. 13, 1956	T,G, 26	Irr	Discharge reported 1,350 gpm. Pump: 8 in.
H-201	Tolbie Winchester	do	1955	78	14	do	16.9	May 3, 1956	T,G, 26	Irr	Discharge reported 1,195 gpm. Pump: 8 in.
H-202	do	do	1955	78	14	do	--	--	T,G, 26	Irr	Pump: 8 in.
H-203	do	do	1956	67	14	do	17.8 26.3 26.3	May 3, 1956 Dec. 13, 1956 Feb. 6, 1959	T,G, 26	Irr	Discharge measured 800 gpm, July 23, 1956; pumping level 41.3 ft. Pump: 8 in. <u>1/</u>
*H-204	Mrs. S. M. Clonts	--	--	Spring	--	do	(+)	1956	Flows	S	Wild Horse Spring.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*H-205	Marvin Mansfield	--	--	Spring	--	Seymour formation	(+)	Feb. 16, 1957	Flows	N	Flow estimated 100 gpm, area of heavy evapotranspiration.
H-206	Bill Clark	--	--	34	24	do	22.1 30.0	Jan. 6, 1953 Jan. 11, 1957	C,W	D,S	<u>2/</u>
J-1	B. F. Cornett	J. M. Rea	1955	35	14	do	11.1	May 3, 1956	Cf,E, 2	Irr	Pump: 3 in. <u>1/</u>
J-2	do	do	1956	30	12	do	--	--	Cf,E, 2	Irr	do
J-3	do	do	1955	25	12	do	--	--	Cf,E, 2	Irr	do
J-4	do	do	1955	26	12	do	--	--	Cf,E, 2	Irr	do
J-5	do	do	1955	28	12	do	--	--	Cf,E, 2	Irr	do
J-6	do	do	1956	38	14	do	--	--	T,E, 5	Irr	Pump: 4 in.
*J-7	do	do	1955	46	14	do	--	--	T,E	Irr	Discharge measured 80 gpm, Aug. 29, 1956. Pump: 4 in. <u>1/</u>
J-8	do	do	1956	56	14	do	30.7 34.0 29.3	May 3, 1956 Dec. 18, 1956 Feb. 7, 1959	T,E, 20	Irr	Pump: 6 in.
J-9	A. A. Smith, Jr.	D. Dickerson	1955	40	13	do	19.8	Mar. 1, 1956	T,E, 3	Irr	Pump: 4 in.
J-10	do	do	1956	34	13	do	18.0	do	T,E, 3	Irr	do
J-11	L. W. Hobert	John Kale	1952	59	14	do	14.2 21.3	Jan. 5, 1954 Feb. 7, 1959	T,G, 25	Irr	Discharge measured 405 gpm, July 18, 1956; pumping level 35.4 ft. Pump: 6 in. <u>2/</u>
J-12	do	do	1952	59	14	do	19.4	Mar. 8, 1956	T,G, 25	Irr	Pump: 8 in.
J-13	Frank Russell	Dickerson and Combs	1952	46	14	do	--	--	T,G, 26	Irr	Discharge measured 615 gpm, July 18, 1956. Pump: 6 in.

* See footnotes at end of table.

Table 7.—Records of wells and springs in Knox County—Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
J-14	Frank Russell	Dickerson and Combs	1952	41	14	Seymour formation	16.9 22.3 20.2	Mar. 8, 1956 Dec. 18, 1956 Feb. 7, 1959	T, E, 10	Irr	Discharge measured 255 gpm, July 18, 1956. Pump: 5 in.
J-15	do	do	1952	43	14	do	16.4	Mar. 8, 1956	T, G, 26	Irr	Pump: 5 in.
J-16	Mrs. W. P. Farrington	D. Dickerson	1956	40	14	do	--	--	T, E, 5	Irr	Pump: 5 in. <u>1</u>
J-17	J. F. Hendrix	John Kale	1955	39	14	do	--	--	T, E, 3	Irr	Pump: 4 in.
J-18	do	do	1956	36	14	do	--	--	T, E, 3	Irr	do
J-19	A. J. Caughran	D. Dickerson	1956	52	14	do	15.7 20.3 19.5	Mar. 8, 1956 Dec. 18, 1956 Feb. 7, 1959	T, E, 10	Irr	Discharge measured 405 gpm, July 18, 1956; pumping level 38.8 ft. Pump: 6 in.
J-20	J. C. Gollehon	Don Combs	1955	48	14	do	17.0 21.1	Mar. 8, 1956 Dec. 18, 1956	T, E, 5	Irr	Pump: 4 in.
J-21	do	do	1956	48	14	do	25.9 27.8	Mar. 8, 1956 Dec. 18, 1956	T, G, 25	Irr	Pump: 5 in.
J-22	C. E. Reed	John Kale	1954	54	14	do	28.9 31.0 30.8	Mar. 9, 1956 Dec. 18, 1956 Feb. 7, 1959	T, E, 20	Irr	Pump: 6 in. <u>1</u>
J-23	do	do	1955	46	14	do	--	--	T, E, 5	Irr	Pump: 4 in. <u>1</u>
J-24	Minnie Cerveny	Don Combs	1955	58	14	do	18.3 20.8 20.2	Mar. 15, 1956 Dec. 18, 1956 Feb. 7, 1959	T, G, 26	Irr	Discharge measured 175 gpm, July 18, 1956; pumping level 43.5 ft. Pump: 6 in.
J-25	W. S. Campbell Estate	D. Dickerson	1954	43	12	do	--	--	T, E, 5	Irr	Pump: 4 in.
J-26	do	do	1955	43	12	do	25.3 27.3 26.0	Mar. 9, 1956 Dec. 18, 1956 Feb. 7, 1959	T, E, 5	Irr	Discharge measured 195 gpm, July 18, 1956; pumping level 39.8 ft. Pump: 4 in.
J-27	D. A. Melton	Dickerson and Combs	1952	48	14	do	30.1 33.2	Mar. 9, 1956 Dec. 18, 1956	T, G, 30	Irr	Discharge measured 250 gpm, July 11, 1956. Pump: 6 in. Temp. 68°F.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
J-28	C. L. Mayes	D. Dickerson	1955	46	12	Seymour formation	26.7 28.6 27.0	Mar. 9, 1956 Dec. 18, 1956 Feb. 7, 1959	T,E, 3	Irr	Pump: 4 in.
J-29	do	John Kale	1953	50	14	do	26.6	Mar. 9, 1956	T,G, 26	Irr	Pump: 5 in. Temp. 68°F.
J-30	Virginia S. Moore	D. Dickerson	1956	50	12	do	30.7 32.9	May 3, 1956 Dec. 18, 1956	T,G, 26	Irr	Discharge measured 120 gpm, July 11, 1956; pumping level 42.1 ft. Pump: 5 in. Temp. 68°F. 1/
J-31	Noonie Johnson	do	1956	53	12	do	20.0 23.2	May 14, 1956 Dec. 18, 1956	T,G, 26	Irr	Discharge measured 495 gpm, July 11, 1956; pumping level 44.5 ft. Pump: 6 in. Temp. 68°F.
J-32	M. J. Gass	J. M. Rea	1954	53	12	do	21.6 24.7 22.0	May 14, 1956 Dec. 18, 1956 Feb. 7, 1959	T,G, 26	Irr	Discharge measured 520 gpm, July 11, 1956; pumping level 36.1 ft. Pump: 6 in. 1/
J-33	do	-- Henderson	1951	59	14	do	29.3	May 14, 1956	T,G, 26	Irr	Discharge reported 400 gpm. Pump: 4 in.
*J-34	Tom Price	do	1952	69	14	do	31.9 36.0	Feb. 11, 1952 Jan. 11, 1958	T,G, 30	Irr	Pump: 6 in. 2/
J-35	Mrs. Orb Coffman	do	1952	54	14	do	24.3	Mar. 15, 1956	T,E, 3	Irr	Pump: 4 in.
J-36	do	J. M. Rea	1955	51	14	do	18.9 23.5	Mar. 14, 1956 Dec. 18, 1956	T,G, 25	Irr	Discharge measured 190 gpm, July 11, 1956; pumping level 42.9 ft. Pump: 6 in. Temp. 68°F. 1/
J-37	John Spann	do	1955	50	14	do	--	--	T,E, 5	Irr	Pump: 4 in.
J-38	do	Don Ratliff	1951	50	14	do	--	--	T,E, 5	Irr	do
J-39	Tom Price	Don Combs	1954	51	12	do	--	--	T,G, 29	Irr	Pump: 6 in.
J-40	G. W. Hunt	Les Jameson	1956	50	12	do	19.3	Mar. 15, 1956	T,E, 5	Irr	Discharge measured 75 gpm, Aug. 15, 1956; pumping level 35.2 ft. Pump: 4 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
J-41	W. L. Orsak	C. Covey	1955	57	12	Seymour formation	28.9 31.5 29.2	Mar. 15, 1956 Dec. 19, 1956 Feb. 7, 1959	T,G, 26	Irr	Discharge reported 140 gpm. Pump: 4 in.
J-42	G. W. Hunt	Les Jameson	1955	49	12	do	21.1 24.5	May 1, 1956 Dec. 19, 1956	T,E, 5	Irr	Pump: 4 in.
J-43	John Spann	Don Ratlift	1951	51	14	do	--	--	T,G, 26	Irr	Pump: 6 in.
J-44	T. L. Moore	C. Covey	1955	45	14	do	19.9	May 1, 1956	T,E, 7½	Irr	Pump: 5 in.
J-45	do	do	1955	45	12	do	19.1	May 6, 1956	T,E, 5	Irr	do
J-46	Billy Good	Les Jameson	1956	47	12	do	--	--	T,E, 5	Irr	Pump: 4 in.
J-47	W. M. Taylor	do	1956	50	14	do	19.3 24.1 20.0	Mar. 6, 1956 Dec. 19, 1956 Feb. 7, 1959	T,E, 7½	Irr	Discharge measured 185 gpm, July 11, 1956; pumping level 42.3 ft. Pump: 5 in. Temp. 67°F.
J-48	do	Hughes Irrigation Co.	1954	50	14	do	20.8 25.4	Mar. 6, 1956 Dec. 19, 1956	T,E, 7½	Irr	
J-49	Orb Coffman	J. M. Rea	1955	46	12	do	17.6	Feb. 29, 1956	T,E, 5	Irr	Discharge measured 125 gpm, Aug. 28, 1956. Pump: 4 in.
J-50	do	do	1955	41	12	do	18.1 22.1 18.7	Feb. 29, 1956 Dec. 19, 1956 Feb. 7, 1959	T,E, 5	Irr	Discharge measured 210 gpm, July 11, 1956; pumping level 34.4 ft. Pump: 4 in.
J-51	Mrs. W. P. Farrington	D. Dickerson	1956	60	12	do	17.2 20.8	May 15, 1956 Dec. 19, 1956	T,E, 10	Irr	Pump: 6 in.
J-52	Clyde Yost	Don L. Ratlift	1952	41	12	do	--	--	T,G, 24	Irr	do
J-53	E. H. Nelson	D. Dickerson	1956	42	14	do	15.7 19.6	May 15, 1956 Dec. 14, 1956	T,E, 5	Irr	Discharge measured 100 gpm, Aug. 29, 1956; pumping level 40.4 ft. Pump: 4 in.
J-54	L. D. Offutt	do	1955	44	14	do	18.7 23.4	Mar. 8, 1956 Dec. 18, 1956	T,E, 7½	Irr	Discharge measured 330 gpm, July 18, 1956; pumping level 37.1 ft. Pump: 5 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
J-55	L. D. Offutt	D. Dickerson	1954	49	14	Seymour formation	28.7 27.1	May 3, 1956 Dec. 18, 1956	T,G, 26	Irr	Pump: 6 in.
J-56	W. L. Hobert	John Kale	1955	42	14	do	18.2 20.5 17.2	Mar. 8, 1956 Dec. 18, 1956 Feb. 7, 1959	T,E, 5	Irr	do
J-57	D. A. Melton	Don Combs	1955	53	14	do	19.8 23.3 20.2	Mar. 14, 1956 Dec. 18, 1956 Feb. 7, 1959	T,G, 26	Irr	Discharge measured 185 gpm, July 11, 1956; pumping level 30.9 ft. Pump: 6 in. Temp. 68°F.
J-58	Mrs. Georgia Maples	Les Jameson	1956	51	12	do	18.4 21.6	May 1, 1956 Dec. 19, 1956	T,G, 26	Irr	Discharge measured 210 gpm, July 11, 1956; pumping level 30.1 ft. Pump: 5 in.
J-59	do	do	1956	56	12	do	23.1 27.5	Mar. 6, 1956 Dec. 19, 1956	T,E, 5	Irr	Pump: 4 in.
*J-60	City of Goree well 4	do	1956	49	14	do	--	--	T,E, 10	P	Discharge reported 155 gpm. Pump: 4 in.
J-61	City of Goree well 3	D. Dickerson	1952	48	12	do	17.7 21.1	Jan. 6, 1953 Jan. 13, 1958	T,E, 10	P	2/
J-62	City of Goree well 2	--	1942	47	12	do	25.5 26.2	Mar. 22, 1944 Jan. 13, 1958	T,E, 10	P	2/
*J-63	City of Goree well 1	--	1925	45	14	do	21.9 25.9	Mar. 22, 1944 Jan. 13, 1958	T,E, 15	P	Dug. 2/
J-64	C. M. Thompson	Don Combs	1955	39	12	do	23.3 21.6 19.7	May 3, 1956 Dec. 14, 1956 Feb. 7, 1959	T,E, --	Irr	Discharge reported 750 gpm. Pump: 6 in.
J-65	do	do	1954	48	14	do	20.2 22.8	May 3, 1956 Dec. 14, 1956	N	N	
J-66	J. E. Nelson	D. Dickerson	1956	42	14	do	--	--	T,G, 26	Irr	Pump: 5 in.
J-67	do	do	1955	46	12	do	24.6 25.6	May 3, 1956 Dec. 14, 1956	T,G, 26	Irr	Pump: 6 in.
J-68	Joe B. Roberts	Don Combs	1955	40	14	do	23.1 22.9	May 3, 1956 Dec. 14, 1956	T,G, 25	Irr	do

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
J-69	Joe B. Roberts	Don Combs	1953	40	14	Seymour formation	15.8 20.1 20.4	Mar. 19, 1956 Dec. 14, 1956 Feb. 7, 1959	N	N	
J-70	Eugene Michels	do	1953	38	12	do	--	--	T,G, 26	Irr	Pump: 5 in.
J-71	E. H. Nelson	D. Dickerson	1956	40	14	do	17.2 19.1	May 15, 1956 Dec. 14, 1956	T,E, 5	Irr	Discharge reported 200 gpm. Pump: 4 in.
J-72	do	do	1956	37	14	do	--	--	T,E, 5	Irr	Discharge reported 300 gpm. Pump: 5 in.
J-73	do	do	1956	42	12	do	--	--	T,E, 5	Irr	Discharge measured 115 gpm, Aug. 29, 1956, Pump: 4 in.
*J-74	do	do	1956	40	12	do	17.1 20.8	May 15, 1956 Dec. 14, 1956	T,E, 5	Irr	Discharge measured 90 gpm, Aug. 29, 1956; pumping level 35.4 ft. Pump: 4 in.
J-75	do	do	1956	42	12	do	17.8	May 15, 1956	T,E, 5	Irr	Pump: 6 in.
J-76	do	do	1956	43	12	do	18.6 22.6 19.7	May 12, 1956 Dec. 14, 1956 Feb. 7, 1959	T,E, 5	Irr	Discharge measured 120 gpm, Aug. 29, 1956; pumping level 41.6 ft. Pump: 5 in. Temp. 68°F.
J-77	Clay F. Grove	do	1954	47	12	do	--	--	T,E	Irr	Discharge reported 425 gpm in 1954.
J-78	do	do	1954	47	12	do	16.4 20.6 21.2 20.6	Mar. 1, 1956 Dec. 13, 1956 Apr. 5, 1957 Feb. 7, 1959	T,E, 15	Irr	Discharge measured 210 gpm, July 30, 1956; pumping level 38.2 ft. Pump: 5 in.
J-79	G. S. Wyatt	do	1956	45	14	do	--	--	T,E	Irr	Discharge measured 175 gpm, Aug. 29, 1956, Pump: 6 in.
J-80	City of Munday well 2	--	1952	43	24	do	13.3 12.2 15.5 25.5	Jan. 6, 1953 Jan. 5, 1954 Jan. 3, 1955 Jan. 11, 1957	T,E	P	Pump: 4 in.
J-81	do	D. Dickerson	1952	38	12	do	11.1 14.4 21.8 22.8	Jan. 5, 1954 Jan. 3, 1955 Jan. 5, 1956 Jan. 11, 1957	T,E	P	do

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
*J-82	City of Munday well 2	D. Dickerson	1952	38	12	Seymour formation	14.7 19.4 27.2	Jan. 3, 1955 Jan. 5, 1956 Jan. 11, 1957	T,E	P	Pump: 4 in.
*J-83	City of Munday well 1	--	1922	37	240	do	10.5 15.5	Mar. 1, 1951 Jan. 13, 1958	T,E	P	Dug. 2/
J-84	Leroy Leflar	Dickerson and Combs	1952	55	14	do	13.9 17.7 16.4	Mar. 8, 1956 Dec. 14, 1956 Feb. 7, 1959	T,G, 20	Irr	Pump: 6 in.
J-85	B. B. Bowden	D. Dickerson	1956	60	12	do	16.5 21.7	Mar. 8, 1956 Dec. 14, 1956	T,E, 10	Irr	Discharge measured 660 gpm, July 10, 1956; pumping level 34.7 ft. Pump: 6 in. Temp. 68°F.
J-86	do	do	1954	60	12	do	16.5 21.3 20.0	Mar. 8, 1956 Dec. 18, 1956 Feb. 7, 1959	T,G, 26	Irr	Pump: 8 in.
J-87	Eugenia Searcey	do	1952	58	14	do	16.7 20.2	May 3, 1956 Dec. 18, 1956	T,G, 85	Irr	Discharge measured 680 gpm, July 10, 1956. Pump: 6 in. Temp. 68°F.
*J-88	J. A. Hill	do	1953	50	14	do	19.5 25.4	Mar. 8, 1956 Dec. 18, 1956	T,G, 26	Irr	Discharge measured 445 gpm, July 10, 1956. Pump: 6 in. Temp. 68°F.
J-89	R. E. Foshee	do	1956	48	14	do	16.3 22.2 21.8	Mar. 6, 1956 Dec. 18, 1956 Feb. 7, 1959	T,G, 30	Irr	Pump: 6 in.
J-90	C. W. Browning and J. Smith	do	1955	50	14	do	18.5 22.5	Mar. 7, 1956 Dec. 14, 1956	T,G, 106	Irr	Discharge measured 390 gpm, July 10, 1956; pumping level 39.7 ft. Pump: 8 in. Temp. 67°F.
J-91	do	do	1955	55	14	do	19.1 23.0 20.0	Mar. 7, 1956 Dec. 14, 1956 Feb. 7, 1959	T,G, 106	Irr	Discharge measured 895 gpm, July 10, 1956; pumping level 37.2 ft. Pump: 8 in. Temp. 67°F.
J-92	B. E. Smith	do	1955	60	12	do	21.3 25.3 19.8	Mar. 13, 1956 Dec. 14, 1956 Feb. 7, 1959	T,G, 30	Irr	Pump: 6 in.
J-93	do	do	1955	58	12	do	20.5	Mar. 13, 1956	T,G, 30	Irr	do
*J-94	do	do	1952	58	14	do	18.8 23.5 22.7	Mar. 7, 1956 Dec. 14, 1956 May 21, 1957	T,G, 48	Irr	Discharge measured 620 gpm, July 11, 1956; pumping level 39.9 ft. Pump: 8 in. Temp. 67°F.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
J-95	E. J. Smith	D. Dickerson	1952	55	14	Seymour formation	11.4 18.2	Jan. 5, 1954 Feb. 7, 1959	T,G, 30	Irr	Discharge measured 445 gpm, July 11, 1956; pumping level 39.1 ft. Pump: 8 in. Temp. 67°F. 2/
J-96	do	do	1952	50	14	do	20.1	Dec. 14, 1956	T,G, 29	Irr	Pump: 6 in.
J-97	H. F. Jungman	Don Combs	1956	49	12	do	14.8	May 9, 1956	T,E, 5	Irr	Discharge measured 150 gpm, July 10, 1956; pumping level 45.5 ft. Pump: 4 in. Temp. 68°F.
J-98	B. E. Smith	D. Dickerson	1952	56	12	do	21.8 24.2 20.4	Mar. 7, 1956 Dec. 14, 1956 Feb. 7, 1959	T,G, 25	Irr	
J-99	V. V. Routen	Covey and Jameson	1955	50	14	do	--	--	T,G, 60	Irr	Discharge reported 700 gpm. Pump: 8 in.
J-100	do	do	1955	50	14	do	--	--	T,G, 60	Irr	Discharge reported 660 gpm. Pump: 8 in.
J-101	W. G. Leflar	Dickerson and Combs	1952	60	14	do	--	--	T,G, 26	Irr	do
J-102	do	do	1952	59	14	do	13.2 19.3	Mar. 9, 1956 Dec. 13, 1956	T,G, 26	Irr	do
J-103	Mrs. N. H. Campbell	J. M. Rea	1956	62	16	do	17.0 22.3 21.2	May 3, 1956 Dec. 13, 1956 Feb. 7, 1959	T,E, 15	Irr	Pump: 6 in.
J-104	W. G. Leflar	Dickerson and Combs	1952	58	14	do	--	--	T,G, 26	Irr	Pump: 8 in. Temp. 68°F.
J-105	do	D. Dickerson	1956	59	14	do	15.0 19.6 18.8	May 3, 1956 Dec. 13, 1956 Apr. 5, 1957	T,G, 26	Irr	Discharge measured 510 gpm, July 19, 1956. Pump: 8 in.
J-106	J. B. Reneau	-- Koontz	1952	47	14	do	--	--	T,G, 30	Irr	Pump: 8 in.
J-107	do	John Kale	1955	52	14	do	15.4 20.5	Mar. 16, 1956 Dec. 13, 1956	T,G, 30	Irr	Discharge reported 600 gpm. Pump: 8 in.
J-108	do	do	1956	61	14	do	16.7 22.8	Apr. 19, 1956 Dec. 13, 1956	T,G, 25	Irr	Discharge measured 650 gpm, July 20, 1956. Pump: 8 in.

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
J-109	Kemmie Lee Caughran	D. Dickerson	1955	62	13	Seymour formation	19.1 25.5 22.8	Mar. 16, 1956 Dec. 13, 1956 Feb. 7, 1959	T,G 29	Irr	Discharge measured 850 gpm, July 19, 1956. Pump: 6 in.
*J-110	J. B. Reneau	John Kale	1953	48	14	do	16.7 21.7 19.6	Mar. 16, 1956 Dec. 13, 1956 Feb. 7, 1959	T,E 10	Irr	Discharge reported 475 gpm. Pump: 6 in.
J-111	W. H. Gaither	D. Dickerson	1956	58	14	do	16.8 22.7	Mar. 16, 1956 Dec. 13, 1956	T,E 20	Irr	Discharge measured 850 gpm, July 19, 1956. Pump: 6 in.
J-112	L. L. Huckabee	Don Combs	1955	63	12	do	15.7 21.4 19.1	Mar. 16, 1956 Dec. 14, 1956 Feb. 7, 1959	T,G	Irr	do
J-113	L. R. Burnison	D. Dickerson	1955	56	12	do	15.8 21.8	Mar. 8, 1956 Dec. 14, 1956	T,G 26	Irr	Discharge measured 450 gpm, July 10, 1956; pumping level 27.4 ft. Pump: 6 in.
J-114	Oscar Spann	Dickerson and Combs	1952	60	14	do	21.3 26.0 24.0	Apr. 17, 1956 Dec. 14, 1956 Feb. 7, 1959	T,G 70	Irr	Pump: 6 in.
J-115	B. B. Bowden	D. Dickerson	1955	58	6	do	16.1 21.3	Mar. 8, 1956 Dec. 14, 1956	C,H	D	
J-116	J. R. King	do	1955	54	14	do	19.5 24.6 23.8	Mar. 8, 1956 Dec. 14, 1956 Feb. 7, 1959	T,G 30	Irr	Discharge measured 625 gpm, July 9, 1956; pumping level 34.4 ft. Pump: 6 in. Temp. 68°F.
J-117	do	do	1955	52	14	do	15.2 20.5	Mar. 8, 1956 Dec. 14, 1956	T,G 23	Irr	Discharge measured 475 gpm, July 9, 1956; pumping level 28.3 ft. Pump: 6 in. Temp. 68°F.
J-118	Wallace Reid	Dickerson and Combs	1951	49	14	do	13.9 19.1	Mar. 8, 1956 Dec. 14, 1956	T,G 26	Irr	Discharge measured 405 gpm, July 9, 1956; pumping level 31.6 ft. Pump: 6 in. Temp. 68°F.
J-119	J. R. King	D. Dickerson	1955	50	14	do	18.2 21.3 21.0	Mar. 8, 1956 Dec. 14, 1956 Feb. 7, 1959	T,G 23	Irr	Discharge measured 430 gpm, July 9, 1956; pumping level 41.5 ft. Pump: 6 in. Temp. 68°F. <u>1</u>
J-120	Samuel Tankersley	J. M. Rea	1956	68	16	do	19.0 24.2	May 3, 1956 Dec. 21, 1956	T,G 30	Irr	Pump: 6 in.
J-121	do	do	1955	59	14	do	--	--	T,G	Irr	do

* See footnotes at end of table.

Table 7.--Records of wells and springs in Knox County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Water level		Method of lift	Use of water	Remarks
							Below land surface datum (ft.)	Date of measurement			
J-122	Grady Phillips	D. Dickerson	1955	58	13	Seymour formation	12.4 19.1 19.7	Mar. 1, 1956 Dec. 13, 1956 Apr. 5, 1957	T,G, 25	Irr	Discharge measured 520 gpm, July 19, 1956. Pump: 6 in. Temp. 68°F.
J-123	M. A. Bumpus	do	1956	52	14	do	14.7 18.8 18.2	Apr. 18, 1956 Dec. 13, 1956 Feb. 7, 1959	T,E, 5	Irr	Discharge measured 340 gpm, July 19, 1956; pumping level 26.9 ft. Pump: 5 in.
J-124	do	do	1956	49	14	do	--	--	T,E, 5	Irr	Pump: 5 in.
J-125	E. H. Nelson	do	1956	62	12	do	19.9 17.9 19.2	Dec. 13, 1956 Jan. 14, 1958 Feb. 7, 1959	T,G, 26	Irr	Discharge measured 520 gpm, July 19, 1956; pumping level 31.7 ft. Pump: 8 in. Temp. 68°F.
J-126	do	do	1956	58	14	do	17.2 22.1	May 3, 1956 Dec. 13, 1956	T,G, 26	Irr	Discharge reported 1,200 gpm in 1956. Pump: 8 in.
J-127	Mrs. Lee Burnison	do	1956	60	12	do	16.7 23.4 18.6	Mar. 16, 1956 Dec. 13, 1956 Feb. 7, 1959	T,G, 26	Irr	Discharge measured 450 gpm, July 19, 1956; pumping level 31.4 ft. Pump: 6 in.
J-128	Mrs. Emma Nelson	do	1956	69	12	do	23.5	Dec. 13, 1956	T,G, 26	Irr	Pump: 6 in.
J-129	Mrs. M. E. Covser Estate	--	--	Spring	--	do	--	--	--	--	--

1/ See Table 8 for driller's log.
 2/ See Table 9 for water level measurement.
 * See Table 10 for analysis of water.

Table 8.--Drillers' logs of wells in Knox County

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well F-2

Owner: B. F. Hughes. Driller: --

Soil -----	5	5	Sand, fine -----	4	45
Clay, sandy, and caliche	17	22	Sand and sandy clay ----	3	48
Clay, sandy, and sandstone -----	13	35	Sand, fine, gravel, and clay -----	17	65
Clay, brown -----	6	41	Gravel and clay -----	7	72

Well F-31

Owner: George Steinbach. Driller: Les Jameson.

Soil -----	4	4	Sand, coarse, and gravel	3	25
Clay and caliche -----	8	12	Sand, tight, and gravel-	3	28
Clay, sandy -----	5	17	Red beds -----	1	29
Sand, fine, and gravel -	5	22			

Well F-39

Owner: W. C. Hertel. Driller: John Kale.

Soil -----	5	5	Sand and gravel -----	10	24
Sand and clay -----	9	14	Red beds -----	1	25

Well F-42

Owner: Mrs. Anna Kuehler. Driller: D. Dickerson.

Soil -----	3	3	Sandrock -----	2	24
Clay, red -----	12	15	Gravel -----	9	33
Sandstone -----	2	17	Red beds -----	1	34
Sand and gravel -----	5	22			

Table 8.--Drillers' logs of wells in Knox County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well F-45

Owner: Mrs. Virginia Moore. Driller: D. Dickerson.

Soil -----	5	5	Sand, coarse, and gravel	15	38
Clay, sandy, and caliche	14	19	Red beds -----	2	40
Clay, sandy -----	4	23			

Well F-64

Owner: Claude Reed. Driller: John Kale.

Soil -----	5	5	Shale -----	1	29
Clay and caliche -----	10	15	Sand and gravel (water)-	2	31
Sand (dry) -----	5	20	Clay -----	2	33
Sandstone -----	4	24	Sand and gravel (water)-	17	50
Sand and gravel (water)-	4	28	Red beds -----	2	52

Well F-66

Owner: Claude Reed. Driller: John Kale.

Soil -----	2	2	Sand, fine, and small gravel -----	6	28
Clay, sandy -----	10	12	Sand, coarse, and gravel	21	49
Sand, clay, and caliche-	10	22	Red beds -----	3	52

Well F-70

Owner: Claude Reed. Driller: John Kale.

Soil -----	3	3	Clay, sandy -----	9	35
Clay -----	10	13	Sand, gravel, and clay -	11	46
Clay and caliche -----	6	19	Gravel -----	5	51
Clay -----	7	26	Red beds -----	1	52

Table 8.--Drillers' logs of wells in Knox County--Continued

Thickness (feet)		Depth (feet)		Thickness (feet)		Depth (feet)	
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Well G-15

Owner: B. B. Campbell. Driller: J. M. Rea.

Soil -----	6	6	Gravel, clean -----	9	29
Caliche -----	8	14	Red beds -----	1	30
Sand (water) -----	6	20			

Well G-18

Owner: B. B. Campbell. Driller: J. M. Rea.

Soil -----	5	5	Sand and gravel -----	13	33
Sand -----	15	20			

Well G-19

Owner: Carl Chapin. Driller: John Kale.

Soil -----	9	9	Sand and gravel -----	9	26
Sand, dirty -----	2	11	Red beds -----	2	28
Clay and sand -----	6	17			

Well G-30

Owner: B. F. Cornett. Driller: J. M. Rea.

Soil -----	8	8	Sand and gravel -----	9	35
Sand and clay -----	13	21	Rock -----	1	36
Sand, gravel, and clay -	4	25	Sand and gravel -----	2	38
Sandrock -----	1	26	Red beds -----	1	39

Well G-43

Owner: B. M. Farmer. Driller: J. M. Rea.

Soil -----	3	3	Sand and gravel -----	6	37
Sand and caliche -----	28	31			

Table 8.--Drillers' logs of wells in Knox County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well G-50

Owner: B. M. Farmer. Driller: J. M. Rea.

Soil -----	7	7	Sand, gravel, and caliche	5	32
Sand and caliche -----	20	27	Sand and gravel -----	15	47

Well G-55

Owner: B. M. Farmer. Driller: J. M. Rea.

Soil -----	9	9	Sand and gravel -----	16	56
Sand and caliche -----	18	27	Red beds -----	1	57
Sand, gravel, and caliche	13	40			

Well G-56

Owner: B. M. Farmer. Driller: J. M. Rea.

Soil -----	9	9	Sand and gravel -----	23	50
Sand and caliche -----	18	27	Red beds -----	1	51

Well G-67

Owner: Beatrice Armstrong. Driller: J. M. Rea.

Soil -----	5	5	Broken formation -----	1	38
Sand, red, and caliche -	21	26	Sand and gravel -----	9	47
Sand and gravel -----	11	37	Red beds -----	1	48

Well G-70

Owner: E. R. Carpenter. Driller: J. M. Rea.

Soil -----	5	5	Sand and clay -----	11	36
Sand and clay -----	5	10	Sand and gravel -----	11	47
Caliche -----	15	25	Red beds -----	3	50

Table 8.--Drillers' logs of wells in Knox County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well H-12

Owner: W. M. Rowan. Driller: John Kale.

Soil -----	4	4	Gravel, large -----	3	23
Caliche -----	4	8	Red beds -----	1	24
Sand and gravel -----	12	20			

Well H-16

Owner: A. H. Word. Driller: John Kale.

Soil -----	4	4	Quicksand -----	7	27
Sand -----	4	8	Sand and gravel -----	6	33
Sand and clay -----	12	20			

Well H-18

Owner: A. H. Word. Driller: John Kale.

Soil -----	4	4	Sand, coarse, and gravel	11	29
Clay and caliche -----	14	18	Red beds -----	2	31

Well H-20

Owner: Earl Watson. Driller: J. M. Rea.

Soil -----	4	4	Sand, coarse, and gravel	7	27
Clay and caliche -----	10	14	Red beds -----	1	28
Sand, fine, and gravel -	6	20			

Well H-27

Owner: City of Benjamin. Driller: J. M. Rea.

Soil -----	6	6	Sand, fine, silty -----	6	30
Shale, sandy -----	18	24	Sand, fine (water) -----	6	36

(Continued on next page)

Table 8.--Drillers' logs of wells in Knox County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well H-27--Continued

Sand, fine, and gravel--	2	38	Sand, coarse, and fine gravel -----	4	49
Clay, tough -----	2	40	Gravel, coarse, and clay balls -----	2	51
Sand, coarse, clean ----	4	44	Red beds -----	4	55
Sand, fine -----	1	45			

Well H-28

Owner: J. Michels. Driller: Don Combs.

Soil -----	5	5	Sand (water) -----	7	26
Sand and caliche -----	8	13	Sand and gravel -----	20	46
Sand -----	6	19	Red beds -----	6	52

Well H-42

Owner: W. P. Denton. Driller: J. M. Rea.

Soil -----	12	12	Sand and gravel -----	10	27
Caliche and sand -----	5	17	Red beds -----	1	28

Well H-48

Owner: G. F. Stubbs. Driller: John Kale.

Soil -----	5	5	Sand and gravel -----	23	42
Sand and caliche -----	14	19			

Well H-50

Owner: S. D. Jones. Driller: John Kale.

Soil -----	6	6	Sand and gravel -----	14	40
Clay, sandy -----	20	26	Red beds -----	3	43

Table 8.--Drillers' logs of wells in Knox County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well H-54

Owner: H. G. Egenbacher. Driller: John Kale.

Soil -----	7	7	Sand and gravel -----	14	35
Caliche -----	10	17	Clay, blue -----	1	36
Clay, sandy -----	4	21	Red beds -----	2	38

Well H-62

Owner: G. F. Stubbs. Driller: John Kale.

Soil -----	5	5	Sand and gravel -----	10	33
Clay and sandy clay ----	9	14	Gravel, coarse -----	3	36
Clay, sandy -----	9	23	Red beds -----	1	37

Well H-67

Owner: W. D. Thomas. Driller: John Kale.

Soil -----	2	2	Sand and small gravel --	8	26
Sand, red -----	10	12	Sand and gravel -----	6	32
Sand and clay -----	6	18	Red beds -----	4	36

Well H-69

Owner: S. N. Reed. Driller: J. M. Rea.

Soil -----	4	4	Sand, gravel, and clay -	6	25
Clay and caliche -----	6	10	Sand and gravel -----	7	32
Sand, red, and sandy clay -----	5	15	Clay, sandy -----	1	33
Clay, sandy -----	4	19	Red beds -----	1	34

Table 8.--Drillers' logs of wells in Knox County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well H-70

Owner: S. N. Reed. Driller: J. M. Rea.

Soil -----	4	4	Gravel and clay -----	2	27
Clay, brown, sandy -----	12	16	Sand, coarse, and gravel	4	31
Sand, fine, and gravel -	7	23	Sandstone -----	1	32
Gravel and clay -----	1	24	Sand, coarse, and gravel	2	34
Sandstone -----	1	25			

Well H-71

Owner: J. W. Ward. Driller: J. M. Rea.

Soil -----	6	6	Caliche -----	1	36
Clay, sandy, and caliche	20	26	Sand and gravel -----	11	47
Sand -----	9	35	Red beds -----	1	48

Well H-85

Owner: Tom Richardson. Driller: J. M. Rea.

Soil -----	7	7	Caliche -----	25	48
Sand, red -----	8	15	Sand and gravel (water)-	10	58
Clay, sandy -----	8	23	Red beds -----	2	60

Well H-89

Owner: C. Bohannon. Driller: John Kale.

Soil -----	4	4	Sand and gravel -----	9	23
Caliche -----	6	10	Red beds -----	3	26
Sand, red, and caliche -	4	14			

Table 8.--Drillers' logs of wells in Knox County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well H-90

Owner: W. H. Freeman. Driller: John Kale.

Soil -----	2	2	Sand and gravel -----	27	41
Caliche and sand -----	12	14	Red beds -----	2	43

Well H-93

Owner: D. B. Whitford. Driller: John Kale.

Soil -----	4	4	Sand and clay -----	7	29
Caliche -----	8	12	Sandstone -----	2	31
Clay, sandy -----	8	20	Clay, sandy -----	2	33
Sandstone, soft -----	2	22	Sand and gravel -----	9	42

Well H-96

Owner: J. G. Hawkins. Driller: John Kale.

Soil -----	4	4	Sand and clay -----	12	38
Clay and caliche -----	9	13	Sand and gravel -----	6	44
Clay, red, sandy -----	13	26	Red beds -----	2	46

Well H-105

Owner: Mrs. Ada M. Jarvis. Driller: D. Dickerson.

Soil -----	4	4	Clay, brown -----	12	39
Clay and caliche -----	13	17	Sand and gravel -----	8	47
Clay, sandy -----	6	23	Red beds -----	3	50
Sand, red -----	4	27			

Table 8.--Drillers' logs of wells in Knox County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well H-106

Owner: Mrs. Ada M. Jarvis. Driller: Hughes Irrigation Co.

Soil -----	9	9	Clay -----	3	31
Sand -----	2	11	Caliche -----	3	34
Clay -----	5	16	Sand, dirty -----	3	37
Sand -----	5	21	Sand (water) -----	10	47
Sand, fine (water) -----	5	26	Red beds -----	1	48
Sand, tight -----	2	28			

Well H-108

Owner: Mrs. Ada M. Jarvis. Driller: D. Dickerson.

Soil -----	4	4	Sandstone, soft -----	1	33
Clay and caliche -----	10	14	Sand, coarse -----	3	36
Sand, red -----	5	19	Clay, brown -----	1	37
Sandstone, soft -----	1	20	Sand and gravel -----	3	40
Sand, red -----	3	23	Gravel, coarse -----	3	43
Clay, sandy -----	6	29	Shale, blue -----	2	45
Sand, fine -----	3	32	Red beds -----	1	46

Well H-115

Owner: R. M. Meyer. Driller: D. Dickerson.

Soil -----	4	4	Clay, yellow -----	1	36
Clay and caliche -----	9	13	Sand and gravel -----	7	43
Clay, sandy -----	2	15	Red beds -----	6	49
Sand, red, fine -----	20	35			

Table 8.--Drillers' logs of wells in Knox County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well H-125

Owner: O. L. Jamison. Driller: John Kale.

Soil -----	4	4	Clay, brown -----	6	35
Clay and caliche -----	8	12	Sand, fine, and gravel -	5	40
Clay, sandy -----	7	19	Sand, coarse, and gravel	7	47
Sand, red -----	10	29			

Well H-159

Owner: J. M. Bradberry. Driller: J. M. Rea.

Soil -----	8	8	Sand and gravel -----	11	52
Clay and caliche -----	33	41			

Well H-168

Owner: Bertha Sweatt. Driller: J. M. Rea.

Soil -----	6	6	Sand -----	10	45
Clay, sandy, and caliche	24	30	Gravel -----	14	59
Sand, red, fine -----	4	34	Red beds -----	3	62
Sandrock -----	1	35			

Well H-172

Owner: Mrs. Leona Thomison. Driller: John Kale.

Soil and caliche -----	35	35	Gravel, coarse, sand, and clay -----	10	60
Sand, fine -----	10	45	Red beds -----	2	62
Sand, coarse -----	5	50			

Table 8.--Drillers' logs of wells in Knox County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well H-189

Owner: Lynn Tankersley. Driller: J. M. Rea.

Soil -----	4	4	Sand and gravel -----	10	42
Clay and sand -----	18	22	Sand and clay -----	11	53
Sand -----	4	26	Sandrock -----	5	58
Clay -----	6	32			

Well H-203

Owner: Tolbie Winchester. Driller: D. Dickerson.

Soil -----	4	4	Sandstone and clay -----	9	41
Clay, sandy, and caliche	10	14	Sand and gravel -----	7	48
Clay, sandy -----	14	28	Sandrock, soft -----	1	49
Sandrock, hard -----	1	29	Sand, coarse, and gravel	16	65
Sand and clay -----	3	32	Red beds -----	2	67

Well J-1

Owner: B. F. Cornett. Driller: J. M. Rea.

Soil -----	8	8	Sand and gravel -----	5	28
Sand and caliche -----	10	18	Clay -----	2	30
Caliche -----	5	23	Shale, blue -----	5	35

Well J-7

Owner: B. F. Cornett. Driller: J. M. Rea.

Soil -----	13	13	Sand -----	20	40
Caliche and sand -----	7	20	Sand and gravel -----	6	46

Table 8.--Drillers' logs of wells in Knox County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
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Well J-16

Owner: Mrs. W. P. Farrington. Driller: D. Dickerson.

Soil -----	4	4	Sandrock, soft -----	1	34
Clay and caliche -----	9	13	Gravel, coarse -----	3	37
Clay, red, sandy -----	8	21	Red beds -----	3	40
Sand, medium, and gravel	12	33			

Well J-22

Owner: C. E. Reed. Driller: John Kale.

Soil, sandy -----	21	21	Clay -----	7	47
Clay and caliche -----	7	28	Sand (water) -----	6	53
Clay, dirty -----	8	36	Red beds -----	1	54
Sand (water) -----	4	40			

Well J-23

Owner: C. E. Reed, Driller: John Kale.

Soil -----	10	10	Sand, dirty -----	3	38
Clay -----	14	24	Sand (water) -----	6	44
Sand, fine, dirty -----	6	30	Red beds -----	2	46
Clay -----	5	35			

Well J-30

Owner: Virginia S. Moore. Driller: D. Dickerson.

Soil -----	5	5	Sand, coarse, and clay -	6	44
Clay, sandy -----	27	32	Sand, coarse, and gravel	5	49
Sand, fine, and clay ---	6	38	Red beds -----	1	50

Table 8.--Drillers' logs of wells in Knox County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
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Well J-32

Owner: M. J. Gass. Driller: J. M. Rea.

Soil -----	10	10	Sand and caliche -----	7	25
Caliche -----	8	18	Sand and gravel -----	28	53

Well J-36

Owner: Mrs. Orb Coffman. Driller: J. M. Rea.

Soil -----	2	2	Clay, red -----	7	26
Clay, red -----	9	11	Rock -----	1	27
Shale, gray -----	8	19	Sand and gravel -----	24	51

Well J-119

Owner: J. R. King. Driller: D. Dickerson.

Soil -----	4	4	Clay, brown -----	3	28
Caliche and sand -----	9	13	Clay, sandy -----	3	31
Clay, sandy -----	5	18	Sand, white -----	5	36
Sandrock, soft -----	1	19	Sand and gravel -----	11	47
Clay, sandy, and sandrock	6	25	Limerock and red beds --	3	50

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

Date	Water level	Date	Water level	Date	Water level
------	-------------	------	-------------	------	-------------

Well H-32

Owner: Herbert Partridge.

Jan. 5, 1955	28.00	May 24, 1956	30.99	Jan. 11, 1958	30.67
Jan. 5, 1956	27.97	Jan. 11, 1957	33.29	Feb. 7, 1959	32.65

Well H-110

Owner: A. C. Tackitt.

Jan. 5, 1955	32.37	May 4, 1956	35.13	Jan. 13, 1958	36.68
Jan. 5, 1956	33.61	Dec. 12	35.2	Feb. 6, 1959	37.38

Well H-116

Owner: R. M. Meyer.

Jan. 5, 1955	21.85	Mar. 1, 1956	21.80	Jan. 12, 1958	24.30
Jan. 5, 1956	22.50	Dec. 13	27.9	Feb. 6, 1959	24.67

Well H-127

Owner: O. L. Jamison.

Jan. 5, 1955	26.57	Dec. 12, 1956	31.48	Jan. 12, 1958	31.02
May 3, 1956	29.98	May 21, 1957	28.76	Feb. 6, 1959	28.65

Well H-133

Owner: C. H. Clarke.

Jan. 6, 1953	24.51	Jan. 5, 1955	25.04	Jan. 11, 1957	a39.34
Jan. 5, 1954	24.00	Jan. 5, 1956	26.58	Jan. 12, 1958	30.22

a/ Pumping.

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

Date	Water level	Date	Water level	Date	Water level
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Well H-134

Owner: C. H. Clarke.

Jan. 5, 1955	23.25	May 9, 1956	27.72	Jan. 12, 1958	29.49
Jan. 5, 1956	24.39	Jan. 11, 1957	a37.13		

a/ Pumping.

Well H-151

Owner: Knox City.

Mar. 22, 1944	18.51	Jan. 6, 1953	19.44	Jan. 11, 1957	22.94
Mar. 1, 1951	17.14	Jan. 5, 1954	19.75	Jan. 14, 1958	21.07
Feb. 11, 1952	17.90	Jan. 5, 1956	20.31		

Well H-152

Owner: Knox City.

Mar. 1, 1951	b27.36	Jan. 5, 1954	b30.03	Jan. 11, 1957	32.84
Feb. 11, 1952	b25.25	Jan. 5, 1955	25.43	Jan. 14, 1958	31.03
Jan. 6, 1953	b28.13	Jan. 5, 1956	a29.31		

a/ Pumping.

b/ Pumped recently.

Well H-154

Owner: Knox City.

Jan. 5, 1954	29.43	Jan. 5, 1956	29.97	Jan. 14, 1958	31.08
Jan. 5, 1955	30.14	Jan. 11, 1957	31.20		

Well H-206

Owner: Bill Clark.

Jan. 6, 1953	22.07	Jan. 5, 1955	22.71	Jan. 11, 1957	29.99
Jan. 5, 1954	21.69	Jan. 5, 1956	24.20		

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

Date	Water level	Date	Water level	Date	Water level
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Well J-11

Owner: L. W. Hobert.

Jan. 5, 1954	14.20	Mar. 8, 1956	18.64	Jan. 12, 1958	19.86
Jan. 3, 1955	16.93	Dec. 18	24.80	Feb. 7, 1959	21.26
Jan. 5, 1956	18.97				

Well J-34

Owner: Tom Price.

Feb. 11, 1952	31.91	Jan. 3, 1955	35.07	Jan. 11, 1957	38.16
Jan. 6, 1953	32.88	May 25, 1956	36.42	Jan. 11, 1958	35.98
Jan. 5, 1954	34.60	Dec. 19	39.78		

Well J-61

Owner: City of Goree, well 3.

Jan. 6, 1953	17.72	Jan. 3, 1955	18.89	Jan. 11, 1957	23.90
Jan. 5, 1954	18.64	Jan. 5, 1956	19.86	Jan. 13, 1958	21.11

Well J-62

Owner: City of Goree, well 2.

Mar. 22, 1944	b25.52	Jan. 4, 1954	b27.63	Jan. 11, 1957	31.30
Mar. 1, 1951	b26.82	Jan. 3, 1955	22.37	Jan. 13, 1958	26.20
Feb. 11, 1952	b31.02	Jan. 5, 1956	24.50		

b/ Pumped recently.

Well J-63

Owner: City of Goree, well 1.

Mar. 22, 1944	21.88	Jan. 4, 1954	24.51	Jan. 11, 1957	29.40
Mar. 1, 1951	20.31	Jan. 3, 1955	22.68	Jan. 13, 1958	25.86
Jan. 6, 1953	24.60	Jan. 5, 1956	23.80		

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

Date	Water level	Date	Water level	Date	Water level
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Well J-83

Owner: City of Munday, well 1.

Mar. 1, 1951	10.5	Jan. 6, 1953	b16.14	Jan. 5, 1956	12.86
Feb. 11, 1952	b16.94	Jan. 5, 1954	15.14	Jan. 11, 1957	21.45
Feb. 11	12.8	Jan. 3, 1955	15.14	Jan. 13, 1958	15.48

b/ Pumped recently.

Well J-95

Owner: E. J. Smith.

Jan. 5, 1954	11.39	Mar. 6, 1956	14.82	Jan. 12, 1958	17.80
Jan. 3, 1955	13.80	Dec. 14	22.54	Feb. 7, 1959	18.23
Jan. 5, 1956	15.38				

Table 10.--Chemical analyses of water from wells and springs in Knox County
(Results are parts per million, except specific conductance, pH, percent sodium and sodium adsorption ratio.)
Water-bearing unit: A, alluvium; C, Clear Fork group; S, Seymour formation.

Well	Owner	Depth of well (ft.)	Water-bearing unit	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃) ^{1/2}	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Micrate (NO ₃)	Boron (B)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (microhmios at 25°C)	pH
A-2	Kincaid Estate	37	SA	Nov. 27, 1956	-	-	-	-	-	242	-	7.8	-	-	-	-	1,800	-	-	2,580	7.7
A-3	Chris Moody	48	C	Nov. 28, 1956	-	-	-	-	-	230	-	170	-	-	-	-	985	-	-	2,190	7.9
A-4	E. J. Jones	40	C	do	-	-	-	-	-	445	-	23	-	-	-	-	778	-	-	1,490	7.7
A-5	Leon Spears	51	C	do	-	-	-	-	-	97	-	775	-	-	-	-	2,190	-	-	5,150	7.6
A-6	W. O. Solomon	81	C	do	-	-	-	-	-	128	-	1,820	-	-	-	-	2,880	-	-	7,770	7.6
A-7	Elmo Todd	26	SA	do	-	-	-	-	-	458	-	62	-	-	-	-	372	-	-	686	8.0
A-8	Big Four Ranch	Spring	C	do	-	-	-	-	-	187	-	69	-	-	-	-	456	-	-	1,090	8.2
B-1	Leon Spears	55	C	Nov. 29, 1956	-	-	-	-	-	149	-	165	-	-	-	-	1,500	-	-	3,070	7.9
B-2	J. M. Chowning	27	C	Nov. 30, 1956	-	-	-	-	-	358	-	22	-	-	-	-	248	-	-	705	8.1
B-3	T. M. Westbrook	43	C	Nov. 28, 1956	-	-	-	-	-	470	-	123	-	-	-	-	492	-	-	1,320	7.8
B-4	R. R. Myers	40	C	Apr. 25, 1957	-	-	-	-	-	140	-	12	-	-	-	-	114	-	-	268	7.8
B-5	J. R. Spivey	46	C	Nov. 30, 1956	-	-	-	-	-	468	-	280	-	-	-	-	1,120	-	-	3,170	7.8
B-6	L. B. Bety	56	S	do	-	-	-	-	-	276	-	610	-	-	-	-	935	-	-	2,580	7.7
B-7	Farmers Co-op GH	45	S	Aug. 17, 1956	34	0.01	172	60	166	495	125	355	0.2	21	0.12	1,180	675	34	2.8	2,070	7.4
B-8	Gilliland School	42	S	Apr. 25, 1957	33	-	116	37	92	428	72	103	.6	88	-	795	442	31	1.9	1,200	7.2
C-1	Glenn Fox	33	S	Dec. 6, 1956	-	-	-	-	-	400	-	680	-	-	-	-	950	-	-	3,380	7.3
C-2	W. A. Shaw	32	S	do	-	-	-	-	-	468	-	930	-	-	-	-	900	-	-	4,110	7.7
C-3	J. A. Hertel	42	S	Apr. 25, 1957	-	-	-	-	-	453	-	157	-	-	-	-	406	-	-	1,460	7.5
C-5	A. L. Kinnibrough	31	S	do	-	-	-	-	-	430	-	134	-	-	-	-	198	-	-	1,360	8.2
C-6	Mrs. Lola Scott	35	S	Apr. 24, 1957	-	-	-	-	-	449	-	238	-	-	-	-	338	-	-	1,870	7.8
D-1	W. P. H. McFaddin	15	C	Nov. 1, 1956	-	-	-	-	-	-	-	700	-	-	-	-	-	-	-	5,220	-
D-2	do	18	C	Nov. 27, 1956	-	-	-	-	-	326	-	35	-	-	-	-	838	-	-	1,510	7.5
D-3	Fant Ranch	61	SA	Nov. 29, 1956	-	-	-	-	-	84	-	1,180	-	-	-	-	2,400	-	-	6,330	7.6
D-4	W. P. H. McFaddin	30	C	Nov. 1, 1956	-	-	-	-	-	158	1,650	430	-	-	-	-	1,640	-	-	3,940	8.2
D-5	do	33	C	do	-	-	-	-	-	-	2,100	192	-	-	-	-	-	-	-	3,800	-

^{1/2} Includes equivalent of any carbonate (CO₃) present.

Table 10.--Chemical analyses of water from wells and springs in Knox County--Continued

Well	Owner	Depth of well (ft.)	Water-bearing unit	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃) ^g	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Micrate (NO ₃)	Boron (B)	Dissolved solids	Hardness CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (microhmhos at 25°C)	pH
D-7	W. A. Polster	34	C	Oct. 11, 1945	-	-	181	103	102	355	475	220	-	0.5	-	1,260	875	20	1.5	-	-
D-9	R. C. Hamilton	15	C	Nov. 27, 1956	-	-	-	-	-	233	-	140	-	-	-	-	2,000	-	-	3,740	7.7
D-10	W. P. H. McFaddin	21	C	Nov. 1, 1956	-	-	-	-	-	173	-	460	-	-	-	-	2,380	-	-	4,980	8.2
E-1	--	22	C	Oct. 11, 1945	-	-	284	97	206	204	986	248	-	17	-	1,940	1,110	29	2.7	-	-
E-2	Mrs. Pearl Sams	33	C	do	-	-	-	-	-	295	75	23	-	2.8	-	-	360	-	-	-	-
E-2	do	33	C	Dec. 7, 1956	-	-	-	-	-	394	-	29	-	-	-	-	242	-	-	880	7.8
E-3	E. B. Sams	42	C	Oct. 11, 1945	-	-	-	-	-	-	840	368	-	4.0	-	-	1,100	-	-	-	-
E-4	I. T. Wright	37	C	do	-	-	-	-	-	346	225	109	-	.0	-	-	645	-	-	-	-
E-5	O. D. Propps	31	C	do	-	-	-	-	-	489	12	6	-	8.5	-	-	525	-	-	-	-
E-6	Mrs. Emma Sams	50	C	do	-	-	592	103	176	266	1,810	124	-	9.0	-	2,940	1,900	17	1.8	-	-
E-7	J. D. Brookson	38	C	do	-	-	58	34	49	317	38	42	-	39	-	416	284	27	1.2	-	-
E-7	do	38	C	Dec. 7, 1956	-	-	-	-	-	313	-	48	-	.0	-	-	322	-	-	924	7.6
E-8	John A. Jones	23	C	Oct. 11, 1945	-	-	-	-	-	692	17	28	-	.0	-	-	795	-	-	-	-
E-9	Mrs. J. B. Moorhouse	23	C	do	-	-	-	-	-	318	569	160	-	10	-	-	1,080	-	-	-	-
E-9	do	23	C	Dec. 6, 1956	-	-	-	-	-	266	-	215	-	-	-	-	1,680	-	-	3,110	7.6
E-10	E. B. Sams	19	C	Oct. 11, 1945	-	-	-	-	-	224	1,750	395	-	4.2	-	-	2,190	-	-	-	-
E-11	W. C. Glenn	23	C	do	-	-	-	-	-	222	2,030	352	-	3.0	-	-	2,020	-	-	-	-
E-12	Lee Estate	48	C	do	-	-	-	-	-	202	1,860	355	-	7.3	-	-	1,950	-	-	-	-
E-13	Joe Redder	16	A	Dec. 7, 1956	-	-	-	-	-	510	-	4.5	-	-	-	-	434	-	-	753	7.2
E-14	Hugh Jones	-	C	Oct. 11, 1945	-	-	-	-	-	240	2,030	218	-	.8	-	-	1,720	-	-	-	-
E-15	R. C. Hamilton	30	C	Oct. 31, 1956	-	-	-	-	-	-	-	410	-	-	-	-	-	-	-	4,250	-
E-16	League-Davis Estate	22	A	Dec. 6, 1956	-	-	-	-	-	266	-	41	-	-	-	-	316	-	-	884	7.9
E-18	Frank Zeissel	42	S	Oct. 30, 1956	-	-	-	-	-	-	65	51	-	-	-	-	-	-	-	863	-
F-1	Bruce Burnett	21	A	Dec. 7, 1956	-	-	-	-	-	372	-	139	-	-	-	-	600	-	-	1,530	8.0

^g Includes equivalent of any carbonate (CO₃) present.

Table 10.--Chemical analyses of water from wells and springs in Knox County--Continued

Well	Owner	Depth of well (ft.)	Water-bearing unit	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃) ²	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Boron (B)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (microhms at 25°C)	pH
F-2	B. F. Hughes	72	S	Apr. 1957	-	-	-	-	-	417	-	111	-	-	-	-	334	-	-	1,140	7.3
F-7	A. E. Boyd	36	S	Aug. 30, 1956	29	-	85	29	126	329	95	126	1.0	62	0.38	726	331	45	3.0	1,190	7.6
F-13	Weston Parris	31	S	Jan. 5, 1956	35	-	80	29	174	435	111	135	-	41	-	819	318	54	4.2	1,300	7.4
F-20	J. W. Kinnibrough	28	S	Apr. 24, 1957	-	-	-	-	-	439	-	61	-	-	-	-	286	-	-	1,090	7.7
F-24	M. E. Taylor	19	S	do	-	-	27	56	-	956	-	280	-	-	-	-	290	-	-	2,850	8.0
F-25	Jack Idol	24	A	Apr. 25, 1957	24	-	57	34	250	379	214	186	-	20	.97	972	282	66	6.5	1,560	7.7
F-31	G. Steinbach	29	S	Aug. 15, 1956	34	-	43	37	250	455	186	142	-	29	.51	948	260	68	6.7	1,530	7.8
F-35	C. E. Haskins	33	S	Oct. 30, 1956	-	-	-	-	-	-	230	200	-	-	-	-	-	-	-	1,700	-
F-44	Mrs. Virginia Moore	37	S	Aug. 29, 1956	24	-	46	25	136	364	80	62	2.0	41	.49	598	218	57	4.0	971	7.6
F-56	Ruben Bates	49	S	Aug. 15, 1956	30	-	57	29	220	402	156	122	-	35	.45	888	262	65	5.9	1,430	7.9
F-67	Claude Reed	52	S	Oct. 30, 1956	-	-	-	-	-	-	-	470	-	-	-	-	-	-	-	2,550	-
G-3	W. P. H. McFaddin	28	C	Oct. 31, 1956	-	-	-	-	-	-	-	1,180	-	-	-	-	-	-	-	6,560	-
G-4	Mrs. J. T. Darr	22	C	do	-	-	-	-	-	236	914	29	-	-	-	-	1,100	-	-	1,830	8.4
G-7	B. B. Campbell	40	A	Aug. 30, 1956	19	-	229	53	628	322	853	740	-	1.9	.93	2,690	790	63	9.7	4,080	7.5
G-9	W. H. Lankford	41	S	Oct. 30, 1956	-	-	-	-	-	294	-	37	-	-	-	-	265	-	-	1,150	8.3
G-34	A. P. Denton	55	S	do	-	-	-	-	-	-	81	42	-	-	-	-	-	-	-	695	-
G-64	J. H. Atterbury	17	S	do	-	-	-	-	-	-	57	21	-	-	-	-	-	-	-	668	-
G-68	E. R. Carpenter	50	S	Aug. 30, 1956	24	-	170	128	528	342	1,120	460	-	45	1.8	2,650	950	55	7.5	3,750	7.5
G-75	B. B. Campbell	Spring	S	Apr. 17, 1957	29	-	66	42	74	329	132	36	-	49	-	601	336	32	1.8	921	7.5
H-17	A. H. Word	31	S	Aug. 15, 1956	34	-	59	35	97	323	106	50	-	63	.33	618	292	42	2.5	959	7.6
H-26	City of Benjamin	43	S	Apr. 1956	25	0.06	58	35	161	317	149	135	2.4	42	-	-	289	-	-	-	7.5
H-32	H. Partridge	68	S	July 30, 1954	-	-	-	-	-	337	-	19	-	-	-	-	135	-	-	732	7.5
H-36	J. O. Hawkins	47	S	Oct. 30, 1956	-	-	-	-	-	-	-	240	-	-	-	-	-	-	-	1,550	-
H-56	S. D. Jones	40	S	do	-	-	-	-	-	-	23	6.8	-	-	-	-	-	-	-	457	-
H-90	W. H. Freeman	43	S	Aug. 15, 1956	44	-	120	67	324	345	433	380	-	41	.90	1,580	575	55	5.9	2,410	8.2

² Includes equivalent of any carbonate (CO₃) present.

Table 10.--Chemical analyses of water from wells and springs in Knox County--Continued

Well	Owner	Depth of well (ft.)	Water-bearing unit	Date of collection	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO ₃) ^M	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Boron (B)	Dissolved solids	Hardness as CaCO ₃	Percent sodium	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
H-109	Mrs. Ada M. Jarvis	49	S	Oct. 30, 1956	-	-	-	-	-	-	-	124	-	-	-	-	-	-	-	1,040	-
H-116	R. M. Meyer	50	S	Oct. 31, 1956	-	-	-	-	-	-	123	95	-	-	-	-	-	-	-	1,080	-
H-127	O. Jamison	49	S	Jan. 5, 1956	36	-	93	34	167	315	199	170	-	36	-	912	373	49	3.7	1,410	7.7
H-151	Knox City	33	S	Mar. 22, 1944	-	-	135	55	187	296	315	251	-	54	-	1,140	563	42	3.4	-	-
H-152	do	35	S	Apr. 24, 1957	36	-	109	43	180	350	211	185	1.4	84	-	1,020	448	47	3.7	1,570	7.4
H-155	J. M. Bradberry	50	S	Oct. 31, 1956	-	-	-	-	-	-	-	262	-	-	-	-	-	-	-	1,740	-
H-184	B. F. Cornett	65	S	do	-	-	-	-	-	-	-	245	-	-	-	-	-	-	-	1,630	-
H-193	E. G. Parkhill	40	S	Aug. 15, 1956	34	-	75	32	136	381	116	100	-	43	0.28	744	318	48	3.3	1,170	7.8
H-204	Mrs. S. M. Clonts Spring	do	S	Feb. 16, 1954	-	-	-	-	-	478	-	398	-	-	-	-	620	-	-	2,690	7.8
H-204	do	do	S	Apr. 18, 1957	-	-	-	-	-	318	-	500	-	-	-	-	635	-	-	2,510	8.0
H-205	Marvin Mansfield	do	S	Feb. 16, 1954	-	-	-	-	-	452	-	650	-	-	-	-	1,030	-	-	3,950	8.0
J-7	B. F. Cornett	46	S	Aug. 30, 1956	27	-	55	20	184	361	117	105	1.6	53	.41	744	218	64	5.4	1,200	7.7
J-23	C. E. Reed	46	S	Oct. 30, 1956	-	-	-	-	-	-	-	332	-	-	-	-	-	-	-	2,240	-
J-34	Tom Price	69	S	Jan. 5, 1956	34	-	86	46	203	407	211	180	-	47	-	1,010	404	52	4.4	1,570	7.7
J-60	City of Goree well ⁴	49	S	Apr. 25, 1957	31	-	84	47	234	455	273	152	2.2	42	-	1,090	402	56	5.1	1,670	7.4
J-63	City of Goree well ¹	45	S	Mar. 22, 1944	26	0.02	113	60	294	410	386	296	1.5	26	-	1,410	528	54	5.6	-	7.9
J-74	E. H. Nelson	40	S	Oct. 30, 1956	-	-	-	-	-	-	132	95	-	-	-	-	-	-	-	1,150	-
J-82	City of Munday well ²	38	S	Apr. 25, 1957	34	-	184	127	352	434	576	510	2.0	81	-	2,080	980	44	4.9	3,150	7.7
J-83	City of Munday well ¹	37	S	Mar. 22, 1944	21	.12	112	99	372	481	469	340	1.9	183	-	1,950	686	53	6.2	2,660	7.6
J-83	do	37	S	Apr. 25, 1957	35	-	113	98	334	485	411	360	2.4	90	-	1,630	685	51	5.6	2,640	7.6
J-88	J. A. Hill	50	S	Oct. 31, 1956	-	-	-	-	-	-	-	420	-	-	-	-	-	-	-	2,860	-
J-94	B. E. Smith	56	S	Aug. 15, 1956	36	-	137	65	268	345	423	320	-	35	.56	1,450	610	49	4.7	2,250	7.7
J-110	J. B. Reneau	48	S	Oct. 31, 1956	-	-	-	-	-	-	-	610	-	-	-	-	-	-	-	3,320	-
J-125	E. H. Nelson	62	S	Aug. 15, 1956	36	-	113	50	184	358	268	198	-	40	.46	1,070	488	45	3.6	1,690	7.6

^M Includes equivalent of any carbonate (CO₃) present.

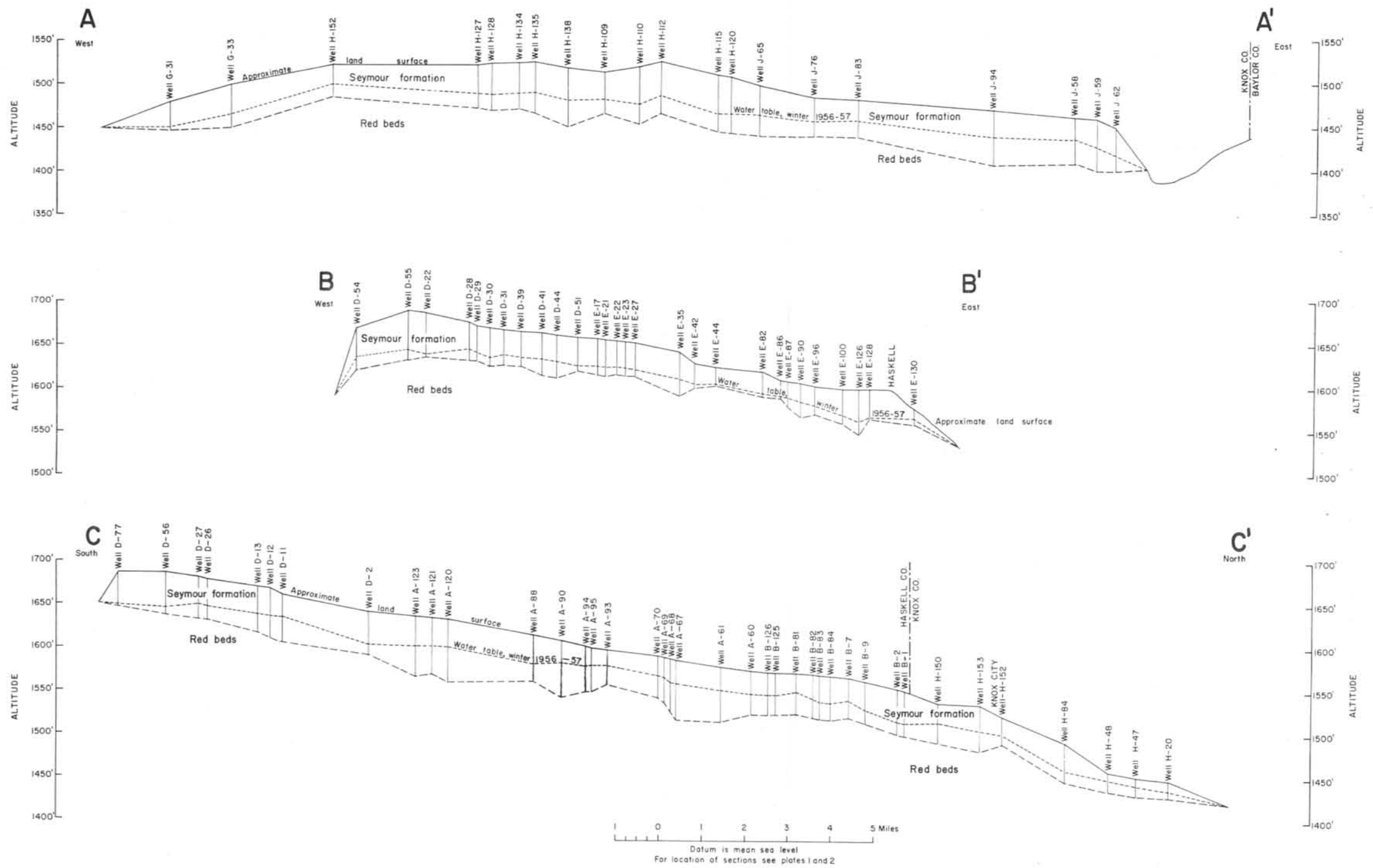


FIGURE 5.—Geologic sections of the Seymour formation, Haskell and Knox Counties