TEXAS WATER COMMISSION

Joe D. Carter, Chairman
O. F. Dent, Commissioner
H. A. Beckwith, Commissioner

BULLETIN 6212

GEOLOGY AND GROUND-WATER RESOURCES OF UVALDE COUNTY, TEXAS

Prepared in cooperation with the Geological Survey
United States Department of the Interior
and the City of San Antonio

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By

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United States Geological Survey

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GEOLOGY AND GROUND-WATER RESOURCES OF UVALDE COUNTY, TEXAS

ABSTRACT

The principal aquifer in Uvalde County is the Edwards and associated limestones of Cretaceous age. The aquifer underlies an extensive area in south-central Texas extending along the Balcones fault zone from Kinney County eastward to San Antonio, thence northeastward to Hays County. The hydrologic unit making up the Edwards and associated limestones consists of the Comanche Peak limestone, the Edwards limestone, the Kiamichi formation, and the Georgetown limestone. Other less important aquifers in Uvalde County include the Glen Rose limestone, the Buda limestone, the Austin chalk, and the Leona formation.

Uvalde County occupies parts of two physiographic provinces, the Edwards Plateau on the north and the Coastal Plain on the south, the two provinces being separated by the Balcones fault zone. In the Edwards Plateau the formations of the Edwards and associated limestones crop out on the plateau surface; in the Coastal Plain where the formations have been down-faulted, they underlie younger rocks. In both provinces the formations dip gently toward the south and southeast, the dips being greatest in the Coastal Plain. Igneous intrusives have penetrated the formations in many places in the Coastal Plain, locally forming barriers to ground-water movement.

The aquifers in Uvalde County are recharged by precipitation within the county and in the drainage areas of streams entering the county from the north and west. In the Edwards Plateau, the aquifer comprising the Edwards and associated limestones is recharged by precipitation that falls on the outcrop. The aquifer is drained by springs at the contact with the underlying Glen Rose limestone where streams have cut through the Edwards and associated limestones at the edge of the plateau. These springs maintain the base flow of the streams that drain the plateau. Most of the base flow and much of floodflow of the streams is lost to the Edwards and associated limestones where the aquifer crops out in stream beds in the Balcones fault zone. This stream loss to the Edwards and associated limestones constitutes the greatest part of the recharge to the aquifer in the county, although some of the recharge from the West Nueces River enters the county as underflow from Kinney County. The normal annual recharge to the Edwards and associated limestones in Uvalde County is estimated to be about 200,000 acre-feet.

Discharge from the Edwards and associated limestones in Uvalde County can be divided into two major segments: discharge by underflow from the county to the east and south and discharge to the surface through wells and springs. Discharge by underflow during the period 1934-47 when changes in storage were small is estimated to be about 190,000 acre-feet per year. During the drought years, 1947-56, the underflow was somewhat less. The discharge to the surface during the period

1934-47 averaged about 17,000 acre-feet per year. During the 1947-56 drought the rate of discharge to the surface increased principally because of increased use of water for irrigation, reaching a maximum of 58,000 acre-feet in 1956.

The chemical quality of the ground water in Uvalde County ranges between wide limits. Except in the extreme southern part of the county where the water is saline, the water in the Edwards and associated limestones is of good chemical quality except that it is hard. The water in the Glen Rose limestone is saline in many places, the principal objectionable constituents being high concentrations of calcium and magnesium sulfate. The water in the Leona formation is generally of good chemical quality. The water from the other formations differs greatly in quality from place to place, and no generalizations can be made.

Ground-water withdrawals from the Edwards and associated limestones in Uvalde County probably could be maintained indefinitely at a rate of about 200,000 acre-feet per year provided that withdrawals north and west of the county are not increased. However, continued withdrawals at this rate would cause wells in structurally high areas to go dry and underflow into Medina County would cease. Furthermore, saline water might invade the fresh-water part of the aquifer from the south and perennial springflow in the Leona River Valley would cease.

GEOLOGY AND GROUND-WATER RESOURCES OF UVALDE COUNTY, TEXAS

INTRODUCTION

Purpose and Scope of Investigation

The report on Uvalde County is one of several studies of the ground-water resources of the San Antonio area made by the U. S. Geological Survey in cooperation with the Texas Water Commission [formerly the Texas Board of Water Engineers] and the city of San Antonio. The San Antonio area includes parts of Kinney, Uvalde, Medina, Bexar, Comal, and Hays Counties within and adjacent to the Balcones fault zone. The purpose of the 1955-57 field work was to collect additional basic data on the geology and occurrence of ground water in Uvalde County, especially in the aquifer formed by the Edwards and associated limestones.

The report contains geologic information on the character, thickness, depth beneath the land surface, and extent of the water-bearing formations. Existing maps and reports were studied and integrated with data from this investigation to determine the relation of local geologic conditions to the recharge, movement, availability, and quality of ground water in the county.

Plates 1 and 2 show the location of wells and springs in Uvalde County. The wells in the county have been numbered in accordance with an established grid system that has been used in a large area in south-central Texas. The quadrangles formed by the grid are identified by a letter and a number and the wells are numbered consecutively within each quadrangle. For example, all wells in the quadrangle containing the city of Uvalde are numbered H-5, followed by the individual well number. The grid system is one which was established many years ago based on latitude and longitude. The grid lines do not precisely accord with the parallels and meridians on the presently used base map. However, in order to preserve the original numbering system insofar as possible, it was decided to retain the old grid for well-numbering purposes.

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

Methods of Investigation

Beginning in October 1955 wells and springs were inventoried, selected samples of water were collected to be analyzed chemically, water levels in selected wells were measured periodically, and a geologic study was made of the water-bearing formations. Many of the well records, chemical analyses, and water-level records have been included in a report by Petitt and George (1956, v. II, pts. I and III).

The remainder of the records are on file in the offices of the U. S. Geological Survey in Austin, Texas. Outcrops of geologic formations were measured in detail, then traced downdip and correlated with subsurface equivalents by means of drillers' logs and electric logs. The surface geology was mapped on aerial photographs and transferred to a base map. A portable electric logger was used to log many wells during the investigation; electric logs were useful not only in the correlation of formations but also in interpreting some of the descriptive terms used in drillers' logs. Logs of wells were obtained from many drillers and well owners, and samples of well cuttings were taken from test wells that were drilled as part of the program. The cuttings were examined using a hand lens or a binocular microscope.

In many areas, geologic outcrops were used as control points for constructing structural contours. Altitude control, used in preparing subsurface geologic and hydrologic maps, was compiled from spirit and barometric leveling and from topographic maps.

Previous Investigations

Several investigations have been made of the geology and ground-water resources of Uvalde County and adjacent areas. Among the earliest detailed investigations, Hill and Vaughan (1898a) mapped the Nueces quadrangle, which covers parts of northwestern Uvalde County and northeastern Kinney County, western Real County, and southeastern Edwards County. Vaughan (1900) mapped the Uvalde quadrangle, which covers the central part of Uvalde County and the northern part of Zavala County. Lonsdale (1927) described the igneous rocks of the Balcones fault zone, including part of Uvalde County. Sayre (1936) described the geology, hydrology, and ground-water resources of Uvalde and Medina Counties. Livingston (1947) reported on the relation of springflow to the discharge of the Leona River. Petitt and George (1956) summarized the hydrology of Uvalde County in a progress report on the ground-water resources of the San Antonio area.

Acknowledgments

The authors are indebted to farmers, ranchers, well drillers, city and county officials, and oil-company employees, who supplied information that aided in the investigation. Dr. Keith Young of The University of Texas identified fossils from some of the geologic formations. F. M. Getzendaner of Uvalde supplied geologic information and many well logs. The Shell Development Co. and W. F. Guyton furnished portable electric logging machines that were used during the investigation. The authors express their appreciation for geologic assistance from C. I. Smith, F. L. Stricklin, B. F. Perkins, and F. E. Lozo of the Shell Development Company, and R. T. Hazzard, formerly of the Gulf Refining Company.

Location and Economic Development

Uvalde County (area 1,588 square miles) in south-central Texas is bounded on the east by Medina County, on the south by Zavala County, on the west by Kinney County, and on the north by Edwards, Real, and Bandera Counties (Figure 1). The county lies largely between latitude 29°05' and 29°38' and longitude 99°24' and 100°07'. Uvalde, the county seat in the south-central part of the county, is 80 miles southwest of San Antonio and 60 miles east of Del Rio on the Rio Grande.

Figure 1

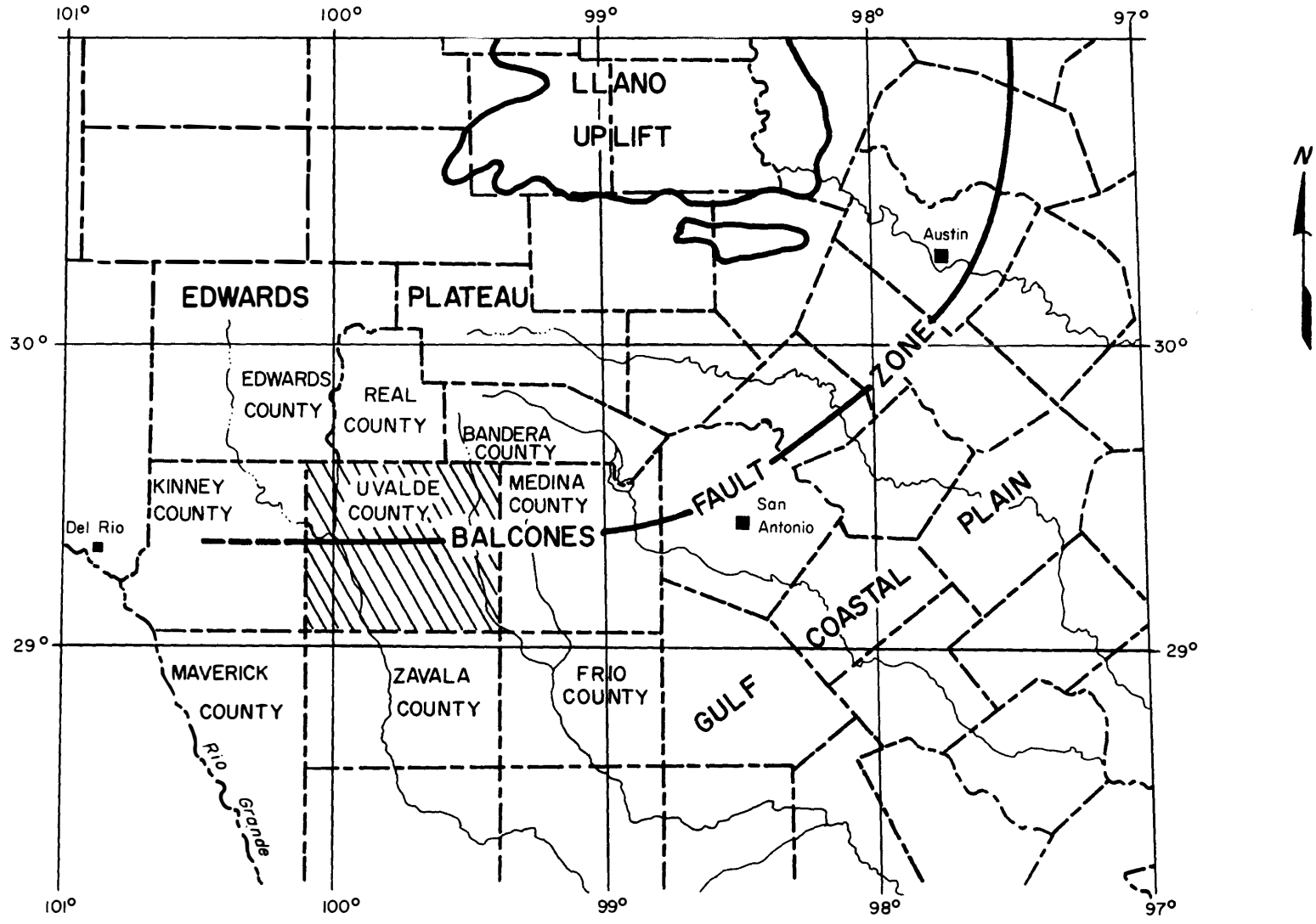

FIGURE 1. — Map of central Texas showing physiographic provinces and location of Uvalde County

The estimated 1957 county population was 20,000; the estimated 1957 population of the city of Uvalde--the business center for stockraising and farming interests--was 12,000. Although manufacturing in Uvalde is of relatively minor importance, the city has the heaviest concentration of industry in the upper Nueces River basin. The chief products are agricultural insecticides, hen cages, and agricultural aircraft tanks and hoppers. In 1957 Sabinal, Knippa, and Utopia had estimated populations of 2,600, 325, and 210, respectively. Other settlements have less than 100 residents.

Approximately 13,000 acres of land was irrigated in 1956 and about 100,000 acres was dry farmed. Quarries in the western part of the county near Blewett make Uvalde County the largest producer of rock asphalt in the State. Other mineral resources are clay, limestone, gravel, and trap rock.

Topography and Drainage

Uvalde County occupies parts of two physiographic provinces: in the north, the Edwards Plateau, and in the south, the Gulf Coastal Plain, the two regions being separated by the nearly eastward-trending Balcones fault zone (Figure 1). The plateau, on the upthrown side of the fault zone, is an area of considerable relief and much of the area is rough or rolling. Except for sporadic heavy growths of juniper, the vegetation on the plateau is sparse. The Coastal Plain, on the downthrown side of the fault zone, consists primarily of undulating prairies and low hills. In places in the Coastal Plain rounded hills represent the remnants of igneous intrusions. Resistant sedimentary strata form low cuestas in the Coastal Plain; one of the most conspicuous of these is near Sabinal. The Coastal Plain supports an abundant growth of mesquite and other brush. Live oak, pecan, elm, walnut, and cypress grow in the flood plains and along the streams.

In general, the regional slope of the land surface is slightly east of south. The altitude ranges from about 700 feet above sea level where the Sabinal River leaves the southeastern corner of the county to 2,000 feet or more in the highest part of the Edwards Plateau. Near the south margin of the plateau the altitude is about 1,100 feet.

From west to east, the major streams in the county are the West Nueces, Nueces, Leona, Dry Frio, Frio, Blanco, and Sabinal Rivers. Most of the streams are spring fed in the plateau area; however, all the streams lose much of their flow while crossing some of the limestones in the Balcones fault zone and are dry or flow intermittently after leaving the fault zone. In the southern part of the county the streams are fed by other springs in some places. The streams have dissected the plateau into high hills and deep narrow valleys having steep gradients. The shallow broad valleys of the Coastal Plain have moderate to slight gradients.

Climate

Uvalde County has a warm subhumid climate. The daily mean temperatures for January and July at Uvalde are about 53°F and 85°F, respectively; the yearly mean is 69°F (Figure 2). The temperature in the winter is highly variable; daily maximums are rarely below freezing and extensive warm periods occur occasionally. The average growing season in Uvalde County is 248 days. The average date of the first frost is November 12; of the last, March 9.

The mean annual precipitation at the city of Uvalde for the period 1920-57 was 23.46 inches. The record of annual precipitation (Figure 2) shows that the

Figure 2

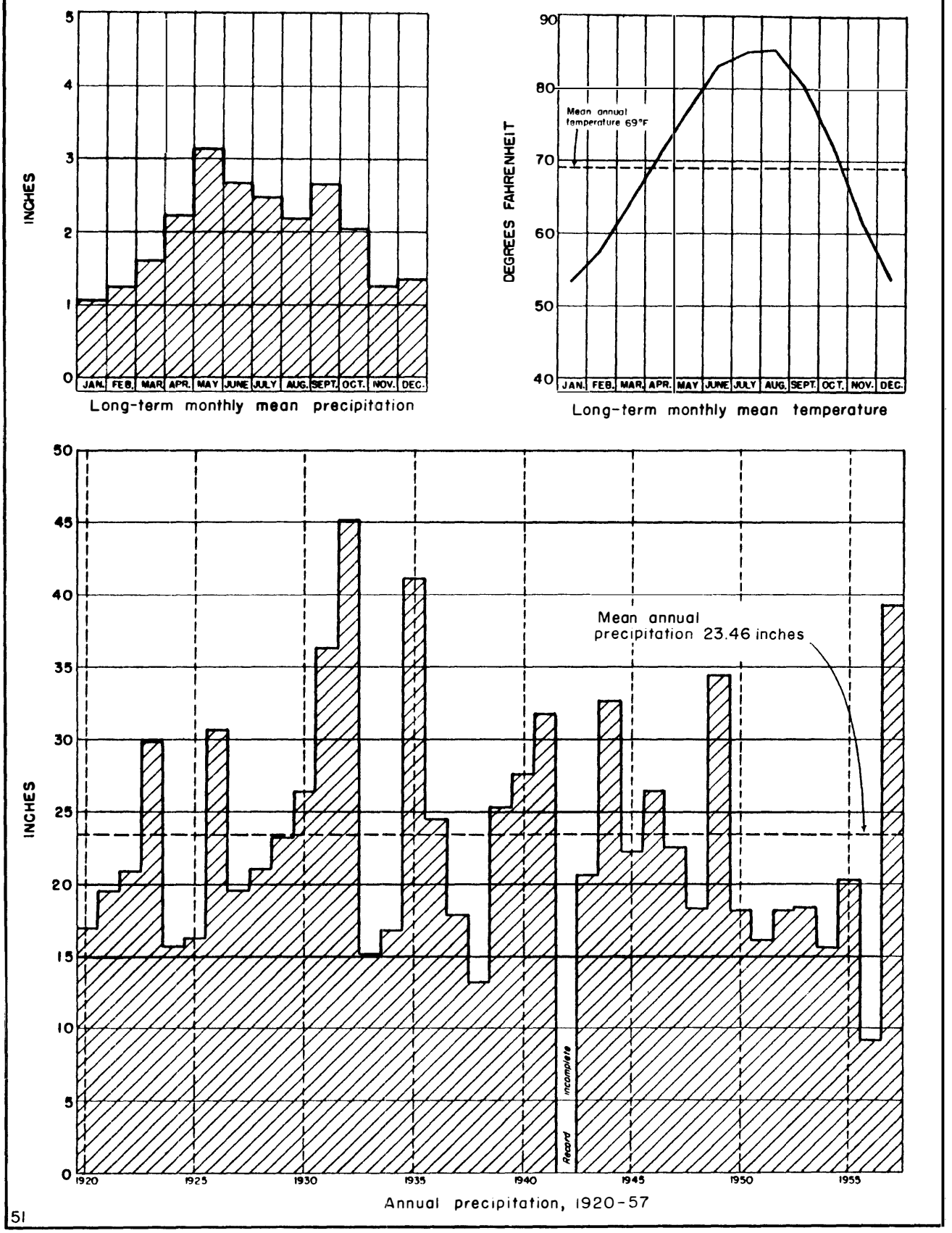

FIGURE 2.– Precipitation and temperature at Uvalde

maximum during the period was about 45 inches in 1932 and the minimum was less than 10 inches in 1956. Figure 2 shows that the precipitation is unevenly distributed throughout the year, most of it occurring during the spring and summer.

GEOLOGY

In Uvalde County, Cretaceous rocks lie on a basement complex of Paleozoic rocks, none of which are exposed in the county. Outcrops of sedimentary rocks, which range in age from Cretaceous to Recent, consist of limestone, chalk, caliche, conglomerate, gravel, sand, silt, shale, and clay. Igneous intrusions of basalt and other basic rocks occur in the forms of plugs, sills, and stocks. Table 1 shows the lithologic character, water-bearing properties, and maximum observed thicknesses of the various formations.

The principal geologic formations from which Uvalde County obtains its water supply are from oldest to youngest: the Glen Rose limestone, the Edwards and associated limestones, Buda limestone, Austin chalk, and Leona formation. The formations crop out in east-west belts across the county; however, the continuity of the belts has been disrupted in places by faulting (Plate 1).

The beds dip generally toward the south and southeast at an angle steeper than the slope of the land surface, and thus the beds are beveled by the land surface. The regional dip of the Edwards Plateau is estimated at 15 to 20 feet to the mile. In the Gulf Coastal Plain the multiple faulting of the Balcones fault zone and a thickening of the formations have increased the regional dip to about 100 feet per mile. In the vicinity of faults or in areas of strong folding the strata may have almost vertical dips.

Rock Formations and Their Water-Bearing Properties

Pre-Cretaceous Rocks

Rocks of pre-Cretaceous age are not exposed in Uvalde County; however, several oil tests have penetrated slate, shale, limestone, and sandstone, all of which are probably of Paleozoic age. In the northeastern part of the county, well B-9-16 reached Pennsylvanian shale at a depth of 1,270 feet. In the north-central part of the county, slate, black limestone, and sandstone of Paleozoic age were found at depths of 1,723 to 3,930 feet in well B-8-1. Near the city of Uvalde, well H-5-199 reached Paleozoic rocks at 3,460 feet. In the southeastern part of the county, well I-4-36 penetrated pre-Cretaceous rocks at a depth of 4,400 feet. No water has been reported from rocks of pre-Cretaceous age in Uvalde County.

Cretaceous System

The lowermost Cretaceous rocks in Uvalde County were deposited upon an eroded surface of Paleozoic rocks from a sea whose margin moved northward during early Cretaceous time. The lower beds are composed principally of sand and conglomerate which are of different ages at different points along the line of advance of the sea. While the marginal sand and conglomerate were being deposited, equivalent beds of shale, limestone, dolomite, marl, and evaporites were being deposited downdip. As a result, a wedge of sediments thickening seaward was built up.

Pre-Comanche Rocks

Prior to 1945 the Cretaceous rocks in Uvalde County were divided into the Comanche and Gulf series, the Travis Peak formation of the Comanche series being regarded as the oldest formation of Cretaceous age. The Travis Peak was believed to be everywhere in direct contact with the underlying Paleozoic rocks. Imlay (1945, p. 1425) presented evidence that a wedge of older strata of Cretaceous age lies between the surface extension of the Travis Peak formation and the Paleozoic rocks downdip from the outcrop of the Travis Peak. He divided the Cretaceous rocks of South Texas into the Coahuila (in Mexico), Comanche, and Gulf series (Table 1). The pre-Comanche rocks were classified as the Hosston and Sligo formations and correlated with the Durango and Nuevo Leon groups of the Coahuila series of Mexico.

Hosston and Sligo Formations

According to logs of several wells in Uvalde County the Hosston formation is composed principally of red sandstone and interbedded layers of shale and limestone. The base of the formation is conglomeratic and rests upon rocks of Paleozoic age. The Sligo formation consists chiefly of limestone and interbedded layers of sandstone and shale.

The Hosston and Sligo together form a wedge that thickens southward. In well B-9-16 the reported thicknesses of the Hosston and Sligo were 349 and 30 feet, respectively. In well H-5-199, near the city of Uvalde, the reported thicknesses were 910 and 210 feet, respectively. The electric log of well I-4-36 indicates about the same thicknesses as in well H-5-199.

Not enough deep wells have been drilled in Uvalde County to determine in detail the stratigraphy and water-bearing properties of the Hosston and Sligo formations. Well I-4-36 draws from these formations, producing saline water; however, some of the water probably comes from the overlying Pearsall formation and Glen Rose limestone. In the north-central part of the county, well H-2-16 penetrated approximately 100 feet of the Hosston formation; however, the well also draws from the Glen Rose limestone and Pearsall formation, and consequently no conclusions can be drawn as to the quantity or quality of the water in the Hosston. Well B-8-21 yields a moderate supply of water from about 85 feet of sand believed to be of Hosston age; however, the water is reported to be too mineralized for human consumption.

From the scanty data available it is probable that the Hosston and Sligo formations will produce only small to moderate quantities of saline water in Uvalde County.

Comanche Series

The Comanche series in Uvalde County is divided into three groups which, from oldest to youngest, are the Trinity, Fredericksburg, and Washita groups.

Table 1.--Rock formations and their water-bearing properties, Uvalde County

System	Series	Group	Formation	Maximum observed thickness (feet)	Lithology	Water-bearing properties
Quaternary	Recent and Pleistocene		Leona formation and alluvium	105	Silt, sand, clay, and gravel.	Yields small to large supplies of water.
Tertiary	Pliocene(?)		Uvalde gravel	20	Silt and coarse gravel.	Not known to yield water in Uvalde County.
	Eocene	Claiborne	Carrizo sand	50+	Coarse- to medium-grained sand and sandstone. Locally cross-bedded. Contains a few quartzite ledges.	Yields small supplies of water.
		Wilcox	Indio formation	200+	Thin-bedded clayey sandstone and shale. Contains lignite and thin beds of bog iron ore.	Yields small supplies of water, which is saline in some areas.
	Paleocene	Midway	Kincaid formation	25	Clay, siltstone, sandstone, and limestone. Thin conglomerate at base.	Not known to yield water in Uvalde County.
Cretaceous	Gulf		Escondido formation	285+	Hard fine-grained sandstone and interbedded shale and clay, some limestone.	Yields small supplies of saline water.
			Anacacho limestone	470	Fine- to coarse-grained limestone alternating with red bentonitic clay.	Yields small supplies of saline water.
			Austin chalk	580	White to buff chalk, marl, and limestone.	Yields small to moderate supplies of water.
			Eagle Ford shale	240	Flaggy limestone and interbedded carbonaceous shale.	Yields small supplies of saline water.
	Comanche	Washita	Buda limestone	100	Hard, massive, fine-grained white to pink limestone; generally contains calcite veins and red and black specks.	Yields small to moderate supplies of water.

(Continued on next page)

Table 1.--Rock formations and their water-bearing properties, Uvalde County--Continued

System	Series	Group	Formation		Maximum observed thickness (feet)	Lithology	Water-bearing properties
Cretaceous (Continued)	Comanche (Continued)	Washita (Continued)	Grayson shale		120	Blue clay, weathers yellow. Contains some thin limestone and abundant Exogyra arietina (Roemer).	Not known to yield water in Uvalde County.
		Fredericksburg	Edwards and associated limestones	Georgetown limestone	400	Hard, massive, cherty limestone.	Principal aquifer in Uvalde County. Yields large quantities of water of good chemical quality.
				Kiamichi formation	210	Flaggy, cherty limestone, black petroliferous shale, some dolomite.	
				Edwards limestone	100	Hard, massive, cherty limestone and some dolomite.	
				Comanche Peak limestone	90	Hard, nodular, light-gray limestone.	
		Trinity	Glen Rose limestone		1,530	Alternating beds of limestone and marl. Thick massive beds of limestone in lower member.	Yields small supplies of water, which are saline in many areas.
			Travis Peak (subsurface Pearsall) formation		440	Sandstone, limestone, and shale.	Probably capable of yielding small supplies of saline water.
	Coahuila of Mexico	Nuevo Leon and Durango of Mexico	Sligo formation		210	Limestone. Some sandstone and shale.	Probably yields small to moderate supplies of saline water.
			Hosston formation		910	Red sandstone and shale. Some limestone and conglomerate.	Do.
Pre-Cretaceous rocks			?		?	Sandstone, limestone, shale, and slate.	Not known to yield water in Uvalde County.

Travis Peak (Subsurface Pearsall) Formation

The Travis Peak (subsurface Pearsall) formation is the oldest of the Trinity group. Imlay (1945, p. 1441) states that the Pearsall formation is the subsurface equivalent of the Travis Peak and suggests that the term Travis Peak be confined to the outcrop. The formation does not crop out in Uvalde County; the nearest reported exposures are near the Guadalupe River in northwestern Comal County (George, 1952, p. 15).

In Uvalde County, the Pearsall formation consists of shale, limestone, and sandstone. The contact with the underlying Sligo formation is sharp and easily picked in well logs, whereas the contact with the overlying Glen Rose limestone is gradational, the contact being arbitrarily placed at the base of the massive limestone of the lower Glen Rose. The Pearsall formation forms a wedge which thickens southward from about 150 feet in well B-9-16 to 440 feet in well H-5-199.

Little is known concerning the water-bearing properties and quality of water in the Pearsall in Uvalde County. The only wells that draw from the formation (H-2-16 and I-4-36) also draw from other strata and the properties observed cannot be attributed entirely to the Pearsall. From observations in southern Bandera County it appears that the Pearsall formation might yield small supplies of saline water to wells in northern Uvalde County.

Glen Rose Limestone

The Glen Rose limestone, the oldest formation exposed in Uvalde County, crops out in valleys in the Edwards Plateau where streams have cut through the overlying Edwards and associated limestones. The estimated thickness of the formation, according to the log of well B-9-16 and surface measurements, is 900 feet in the northeastern part of the county; whereas in well H-5-199 in the south-central part of the county, the formation is 1,530 feet thick.

In Comal County, George (1952, p. 17) arbitrarily divided the Glen Rose limestone into lower and upper members, the division being made at the top of a well-known fossiliferous zone called the Salenia texana zone. A persistent thin limestone bed at the top of the zone is characterized by the presence of numerous Corbula texana Whitney. For this reason the bed throughout south-central Texas is commonly referred to as the "Corbula." In Uvalde County the zone consists of about 20 feet of nodular marl containing many Orbitolina texana (Roemer), Porocystis sp., Trigonia sp., Salenia texana (Credner), Hemiaster sp., and worm tubes. The only known exposure of the zone in Uvalde County is in the northern part of the Sabinal River Valley.

The lower member of the Glen Rose consists chiefly of massive fossiliferous limestone and interbedded layers of marl or shale. The upper member consists of clay and nodular marl alternating with thin beds of impure limestone. The upper member contains two beds of anhydrite, the lower anhydrite bed immediately overlying the Corbula texana bed. In the outcrop the anhydrite beds appear as highly leached, brownish-yellow, distorted dolomitic clay, weathering having removed most of the anhydrite. The anhydrite beds are easily correlated in the subsurface on

electric logs because of the high resistivity of the anhydrite. In the northern part of the county the two zones are about 200 and 400 feet below the top of the formation.

Shallow-water features such as ripple marks, cross-bedding, mud cracks, lignite, and dinosaur tracks are found locally in the Glen Rose limestone. The lithology of the formation is remarkably uniform along the strike and the entire sequence from lower massive limestones through the anhydrite zones and thin limestones of the upper member is stratigraphically persistent along strike from Uvalde County northeastward at least to Hays County.

Because of the difference in the resistance to erosion of the marl and limestone layers, the Glen Rose limestone forms a characteristic terrace or stair-step type topography. Along the Nueces River near the Edwards County line, about 350 feet of the upper Glen Rose forms stair-step slopes rising to the overlying limestones of the Fredericksburg group.

The sharp contact of the upper Glen Rose limestone with the overlying Comanche Peak limestone is probably a disconformity. The contact is easily recognized in the subsurface in well cuttings and on electric logs by the lower resistivity of the Glen Rose (Plates 3 and 4). The difference between the rock types of the two formations is seen at exposures where the light-gray limestone of the Comanche Peak rests on the dark-gray to blue shale and marl of the Glen Rose.

In the Edwards Plateau, the Glen Rose limestone supplies small but sufficient quantities of water for domestic and stock use; elsewhere in the county the water in the Glen Rose is probably too saline for most uses. The quality of the water from the Glen Rose differs widely. Water from the deeper wells is generally saline whereas water from springs or shallow wells is hard but otherwise of good quality. The two anhydrite beds in the Glen Rose yield water that is high in calcium sulfate content, and the two beds should be cased off in wells penetrating them; otherwise the water produced may be too saline, at least for domestic uses.

Fredericksburg and Washita Groups

The Fredericksburg group in Uvalde County includes, in ascending order, the Comanche Peak limestone, the Edwards limestone, and the Kiamichi formation. The Walnut clay, the lowermost formation of the Fredericksburg group, is probably absent in the county. The Washita group includes the Georgetown limestone, the Grayson shale, and the Buda limestone.

The contacts between the Edwards limestone, the Kiamichi formation, and the Georgetown limestone have not been mapped in Uvalde County and the formations are shown as a unit on the geologic map (Plate 1). The three formation names as used in this report represent rock units and the units may not be strictly correlative with the formations at their type localities.

The Comanche Peak, Edwards, and Georgetown limestones were considered as a single hydrologic unit and referred to as the Edwards and associated limestones by Petitt and George (1956, p. 16). The term Edwards and associated limestones as used in this report includes all formations from the top of the Glen Rose limestone to the base of the Grayson shale.

Comanche Peak Limestone

The Comanche Peak limestone consists chiefly of hard, light-gray, nodular limestone 60 to 90 feet thick. The limestone contains tubes formed by boring organisms, the tubes being filled with pellets of softer material. The nodular appearance of the formation is its most distinctive characteristic (Figure 3).

The Comanche Peak limestone crops out as a thin cap on hilltops or as a belt along the valley walls in the southern part of the plateau where it is capped by the overlying more massive Edwards limestone. The formation forms a rather even slope, slightly steeper than that of the gentle, stair-step slope of the underlying Glen Rose limestone. The fossil Exogyra texana Roemer occurs throughout the formation but is more abundant in the lower part.

The Comanche Peak limestone is not distinguished from the overlying Edwards limestone by well drillers; consequently, the water-bearing properties of the formation itself are not well known. The properties of the Edwards and associated limestones, which includes the Comanche Peak, are discussed later in this report.

Edwards Limestone

The Edwards limestone is composed of massive lithographic to medium-grained limestone and a few beds of dolomite, the total thickness ranging from 50 to 100 feet. Chert is found in a few places in the limestone. The limestone contains miliolid foraminifera, rudistids, and small slender gastropods, probably Turritella sp., which, with Gryphaea mucronata Gabb, are common in the upper 20 feet (Figure 3). The miliolid limestone is harder, more massive, and contains fewer bore tubes than the Comanche Peak limestone. A prominent basal ledge in the Edwards served as a mapping horizon in Uvalde County. Like the underlying Comanche Peak limestone, the Edwards crops out chiefly in stream valleys in the southern part of the Edwards Plateau.

The Edwards limestone is an important part of the Edwards and associated limestones aquifer. The water occurs chiefly in solution openings. Individual limestone beds are massive and competent and, consequently, are highly susceptible to fracturing and jointing associated with faulting. Secondary solution along the joints and fractures has created a cavernous and honeycombed structure in many areas.

The yields of wells in the Edwards range between wide limits. In the area of the Edwards Plateau most wells yield only a few gallons per minute and in some places the Edwards is non-productive. For example, wells H-1-5 and H-1-12 were drilled through cavernous limestone in the lower part of the Edwards but produce only from the underlying Glen Rose limestone. The small yields on the plateau result from a thin saturated section. This, in turn, results from rapid drainage of the Edwards through springs, especially where the formation is topographically higher than adjacent stream beds.

South of the Edwards Plateau the Edwards limestone is completely saturated and the water occurs under artesian pressure. Here the yields of wells are much greater than on the plateau. Well H-4-71 yields 420 gpm (gallons per minute) and well H-2-28 yields 1,000 gpm. These wells draw from the Edwards and associated limestones but most of the water probably comes from the Edwards itself.

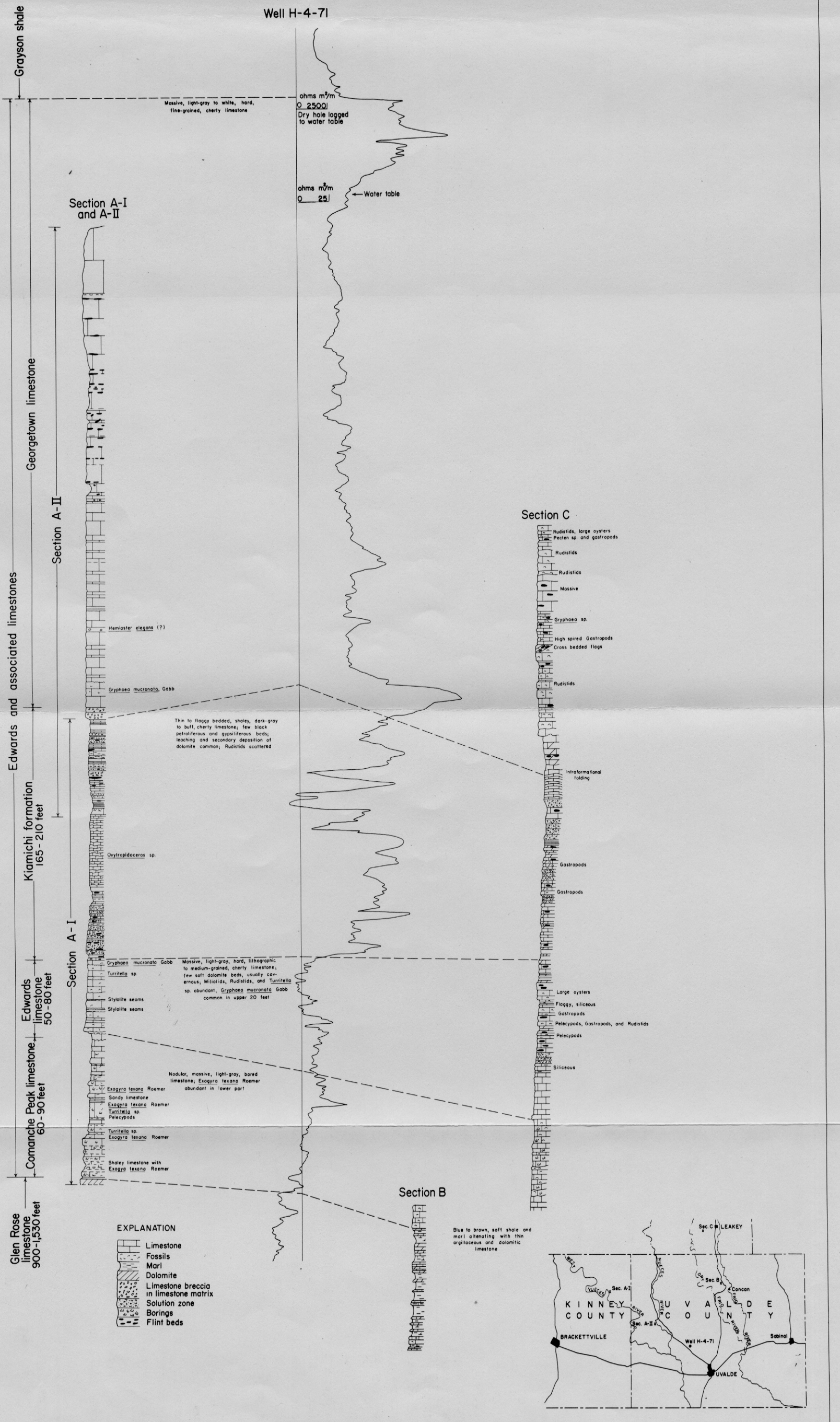

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Figure 3.—Stratigraphy and lithology of the Edwards and associated limestones, Uvalde County and adjoining areas

Kiamichi Formation

Overlying the Edwards limestone and cropping out in the northwest part of the county is a formation that is tentatively referred to as the Kiamichi formation. The Kiamichi consists of thin to flaggy, dark-gray to buff, leached, petroliferous limestone containing bedded and nodular flint and zones of solution breccia (Figure 3). In the upper half of the formation are several layers of black petroliferous shale. Intraformational folding may indicate the former presence of anhydrite which was later altered to gypsum, the folding being caused by the volumetric increase involved in the alteration of anhydrite to gypsum. At or near the outcrop the removal of the gypsum through weathering has left leached zones up to 5 feet thick. Downdip the gypsum content increases as does the thickness of the flaggy limestone. In the subsurface the Kiamichi formation is identified by the dark sulfurous petroliferous nature of the drill cuttings and by high resistivity in electric logs (well H-5-202, Plate 3).

The Kiamichi formation crops out in the Edwards Plateau where it forms gentle topographic slopes having prominent vegetation zones. Fragments of Gryphaea sp. and Oxytropidoceras occur rarely in the flaggy beds. The upper contact of the Kiamichi is placed at a limestone breccia about 10 feet thick.

The observed thickness of the Kiamichi in Uvalde County ranges from 155 feet in the outcrop to 210 feet in well H-5-202.

In the eastern and northeastern parts of the county the Kiamichi appears to lose its distinctive features; the flaggy beds interfinger with thicker limestone and dolomite beds that have not been distinguished from overlying and underlying beds. Electric logs of well I-1-17 and I-4-36 show many thin beds having high resistivities but no well-defined zone of high resistivity as in the western part of the county. The geologist's log of well H-3-23 suggests that the flaggy beds of the Kiamichi grade eastward into a reeflike miliotic limestone.

The water-bearing properties of the Kiamichi formation are not well known because the overlying Georgetown limestone also supplies water to most wells drilled to the Kiamichi. In general, in wells in which the Kiamichi is included in the producing section, the water is higher in sulfate content than in wells that draw only from the Georgetown. For example, well G-9-3 produces saline water having a high sulfate content most of which probably comes from the Kiamichi. Near Uvalde, however, wells H-5-207, H-5-144, and H-5-192 penetrated the Kiamichi and the quality of the water is good.

Georgetown Limestone

Near the city of Uvalde in well H-4-71 the flaggy beds of the Kiamichi formation are overlain by about 380 feet of fine-grained white limestone containing flint, which in this report is referred to as the Georgetown limestone. In the vicinity of Chalk Bluff on the Nueces River 17 miles northwest of Uvalde, 320 feet of the Georgetown is exposed. Here the limestone contains flint beds and large nodules in the interval between 140 and 275 feet above the base of the formation. The lower 8 feet of the section consists of a matrix of fine-grained limestone containing angular fragments of sandy limestone as much as 3 inches long (Figure 3). The presence of similar limestone at a point 15 miles northwest of Chalk Bluff suggests a disconformity. The breccia is assumed to be the base of the Georgetown. Near Leakey in Real County (Figure 3) rudistid reefs are common in the Georgetown but disappear westward. Near the southern edge of the plateau

the white limestone of the Georgetown caps the highest hills, forming prominent cliffs which contrast with the darker, gentler slopes of the underlying formations.

The thickness of the Georgetown could not be determined on the outcrop; however, in the subsurface the thickness ranges from about 310 to 400 feet (Plate 3).

The Georgetown is highly fossiliferous in places, especially in the upper 100 feet of the formation. Kingena wacoensis (Roemer), Pecten sp., and large echinoids are common. Rudistids, chiefly Caprina and Toucasia, are found in many beds. Small spherical bodies that appear to be oölites are common.

The contact of the Georgetown with the overlying Grayson shale is easily discernible both in the subsurface and on the surface. In the subsurface the contact is shown by the prominent change in the resistivity curve of electric logs (Plates 3 and 4) and by the rapid change from limestone to shale in drillers' logs. On the surface the contact can be placed within a vertical interval of about 5 feet wherein the limestone of the Georgetown becomes progressively argillaceous and grades into the overlying Grayson shale.

Hydrologically the Georgetown limestone is the most important unit of the Edwards and associated limestones. Most of the large-supply wells in the county produce chiefly from the Georgetown. Where artesian conditions prevail, wells need be drilled no deeper than about 200 feet below the top of the formation to obtain large quantities of water.

Grayson Shale

The Grayson shale conformably overlies the Georgetown limestone and crops out in an irregular belt in the southern part of the Balcones fault zone and along a structural uplift east of Uvalde. Several small patches occur in down-dropped fault blocks in the Edwards Plateau (Plate 1).

The Grayson is predominantly a blue clay that weathers to yellow or yellowish brown. Pyrite nodules and thin beds of limestone are scattered throughout the formation. A characteristic fossil Exogyra arietina (Roemer), a small oyster shell shaped like a ram's horn, is abundant in the formation, especially in the lower part. In some places the shells are cemented into calcareous layers 1 to 6 inches thick. Because of the difference in lithology, fossil content, and electrical properties, the Grayson is easily distinguished from the underlying Georgetown limestone and overlying Buda limestone.

The yellow clay zone of the Grayson shale forms a characteristic light colored slope below the protecting resistant Buda limestone which is conspicuous on aerial photographs. The upper part of the slope, generally steep, is sparsely vegetated and has a thin veneer of shells and pyrite nodules that have weathered out of the clay and limestone beds. Gypsum is commonly found disseminated in the clay and as a coating on the shells. The lower part of the slope is a gently sloping or nearly flat surface generally mantled by alluvium.

The thickness of the Grayson ranges from about 70 feet near Sabinal to 120 feet at the Kinney-Uvalde County line (Plate 3). The average thickness in the vicinity of Uvalde is about 90 feet.

The Grayson shale is a confining layer that overlies the Georgetown limestone. It is not an aquifer in Uvalde County.

Buda Limestone

The Buda limestone, uppermost formation of the Comanche series, lies conformably on the Grayson shale and is overlain unconformably by the Eagle Ford shale of the Gulf series. The Buda crops out chiefly in the southern part of the Balcones fault zone, on the Frio River south of Knippa, in isolated spots east and south of Uvalde, and along the Nueces River west of Uvalde. Because of its resistance to erosion, the Buda limestone crops out in many places as low wooded hills and ridges or as caps on hills and bluffs protecting the underlying easily eroded Grayson shale. The Buda is a massive limestone between two formations composed chiefly of shale, and the upper and lower contacts are distinctive and easy to recognize. The thickness varies from about 70 feet near Sabinal to 100 feet near the Kinney-Uvalde County line (Plate 3).

The Buda limestone characteristically is a dense, very fine-grained, massive limestone. Its color ranges from white to gray to pink; the weathered surface is generally smooth and light gray or brown, but may have a white nodular appearance where exposed in stream banks. The limestone is brittle and breaks into small angular pieces having smooth or slightly conchoidal surfaces. The fresh surface has a porcelaneous texture, many small red and black specks, and veins of crystalline calcite.

Near the city of Uvalde the Buda furnishes moderate quantities of water of good chemical quality for domestic and irrigation use. Elsewhere in the county the Buda produces only small quantities of water.

Gulf Series

Eagle Ford Shale

The Eagle Ford shale consists chiefly of laminated blue to black carbonaceous shale and thin beds of flaggy limestone which are fossiliferous in places. The lower 40 feet, exposed in the Sabinal River Valley east of well H-3-23, is composed of brown weathered shale and a few flaggy limestone beds lying unconformably on the Buda limestone. The nearby contact with the overlying Austin chalk also is probably an unconformity. The contact with the underlying Buda limestone is sharp and easily distinguished. The upper contact is less easily distinguished because the upper part of the Eagle Ford contains a large proportion of limestone that closely resembles the lowest part of the overlying Austin chalk. The best exposure of the Eagle Ford is at the shale and limestone cliff, about 80 feet high, that forms the west bank of the Nueces River about 2 miles north of the Southern Pacific Railroad bridge. A mile farther north the contact with the underlying Buda is well exposed.

Electric logs show that the formation thickens progressively westward from about 75 feet near Sabinal to about 240 feet near the Kinney County line (Plate 3).

The Eagle Ford yields small quantities of saline water in Uvalde County.

Austin Chalk

The Austin chalk unconformably overlies the Eagle Ford shale and, in turn, is overlain unconformably by the Anacacho limestone. The Austin consists chiefly

of white to buff chalk, marl, and limestone. In the outcrop area the Austin consists generally of massive beds of limestone in the lower part, becoming thin-bedded, chalky and marly in the upper part. The Austin is very fossiliferous and in several places the formation is composed principally of shells.

On the Sabinal River north of Sabinal, the upper part of the Austin consists of 90 feet of moderately hard white chalk exposed in a steep west-facing bluff of the river. The chalk is overlain by about 30 feet of soft chalk and marl which form a gently sloping bench. For mapping purposes the upper contact of the Austin was placed at the top of the marl section immediately underlying the red bentonitic clay of the Anacacho limestone. Details of the stratigraphy and lithology of the Austin are shown in Figure 4.

Near Sabinal the Austin is about 275 feet thick and, like the older formations, progressively thickens westward across the central part of the county to about 580 feet in well G-9-3 (Plate 3).

The Austin chalk yields small to moderate quantities of water to wells in areas in which it crops out and a short distance downdip from these areas. The Austin yields large quantities of water to a few shallow wells in the area between the Nueces and Leona Rivers southwest of Uvalde and in the valley of Turkey Creek near Cline. Near Uvalde the Austin furnishes water for irrigation from wells H-4-59 and H-5-164.

Anacacho Limestone

In Uvalde County the Taylor marl is represented by a series of calcareous, argillaceous and, in places, pyroclastic clays and marls interfingering westward with limestone. Hill and Vaughan (1898b, p. 240-241) named the limestone facies the Anacacho from exposures in the mountains of that name in southeast Kinney and southwest Uvalde Counties. No further subdivision is attempted in this report, the entire group being mapped and discussed as the Anacacho limestone.

In most places in Uvalde County, the lower beds of the Anacacho limestone consist of rusty-red clayey beds which may be water-laid volcanics (Hazzard, 1956, p. 58). The clayey beds are overlain by beds of fine- to coarse-grained limestone alternating with clay strata. Some of the limestone is coquinal. A study of cuttings from well G-9-3 shows that the clay beds are bentonitic, apparently having been deposited as water-laid volcanics. The interbedded limestones contain asphalt; the asphalt is quarried in the western part of the county. The Anacacho is fossiliferous in many places, the fossils being principally cephalopods, mollusks, and echinoids. Details of the stratigraphy and lithology of the Anacacho are shown in Figure 5.

The range in thickness of the Anacacho was not determined; however, in well G-9-3 the thickness was at least 470 feet.

The Anacacho limestone yields small quantities of water, most of which is saline. The bentonitic clay beds in the formation tend to absorb water and to swell during drilling; therefore, they must be cased off to prevent caving.

Escondido Formation

The Escondido formation, as used in this report, includes all the strata between the Anacacho limestone and the rocks of the Midway group. The Escondido

Texas Water Commission in cooperation with the
U.S. Geological Survey and the city of San Antonio

Figure 4

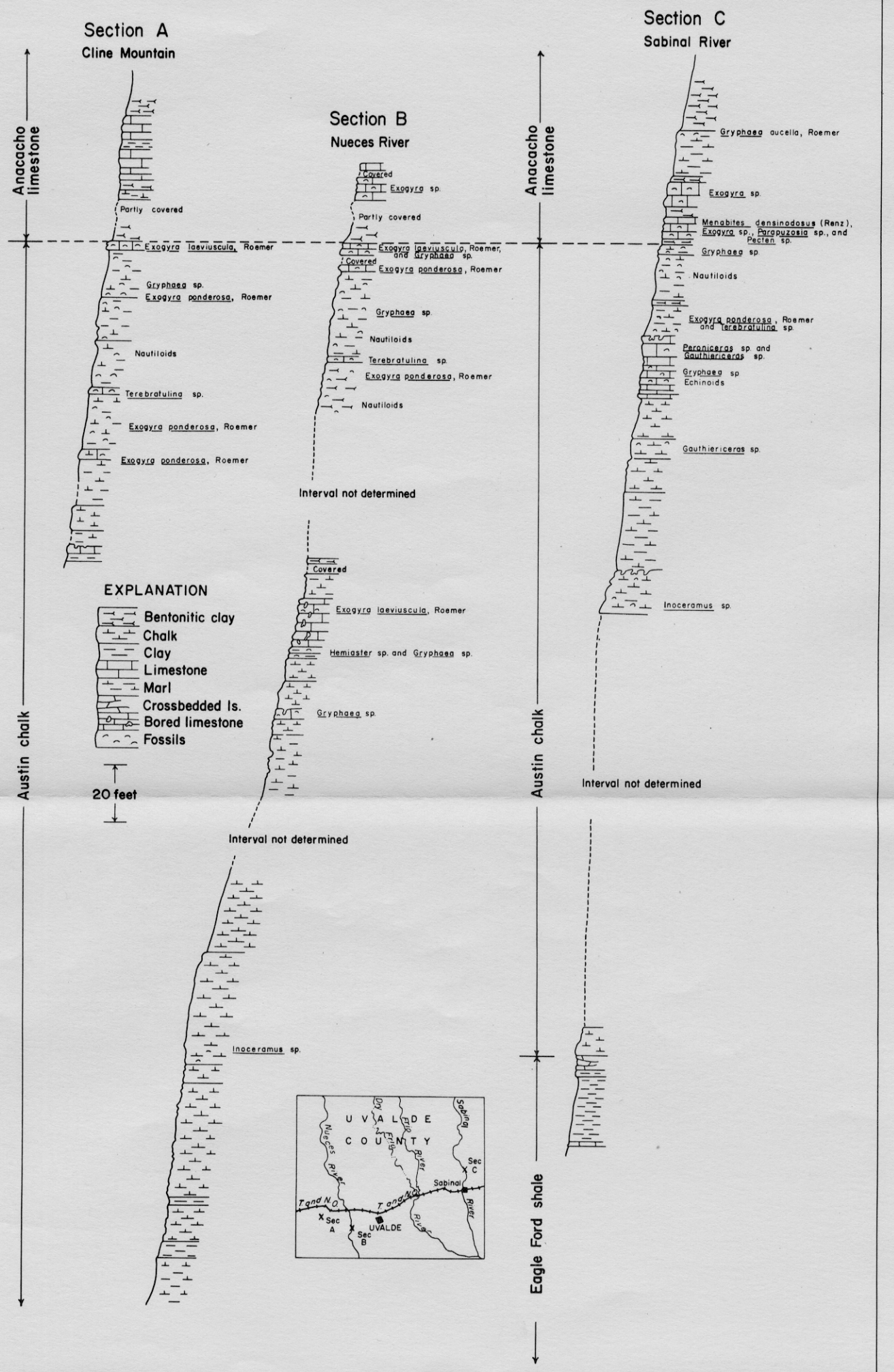


FIGURE 4.— Stratigraphy and lithology of the Austin chalk, Uvalde County

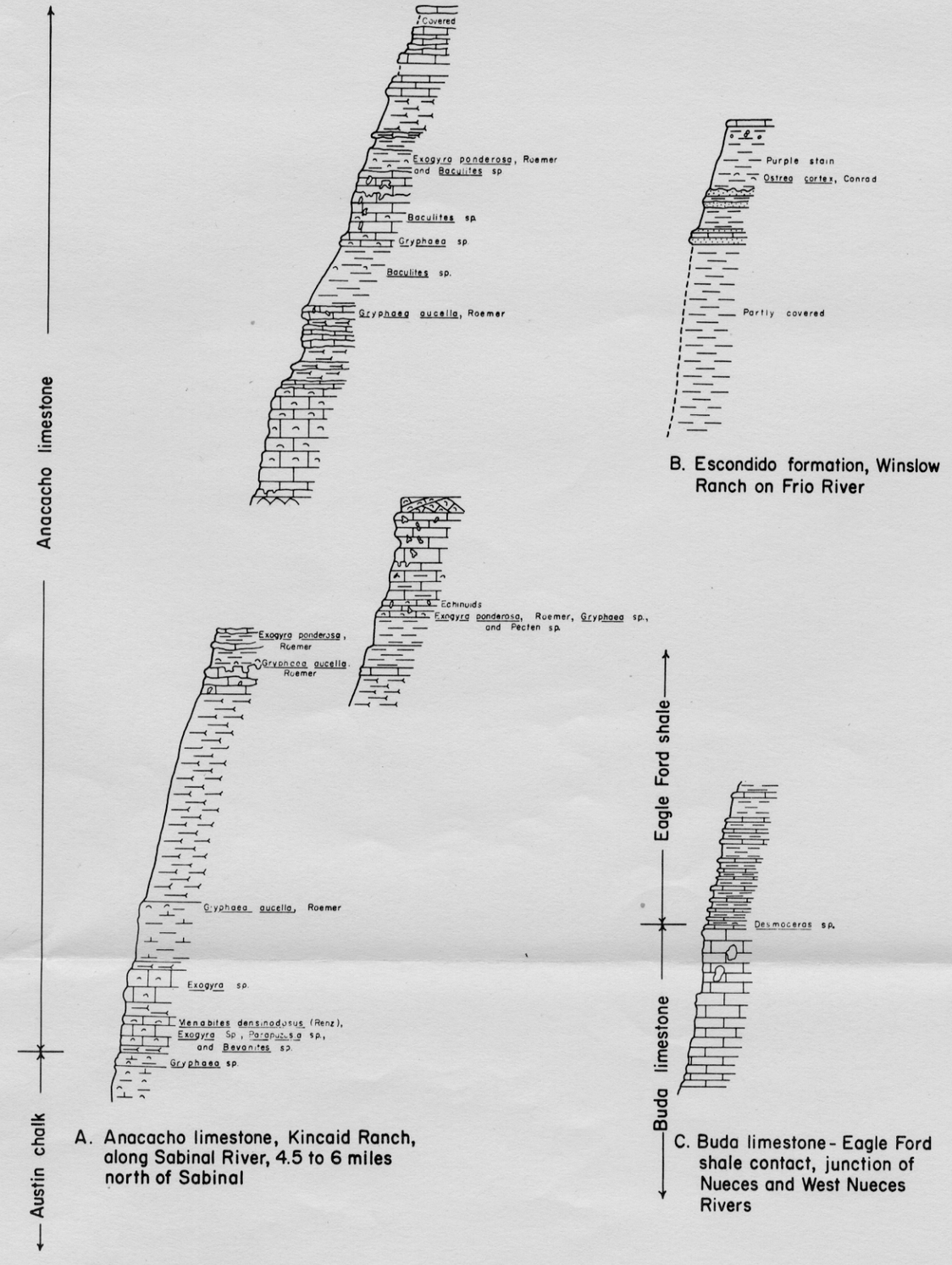


FIGURE 5.— Stratigraphy and lithology of rocks of the Gulf series, Uvalde County

overlies the Anacacho conformably, the contact being gradational. The contact with the overlying Midway group represents the unconformity between Cretaceous and Tertiary rocks (Figure 6). The Escondido is poorly exposed in Uvalde County; however, the few exposures show that the formation consists chiefly of hard fine-grained sandstone and interbedded shale and clay, some of which contains pyroclastic material. An outcrop at the old crossing of the Nueces River (Pulliam Bridge) consists of fine-grained asphaltic sand overlain by a strongly cemented limestone bed containing Ostrea cortex Conrad. A thick clay sequence, which contains sandy beds overlain by a thin clay zone containing Ostrea cortex forms the west valley wall of the Frio River downstream from Black Waterhole. Details of the lithology of the upper part of the Escondido are shown on Figure 6.

The thickness of the Escondido formation was not determined. The log of well H-9-9 shows 285 feet of Escondido; however, it is not known if the full section was present. According to Holt (1959, p. 32) the Escondido is about 550 feet thick in southwestern Medina County.

The Escondido formation yields small quantities of saline water to a few wells in Uvalde County.

Tertiary System

Paleocene Series

Midway Group

Kincaid Formation

Vaughan (1900, p. 2) described sandstone and clay beds on the Kincaid Ranch in the lower Frio River Valley in Uvalde County as Eocene in age and named them the Myrick formation. Later, Gardner (1933, p. 78) reclassified the beds as the Midway group of the Paleocene series and named them the Kincaid formation.

The Kincaid formation in Uvalde County consists chiefly of clay and siltstone and lesser amounts of fine-grained sandstone and fossiliferous limestone. A thin glauconitic conglomerate containing shell fragments and sharks teeth is found at the base of the formation. Details of the lithology of the Kincaid are shown in Figure 6.

The maximum exposed thickness of the Kincaid is about 25 feet on the northward-facing slope of Elm Creek near its junction with the Sabinal River. The exposure thins westward to about 11 feet at the Nueces River and is completely overlapped within a mile northward where the overlying Indio formation rests directly on the Escondido. The thickness of the Kincaid in the subsurface was not determined.

The Kincaid formation is not known to yield water to wells in Uvalde County.

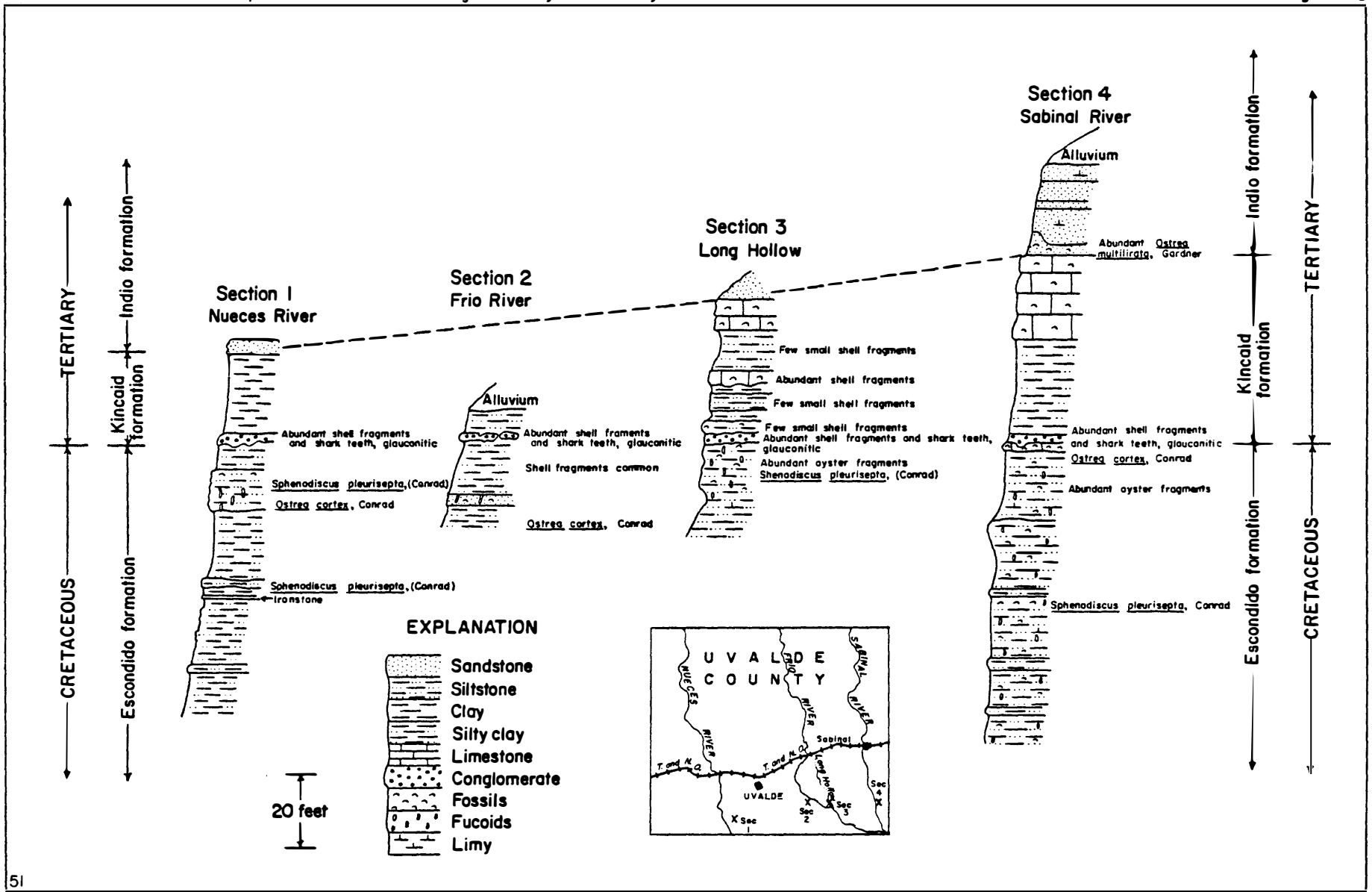


FIGURE 6.–Stratigraphy and lithology along the Cretaceous-Tertiary contact, Uvalde County

Eocene Series

Wilcox Group

Indio Formation

The Indio formation of the Wilcox group unconformably overlies the Kincaid formation and overlaps it completely in the southwestern part of Uvalde County. The formation is poorly exposed in Uvalde County, the best exposures being along the Frio and Sabinal Rivers and in the high bluffs along the Nueces River in Zavala County.

The Indio formation is chiefly nonmarine in origin and consists of lenticular, thin-bedded clayey light-gray to buff sandstone and sandy shale. In some places it contains thin beds of lignite and bog iron ore. The sandstone is poorly cemented, except in a few places where well-cemented massive cross-bedded calcareous sandstone ledges occur.

The complete thickness of the Indio was not determined; however, it is estimated that 150 to 200 feet of the formation is exposed in various places along the Frio and Sabinal Rivers.

The Indio yields only small quantities of water, used chiefly for domestic and stock purposes. In many areas it yields only saline water.

Claiborne Group

Carrizo Sand

The Carrizo sand of the Claiborne group unconformably overlies the Indio formation and crops out in the southeastern part of the county. The Carrizo consists of poorly cemented coarse- to medium-grained nonmarine sandstone containing sandy shale lenses. The sandstone beds are thicker than those in the Indio and locally are moderately to strongly crossbedded. The sandstone is generally light gray on the fresh surface but weathers to yellow or tan. Ledges of well-cemented ferruginous sandstone and quartzite are exposed in places along the Frio River. The total thickness of the Carrizo was not determined, but it is estimated that the maximum exposed thickness in the county is about 50 feet.

The Carrizo sand yields small quantities of water of good chemical quality for domestic and stock use in Uvalde County. In Zavala County where the formation is 170 feet in thickness, the formation yields large quantities of water for irrigation.

Pliocene(?) Series

Uvalde Gravel

The Uvalde gravel was named by Hill (1891, p. 366-370) after the upland gravel and silt deposits in the vicinity of the city of Uvalde. According to Sayre (1936, p. 67) the Uvalde was deposited by southward-flowing streams either in late

Pliocene or early Pleistocene time. In most places removal of fine-grained material and weathering have reduced the original alluvial unit to residual gravel, occurring either as loose pebbles and cobbles or gravel embedded in caliche. In the area between the Nueces and Leona Rivers southwest of Uvalde the formation contains enough fine-grained and silty material to provide a soil suitable for cultivation.

After the Uvalde gravel had been deposited, uplift in the area rejuvenated the streams and caused them to dissect the formation and cut into the underlying bedrock. As downcutting continued the Uvalde stood progressively higher above stream level and the water table was progressively lowered. Much of the water was discharged by seepage and capillary action and was evaporated as it was discharged, the evaporation resulting in the deposition of caliche. The pebbles and cobbles composed of limestone were rather easily dissolved by the percolating water, whereas the flint cobbles were more resistant, so that now some of the Uvalde remnants consist of thin sheets of flint gravel. In many places, where the gravel has been exposed to weathering, it has a typical red, desert-varnish type of ferruginous coating. The various stages of alluvial weathering of the Uvalde are shown in places where loose red flint gravel grades downward into white, caliche-cemented, flint and limestone gravel.

Small hills capped by residual gravel mapped as Uvalde rise above the cultivated plains between the Nueces River and the city of Uvalde. Other gravel remnants lie on the divide between the Leona and Frio Rivers, in the area immediately east of the Blanco River, and on hills flanking the lower part of the Sabinal River. Just east of the Medina-Uvalde County line, an area of Uvalde gravel, which reaches an altitude of 1,000 feet, forms a widespread plain topped with fine dark soil.

The Uvalde gravel does not occur at a specific altitude in different places but is found at various levels, all above the present streambeds. The exact thickness of the Uvalde was not determined; however, the formation is thin, the maximum thickness probably being less than 20 feet. Because of its thinness and high topographic position, the Uvalde is not water bearing in Uvalde County.

Quaternary System

Pleistocene and Recent Series

Leona Formation and Recent Alluvium, Undifferentiated

Hill and Vaughan (1898b, p. 254) applied the name Leona formation to "the deposit making the first wide terrace of the Nueces and Leona Rivers, below the level of the Uvalde formation, and for the flood-plain deposit extending westward from Uvalde on the Leona to the Nueces River." Although they exclude from this definition "a smaller terrace, some 10 to 20 feet below the Leona terrace level," for purposes of this report, all alluvium younger than the Uvalde gravel, including Recent alluvium, is mapped as a unit and called Leona. From a study of profiles across the principal streams in Uvalde County, it is apparent that the alluvium occupies terraces that lie at many different levels in the county and that a term such as the Leona formation used to describe the terrace is inclusive rather than being confined to a particular topographic position or specific geologic time

interval. In the following discussion several terraces are discussed but they are to be considered as part of the Leona formation.

Hydrologically the most significant areas of the Leona formation are those in the Leona River Valley itself and in the area between the Nueces and Leona Rivers. South and west of Uvalde, Vaughan (1900, p. 3) noted that "the old flood plains of the Nueces and the Leona Rivers were in free communication across a strip of country about 4 or 5 miles wide." The strip is bounded on the south by highlands of the Cretaceous strata capped by Uvalde gravel. Geologic evidence indicates that during late Pleistocene time the Nueces River flowed across this strip through the lowland now occupied by Garmon Slough, entering the present Leona River Valley south of Mount Inge.

The ancient Nueces River formed a large meander loop cutting a scarp southward into the Austin chalk in the unnamed hill northeast of Tom Nunn Hill, the old north-facing cutbank being still preserved. During flood stage the river was diverted at this point into a smaller southward-flowing stream of higher gradient. During subsequent floods more and more water was diverted from the ancient Nueces into the modern Nueces Valley. Eventually the river cut the canyon-like gap through the Austin outcrop northeast of Tom Nunn Hill, the gap area presently being the minimum width of the modern Nueces flood plain in the county. The increased flow southward down the new course of the river made less water available for flow southeastward into the Leona Valley. As the flow into the Leona Valley decreased, the carrying power of the stream likewise decreased and the old channel began to fill with clay and silt, ultimately forming a clay confining layer overlying the older coarse gravelly material. Later a small southward-flowing stream, the present Leona River, flowed over the old clay fill cutting the narrow channel which is the present course of the Leona River. The point of intersection of the tributary and the abandoned Pleistocene Nueces River channel is near the crossing of U. S. Highway 90 and the Leona River. The riverbed is wide and shallow north of the intersection, but at a point about 500 yards downstream from the bridge the channel narrows and deepens and maintains steep channel walls. The material in the channel walls consists of firm yellow silty clay containing scattered fossil bones. Downstream the yellow clay becomes more persistent and is found also in the bed of the river. The Leona River flows on the yellow clay except in a few places where it has cut into the underlying gravel. At these points ground water emerges as springflow when the gravel is saturated (Livingston, 1947, p. 13).

The relation of the Leona River to the Leona formation is shown in Plate 5. The river is underlain by a large underflow conduit of gravel as much as 35 feet thick and 10,000 feet wide, which is overlain by a confining layer of yellow silty clay. Thus, the gravel is, for practical purposes, hydrologically independent of the river except at the spring sites. When saturated, the gravel acts as an artesian aquifer because of the presence of the overlying confining layer of clay, but during periods of low water levels, water-table conditions prevail.

Large supplies of water are pumped from the Leona formation in the Leona River Valley and much of the water is used for irrigation. In 1946 the Leona furnished water sufficient to irrigate 1,950 acres in Uvalde County (Livingston, 1947, p. 5). The most productive wells are near the center of the valley where the gravel is deepest and thickest. Where the gravel thins near the edges of the valley, the wells are unreliable during periods when the water table is low.

In the vicinity of the city of Uvalde and in the plains area to the west, the Leona formation rests on highly permeable limestones of Cretaceous age, chiefly the Buda limestone and Austin chalk. During times of low water levels in the

limestones, water entering the overlying Leona percolates into the limestones. Because of this, wells in the Leona are unreliable in this area during periods of drought.

At a point about 1 mile south of Mount Inge, faulting has downthrown the Cretaceous formations to the south so that the Leona formation is underlain by relatively impermeable serpentine and Upper Cretaceous and younger formations. In this area the underlying formations act as a confining layer and the wells here are relatively more reliable during periods of drought.

The Leona formation yields water to wells in several other areas in the county. The area west and southwest of Uvalde between the Leona and Nueces Rivers is underlain by clay and gravel of the Leona formation, in places exceeding 100 feet in thickness. The formation yields water to wells in this area in times of high water table; however, in times of drought most of the wells go dry. A large area of Leona formation occurs along the Frio River where the formation is more than 70 feet thick in places and yields potable water to small-supply wells. This area has not been tested for large supplies; however, such supplies might be available in the area south of U. S. Highway 90 where the Leona is underlain by relatively impermeable Upper Cretaceous formations. Other areas that yield small quantities of water from the Leona formation occur along the lower reaches of the Blanco and Sabinal Rivers.

Igneous Rocks

Intrusive igneous rocks occur in many places along the Balcones fault zone and they are particularly abundant in Uvalde County. The igneous masses occur in many forms but volcanic plugs, dikes, and sills are the most common.

The igneous rock types are basalt, phonolite, serpentine, and possibly volcanic ash. The most common type is basalt which is resistant to erosion and forms prominent hills, mostly south of the Edwards Plateau.

Along the south edge of the Edwards Plateau veins of siderite, limonite, and kaolin are found in the Glen Rose and Edwards limestones and small amounts of silver, gold, and other minerals are reported by Vaughan (1900, p. 5). The veins probably are products of liquid or gaseous emanations from parent magmatic bodies.

The rocks locally referred to as serpentine consist of soft, green to yellow, claylike material, which is probably an alteration product of basalt. Greenwood (1956, p. 171) described samples of serpentine collected in Uvalde County as follows:

"Specimens selected for thin-section study range from the altered margin of the alkali peridotite, patently an igneous rock, through massive earthy material of uncertain origin, to stratified rocks which are clearly marine sediments. The microscope reveals relic igneous textures reminiscent of the peridotite in all specimens, but the degree of alteration is frequently unrelated to the megascopic appearance of the specimen and its proximity to fresh igneous rock...All sections show psuedomorphs after olivine...An x-ray diffraction powder photograph on hand-picked grains showed the characteristic pattern of a montmorillonoid...The groundmass, amounting to 75-90 percent of the rock, consists mainly of murky cryptocrystalline material with relics of brown hydrated glass corresponding to palagonite..."

The soft serpentine material crops out commonly in stream beds and is found in great thicknesses in the subsurface. It is fairly easy to drill through except where intruded by basaltic sills and dikes. It does not cave as easily as may be expected although casing generally is used as a precautionary measure.

Dating the igneous activity along the Balcones fault zone has been a matter of considerable speculation. Vaughan (1900, p. 5) first thought it was confined to Eocent time but later workers believed that most of the activity took place during Late Cretaceous time (Sayre, 1936, p. 28). The earliest evidence of igneous activity observed by the writers is a small amount of possibly bentonitic clay in the Eagle Ford shale. Thin beds of red bentonitic clay in the upper part of the Austin chalk in the Sabinal River Valley (Figure 4) may be igneous in origin. The presence of bentonitic clay in the Anacacho limestone and Escondido formation certainly indicates igneous activity during Late Cretaceous time.

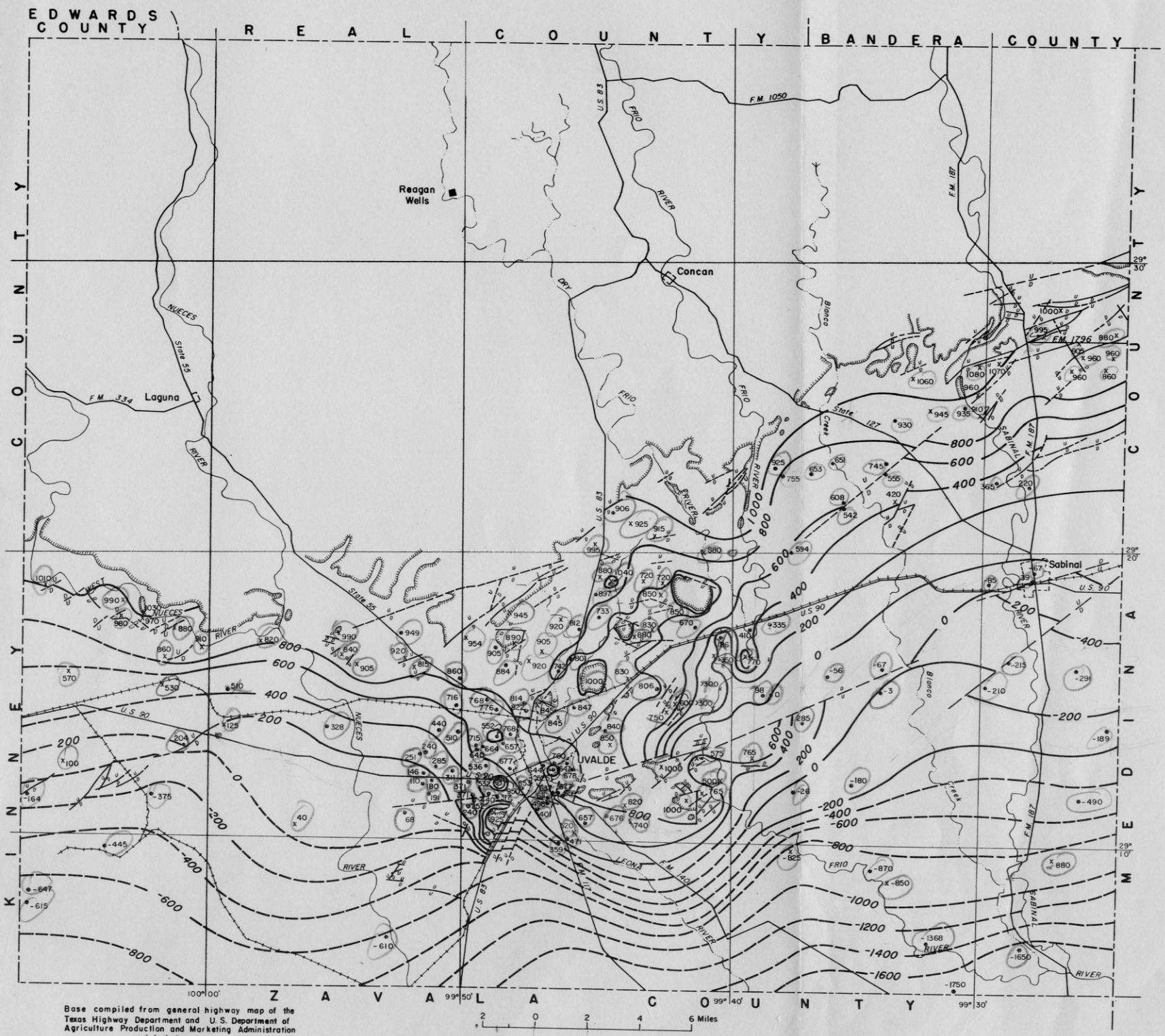
Basalt and serpentine were penetrated in many wells throughout the county. In water wells H-4-91, H-5-255, and H-6-58, which are unproductive, the serpentine is several hundred feet thick. In others, such as H-4-38, H-4-48, and H-5-174, the drillers report several tens of feet of serpentine overlying sedimentary formations and the production does not seem to have been affected by the presence of the igneous rock. A few wells, such as H-5-242, H-6-39, and H-6-56 produce small quantities of water from basalt.

Structure

The principal structural feature in Uvalde County is the nearly east-trending Balcones fault zone, a zone of faulting and some folding in which Lower Cretaceous limestones have been upthrown to the north forming an escarpment separating the Edwards Plateau from the Gulf Coastal Plain. The maximum displacement is in the northeastern part of the county where the total displacement across the zone is about 700 feet. The displacement along a single fault in this area exceeds 250 feet. In the southwestern part of the county the fault displacement diminishes and the zone becomes one of folding and fracturing. Throughout the fault zone evidence of faulting is apparent, although the actual fault planes are rarely seen because of the surficial alluvial deposits. Thus the faults shown on the geologic map represent only a part of the total. All the faults observed are of the normal type and most of them are downthrown to the south, although a few are downthrown to the north. Some of the structural relations in the fault zone are shown in Plate 4 and Figure 7.

A prominent structural high associated with the Balcones fault zone extends southward from the Edwards Plateau occupying an area between the towns of Uvalde and Knippa. The high, known as the Uvalde salient, consists of several closely connected crustal uplifts where the Edwards limestone and other formations are brought to the surface, generally forming prominent hills. The uplifts, which roughly bound the salient, are associated with basaltic masses extending from Blue Mountain northwest of Knippa southwestward through Uvalde to Rocky Hill, thence eastward to Frio Hill. Large-scale faulting associated with the salient has dropped a block of Escondido formation between blocks of older formations south of Black Waterhole, and to the north structural movement has exposed Upper Cretaceous rocks and serpentine in the bed of the Frio River.

Along the south edge of the Uvalde salient from Frio Hill west to Rocky Hill downwarping has lowered the Cretaceous formations to the south sufficiently to break the hydraulic continuity in this direction. This east-west zone of deformation is characterized by outcrops of basalt believed to be associated with faulting.



Base compiled from general highway map of the Texas Highway Department and U. S. Department of Agriculture Production and Marketing Administration aerial photos 1958

EXPLANATION

• 220
Well used for control. Number indicates altitude of top of Edwards and associated limestones, in feet

X 660
Point used for control. Number indicates estimated altitude of the top of the Edwards and associated limestones, in feet, projected from marker beds

Outcrop of Edwards and associated limestones

800
Line showing approximate altitude of the top of the Edwards and associated limestones, dashed where approximate

Contour interval, 200 feet

Datum is mean sea level

U / D
Fault, dashed where approximately located
D indicates downthrown side of fault
U indicates upthrown side of fault

FIGURE 7. – Altitude of the top of the Edwards and associated limestones, Uvalde County

No satisfactory method for dating the faulting has been found. Igneous bodies are found throughout the Balcones fault zone and it seems that crustal deformation and igneous intrusion are closely related. In Uvalde County igneous outcrops coincide to a large extent with structural features. Sedimentary formations adjacent to outcrops of igneous rocks are invariably faulted and fractured, indicating that the intrusion took place after the bedrock has become consolidated. The presence of water-laid volcanic material in the upper part of the Austin chalk may indicate that crustal deformation had begun by late Austin time; basalt plugs in the Anacacho limestone and thick serpentine complexes in the Escondido formation suggest that most of the igneous activity and at least some of the faulting occurred near the close of the Cretaceous period. The movement along the fault zone was probably recurrent over a long period. The presence of the prominent escarpment along the fault zone indicates that at least part of the movement was fairly recent--perhaps during Pliocene or Pleistocene time.

GROUND WATER

Principles of Occurrence

The source of all fresh water in Uvalde County is precipitation on and adjacent to the county. The average annual precipitation in Uvalde County is about 23 inches, but only a small part of the precipitation reaches the ground-water reservoir. Precipitation falling on the earth's surface is either absorbed (infiltration), remains on the surface and runs off overland (direct runoff), is consumed by vegetation (transpiration), or is evaporated (evaporation). The part of the water that escapes runoff and evapotranspiration percolates slowly downward through the soil and underlying strata, and, after replenishing deficiencies of soil moisture, the remainder joins the body of ground water in the zone of saturation, the top of which is the water table.

A formation, group of formations, or part of a formation that yields water in usable quantities is termed an aquifer. In areas where it is difficult to obtain ground water, formations yielding only a few gallons per minute may constitute important aquifers. On the other hand, aquifers that yield a few gallons per minute may be considered unimportant in areas where other aquifers are present that yield large quantities of water. The aquifers in Uvalde County consist of strata of Cretaceous age and of unconsolidated alluvial deposits of Quaternary age. The most important aquifers in the county are the Glen Rose limestone, the Edwards and associated limestones, the Buda limestone, the Austin chalk, and the Leona formation.

The quantity of ground water available in an area is partly dependent upon the capacity of the rocks in that area to contain and transmit water. In turn, the capacity of rocks to contain and transmit appreciable supplies of water is in large part dependent upon the size, shape, and arrangement of the openings which they contain. Rocks differ widely in their ability to contain and transmit water. For example, shale and clay may contain large quantities of water but transmit only small quantities. On the other hand, cavernous limestone or sand and gravel may contain less water per unit volume of material but may transmit large quantities of water.

Most of the usable ground water in Uvalde County occurs in beds of limestone. Factors controlling the porosity and permeability of limestone include the presence of solution openings, joints, and fractures; the degree of cementation and compaction; and the shape and size of the particles. The openings in the limestones

in Uvalde County are formed chiefly by fracturing and solution, the limestone being most permeable in areas where fracture openings have been enlarged by solution. In the Balcones fault zone, the thick, hard, very competent limestone beds in the upper and lower parts of the Edwards and associated limestones have large fracture openings and as a unit are highly permeable. The softer flaggy beds in the middle part which are more flexible and less competent are less subject to fracturing and as a unit are much less permeable. Furthermore, clay occupies the spaces between the limestone particles in the flaggy beds, thereby retarding solution. The hard competent limestone beds in the Buda and in the lower parts of the Glen Rose limestone and Austin chalk are fractured; however, they transmit less water than the Edwards because of the thinness of the individual limestone beds and the smaller combined thickness of the beds.

Generally, solution channels in limestone are larger than those in dolomite because calcium carbonate dissolves more readily than magnesium carbonate. The Glen Rose limestone contains appreciable amounts of dolomite and is much less permeable than the Edwards limestone, some parts of which are nearly pure limestone. The Buda, like most of the Edwards, is a hard nearly pure limestone, but being much thinner, it transmits much less water.

Water in contact with limestone is a fairly effective solvent because it contains dissolved carbon dioxide (carbonic acid) and other weak acids. In the zone of weathering, the rapid movement of storm water also erodes the weathered rock and enlarges solution channels.

Of the sand and gravel aquifers in Uvalde County, only the Leona formation yields large quantities of water. The water in the Leona is contained in the spaces between the grains of the sand and gravel. The capacity of the material to yield water depends chiefly on the size and degree of interconnection of the intergranular spaces. In some places the sand and gravel of the Leona are apparently clean and are very permeable. In other places the intergranular space is partly filled with silt, clay, or caliche and the permeability is low.

Throughout most of Uvalde County the chief water-bearing formations are separated by relatively impermeable strata. For example, the upper part of the Glen Rose separates the more permeable lower part from the Edwards and associated limestones. The Grayson shale lies between the Buda limestone and the Edwards and associated limestones; the Eagle Ford shale lies between the Buda limestone and the Austin chalk.

In some places the chief water-bearing formations are hydraulically connected. Where one aquifer has been faulted against another, water may be free to move between the two formations, freedom of movement depending upon whether or not impermeable material fills the space along the fault plane. Plate 4 shows that between wells H-4-71 and H-4-45 the Buda limestone is in fault contact with the Edwards and associated limestones. Plate 5 shows that the Leona overlies and is in contact with the Buda limestone. Such connections between the Edwards, Buda, Austin, and Leona formations probably exist in many places in the faulted area in the vicinity of the city of Uvalde (Plate 1).

Another possible type of hydraulic connection between the separated formations is through channels formed along fault planes. Again, freedom of movement is dependent upon whether or not impermeable material fills the space along the fault planes.

Recharge

Natural

The aquifers in Uvalde County are recharged from precipitation within the county and from precipitation in the drainage basins of the streams entering the county from the north and west. On the west the contributing areas include the northeast quarter of Kinney County; on the north, two-thirds of Edwards County, almost all Real County, and a small part of western Bandera County.

The Edwards and associated limestones aquifer underlying the Edwards Plateau is drained by springs at the contact with the underlying Glen Rose limestone. The springs feed the streams that flow southward across the outcrop of the Glen Rose into the Balcones fault zone where much of the flow is lost in the vicinity of the outcrop of the Edwards and associated limestones where this aquifer has dropped down by the faulting. These stream losses constitute the greater part of the natural recharge to the aquifer although some infiltration takes place directly from precipitation on the aquifer outcrop itself. Although some of the spring-fed streams are perennial and their base flows constitute a continual source of recharge, the total quantity of recharge from this source is small; most of the recharge occurs during periods of flood runoff. In some places gravel overlying the Edwards and associated limestones may be recharged by the streams, the water being released slowly as it seeps into the limestones.

The potential recharge from the streams where they flow across the limestone outcrops is greatest where the streambed exposures in the intake area are longest. The lengths of streambed exposure in the outcrop of the Edwards and associated limestones are 13 miles along the Nueces River, 11 miles along the Frio, 14 miles along the Dry Frio, and 3 miles along the Sabinal. Most of the recharge from the West Nueces River moves from Kinney County into Uvalde County as underflow, the amount of underflow being equal to the recharge less the withdrawals in the Kinney County part of the reservoir if changes in storage are small.

Seepage from streams also recharges other formations in the stream valleys but to a lesser degree than the Edwards and associated limestones. Seepage studies on the Nueces River show that some streamflow is lost to the Buda limestone and the Eagle Ford shale, and a much larger amount is lost to the Austin chalk. The alluvium in some of the stream valleys is likewise recharged by seepage from streams. Such recharge to the Leona formation probably is slight, because the upper part of the formation is chiefly clay and silt and is nearly impermeable; water discharged from underlying formations is believed to be the chief source of recharge to the Leona.

The annual recharge to the Edwards and associated limestones in the fault zone was estimated for the 20-year period 1934-53 by Petitt and George (1956, v. 1, p. 21-41). Using the method they describe, the record of annual recharge has been extended through 1957 for Uvalde County (Table 2). Included in the estimate is water recharged in the West Nueces River basin, most of which enters Uvalde County by underflow from Kinney County. The mean annual recharge for the period of record (170,000 acre-feet per year) is substantially greater than the mean annual recharge for the drought period 1948-56 (100,000 acre-feet per year)--indicating the severity of the drought. The period of drought is a substantial part of the period of record, and therefore the "normal" annual recharge may be somewhat greater than 170,000 acre-feet--perhaps as much as 200,000 acre-feet per year.

Table 2.--Estimated annual recharge to the Edwards and associated limestones, Uvalde County (includes underflow from Kinney County)

Year	Recharge in thousands of acre-feet	Year	Recharge in thousands of acre-feet
1934	40	1946	150
1935	640	1947	160
1936	360	1948	90
1937	120	1949	280
1938	150	1950	90
1939	290	1951	50
1940	130	1952	50
1941	280	1953	40
1942	230	1954	90
1943	90	1955	190
1944	160	1956	20
1945	140	1957	320

Artificial

The recharging of an aquifer artificially may be accomplished by water spreading or by injecting water through wells, pits, shafts, or other openings. The injection method has been used at several sites in Uvalde County (Plate 1) and though the economic feasibility of such projects is uncertain, the problems are of interest.

Artificial recharging of limestone aquifers in the Balcones fault zone has been attempted by diverting floodwater into the fracture zones in limestone outcrops in streambeds. On the Mason Ranch 16 miles north-northwest of Uvalde, local investigators found large northeastward-trending fractures in the bed of Indian Creek filled with soil, rocks, and organic debris. They also discovered that the fractures led into a large cave in the lower part of the Edwards and associated limestones. The authors, in 1956, found a tunnel in the cave, averaging 6 feet in diameter, sloping southward parallel with the bedding planes, about 20 feet above the top of the Glen Rose limestone. Two 8-foot-diameter holes were dug to the cave through the fill material in the fractures and were covered with steel grates to keep out logs and large rocks. A concrete dam nearly 8 feet high was built across the creek about 50 feet downstream from the cave to impound water and divert it into the cave. On the night of May 26, 1957, 5.2 inches of rain was recorded at the Mason ranchhouse. On May 27 at 7 a.m. water began to rise behind the dam and flow into the cave. At 10:30 a.m. the water was flowing 2 1/2 feet above the top of the dam and continued to do so for 1 1/2 hours. The water

had ceased flowing into the cave by 6 p.m., approximately 11 hours after it had begun. Assuming an average hydrostatic head of 4 feet, the average velocity of flow into the cave would be 16 feet per second. Assuming further that the cross-sectional area of the shaft and fractures is 20 square feet, then the maximum rate of recharge would be about 320 cubic feet per second or 144,000 gpm (gallons per minute). At this rate during an 11-hour period, the total recharge would be about 290 acre-feet. This figure is the maximum possible and it is based on the assumption that the cave could take the entire flow without creating a condition of backwater. A smaller flood on May 31 completed the recharge at that site for 1957. It is estimated that the maximum recharge which could have taken place at the site during 1957 under the then existing conditions of precipitation and streamflow was about 500 acre-feet. This is about 0.29 percent of the total estimated average annual natural recharge in the county.

Another injection site in the bed of the Leona River 2 miles north of Uvalde on the Kenedy Ranch consists of a vertical shaft about 5 feet in diameter extending through the Grayson shale into the Edwards and associated limestones. Witnesses report that after heavy rains on October 22, 1957, a large but unknown quantity of water flowed into the shaft, although there is no dam to impound the water.

Two dams--one in the Leona River 1 1/2 miles north of Uvalde and the other in the Sabinal River 2 miles north-northwest of Sabinal--are built on fractured zones in the Buda limestone. The Buda is separated from the Edwards and associated limestones aquifer by about 65 feet of nearly impermeable Grayson shale, and it is doubtful that the Edwards and associated limestones can be recharged appreciably at either of these sites.

On the John Garmon farm 4 miles southwest of Uvalde a 13-inch-diameter drilled well (H-4-94) is used as an injection well. Water impounded by an earthen dam across Garmon Slough flows along a canal into the well which penetrates the Austin chalk. After the heavy rains of April 20, 1957, the canal, which is 10 feet wide, was opened, permitting the impounded water to flow into the injection well. On April 22, after the rate of injection had declined considerably, the rate was measured at 5,900 gpm; however, insufficient data are available to estimate the total amount recharged. At this time the water was carrying 0.13 tons of suspended sediment per acre-foot and the suspended load during maximum flow probably was much greater. Unless the recharge water is filtered, the silt may reduce the rate of infiltration or completely plug the well.

The artificial recharge program in Uvalde County amply demonstrates that water can be artificially recharged at high rates at least locally. However, the capacity of existing impounding structures is too small to capture an appreciable proportion of the excess floodflow of the streams in the county. Further studies are needed to determine the amount of excess water available annually for recharging; the type, number, and size of structures required to capture the excess water; and an economic determination of the feasibility of an expanded artificial recharge program.

Discharge

Ground water is discharged to the surface in Uvalde County through wells, springs, seeps, and by evapotranspiration. Ground water is discharged from the county beneath the surface by underflow to the south and east. Most of the discharge is from the Edwards and associated limestones, although it is estimated that substantial amounts were discharged from the Leona formation and lesser amounts from the other water-bearing formations. The annual discharge to the

surface from the Edwards and associated limestones for the period 1934-56, exclusive of the relatively small amount consumed by evapotranspiration, is summarized in Table 3.

Underflow

Annual discharge by underflow for the entire period of record cannot be estimated accurately because insufficient data are available to evaluate annual changes in storage. However, the average annual rate of underflow for the period 1934-47, when the net change in storage was small, was estimated to be 190,000 acre-feet by comparing the records of recharge and surface discharge. A part of the underflow (about 10,000 acre-feet) moves southward, chiefly through the Leona formation along the Leona River Valley; the rest moves eastward through the Edwards and associated limestones along the Balcones fault zone.

Discharge from Springs and Seeps

Ground water is discharged through springs and seeps in Uvalde County where streams have cut below the water table in permeable formations (water-table springs) and where passageways are open to the surface from confined aquifers having a hydrostatic head above the land surface (artesian springs).

In the northern part of the county on the Edwards Plateau, water-table springs issue from the Edwards and associated limestones near its contact with the Glen Rose limestone. The flow of the springs maintains the base flow of the streams draining the Edwards Plateau. Most of the base flow is subsequently lost to the Edwards and associated limestones as the streams cross the Balcones fault zone where the aquifer has been dropped down.

The principal artesian springs are in the southern half of the county along the Leona River where the river has cut through relatively impermeable clays overlying gravel in the lower part of the Leona formation. The springs form the discharge points for the Leona formation and they flow only when there is excess water in the gravel in the lower part of the formation. The principal source of the water is the Edwards and associated limestones, which in some places is hydraulically connected with the gravel in the Leona. The record of the flow of the springs for the period 1934-56 is shown in Table 3.

Many springs and seeps in the county issue from gravel deposits in the stream beds, chiefly in the Nueces River. Much of this springflow represents an interchange between the flow of the streams and the underflow in the gravel. Where the gravel deposits are thin, water may flow on the surface; where they are thick, the surface flow may be wholly or partly lost and become underflow. The magnitude of the gains and losses of the streams has been demonstrated by seepage runs made in the principal streams (Petitt and George, 1956, v. 2, pt. 3, VI-1-VI-8).

Withdrawals from Wells

Table 3 shows that the largest use of ground water in Uvalde County since 1934 has been for irrigation except in 1935. Although the first irrigation well was drilled in 1908, ground water was not used for irrigation in appreciable quantities until 1925. Irrigation increased gradually from 1925 to 1947; after 1947

it developed much more rapidly, withdrawals amounting to 48.2 mgd (million gallons per day) or 54,000 acre-feet in 1956 when about 100 wells were used to irrigate 13,000 acres.

Other uses of ground water in Uvalde County are small compared to the use for irrigation; however, ground water is the sole source for the municipal and industrial supplies and the chief source for domestic and stock supplies. In 1956 ground-water withdrawals averaged 3.6 mgd from 8 municipal wells at Uvalde and 0.25 mgd from 2 wells at Sabinal, a total municipal use of 4,300 acre-feet. During the same year about 560 acre-feet of ground water was used for fish and wildlife supplies and 220 acre-feet for domestic and stock supplies.

Movement of Ground Water

Ground water moves in the general direction of the hydraulic gradient--that is, from points at which the altitude of the artesian head or water table is high to points at which it is low. The limestone aquifers in Uvalde County are not homogeneous; much of the movement of the water is along fractures and solution channels generally parallel with the fault pattern. The contours of the altitude of the water surface in the Edwards and associated limestones as shown in the piezometric map (Figure 8) show only the general direction of flow which is eastward through the fault zone parallel with the faulting.

Some of the factors which control the configuration of the piezometric surface include the effects of recharge and discharge. Recharge tends to elevate the water surface in the recharge areas; discharge tends to depress it in the discharge areas.

From a consideration of the piezometric map, the information on geologic structure, and quantitative measurements of recharge and discharge, the general subsurface movement of ground water in the county can be described as follows:

Ground water in the Edwards Plateau moves from areas of recharge generally in the direction of surface drainage toward areas of discharge. From the principal areas of recharge on the outcrops of the Edwards and associated limestones south of the plateau, the water moves southward through solution channels, being partly diverted eastward as it is intercepted by channels along faults. The water moving southward through the Edwards and associated limestones from the recharge area tends to be confined at the top by the Grayson shale, except where faulting has opened channels into overlying formations. Southward movement virtually ceases at the southern extent of faulting; water beyond this point commonly is saline.

Water moving eastward from the Nueces River basin follows devious paths owing to the structurally high area of the Uvalde salient and the presence of igneous intrusives. Eastward from well G-9-3 to well H-5-202, a distance of about 19 miles, the Edwards and associated limestones aquifer rises, not at a uniform rate but by means of complex faulting, on the Uvalde salient about 1,300 feet; from this point east it drops about 850 feet in 4 miles (Figure 7). The complex faulting in the area suggests that impermeable material may be in fault contact with the Edwards and associated limestones in some places, blocking or retarding eastward flow. On the other hand, faulting may have created a fracture system that facilitates flow in some places. The piezometric map (Figure 8) indicates that most of the movement is along the west and northern part of the salient.

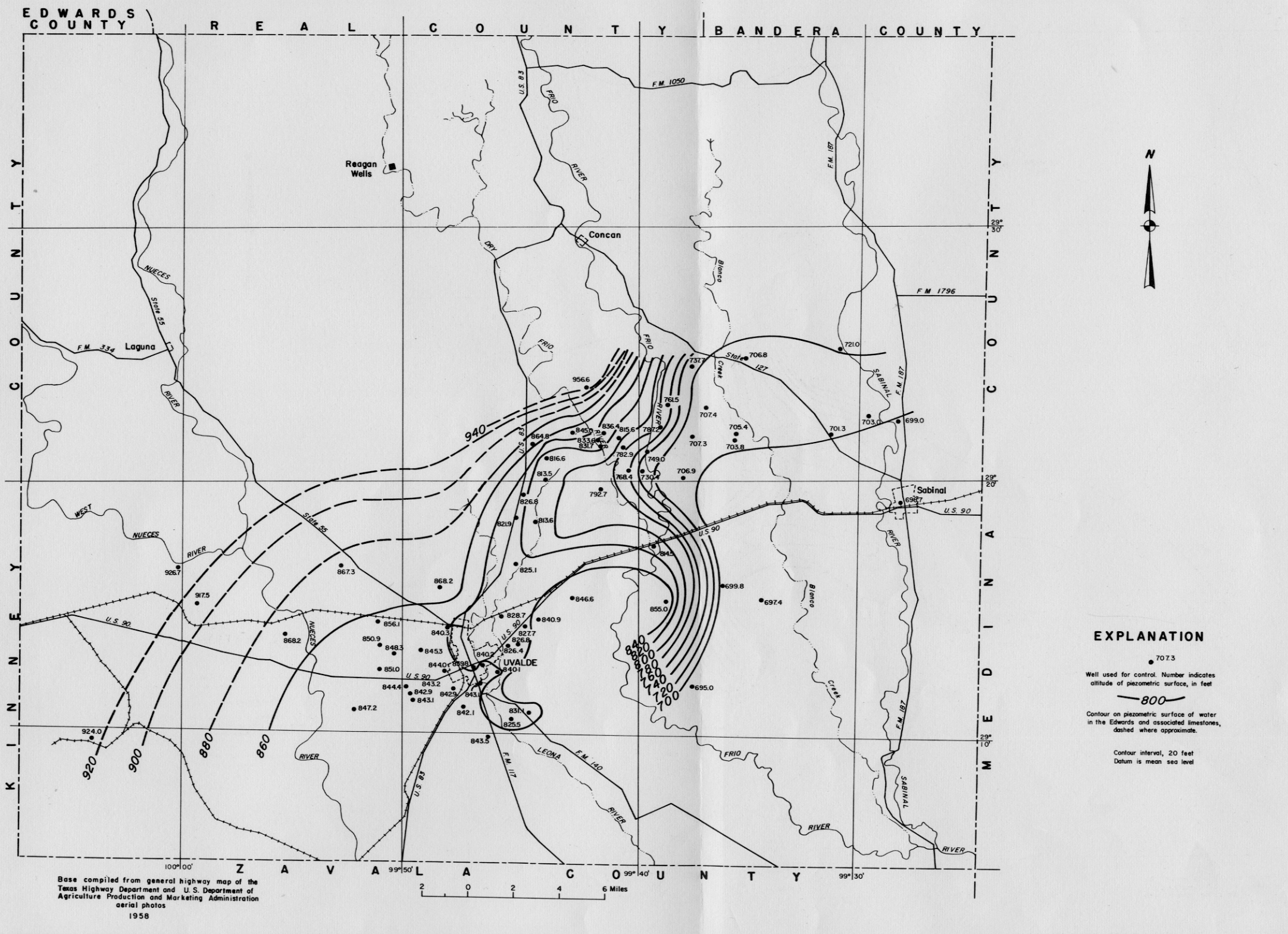


FIGURE 8.—Map of Uvalde County, showing contours on piezometric surface of water in the Edwards and associated limestones, December 1957

Table 3.--Discharge to the surface from the Edwards and associated limestones, Uvalde County

Millions of gallons per day							Thousands of acre-feet
Year	Municipal	Domestic and stock	Federal Fish Hatchery	Spring-flow	Irriga-tion	Total	Total
1934	0.5	0.6	0.5	8.8	0.8	11.2	12.5
1935	.4	.6	.5	8.9	.3	10.7	12.0
1936	.5	.6	.5	21.4	.7	23.7	26.6
1937	.6	.6	.5	22.4	1.1	25.2	28.2
1938	.6	.6	.3	19.3	1.0	21.8	24.4
1939	.7	.6	.3	13.5	1.0	16.1	18.0
1940	.6	.6	.3	11.7	.9	14.1	15.8
1941	.6	.6	.3	13.4	.9	15.8	17.7
1942	.8	.6	.3	17.1	1.1	19.9	22.3
1943	1.0	.6	.3	13.5	1.5	16.9	18.9
1944	1.0	.6	.3	6.7	1.0	9.6	10.7
1945	1.0	.6	.3	7.3	1.6	10.8	12.1
1946	1.2	.6	.3	1.8	1.4	5.3	5.9
1947	1.4	.6	.3	8.0	1.8	12.1	13.5
1948	1.9	.6	.3	2.3	2.9	8.0	9.0
1949	1.4	.6	.3	4.5	4.8	11.6	13.0
1950	1.6	.6	.5	6.5	6.4	15.6	17.5
1951	2.3	.6	.5	.0	11.5	14.9	16.7
1952	2.5	.6	.5	.0	16.5	20.1	22.5
1953	2.8	.6	.7	.0	20.2	24.3	27.2
1954	2.8	.6	.8	.0	19.4	23.6	26.4
1955	2.9	.6	1.1	.0	20.7	25.3	28.4
1956	3.9	.2	.5	.0	48.2	52.9	58.2
Mean annual	1.4	.6	.4	8.1	7.2	17.8	20.0

Water may move underground through the Leona formation between the Nueces and Leona River Valleys through a channel connecting the two stream valleys. The riverbed of the Nueces at the west end of the channel is at least 30 feet higher than the base of the gravel at a point near the east end. Thus, the channel, which approximately underlies Garmon Slough, provides a possible avenue for subsurface movement of water from the Nueces River to the Leona River Valley.

Under certain conditions water may move through the gravel deposits toward either the Leona or Nueces Rivers from an area south and west of Uvalde. Altitudes of water levels in wells and subsurface geologic information indicate that near wells H-4-45 and H-5-163 the Edwards and associated limestones and Austin chalk are hydraulically connected with the Leona formation. Thus, when the piezometric surface in the limestone aquifers is above the base of the Leona, water probably spills out into the gravel of the Leona and moves toward either stream, depending on where the spill occurs.

The principal limestone aquifers (Edwards and associated limestones, Austin chalk, and Buda limestone) are hydraulically connected with the Leona formation also in the Leona River Valley just south of Uvalde. When the piezometric surface of the limestones is above the base of the Leona, water probably spills out into the gravel and moves downstream. When the piezometric surface is below the gravel, water entering the gravel from the surface probably drains into the limestone aquifers.

The interchange of water between gravel and bedrock formations in the Leona River Valley ceases abruptly downstream between wells H-5-230 and H-5-255, where the bedrock changes from Austin chalk to serpentine. Plate 5 shows that the piezometric surface along the Leona River is continuous across the igneous-limestone contact when water is being discharged from underlying formations, but that hydraulic continuity is broken at the contact when water is being discharged to the limestone formations. During periods of drought the part of the gravel overlying the serpentine may contain water long after the gravel overlying the limestone has been drained.

Springs issue from the streambed of the Leona River when the storage capacity of the gravel is exceeded and where the river has cut into the gravel. The principal springs are just southeast of the city of Uvalde and at points 2 miles, 5 miles, and 9 1/2 miles downstream. The southernmost springs are the first to flow as the water level in the gravel rises. The water level in well H-5-1 (Figure 9) correlates with the flow from two of the springs as measured at a stream-gaging station 4.6 miles southeast of Uvalde. When the water level in the well drops below 42 feet, the springs above the gage cease flowing.

Fluctuations of Water Levels

Water levels have been measured regularly in a few observation wells in Uvalde County since 1929 and in several others for varying lengths of time. A continuous water-stage recorder has been in operation on well H-5-1 since 1938 and others have been maintained on other wells for much shorter periods. Most of the water-level data are from wells that draw from the Edwards and associated limestones, although a few long-term records are available for wells that draw from the Austin chalk and Leona formation. Miscellaneous measurements only are available for a few wells that draw from the Buda and Glen Rose limestones. Hydrographs showing fluctuations of water levels in wells that draw from the principal aquifers are shown in Figures 9 and 10.

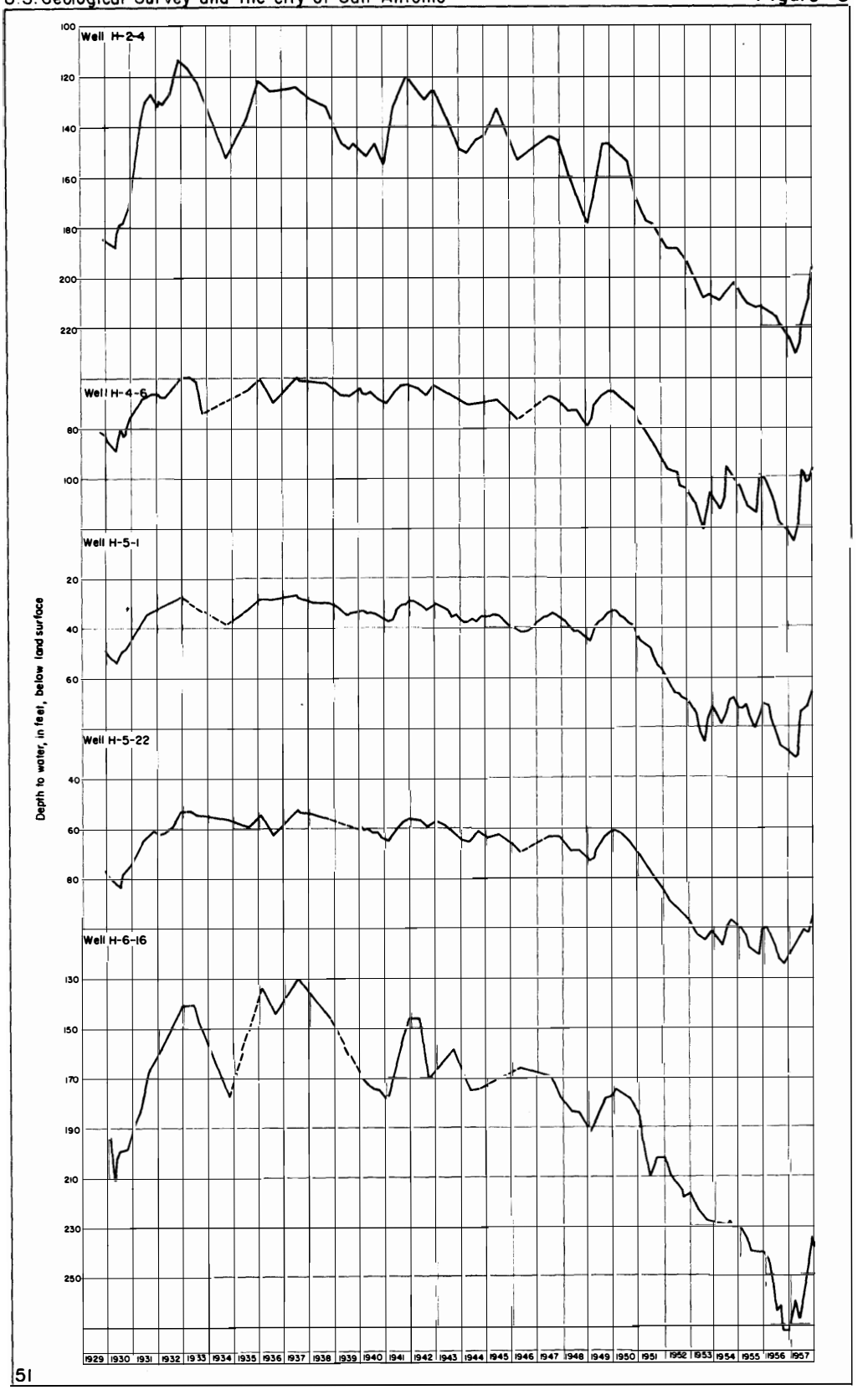


FIGURE 9.— Fluctuations of water levels in representative wells that draw from the Edwards and associated limestones, Uvalde County

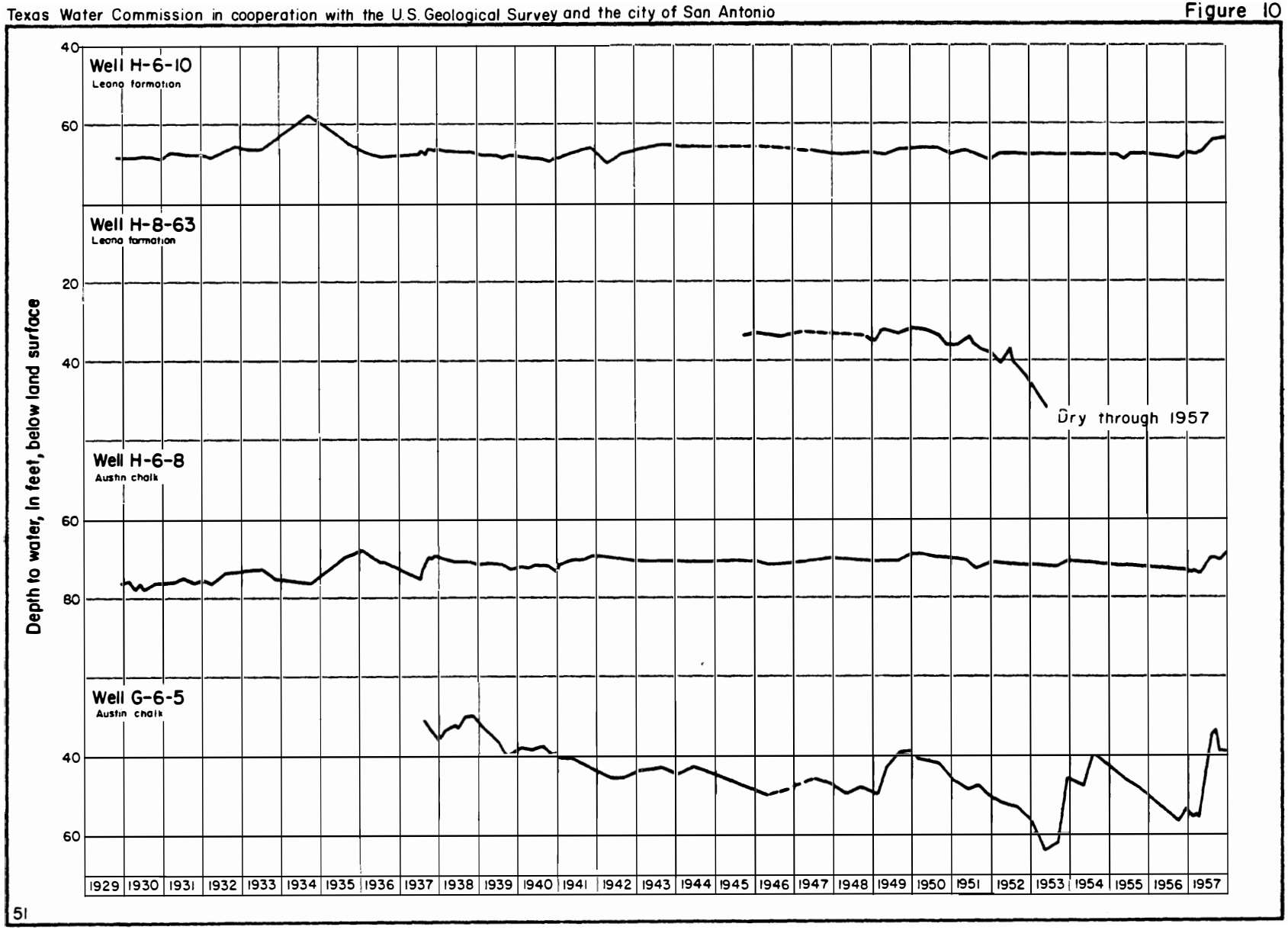


FIGURE 10.– Fluctuations of water levels in representative wells that draw from the Leona formation (includes alluvium) and Austin chalk, Uvalde County

Water levels in wells fluctuate chiefly in response to changes in ground-water storage and reflect changes in hydrostatic pressure. Other water-level changes observed in artesian wells in Uvalde County include those caused by changes in loading, by changes in atmospheric pressure, and by earthquakes. These changes do not reflect changes in the amount of water in storage; they are of relatively short duration, are small in magnitude, and are not detectable when plotted to the scale shown on the hydrographs in this report. Thus, the graphs in Figures 9 and 10 represent chiefly the changes in storage caused by changes in the rates of recharge and discharge.

Edwards and Associated Limestones

Figure 9 shows that the water levels in wells that draw from the Edwards and associated limestones generally rise and fall at the same times, but the changes generally are greater in wells in the eastern half of the county than in the western half. Water levels in wells H-4-6, H-5-1, and H-5-22 in and west of Uvalde declined about 60 feet from the winter of 1941-42 to the winter of 1956-57; those in wells H-2-4 and H-6-16 in the eastern part of the county declined more than 100 feet during the same period.

The prolonged decline of water levels in wells beginning in 1950 shows the depletion of ground-water storage during the drought when water levels declined steadily for nearly 4 years. During the period 1954-56 recharge in the Nueces River basin nearly halted the decline in the western half of the county; water levels in the eastern half of the county, however, continued to decline until the spring of 1957, although at a much slower rate after 1953. Water levels throughout the county began to rise rapidly during 1957 when above-normal precipitation broke the drought. In a period of 9 months, water levels in wells rose an average of about 30 feet, demonstrating the remarkable capacity of the aquifer to refill rapidly.

Table 3 shows that withdrawals of ground water increased substantially during the drought. In 1956 the underflow out of the county to the east probably was somewhat less than the average for the period 1934-47 (about 180,000 acre-feet; see p. 40). Thus, an appreciable part of the decline in water levels was caused by an increased rate of pumping.

Leona Formation

Figure 10 shows the fluctuations of water levels in two wells that draw from the Leona formation, well H-6-10 in the Sabinal River basin and well H-8-63 in the Leona River Valley. The Leona formation in the vicinity of well H-6-10 is underlain by the relatively impermeable Anacacho limestone which acts as a barrier to movement of water between the Leona and underlying limestones. The fluctuations of water level in well H-6-10 suggest that the Leona formation drains and is recharged slowly, drainage being somewhat more rapid when the aquifer is nearly full. The drought caused only a slight decline of water level in the well.

Near well H-8-63, the Leona formation probably is underlain by the Buda limestone or Austin chalk. The Leona formation is hydraulically connected not only with the Buda and Austin but also with the Edwards and associated limestones in the Leona River Valley; consequently, water-level fluctuations in the limestone formations affect water levels in the Leona. After the springs ceased flowing in 1950, water levels in wells in the Leona formation fluctuated similarly to those in the limestone formations. During the drought, water in the Leona was partly

drained into the underlying formations, causing well H-8-63 to become dry early in 1953.

Austin Chalk

Figure 10 shows the fluctuations of water levels in two wells that draw from the Austin chalk, well H-6-8 in the Frio River basin in the eastern part of the county and well G-6-5 in the Nueces River basin in the western part of the county. The rapid rise of water level in well G-6-5 after periods of above-normal precipitation suggests that the recharge characteristics of the Austin chalk in the western part of the county are similar to those of the Edwards and associated limestones. The magnitude of the fluctuations in the Austin, however, is much less than that in the Edwards and associated limestones, probably because of less favorable opportunities for recharge to the Austin. The Austin underlies a shorter reach of the Nueces River than the Edwards and associated limestones and furthermore it is exposed farther downstream where the streamflow is much less than in the reach underlain by that aquifer.

Water-level fluctuations in well H-6-8 suggest that in the eastern half of the county the Austin chalk drains and is recharged at a much slower rate than in the western half. During the period 1938-57 the water level in well H-6-8 fluctuated through a range only about one-seventh as great as in well G-6-5. The reason for the difference is not apparent.

Quality of Water

The data on chemical quality of water in this report are compiled from 130 analyses made by the U. S. Geological Survey and from 8 analyses made prior to 1940 by the Works Progress Administration under the supervision of the Bureau of Industrial Chemistry of The University of Texas. Methods of analysis used by the Works Progress Administration do not conform to present-day standards. Hence, comparing these early analyses with those of a later date will not necessarily show changes in quality where the difference between the reported quantity of individual constituents is slight. Wells and springs for which analyses of samples of water have been made are indicated by a bar above the well number on Plates 1 and 2. Some of the analyses were included in a report by Petitt and George (1956, v. 2, pt. 3, p. IV-6, IV-7) and all the analyses are on file in the office of the Quality of Water Branch, U. S. Geological Survey, Austin, Texas.

Several factors determine the concentration and character of mineral constituents in ground water. The most important are the source of the water, the mineral composition of the rocks through which the water has passed, and the length of time the water has been in contact with these enclosing rocks.

Precipitation dissolves some minerals from the air as it falls. After the water reaches the land surface, it becomes increasingly mineralized as it dissolves part of the material over or through which it flows. The water may dissolve sufficient material to render it saline and unsuitable for most uses. For purposes of this report, water containing more than 1,000 ppm (parts per million) of dissolved solids is considered saline.

During periods of overland runoff, the water in the streams has a lower mineral content than when the flow is sustained by springs. Although surface water is subject to sudden changes in quality during and after storms, the range in dissolved mineral content is considerably less for surface water than for ground water.

Certain relations of the depth of occurrence of ground water to its quality have been observed, the water from deeper wells generally being more mineralized than water from shallower wells. All samples, except one, from wells that draw from the Edwards and associated limestones at depths of less than 600 feet contained between 200 and 400 ppm of dissolved solids. These are calcium bicarbonate waters having only small concentrations of magnesium, sodium, sulfate, and chloride. The dissolved-solids content of samples from greater depth differed widely from place to place, ranging from 226 to 4,510 ppm. Increased concentrations of magnesium, sodium, sulfate, and, in some instances, chloride, are found in the more highly mineralized samples. Figure 11 shows the dissolved-solids, sulfate, and chloride content in selected wells that draw from the Edwards and associated limestones in Uvalde County. The figure also shows the approximate downdip limit of occurrence of fresh water in the aquifer.

All the water samples from the Leona formation were fresh. Water from depths greater than 300 feet in the Glen Rose limestone was saline, having high concentrations of calcium, magnesium, and sulfate. Sampling from other formations was inadequate to show any relation of quality to depth.

The suitability of a water for various uses is determined largely by the kind and amount of dissolved mineral matter it contains. Some chemical constituents when present in excessive concentrations may adversely affect the use of water for drinking, others limit its use for domestic and industrial purposes, and still others for irrigation. Only the chemical constituents most commonly found in undesirable concentrations in water in Uvalde County are discussed in this report.

Some of the wells that draw from the Edwards and associated limestones yield water containing hydrogen sulfide. Even in small amounts it gives water an offensive odor, and in larger amounts is corrosive to metal. Hydrogen sulfide can be removed by aeration and therefore is not a serious problem in the use of the water.

The quality tolerances of water for drinking differ with individuals, but the standards established by the U. S. Public Health Service (1946, p. 382-383) for drinking water used on interstate carriers are generally accepted as criteria for judging the suitability of a water for drinking. The following chemical substances preferably should not be present in excess of the following concentrations:

Magnesium (Mg) should not exceed 125 ppm.

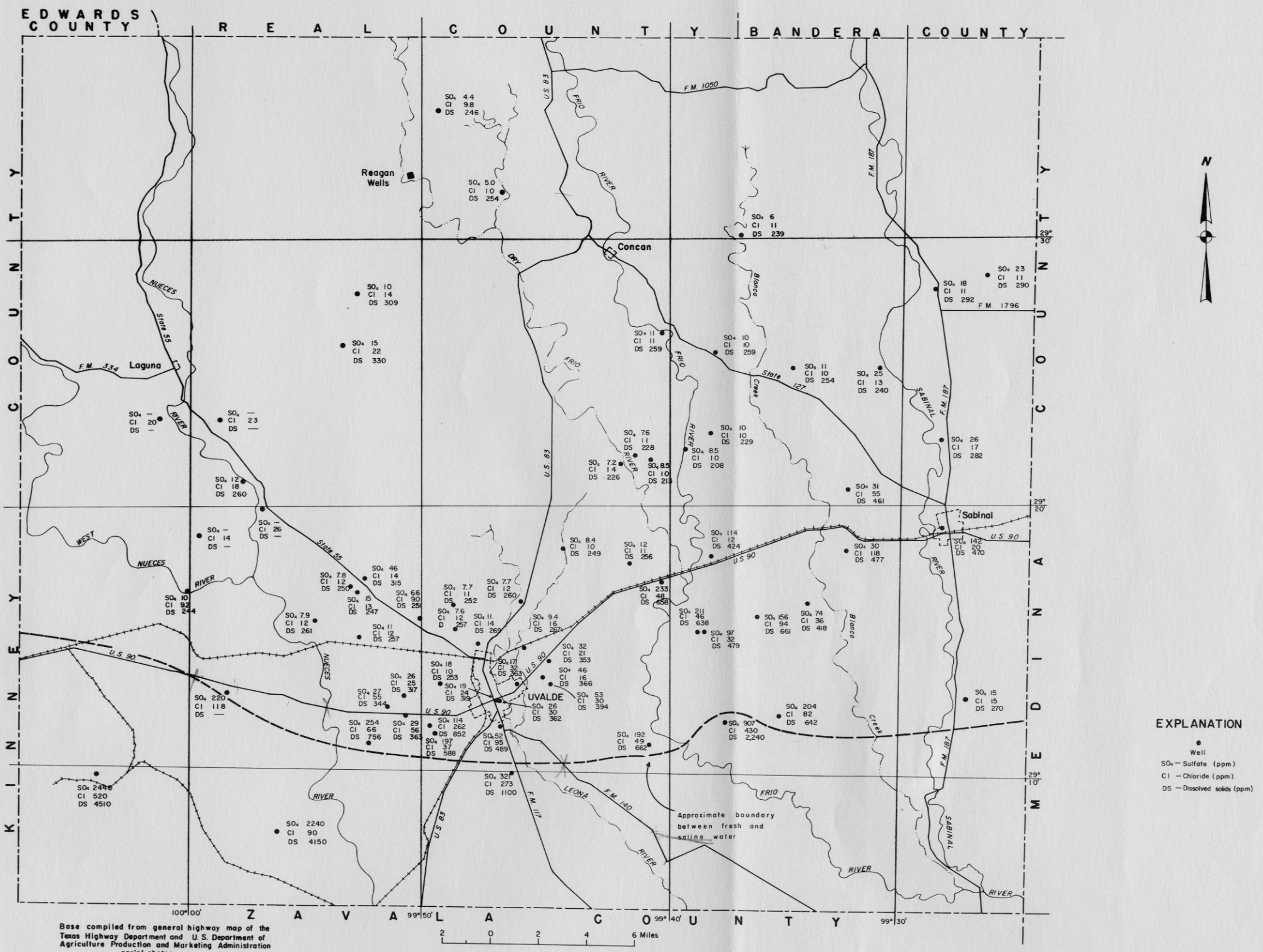
Chloride (Cl) should not exceed 250 ppm.

Sulfate (SO_4) should not exceed 250 ppm.

Fluoride (F) must not exceed 1.5 ppm.

Dissolved solids should not exceed 500 ppm. However, if such water is not available, a dissolved-solids content of 1,000 ppm may be permitted.

Some communities use water that contains certain minerals far in excess of concentrations suggested in these standards because better water is not available. The U. S. Public Health Service standards were set primarily to protect travelers from the ill effects of consuming water of markedly different chemical characteristics. Water having a chloride content exceeding 300 ppm has a salty taste. Water containing large quantities of magnesium and sulfate tends to have a laxative



Base compiled from general highway map of the Texas Highway Department and U. S. Department of Agriculture Production and Marketing Administration aerial photos 1958

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FIGURE 11.-Dissolved-solids, sulfate, and chloride concentrations in water from the Edwards and associated limestones, Uvalde County

effect. Use of drinking water having a fluoride content exceeding 1.5 ppm may cause mottling of the teeth of children (Dean, Dixon, and Cohen, 1935, p. 424-442); however, the use of drinking water that contains about 1.0 ppm appears to reduce the incidence of tooth decay of children (Dean, Arnold, and Elvove, 1942, p. 1155-1179).

Water containing more than about 45 ppm of nitrate has been related (Maxcy, 1950, p. 271) to the incidence of infant cyanosis (methemoglobinemia or "blue baby" disease) and may be dangerous for infant feeding. The nitrate content of water may be an indication of pollution by sewage or other organic matter. A well that yields water containing more nitrate than others nearby should be tested for bacterial content of the water.

Most of the water used for public supply in Uvalde County meets the U. S. Public Health Service standards. The water from municipal wells at Uvalde was of excellent quality for drinking although hard. At Sabinal, municipal wells yielded water that meets the drinking-water standards. Water from the Utopia school well (B-9-4), which draws from the Glen Rose limestone, exceeded the suggested concentrations in the standards for dissolved solids, magnesium, sulfate, and fluoride. A sample from the Knippa school well (H-6-26) contained 108 ppm of nitrate, suggesting that the water may be polluted.

Although sampling was inadequate to evaluate the water from each formation, the results suggest that the dissolved-solids, fluoride, and sulfate content of water at many places in the Glen Rose limestone and older formations is likely to exceed the suggested maximum concentrations in the drinking-water standards. The data further suggest that in a few places younger rocks contain water having excessive amounts of some of the constituents, especially fluoride and iron. Of 19 determinations of fluoride in water from wells that draw from the Edwards and associated limestones, 2 were more than 1.5 ppm. The two samples were from depths greater than 900 feet, suggesting that shallow wells may not contain excessive amounts of fluoride in the water.

Certain concentrations of calcium, magnesium, silica, iron, and manganese in water affect its use for industrial and domestic purposes. Calcium and magnesium cause virtually all the hardness of natural waters. As hardness increases, soap consumption increases and incrustations (boiler scale) accumulate on boilers, pipes, and coils more rapidly. Hardness equivalent to the carbonate and bicarbonate content is called carbonate hardness; the remainder is called noncarbonate hardness. Two methods are commonly used to soften large quantities of water: the lime or lime-soda process which, in addition to softening, reduces the content of dissolved solids; and the zeolite process, which involves the exchange of calcium and magnesium in the water for sodium in the exchange material. Carbonate hardness may be removed most economically by using lime as the precipitant. The analyses of water from Uvalde County may be compared with the following arbitrary classification commonly used to describe waters with reference to hardness.

Less than 60 ppm, soft

60-120 ppm, moderately hard

121-200 ppm, hard

More than 200 ppm, very hard--
water needs to be softened for
most uses

The water sampling indicates that nearly all of the water in Uvalde County is hard or very hard. The few samples containing less than 120 ppm hardness were either from formations of little importance or were not necessarily representative of the formation from which they were taken. The hardness of water in the limestone formations is largely carbonate hardness; the water, therefore, can be softened successfully with the lime process.

Because silica forms a hard, adherent scale in boilers, information as to its concentration in water supplies for boiler use is important to industries. Moore (1940, p. 263) has suggested the following allowable concentrations of silica in water for boilers operating at various pressures.

Concentration (ppm)	Boiler pressure (pounds per square inch)
40	Less than 150
20	150 - 250
5	251 - 400
1	More than 400

The silica content of all the samples collected in the county was less than 50 ppm, and in most it was less than 20 ppm.

Oxidation of dissolved iron and manganese in water forms a precipitate that stains porcelain, enamel, and fabrics. Water containing more than 0.3 ppm of iron and manganese together is likely to cause appreciable staining. Only a few determinations of iron and manganese were made on ground-water samples, but enough showed concentrations more than 0.3 ppm to suggest that these constituents may be a problem in parts of the county.

Water becomes less suitable for irrigation as the salinity, sodium, and boron contents increase. Of these, only the salinity hazard appears to warrant attention in Uvalde County. Wilcox (1955, p. 16) reported that water may be used safely for supplemental irrigation if its conductivity (a measure of the salinity) is less than 2,250 micromhos per centimeter at 25°C. Based on this criterion, most of the water in the Edwards and associated limestones is suitable for irrigation. However, in the southern part of the county, the water in this aquifer becomes too saline for irrigation and most other uses. The approximate boundary between fresh and saline water in the Edwards and associated limestones is shown on Figure 11.

The observed temperature of ground water in Uvalde County ranged from 69°F to 93°F. The coldest temperature was measured in a spring and the warmest in water from a well about 1,400 feet deep. No distinct relation of water temperature to well depth is apparent from the temperatures observed, the temperature of the water from the deepest well being only 76°F.

POTENTIAL DEVELOPMENT OF GROUND-WATER RESOURCES

Plans for the development of water from the Edwards and associated limestones in Uvalde County should be coordinated with programs for the development of water resources throughout the entire area underlain by the aquifer. The area extends along the Balcones fault zone in parts of Kinney, Uvalde, Medina, Bexar, Comal,

and Hays Counties in a strip ranging from 5 to 40 miles in width. The strip, about 200 miles long, extends from a point about 35 miles west of the city of Uvalde to about 60 miles northeast of San Antonio.

Any program for the development of ground-water resources must include plans for the development of surface water. Much of the annual streamflow in Uvalde County represents ground-water discharge. In the northern part of the county the rivers are fed by springs. The rocks of the Edwards Plateau store water which drains out to form the base flow of the streams that have cut their channels into or through the aquifer. The streams flow southward on beds of the Glen Rose limestone until they cross the fault zone where most of the water seeps into the Edwards and associated limestones and becomes part of the main ground-water reservoir.

One of the first problems to be considered in evaluating the potential development of ground water in Uvalde County is the effect that the development will have on potential development elsewhere in the aquifer. A large part of the water recharging the Edwards and associated limestones moves eastward through interconnected joints, fractures, and solution channels along the fault zone and is discharged through wells and springs in and northeast of the city of San Antonio. Thus, water withdrawn from wells in Uvalde County will reduce the availability of ground water in areas east of the county. Withdrawals of ground water west of Uvalde County likewise will reduce the quantity of ground water available within the county. Withdrawals within Uvalde County may also reduce the quantity of surface water available to counties to the south. Where water levels in the Edwards and associated limestones are above stream level, a substantial part of the streamflow is made up either of water that would otherwise recharge the aquifer or water that is discharging from the aquifer. When pumping lowers the water levels below stream level, the water is lost from the streams to the aquifers.

The regional hydrology as it pertains to the occurrence and development of ground water in the Edwards and associated limestones has been described by Petitt and George (1956). The possibility of future development of water supplies in Uvalde County is discussed in the following paragraphs.

In Uvalde County, during the 23-year period 1934-56, the mean annual recharge (170,000 acre-feet) exceeded the mean annual discharge to the surface (20,000 acre-feet) by 150,000 acre-feet. The decrease in storage shown by the decline in water levels during the period indicates that a large amount of water left the county by underflow. Most of the water flowed eastward into Medina County although prior to 1951 about 10,000 acre-feet per year moved southward.

The loss in storage and the amount of the underflow eastward can be estimated from recharge and discharge estimates for the entire San Antonio area and from water-level fluctuations in wells in Uvalde County. The underflow into Medina County for a particular period of time may be considered the difference between the amount of recharge and the amount of surface discharge plus or minus the change in storage in the aquifer west of the Uvalde-Medina county line; similarly, the recharge-discharge-storage relationship east of the county line can also be used to determine the underflow. During the period 1934-47, when the storage loss was small, the difference between recharge and discharge in the western part of the aquifer averaged about 190,000 acre-feet per year; the difference in the eastern part was about 230,000 acre-feet per year. By considering the average water-level declines and the areal extent of the western and eastern parts of the aquifer, the storage loss appears to have been somewhat less in the western part than in the eastern part. Thus, the average underflow for the period 1934-47 was probably closer to 200,000 acre-feet per year.

Ground-water withdrawals in Uvalde County probably could be maintained indefinitely at a rate equal to the "normal" rate of recharge (200,000 acre-feet per year) if the water resources north and west of the county are not further developed. Eventually, however, continued withdrawals at this rate would cause a decline of water level to a depth where wells in structurally high areas would be dry and underflow into Medina County would cease. The lowering of the water levels in the aquifer might also cause saline water to move from downdip or from other formations into the Edwards and associated limestones. Water-level declines would also cause springflow in the Leona River Valley to stop permanently.

Potential development of the total water resources may be increased by artificial recharge. Studies to date, however, suggest that the amount that can be recharged economically is small compared to the present potential. The erratic occurrence of storms and variations in the rate of runoff complicate the planning of recharge projects. The quantity of water that can be salvaged by artificial recharge is the amount saved from evaporation and runoff to the sea. The rest merely depletes surface supplies to increase ground-water supplies.

The potential development of water supplies from the Glen Rose limestone, Buda limestone, Austin chalk, and Leona formation is much smaller and less dependable than from the Edwards and associated limestones. It is not feasible to evaluate quantitatively their potential water resources at this time; however, the geologic map (Plate 1) and records of existing wells can be used as an aid in planning development of supplies from these formations.

The Glen Rose limestone is an important source of water north of the Balcones fault zone in areas where water is not available from the Edwards and associated limestones. The Glen Rose yields sufficient quantities only for domestic and stock supplies and in many places the water is saline. The water of best quality obtained from the Glen Rose is from wells in which the anhydrite beds are absent or have been cased off.

The Buda limestone yields small to moderate supplies of fresh water in its outcrop or where it immediately underlies surficial alluvial deposits. Its potential development is probably greatest in the vicinity of Uvalde; the aquifer becomes less important eastward where it is thinner.

Of the limestone aquifers, the Austin chalk is second in importance to the Edwards and associated limestones. As in the Buda limestone, most of the fresh water is found in the outcrop area where the Austin is capable of yielding small to large supplies. Large yields at Cline and in an area a few miles southwest of Uvalde suggest that large supplies can be obtained in the western part of the county where the formation crops out or is close to the surface. Water-level records in a few wells indicate that extended droughts can seriously affect the adequacy of the supply from the Austin.

The potential development of water from the Leona formation is largely dependent upon development in the underlying limestone aquifers. In a large part of the area where the Leona is most productive, it is hydraulically connected with the Buda limestone, Austin chalk, and Edwards and associated limestones. Development from the limestone aquifers may lower the water level, thus reducing or depleting the supply available from the Leona. The availability of water from the Leona also is reduced appreciably by drought. During the 1947-56 drought, water levels in parts of the Leona River Valley declined below the base of the formation, deactivating some of the wells in that area. Other wells in areas where the formation is deeper were productive throughout the drought, despite the lowering of water levels.

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

Table 4.--Records of wells and springs in Uvalde 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; H, hand; J, jet; N, none; Ng, natural gas; 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	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
A-9-1	M. D. Cloudt	Phanton Oil Co.	1931	2,709	--	--	1,450	--	--	--	--	Oil test. Abandoned. 1/
A-9-2	Ross Doughty	--	--	Spring	--	Edwards and associated limestones	--	(+)	May 3, 1956	Flows	--	Supplies water for private swimming pool. Reported flowing several gpm (gallons per minute) Dripping Springs.
A-9-3	do	--	--	--	8	Glen Rose limestone	--	24.5	do	C,W	D,S	
A-9-4	J. F. Rogers	--	--	Spring	--	Edwards and associated limestones	--	(+)	do	Flows	--	Flow estimated 3 gpm. Temp. 76°F.
A-9-5	Oscar Hope	-- Connell	1953	213	6	Glen Rose limestone	--	127.0	May 9, 1956	N	S	Casing: 6-in. to 69 ft. Drilled to 600 ft.; caved at 213 ft. 1/ 2/
A-9-6	W. D. Sutherland	-- Lambert	1951	185	--	do	--	141.5	Apr. 25, 1956	C,W	S	Temp. 75°F.
A-9-7	do	--	1951	172	6	Glen Rose limestone and Leona formation (?)	--	45.2	do	C,W,G	S	
A-9-8	do	--	1956	146	6	Glen Rose limestone	--	126.2	Apr. 26, 1956	C,W	S	
A-9-9	--	--	Old	22	48	Leona formation	--	15.1	do	C,W	S	Dug.
A-9-10	W. D. Sutherland	--	1935	25	--	do	--	21.4	do	J,E	D,S	do
A-9-11	J. K. Kepley	--	--	49	--	Glen Rose limestone and Leona formation	--	38.0	Apr. 23, 1956	C,W	D	Drilled to 32 ft.; deepened to 49 ft. in 1953.
A-9-12	Mrs. Roy C. Luce	--	1945	55	--	Leona formation	--	40.7	do	C,W	D	Discharge reported small.
A-9-13	W. A. Luce	--	--	65	--	Glen Rose limestone and Leona formation	--	46.3	May 2, 1956	C,W	D	Dug to 35 ft.; drilled to 65 ft.
A-9-14	T. L. Witt	--	--	31	6	Leona formation	--	23.1	Apr. 25, 1956	--	S	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
A-9-15	T. L. Witt	--	--	40	--	Leona formation	--	--	--	T,G, 30	Irr	Cased to bottom. Discharge reported 500 gpm.
A-9-16	do	--	--	175	6	Glen Rose limestone	--	66.9	Apr. 25, 1956	C,W	S	
A-9-17	Oscar Hope	--	1934	225	6	do	--	118.6	May 9, 1956	C,W	S	
A-9-18	do	H. C. Murphy	--	360	6	do	--	86.7	May 3, 1956	C,W	S	Deepened from 205 ft. to 360 ft. in Apr. 1955.
A-9-19	do	--	--	320	6	do	--	170.7	May 9, 1956	C,W	S	
A-9-20	Vic Rogers	--	--	5?	--	Leona formation	--	--	--	J,E, ¼	D,S	Situated on small alluvial bar on edge of springfed creek. Reported never goes dry.
A-9-21	J. F. Rogers	--	--	7	--	do	--	--	--	J,E	D	Dug.
A-9-22	do	A. W. Heine	--	200	--	Edwards and associated limestones(?)	1,414	166.2	May 3, 1956	C,W	D,S	
A-9-23	J. H. Mills	--	--	200	--	Glen Rose limestone	--	--	--	C,W	S	
A-9-24	do	--	--	60	--	--	--	35.1	May 16, 1956	C,W	S	
A-9-25	Oscar Hope	--	--	4	--	Leona formation	--	--	--	J,E, 1/3	D	Dug.
A-9-26	H. A. Victor	H. A. Victor	1949	34	12	do	--	11.5	May 6, 1956	Cf,G	Irr	Cased to bottom. Discharge reported 300 gpm.
A-9-27	do	--	--	50	--	do	--	27.7	do	C,W	D	
A-9-28	S. Ruiz	--	Old	39	--	do	--	33.4	do	B,H	D,S	Dug.
A-9-29	J. H. Mills	--	--	--	--	do	--	27.5	do	C,E, ½	D	do
A-9-30	T. L. Witt	--	--	50	12	Leona formation and Glen Rose limestone	--	--	--	T,G, 50	Irr	Discharge estimated 700 gpm.
A-9-31	Jack Noble	--	--	174	6	Glen Rose limestone	--	114.4	May 6, 1956	C,E	S	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
A-9-32	Jack Noble	--	--	50	6	Leona formation	--	32.9	May 6, 1956	C,G	S	Discharge reported 60 gpm.
A-9-33	do	--	1954	55	6	do	--	32.7	do	C,E, 1/3	D	
A-9-34	Lynn Jones	--	--	54	6	do	--	31.7	do	C,E, ½	D	
A-9-35	J. H. Mills	--	--	147	--	Leona formation and Glen Rose limestone	--	42.3	May 16, 1956	T,E	D,S	Cased to bottom. Temp. 80°F.
A-9-36	do	--	--	140	6	Glen Rose limestone	--	51.3	do	C,W	S	
A-9-37	do	W. Heine	--	128	--	do	--	74.8	do	C,W	S	Cased to bottom.
A-9-38	do	Austin Smith	--	128	--	do	--	--	--	T,E	D	do
A-9-39	E. J. Benson	--	--	Spring	--	Edwards and associated limestones	--	(+)	July 12, 1956	Flows	S	Boiling Springs.
A-9-40	do	--	--	147	--	Glen Rose limestone	--	--	--	C,W	S	
B-7-1	Fred Clark	--	--	22	--	Leona formation	--	20.1	Oct. 9, 1956	--	D,S	Dug.
B-7-2	H. B. Cummings	--	1925	35	--	do	--	30.0	Nov. 22, 1955	C,W	D,S	do
B-7-3	J. H. Heard	--	--	37	6	Glen Rose limestone and Leona formation	--	19.3	Oct. 10, 1956	C,W	D,S	
B-7-4	do	--	--	Spring	--	Edwards and associated limestones	--	(+)	Oct. 11, 1956	Flows	--	Flow measured 2 gpm. Temp. 72°F.
B-7-5	E. M. Wise	--	--	Spring	--	do	--	(+)	Apr. 23, 1956	Flows	--	Flow reported 0.5 gpm. Temp. 70°F.
B-7-6	do	--	1955	680	5	Glen Rose limestone	--	200	1955	N	N	Discharge reported 20 gpm. Formerly supplied water for stock.
B-7-7	Y. C. Smith	--	--	110	6	do	--	23.5	Apr. 23, 1956	C,W	S	
B-7-8	do	-- Wells	--	35?	--	Leona formation	--	--	--	T,G, 50	Irr	Dug. Cased to bottom. Discharge reported 1,000 gpm.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
B-7-9	Y. C. Smith	--	--	90	6	Leona formation and Glen Rose limestone (?)	--	25.6	Apr. 23, 1956	C,W	S	Cased to bottom.
B-7-10	do	-- Wells	--	45	--	Leona formation	--	22.5	do	J,E	D	Dug. Cased to bottom.
B-7-11	Tobe Whitley	W. Heine	--	125	--	Glen Rose limestone and Leona formation	--	--	--	T,E	D	
B-7-12	do	-- Wells	1952	666	--	Glen Rose limestone	--	--	--	C,W	S	
B-7-13	do	do	1952	71	--	Leona formation	--	46.9	May 2, 1956	C,W	S	Cased to bottom. Discharge reported 20 gpm when drilled.
B-7-14	do	--	--	105	--	--	--	45.9	do	C,W	--	Cased to bottom.
B-7-15	do	Austin Smith	1954	825	--	Glen Rose limestone	--	--	--	C,W	S	
B-7-16	do	--	--	Spring	--	Edwards and associated limestones	--	(+)	May 2, 1956	Flows	--	Flow reported 0.5 gpm. Temp. 72°F.
B-7-17	J. E. Moss	--	--	Spring	--	do	--	(+)	--	Flows	D,S	Flow reported 30 gpm. Walnut Spring. Temp. 73°F.
B-7-18	Ana Heard	--	--	Spring	--	do	--	(+)	Oct. 11, 1956	Flows	--	Flow estimated 1 gpm. Temp. 71°F.
B-7-19	Heard Estate	--	1914	34	--	Glen Rose limestone	--	30.3	do	C,W	D,S	Dug.
B-7-20	S. S. Heard	R. Bishop	1953	61	6	do	--	40.9	do	J,E	D,S	Cased to 30 ft.
B-7-21	L. Gonzales	--	--	27	--	do	--	22.5	do	J,E	D,S	Old well. Dug.
B-7-22	O. U. Russell	R. Bishop	1953	168	12	do	--	58.8	Oct. 14, 1956	J,E	D,S	Cased to 2 ft.
B-7-23	A. C. Robinson	--	1906	65	--	do	--	37.7	Oct. 16, 1956	J,E, 3/4	D	Dug.
B-7-24	-- Marshall	--	--	114	6	do	--	22.8	do	--	N	Old well.
B-8-1	W. B. Patterson, Jr.	Transcontinental Oil Co.	1919	3,930	--	--	--	--	--	--	--	Oil test. Abandoned. 1/
B-8-2	J. P. Spinks	--	--	75	6	Glen Rose limestone	--	59.8	Sept.11, 1956	C,W	D	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
B-8-3	John Hammand	--	--	40	60	Leona formation	--	30.8	Aug. 17, 1956	C,W,G, 2½	D,S	Dug. Temp. 71°F.
B-8-4	Fritz Streib	A. Serber	1954	405	6	Glen Rose limestone	--	114.9	Sept.12, 1956	C,W	S	Cased to 20 ft.
B-8-5	T. Love	Sid Wells	1952	85	6	do	--	72.6	Sept.11, 1956	C,W	S	Cased to 20 ft. Temp. 75°F.
B-8-6	Bob Davis	--	1905	100	6	do	--	64.5	Sept.10, 1956	C,W	D	Cased to 12 ft.
B-8-7	Mrs. G. B. Hoover	--	1926	38	48	Leona formation	--	34.4	do	J,E, ½	D	Dug.
B-8-8	Bob Davis	Victor Wee Hunt	1946	155	6	Glen Rose limestone	--	85.6	do	C,W	S	Cased to 75 ft. Deepened from 75 to 155 ft. in 1956. Temp. 74°F.
B-8-9	do	Austin Smith	1953	60	8	do	--	(+)	do	Flows	S	Cased to bottom. Flow reported 1.5 to 2 gpm.
B-8-10	do	A. Goodin	1920	100	6	do	--	59.0	do	C,W	S	Cased to 8 ft.
B-8-11	Mrs. G. B. Hoover	--	--	Spring	--	Leona formation	--	(+)	do	Flows	S	Flow estimated 2 gpm. Temp. 73°F.
B-8-12	Richard Magers	--	--	70	6	Glen Rose limestone	--	40.8	Aug. 22, 1956	C,W	D,S	Cased to 20 ft. Old well.
B-8-13	W. L. Magers	King Stokes	1950	46	6	Leona formation	--	25.7	do	J,E, 1/3	D,S	Cased to 39 ft.
B-8-14	Garner State Park	--	--	60	6	Glen Rose limestone	--	23.5	Aug. 17, 1956	T,E, 3	P	
B-8-15	S. G. Newton	--	--	Spring	--	Edwards and associated limestones	--	(+)	Oct. 11, 1956	Flows	D,S	Flow estimated 30 gpm. Temp. 69°F.
B-8-16	W. B. Patterson, Jr.	--	--	Spring	--	do	--	(+)	Sept.11, 1956	Flows	S	Flow estimated 3 gpm. Temp. 72°F.
B-8-17	do	--	--	Spring	--	do	--	(+)	do	Flows	S	do
B-8-18	B. Routh	A. Serber	1951	130	6	Glen Rose limestone	--	83.1	Sept.18, 1956	C,W	D	
B-8-19	S. W. Chapman	do	1953	63	6	do	--	60.3	Aug. 22, 1956	C,W	S	

See footnotes at end of table.

Table 4.--Records of wells and spring in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
B-8-20	A. A. Collins	Victor Wee Hunt	1943	37	--	Glen Rose limestone and Leona formation	--	22.4	Aug. 22, 1956	J,E, 1	D	Cased to 34 ft.
B-8-21	J. R. Brown	-- Crawford	--	995	8, 7	Hosston formation	--	--	--	T,G, 25	S,Irr	Cased to bottom. Discharge reported 1,557 gpm during 13 hour test.
B-8-22	W. B. Patterson, Jr.	--	1916	25	48	Leona formation	--	20.7	Sept.11, 1956	C,W	D,S	Dug. Temp. 72°F.
*B-8-23	do	--	--	Spring	--	Edwards and associated limestones	--	(+)	Oct. 18, 1956	Flows	S	Flow estimated 1.5 to 2 gpm. Temp. 70°F.
*B-8-24	O. E. Monroe	--	--	Spring	--	Glen Rose limestone	--	(+)	Oct. 16, 1956	Flows	D,S	Flow measured 1 gpm. Temp. 73°F.
B-8-25	do	O. E. Monroe	1952	23	36	Leona formation	--	19.3	Nov. 16, 1956	J,E, 3/4	D	Dug. Cased to bottom.
B-8-26	L. R. Davenport	L. R. Davenport	1932	26	--	Leona formation and Glen Rose (?) limestone	--	25.1	Oct. 17, 1956	C,W	D	Dug.
B-8-27	W. J. Nelson	--	--	Spring	--	Glen Rose limestone	--	(+)	Oct. 18, 1956	Flows	S	Flow estimated 1 to 2 gpm. Temp. 72°F.
B-8-28	Archie McFaddin	B. Benson	1953	250	--	Glen Rose limestone and Edwards and associated limestones(?)	--	67.5	Nov. 1, 1956	C,W	S	Temp. 72°F.
B-8-29	W. J. Nelson	W. Heine	1950	150	6	Glen Rose limestone	--	18.4	Oct. 16, 1956	C,W	S	Cased to 40 ft.
*B-8-30	do	do	1950	60	6	do	--	17.5	Oct. 18, 1956	Cf,E, 1	D,S	Cased to 40 ft. Temp. 72°F.
B-8-31	Archie McFaddin	--	1955	25	48	Leona formation	--	20.3	Nov. 1, 1956	J,E, 1/4	D,S	Dug.
B-8-32	do	A. Hancock	1951	300	9	Glen Rose limestone	--	101.9	Nov. 6, 1956	C,W	S	Cased to 10 ft.
B-8-33	B. Cowan	--	1950	250	6	do	--	79.3	Sept.18, 1956	C,W	S	Cased to 4 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
B-8-34	B. Covan	A. Serber	1956	35	6	Glen Rose limestone	--	21.7	Sept.18, 1956	--	--	Cased to bottom.
B-8-35	W. J. Robinson	Tex King	1951	31	6	Leona formation and Glen Rose (?) limestone	--	20.4	do	Cf,E,6	D	do
B-8-36	B. Covan	J. Roberts	1937	102	6	Glen Rose limestone	--	43.3	Sept.19, 1956	J,E	D	Cased to 40 ft.
B-8-37	W. B. Rankin	--	1951	125	--	Glen Rose limestone and Edwards and associated limestones	--	46.7	do	C,W	S	
B-8-38	B. Covan	A. Serber	1954	136	6	Glen Rose limestone	--	34.7	do	C,W	S	Cased to 5 ft.
B-8-39	L. E. Wyatts	Victor Wee Hunt	1949	60	6	do	--	28.4	do	C,W	D,S	Temp. 75°F.
B-9-1	W. P. Cunningham	--	1923	350	6	do	--	104.3	May 22, 1956	C,W	D	Cased to 35 ft.
B-9-2	Mrs. J. T. Bounds	--	1916	34	30	do	--	31.3	May 23, 1956	J,E	D	Dug. Cased to bottom.
B-9-3	C. F. Porter	--	1900	39	48	Leona formation	--	37.1	do	J,E	D	Dug. Temp. 70°F.
*B-9-4	Utopia School	--	1952	336	6	Glen Rose limestone	--	58.6	do	T,E	P	Cased to 100 ft. Temp. 74°F.
B-9-5	P. M. Boyce	--	1924	38	36	Leona formation	--	32.3	July 10, 1956	J,E	D	Dug. Cased to 9 ft. Temp. 74°F.
B-9-6	A. E. Umlang	--	--	35	36	Leona formation and Glen Rose limestone	--	29.1	May 23, 1956	C,E	D	Dug. Temp. 73°F. Old Well.
B-9-7	Mrs. F. Forbes	--	--	187	6	Glen Rose limestone	--	110.4	July 10, 1956	C,W	S	Temp. 73°F.
B-9-8	Jack Tampke	E. Boyce	1928	178	6	do	--	34.8	June 11, 1956	C,W	S	Cased to 20 ft.
B-9-9	George Moore	do	1928	260	6	do	--	40.9	May 22, 1956	C,E,1	D,S	Cased to 60 ft.
B-9-10	Freida Heideman	--	1916	180	6	do	--	67.8	May 21, 1956	C,E,1½	D	Cased to 10 ft.
*B-9-11	Frank Jones, Jr.	--	--	407	6	do	--	190.9	May 2, 1956	C,W	S	Cased to 6 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
B-9-12	A. Heideman	J. Smallwood	--	92	6	Glen Rose limestone	--	64.9	May 21, 1956	C,G	S	Cased to 10 ft. Temp. 74°F.
B-9-13	Frank Jones, Jr.	A. Smith	--	600	6	do	--	139.3	May 2, 1956	C,W	S	Cased to 6 ft.
B-9-14	do	do	1953	155	6	Glen Rose limestone and Leona formation	--	40.4	do	T,E, 5/8	D	do
*B-9-15	do	do	--	101	6	Glen Rose limestone	--	83.4	do	C,W	S	Cased to 10 ft. Temp. 74°F.
B-9-16	C. C. Mitchell well 1	The Texas Co.	--	6,503	15, 6	--	--	--	--	--	--	Oil test. 1/ 2/
B-9-17	A. Heideman	E. Boyce	1910	170	6	Glen Rose limestone	--	148.9	May 21, 1956	C,W	D,S	Cased to 3 ft.
B-9-18	D. R. Thrasher	--	--	23	18	Glen Rose limestone and Leona formation	--	18.4	May 9, 1956	C,E	D	Dug. Temp. 74°F.
*B-9-19	Edgar L. Tampke	E. Boyce	1912	400	6	Glen Rose limestone	--	114.2	May 21, 1956	C,W	D,S	Cased to 6 ft.
B-9-20	G. Tampke	A. Smith	1953	450	6	do	--	195.5	May 16, 1956	C,W	S	Temp. 76°F.
B-9-21	Frank Tampke	W. Cornelius	1955	66	7	do	--	41.4	July 10, 1956	C,W	S	
*B-9-22	Jack Tampke	--	1948	28	36	Leona formation	--	23.6	June 11, 1956	N	N	Dug. Cased to 18 ft.
B-9-23	Abbie Linam	--	1948	41	6	Glen Rose limestone	--	32.4	June 28, 1956	J,E, 1/3	D	
B-9-24	G. Tampke	-- Murphy	--	75	7	do	--	35.3	May 11, 1956	J,E, 1	D,S	Cased to 40 ft.
B-9-25	Frankie Lohman	John Roberts	1946	400	7	do	--	32.9	July 10, 1956	J,E, ½	D,S	
B-9-26	Girl Scouts of Bexar County	--	1956	16	30	Leona formation	--	12.9	June 12, 1956	Cf,E, 1	--	Dug. Cased to bottom. Temp. 73°F.
B-9-27	J. A. Webb	--	1904	35	36	Glen Rose limestone and Leona formation	--	34.9	June 11, 1956	C,W,E, ½	D,S	Cased to 6 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
B-9-28	L. L. Beard	E. Boyce	1905	283	8	Glen Rose limestone	--	66.4	May 9, 1956	J,E,1	D,S	Cased to 5 ft. Temp. 74°F.
*B-9-29	L. S. Tampke	do	1932	153	7	do	--	62.5	do	C,W	D,S	Cased to 80 ft. Temp. 72°F.
B-9-30	G. Tampke	--	--	125	6	do	--	107.7	May 16, 1956	C,W	S	Cased to 6 ft.
B-9-31	Frank Tampke	Victor Wee Hunt	1951	120	6	do	--	95.9	June 18, 1956	C,W	S	Cased to 15 ft.
*B-9-32	D. R. Thrasher	--	--	18	--	Leona formation	--	13.9	June 16, 1956	J,E	D,S	Dug. Temp. 73°F.
*B-9-33	do	--	--	Spring	--	Glen Rose limestone	--	(+)	do	Flows	S	Flow reported 4 gpm. Temp. 71°F.
B-9-34	G. C. Clark	--	--	Spring	--	do	--	(+)	Dec. 6, 1956	Flows	S	Flow reported 1 gpm. Temp. 71°F.
B-9-35	do	--	--	Spring	--	Edwards and associated limestones	--	(+)	do	Flows	S	Flow reported 29 gpm. Temp. 71°F.
B-9-36	Grover Cannan, Jr.	A. Sm th	1955	300	6	Glen Rose limestone	--	122.1	June 18, 1956	C,W	S	Cased to 90 ft. Temp. 73°F.
B-9-37	do	do	1953	505	6	do	--	137.6	do	T,E	D,S	Cased to 205 ft.
B-9-38	do	do	1953	405	6	do	--	111.6	do	C,W	S	Cased to 140 ft. Temp. 73°F.
B-9-39	G. Tampke	W. Clanton	1950	174	7	do	--	157.7	May 16, 1956	C,W	S	Cased to 18 ft. Temp. 75°F.
B-9-40	Austin Lewis	A. Smith	--	451	7	do	--	76.3	June 18, 1956	C,W	S	Cased to 200 ft.
B-9-41	Volney Umlang	--	--	226	6	do	--	35.3	July 11, 1956	C,W	S	Temp. 72°F.
B-9-42	Austin Lewis	--	1896	320	6	do	--	56.0	June 18, 1956	C,W T,E,1½	D,S	Cased to 10 ft.
B-9-43	Volney Umlang	--	--	46	48	do	--	41.9	July 11, 1956	C,W J,E,2	D	Dug. Cased to 2 ft. Temp. 73°F.
B-9-44	Frank Jones, Jr.	A. Smith	1955	250	6	do	--	48.6	do	C,W, T,E,3/4	S	Cased to 60 ft.
B-9-45	McCullough Ranch	-- Cravens	1953	225	6	do	--	46.3	July 10, 1956	C,W	S	
B-9-46	A. C. Wood	--	--	24	--	Leona formation	--	21.1	June 2, 1956	J,E, ½	D	Dug.
B-9-47	C. C. Kelley	A. Smith	1952	110	6	Glen Rose limestone	--	33.9	June 27, 1956	J,E,1	D	Cased to 40 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
B-9-48	G. C. Clark	A. Smith	1955	715	7	Glen Rose limestone	--	201.0	Dec. 6, 1957	C,G	S	Cased to 22 ft.
B-9-49	do	do	1954	735	7	do	--	237.5	Dec. 6, 1956	C,W, T,E,1	S	Cased to 30 ft.
B-9-50	-- Richardz	--	--	35	14	Leona formation	--	32.8	Nov. 13, 1956	C,W	S	Dug. Cased to bottom. Old well. Temp. 74°F.
*B-9-51	Story Ranch	--	--	Spring	--	Edwards and associated limestones	--	(+)	Nov. 26, 1956	Flows	D,S	Flow reported 15 gpm. Temp. 70°F.
B-9-52	Horton Estate	--	--	Spring	--	Glen Rose limestone	--	(+)	July 19, 1956	Flows	S	Flow reported 5 gpm. Temp. 72°F.
B-9-53	Susie Kelly Estate	--	--	140	6	do	--	43.3	June 27, 1956	J,E, ½	D	Cased to 30 ft. Old well.
B-9-54	Russell Rehm	W. D. Barton	1918	480	6	do	--	14.5	do	J,E	D	Cased to 60 ft.
B-9-55	T. G. Hines	--	--	220	6	do	--	56.9	June 28, 1956	C,W	D,S	
B-9-56	L. A. Felder	A. Smith	--	400	7	do	--	22.1	do	N	N	Cased to 10 ft.
B-9-57	McCullough Ranch	--	--	60	6	do	--	42.1	July 5, 1956	C,W	S	
C-7-1	J. Woodard	J. Roberts	1946	423	6	do	--	232.2	Oct. 2, 1951	T,E, 2	S	Temp. 73°F.
C-7-2	do	do	1946	423	6	do	--	118.8	do	T,E, 2	S	
C-7-3	J. M. Chaney	--	--	100	6	do	--	54.8	May 24, 1956	C,W	D,S	Cased to 20 ft. Old well. Temp. 73°F.
C-7-4	do	Bill Cornelius	--	401	6	do	--	225.5	do	C,G, 3	S	Cased to 31 ft.
*C-7-5	D. B. Hicks	I. Chism	1946	390	5	do	--	208.8	May 29, 1956	C,W	S	Cased to 15 ft.
C-7-6	do	E. Boyce	--	670	--	do	--	335.9	do	C,G	S	Cased to 60 ft.
C-7-7	C. C. Kelley	--	--	350	6	do	--	171.3	July 7, 1956	C,W	S	Cased to 50 ft. Temp. 74°F.
C-7-8	J. D. Chism	Tex King	1946	178	6	do	--	64.0	May 24, 1956	C,W	D,S	Cased to 18 ft.
C-7-9	McCullough Ranch	--	--	735	6	Glen Rose(?) limestone	--	133.8	June 6, 1956	C,W	S	Originally drilled to 1,400 ft.; caved at 735 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
C-7-10	McCullough Ranch	-- Cravens	1953	325	6	Glen Rose limestone	--	207.7	July 7, 1956	C,W	S	Cased to 6 ft.
C-7-11	do	--	--	256	6	do	--	198.6	June 6, 1956	C,W	S	Cased to 10 ft. Temp. 74°F.
C-7-12	C. C. Kelley	--	--	300	6	do	--	143.5	July 7, 1956	C,W	S	
*C-7-13	do	--	1906	300	6	do	--	120.7	do	C,W	D,S	Cased to 50 ft. Temp. 72°F.
C-7-14	Roy Nunnley	--	--	96	6	do	--	32.4	do	C,W	D,S	
C-7-15	Mrs. G. E. Woods	A. Smith	1930	400	6	do	--	311.2	May 31, 1956	C,W	S	
*C-7-16	do	do	1956	475	6	do	--	222.2 228.7	May 31, 1956 Mar. 25, 1957	C,W	S	Cased to 45 ft. Temp. 72°F.
C-7-17	W. C. Johnson	John Roberts	1953	250	10	do	--	153.3	June 2, 1956	C,W	S	Cased to 6 ft.
G-3-1	G. R. Herndon	--	--	200	6	Edwards and associated limestones	--	--	--	C,W	S	Old well.
G-3-2	Stoner Smith	--	--	32	--	Leona formation	--	28.1	July 5, 1956	B,H	D	Dug.
G-3-3	J. E. Moss	--	--	Spring	--	do	--	(+)	May 17, 1956	Flows	D	Flow estimated 2 gpm. Reported never dry. Temp. 71°F.
G-3-4	J. H. Massingill	--	--	30	--	do	--	28	July 1956	C,W	D	Dug.
G-3-5	do	--	1950	30	5	Edwards and associated limestones	--	23.4	July 5, 1956	C,W	S	
G-3-6	do	J. Roberts	1944	224	--	Glen Rose limestone	--	75	July 1956	C,W	S	
G-3-7	do	--	--	150	--	do	--	83.2	July 5, 1956	C,W	S	
G-3-8	Mrs. Anna Wells	--	--	30	--	Leona formation	--	19.1	July 6, 1956	C,E	D	Dug. Discharge estimated 10 to 15 gpm. Old well.
G-3-9	I. W. Elliott	--	1942	26	--	do	--	21.3	do	C,G	D	Dug. Discharge estimated 10 to 15 gpm.
G-3-10	H. B. Shawcross	--	--	140	--	Glen Rose limestone	--	--	--	C,W	S	
*G-3-11	do	--	--	56	7	Leona formation	--	37.0	July 23, 1956	C,W	S	Temp. 78°F.

See footnotes at end of table.

Table 4.--Reco ds of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
G-3-12	H. B. Shawcross	--	1938	55	7	Leona formation	--	40.5	July 23, 1956	C,W	D	
*G-3-13	do	--	--	207	--	Glen Rose limestone	--	--	--	C,W	S	Temp. 75°F.
G-3-14	Virgil Sutherland	W. Heine	1944	68	5	Leona formation	--	52.2	July 17, 1956	T,E, 3/4	D,S	Cased to bottom. Drawdown measured 15 ft. after 1 hour pumping at 6.6 gpm.
G-3-15	J. G. Dooley	A. Smith	1954	65	11	do	--	38.4	July 13, 1956	J,E, 1/2	S	Cased to bottom. Discharge reported about 60 gpm.
G-3-16	do	--	1916	61	--	do	--	--	--	T,E	D,S	Discharge reported 15 gpm.
G-3-17	do	W. Heine	1956	177	--	Glen Rose limestone	--	86.5	July 15, 1956	T,E	S	Cased to 110 ft. Discharge reported small.
*G-3-18	S. H. Laning	A. Smith	1957	60	7	Leona formation	--	41.0 42.5	Apr. 25, 1957 Mar. 25, 1958	N	--	Cased to bottom. Recording gage installed May 24, 1957. Observation well. 3/
G-3-19	do	do	1957	140	7	Edwards and associated limestones	--	41.0 41.9	Apr. 26, 1957 Mar. 25, 1958	N	--	Cased to 70 ft. Recording gage installed May 24, 1957. Observation well. 3/
G-3-20	do	--	--	30	--	Leona formation	--	--	--	T,E	Irr	Cased to bottom. Discharge estimated 2,500 gpm.
*G-3-21	Joe Rogers	--	--	140	--	Edwards and associated limestones	--	103.1	July 13, 1956	C,T	D,S	Temp. 73°F.
G-3-22	Geo. Raney	--	--	200?	5	do	--	--	--	C,W	D,S	
G-3-23	do	--	--	159	--	do	--	150	July 1956	C,W	D,S	Old well.
G-3-24	do	--	--	235	--	do	--	190	July 1956	C,W	S	
G-3-25	Sarah Haby	John Laxton	1917	356	6	do	--	254.5	July 31, 1956	C,W	D,S	Cased to 1.5 ft. Black rock reported from 300 to 335 ft. Temp. 78°F.
G-6-1	J. B. Smythe	Gulf Production Co.	1916	2,625	12	--	950	--	--	--	--	Oil test. 1/
G-6-2	Frank Kirchgraber	--	1951	--	--	Edwards and associated limestones, and Austin(?) chalk	--	--	--	T,G	Irr	Supplies water for about 50 acres.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
G-6-3	C. R. Brice	-- Heine	1939	1,420	5	Edwards and associated limestones	1,066	127.4	Jan. 20, 1940	N	N	Caved and abandoned.
*G-6-4	Frank Kirchgraber	--	--	120	6	Austin chalk	--	44.3 53.9	Aug. 18, 1937 Jan. 14, 1958	C,W,G, 2½	D,S	3/
*G-6-5	Texas & New Orleans R. R. Co.	--	--	68	120	do	--	30.2 40.4	Aug. 18, 1937 Jan. 14, 1958	N	N	Dug. Brick curb to 25 ft. Rock wall from 25 ft. to bottom. Discharge reported large. Old well. 3/
G-6-6	R. H. Harris, Jr.	W. Heine	1945	205	9	Edwards and associated limestones	--	142.7	June 25, 1957	C,W	S	Cased to bottom.
G-6-7	do	do	1945	210	6	do	--	163.5	do	C,W	S	do
G-6-8	do	do	1945	249	7	do	--	125.3	do	C,W	S	Cased to 160 ft.
G-6-9	do	-- DeVillbiss	--	250	5	do	--	131.4	Apr. 18, 1957	C,W	S	Cased to 50 ft. Old well.
*G-6-10	John Rosenall	--	--	100	6	do	1,006	62.6 69.6	Mar. 22, 1939 Mar. 25, 1958	C,W	S	Well H-4-35 in Bull. 5608, Texas Board of Water Engineers. 3/
G-6-11	R. H. Harris, Jr.	--	--	250	5	Eagle Ford shale	--	130.1	July 2, 1957	C,W	S	Drawdown measured 1.38 ft. after 5 minutes pumping at 1.5 to 2 gpm. Old well.
G-6-12	do	W. Heine	1952	350	6	do	--	--	--	C,W	S	Cased to bottom.
G-6-13	do	do	1948	510	7	Edwards and associated limestones, and Eagle Ford(?) shale	--	58.7	May 21, 1957	C,W	S	Cased to 350 ft.
G-6-14	do	-- DeVillbiss	--	349	5	Austin chalk	--	53.9	Aug. 9, 1957	C,W	D,S	Cased to 50 ft. Old well.
G-6-15	--	--	--	85	--	Leona formation	--	30.9	May 21, 1957	C,W	S	
G-6-16	J. A. Sparks	W. Heine	1949	80	12	Austin chalk	--	38.4	May 17, 1957	N	Ind	Cased to 10 ft. Discharge reported 700 gpm. Supplies water for highway construction.
G-6-17	John Pingenot	--	--	100	--	Leona formation and Austin chalk	--	37	July 1956	C,G	Irr	Casing slotted at gravel interval. Discharge measured 35 gpm. Temp. 74°F.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
G-6-18	John Pingenot	Crawford & Heine	--	65	--	Austin chalk and Leona formation	--	36	July 1956	T,E	D,S	Cased to 35 ft. Discharge reported 7 gpm.
*G-6-19	Phil Newell	--	--	245	--	Austin chalk	--	153.5 67.8	Aug. 18, 1937 Sept. 14, 1955	C,W,G, 2½	D,S	Well H-4-65 in Bull. 5608, Texas Board of Water Engineers. Old well. 3/
G-6-20	do	Crawford & Heine	1931	953	--	Edwards and associated limestones	1,040	--	--	N	N	Reported top of Edwards 836 ft.
G-6-21	Blewett Mines	--	--	125	--	Anacacho limestone	--	--	--	C,E	Ind	Discharge reported 30 gpm.
G-9-1	J. B. & W. A. Smythe	Pure Oil Co.	--	4,810	--	--	1,200	--	--	N	N	Oil test. 1/
G-9-2	do	do	--	2,445	--	--	1,150	--	--	N	N	Oil test. Abandoned. 1/
*G-9-3	Texas Highway Department	Lynn Spurgeon	1957	2,140	--	Edwards and associated limestones	1,070	146.0	Dec. 4, 1957	T,E	Ind	Cased to 1,535 ft. Temp. 80°F.
G-9-4	-- Blewitt	--	--	110	--	Anacacho limestone	--	42.8	June 4, 1957	C,W	Ind	
G-9-5	do	--	1924	--	6	--	--	--	--	C,W	D,S	Shallow well. Reported recharged directly by water in nearby creek.
G-9-6	do	--	--	80	10	--	--	1.0	June 7, 1957	C,W	S	Located near creek. Pumping at time of measurements. Nearby dam impounds water for recharging well.
*H-1-1	Arlie Crump	Tex King	1951	232	10	Edwards and associated limestones	--	47.6 38.4	Feb. 1, 1954 Mar. 27, 1958	T,G	Irr	Cased to 84 ft. Drawdown reported 73 ft. after 4 to 5 hours pumping at 500 gpm. Irrigated 40 acres in 1953 and 60 acres in 1955-56. 3/
H-1-2	Wayne Wynn	Victor Wee Hunt	1949	100?	10	Leona formation	--	26.3 24.7	Feb. 11, 1954 Jan. 16, 1958	T,G	Irr	Deepened from 65 to 100 ft. Discharge measured 500 gpm. Discharge reported not dependable. Could not use in summer of 1953, 1956-57. Pump set at 40 ft. 3/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-1-3	Virgil Sutherland	--	--	170	6	Glen Rose limestone	--	126.7	May 17, 1956	C,W	S	
H-1-4	Gonzales Bros.	--	--	1,200	--	do	--	--	--	C,W	S	
H-1-5	Joe Roberts	L. Spurgeon	--	425	6	do	--	145.1	Nov. 2, 1955	N	N	Formerly supplied water for stock.
H-1-6	Fred Mason, Jr.	--	--	396	--	Edwards and associated limestones	--	196.9 197.6	Nov. 24, 1955 Feb. 26, 1956	N	N	
*H-1-7	do	--	1948	185	6	do	--	158.8 159.0	Nov. 24, 1955 Feb. 26, 1956	C,W	S	Cased to 20 ft.
H-1-8	do	Austin Smith	1955	331	6	do	--	207.3 206.8	Nov. 29, 1955 Jan. 27, 1956	C,W	S	Cased to 2 ft. Reported dynamiting increased discharge of well from 0.5 gpm to 2.5 gpm.
H-1-9	do	do	1953	620	8	Glen Rose limestone and Edwards and associated limestones(?)	1,504	212.0 203.9	Dec. 7, 1955 Feb. 26, 1956	C,W	S	Cased to 3 ft. Drilled to 1,035 ft., caved at 620 ft.
*H-1-10	Haven Friday	--	1950	250	6	Glen Rose limestone	--	--	--	C,W	S	Temp. 77°F.
*H-1-11	Fred Mason, Jr.	--	1950	230	6	Edwards and associated limestones	--	116.9 115.7	Nov. 24, 1955 Dec. 16, 1955	C,W,E, 2	S	Temp. 72°F.
H-1-12	do	--	--	385	6	Glen Rose limestone	1,332	95.9 94.8	Nov. 24, 1955 Oct. 11, 1957	N	N	Formerly supplied water for stock. 2/ 3/
H-1-13	Wm. Wynn	M. Fenley	1938	1,309	--	do	--	70	July 1956	C,W	S	
H-1-14	do	--	--	30	--	Leona formation	--	25.5	July 19, 1956	B,H	D,S	Dug. Concrete curb. Old well.
*H-1-15	Wrather Holmgreen	Parker & Scheely	1947	100	6	Edwards and associated limestones	--	52.2	July 31, 1956	C,W	S	Cased to 4 ft.
H-1-16	do	--	--	40	--	Leona formation	--	33.2	do	J,E	D,S	Cased to bottom.
H-1-17	Mrs. C. E. Jones	--	--	1,300?	--	Glen Rose limestone	--	246.5	Dec. 7, 1955	N	N	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
*H-1-18	Wayne Wynn	--	1920	450	--	do	--	--	--	C,W	D,S	
H-1-19	do	--	--	396	6	Edwards and associated limestones, and Glen Rose limestone	1,259	127.5 126.6	Nov. 24, 1955 Jan. 25, 1958	N	--	Recording gage installed May 30, 1956. 3/
H-1-20	George Raney	R. V. Raney	--	174	6	Edwards and associated limestones	--	140.5	Dec. 3, 1955	C,W	D,S	
H-1-21	do	--	--	267	7	do	--	205.3 179.0	Aug. 13, 1956 Dec. 3, 1957	C,W, T,E	S	Cased to 20 ft. 3/
H-1-22	R. A. Rogers	John Sellers	--	100	5	Leora formation	--	31.6	July 30, 1956	J,E	D	Cased to bottom. Reported dry in 1953.
H-2-1	C. F. Meyer Estate	M. L. Hale	1925	540	6	Edwards and associated limestones	1,058	220.0 268.1 244.7	Nov. 2, 1929 May 8, 1957 Dec. 3, 1957	C,W,G, 2½	D,S	
H-2-3	C. L. Farrish	G. C. Sanderlin	1916	386	6	do	1,088	265.0 272.2	Mar. 11, 1952 Dec. 3, 1957	C,E	D,S	Drawdown measured 3.9 ft. after pumping 2 gpm for 15 minutes. 3/
H-2-4	H. I. Holmes	--	1894	190	6	do	1,153	183.7 175.4	Nov. 30, 1929 Mar. 27, 1958	C,W	D,S	3/
H-2-5	W. E. Fitzgerald	G. C. Sanderlin	--	270	5	do	1,174	88.4 60.3	Nov. 30, 1929 July 22, 1954	C,W,G	D,S	3/
H-2-6	L. L. Gilleland	do	1913	270	6	do	1,069	210.6 235.9	Dec. 3, 1929 Dec. 4, 1957	C,W	D,S	3/
H-2-7	do	do	1909	250	6	do	1,071	203.9 239.5	Dec. 3, 1929 Dec. 4, 1957	C,W	D,S	
*H-2-8	W. O. DuBose	Herman Crawford	1895	333	6	do	1,071	235.1 256.3	Dec. 3, 1929 Dec. 4, 1957	T,E, 1	D,S	Drawdown measured 14.7 ft. after pumping 7.1 gpm for 20 minutes. Deepened to 333 ft. in 1957. Temp. 69°F. 3/
H-2-9	Archie McFaddin	--	1951	305	6	Glen Rose limestone	--	55.2	Nov. 11, 1956	C,W	S	Cased to 10 ft.
H-2-10	do	Wilson Crane	1934	250	6	Edwards and associated limestones	--	147.1	Nov. 6, 1956	C,G, ½	S	Cased to 10 ft. Drilled to 515 ft., caved at 250 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
*H-2-11	L. S. Reed	S. Heine	1955	64	6	Glen Rose limestone	--	30.7 31.3	Nov. 7, 1956 July 27, 1957	J,E	D,S	Cased to 21 ft.
H-2-12	C. B. Fulton Estate	do	1952	78	--	do	--	35.6	Nov. 7, 1956	J,E, 2	D,S	
H-2-13	L. S. Reed	A. Serber	1950	56	6	do	--	30.1	do	J,E, 1	D	Cased to 20 ft.
H-2-14	G. Echols	--	1955	98	6	do	--	34.9	Nov. 8, 1956	T,E, 3/4	S	
H-2-15	R. Richarz	--	--	36	--	Leona formation	--	32.6	Nov. 14, 1956	C,W	D,S	Dug.
H-2-16	G. Echols	A. Smith	1955	1,275	12	Glen Rose limestone, Pearsall, Sligo and Hosston formations	--	42.6	do	T,E, 1	D,S	Cased to 10 ft.
H-2-17	do	--	1952	80	5	Glen Rose limestone	--	46.4	Nov. 13, 1956	C,W	S	Temp. 74°F.
H-2-18	Mark Upson	--	--	103	6	Edwards and associated limestones	--	76.2	Nov. 12, 1956	C,W	S	Drawdown reported 1.1 ft. after pumping 2 to 3 gpm for 15 minutes. Temp. 74°F.
H-2-19	C. C. Meyer	A. Serber	1952	60	6	Glen Rose limestone	--	32.8	do	J,E, 1	D,S	Cased to bottom. Temp. 74°F.
H-2-20	W. E. Fitzgerald	--	--	110	6	Edwards and associated limestones	--	87.5 39.9	Mar. 9, 1955 Feb. 25, 1958	N	--	Observation well. Recording gage installed June 8, 1956. Old well. 3/
H-2-21	Mark Upson	--	--	210	6	do	--	84.3	Nov. 22, 1956	C,E, 2	S	
H-2-22	W. E. Fitzgerald	R. V. Raney	1957	46	7	Leona formation	--	38.4 40.5	Oct. 10, 1957 Mar. 25, 1958	N	--	Cased to bottom. Observation well. Recording gage installed Oct. 8, 1957. 3/
*H-2-23	do	do	1957	237	7	Edwards and associated limestones	--	68.9 49.7	Sept. 9, 1957 Mar. 5, 1958	N	N	Cased to 57 ft. Recording gage installed Oct. 8, 1958. Observation well. 1/ 2/ 3/
H-2-24	Harvey Gulley	M. Fenley	1900	300	6	do	--	184.1	Aug. 30, 1956	C,W,G, 1½,2½	D,S	Cased to 20 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-2-25	W. E. Fitzgerald	--	1906	296	6	Edwards and associated limestones	--	211.2	Nov. 22, 1956	C,W,G, 2	D,S	Maximum measured discharge of well without drawdown is 15 gpm.
H-2-26	R. R. Woodard	--	1952	320	7	do	--	239.5	Nov. 23, 1956	T,E, 1	D,S	
H-2-27	do	--	--	300?	12	do	--	232.3	Nov. 26, 1956	T,E, 3	S	Drawdown measured 3.5 ft. after many hours of pumping at 30 gpm.
*H-2-28	L. L. Gilleland	Tex King	1955	605	18	do	1,083	246.7	Dec. 4, 1957	T,G, 135	Irr	Cased to 19 ft. Drawdown measured 47 ft. after many hours of pumping at 1,000 gpm. Irrigated 200 acres of feed crops in 1957. Temp. 78°F.
H-2-29	D. E. Hale	A. Goodin	1953	360	--	do	1,089	238.1	Sept.25, 1956	C,W	S	
*H-2-30	do	R. V. Raney	1957	721	7	do	1,067	241.4 227.3	Aug. 27, 1957 Mar. 25, 1958	N	--	Cased to 44 ft. Recording gage installed Oct. 10, 1957. Observation well. Temp. 75°F. 1/ 2/ 3/
H-2-31	Mrs. F. M. Frasher	B. Bishop	1943	315	6	do	1,109	291.2 264.2	May 5, 1957 Dec. 3, 1957	C,W	S	
H-2-32	Jack Kolaya	A. Serber	1952	560	12	do	1,081	232.7 216.2	Feb. 27, 1956 Dec. 3, 1957	N	--	Cased to 185 ft. Discharge reported 250 gpm when pump set at 265 ft. Observation well. 2/ 3/
H-2-33	Millard Bryson	--	--	240	--	do	--	218.9	Oct. 25, 1956	C,W	D,S	
H-2-34	Ben Gerdes	Tex King	1952	553	--	do	1,083	246.1 247.2	Sept.25, 1956 June 6, 1957	C,G	--	
H-2-35	Fred Brigman	John Roberts	1907	375	6	do	--	255.7	Oct. 2, 1956	C,W,E, 2	D,S	Cased to bottom. Temp. 73°F.
H-2-36	L. L. Gilleland	A. Goodin	1946	350	8	do	1,057	314.4 274.9	Nov. 18, 1956 Dec. 4, 1957	C,G	S	Cased to 10 ft.
H-2-37	Fred Brigman	--	1907	348	6	do	1,040	299.3 301.5 271.8	Oct. 3, 1956 Jan. 4, 1957 Dec. 4, 1957	C,W	S	Cased to bottom.
H-2-38	do	--	--	370	6	do	--	291.3 310.3	Mar. 26, 1956 Oct. 8, 1956	C,W	D,S	Cased to 60 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
H-3-1	G. C. Sanderlin	G. C. Sanderlin	1910	440	6	Edwards and associated limestones	1,068	326.4 281.6	Mar. 11, 1952 Dec. 4, 1957	C,W	D,S	3/
H-3-2	Mark Upson	-- Brumley	1917	398	5	do	1,070	340	1917	C,W,G	D,S	
H-3-3	John Dodson	G. C. Sanderlin	--	--	6	do	--	402.9	Dec. 14, 1956	C,W,G	S	Temp. 73°F. Old well.
H-3-4	do	--	1909	440	6	Glen Rose limestone and Edwards and associated limestones(?)	1,131	232.7 235.7	Dec. 3, 1929 Jan. 5, 1951	N	N	Cased to 150 ft. 3/
H-3-5	L. D. Carter	G. C. Sanderlin	1917	319	6	Edwards and associated stones	1,198	198.7 224.1	Jan. 4, 1930 Nov. 26, 1956	C,W	S	Cased to 5 ft.
H-3-6	Story Ranch	--	--	21	--	--	1,348	17.1	Jan. 4, 1930	N	N	Dug.
H-3-7	-- Glotch	--	1925	450	8	Edwards and associated limestones(?)	--	--	--	--	S	Blowing well.
H-3-8	Mrs. K. S. Truelove	--	--	--	5	--	--	--	--	T,E	D,S	
H-3-9	H. M. Waldrip	Charley Tyler	1925	--	8	--	997	174.2 159.4	Dec. 10, 1929 Sept. 22, 1938	--	D,S	
H-3-10	T. M. Woodley	J. Roberts	--	1,220	6	Edwards and associated limestones	1,000	240.4 332.9	Dec. 11, 1929 Mar. 26, 1956	C,W	S	Deepened from 275 ft. to 1,220 ft. when visited in 1956. Temp. 73°F.
H-3-11	do	do	1912	1,000	6	do	--	--	--	C,W	S	Deepened from 400 ft. to 1,000 ft. when visited in 1956.
H-3-12	--	--	--	--	6	--	1,010	262.2 274.8	Dec. 11, 1929 Oct. 23, 1934	--	S	
H-3-14	W. A. Seidel & Sons	Max Gerfers	1938	440	12	Edwards and associated limestones	--	330 360	Oct. 1948 Feb. 1954	N	N	Cased to 80 ft. Discharge reported about 60 gpm after acidizing. Formerly irrigated 100 acres. Unused in 1953, 1956-57.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
*H-3-15	W. A. Seidel & Sons	A. C. Sanderlin	1948	847	12	Edwards and associated limestones	1,066	340 376.9	Oct. 1948 Dec. 5, 1955	T,G, 130	Irr	Cased to 90 ft. Deepened from 430 ft. to 847 ft. in 1955. Irrigated 90 acres of feed crops in 1956. Temp. 74°F. 2/
H-3-16	Dick Jantzen	A. Serber	1950	450	10	do	--	385	1950	T,G	Irr	Cased to 385 ft. Pump set at 405 ft. Irrigated about 150, 100, and 30 acres of oats and grass in 1953, 1955, and 1956, respectively. Reported slight drawdown after 4 hours pumping at 1,000 gpm.
*H-3-17	Gulick Dairy	John Roberts	1952	500	12	do	--	378	Feb. 1954	T,G	Irr	Cased to bottom. Pump set at 420 ft. Discharge reported 1,600 gpm. Irrigated 100 acres in 1956. Temp. 72°F.
H-3-18	L. O. Carter	I. Glenn	1911	80	6	do	--	70.9	Nov. 26, 1956	C,W,G, 2	D,S	
H-3-19	do	John Roberts	1953	1,135	6	Glen Rose limestone	--	166.4	do	C,W	S	Cased to 700 ft.
H-3-20	L. N. Parker	do	1956	525	8	Glen Rose limestone, and Edwards and associated limestones	--	96.3	Feb. 15, 1956	N	N	2/
H-3-21	Horton Estate	--	--	536	6	Edwards and associated limestones	--	434.1	Jan. 19, 1956	C,W,E	D,S	Cased to 20 ft. Old well.
H-3-22	Bessie Kaler	A. Goodin	1938	553	6	do	--	440.0	Mar. 11, 1957	C,W, T,E, 1½	D,S	Deepened to 553 ft. in 1956.
*H-3-23	E. F. Jackson	R. V. Raney	1957	760	7	do	1,075	354.1	Dec. 6, 1957	N	--	Cased to 210 ft. Recording gage installed Feb. 4, 1958. Observation well. 1/ 2/
H-3-24	J. W. Harris	J. Roberts	1953	500	6	do	--	403.9	Mar. 12, 1957	C,W	D,S	Cased to 2 ft.
H-3-25	K. S. Truelove	A. C. Sanderlin	1956	745	8	do	1,070	397.4	June 21, 1956	C,G, 2½, 3½	S	2/
H-3-26	do	T. T. Word	1934	2,278	--	--	--	--	--	--	--	Oil test. Abandoned. 1/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-3-27	Jack Richardson	L. Spurgeon	1955	508	10	Edwards and associated limestones	--	380	Jan. 1955	T,C, 150	Irr	Cased to 80 ft. Irrigated 175 acres of feed crops in 1955 and 1956. Temp. 72°F.
H-3-28	A. Davis	A. Goodin	--	489	6	do	1,095	423.1 388.2	Dec. 14, 1956 Dec. 4, 1957	C,W	D,S	Cased to 278 ft. Temp. 72°F. Old well.
H-3-29	Oscar Richarz, Jr.	A. Glazer	1914	512	6	do	--	446.6	Dec. 13, 1956	C,W	D,S	Temp. 73°F.
H-3-30	W. W. Chapman	I. Glenn	1916	490	6	do	--	432.0	Dec. 14, 1956	C,W,G, 1½,2½	D,S	
H-3-31	John Dodson	A. Goodin	1946	250	6	do	--	213.2	Dec. 16, 1956	C,W,G, 1½,2½	D,S	Temp. 76°F.
H-3-32	Oscar Santleben	A. C. Sanderlin	1956	600	6	do	1,115	394.2 400.4	June 29, 1956 Jan. 18, 1957	C,E, 2,2½	S	2/
H-3-33	do	--	1906	490	6	do	1,111	408.9 374.1	Dec. 16, 1956 Dec. 6, 1957	C,W	D,S	Cased to 40 ft.
H-3-34	do	--	1906	405	6	do	--	399.0	Dec. 16, 1956	C,W	S	
H-3-35	Mark Upson	J. Roberts	1944	190	9	do	--	159.4	Nov. 22, 1956	C,W	S	
H-3-36	W. O. DuBose	Herman Crawford	1938	250	7	do	--	216.8	Nov. 21, 1956	C,W	S	Cased to 20 ft.
H-3-37	do	do	--	300	7	do	--	284.3	Nov. 20, 1956	C,W	S	do
H-3-38	W. A. Seidel	J. Roberts	1943	465	6	do	1,102	265.6	Dec. 6, 1956	C,W	S	Cased to 265 ft.
H-3-39	do	B. Bishop	1955	674	11	do	1,091	369.6 330.1	Dec. 5, 1955 Dec. 5, 1957	N	N	Cased to 11 ft. Discharge reported 100 gpm. 2/ 3/
H-3-40	do	do	1955	1,123	6	Edwards and associated limestones, and Glen Rose limestone	1,089	371.5	Dec. 5, 1955	--	--	Oil test. 2/
H-3-41	D. Rogers	John Roberts	1956	880	12	Edwards and associated limestones	1,060	383.7 353.0	June 5, 1956 Dec. 6, 1957	T,E, 125	Irr	Cased to 578 ft. Discharge reported 1,000 gpm with less than 20 ft. drawdown. 2/
H-3-42	do	A. Goodin	1943	499	6	do	1,051	377.0	Aug. 9, 1956	C,E	D	Cased to 402 ft. 2/
H-3-43	K. S. Truelove	A. C. Sanderlin	1956	505	7	do	1,025	363.0	Oct. 3, 1956	C,W	S	Reported top of Edwards 280 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-3-44	Melvin O'Bryant	A. C. Sanderlin	1956	800	9	Edwards and associated limestones	--	--	--	C,G	S	Cased to 35 ft. Reported top of Edwards 465 ft.
H-3-45	Claude Armand	J. Roberts	1956	700	7	do	--	387.4	Apr. 20, 1956	C,E, 3	S	2/
H-3-46	C. P. Arnum	do	1956	600	7	do	--	419.7	Mar. 11, 1957	C,W	S	Cased to 450 ft.
H-3-47	T. M. Woodley	do	1944	900	6	do	1,015	314.5	Dec. 6, 1957	C,W	S	Cased to bottom.
H-3-48	Mrs. J. McCauly	do	1953	1,001	6	do	--	324.2	Oct. 8, 1958	T,E	D,S	
H-3-49	Alfred Meyer	--	--	455	6	do	1,027	360.8 322.1	Oct. 23, 1956 Dec. 5, 1957	C,W	S	2/
H-3-50	L. Meyer	--	1906	420	5	Buda limestone	1,023	354.4 320.1	Oct. 4, 1956 Dec. 5, 1957	C,W	S	2/
H-3-51	Perry Wall	Alton Echols	1956	1,025	--	Edwards and associated limestones	1,023	339.0	Mar. 31, 1956	T,G, 150	Irr	Cased to 805 ft. Drawdown 20 ft. after 8 hours pumping 874 gpm. Irrigated 170 acres of feed crops in 1956.2/
H-3-52	L. Meyer	J. Roberts	1942	597	6	Eagle Ford(?) shale	--	342.3	Sept.27, 1956	C,W	S	Cased to bottom.
H-3-53	do	-- Fisher	1916	600	6	do	--	339.0	do	C,W	D,S	Cased to 200 ft. Temp. 72°F.
H-3-54	E. Krause	-- Tyler	1905	400	6	--	--	270.7	do	C,W	D,S	Temp. 73°F.
H-3-55	do	A. Goodin	1929	410	6	--	--	323.9	do	C,W	D,S	do
H-3-56	L. B. Truelove	--	--	400	6	Edwards and associated limestones	1,042	335.1	Dec. 6, 1957	C,W	D,S	Old well.
H-3-57	Rimkus Bros.	A. Serber	1954	450	7	do	--	359.1	Sept.25, 1956	C,G, 3	Irr	Cased to 176 ft.
H-3-58	W. Meyer	A. C. Sanderlin	1956	506	8	do	1,009	336.3 337.0 302.1	Sept. 2, 1956 Oct. 25, 1956 Dec. 6, 1957	C,E	D,S	Cased to 97 ft. 2/
H-3-59	Rimkus Bros.	A. Serber	1955	460	7	do	--	333.6 335.8	Sept.27, 1956 Oct. 25, 1956	C,G, 3	S	Cased to 286 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-3-60	Rimkus Bros.	Fritz Nemier	1914	400	7	Edwards and associated limestones	--	359.6	Sept.25, 1956	C,W,E, 2	D,S	Cased to 110 ft.
H-3-61	do	J. Roberts	1946	120	6	Austin chalk	--	97.4	do	C,W,E, ½	D	Cased to 120 ft.
H-3-62	K. S. Truelove	do	1947	597	6	Edwards and associated limestones	1,043	335.0 294.8	Oct. 25, 1956 Dec. 5, 1957	C,W	S	Cased to 325 ft.
H-3-63	Fred Brigman	A. C. Sanderlin	1956	432	6	do	1,034	332.5 304.1	Oct. 2, 1956 Dec. 5, 1957	C,W	S	
H-4-1	Joe Richarz	G. C. Sanderlin	--	200	6	do	938	108.3	Nov. 22, 1929	T,E	D,S	Reported depth to water 60 ft. in 1928.
H-4-2	E. Gray	John Roberts	1928	206	6	do	983	115.6 117.8 115.7	Nov. 22, 1929 Mar. 10, 1952 Aug. 25, 1954	--	D,S	
H-4-3	H. B. Clayton	--	--	230	6	do	1,009	139.5 131.1	Nov. 22, 1929 Mar. 27, 1958	C,W	D,S	3/
H-4-4	-- Patterson	—	1904	185	6	do	--	--	--	--	D,S	Obstruction in casing.
H-4-5	--	--	--	--	6	Edwards and associated limestones(?)	1,040	159.2	Nov. 23, 1929	--	D,S	
H-4-6	Briscoe, Fenley & Spangler	—	--	100	8	Edwards and associated limestones	950	81.6 82.3	Oct. 7, 1929 Mar. 25, 1958	C,W	D,S	3/
H-4-7	--	--	--	--	6	--	965	91.8	Oct. 9, 1929	N	N	Abandoned.
H-4-8	J. T. Hall	--	1912	135	8	Leona formation	938	63.6 39.1	Oct. 9, 1929 Sept.19, 1938	B,H	D	Dug. Cased to 75 ft. 3/
H-4-9	do	--	—	119	8	--	951	83.0	Oct. 9, 1929	--	D,S	
H-4-10	R. L. Herrington	--	—	--	—	Leona formation	935	72.0	Apr. 10, 1930	--	D,S	Dug.
H-4-11	DeHood Barber	--	--	--	6	do	936	52.7	Oct. 9, 1929	--	D,S	
H-4-12	Lewis Stearns	--	—	--	6	do	899	43.9	do	-,G	D,S	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-4-13	B. B. Dunbar	--	1929	500	10	Edwards and associated limestones	949	70	Oct. 1929	T,E, 25	Irr	Pump set at 150 ft. Formerly irrigated 200 acres. Unused in 1953.
H-4-14	H. E. Stoy	--	--	400	8	Edwards and associated limestones(?)	947	81.9 96.8	Oct. 7, 1929 Dec. 3, 1957	C,W	D,S	Old well. 3/
H-4-15	-- Witts	--	--	--	6	--	931	72.2	Oct. 7, 1929	N	N	
H-4-16	-- Young	--	--	--	6	--	933	73.9	do	--	S	
H-4-17	-- Witts	--	--	--	8	--	927	--	--	--	D,S	
H-4-18	do	--	--	250	6	Austin(?) chalk	924	89.9 78.7	Oct. 7, 1929 Jan. 27, 1936	--	D,S	Discharge reported small. 3/
H-4-19	--	--	--	199	6	Austin chalk	--	--	--	--	D,S	
H-4-20	-- Ashur	--	--	150	72	do	--	--	--	--	D,S	Dug. Discharge reported small.
H-4-21	--	--	--	--	6	Austin chalk(?)	935	74.6	Oct. 2, 1929	--	D,S	
H-4-22	-- Meacham	--	--	--	4	do	941	80.9	do	C,W,G	S	
H-4-23	A. Milam	--	--	--	6	Austin chalk	918	39.5	Oct. 4, 1929	--	D,S	
H-4-24	-- Smith	--	--	--	6	Leona formation	913	39.3	do	--	D,S	
H-4-25	-- Monguam	M. Fenley	--	160	4	Austin chalk	--	--	--	--	D,S	Discharge reported small.
H-4-26	--	--	--	--	48	Leona formation	897	48.9	Oct. 3, 1929	N	N	Dug.
H-4-27	-- Meacham	--	--	--	6	do	897	32.6	Oct. 2, 1929	--	D,S	Discharge reported large.
*H-4-28	R. P. Ingrum	--	--	--	5	do	897	28.5 31.2	Oct. 3, 1929 Aug. 14, 1951	G	D,S	Dug. 3/
H-4-29	do	--	--	--	6	--	899	45.7	Oct. 3, 1929	--	S	
H-4-30	W. A. Allen	--	--	--	6	--	953	57.7 61.0	Nov. 14, 1929 June 11, 1957	C,W	S	
H-4-31	R. S. Edmonds	--	1909	96	6	--	958	61.9	Oct. 18, 1929	--	D,S	Cased to 63 ft.
H-4-32	A. Milam	--	--	--	36	Austin chalk	917	38.9	Oct. 4, 1929	--	D,S	Dug.
H-4-33	W. A. Allen	--	--	100	6	Austin(?) chalk	--	71.1	Oct. 14, 1956	C,W	S	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-4-34	John Rosenall	--	1929	593	--	Edwards and associated limestones	1,082	162.2 159.4	Mar. 22, 1939 Mar. 25, 1958	C,W	S	Reported top of Edwards 573 ft. 3/
H-4-36	Calvin Gray	Walter Heine	1951	280	12	do	--	--	--	T,G	D	Discharge reported 735 gpm.
*H-4-37	W. P. Sights	Newell & Meyers	1949	313	12	do	971	103	1949	T,G	Irr	Drawdown reported 20 ft. after 4 to 5 hours pumping at 1,200 gpm. Irrigated about 165 acres in 1953 and 1956. Water reported at 115-135, 235-255, and 285-312 ft. Temp. 73°F. 1/
H-4-38	Calvin Gray	Walter Heine	1950	460	12	do	973	80	1950	T,G, 75	Irr	Cased to 200 ft. Discharge reported 2,000 gpm. Irrigated about 200 acres of feed crops in 1953, and 80 acres of feed crops in 1956. Temp. 74°F. 1/
*H-4-39	Leon Walton	-- Loessberg	1953	740	12	do	--	125	Feb. 1954	T,E, 50	Irr	Discharge reported 1,100 gpm. Deepened to 740 ft. in 1953. Irrigated about 100, 150, and 200 acres of feed crops in 1953, 1955, and 1956, respectively. Temp. 73°F.
*H-4-40	Joe Moss	-- Roberts	1949	606	10, 8	do	--	110.9 61.1	Feb. 10, 1954 Mar. 25, 1958	T,G	Irr	Casing: 10-in. to 200 ft., 8-in. to 560. Discharge reported 900 gpm. Irrigated about 100 acres in 1953. Temp. 74°F. 3/
H-4-41	R. P. Ingrum	Walter Heine	1952	893	8	Austin chalk, Eagle Ford shale, and Buda limestone	--	73.1	Feb. 11, 1956	N	N	Cased to 38 ft. Discharge reported 243 gpm. 1/
H-4-42	do	do	1953	1,083	15	Edwards and associated limestones	--	123 104	July 1953 Sept. 1953	N	N	Cased to 20 ft. Drawdown reported 17 ft. after 2.5 hours pumping at 1,200 gpm. 1/
H-4-43	do	do	1952	653	15	do	962	117 93.9	1952 Dec. 3, 1957	N	N	Cased to 17 ft. Discharge reported 965 gpm. 1/ 2/ 3/
H-4-44	Julian Joplin	-- Virdell	1951	855	--	do	945	--	--	T,E, 50	Irr	Pump set at 225 ft. Discharge reported 790 gpm. Water reported from 745 to 750 ft. Irrigated 145 acres in 1953. 1/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
H-4-45	Burk Clements	Carlos Meyers	1948	809	12	Edwards and associated limestones	939	65	Oct. 1948	T,G, 80	Irr	Cased to 90 ft. Pump set at 170 ft. Discharge reported 500 gpm. Irrigated 145 acres of feed crops in 1955. 1/ 2/
H-4-46	do	Lynn Spurgeon	1948	585	12	do	942	65	1948	T,G, 110	Irr	Cased to 90 ft. Pump set at 180 ft. Discharge reported 1,000 gpm. Irrigated 155 acres in 1953, and 370 acres in 1954-55.
H-4-47	Otto Strubbe	R. F. Gorman	1953	716	16	do	950	112.6	Feb. 3, 1954	T,G, 75	Irr	Cased to 75 ft. Drawdown reported 40 ft. after several hours pumping at 700 gpm. Irrigated part of 400 acres in 1953, 1954, and 1955-56. 1/
H-4-48	do	do	1953	342	16	do	942	100	Jan. 1953	T,G, 75	Irr	Cased to 60 ft. Pump set at 165 ft. Drawdown reported 35 ft. after several hours pumping at 1,400 gpm. Irrigated part of 400 acres in 1953, 1954, and 1955-56. 1/
H-4-49	H. E. Stoy	Tom Garrett	1949	385	16	do	941	95	1953	T,E, 75	Irr	Cased to 80 ft. Pump set at 140 ft. Discharge reported 1,200 gpm.
H-4-50	Otto Strubbe	--	--	467	10	do	944	106	Jan. 1953	T,G, 50	Irr	Pump set at 120 ft. Drawdown reported 4 ft. after 24 hours pumping 800 gpm. Irrigated part of 400 acres in 1953, 1954, and 1955-56.
H-4-51	Carlos Meyers	Carlos Meyers	1949	380	16	do	937	60 89.4	July 1949 Dec. 3, 1957	T,G, 40	Irr	Cased to 48 ft. Pump set at 122 ft. Drawdown reported 4 ft. after pumping 3 hours at 1,670 gpm. Irrigated 140 acres in 1953, and 80 acres in 1956.
H-4-52	D. Foster	E. H. Cannon	1950	960	12, 10	do	931	--	--	T,E, 40	Irr	Casing: 160 ft. of 12-in., 140 ft. of 10-in. Discharge reported 700 gpm. Irrigated 75 acres in 1953. 1/
*H-4-53	do	do	--	510	12	do	932	--	--	T,E, 60	Irr	Cased to 170 ft. Discharge reported 1,200 gpm. Irrigated 125 acres of grass in 1953, and 150 acres in 1956. Temp. 75°F.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-4-54	Burk Clements	Lynn Spurgeon	1951	926	12	Edwards and associated limestones	934	70 83.8	1951 Dec. 3, 1957	T,G, 110	Irr	Cased to 230 ft. Pump set at 230 ft. Discharge reported 1,000 gpm. Irrigated 200 acres in 1953. 1/
H-4-55	Edgar Eaker	Carlos Meyers	1949	895	18	do	951	109.9	Feb. 3, 1954	T,E, 40	Irr	Pump set at 135 ft. Drawdown reported 32 ft. after pumping 70 hours at 1,000 gpm. Irrigated 200 acres in 1953. Water reported from 850 to 895 ft. Temp. 77°F. 1/
H-4-56	Knowlton Dairy	Lynn Spurgeon	1953	1,030	12	do	934	--	--	T,E	Irr	Cased to 60 ft. Discharge reported 500 gpm. Deepened from 230 to 1,030 ft. in 1953. Irrigated part of 120 acres in 1953. 1/
H-4-57	do	Spurgeon & Sellers	1953	980	12	do	932	--	--	T,E, 60	Irr	Cased to 60 ft. Discharge reported 900 gpm. Deepened from 150 to 980 ft. in 1953. Irrigated about 120 acres in 1953, and 160 acres in 1956.
H-4-58	Edgar Eaker	R. F. Gorman	1954	740	12	do	--	88.1	Feb. 4, 1954	T,E, 60	Irr	Cased to 127 ft. Drawdown reported 31 ft. after pumping 4 hours at 800 gpm. Water reported at 680-740 ft. Irrigated 120 acres in 1956.
H-4-59	R. F. Gorman	do	1953	295	12	Austin chalk	925	85.5 75.3	Feb. 4, 1954 Nov. 12, 1957	T,E, 40	Irr	Drawdown reported 14 ft. after several hours pumping 500 gpm. Water reported at 187, 194, 204, 214 to 221 ft. 3/
H-4-60	do	--	—	536	10	Edwards and associated limestones	918	78.1	Feb. 4, 1954	T,E, 25	Irr	Originally drilled as oil test to 630 ft.; plugged back to 536 ft. Drawdown reported 48 ft. after several hours pumping at 800 gpm. Irrigated 60 acres of cotton in 1953. Old well.
H-4-61	Bill Stockton	Johnny Sellers	1953	880	12	do	923	--	--	T,G, 42	Irr	Cased to 60 ft. Discharge reported 700 gpm. Deepened to 880 ft. in 1953. Irrigated 120 acres in 1953, and 160 acres in 1955.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-4-62	Bill Stockton	Lynn Spurgeon	1953	910	12	Edwards and associated limestones	925	--	--	T,G, 42	Irr	Cased to 60 ft. Discharge reported 900 gpm. Deepened from 200 to 910 ft. in 1953.
*H-4-63	H. B. Clayton	Tex King	1951	540	12	do	--	145	1951	T,G	Irr	Cased to 150 ft. Drawdown reported 6 ft. after 5 hours pumping at 1,000 gpm. Irrigated 135 acres of feed crops in 1953 and 1955-56. Temp. 72°F.
*H-4-64	Frank Turner	--	--	842	8	do	--	174.9 163.4	Aug. 18, 1937 Apr. 1, 1939	C,W,G, $2\frac{1}{2}$	S	Casing at top only. Old well.
*H-4-66	R. P. Ingrum	--	--	300	8	Austin chalk	--	119.7 116.4	Nov. 17, 1937 Sept.14, 1939	C,W	D,S	3/
H-4-67	Walter Bankier	Austin Smith	1954	280	--	Edwards and associated limestones	--	127.1	July 25, 1956	C,W	S	
H-4-68	W. E. Gray	--	1951	300	6	do	--	129.1 129.8	Sept.11, 1956 May 6, 1957	C,E	D,S	Cased to 60 ft. Reported top Edwards 90 ft.
H-4-69	J. H. Lewis	P. Heine	1939	220	6	do	--	163.5	Sept.14, 1956	C,W	S	Deepened from 164 ft. to 220 ft. Temp. 76°F.
H-4-70	Jack Nelson	--	1907	200	6	do	--	179	Oct. 1956	T,E	D,S	
*H-4-71	George Pardi	W. Heine	1958	844	12	do	1,020	144.0	Feb. 6, 1958	N	N	Drawdown 50 ft. after 2 hours pumping at 420 gpm. 2/
H-4-72	do	do	1957	518	8	do	--	162.0	Dec. 17, 1957	N	N	Drilled for irrigation; abandoned; insufficient supply. 2/
H-4-73	Joe Richarz	Lynn Spurgeon	1954	200	8	do	--	164.2	Oct. 5, 1956	C,W	S	Cased to 20 ft. Reported water level could not be lowered with bailer. Temp. 74°F.
H-4-74	Suttle & Kessler	--	1946	300	6	do	--	152.9	Oct. 8, 1956	C,W	S	
H-4-75	Mrs. John Moss	--	1936	200	6	do	--	158.5	Oct. 5, 1956	C,W	S	
H-4-76	Suttle & Kessler	--	--	163	6	Buda limestone	956	126.5	June 5, 1956	C,W	S	2/
H-4-77	J. H. Lewis	M. Fenley	--	180	--	Edwards and associated limestones	--	103.8	Sept.12, 1956	C,W	S	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-4-78	M. M. L. Park	-- Bishop	1953	350	--	Edwards and associated limestones	--	127.9	Sept.12, 1956	T,E	D	
H-4-79	do	M. Fenley	1942	250	6	do	--	110.7	do	C,W	S	Deepened 100 ft. in 1953 by Benson. Temp. 70°F.
H-4-80	Mrs. M. M. L. Park	--	--	148	--	Austin chalk	--	132.0	do	C,G, $1\frac{1}{2}$,$2\frac{1}{2}$	S	
H-4-81	M. M. L. Park	--	--	216	6	Edwards and associated limestones	--	177.9	do	C,W	S	Temp. 75°F.
H-4-82	Robert Ingrum	M. Fenley	1938	199	6	Austin chalk	--	149.3	Mar. 6, 1957	C,G, 2	S	
H-4-83	W. A. Allen	W. Heine	1955	100	--	Austin chalk and Leona(?) formation	--	70.4 22.8	Oct. 11, 1956 June 12, 1957	C,W	S	
H-4-84	James Dalrymple	Carlos Meyers	1955	214	--	Austin chalk	--	72.2	May 13, 1957	C,E	D	
H-4-85	Gene Milam	--	--	175	--	do	--	71.0	do	T,E	D	Cased to 20 ft.
H-4-86	W. A. Allen	--	--	40	6	Austin chalk, and Leona formation	--	34.2	do	C,G	S	
H-4-87	John Partridge	--	--	--	5	Austin chalk	941	114.2 89.1	Oct. 20, 1956 Dec. 3, 1957	C,W	S	3/
H-4-88	Earl Hutcherson	A. Serber	--	960	--	Edwards and associated limestones	936	117.0	Mar. 3, 1957	N	N	1/ 2/
*H-4-89	do	Lynn Spurgeon	1957	1,200	--	do	927	73.9	Dec. 3, 1957	N	N	Reported top of Edwards 700 ft. To be used for irrigation. Temp. 78°F.
H-4-90	Marcel Rambie	--	--	155	--	Serpentine	--	51.2	Jan. 2, 1957	T,E	D	Drawdown reported 3 ft. while pumping 14 gpm. Old well.
H-4-91	Fred Everett	Carlos Meyers	--	750	--	do	930	40.1	Dec. 3, 1957	N	N	Serpentine reported from 65 ft. to bottom. 2/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-4-92	E. Hutcherson	-- Walker	1955	252	--	Austin chalk	931	79.0 115.4 78.1	Nov. 28, 1955 Sept. 3, 1956 Dec. 3, 1957	T,G	Irr	Drawdown reported 46 ft. after 1 hour pumping at 1,750 gpm. Temp. 74°F.
H-4-93	Vernon Harlan	Lynn Spurgeon	1951	1,200	12	Austin chalk, and Edwards and associated limestones	931	111.0	July 17, 1956	T,E, 60	Irr	Cased to 80 ft. Original depth 783 ft. in 1951, tested 1,850 gpm; deepened to 1,200 ft. by Sellers, no test. Discharge reported declined from 1,050 gpm in May 1956 to 250 gpm in July 1956. Pump set at 180 ft. 1/ 2/
H-4-94	R. F. Garmon	R. F. Garmon	1953	295	13	--	--	--	--	--	--	Water impounded by nearby dam routed into well beginning Apr. 20, 1957. See water-level measurements in nearby wells H-4-59 and H-5-162.
*H-4-95	S. G. Nelson	Lynn Spurgeon	1955	1,113	7	Edwards and associated limestones	942	102.2 95.6	Nov. 1, 1955 Dec. 3, 1957	C,W	S	Cased to 150 ft. Temp. 80°F. 3/
*H-4-96	R. A. Eads	do	1952	830	8	Serpentine and Leona formation	--	38.4	Sept.28, 1956	J,E, 1	S	Cased to 40 ft. Drawdown 1.5 ft. after 3.5 hours pumping 6 gpm. Water in gravel at 40 ft. Temp. 77°F. 1/
*H-4-97	Seth Young	--	--	200?	--	Edwards and associated limestones	--	168.2	July 30, 1956	C,W	S	Drawdown 3.0 ft. after 20 minutes pumping at 2 to 3 gpm. Temp. 77°F. Old well.
H-4-98	do	Clark Burrow	--	--	--	do	--	128.7	do	C,W	S	
H-4-99	G. H. Habe	--	--	150	6	do	--	80.0	Sept.10, 1956	C,W	D,S	Old well.
*H-4-100	Seth Young	--	--	77	4	do	--	60.5	July 31, 1956	C,W	D,S	Dug to 50 ft., drilled to 77 ft. Temp. 70°F.
H-4-101	do	--	1951	127	6	do	--	71.6 103.5	July 30, 1956 Apr. 11, 1957	T,E, 3/4	D,S	Cased to 96 ft.
H-4-102	do	-- Loessberg	1945	148	--	do	--	105.0	July 30, 1956	C,W	S	Cased to 109 ft.
H-4-103	R. A. Rogers	--	--	200	--	do	--	162.2	do	C,W	S	
H-4-104	W. E. Gray	-- Crawford	1952	201	6	do	--	111.6	Sept.11, 1956	C,W	S	Cased to 130 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-4-105	R. A. Rogers	John Sellers	--	240	--	Edwards and associated limestones	--	150.2	July 30, 1956	C,G	S	
H-4-106	W. E. Gray	A. Serber	1957	260	7	do	--	189.8	May 10, 1957	C,W	S	Cased to 150 ft. Reported top of Edwards 144 ft.
H-4-107	W. H. Shaw	--	--	125	6	do	--	75.8	May 29, 1957	C,W,G	D,S	Cased to 4 ft. Old well.
H-4-108	Mrs. M. M. L. Park	--	--	300?	--	do	--	184.5	Sept.10, 1956	C,W	S	
H-4-109	Mrs. L. Rosenall	--	--	700	6	do	--	63.8	May 29, 1957	C,W	S	Reported top of Edwards 638 ft.
H-4-110	do	W. Heine	1944	260	6	Austin chalk	--	177.3	do	C,W, T,E, 3/4	D,S	Cased to 170 ft.
#H-5-1	City of Uvalde	--	--	287	12	Edwards and associated limestones	904	48.7 57.0	Nov. 7, 1929 Mar. 20, 1958	N	N	Cased to 260 ft. Recording gage installed Oct. 24, 1940. Observation well. 2/ 3/
H-5-2	Uvalde Electric & Ice Co.	G. P. Laird	1919	403	--	do	--	--	--	--	Ind	
#H-5-3	Luis Borgas	--	1925	64	48	Leona formation	905	61.1	May 19, 1930	B,H	D	Dug.
H-5-4	-- Canales	--	--	48	48	do	906	45.0	Sept.23, 1929	B,H	D	do
H-5-5	Jesus DeLeon	M. Fenley	--	101	6	Edwards and associated limestones	--	--	--	--	D	
H-5-6	Lane Rock Hill Dairy	--	--	--	--	do	905	46.2 60.9 70.1 65.4	Oct. 2, 1929 Mar. 10, 1952 Sept.10, 1952 Aug. 25, 1954	C,W	N	
H-5-7	-- Hagood	--	--	81	8	--	--	--	--	--	D,S	
H-5-8	R. P. Rainey	--	--	--	8	--	897	46.4	Oct. 18, 1929	--	D,S	
H-5-9	G. H. Heard	J. W. Roberts	1929	598	10	Edwards and associated limestones	902	44.7 65.1	Oct. 18, 1929 June 24, 1956	T,E, 3/4	D,S	Reported top of Edwards 585 ft. 3/
H-5-10	-- Brashier	--	--	--	6	--	908	50.6	Oct. 18, 1929	--	S	
H-5-11	G. L. James	--	1912	120	6	--	913	52.5	do	--	S	

See footnotes at end of table.

Table 4.---Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-12	T. H. McNelley	--	--	--	5	--	919	53.9	Oct. 22, 1929	C,G	D	
*H-5-13	Zimel Farms	M. Fenley	1927	475	10	Edwards and associated limestones	927	66.0 82.0	Oct. 21, 1929 Dec. 3, 1957	J,E	D	Discharge reported 650 gpm. Drawdown 0.3 ft. 1/ 3/
H-5-15	C. S. Bowman	do	--	540	--	do	--	--	--	T,E	N	Discharge reported 280 gpm. 1/
H-5-16	E. H. Barber	--	1915	110	--	do	929	72.0 85.0 91.6 92.8	Nov. 22, 1929 Mar. 8, 1952 Sept.10, 1952 Aug. 25, 1954	N	N	
H-5-17	George Clark	--	1909	138	4	do	925	65.7 78.8	Nov. 21, 1929 Mar. 10, 1952	--	D	
H-5-18	Mrs. F. F. Spires	--	--	142	6	do	925	65.8	Nov. 22, 1939	--	D	
H-5-19	R. A. Ramsey	--	--	110	--	do	935	78.3 115.5	Nov. 22, 1929 Aug. 29, 1956	J,E	D,S	3/
H-5-20	-- Moos	--	--	100	6	do	946	89.5	Nov. 22, 1939	--	D,S	
H-5-22	W. Henderson	--	--	190	6	do	933	77.9 84.3	Nov. 20, 1929 Mar. 25, 1958	N	N	3/
H-5-23	Frank McKenzie	--	1913	100	--	do	927	84.0	Nov. 20, 1929	C,E, 1½	D	
H-5-24	M. E. Walker	--	1914	200	5	do	990	138.8	do	--	D,S	
H-5-25	George Kennedy	--	1905	200	6	do	982	134.0 159.7 160.3 157.6	Nov. 20, 1929 Sept. 8, 1952 Aug. 25, 1954 Dec. 4, 1957	C,W	D,S	
*H-5-26	do	--	1905	200	7	do	1,021	184.2 194.8	Nov. 20, 1929 Mar. 27, 1958	C,W	S	3/
H-5-28	do	--	--	520	6	do	1,069	249.3 239.9 242.1 252.8	Nov. 21, 1929 Mar. 10, 1952 Sept.10, 1952 Aug. 25, 1954	C,W	S	
H-5-29	Nellie Haviston	-- Crawford	1925	254	6	do	1,064	--	--	--	D,S	
H-5-30	Juan B. Reyes	-- Moore	--	100	6	do	899	44.8	Feb. 5, 1930	--	D	Dug.
H-5-31	W. H. Hill	--	1903	--	60	Buda limestone	895	42.0	Feb. 6, 1930	N	N	Dug. Abandoned.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-32	J. M. Pile	--	1922	180	5	Buda limestone	916	57.9	Nov. 7, 1929	--	D	
H-5-33	J. E. Puccini	--	1905	79	8	Leona formation	906	55.5	do	N	N	Abandoned.
†H-5-34	Doris Houston Evans	Century Oil & Gas Co.	--	713	14	Edwards and associated limestones and Glen Rose(?) limestone	--	130.4	May 21, 1956	C,W	S	Oil test. Water in Edwards at 275 ft.
H-5-35	-- Hooper	--	--	--	8	do	954	94.5 142.1	Nov. 26, 1929 Aug. 31, 1956	C,W	S	3/
†H-5-36	Frank Winslow	--	1909	100	6	Leona formation and Serpentine	956	53.1	Nov. 26, 1929	J,E,$\frac{1}{2}$	D	Temp. 73°F.
H-5-37	--	--	1930	--	--	Edwards and associated limestones	933	89.6 95.9 97.1 115.1	Mar. 9, 1952 Sept. 9, 1952 Aug. 26, 1954 Aug. 28, 1956	--	D	
H-5-38	--	--	--	--	6	do	909	54.1	Dec. 5, 1929	N	N	
†H-5-39	William Galloway	--	1926	135	--	do	950	98.3 129.4	Dec. 5, 1929 Aug. 26, 1954	--	--	Caved and abandoned. 3/
†H-5-40	M. B. Walcott	Bell Oil & Gas Corp.	--	3,030	15	Glen Rose(?) limestone	--	--	--	C,W	S	Oil test.
H-5-41	J. D. Mahaffey	--	--	700	6	--	961	96.6	Dec. 5, 1929	--	D,S	Discharge reported small.
H-5-42	do	-- Saunders	--	250	4	Edwards and associated limestones	945	87.1 99.1	Jan. 1, 1930 Jan. 4, 1951	--	S	3/
H-5-43	W. H. Kramer	--	1925	200	36	Austin(?) chalk	976	120.0	Dec. 9, 1929	--	D,S	Dug.
H-5-44	J. H. Zackary	--	1929	60	6	Buda limestone	907	49.5	Oct. 5, 1929	--	D	
H-5-48	Dick Senter	-- Laird	1909	100	6	Buda limestone and Leona formation	894	43.9 64.3	Oct. 8, 1929 June 24, 1957	T,E,3/4	D,S	
H-5-50	San Antonio, Uvalde and Gulf RR.	N. Fenley	--	75	6	Leona formation	894	33.3	Oct. 5, 1929	--	S	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
*H-5-51	O. T. Cardwell	--	--	85	6	Austin chalk	907	50.9 59.8	Oct. 5, 1929 Mar. 24, 1958	C,W	S	3/
*H-5-52	D. H. Hancock	M. Fenley	1927	863	10	Edwards and associated limestones	900	35 37.0 33.7 79.3	1927 Jan. 12, 1946 Mar. 3, 1947 Nov. 5, 1956	T,G	Irr	Discharge reported 533 gpm. Irrigated 25 acres in 1953, 32 acres in 1955-56, and 1957. 1/ 2/
H-5-53	E. E. Capt	W. R. Sweringen	1928	640	12	do	897	41.1 83.7	Oct. 24, 1929 Mar. 18, 1957	T,G, 30	Irr	Discharge reported 500 gpm. Irrigated 100 acres in 1953 and 1955. 2/ 3/
H-5-54	H. Q. Haile	--	--	100	6	Leona formation	892	37.2 30.1 31.1 27.9	Oct. 24, 1929 Feb. 15, 1946 Aug. 6, 1946 Mar. 3, 1947	C,W	D,S	
H-5-55	H. B. Echols	--	1927	38	60	do	882	27.1 20.9 21.9 19.4	Oct. 24, 1929 Jan. 12, 1946 Aug. 6, 1946 Mar. 3, 1947	N	N	Dug. Discharge reported 500 gpm in 1929.
*H-5-56	do	--	1928	25	48	do	884	30.9 23.1 24.2 21.8	Oct. 24, 1929 Jan. 11, 1946 Aug. 6, 1946 Mar. 3, 1947	Cf,E	N	do
H-5-57	J. O. Thompson	--	--	270	8	Leona formation and Edwards and associated limestones	881	25.2 19.4	Oct. 24, 1929 Mar. 3, 1947	T,E	D	Dug to 50 ft. 3/
H-5-58	-- Torres	--	--	50	60	Leona formation	904	52.2 46.0 47.6 44.3	Oct. 7, 1929 Jan. 11, 1946 Aug. 6, 1946 Mar. 3, 1947	N	N	Dug. Abandoned.
H-5-59	W. M. Beavers	W. Heine	1906	180	5	Edwards and associated limestones	911	59.7 86.6	Oct. 7, 1929 Nov. 23, 1956	T,E	D,S	Deepened from 100 ft. to 180 ft. by W. Heine. 3/
H-5-60	J. W. Boggus	do	--	343	5	do	--	62.0	Dec. 4, 1957	C,W	D,S	Old well.
H-5-61	do	--	1929	80	--	--	--	--	--	N	N	Water encountered in gravel but not in sufficient amount for irrigation.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-62	Ramon Rodriquez	--	1929	47	60	Leona formation	894	43.9	Nov. 1, 1929	B,H	D	Dug.
H-5-64	Fred Ehlers	--	--	--	36	do	877	33.6	do	N	N	Filled and abandoned.
H-5-65	E. E. Capt	--	1924	142	8	Serpentine and Eagle Ford(?) shale	885	39.2 32.7 30.7 46.5	Oct. 24, 1929 Jan. 15, 1946 Mar. 3, 1947 Jan. 14, 1957	N	N	
H-5-66	Sam O'Bryant	--	1926	150	6	--	895	80.3	Jan. 14, 1957	C,W	D,S	Originally drilled to 388 ft.; filled and redrilled because of mineralized water, and insufficient discharge for irrigation.
H-5-67	do	--	1927	188	6	Leona formation and Buda(?) limestone	872	17.8 12.4 13.2 11.3	Oct. 28, 1929 Jan. 12, 1946 Aug. 7, 1946 Mar. 3, 1947	N	N	Dug to 20 ft.; drilled to 188 ft.
H-5-68	R. Vosatko	--	1924	30	48	Leona formation	868	15.7 9.3 10.0 8.3	Jan. 15, 1930 Jan. 12, 1946 Aug. 9, 1946 Mar. 3, 1947	N	N	Abandoned.
H-5-69	--	--	--	--	12	--	878	27.2	Oct. 24, 1929	C,G	D,S	
H-5-70	W. H. Godball	--	1911	39	40	Leona formation	877	33.5	Oct. 22, 1929	C,G	D,S	Dug.
*H-5-72	Beverly Turner	--	1908	350	7	Edwards and associated limestones	887	64.8	Dec. 5, 1929	C,W	S	Temp. 75°F.
H-5-74	-- Wiebush	--	--	100?	6	Leona formation	907	42.5 43.3 39.5	Feb. 18, 1946 Aug. 6, 1946 Mar. 3, 1947	C,W	D,S	
H-5-75	Davenport Day	--	--	56	6	do	906	42.0 42.8	Feb. 16, 1946 Aug. 6, 1946	N	N	Abandoned.
H-5-76	Mrs. -- Ross	--	--	96	6	Leona formation and Eagle Ford shale	908	44.4 45.2 41.3	Feb. 16, 1946 Aug. 6, 1946 Mar. 3, 1947	N	N	Deepened from 49 to 96 ft.
H-5-77	P. A. Reed	--	--	--	6	--	902	38.7 39.6	Feb. 16, 1946 Aug. 6, 1946	C,G	D,S	
H-5-78	Cole Howard	--	--	195	6	Buda(?) limestone	902	38.9 39.8 36.1 33.1	Feb. 16, 1946 Aug. 6, 1946 Mar. 3, 1947 Nov. 23, 1956	C,G	N	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-79	Jimmie Wakefield	--	--	95	6	Leona formation	903	40.2 41.1 37.3	Feb. 16, 1946 Aug. 6, 1946 Mar. 3, 1947	C,W	D,S	
H-5-80	C. Hagerton	--	--	123	6	do	917	54.7 53.3 74.9	Feb. 16, 1946 Mar. 3, 1947 Nov. 23, 1956	C,W	N	
H-5-81	-- King	--	--	54	6	do	899	35.4 36.3	Feb. 16, 1946 Aug. 6, 1946	J,E,1	D	
H-5-82	Mrs. -- Ross	--	--	37	48	do	899	35.9 37.2 33.4	Feb. 16, 1946 Aug. 6, 1946 Mar. 3, 1947	C,W	D,S	Dug.
H-5-83	J. T. Martin	--	--	60	6	do	896	33.5 34.8 31.3 79.2	Jan. 15, 1946 Aug. 7, 1946 Mar. 3, 1947 Jan. 14, 1957	J,E,1	D,S	
H-5-84	W. R. Painter	--	--	100	12	Leona formation and Austin(?) chalk	891	28.2 49.4	Jan. 15, 1946 Dec. 4, 1957	T,E,1	S	3/
H-5-85	do	--	--	190	8	Eagle Ford shale and Austin(?) chalk	896	32.6 33.0 30.7	Jan. 15, 1946 Aug. 7, 1946 Mar. 3, 1947	T,E	D,S	
H-5-86	Halden Fry	--	--	--	48	Leona formation	899	37.6 37.9 36.1	Jan. 12, 1946 Feb. 27, 1946 Mar. 3, 1947	N	N	Dug.
H-5-87	Cecil Bailey	--	--	90	6	do	898	35.0 36.0 31.8	Feb. 18, 1946 Aug. 6, 1946 Mar. 3, 1947	C,G,2	D,S	
H-5-88	T. F. Johnson	--	--	62	6	do	895	33.1 34.0 30.9	Feb. 18, 1946 Aug. 6, 1946 Mar. 3, 1947	N	N	
H-5-89	W. R. Burkholder	--	--	55	8	do	893	30.6 31.5 28.2	Feb. 18, 1946 Aug. 6, 1946 Mar. 3, 1947	J,E	D,S	
H-5-90	F. H. Southerland	--	--	21	8	do	882	20.4 22.5 18.7	Feb. 20, 1946 Aug. 6, 1946 Mar. 3, 1947	C,G,2	D,S	Dug.

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Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-91	H. B. Echols	--	--	165	8	Buda limestone	889	26.3 27.4 25.3 67.9	Jan. 12, 1946 Aug. 6, 1946 Mar. 3, 1947 Nov. 18, 1956	T,E	D,S	Dug to 30 ft.; drilled to 165 ft.
H-5-92	S. W. Bailey	--	1945	65	8	Leona formation	904	44.0 45.4 42.3	Jan. 11, 1946 Aug. 6, 1946 Mar. 6, 1947	C,G, 1½	D,S	
H-5-93	C. W. Davis	--	1945	101	12	do	904	43.8 44.7	Jan. 11, 1946 Aug. 8, 1946	T,G	Irr	
H-5-94	-- Torres	--	1940	--	6	Edwards and associated limestones	904	45.8 47.3 44.0 84.0	Jan. 11, 1946 Aug. 6, 1946 Mar. 3, 1947 Nov. 23, 1956	C,W,G	D,S	
H-5-95	A. M. Mills	--	1928	100	6	Leona formation	909	53.1 52.2	Jan. 11, 1946 Mar. 3, 1947	C,W	D,S	
H-5-96	H. B. Echols	--	--	90	--	Leona formation and Buda(?) limestone	878	17.8 18.7 16.5 73.4	Jan. 12, 1946 Aug. 6, 1946 Mar. 3, 1947 Nov. 22, 1956	T,E	S,Irr	
H-5-97	Joe Vosatko	--	--	--	48	Leona formation	870	11.6 12.3 10.6	Jan. 12, 1946 Aug. 9, 1946 Mar. 3, 1947	N	N	Dug.
H-5-98	G. C. Jolly	--	--	--	--	do	870	12.7 13.5 11.6	Jan. 12, 1946 Aug. 8, 1946 Mar. 3, 1947	T,E, 10	Irr	
H-5-99	L. M. Ortiz	--	--	57	48	do	895	41.2 40.2 42.4 39.4	Sept. 14, 1945 Feb. 18, 1946 Aug. 7, 1946 Mar. 3, 1947	C,G	D,S	Dug.
H-5-100	Joe Vosatko	--	--	--	8	do	890	29.1 30.3 27.2	Jan. 12, 1946 Aug. 9, 1946 Mar. 4, 1947	N	N	
H-5-101	M. H. Jones	--	--	--	8	do	887	28.3 29.7 26.4	Jan. 15, 1946 Aug. 8, 1946 Mar. 6, 1947	C,W	D,S	
H-5-102	M. L. Flowers	--	--	150	8	Leona formation and Buda limestone	890	28.9 30.3 27.0 63.2	Jan. 15, 1946 Aug. 8, 1946 Mar. 4, 1947 Oct. 29, 1956	J,E, 2	D,S	Dug to 60 ft.; drilled to 150 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-104	J. W. Vanham	--	--	50	8	Leona formation	872	18.4 20.1 17.0	Jan. 15, 1946 Aug. 9, 1946 Mar. 4, 1947	N	N	Old well.
H-5-105	Hoag Ranch	--	--	120	6	Leona formation and Buda limestone	881	28.8 27.6	Jan. 11, 1946 Mar. 3, 1947	C,E	D,S	
H-5-106	Will Hoag	--	--	160	6	Buda limestone	887	33.1 34.7 31.9 67.8	Jan. 11, 1946 Aug. 7, 1946 Mar. 3, 1947 Jan. 8, 1957	C,W	D,S	
H-5-107	Homer Hargroves	Benson & Nichols	1952	365	--	Edwards and associated limestones	--	188.3	Feb. 16, 1954	N	N	Caved and abandoned.
H-5-108	Pete Stoy	-- Nichols	1951	535	12	do	--	187	Dec. 1953	T,E, 75	Irr	Cased to 180 ft. Pump set at 300 ft. Discharge reported 850 gpm. Irrigated about 200 acres in 1953; and 250 acres of vegetables in 1956.
H-5-109	do	Lynn Spurgeon	1952	525	12	do	1,013	--	--	T,G, 75	Irr	Cased to 300 ft. Drawdown measured 10 ft. after 5 hours pumping at 1,200 gpm. Reported top of Edwards 280 ft. Irrigated about 200 acres of vegetables in 1953, and 250 acres in 1956.
H-5-110	George Kennedy	J. Roberts	1950	300?	12	do	--	--	--	T,E, 40	Irr	Discharge reported 1,000 gpm. Irrigated 100 acres of grass and feed in 1953.
*H-5-111	M. E. Walker	Herman Crawford	1941	260	10	do	991	168.3	Dec. 15, 1953	T,E, 40	Irr	Cased to 200 ft. Pump set at 200 ft. Discharge reported 850 gpm. Water at 190-260 ft. Reported top of Edwards 190 ft. Irrigated 123 acres of feed crops in 1953.
H-5-112	E. E. Capt	do	1939	600	--	do	957	88.8	Dec. 3, 1957	T,E, 40	Irr	Pump set at 150 ft. Discharge reported 350 gpm.
H-5-113	do	Walter Heine	1952	600	15	do	--	128.5	Dec. 15, 1953	T,E, 30	Irr	Cased to 15 ft. Discharge reported 600 gpm. Deepened from 400 to 600 ft. in 1952.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
*H-5-114	M. A. Rombie	H. Spurgeon	1947	254	10	Edwards and associated limestones	970	91	1947	T,E, 30	Irr	Cased to 138 ft. Drawdown reported 35 ft. after several hours pumping at 680 gpm. Water reported at 248 to 254 ft. Irrigated 135 acres in 1953 and 175 acres in 1956. Temp. 74°F.
H-5-115	Texas Grass-Seed Growers	Walter Heine	1951	214	12	do	--	115	Dec. 1951	T,E, 100	Irr	Drawdown reported 3 ft. after several hours pumping at 1,300 gpm. Irrigated 150 acres in 1953.
*H-5-116	do	do	1951	350	12	do	--	110	Oct. 1951	T,E, 100	Irr	Drawdown reported 5 ft. after several hours pumping at 1,300 gpm. Irrigated about 300 acres of grass and oats in 1953. Temp. 73°F.
H-5-117	--	do	1951	472	12	do	944	109.8	Dec. 16, 1953	T,E, 50	Irr	Cased to 146 ft. Discharge reported 1,200 gpm. Deepened to 472 ft. in 1951. Water reported at 96, 282, and 290 ft. Irrigated 130 acres of grass in 1953.
H-5-118	--	Walter Heine	--	409	12	do	932	104.0	do	T,E, 25	Irr	Cased to 95 ft. Discharge reported 700 gpm. Irrigated 70 acres of grass in 1953. 1/
H-5-119	Dan Parman	do	1938	390	--	do	--	97.5	Dec. 15, 1953	T,E, 5	Irr	Pump set at 90 ft. Discharge reported 150 gpm. Deepened from 248 to 390 ft. in 1949. Not used in 1953.
*H-5-120	Clyde Watkins	Newell & Meyers	1950	225	12	do	942	118	Dec. 1953	T,E, 100	Irr	Cased to 129 ft. Pump set at 140 ft. Discharge reported 1,200 gpm. Irrigated 165 acre truck farm in 1953, and 230 acres in 1955-56. Temp. 73°F. 1/
H-5-121	Mrs. O. P. Barber	Walter Heine	1949	216	10	do	--	--	--	T,E, 25	Irr	Cased to 120 ft. Pump set at 130 ft. Drawdown reported 2 ft. after 4 to 5 hours pumping at 700 gpm. Irrigated 45 acres in 1953.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-122	J. W. Newton	-- Sellers	1953	251	10	Edwards and associated limestones	--	110	Jan. 1954	T,E, 30	Irr	Cased to 157 ft. Pump set at 160 ft. Drawdown reported 35 ft. after 30 minutes pumping at 455 gpm. Irrigated about 17 acres in 1953, 1955, and 1956.
H-5-123	D. Hutchinson	Walter Heine	1943	195	10	do	--	108	Dec. 1953	T,E, 20	Irr	Cased to 110 ft. Pump set at 126 ft. Discharge reported 271 gpm. Irrigated small field of oats in 1953.
H-5-124	W. O. Victor	Phil Newell	1950	320	12	do	--	130	1950	T,E, 50	Irr	Cased to 120 ft. Pump set at 150 ft. Drawdown reported 8 ft. after 4 to 5 hours pumping 1,000 gpm. Deepened from 210 to 320 ft. in 1950. Irrigated 100 acres of cotton in 1953.
H-5-125	do	do	1951	370	--	do	--	130	1951	T,E, 60	Irr	Pump set at 150 ft. Drawdown reported 7 ft. after 4 to 5 hours pumping 900 gpm. Irrigated 40 acres of cotton in 1953, and in conjunction with well H-5-124 irrigated 238 acres in 1955-56.
H-5-126	H. R. Bishop	do	1951	440	12	do	951	129.0 122.3	Feb. 5, 1954 Dec. 3, 1957	T,E, 30	Irr	Cased to 100 ft. Drawdown reported 25 ft. after 4 to 5 hours pumping at 1,000 gpm. Irrigated a part of 240 acres in 1953. 2/ 3/
*H-5-127	L. M. Smallwood	do	1952	430	8	do	952	130.2	Feb. 5, 1954	T,E, 65	Irr	Cased to 135 ft. Discharge reported 400 gpm. Reported top of Edwards at 82 ft. Irrigated 20 acres of feed in 1953, and 15 acres in 1955-56.
H-5-128	L. Wilde	do	1951	260	12	--	--	105	1951	T,E, 40	Irr	Cased to 136 ft. Pump set at 120 ft. Drawdown reported 2 ft. after 4 to 5 hours pumping at 1,200 gpm. Irrigated a part of 240 acres in 1953, and 103 acres in 1956.
H-5-129	Uvalde Livestock Sales Co.	do	--	320	12	do	--	93.1	Dec. 15, 1953	T,E, 20	Irr	Cased to 100 ft. Pump set at 120 ft. Reported no drawdown after several hours pumping at 600 gpm. Irrigated about 10 acres in 1953, and 1955-56.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-130	R. M. Caveness	Phil Newell	1952	250	8	Edwards and associated limestones	--	100	Aug. 1953	T,G	Irr	Cased to 150 ft. Discharge reported 759 gpm. Irrigated 20 acres of feed in 1953.
H-5-131	Buzzy Stokes	J. Sellers	1953	402	12	do	--	102	May 1953	T,E, 75	Irr	Cased to 130 ft. Pump set at 120 ft. Drawdown reported 4 ft. after 4 to 5 hours pumping at 1,218 gpm. Irrigated a part of 220 acres in 1953-54, and 1955-56.
H-5-132	John Monican	H. Spurgeon	1941	440	10	do	926	--	--	T,G, 60	Irr	Cased to 100 ft. Discharge reported 750 gpm. Irrigated about 200 acres in 1953; in conjunction with well H-5-133 irrigated 180 acres in 1955.
H-5-133	do	--	1948	330	12	do	921	103.0	Dec. 3, 1956	T,G, 60	Irr	Cased to 100 ft. Discharge reported 500 gpm. Irrigated about 80 acres in 1952 and 1953. 2/
H-5-134	Zimel Farms	--	--	--	--	do	--	--	--	N	N	Abandoned.
H-5-135	do	Walter Heine	1951	323	18	do	930	59	1951	T,G, 115	Irr	Cased to 100 ft. Drawdown reported 6 ft. after pumping 6 hours at 2,400 gpm. Irrigated a part of 850 acres in 1953. 1/
H-5-136	R. A. Howard	-- Spurgeon	1948	523	12	do	916	--	--	T,E, 40	Irr	Cased to 120 ft. Reported top of Edwards at 380 ft. Pump set at 160 ft. Discharge reported 1,000 gpm. Irrigated 40 acres in 1953, and 130 acres in 1956.
H-5-137	Zimel Farms	do	1947	340	--	do	918	--	--	T,G	Irr	Pump set at 120 ft. Discharge reported 1,250 gpm. Irrigated a part of 850 acres in 1953.
H-5-138	do	Carlos Meyers	1951	185	12	Buda limestone	915	76.7	Dec. 17, 1953	T,E, 40	Irr	Cased to 98 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-139	Fred Mason	Newell & Smith	1953	350	12	Edwards and associated limestones(?)	--	74.2	Dec. 17, 1953	T,G	Irr	Cased to 80 ft. Pump set at 130 ft. Discharge reported 600 gpm. Originally drilled to 87 ft., deepened to 150 ft., then to 350 ft. Irrigated 40 acres of feed crops in 1953.
H-5-140	Sam Sadler	Walter Heine	1953	640	--	Edwards and associated limestones	--	73.7	do	T,G	Irr	Discharge reported 450 gpm. Deepened to 640 ft. in 1953.
H-5-141	Kimble & Laning	Tex King	1953	264	12	do	--	104	Jan. 1953	T,E, 30	Irr	Cased to 68 ft. Reported no drawdown after 4 to 5 hours pumping at 1,300 gpm. Irrigated 100 acres of feed in 1953 and 1955-56.
H-5-142	Farrell Warren	Phil Newell	1950	180	12	do	--	105	1950	N	N	Cased to 135 ft. Pump set at 130 ft. Drawdown reported 6 ft. after 4 to 5 hours pumping at 1,300 gpm. Irrigated 200 acres in 1953.
H-5-143	W. O. Victor	-- Spurgeon	1942	203	8	do	--	--	--	T,E, 20	Irr	Discharge reported 600 gpm. Irrigated 24 acres in 1953 and 1955-56.
*H-5-144	R. V. Raney	R. V. Raney	1949	360	12	do	946	113.8 119.3	Feb. 10, 1954 Dec. 6, 1957	T,G	Irr	Cased to 5 ft. Discharge reported 1,000 gpm with 6 ft. drawdown in 1952. Deepened from 330 to 360 ft. in 1957. Temp. 77°F. 2/
H-5-145	J. A. Johnson	Brownie Locke	1952	250	14, 12	do	--	115	1952	T,G	Irr	Casing: 14-in. to 202 ft., 12-in. from 202 to 250 ft. Pump set at 180 ft. Discharge reported 900 gpm. Irrigated 113 acres of feed crops in 1954-55, and 1956.
*H-5-146	City of Uvalde	-- Spurgeon	1949	190	12	do	--	70 110.0	1949 Feb. 2, 1954	T,G	Irr	Cased to 60 ft. Discharge reported 800 gpm. Irrigated about 125 acres of vegetables and grain in 1953 and 220 acres in 1954-55. 1/
H-5-147	J. E. Puccini	-- Sellers	1952	425	12	do	--	--	--	T,E, 40	Irr	Cased to 240 ft. Pump set at 150 ft. Irrigated a part of 400 acres in 1953.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
H-5-148	Paul Ehlers	J. Sellers	1950	160	15	Edwards and associated limestones	906	--	--	T,E, 40	Irr	Cased to 8 ft. Pump set at 100 ft. Discharge reported 1,000 gpm. Irrigated a part of 400 acres in 1953, and 120 acres in 1955-56.
H-5-149	Clint Davis	Walter Heine	1949	120	--	Buda(?) limestone	944	--	--	T,E, 15	Irr	Unused in 1953.
H-5-150	R. R. Ross	-- Nichols	1953	425	8	Edwards and associated limestones	--	70	1953	T,E, 15	Irr	Cased to 50 ft. No drawdown reported after several hours pumping at 500 gpm.
H-5-151	J. M. Saunders	-- Virdell	1952	481	12	do	--	67	Sept. 1952	T,E, 30	Irr	Cased to 250 ft. Pump set at 80 ft. Discharge reported 600 gpm. Irrigated 50 acres of grass in 1953, and 1955-56.
H-5-152	Charles Waechter	L. Spurgeon	1946	685	10, 7	do	884	54	Feb. 1954	T,E, 10	Irr	Casing: 10-in. to 80 ft., 7-in. from 80 to 240 ft. Deepened from 153 to 685 ft. in 1952. Drawdown reported 17 ft. after several hours pumping 225 gpm. Irrigated 12 acres of grass in 1953, 1955-56, and 20 acres in 1957. Well H-5-103 in Bull. 5608, Board of Water Engineers.
H-5-153	W. R. Painter	H. Spurgeon	1947	540	--	do	--	30	1948	T,E, 15	Irr	Pump set at 100 ft. Discharge reported 600 gpm. Irrigated about 75 acres in 1953, and 60 acres in 1955-56.
H-5-154	J. T. Martin	Hawkins & Evetts	1953	482	8	do	--	62.7	Feb. 4, 1954	T,G	Irr	Cased to 75 ft.
H-5-155	R. S. Senter	Tex King	1952	400	12	do	--	--	--	T,E, 20	Irr	Cased to 70 ft. Discharge reported 1,627 gpm. Deepened to 400 ft. in 1952. Irrigated about 190 acres in 1953, and 1955-56.
H-5-156	do	do	1952	400	12	do	--	67.5	June 24, 1957	T,G, 32	Irr	Pump set at 130 ft. Discharge reported 1,000 gpm. Deepened to 400 ft. in 1952.
H-5-157	C. C. Heard	--	--	200	8	do	--	--	--	T,G	Irr	Cased to 42 ft. Pump set at 100 ft. Discharge reported 600 to 700 gpm. Deepened from 152 to 200 ft. Irrigated about 10 acres in 1953.

See footnotes at end of table.

Table 4.--Records of wells and spring in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-158	Fred Ligocky	-- Wuensch	1953	940	12	Edwards and associated limestones	--	70.7	Feb. 2, 1954	T,E, 40	Irr	Cased to 150 ft. Discharge reported 1,350 gpm. Irrigated a part of 80 acres in 1953, and a part of 150 acres in 1956.
H-5-159	Ross Lane	Carlos Meyers	1951	570	12	do	--	--	--	T,E, 15	Irr	Cased to 100 ft. Pump set at 100 ft. Discharge reported 600 gpm. Irrigated about 300 acres in 1953 and 1956. 1/
H-5-160	E. A. Owen	do	1951	845	12	do	909	53 76.6	Mar. 1951 Feb. 4, 1954	T,G, 30	Irr	Cased to 75 ft. Pump set at 100 ft. Discharge reported 700 gpm. Water reported from 820 to 845 ft. Irrigated about 40 acres in 1953 and 1955. 1/
H-5-161	Homer Hess	Hawkins & Nichols	1953	770	12	do	910	90	Jan. 1953	T,E, 50	Irr	Cased to 90 ft. Pump set at 170 ft. Discharge reported 1,294 gpm. Irrigated 120 acres in 1953 and 1955-56.
*H-5-162	U. S. Fish & Wildlife Service	H. Spurgeon	1937	750	10	do	911	74.0 68.8	Feb. 7, 1956 Dec. 3, 1957	N	N	Discharge reported 1,000 gpm. Temp. 78°F. 2/ 3/
*H-5-163	do	Walter Heine	1950	600	10	do	910	68.0	Dec. 3, 1957	T,E, 30	Ind	Pump set at 130 ft. Drawdown reported 9 ft. after 10 hours pumping at 805 gpm. Deepened from 70 to 600 ft. in 1952. 1/ 2/
H-5-164	Huie H. Butler	Harvey & Spurgeon	1948	186	12	Austin chalk	915	71 71.2	May 1952 Dec. 3, 1957	T,G, 40	Irr	Cased to 70 ft. Discharge reported 850 gpm. Irrigated a part of 250 acres in 1953, 1955, and 1956-57. 1/
H-5-165	do	H. Spurgeon	1953	852	10	Edwards and associated limestones	922	97	July 1953	T,E, 50	Irr	Cased to 70 ft. Drawdown reported 49 ft. after 4 hours pumping at 1,200 gpm. Water reported at 684, 712, 730, 750, and 830 to 840 ft. Irrigated a part of 250 acres in 1953, 1955, and 1956-57. 1/
H-5-166	City of Uvalde	L. Spurgeon	1952	400	16, 12	do	--	--	--	T,E, 75	P	Casing: 16-in. to 80 ft., 12-in. to 261 ft. Pump set at 120 ft. City well 1. 1/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-167	City of Uvalde	--	--	350	12	Edwards and associated limestones	--	--	--	T,E, 60	P	Cased to 261 ft. Pump set at 120 ft. City well 3.
*H-5-168	do	Crawford & Roberts	1938	478	15, 12	do	--	42	1938	T,E, 60	P	Casing: 15-in. to 76 ft., 12-in. to 261 ft. Pump set at 100 ft. City well 2. 1/
H-5-169	do	L. Spurgeon	1953	602	20	do	--	85.5	Aug. 17, 1953	T,E, 100	P	Cased to 80 ft. 18-in. hole from 80 to 500 ft., 15-in. hole from 500 to 602 ft. Pump set at 150 ft. Drawdown reported 21 ft. after 4 to 5 hours pumping at 1,150 gpm. City well 7. 1/
H-5-170	do	Meyers & Spurgeon	1951	161	12	do	--	35	1951	T,E, 50	P	Cased to 130 ft. Deepened from 140 to 161 ft. in 1953. Drawdown reported 6 ft. after 4 to 5 hours pumping at 2,000 gpm. City well 5. 1/
H-5-171	do	H. Spurgeon	1946	265	12	do	--	--	--	T,E, 60	P	Cased to 265 ft. Pump set at 120 ft. City well 4. 1/
H-5-172	do	L. Spurgeon	1951	525	12	do	--	43	Mar. 1953	T,E, 40	P	Cased to 191 ft. Pump set at 100 ft. Discharge reported 550 gpm. City well 6. 1/
*H-5-173	U. S. Fish & Wildlife Service	--	--	35	--	--	905	--	--	N	N	Discharge reported 60 gpm.
H-5-174	do	M. Fenley	1935	362	--	Serpentine(?)	912	52.0 52.3	July 10, 1951 Jan. 25, 1958	--	--	Originally drilled to 1,150 ft.; caved at 362 ft. Observation well. Recording gage installed Nov. 1, 1951. 1/ 2/ 3/
H-5-175	M. Bryson	--	--	--	--	Edwards and associated limestones	--	217.3	Oct. 25, 1956	C,W	S	
H-5-176	Mrs. A. Meyer	--	--	369	6	do	1,050	239.7 224.0	Aug. 18, 1956 Dec. 3, 1957	C,W	S	
H-5-177	Roy Davenport	--	--	300	7	do	--	222.9 200.3	Oct. 23, 1956 Nov. 8, 1957	C,W	S	
H-5-178	Pete Stoy	--	1955	518	16	do	1,037	226.5 215.0	Apr. 9, 1956 Dec. 3, 1957	N	N	2/ 3/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-179	D. Bryson	John Roberts	1939	535	6	Edwards and associated limestones	1,036	267.1 243.8	Sept. 25, 1956 Dec. 5, 1957	C,W	S	Cased to 310 ft.
H-5-180	do	--	--	349	6	do	--	297.8	May 3, 1957	C,W	S	Cased to bottom.
*H-5-181	W. H. Kramer	Alton Echols	1955	1,235	--	do	977	198	1955	T,G, 126	Irr	Cased to 795 ft. Discharge reported before acidizing 450 gpm with pump setting of 368 ft.; after acidizing discharge increased to 600 gpm with pump setting of 310 ft. Well acidized in January 1957. 1/ 2/
*H-5-182	Duke Bryson	M. Fenley	1936	350	7	do	--	246.5	Apr. 30, 1957	C,W	S	Cased to 20 ft. Reported top of Edwards 270 ft. Temp. 75°F.
H-5-183	George Kenedy	--	1900	355	6	do	--	261.0	Apr. 10, 1957	C,W	S	
H-5-184	Pete Stoy	--	--	370	6	do	--	201.6	Aug. 1, 1956	C,W	D	Deepened from 202 to 370 ft. in 1956. Reported top of Edwards 345 ft. 2/
H-5-185	Homer Hargrove	L. Spurgeon	1956	800	--	do	996	194.7	Oct. 3, 1956	--	--	Oil test. Cased to 36 ft. Reported top of Edwards 185 ft.
H-5-186	Marcel Rambie	Soil Conservation Service	1956	79	--	--	949	--	--	--	--	Covered and abandoned. 1/ 2/
H-5-187	do	L. Spurgeon	1953	200	6	Edwards and associated limestones	944	117.0 136.6	Jan. 27, 1956 Feb. 5, 1957	T,E, 3/4	D,S	Cased to 160 ft. Reported top of Edwards 60 ft.
H-5-188	Clyde Watkins	Tex King	1956	389	15	do	976	163.5	Sept. 24, 1956	T,E	Irr	2/
H-5-189	George Kennedy	J. Roberts	1940	285	8	do	--	180.9	May 7, 1957	C,W	S	Cased to bottom. Temp. 73°F.
H-5-190	do	do	1935	300	8	do	--	184.3	Dec. 8, 1955	N	N	Cased to 20 ft. 2/
H-5-191	do	Production Service Co.	1947	2,863	10	--	--	92.3	Apr. 17, 1957	C,W	S	Oil test. Reported plugged at 1,500 ft. Temp. 76°F.
H-5-192	-- Walcott	L. Spurgeon	1955	855	--	Edwards and associated limestones	965	134.0 119.0	Nov. 1, 1955 Dec. 4, 1957	N	N	Oil test. Discharge reported 200 gpm. 3/
H-5-193	Julias Bose	John Roberts	1917	350	6	do	--	152.8	Apr. 7, 1957	T,E	D	
H-5-194	do	Sam Heine	1947	200	--	Austin(?) chalk	--	108.2	do	C,W	N	Cased to 80 ft.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-195	Julias Bose	J. W. Roberts	1928	131	--	--	--	101.4	Apr. 7, 1957	--	S	
H-5-196	Doris H. Evans	R. V. Raney	--	273	7	Edwards and associated limestones	--	149.0	Sept. 4, 1956	T,E, 3	D,S	Top of Edwards 235 ft. 2/
H-5-197	do	John Roberts	1936	300	6	--	--	164.9	May 22, 1956	C,W	S	
H-5-198	H. D. Morgan	Ray Chapman	1953	293	--	Edwards and associated limestones	--	274.7	Nov. 7, 1956	T,E	D,S	
H-5-199	R. L. Anderson	Humble Oil & Refining Co.	1934	5,015	--	--	949	--	--	N	N	Oil test. Abandoned. 1/
H-5-200	Randolph Stein	--	--	288	6	Edwards and associated limestones	--	148.9	Jan. 14, 1957	T,E, 3	D,Irr	Drawdown reported 0.7 ft. after pumping 150 gpm. 2/
H-5-201	D. D. Pettit	W. Heine	--	191	--	do	951	137.2 123.3	Apr. 5, 1956 Dec. 6, 1957	C,W	D	3/
H-5-202	Phil Newell	-- Virdell	1953	1,492	--	Edwards and associated limestones, and Glen Rose (?) limestone	965	139.0 124.3	Dec. 7, 1955 Dec. 6, 1957	N	N	
H-5-203	J. A. Johnson	--	--	370	16	Edwards and associated limestones	--	151.6	Dec. 7, 1956	N	N	2/
H-5-204	R. V. Raney	--	--	265	--	do	1,938	118.9 111.6	Apr. 4, 1956 Dec. 6, 1957	T,E	D,S	Cased to bottom. 3/
H-5-205	Howard Watson	W. Heine	1941	220	5	do	--	139.7	Oct. 19, 1956	C,W	D,S	Cased to 110 ft.
H-5-206	D. McFatter	--	--	--	--	do	925	107.0	Oct. 22, 1956	N	N	2/
*H-5-207	City of Uvalde	Lynn Spurgeon	1957	637	20	do	--	79.5	Dec. 16, 1957	N	N	Cased to 100 ft. Temp. 73°F. 2/
H-5-208	R. S. Dismukes	Tex King	1951	273	12	do	931	105.9	May 15, 1956	T,G	Irr	Cased to 62 ft. 2/
H-5-209	W. Heine	W. Heine	--	137	6	do	927	98.8 87.4	Apr. 9, 1956 Dec. 3, 1957	N	N	Cased to 65 ft. Observation well. 3/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-210	R. A. Ramsey	J. Sellers	1954	602	12	Edwards and associated limestones	941	121.0	Sept. 8, 1956	N	N	Cased to 173 ft. Discharge reported 1,000 gpm. 2/
H-5-211	Buzzy Stokes			405	12	do	--	97.9	Apr. 10, 1956	T,E, 40	Irr	Discharge reported 700 gpm. Irrigated a part of 220 acres from 1953 through 1956. Well H-5-14 in Bull. 5608. Board of Water Engineers.
H-5-212	Charles Daly	Tex King	1950	187	6	do	920	102.2	Aug. 20, 1956	T,E	D	2/
H-5-213	John Monigan	W. Heine		800	12	do	924	86.9 108.6	Feb. 21, 1956 Apr. 2, 1957	N	N	Discharge reported 200 gpm. 2/
H-5-214	Pete Stoy	M. Fenley	1929	295	12	do	931	100.3	May 6, 1957	T,E	Irr	Drawdown reported 32 ft. pumping at 700 gpm. Deepened to 295 ft. in 1956. Well H-5-14 in Water-Supply Paper 678. 2/
H-5-215	Arthur Winans			289	6	Edwards and associated limestones, and Buda(?) limestone	907	63.4	Dec. 3, 1957	T,E	D	2/
H-5-216	A. L. Burkett	A. Serber	1956	430	-	Edwards and associated limestones	907	86.5 64.3	Sept. 1, 1956 Dec. 3, 1957	T,E	D	Cased to 57 ft. 2/
H-5-217	J. H. Burns			387	8	do	902	82.2 59.2	Aug. 9, 1956 Dec. 3, 1957	T,E	Irr	2/
H-5-218	R. V. Raney			157	6	do	901	68.2 61.8	Dec. 2, 1955 Dec. 3, 1957	T,E, 1	D	Old well. 2/
H-5-219	W. H. Hill	R. V. Raney	1957	160	15	Buda limestone	--	71.7	May 8, 1957	T,E	P	Cased to 95 ft. 1/ 2/
H-5-220	Shorty Thompson	Lynn Spurgeon	1956	617	12	Edwards and associated limestones	890	66.7	Apr. 23, 1956	N	N	Cased to 440 ft. 2/
H-5-221	Paul Ehlers	Walter Heine	1946	60		Leona formation	--	31	1946	N	N	Cased to 60 ft. Discharge reported 1,800 gpm. Gravel reported from 42 to 56 ft.
H-5-222	J. E. Puccini			426	6	Edwards and associated limestones	912	97.0	Oct. 2, 1956	T,E	D	2/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-223	Doris Houston Evans	John Roberts	1947	145	8	Edwards and associated limestones	906	78.8 66.7	May 21, 1956 Dec. 3, 1957	C,W	S	2/
H-5-224	Paul Ehlers	J. Sellers	1956	640	--	do	--	91.3	Dec. 8, 1956	T,E, 40	Irr	Discharge reported increased from 320 gpm to 1,000 gpm, after acidizing 15,000 gallons.
H-5-225	Doris Houston Evans	--	--	300	8	do	--	79.0	May 21, 1956	C,W	S	
H-5-226	Frank Winslow	--	--	343	--	Edwards and associated limestones(?)	982	111.3	Dec. 6, 1956	C,W	S	Temp. 77°F.
H-5-227	do	Humble Oil & Refining Co.	1938	620	--	Edwards and associated limestones	--	92.3	do	C,W	S	1/ 2/
H-5-228	do	--	--	--	--	do	--	116.3	do	C,W	S	
H-5-229	Will Hoag	Phillips Petroleum Co.	1952	1,500	5	do	882	54.0 51.5	Mar. 2, 1956 Dec. 4, 1957	N	N	Cased to 40 ft. Observation well. 3/
H-5-230	do	W. Heine	1954	350	6	do	1,882	57.2 73.2 48.2	Apr. 9, 1956 Feb. 2, 1957 Mar. 3, 1958	C,W	S	Gravel reported from 44 to 60 ft. Deepened from 120 to 350 ft. in February 1957. 2/
H-5-231	F. E. Beecroft	--	1952	60	6	Leona formation	--	46.8	Aug. 26, 1957	J,E	S	Cased to bottom.
H-5-232	G. H. Dunson	--	--	100	--	Buda limestone, and Eagle Ford shale	--	48.1	Jan. 15, 1957	J,E	D	
H-5-233	J. O. Thompson	--	1954	460	--	Edwards and associated limestones	--	--	--	T,E	Irr	
H-5-234	E. L. Sutherland	A. Smith	1950	225	--	Leona formation and Buda limestone	882	62.2 39.3	Jan. 9, 1957 Mar. 3, 1958	N	N	Cased to 60 ft. Casing perforated opposite gravel. Observation well. 2/ 3/
H-5-235	Tom F. Johnson	W. Heine	1956	305	--	Edwards and associated limestones	896	82.9	Mar. 20, 1957	T,E	Irr	Cased to 97 ft. Gravel reported from 30 to 65 ft. Discharge reported 800 gpm. Top of Edwards 220 ft.
H-5-236	J. C. Pogue	R. V. Raney	1956	450	8	do	901	82.7 58.4	Dec. 29, 1956 Dec. 3, 1957	T,E	Irr	Cased to 81 ft. Drawdown reported 6 ft. pumping at 200 gpm. 2/

See footnotes at end of table.

Table 4.--Records of wells and spring in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-237	Halden Fry	W. Heine	1956	388	6	Edwards and associated limestones	899	70.0	Apr. 25, 1956	J,E	D	2/
H-5-238	Sam O'Bryant	-- Spurgeon	1949	725	12	do	--	66.4 73.9	Apr. 13, 1956 Apr. 29, 1957	T,E, 65	Irr	Cased to 150 ft. 1/
H-5-239	E. E. Capt	W. Heine	1954	537	--	Buda limestone, Eagle Ford shale, and Edwards and associated limestones	--	74.9	Jan. 14, 1957	T,E	D,S	Cased to 80 ft. Owner reports Health Department analysis states water unfit for human consumption.
H-5-240	W. R. Painter	Lynn Spurgeon	1956	562	12	Edwards and associated limestones	888	69.5 46.0	Sept. 6, 1956 Dec. 4, 1957	T,E	Irr	Cased to 103 ft. Discharge reported 900 gpm. 1/ 2/
H-5-241	J. H. Speer	W. Heine	--	100	--	Austin chalk	--	63.0	Sept.13, 1957	C,W	S	
H-5-242	Robert Wilburn	--	1955	58	--	Basalt	--	43	1955	T,E	D	
H-5-243	George Brashier	--	--	1,207	12	Serpentine	908	72.4	Nov. 28, 1955	N	N	2/
H-5-244	J. H. Speer	W. Heine	1956	121	6	Austin chalk	--	74	Feb. 1957	C,W	S	
H-5-245	do	-- Spurgeon	--	114	7	do	--	61.1	Aug. 13, 1957	C,W	S	Cased to bottom.
*H-5-246	Marcel Rambie	--	--	115	6	Edwards and associated limestones(?)	--	95.2	do	C,W	S	Temp. 77°F.
H-5-247	Sam Jones	--	1912	75	4	--	--	45.4	Oct. 24, 1929	--	D,S	Well H-8-6 in Water-Supply Paper 678.
H-5-248	P. C. Montgomery	Lynn Spurgeon	1948	532	8	Edwards and associated limestones	--	43 68.4 64.1	July 1948 July 8, 1952 Feb. 4, 1954	T,E, 15	Irr	Cased to 56 ft. Discharge reported 450 gpm. Irrigated 30 acres in 1953. Well H-8-68 in Bull. 5608, Board of Water Engineers. 1/
H-5-249	do	--	--	300	6	--	888	32.1 33.7 30.9	Jan. 15, 1946 Aug. 8, 1946 Mar. 4, 1947	J,E	D,S	Well H-8-33 in Bull. 5608, Board of Water Engineers.
H-5-250	R. M. Simmonds	Sam Bunting	1917	200	8	--	--	37.8	Oct. 22, 1929	--	D,S	Well H-8-5 in Water Supply Paper 678.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
H-5-251	W. O. Estes	-- Murphy	1956	600	7	Edwards and associated limestones	893	57.2 57.0	Apr. 4, 1956 Jan. 2, 1957	T,E	D	2/
H-5-252	H. C. Sutherland	Lynn Spurgeon	--	432	6	Buda limestone, Eagle Ford shale, and Edwards and associated limestones	885	32.7 34.4 31.7 75.1	Jan. 15, 1946 Aug. 8, 1946 Mar. 4, 1947 Jan. 15, 1957	T,E	D	Cased to 35 ft. Well H-8-34 in Bull. 5608, Board of Water Engineers.
H-5-253	--	--	--	50	6	Leona(?) formation	883	37.7 37.0	Jan. 25, 1946 Mar. 4, 1947	C,W	S	Well H-8-35 in Bull. 5608, Board of Water Engineers.
H-5-254	Paul Ehlers	W. Heine	--	50	72	Leona formation	861	15.1	Feb. 16, 1946	N	N	Dug to 26 ft., drilled to 50 ft. Well H-8-38 in Bull. 5608, Board of Water Engineers.
H-5-255	Fred Ehlers	Lynn Spurgeon	--	850	12	Leona formation and Serpentine	877	53.4 44.7	Mar. 2, 1956 Apr. 3, 1958	N	N	Gravel reported from 43 to 58 ft. 2/ 3/
H-5-256	Walter Harris	--	--	46	48	Leona formation	870	29.2 30.7 27.6	Sept.14, 1945 Aug. 7, 1946 Mar. 3, 1947	N	N	Dug. Well H-8-42 in Bull. 5608 Board of Water Engineers.
H-5-257	Fred Ehlers	--	--	60	6	do	873	30.9 32.4 29.3	Sept.13, 1945 Aug. 7, 1946 Mar. 3, 1947	C,W	N	Dry at 60 ft. on Oct. 19, 1956. Well H-8-39 in Bull. 5608 Board of Water Engineers.
H-5-258	do	--	--	--	12	do	--	--	--	T,G, 40	N	Well H-8-40 in Bull. 5608 Board of Water Engineers.
H-5-259	do	--	--	74	12	do	--	61.1 55.6	Oct. 20, 1956 Oct. 29, 1957	N	N	Cased to bottom. 3/
H-5-260	Ralph Harris	--	1944	58	6	do	874	34.2 33.9 33.8 35.6	Sept.12, 1945 Jan. 5, 1946 Feb. 18, 1946 Aug. 7, 1946	J,E, 1	D,S	Well H-8-41 in Bull. 5608 Board of Water Engineers.
H-5-261	do	W. Heine	1954	78	60	do	874	--	--	T,E	D	Cased to 60 ft.
H-5-262	C. C. Smith	--	--	59	10	do	871	19 59.4	1945 Jan. 10, 1957	T,G	N	Well H-8-44 in Bull. 5608 Board of Water Engineers.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-5-263	Jimmie Wakefield	--	--	--	6	Leona(?) formation	872	35.0 34.6 36.2 34.1	Sept.13, 1945 Feb. 20, 1946 Aug. 7, 1946 Mar. 3, 1947	C,W	S	Well H-8-45 in Bull. 5608 Board of Water Engineers.
H-5-265	R. Harris well 3	U. S. Geological Survey	1957	38	--	--	873	--	--	--	--	Test hold. 1/
H-5-266	R. Harris well 2	do	1957	12	--	--	870	--	--	--	--	do
H-5-267	P. Ehlers well 2	do	1957	24	--	--	889	--	--	--	--	do
H-5-268	P. Ehlers well 1	do	1957	37	--	--	885	--	--	--	--	do
H-5-269	T. Johnson well 1	do	1957	25	--	--	882	--	--	--	--	do
H-5-270	E. E. Capt well 1	do	1957	6	--	--	897	--	--	--	--	do
H-5-271	City of Uvalde well 1	do	1957	49	--	--	889	--	--	--	--	do
H-6-1	Duke Bryson	--	--	300	6	Edwards and associated limestones(?)	979	102.0 95.6	Dec. 9, 1929 Apr. 1, 1946	C,E	D,S	Old well. 3/
H-6-2	Texas Trap Rock Co.	--	1929	946	--	Edwards and associated limestones	974	138.2 144.8	Sept.20, 1929 Mar. 24, 1958	J,E	Ind	Supplies water for steam compressor. 1/ 3/
H-6-3	Decideria Diaz	--	1922	97	--	Leona formation	981	75.0	Dec. 9, 1929	--	D	
H-6-4	Bob Harring	-- Sanderlin	--	--	6	--	986	120.6	Dec. 6, 1929	--	S	
H-6-5	T. J. Niemeyer	-- Niemeyer	1910	488	6	Edwards and associated limestones	1,009	275.5 285.0 296.7 308.1	Dec. 4, 1929 Mar. 12, 1952 Sept.10, 1952 Aug. 26, 1954	--	D,S	
H-6-6	E. F. Martin	--	1917	180	--	--	989	123.6	Dec. 4, 1929	--	D,S	
H-6-7	I. J. Sharey	--	--	120	5	Austin chalk	977	76.7	do	--	D,S	
*H-6-8	K. K. Woodley	--	1929	89	40	do	977	77.0 67.6	Dec. 9, 1929 Jan. 13, 1958	C,W	S	Dug. 3/
H-6-9	-- Albright	--	--	160	6	Anacacho limestone	--	61.4 45.6	Dec. 11, 1929 Sept.21, 1938	--	D,S	do

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
*H-6-10	Herbert Stevens	--	--	77	--	Leona formation	--	68.4 63.2	Dec. 12, 1929 Jan. 13, 1958	C,G	S	Dug. 3/
H-6-11	A. J. Owen	--	1904	130	7	Anacacho limestone	947	71.8	Dec. 10, 1929	--	D,S	
H-6-12	do	--	1909	124	8	do	918	52.6	Nov. 26, 1929	--	D,S	
H-6-13	Cecil Regan	--	--	68	6	Anacacho limestone and Leona formation	914	45.6 42.1	Nov. 26, 1929 Aug. 22, 1957	C,W	D,S	Drawdown measured 1 ft. after 5 minutes pumping at 1 to 1.5 gpm. Temp. 75°F.
H-6-14	--	--	--	110	6	--	929	62.3	Nov. 26, 1929	--	D,S	
H-6-15	-- Bailey	--	1906	96	7	Leona(?) formation	921	55.2	do	--	D,S	
*H-6-16	Kay Craig	-- Holderman	1928	1,330	6	Edwards and associated limestones	934	193.7 210.7	Dec. 11, 1929 Mar. 24, 1958	C,W	S	Cased to 994 ft. Drawdown 13.5 ft. after 10 minutes pumping at 1.5 gpm. Temp. 86°F. 3/
H-6-17	J. Davis	--	1929	--	6	Austin(?) chalk	941	67.9	Nov. 27, 1929	--	D	
H-6-18	Jamie Aleen Houston Estate	John Roberts	--	900	6	Edwards and associated limestones	910	260.5	May 21, 1956	C,W	S	Drilled as oil test, now used to supply water for stock. 2/
H-6-19	--	--	--	66	6	Leona formation	938	65.4	Nov. 26, 1929	--	D,S	
H-6-20	Mrs. -- Connor	--	1899	66	72	do	857	60.9	Nov. 6, 1929	--	D,S	Dug.
*H-6-21	do	--	--	33	60	do	832	24.6 20.7	Nov. 6, 1929 Dec. 20, 1930	--	D,S	do
*H-6-22	Able Irrigation Co.	Tex King	1953	1,300	12	Edwards and associated limestones	933	98.8 102 136.1 77.9	Jan. 26, 1954 Dec. 1955 Feb. 13, 1957 Dec. 5, 1957	T,E, 75	Irr	Cased to 890 ft. Drawdown reported 5 ft. after 4 to 5 hours pumping at 1,300 gpm in 1954. Irrigated 175 and 330 acres in 1953 and 1956, respectively. Temp. 85°F. 2/
*H-6-23	do	do	1952	1,311	12	do	930	98.9	Jan. 26, 1954	T,E, 75	Irr	Cased to 900 ft. Drawdown reported 50 ft. after 4 to 5 hours pumping at 1,000 gpm in 1954, and pumped well about 4,320 hours at 1,200 gpm in 1956. Irrigated about 125 acres in 1953. Temp. 82°F. 2/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
*H-6-24	Cecil Regan	Tex King	1953	1,265	12	Edwards and associated limestones	--	240	Sept. 1953	T,G, 75	Irr	Cased to 310 ft. Drawdown reported 55 ft. after 30 minutes pumping at 1,000 gpm. Irrigated about 150 acres in 1953, in conjunction with well H-6-42 irrigated 400 and 1,000 acres of feed crops in 1955, and 1956-57, respectively.
*H-6-25	Beverly Turner	E. H. Cannon	1952	1,410	12	do	875	177.6 153.3	Feb. 10, 1954 Mar. 27, 1958	T,G, 130	Irr	Cased to 300 ft. Drawdown 68 ft. after pumping 12 minutes at 900 gpm in November 1956. Reported top of Edwards 901 ft. Irrigated 100 and 200 acres of feed crops in 1953 and 1955-56, respectively. Temp. 93°F. 3/
*H-6-26	Knippa School	--	--	150	--	--	--	--	--	--	P	Discharge reported 0.5 gpm with well pumping continuously.
*H-6-27	do	--	--	968	--	Edwards and associated limestones	--	--	--	--	P	Discharge reported 15 gpm.
H-6-28	-- Alexander	-- Niemeyer	1904	520	5	do	1,005	345.1	Dec. 4, 1929	--	D,S	Discharge reported small.
H-6-29	Victor Niemeyer	--	--	300	--	--	--	141.6	May 10, 1957	C,E, 1½	D,S	
H-6-30	Edwin Dornbusch	G. Dornbusch	1920	100	7	Austin(?) chalk	--	58.4	May 13, 1957	C,W	D,S	
H-6-31	Paul Dornbusch	Karl Dornbusch	1931	100	6	Anacacho(?) limestone	--	58.6	May 10, 1957	C,W, J,E	D,S	Cased to 14 ft. Drawdown reported 2 ft. after 10 minutes pumping 5 to 6 gpm.
H-6-32	Sam Heine	Sam Heine	--	100	--	do	--	50.7	do	C,W	D,S	
H-6-33	Paul Dornbusch	--	--	--	--	--	--	57.8	May 10, 1957	C,G	S	
H-6-34	Kincaid Bros.	--	--	54	6	Serpentine	--	33.2	Aug. 22, 1957	C,W	S	Cased to bottom. Old well.
H-6-35	T. M. Woodley	--	1929	27	60	Leona formation	--	18.3	Mar. 21, 1957	C,W	S	Dug.
H-6-36	do	Sam Heine	--	36	6	do	--	27.0 13.0	Mar. 27, 1957 May 14, 1957	C,W	N	
*H-6-37	do	--	--	100	--	Anacacho limestone	--	62.1	Mar. 22, 1957	C,W	D,S	Cased to bottom.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
*H-6-38	T. M. Woodley	--	1947	1,100	6	Edwards and associated limestones	--	291.1	Mar. 22, 1957	C,W	S	
H-6-39	C. P. Arnim	J. Roberts	1945	109	6	Igneous rock	--	25.1	May 13, 1957	C,W	S	Cased to bottom. Tested more than 50 gpm with bailer, reported could not lower water level.
H-6-40	do	--	--	132	--	Anacacho limestone	--	71.3	do	C,W	D,S	Old well.
H-6-41	Mrs. B. Angelo	--	--	110	--	do	--	57.9	do	C,W	D,S	Well reported weak. Old well.
H-6-42	Cecil Regan	-- Echols	1955	1,225	--	Edwards and associated limestones	--	--	--	T,G, 160	Irr	Discharge reported 2,000 gpm. Temp. 84°F.
H-6-43	do	--	--	1,125	--	--	920	--	--	--	--	2/
H-6-44	do	--	--	1,520	--	Edwards and associated limestones	912	214.6	Dec. 6, 1957	N	N	Cased to 915 ft. 2/
H-6-45	J. E. Miles	--	--	90	108	Leona formation	--	38.6	Jan. 24, 1957	N	N	Dug. Old well.
H-6-46	do	--	--	120	--	--	--	72.0	do	C,W	D,S	Cased to 80 ft. Discharge reported 16 gpm in 1954.
H-6-47	Cecil Regan	--	--	139	5	Austin(?) chalk	--	58.4	May 10, 1957	C,W,E, 1/4	D,S	
H-6-48	H. D. Dicke	--	--	200	--	Austin chalk	--	69.3	do	C,W	D,S	Old well.
H-6-49	do	Sam Heine	--	172	8	do	--	100.4	do	C,W	S	
H-6-50	J. E. Miles	do	--	200	--	--	--	81.9	Jan. 24, 1957	C,W	--	Cased to bottom.
H-6-51	C. S. Hunter	--	--	165	7	Anacacho limestone	--	133.5	Aug. 29, 1957	C,W	S	Cased to 148 ft.
H-6-52	G. W. Gunn	A. C. Sanderlin	--	250	7	Austin chalk	--	47.4	May 9, 1957	C,W	S	Cased to 100 ft.
H-6-53	G. H. Knippa	Charlie Kassler	1937	81	--	Leona formation	--	65.9	do	C,W	D,S	
H-6-54	W. P. Noack	--	--	285	--	Austin(?) chalk	--	62.5	do	C,W,E, 1	D,S	Old well.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
H-6-55	W. J. Dicke	Sam Heine	1947	110	8	Leona formation	--	77.2	May 9, 1957	C,W	D,S	Water reported in gravel from 85 ft. to bottom.
*H-6-56	L. G. Dicke	G. Dornbusch	1925	151	6	Igneous rock	--	75.4 84.5	May 9, 1957 July 22, 1957	C,W	D,S	Cased to 40 ft. Water reported in igneous material at 147 ft.
H-6-57	K. Eds	John Roberts	1941	1,175	--	Edwards and associated limestones	980	--	--	--	P	Water level reported stabilized at 305 ft. pumping 75 gpm. Reported top of Edwards 645 ft.
H-6-58	Bun Posey	Lynn Spurgeon	1954	1,050	15	Serpentine	--	65.0	Mar. 1, 1956	N	N	Cased to 64 ft.
H-6-59	-- Watson	--	--	74	48	Leona formation	--	68.6	May 9, 1957	N	N	Dug. Cased to 5 ft. Fine alluvial material to 69 ft.
*H-6-60	C. A. Zinsmeister	John Roberts	1948	200	6	--	--	110.6	do	C,W	D,S	Cased to 100 ft. Temp. 75°F.
H-6-61	F. D. Winslow	R. V. Raney	1953	1,301	--	Edwards and associated limestones	--	54.0	Dec. 2, 1955	N	N	2/
H-6-62	do	--	--	200	--	--	--	102.4	Dec. 20, 1956	C,W	S	
H-6-63	do	--	--	300	--	--	--	127.3	Dec. 21, 1956	C,W	S	
H-6-64	Jamie Aleen Houston Estate	M. Fenley	1936	240	12	Edwards and associated limestones	--	204.7	do	C,W	--	
H-6-65	do	--	1942	137	--	--	--	120.6	May 21, 1956	C,W	S	
*H-6-66	do	M. Fenley	1936	787	--	Edwards and associated limestones(?)	--	257.7	do	C,W	S	Temp. 80°F.
*H-6-67	Mrs. L. D. Kothmann	--	--	52	60	Leona formation	--	48.6	Apr. 11, 1957	C,W	D	Dug. Temp. 73°F.
H-6-68	C. S. Hunter	Lynn Spurgeon	1954	165	8	Escondido formation	--	88.2	Aug. 29, 1957	C,W	S	Cased to bottom.
H-6-69	E. Corder	--	--	90	--	Leona formation	--	48.3	Apr. 18, 1957	J,E	D	
H-6-70	do	--	--	187	6	Escondido formation	--	176.5	do	C,W	--	
H-6-71	Jack Brown	V. Wee Hunt	1949	94	6	do	--	52.6	Sept. 9, 1957	C,G	S	Cased to bottom.
*H-6-72	do	A. Goodin	1939	122	6	do	--	73.0	do	C,W	D,S	Cased to bottom. Temp. 76°F.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-6-73	E. Corder	-- Glazer	1930	700	--	--	--	110.2	Apr. 18, 1957	T,E	--	
*H-6-74	C. S. Hunter	M. Fenley	1940	1,075	6	Edwards and associated	870	203.6 188.1	Jan. 24, 1957 Aug. 29, 1957	C,W T,E	D,S	Cased to 1,030 ft. Reported top of Edwards 1,050 ft.
H-6-75	Cecil Regan	--	--	500	6	Anacacho(?) limestone	--	228.9	Aug. 26, 1957	C,W	S	
H-6-76	do	--	--	85	6	Leona formation	--	33.7	do	C,W	S	Temp. 73°F.
H-6-77	Otis Deason	--	--	100	--	Leona formation and Serpentine	--	32.6	Sept. 6, 1957	C,W	S	Dug to 47 ft. Old well.
H-6-78	do	Sam Heine	1953	125	5	Anacacho limestone and Escondido(?) formation	--	30.7	Aug. 27, 1957	C,W	D	Reported no drawdown after many hours pumping at 1.5 to 2 gpm.
H-6-79	Victor Niemeyer	--	--	117	6	do	--	37.1	Aug. 28, 1957	C,W	D,S	Temp. 74°F.
H-6-80	H. H. Matthews	--	1901	200	6	Escondido formation	--	43.0	Aug. 29, 1957	C,W	S	Cased to bottom.
H-6-81	J. O. Winston, Jr.	J. Roberts	1944	200	8	do	--	107.6	Oct. 18, 1957	C,W	S	Cased to bottom. Drawdown 2 ft. after 5 minutes pumping at 2.5 to 3 gpm.
*H-6-82	Frank Kincaid	do	1947	1,524	6	Edwards and associated limestones	--	123.9	Nov. 1, 1957	C,W	S	Cased to bottom.
*H-7-2	C. A. McDaniels	--	--	2,000	6	--	--	14.3	July 1, 1957	C,W	S	Drawdown reported 118 ft. after pumping 30 minutes in 1929.
H-7-3	George Lyles	Union Oil Co.	--	3,147	--	--	800	--	--	--	--	Oil test. Abandoned. Old well.1/
H-7-4	C. M. Cain, Jr.	--	--	1,305	10	--	--	--	--	--	--	Oil test. Abandoned.
H-7-5	-- Pulliam	M. Fenley	--	2,454	--	Edwards and associated limestones	--	--	--	--	--	Oil test. Sulfur water flowed over top of casing.
H-7-6	N. B. Pulliam, Jr.	--	1909	--	6	--	--	153.3	Nov. 18, 1929	--	S	
H-7-7	C. A. McDaniel	--	--	40	6	Leona formation	--	8.5	June 26, 1957	C,W, T,E	S	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-7-8	J. J. Anthon	Tex King	1951	100	6	Escondido formation	--	22.5	July 9, 1957	J,E	D,S	Cased to 30 ft.
H-7-9	Henry Fisher	H. Spurgeon	--	485	6	do	--	114.6	July 16, 1957	C,W	S	Cased to bottom.
*H-7-10	do	do	--	40	--	Leona formation	--	--	--	C,W	D,S	Temp. 79°F.
H-7-11	do	--	--	48	6	do	--	39.6	July 17, 1957	C,W	S	Discharge reported small.
*H-7-12	C. M. Cain, Jr.	--	--	36	--	do	--	33.5	Oct. 25, 1957	C,W	S	Temp. 73°F.
H-8-2	Hines & Monigan	--	--	--	6	Edwards and associated limestones	949	82.9 98.3	Nov. 15, 1929 Mar. 28, 1958	--	S	3/
H-8-3	B. M. Hines	--	--	300	6	Igneous rock	--	92.7	Oct. 8, 1929	--	D,S	
H-8-4	-- Roberts	--	--	150	5	--	948	79.1 83.8	Oct. 7, 1929	--	S	Old well.
H-8-7	Sam Jones	Sam Bunting	1915	180	6	--	--	--	--	--	S	
H-8-8	do	do	1915	180	6	--	--	--	--	--	D,S	
H-8-9	--	--	--	37	48	Leona formation	--	30.9	Oct. 25, 1929	B,H	D,S	Dug.
H-8-10	-- Aten	--	1929	36	60	do	830	36.6	do	--	D,S	do
H-8-11	Will White	--	1925	40	48	do	830	36.4	do	T,E	Irr	Dug. Irrigated 20 acres of cane and corn in 1929.
H-8-12	do	--	1925	40	48	do	824	32.6	do	T,E	Irr	do
*H-8-13	W. E. Lee	M. Fenley	1907	60	6	Indio and Leona formations	869	39.0 52.5	Oct. 26, 1929 Jan. 21, 1957	C,W	D	Dug to 41 ft., deepened to 60 ft., and filled around casing when visited in 1947. 3/
H-8-14	do	do	1924	90	6	Leona formation	859	32.6 41.2	Oct. 26, 1929 May 7, 1957	C,W	N	Dug to 40 ft. Drilled to 90 ft. 3/
H-8-15	-- Taylor	--	1907	38	48	do	851	32.4	Oct. 26, 1929	B,H	D	Dug.
H-8-16	T. P. Lee	--	--	120	5	--	--	89.2	Oct. 29, 1929	--	S	
H-8-17	do	--	--	--	6	--	--	66.3	do	--	S	
H-8-18	do	--	--	--	6	--	--	86.1	do	--	S	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
*H-8-19	A. W. West	--	--	400	6	Indio formation	--	83.2 66.2	Oct. 28, 1929 May 13, 1931	--	S	3/
H-8-21	-- Blankenship	--	--	34	48	Leona formation	--	29.1	Nov. 1, 1929	B,H	D	Dug.
H-8-22	J. R. Baylor	--	--	60	5	do	--	38.5	do	--	D,S	do
H-8-23	S. T. Gilbert	--	--	53	72	do	--	52.3	do	--	S	do
H-8-24	do	--	--	40	60	do	--	33.8	do	B,H	S	do
H-8-25	J. E. Rabel	--	1929	52	60	do	846	33.5 57.6	Nov. 1, 1929 Jan. 10, 1957	T,E	N	do
H-8-26	do	--	--	50	12	do	--	--	--	T,E, 15	N	Discharge reported 1,800 gpm in 1929.
*H-8-27	do	--	--	60	60	do	835	32.8 52.6	Nov. 2, 1929 May 6, 1957	N	N	Dug to 42 ft., deepened to 60 ft. 3/
H-8-28	do	--	1899	--	30	do	835	30.5 28.0	Nov. 2, 1929 Mar. 3, 1947	N	N	Abandoned. 3/
H-8-29	Frank Reeder	--	--	250	8	Escondido(?) formation	833	42.8 30.8	Nov. 2, 1929 Mar. 3, 1947	C,W	S	3/
H-8-30	J. M. Mayberry	--	1893	35	48	Leona formation	828	29.5 27.2	Nov. 4, 1929 Mar. 3, 1947	C,W	D	Dug. 3/
*H-8-31	J. E. Rabel	--	1927	50	55	do	830	30.4 29.4 28.5 27.7	Nov. 2, 1929 Sept.12, 1945 Feb. 20, 1946 Mar. 3, 1947	T,G, 47	Irr	Dug. Discharge 2,200 gpm. Irrigated 200 acres in 1929.
H-8-32	A. F. Seidel	--	--	42	55	do	815	35.2 39.6	Nov. 4, 1929 Jan. 11, 1957	C,W	D,S	3/
H-8-36	Dudley Blair	--	--	65	6	do	872	27.4 53.0	Jan. 25, 1946 Mar. 30, 1957	J,E	D	
H-8-37	-- Brooks	--	--	--	--	do	--	32.6	Jan. 25, 1946	C,G	S	
H-8-43	C. C. Smith	--	--	65	10	do	--	--	--	T,E, 42	N	
H-8-46	J. O. Palmer	--	--	72	12	do	867	32.1	Sept.12, 1946	T,E	Irr	1/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-8-47	John King	Lynn Spurgeon	--	125	6	Leona formation and Serpentine	866	31.2 32.4 30.9 55.5	Jan. 24, 1946 Aug. 9, 1946 Mar. 4, 1947 Jan. 21, 1957	J,E	D,S	Dug to 48 ft., deepened to 125 ft. Filled in around casing in 1953.
H-8-48	--	--	--	35	8	Leona formation	865	28.9	Jan. 24, 1946	N	N	
H-8-49	-- White	--	--	56	48	do	871	34.8 36.2 34.1 54.6	Jan. 24, 1946 Aug. 9, 1946 Mar. 4, 1947 Jan. 15, 1957	N	N	Dug.
H-8-50	-- Hale	--	--	38	8	do	871	34.9 36.3 34.3	Jan. 24, 1946 Aug. 9, 1946 Mar. 4, 1947	--	--	Abandoned.
H-8-51	-- Moore	--	--	37	8	do	871	35.1 36.5 34.6	Jan. 24, 1946 Aug. 9, 1946 Mar. 4, 1957	N	N	
H-8-52	Joe Vanham	--	--	64	6	do	871	36.1 53.6	Jan. 24, 1946 Oct. 24, 1956	C,W	S	
*H-8-53	W. E. Lee	M. Fenley	--	400	6	Indio and Escondido formations	--	72.2 76.1	Jan. 18, 1946 Jan. 21, 1957	C,W	S	Temp. 75°F.
*H-8-54	do	do	--	162	6	Indio formation	--	89.1 89.5	Jan. 18, 1946 Jan. 21, 1957	C,W	S	Temp. 76°F.
H-8-55	W. E. Lee	--	--	112	4	--	--	88.5	Jan. 18, 1946	N	N	Casing plugged.
*H-8-56	do	M. Fenley	--	500	6	Indio and Escondido formations	--	86.7	Jan. 21, 1957	C,W	S	
*H-8-57	do	do	--	84	6	Indio formation	--	62.0 65.1	Jan. 18, 1946 Jan. 21, 1957	C,W,G	S	
H-8-58	do	do	--	250	6	--	--	65.8	Jan. 18, 1946	C,W	S	
H-8-59	B. T. Winkle	--	--	42	60	Leona formation	848	30.8 30.1 31.2 29.9	Sept. 13, 1945 Feb. 20, 1946 Aug. 8, 1946 Mar. 3, 1947	--	--	Abandoned.
H-8-60	Jimmie Wakefield	--	--	100	--	do	852	--	--	T,-	N	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-8-61	Jimmie Wakefield	--	--	56	6	Leona formation	852	35.9	Jan. 5, 1946	N	N	
H-8-62	J. A. Meacham	--	--	34	60	Leona(?) formation	848	33.1 32.3 33.4 32.0	Sept.13, 1945 Feb. 20, 1946 Aug. 8, 1946 Mar. 4, 1947	N	N	Dug.
*H-8-63	Ditch School	--	1936	65	6	Leona formation	846	33.3 50.8	Sept.12, 1945 Apr. 23, 1953	C,H	N	3/
H-8-64	Frank Reeder	--	--	35	30	do	830	30.1 29.5 30.4 28.3	Sept.12, 1945 Jan. 5, 1946 Aug. 8, 1946 Mar. 4, 1947	C,W	D,S	Dug.
H-8-65	Frank Reeder & O. T. Caldwell	--	--	30	30	do	827	28.6 27.5	Sept.12, 1945 Dec. 31, 1946	N	N	Dug. 3/
H-8-66	T. P. Lee	--	--	--	--	--	813	31.3 32.9 31.3	Jan. 4, 1946 Aug. 9, 1946 Mar. 6, 1947	N	N	
H-8-67	do	--	--	160?	8	--	--	102.0	Jan. 31, 1946	C,W	S	
*H-8-69	J. R. Farr	Lynn Spurgeon	1948	604	12	Edwards and associated limestones	913	82.9 88.5 98.9 70.1	Feb. 4, 1954 May 7, 1956 Aug. 6, 1956 Dec. 3, 1957	T,Ng, 75	Irr	Cased to 4 ft. Drawdown reported 2 ft. after many hours pumping at 1,000 gpm. Irrigated 200 acres in 1953, 1955, and 1956.1/
H-8-70	Betty Miers	--	--	62	5	Eagle Ford shale	--	56.2	Aug. 23, 1957	C,W	S	
H-8-71	George Herzing	--	--	99	10	do	--	56.3	do	T,E, 1	D	
H-8-72	F. L. Gallardo	--	--	100	--	Austin(?) chalk	--	--	--	T,E	D,S	
H-8-73	Dudley Blair	Lynn Spurgeon	1948	66	--	Leona formation	--	--	--	T,E	Irr	Cased to bottom. Discharge reported declined from 1,000 gpm in 1948 to 350 gpm in 1957. Gravel reported 40 to 66 ft.
H-8-74	Mrs. -- Drunzer	W. Heine	1952	50	10	do	869	46.7 38.3	Jan. 9, 1957 Mar. 3, 1958	N	N	Cased to 45 ft. Gravel reported from 38 to 51 ft. 3/
H-8-75	F. A. Lundell	C. Meyers	1951	80	12	Leona formation and Serpentine	--	60.3 56.8	Oct. 20, 1956 June 6, 1957	T,E, 5	Irr	Cased to 55 ft. Discharge reported 640 gpm in 1951, about 150 gpm in 1956. Gravel reported at 43 ft., water rose to 35 ft. 3/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-8-76	Jack Folks	--	--	55	12	Leona formation	--	--	--	N	N	Formerly supplied water for irrigation. Dry at 55 ft. on May 7, 1957.
H-8-77	do	--	--	105	6	Serpentine	--	57.3	May 7, 1957	N	N	
H-8-78	do	--	--	50	12	Leona formation	--	--	--	N	N	Formerly supplied water for irrigation. Dry at 50 ft. on May 1, 1957.
H-8-79	do	--	--	51	20	do	--	--	--	N	N	Formerly supplied water for irrigation. Dry at 51 ft. on May 7, 1957.
H-8-80	do	--	--	54	12	do	--	--	--	N	N	Formerly supplied water for irrigation. Dry at 54 ft. on May 7, 1957.
*H-8-81	W. E. Lee	-- Loessberg	1954	65	--	do	847	48.4 49.1 37.7	Jan. 21, 1957 Feb. 2, 1957 Mar. 3, 1958	J,E, 1½	D	Water reported bitter after rise in water level. 1/
H-8-82	B. T. Winkle	W. Heine	1955	72	--	do	848	51.7 46.1	Oct. 20, 1956 June 6, 1957	T,G	Irr	Discharge reported 250 gpm in 1955. Reported base of gravel at 61 ft. 3/
H-8-83	French Jordan	do	1954	127	12	do	--	57.2	Oct. 20, 1956	T,E, 15	Irr	Discharge reported 800 gpm in 1954; 350 gpm in 1956. Gravel reported from 42 to 62 ft.
H-8-84	J. E. Rabel	--	--	62?	--	do	--	53.7	May 6, 1957	T,E	N	Formerly supplied water for irrigation.
H-8-85	do	--	--	70?	--	do	--	55.3	do	T,E, 20	N	do
H-8-86	do	--	--	59	18	do	--	56.2	do	N	N	do
H-8-87	Frank Reeder	Tex King	1950	250	--	Serpentine	--	117.4	Jan. 11, 1957	C,W	S	
H-8-88	do	B. & S. Drilling Co.	1957	1,700	--	--	854	--	--	--	--	Oil test. 2/
H-8-89	J. E. Rabel	--	--	70	20	Leona formation	--	54.1 43.9	May 6, 1957 Mar. 31, 1958	N	N	Observation well. Recording gage installed Oct. 29, 1957. 3/
H-8-90	L. L. Buffington	-- Loessberg	1953	68	16	do	--	58.7 58.9	Oct. 20, 1956 Jan. 11, 1957	N	N	Drilled as irrigation well, unused due to insufficient discharge.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-8-91	J. E. Rabel	--	--	70	20	Leona formation	--	53.4 48.3	May 6, 1957 June 6, 1957	N	N	Formerly supplied water for irrigation.
H-8-92	do	--	--	70	--	do	--	53.0	May 6, 1957	T,E	N	do
H-8-93	Frank Reeder	-- Hancock	1953	70	--	Leona(?) and Indio(?) formations	--	47.2	Jan. 10, 1957	C,W	N	
H-8-94	Frank Reeder & O. T. Caldwell	--	1950	58	16	Leona formation	--	52.0 53.2	Jan. 11, 1957 Mar. 11, 1957	N	N	
H-8-95	do	W. Heine	--	70	--	do	--	56.0 57.3 52.9	Jan. 10, 1957 Mar. 11, 1957 May 6, 1957	T,G	Irr	Discharge reported 400 gpm in 1957.
H-8-96	do	-- Loessberg	1956	70	--	do	--	55.7	Jan. 10, 1957	T,G	Irr	
H-8-97	A. F. Seidel	W. Heine	--	132	6	Indio formation	--	--	--	T,E, 3/4	S,Ind	Discharge reported 6 gpm.
H-8-98	do	R. V. Raney	1955	222	--	do	--	--	--	T,E, 3	S	Cased to 80 ft.
H-8-99	W. E. Lee	A. J. Loessberg	1955	70	20	Leona formation	--	52.4	Jan. 21, 1957	T,E, 15	Irr	Discharge reported 450 gpm in 1955, and 300 gpm in 1957. Gravel reported from 50 to 70 ft.
H-8-100	Terry Thrift	--	--	420	--	Escondido formation	--	113.5	Mar. 14, 1957	C,G	S	
H-8-101	J. O. Palmer	--	--	200	8	Indio and Escondido formations	--	111.9	Sept. 18, 1957	T,E	S	Temp. 76°F.
H-8-102	do	--	--	--	5	Indio formation	--	38.4	Oct. 21, 1957	C,W,G	D,S	
H-8-103	do	--	--	130	5	do	--	65.4	do	C,W	S	
H-8-104	F. J. Horner	Austin Smith	1954	400	6	Indio and Escondido formations	--	--	--	C,W	S	Cased to 150 ft.
H-8-105	C. M. Cain, Jr.	do	1955	400	6	do	--	196	Oct. 1957	C,W	S	
H-8-106	do	do	1955	210	6	Escondido formation	--	105.2	Oct. 23, 1957	C,W	S	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-8-107	R. Harris well 1	U. S. Geological Survey	1957	20	--	--	862	--	--	--	--	Test hole. 1/
H-8-108	Dudley Blair well 1	do	1957	32	--	--	866	--	--	--	--	do
H-8-109	Dudley Blair well 2	do	1957	25	--	--	876	--	--	--	--	do
H-8-110	Dudley Blair well 3	do	1957	29	--	--	881	--	--	--	--	do
H-8-111	-- Winkle well 2	do	1957	47	--	--	851	--	--	--	--	do
H-8-112	-- Winkle well 1	do	1957	34	--	--	848	--	--	--	--	do
H-8-113	W. E. Lee well 1	do	1957	30	--	--	846	--	--	--	--	do
H-8-114	W. E. Lee well 3	do	1957	10	--	--	855	--	--	--	--	do
H-8-115	W. E. Lee well 2	do	1957	8	--	--	860	--	--	--	--	do
H-8-116	W. E. Lee well 7	do	1957	29	--	--	877	--	--	--	--	do
H-8-117	W. E. Lee well 4	do	1957	1	--	--	--	--	--	--	--	do
H-8-118	W. E. Lee well 5	do	1957	3	--	--	--	--	--	--	--	do
H-8-119	W. E. Lee well 6	do	1957	19	--	--	--	--	--	--	--	do
H-9-1	W. N. Beavers	--	--	100	7	Indio formation	820	34.3 42.1	Nov. 4, 1929 Jan. 11, 1957	C,W	S	3/
H-9-2	-- Kincaid	--	--	70	36	Leona formation	--	29.9	Nov. 4, 1929	--	D	Dug.
H-9-3	W. N. Beavers	--	--	90	96	Indio formation	849	63.7 62.6	Nov. 4, 1929 Mar. 3, 1947	C,W	--	Dug. Deepened to 90 ft. in 1957. Dry at 90 ft. Jan. 11, 1957.
H-9-4	-- Brooks	--	--	100	6	--	--	62.6	Nov. 4, 1929	--	D,S	
H-9-5	Kincaid Bros.	--	--	42	48	Carrizo sand	751	32.7 35.7	Nov. 4, 1929 Dec. 20, 1930	B,H	D	Dug.
H-9-6	F. Kincaid	--	--	160	6	Carrizo(?) sand	--	100.4 95.5	Nov. 9, 1929 Nov. 6, 1957	C,W	S	
H-9-7	do	Mission Drilling Co.	1930	1,160	10	--	--	--	--	--	--	Oil test. Water reported at 270, 428, and 838 ft.
*H-9-8	do	--	--	150	6	Indio formation	--	108.3 108.0	Nov. 4, 1929 Dec. 20, 1930	N	N	Abandoned.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
H-9-9	F. Kincaid	Humble Oil & Refining Co.	1924	2,052	--	--	810	--	--	--	--	Oil test. Water at 285, 870, 970, 1,680 and 1,706 ft. Abandoned. 1/
H-9-10	do	do	1925	2,324	--	--	800	--	--	--	--	Oil test. Water at 470, 590, 840 and 1,620 ft. Abandoned. 1/
H-9-11	do	Ballard & Underwood	1926	2,832	--	--	--	--	--	--	--	Oil test. 1/
H-9-12	T. P. Lee	--	--	--	6	--	826	48.6 49.2	Jan. 11, 1946 Mar. 6, 1947	C,W	D,S	
*H-9-13	F. Kincaid	H. S. Spurgeon	1941	222	8	--	847	85.2 61.9	Jan. 28, 1946 Nov. 6, 1957	C,W	S	Drawdown 1.6 ft. after 5 minutes pumping at 2 to 2.5 gpm. Reported odor of hydrogen sulfide.
H-9-14	do	--	Old	165?	6	Indio and Escondido(?) formations	--	103.8	Oct. 30, 1957	C,W	S	Cased to bottom. Old well.
H-9-15	do	L. Spurgeon	1948	256	6	Indio(?) and Escondido formations	--	95.4	Oct. 28, 1957	C,W	S	Cased to bottom.
H-9-16	do	do	1957	314	6	Indio and Escondido formations	--	104.2	Oct. 30, 1957	C,G	S	Cased to bottom. Drawdown 0.1 ft. after 10 minutes pumping at 5 to 6 gpm.
H-9-17	do	H. S. Spurgeon	--	252?	6	Indio and Escondido(?) formations	--	149.8	Nov. 6, 1957	C,W	S	Cased to bottom.
*H-9-18	do	do	1939	360	9	Escondido formation	--	78.8	Nov. 1, 1957	C,W	S	Cased to bottom. Drawdown 2.4 ft. after 5 minutes pumping at 2.5 to 3 gpm.
*H-9-19	do	L. Spurgeon	1950	341	7	do	--	63.0	do	C,W	S	Cased to bottom. Drawdown 3.5 ft. after 5 minutes pumping at 2.5 to 3 gpm.
*H-9-20	do	H. S. Spurgeon	1939	330	6	do	--	69.9	do	C,W	S	Cased to bottom. Drawdown 4.7 ft. after 5 minutes pumping at 3 to 3.5 gpm.
H-9-21	do	Humble Oil & Refining Co.	1925	1,360	--	--	--	--	--	--	--	Oil test. Abandoned. 1/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
H-9-22	F. Kincaid	Phillips Petroleum Co.	1950	2,953	--	--	--	--	--	--	--	Oil test. Abandoned. 1/
H-9-23	do	do	1957	1,790	5, 3	--	--	--	--	--	--	Cased to 1,065 ft. Gas well. 1/ 2/
H-9-24	do	do	1950	2,995	8	--	825	--	--	--	--	Oil test. Abandoned. 1/
I-1-1	Maynard Fowkes	--	1909	36	48	Leona formation	--	28.5	Dec. 10, 1929	C,G	S	Dug.
I-1-2	-- Heep	--	1929	89	--	do	--	--	--	--	D	
*I-1-3	E. B. Kincaid	John Roberts	1933	1,000	--	Edwards and associated limestones	1,009	189.5 288.4	Feb. 21, 1930 Mar. 24, 1958	C,W,G	D,S	Reported top of Edwards 790 ft. 3/
I-1-4	R. R. Woodard	John Roberts	1946	588	6	do	--	405.3 424.2	Feb. 2, 1951 Apr. 3, 1957	T,E, 1/4	S	Cased to 385 ft. Well I-1-4 in Bull. 5601 Texas Board of Water Engineers. Temp. 73°F.
I-1-5	McCullough Ranch	--	1951	907	6	Glen Rose limestone	--	24.7	July 5, 1956	C,W	S	Temp. 73°F.
I-1-6	J. J. Franklin	--	1906	461	6	Edwards and associated limestones	--	365.2	Aug. 30, 1956	C,E, 3/4	D,S	Cased to 40 ft.
I-1-7	do	A. C. Sanderlin	1956	640	7	do	--	502	Oct. 1956	C,W	S	
*I-1-8	Joe Sullivan	A. Goodin	--	503	8	do	--	405.4	Mar. 13, 1957	C,W	S	Cased to 25 ft. Temp. 73°F.
I-1-9	do	John Roberts	--	500	6	do	--	407.1	do	C,W	S	
*I-1-10	Charles Hudson	do	--	500	6	do	--	419.6	Mar. 14, 1957	C,W,E	D,S	Cased to 400 ft. Old well. Temp. 72°F.
I-1-11	R. R. Woodard	--	--	440	6	do	--	382.2	Apr. 3, 1957	T,E, 1 1/4	S	Temp. 73°F.
I-1-12	Joe Sullivan	John Roberts	1950	510	6	do	--	--	--	T,E, 1 1/2	D,S	Cased to 20 ft.
I-1-13	do	do	--	500	6	do	--	428.5	Apr. 28, 1957	C,E, 1 1/2	S	Cased to bottom.
I-1-14	do	do	1940	500	6	do	--	433.9	do	C,W	S	do
*I-1-15	E. B. Kincaid	--	--	--	--	--	--	--	--	C,W	S	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
I-1-16	E. B. Kincaid	--	--	--	--	--	--	--	--	C,W	S	
I-1-17	J. A. Henry	John Roberts	1933	1,600	8	Edwards and associated limestones	1,030	362.7 326.8	Jan. 15, 1957 Dec. 6, 1957	C,W	D,S	
I-1-18	W. A. Wieboldt	do	1955	1,320	12, 8	do	--	302	June 1955	T,G, 135	Irr	Casing: 12-in. to 400 ft., 10-in. to 620 ft., and 8-in. to 1,120 ft. Drawdown 39 ft. after many hours pumping at 1,000 gpm. Reported pumps operated 600 hours at 900 gpm in 1955, and 1,150 hours at 900 gpm in 1956. Irrigated 75 acres, mostly vegetables, in 1956.
I-4-1	L. F. Heard	--	1895	130	4	Anacacho limestone	956	84.2	Feb. 12, 1930	--	D	
I-4-2	Porfio Flores	--	1929	93	36	Leona formation	946	85.2	do	B,H	D	Dug.
I-4-3	Gabriel Barda	--	--	61	36	do	945	38.1	do	B,H	D	do
I-4-5	Jose Martinez	--	1920	63	36	Leona formation and Anacacho limestone	947	52.6	do	B,H	D	do
I-4-6	Alberto Contreres	--	--	47	36	Leona formation	929	40.6	do	B,H	D	do
I-4-7	Southern Pacific RR. Co.	--	--	--	72	Anacacho limestone	--	--	--	--	Ind	do
I-4-8	W. C. Crews	--	1910	165	6	do	--	76.9	Dec. 10, 1929	--	D,S	
I-4-9	M. E. Giffin	Eph Mills	1921	970	6	Edwards and associated limestones	974	256.7 234.8	Dec. 11, 1929 Oct. 18, 1934	--	D	
I-4-10	-- Wood	--	--	164	--	Anacacho limestone	--	--	--	--	D	
I-4-11	-- Fowler	--	--	70	--	do	--	--	--	--	D	
I-4-12	Arthur Wood	--	--	60	--	do	--	--	--	--	D	
I-4-13	M. A. Goodin	--	--	57	--	do	--	--	--	--	D	

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
I-4-14	Central Power & Light Co.	--	--	67	--	Anacacho limestone	--	--	--	--	Ind	Dug.
I-4-15	-- Cullins	--	--	62	--	do	--	56.6	Feb. 19, 1930	--	D	
I-4-19	E. H. Murrell, Sr.	--	1900	55	60	Leona formation	--	48.4 46.3	Feb. 12, 1930 Oct. 17, 1957	C,W	D,S	Dug. Temp. 74°F.
I-4-20	Ed Turner	-- Burddit	1914	99	6	Anacacho limestone	--	58.0 54.9	Feb. 11, 1930 Oct. 17, 1957	C,W	D	
I-4-22	Ross Kennedy	--	1910	94	9	do	--	54.7 39.1	Feb. 12, 1930 Oct. 17, 1957	C,W	D	Temp. 74°F.
I-4-23	Lee Braden	--	--	50	48	Leona formation	--	42.9	Feb. 12, 1930	N	N	Abandoned. Old well.
I-4-24	W. O. Shane	--	1905	142	48	Anacacho limestone	--	56.1	Feb. 11, 1930	--	N	
I-4-25	Robert Shane	--	1916	148	6	do	--	63.3	Feb. 5, 1930	--	D,S	
I-4-26	George Kennedy	--	--	175	--	Edcondido formation	--	130.5	Feb. 11, 1930	--	D,S	
I-4-27	Lee Braden	--	1918	160	6	do	--	--	--	--	S	
I-4-32	Quinn Braden	T. T. Word et al	1934	1,165	10	Edwards and associated limestones	866	157.0 40.0 39.7	Oct. 5, 1934 Mar. 1, 1952 Aug. 26, 1954	N	N	Reported well caved when visited in 1957. 1/
I-4-33	A. L. Rehm	--	1953	1,300	16, 10	do	--	182.6	Feb. 15, 1954	T,G	Irr	Casing: 16-in. to 340 ft., 10-in. to 1,120 ft. Drawdown reported 6 ft. after 4 to 5 hours pumping at 2,170 gpm.
I-4-34	City of Sabinal	J. W. Roberts	1953	1,211	12, 8	do	953	245	Mar. 1950	T,E, 60	P	Casing: 12-in. to 400 ft., 8-in. to 1,015 ft. Drawdown reported 5 ft. after 3 hours pumping at 615 gpm. 1/
*I-4-35	do	F. Trim & Son	1919	1,476	10	Edwards and associated limestones and Glen Rose (?) limestone	954	250 284.4 240.0	July 1954 June 10, 1956 Feb. 25, 1958	N	N	Cased to 937 ft. Drilled to 2,700 ft., plugged back to 1,476 ft. One of 2 wells listed as I-4-4 in Water-Supply Paper 678. Observation well. Recording gage installed June 8, 1956. 1/ 2/ 3/

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
*I-4-36	A. L. Rehm	Atlantic Refining Co.	1933	4,490	7	Hosston, Sligo, and Pearsall formations, and Glen Rose limestone	870	(+)	--	Flows	S	Cased to 1,564 ft. Oil test, converted to water well. Flowing 26 gpm on Nov. 28, 1951. Well I-4-18 in Bull. 5601 Texas Board of Water Engineers. 2/
*I-4-37	City of Sabinal	F. Trim & Son	1919	1,493	10	Edwards and associated limestones	--	--	--	T,E, 40	P	Cased to 930 ft. One of 2 wells listed under I-4-4 in Water-Supply Paper 678.
I-4-38	C. A. Pepper	John Roberts	1957	1,230	--	do	--	--	--	T,E	Irr	Cased to 1,140 ft. Discharge reported 1,600 gpm. Irrigates part of 750 acres. Well was used 4,000 hours at 1,000 gpm in 1956.
I-4-39	do	do	1955	1,103	12	do	950	285.7	Mar. 9, 1956	T,E, 144	Irr	Cased to 1,035 ft. Drawdown reported 13 ft. after 5 hours pumping at 1,222 gpm. Irrigates part of 750 acres. Well used 2,500 hours at 1,200 gpm in 1956. Reported top of Edwards 1,035 ft.
I-4-40	John Gulley	--	--	1,531	15	do	905	252.0 203.8	Dec. 8, 1955 Dec. 6, 1957	N	N	Cased to 1,123 ft. Well acidized but failed to produce as irrigation well. 3/
I-4-41	S. G. Nelson	John Roberts	1957	1,740	12	--	--	167.4	Dec. 6, 1957	--	--	Cased to 1,300 ft. Drawdown reported 12 ft. after 4 hours pumping at 1,730 gpm. To be used for irrigation. 2/
I-4-42	do	do	1957	1,810	12	Edwards and associated limestones	889	--	--	N	N	Well completed and acidized, but failed to produce as irrigation well. Casing pulled and well abandoned.
I-4-43	John Shane	--	1914	58	46	Leona formation	--	53.1	Oct. 17, 1957	C,W	D,S	Dug. Temp. 74°F.
I-4-44	J. O. Winston, Jr.	John Roberts	1948	305	8	Anacacho limestone	--	68.7	Oct. 18, 1957	C,W	S	Cased to bottom. Drawdown 3.1 ft. after 5 minutes pumping at 2.5 to 3 gpm.
I-4-45	do	do	1947	280	8	do	--	183.3	do	C,W, T,E, 3/4	D,S	Cased to bottom.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level: Below land-surface datum (ft.)	Water level: Date of measurement	Method of lift	Use of water	Remarks
I-4-46	J. O. Winston, Jr.	John Roberts	1949	146	8	Anacacho limestone	--	--	--	C,W	S	Cased to bottom.
I-4-47	Mrs. Mollie Shane	E. Mills	1937	236	8	do	--	91.1	Dec. 12, 1957	C,W	D,S	
*I-4-48	H. L. Pepper	John Roberts	1957	1,230	12, 8	Edwards and associated limestones	--	145 114.5	Nov. 1957 Mar. 24, 1958	T,G, 90	Irr	Casing: 12-in. to 395 ft., 8-in. to 1,135 ft. Drawdown reported 43 ft. pumping at 1,685 gpm. Temp. 74°F.
I-4-49	Richard Nunley	J. A. Green	1946	3,511	12, 7	--	--	--	--	C,W	D,S	Oil test. 1/
I-7-1	T. M. Woodley	John Roberts	1945	350	6	Escondido formation	--	36.6	Nov. 14, 1957	C,W	S	Cased to bottom. Drawdown 3.1 ft. after 15 minutes pumping at 1.5 to 2 gpm.
I-7-2	F. M. Woodley, Jr.	--	--	62	--	Leona formation	--	54.4	July 16, 1957	N	N	Dug.
I-7-3	T. M. Woodley	Sam Heine	1955	300	5	Escondido formation	--	103.7	Nov. 15, 1957	C,W	S	Cased to bottom.
I-7-4	do	John Roberts	1945	200	6	Escondido and Indio(?) formations	--	130.2	do	C,W	S	do
I-7-5	do	--	--	100	6	Leona formation	--	45.3	do	C,W	S	do
I-7-6	do	John Roberts	--	250	6	Escondido and Indio(?) formations	--	76.1	Nov. 14, 1957	C,W	S	Cased to bottom. Drawdown 1.6 ft. after 5 minutes pumping at 1.5 to 2 gpm.
I-7-7	do	do	1945	200	6	Escondido and Indio formations	--	112.8	do	C,W	S	Cased to bottom. Drawdown 1.2 ft. after 5 minutes pumping at 2 to 2.5 gpm.
I-7-8	do	--	1939	250	6	Indio formation	--	88.2	do	C,W	S	Cased to bottom. Drawdown 4.9 ft. after 5 minutes pumping at 2 to 2.5 gpm.
I-7-9	do	Wilcox Oil & Gas Co.	1938	3,090	--	--	750	--	--	--	--	Oil test. 1/
I-7-10	do	John Roberts	1946	100	6	Leona formation	--	48.3	Nov. 14, 1957	C,W	S	Cased to bottom.

See footnotes at end of table.

Table 4.--Records of wells and springs in Uvalde County--Continued

Well	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Water-bearing unit	Altitude of land surface (ft.)	Water level		Method of lift	Use of water	Remarks
								Below land-surface datum (ft.)	Date of measurement			
I-7-11	T. M. Woodley	--	1900	250	6	Leona and Indio(?) formations	--	50.6	Nov. 15, 1957	C,W	D,S	
I-7-12	do	John Roberts	--	250	6	Indio formation	--	66.7	do	C,W	S	Cased to bottom.
I-7-13	do	do	1948	250	6	do	--	52.6	do	C,W	S	do
I-7-14	do	do	1948	250	6	do	--	84.6	do	C,W	S	do

1/ See Table 6 for drillers' logs of wells in Uvalde County.
2/ Electric logs and radioactivity logs in files of Texas Water Commission.
3/ See Table 5 for water-level measurements in wells in Uvalde County.
* See Table 7 for analyses of water from wells and springs in Uvalde County.
+ Leona formation includes alluvium.

Table 5.--Water levels in wells in Uvalde County

Well G-3-18

Owner: S. H. Laning.

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5						41.96	42.54	42.76	42.93	42.96	42.77	42.78
10						42.31	42.58	42.81	42.95	42.68	42.77	42.80
15						42.42	42.62	42.83	42.94	42.86	42.77	42.80
20						42.49	42.64	42.85	42.98	42.76	42.78	42.81
25					42.42	42.51	42.65	42.87	42.83	42.68	42.79	42.55
End of month					41.76	42.51	42.72	42.90	42.91	42.77	42.78	42.81

1958

5	42.48	42.80	42.47	42.47	42.47	42.70	42.38	42.53	42.62	42.18	42.14	42.37
10	42.80	42.81	42.30	42.49	42.55	42.73	42.38	42.54	42.55	42.20	42.22	42.39
15	42.84	42.80	42.49	42.50	42.55	42.75	42.46	42.53	42.59	42.28	42.28	42.40
20	42.85	42.81	42.53	42.52	42.02	41.57	42.50	42.55	41.78	42.30	42.30	42.43
25	42.67	42.35	42.53	42.55	-	42.12	42.50	42.56	41.75	42.33	42.32	42.44
End of month	42.78	42.30	42.47	42.58	-	42.30	42.52	42.59	41.97	42.15	42.35	42.43

Well G-3-19

Owner: S. H. Laning.

1957

5						41.43	42.02	42.15	42.45	42.45	42.13	42.25
10						41.75	42.07	42.19	42.48	41.90	42.08	42.27
15						41.84	42.07	42.25	42.47	42.28	42.14	42.31
20						41.89	42.05	42.32	42.53	42.12	42.17	42.33
25						41.93	42.08	42.37	42.30	41.98	42.18	41.85
End of month						41.97	42.12	42.42	42.40	42.10	42.23	42.25

1958

5	41.50	42.25	41.83	41.92	41.80	42.12	41.78	42.02	42.02	41.55	41.50	41.77
10	42.25	42.25	41.65	41.94	41.95	42.15	41.72	41.52	41.97	41.53	41.62	41.82
15	42.28	42.27	41.84	41.95	41.99	42.18	41.89	41.96	41.87	41.35	41.66	41.83
20	42.30	42.28	41.89	41.96	41.55	40.98	41.93	42.02	40.99	41.63	41.70	41.85
25	41.98	41.68	41.92	42.00	41.97	41.43	41.96	42.05	41.20	41.68	41.75	41.87
End of month	42.22	-	-	42.02	-	41.67	41.98	42.10	41.40	41.49	41.72	41.89

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

Well G-6-4

Owner: Frank Kirchgraber.

Date	Water level	Date	Water level	Date	Water level
Aug. 18, 1937	44.33	Sept.12, 1939	55.25	May 1, 1944	58.95
Sept.25	48.00	Oct. 24	54.30	Aug. 17	59.72
Oct. 23	48.64	Jan. 15, 1940	55.89	Dec. 21	60.26
Nov. 17	49.69	Feb. 23	55.76	June 6, 1945	61.55
Dec. 16	50.35	Mar. 20	55.68	Apr. 2, 1946	66.09
Jan. 19, 1938	51.78	Apr. 24	55.41	June 25, 1947	52.58
Feb. 25	48.57	May 21	55.04	Nov. 7	62.07
Mar. 19	52.06	June 18	55.07	Apr. 21, 1948	65.95
Apr. 25	49.97	July 23	55.48	Jan. 8, 1949	65.46
May 26	50.17	Aug. 22	55.51	Apr. 14	56.94
June 29	51.79	Sept.25	56.71	Aug. 29	57.39
July 28	48.71	Oct. 23	56.86	Dec. 20	57.92
Aug. 24	49.35	Dec. 4	56.33	Apr. 4, 1950	58.16
Sept.19	48.68	Jan. 21, 1941	56.50	Aug. 8	59.68
Oct. 27	48.54	May 28	56.35	Dec. 7	62.02
Dec. 9	48.42	Aug. 12	57.18	May 14, 1951	64.28
Jan. 26, 1939	48.70	Nov. 13	58.62	Aug. 14	64.68
Mar. 1	49.48	Apr. 7, 1942	60.53	Dec. 19	69.57
Apr. 1	50.44	Aug. 5	62.21	Aug. 6, 1952	71.13
29	51.95	Dec. 2	60.26	Dec. 5	74.13
June 7	53.10	Apr. 27, 1943	61.35	Apr. 8, 1953	77.78
July 7	54.20	Aug. 30	60.67	Nov. 20	61.76
Aug. 15	54.70	Dec. 16	60.12	July 13, 1954	54.86

(Continued on next page)

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

Well G-6-4--Continued

Date	Water level	Date	Water level	Date	Water level
July 21, 1954	56.63	May 9, 1956	73.12	May 14, 1957	57.71
Nov. 10	58.42	July 10	74.82	July 10	49.88
Jan. 12, 1955	59.35	Sept. 5	76.34	Aug. 8	51.66
Mar. 10	60.29	Nov. 13	73.55	Sept.10	53.45
May 11	61.36	Jan. 9, 1957	73.75	Nov. 5	53.19
July 11	62.18	Feb. 5	75.11	Jan. 14, 1958	53.85
Nov. 10	66.26	Mar. 12	74.45		
Jan. 10, 1956	67.61	Apr. 23	64.73		

Well G-6-5

Owner: Texas & New Orleans R. R. Co.

Aug. 18, 1937	30.19	Oct. 27, 1938	29.86	Apr. 24, 1940	38.39
Sept.25	31.77	Dec. 9	31.40	May 21	38.05
Oct. 23	32.96	Jan. 26, 1939	32.26	June 19	37.72
Nov. 17	34.33	Mar. 1	33.70	July 23	37.51
Dec. 16	35.49	Apr. 1	34.88	Sept.25	38.45
Jan. 19, 1938	35.01	29	36.27	Oct. 23	39.63
Feb. 24	33.29	June 7	36.64	Dec. 4	39.00
Mar. 16	32.97	July 7	38.52	Jan. 21, 1941	40.30
Apr. 25	32.03	Aug. 15	39.42	May 28	40.67
May 26	31.78	Sept.12	39.80	Aug. 12	41.98
June 29	32.50	Oct. 24	39.32	Nov. 13	43.41
July 27	31.94	Jan. 15, 1940	37.70	Apr. 7, 1942	45.29
Aug. 24	29.98	Feb. 23	37.65	Aug. 5	45.53
Sept.19	29.92	Mar. 19	38.16	Dec. 2	43.90

(Continued on next page)

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

Well G-6-5--Continued

Date	Water level	Date	Water level	Date	Water level
Aug. 29, 1943	42.86	May 14, 1951	48.47	Jan. 10, 1956	51.17
Dec. 16	44.37	Aug. 14	47.49	Mar. 13	52.46
May 1, 1944	42.68	Dec. 19	50.96	May 9	54.07
Aug. 17	43.20	Mar. 13, 1952	51.97	July 10	55.44
Dec. 21	44.64	Aug. 6	53.07	Sept. 5	56.61
June 5, 1945	45.61	Dec. 5	56.40	Nov. 13	53.33
Apr. 2, 1946	49.88	Apr. 8, 1953	a63.98	Jan. 7, 1957	55.27
3	48.82	Aug. 12	61.74	Feb. 5	54.97
June 25, 1947	45.74	Nov. 20	44.75	Mar. 12	55.30
Nov. 6	46.70	Apr. 12, 1954	47.30	Apr. 23	49.34
Apr. 22, 1948	49.45	July 13	39.03	May 14	44.71
Aug. 10	47.44	21	39.20	July 10	34.11
Jan. 8, 1949	49.70	Nov. 10	42.04	Aug. 8	33.15
Apr. 14	42.51	Jan. 12, 1955	43.50	Sept.10	38.39
Aug. 29	38.76	Mar. 10	44.48	Oct. 4	38.90
Dec. 20	38.93	May 9	46.07	Nov. 5	39.21
Apr. 4, 1950	40.14	July 11	47.11	Jan. 14, 1958	40.39
Aug. 8	41.96	Sept.13	48.23		
Dec. 7	45.94	Nov. 9	49.85		

a Pumping

Well G-6-10

Owner: John Rosemall.

Mar. 22, 1939	62.60	Apr. 24, 1940	60.63	July 23, 1940	59.33
Feb. 24, 1940	58.54	May 21	61.36	Sept.25	67.60
Mar. 19	59.62	June 18	60.29	Oct. 23	66.90

(Continued on next page)

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

Well G-6-10--Continued

Date	Water level	Date	Water level	Date	Water level
Dec. 4, 1940	69.69	May 14, 1951	85.36	Jan. 9, 1957	98.26
Jan. 21, 1941	72.19	Aug. 14	88.79	Feb. 5	99.35
May 28	61.69	Mar. 13, 1952	95.44	Mar. 12	100.38
Nov. 13	58.17	Dec. 5	97.05	Apr. 23	99.40
Dec. 2, 1942	62.57	Aug. 12, 1953	102.63	May 14	95.57
Aug. 29, 1943	73.94	Nov. 20	95.64	July 10	77.36
May 1, 1944	74.54	Aug. 25, 1954	80.65	Aug. 7	80.00
Aug. 17	74.26	Jan. 14, 1955	87.39	Sept.10	83.33
June 5, 1945	73.63	Mar. 10	90.00	Oct. 4	83.65
July 1, 1947	56.64	July 12	90.35	Nov. 5	81.60
Nov. 7	70.08	Sept.13	91.30	Dec. 4	79.84
Apr. 21, 1948	72.00	Mar. 14, 1956	85.50	Jan. 14, 1958	79.33
Nov. 2, 1949	55.92	May 9	89.36	Mar. 25	69.56
Apr. 4, 1950	60.35	Aug. 31	98.84		
Dec. 7, 1951	75.40	Nov. 13	96.85		

Well G-6-19

Owner: Phill Newell.

Aug. 18, 1937	153.47	Apr. 25, 1938	126.24	Dec. 9, 1938	135.50
Sept.25	212.84	May 27	133.05	Jan. 26, 1939	156.60
Oct. 23	162.52	June 29	179.67	Mar. 1	182.76
Nov. 17	127.33	July 28	134.64	Apr. 1	129.93
Dec. 16	128.72	Aug. 23	134.35	29	179.62
Feb. 25, 1938	133.43	Sept.22	123.77	Sept.14, 1955	67.81
Mar. 22	130.35	Oct. 27	123.95		

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

Well H-1-1

Owner: Arlie Crump.

Date	Water level	Date	Water level	Date	Water level
Feb. 11, 1954	47.60	Jan. 11, 1956	40.59	May 16, 1957	44.90
Apr. 15	48.37	Mar. 15	59.03	July 9	40.83
Aug. 25	41.92	May 8	49.95	Sept.12	43.64
Nov. 11	43.41	Aug. 29	47.33	Oct. 2	41.54
Jan. 14, 1955	43.64	Nov. 14	51.02	11	41.26
Mar. 9	43.66	Jan. 9, 1957	72.81	Nov. 6	40.11
May 12	44.56	Feb. 8	53.31	Dec. 3	40.42
July 15	b65.96	Mar. 15	53.59	Jan. 16, 1958	39.88
Sept.14	54.87	Apr. 16	52.03	Mar. 27	38.38
Nov. 11	40.63	25	49.16		
b Pumped recently					

Well H-1-2

Owner: Wayne Wynn.

Feb. 11, 1954	26.30	May 16, 1957	24.41	Nov. 6, 1957	24.49
Jan. 9, 1957	32.78	July 9	24.39	Jan. 16, 1958	24.69
Feb. 2	32.94	Aug. 7	25.42	May 9	24.38
Mar. 15	32.89	Sept.12	27.50	July 9	23.87
Apr. 16	32.69	Oct. 2	25.31	Nov. 13	24.08
25	25.34	11	24.67		

Well H-1-12

Owner: Fred Mason, Jr.

Nov. 24, 1955	95.90	Dec. 16, 1955	95.85	Jan. 27, 1956	95.87

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-1-12--Continued					
Feb. 26, 1956	95.85	May 12, 1956	95.91	May 19, 1957	95.95
Apr. 10	95.94	Aug. 29	95.00	June 3	94.45
21	95.91	Oct. 18	95.97	Oct. 11	94.78

Well H-1-19

Owner: Wayne Wynn.

Nov. 24, 1955	127.51	Dec. 26, 1956	127.56	May 12, 1956	127.67
Dec. 16	127.52	Apr. 10	127.65		
Jan. 27, 1956	127.66	21	127.68		

Recorder installed May 30, 1956

(Continued on next page)

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Well H-1-19--Continued												
1956												
5						127.73	127.80	127.87	127.92	127.98	127.99	127.98
10						127.77	127.83	127.87	127.94	127.99	128.00	128.01
15						127.72	127.85	127.87	127.90	127.97	127.89	127.95
20						127.77	127.85	127.88	127.93	127.97	127.91	128.02
25						127.79	127.84	127.90	127.94	127.96	127.98	128.07
End of month					127.71	127.77	127.84	127.87	127.97	127.95	127.99	127.96
1957												
5	128.01	127.98	127.92	127.92	127.60	124.95	126.10	126.42	126.64	126.65	126.40	126.65
10	127.98	127.97	127.90	127.90	127.55	125.20	126.16	126.45	126.63	126.68	126.55	126.68
15	127.96	127.97	128.00	127.92	127.56	125.50	126.20	126.50	126.67	126.52	126.43	126.65
20	127.96	127.98	127.92	127.85	127.20	125.80	126.26	126.55	126.68	126.65	126.55	126.68
25	127.98	127.92	127.96	127.79	127.21	125.92	126.33	126.55	126.60	126.35	126.61	126.73
End of month	127.97	127.97	127.87	127.60	124.12	126.03	126.35	126.62	126.63	126.23	126.70	126.73
1958												
5	126.74	126.65	125.28	125.57	125.86	126.04	118.52	122.67	123.63	116.98	112.05	120.85
10	126.67	126.70	125.13	125.67	125.83	126.00	119.99	122.89	123.24	118.96	111.92	121.48
15	126.75	126.67	125.25	125.70	125.93	126.03	120.88	123.07	123.28	120.45	113.26	121.80
20	126.65	126.73	125.37	125.70	125.94	111.55	121.50	123.23	122.05	121.32	115.75	122.04
25	126.64	123.45	125.45	125.80	125.94	110.75	121.93	123.35	119.80	121.97	118.78	122.45
End of month	127.65	124.80	125.56	125.81	125.96	115.02	122.38	123.50	117.18	115.54	120.07	122.57

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

Date	Water level	Date	Water level	Date	Water level

Well H-1-21

Owner: George Raney.

Aug. 13, 1956	205.33	Apr. 2, 1957	206.74	Sept. 3, 1957	188.74
29	205.85	25	204.10	Oct. 2	184.80
Oct. 18	206.24	May 6	194.78	11	178.64
Jan. 2, 1957	207.08	June 3	179.77	Nov. 8	178.33
Feb. 8	207.55	Aug. 1	193.55	Dec. 3	179.04

Well H-2-3

Owner: C. L. Farrish.

Mar. 11, 1952	265.00	Aug. 25, 1954	286.05	Nov. 20, 1956	308.28
July 8	276.77	Aug. 30, 1956	306.60	Dec. 3, 1957	272.20

Well H-2-4

Owner: H. I. Holmes

Nov. 30, 1929	183.74	Oct. 30, 1931	126.40	July 7, 1937	123.96
Dec. 24	184.60	Jan. 14, 1932	131.30	Aug. 10	125.81
Jan. 20, 1930	185.30	Feb. 16	129.90	Sept.22, 1938	131.62
Mar. 13	186.26	Apr. 1	130.70	Apr. 8, 1939	145.88
May 21	187.90	July 8	126.60	Aug. 1	148.60
June 24	182.15	Nov. 30	113.01	Oct. 25	146.77
July 23	178.80	Apr. 10, 1933	116.00	Jan. 16, 1940	148.45
Sept.30	177.90	July 19	120.85	Feb. 24	149.83
Oct. 22	175.90	Oct. 16, 1934	151.71	Mar. 20	150.64
Dec. 19	170.80	Aug. 12, 1935	136.08	Apr. 25	151.06
May 14, 1931	137.60	Jan. 28, 1936	121.10	May 22	150.60
July 11	130.50	Aug. 21	a125.3	June 19	149.04

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-2-4--Continued					
July 24, 1940	146.75	Aug. 29, 1949	147.12	Mar. 4, 1955	208.86
Aug. 22	146.90	Nov. 2	146.90	May 10	210.98
Sept. 26	148.39	Dec. 19	147.56	July 13	211.57
Oct. 23	149.96	Jan. 24, 1950	148.27	Sept. 14	212.49
Dec. 4	154.81	Apr. 4	150.70	Nov. 10	212.48
Jan. 22, 1941	152.25	Aug. 8	153.59	Jan. 13, 1956	213.09
May 28	131.72	Dec. 6	167.56	Mar. 15	214.03
Aug. 11	125.47	Jan. 5, 1951	170.01	May 11	215.14
Nov. 14	119.82	May 8	177.56	July 12	216.53
Aug. 6, 1942	129.04	Aug. 16	178.76	Aug. 30	218.82
Dec. 2	124.72	Dec. 19	184.46	Nov. 15	222.08
Apr. 28, 1943	131.42	Mar. 11, 1952	188.03	Jan. 11, 1957	225.04
Aug. 28	139.53	Aug. 6	188.78	Feb. 12	227.00
Dec. 16	148.67	Sept. 8	189.58	Mar. 14	228.71
Apr. 30, 1944	150.07	Dec. 5	193.21	Apr. 26	230.45
Aug. 16	145.03	Apr. 8, 1953	199.66	May 16	229.85
Dec. 20	143.17	Aug. 12	208.63	July 8	218.54
June 6, 1945	132.43	Nov. 24	207.63	Aug. 7	214.40
Apr. 3, 1946	153.24	Apr. 15, 1954	209.55	Sept. 11	211.47
July 1, 1947	143.82	June 3	207.19	Oct. 4	208.55
Nov. 7	145.33	July 15	205.50	Nov. 6	201.97
Apr. 22, 1948	158.48	23	205.54	Dec. 3	196.97
Aug. 9	167.86	Aug. 25	205.28	Jan. 16, 1958	190.78
Jan. 7, 1949	178.38	Nov. 11	202.42	Mar. 27	175.39
Apr. 14	168.75	Jan. 14, 1955	205.83		

a Pumping

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

Well H-2-5

Owner: W. E. Fitzgerald.

Date	Water level	Date	Water level	Date	Water level
Nov. 30, 1929	88.37	Sept.22, 1938	84.00	Aug. 28, 1943	88.68
Jan. 20, 1930	61.44	Apr. 8, 1939	71.40	Dec. 16	62.22
Mar. 13	83.90	Aug. 1	52.49	Apr. 30, 1944	50.81
May 21	60.90	Oct. 25	65.75	Aug. 16	83.76
June 24	62.50	Jan. 16, 1940	55.81	Dec. 20	52.68
July 23	69.85	Feb. 24	55.40	June 6, 1945	51.79
Aug. 28	79.70	Mar. 20	55.28	Apr. 3, 1946	64.27
Sept.30	b91.75	Apr. 25	54.21	July 1, 1947	46.50
Oct. 22	52.16	May 22	53.15	Nov. 7	87.86
Dec. 19	56.25	June 19	53.60	Apr. 22, 1948	81.80
July 11, 1931	53.80	July 24	53.86	Aug. 9	90.60
Oct. 30	55.75	Aug. 22	56.06	Jan. 7, 1949	92.94
Jan. 14, 1932	59.45	Sept.26	65.11	Mar. 8	48.98
Feb. 16	58.55	Oct. 23	87.94	Apr. 14	55.95
Apr. 1	57.30	Dec. 4	56.71	Aug. 29	55.30
Nov. 30	53.05	Jan. 22, 1941	53.88	Nov. 2	55.15
Apr. 10, 1933	56.30	May 28	40.70	Dec. 19	57.54
July 19	56.50	Aug. 11	51.70	Jan. 24, 1950	57.16
Oct. 16, 1934	93.12	Nov. 14	47.37	Apr. 4	57.49
Aug. 12, 1935	45.95	Apr. 8, 1942	56.07	Aug. 8	87.17
Jan. 28, 1936	55.85	Aug. 6	60.40	Dec. 6	92.00
Aug. 21	55.95	Dec. 2	52.41	Jan. 5, 1951	91.86
July 7, 1937	55.75	Apr. 28, 1943	55.38	May 8	80.02

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-2-5--Continued					
Aug. 16, 1951	91.89	Dec. 5, 1952	95.61	June 3, 1954	68.20
Dec. 19	94.27	Apr. 8, 1953	95.73	July 15	59.75
Mar. 11, 1952	94.18	Aug. 12	97.00	22	60.34
Aug. 6	92.09	Nov. 24	93.93		
Sept. 8	94.20	Apr. 15, 1954	97.69		
b Pumped recently					
Well H-2-6					
Owner: L. L. Gilleland.					
Dec. 3, 1929	210.60	Sept.10, 1952	215.05	Aug. 30, 1956	a248.45
Mar. 11, 1952	211.30	Aug. 25, 1954	243.28	Dec. 4, 1957	235.89
a Pumping					
Well H-2-8					
Owner: W. O. DuBose.					
Dec. 3, 1929	235.09	Oct. 25, 1939	165.45	June 19, 1940	196.70
Jan. 20, 1930	236.60	Jan. 16, 1940	190.31	Dec. 4	199.16
Nov. 30, 1932	151.95	Feb. 24	192.43	Jan. 22, 1941	200.57
Aug. 21, 1936	153.30	Mar. 20	193.67	Nov. 20, 1956	281.99
Aug. 11, 1937	151.20	Apr. 25	195.22	Dec. 4, 1957	256.26
Sept.21, 1938	158.38	May 22	194.40		
Well H-2-20					
Owner: W. E. Fitzgerald.					
Mar. 9, 1955	87.51	Sept.14, 1955	85.88	Mar. 15, 1956	87.80
May 10	87.74	Nov. 10	85.61	May 11	88.33
July 13	85.79	Jan. 13, 1956	87.23		

Recorder installed June 8, 1956

(Continued on next page)

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.

Well H-2-20--Continued

1956

5								81.00	80.90	82.22	83.50	84.52
10						81.78	-	80.96	80.95	82.42	83.62	84.97
15						-	80.25	81.02	81.27	82.77	83.79	84.95
20						-	80.45	81.13	81.57	82.90	84.02	84.97
25						-	80.68	81.11	81.75	83.12	84.18	85.15
End of month						-	80.89	81.45	81.98	83.35	84.40	85.32

1957

5	85.48	85.76	82.85	63.62	49.55	46.60	50.27	79.93	84.87	76.62	-	46.40
10	85.60	84.97	82.42	71.07	-	47.80	50.87	81.50	85.17	57.00	-	47.98
15	85.74	-	82.28	74.12	*54.10	49.10	53.61	82.60	85.35	46.50	-	49.63
20	85.86	-	68.37	75.18	53.76	50.30	58.95	83.34	85.55	42.46	-	49.55
25	85.97	83.32	60.98	-	54.10	51.37	70.20	83.85	57.32	-	43.49	49.62
End of month	85.98	83.08	71.35	53.29	50.60	50.95	77.26	84.53	70.40	-	44.55	50.15

1958

5	49.36	44.03	-	40.43	40.17							
10	48.48	44.43	-	42.02								
15	48.15	46.12	-	43.23								
20	48.57	47.40	-	44.04								
25	46.83	39.90	-	44.40								
End of month	43.95	-	39.81	42.92								

Recorder discontinued

* Measured

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.

Well H-2-22

Owner: W. E. Fitzgerald.

1957

5											39.04	39.46
10										38.42	39.12	39.52
15										38.55	39.19	39.57
20										38.65	39.26	39.63
25										38.78	39.34	39.66
End of month										38.94	39.40	39.72

1958

5	39.77	40.08	40.38	40.56	40.59	40.61	40.33	40.40	40.52	39.48	38.25	37.99
10	39.80	40.15	40.43	40.56	40.59	40.62	40.34	40.42	40.55	39.50	37.58	38.13
15	39.85	40.20	40.46	40.56	40.59	40.62	40.34	40.45	40.55	39.55	37.22	38.25
20	39.90	40.25	40.49	40.56	40.60	40.31	40.36	40.46	39.93	39.58	37.22	38.37
25	39.94	40.31	40.51	40.56	40.60	40.33	40.38	40.47	39.70	39.60	37.45	38.45
End of month	40.02	-	40.55	40.58	40.60	40.33	40.40	40.51	39.49	38.90	37.76	38.62

Well H-2-23

Owner: W. E. Fitzgerald.

1957

5											52.98	59.33
10										64.27	56.27	59.34
15										64.42	53.15	59.35
20										58.64	53.72	-
25										51.66	56.60	-
End of month										51.68	58.86	60.27

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.

Well H-2-23--Continued

1958

5	60.37	56.00	49.67	54.22	61.22	63.34	45.48	53.98	57.35	40.48	34.93	44.40
10	61.20	57.72	-	56.55	60.87	64.72	45.35	55.38	53.00	41.72	35.56	46.62
15	62.24	60.52	-	58.65	60.60	65.42	46.75	53.52	53.13	42.04	36.92	49.26
20	64.71	62.90	-	60.10	59.68	45.31	48.40	54.78	-	41.70	38.77	51.18
25	59.30	50.90	-	61.23	60.60	43.34	50.27	55.55	-	41.54	40.37	53.45
End of month	55.38	49.80	52.70	61.81	61.77	44.12	52.43	56.62	39.46	35.58	42.55	56.07

Well H-2-30

Owner: D. E. Hale.

1957

5												234.29
10											235.77	234.13
15											235.25	234.07
20											235.12	233.97
25											234.87	233.86
End of month											234.79	233.75

1958

5	233.51	231.99	228.55	226.30	225.07	223.91	218.15	216.40	214.05	203.82	-	196.65
10	233.30	231.79	228.40	226.08	225.47	223.82	218.18	216.12	213.65	205.01	-	196.45
15	233.24	231.43	227.92	226.05	225.65	223.28	217.84	215.55	-	205.02	198.62	195.91
20	232.97	231.14	227.67	225.68	225.92	-	217.37	215.11	-	204.36	198.57	195.40
25	232.78	221.15	227.27	226.10	226.25	-	217.03	214.82	-	-	198.12	194.92
End of month	232.40	227.78	226.83	225.80	225.40	-	216.62	214.44	196.65	-	197.60	194.22

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

Date	Water level	Date	Water level	Date	Water level
Well H-2-32					
Owner: Jack Kolaya.					
Feb. 27, 1956	233.00	Aug. 31, 1956	236.95	Dec. 4, 1956	239.00
Apr. 9	233.62	Oct. 1	237.70	Jan. 2, 1957	239.60
May 22	234.98	19	238.19	Feb. 5	240.27
June 8	235.58	23	238.25	Dec. 3	216.15
Aug. 2	236.57	29	238.42		
Well H-3-1					
Owner: G. C. Sanderlin.					
Mar. 11, 1952	326.40	Aug. 26, 1954	338.88	Dec. 4, 1957	281.63
Sept.10	329.64	Aug. 31, 1956	372.20		
Well H-3-4					
Owner: John Dodson.					
Dec. 3, 1929	232.73	Dec. 19, 1930	232.70	July 19, 1933	252.10
23	232.74	May 14, 1931	232.60	Oct. 16, 1934	236.40
Jan. 27, 1930	232.86	July 11	224.90	Aug. 12, 1935	236.20
Mar. 13	234.23	Oct. 29	236.80	Jan. 28, 1936	235.48
May 21	232.70	Jan. 14, 1932	235.35	Aug. 21	242.51
June 24	237.20	Feb. 16	236.00	July 7, 1937	236.36
July 23	250.40	July 9	236.45	Aug. 10	271.10
Aug. 28	233.00	Nov. 30	204.20	Sept.22, 1938	252.39
Sept.30	232.75	Apr. 10, 1933	235.60	Jan. 5, 1951	235.73
Oct. 22	236.05				

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

Date	Water level	Date	Water level	Date	Water level

Well H-3-39

Owner: W. A. Seidel.

Dec. 5, 1955	369.60	Nov. 8, 1956	375.69	Aug. 5, 1957	360.20
Apr. 20, 1956	370.85	Dec. 7	375.82	Oct. 5	362.71
Aug. 1	373.37	Jan. 7, 1957	376.16	Nov. 12	341.17
Sept.17	374.04	Mar. 6	375.58	Dec. 5	330.09
Oct. 8	374.40	Apr. 4	374.24		
25	374.60	May	368.75		

Well H-4-3

Owner: H. B. Clayton.

Nov. 22, 1929	139.50	Jan. 1, 1957	170.35	Sept. 3, 1957	149.30
Mar. 10, 1952	147.00	8	170.22	Oct. 2	150.97
Sept.10	154.36	Feb. 7	171.85	11	149.04
Apr. 4, 1956	152.42	Mar. 2	173.97	Nov. 8	144.48
Aug. 31	163.76	25	173.45	Dec. 3	142.03
Oct. 4	166.25	May 6	169.66	Mar. 27, 1958	131.06
23	167.08	July 8	147.40		

Well H-4-6

Owner: Briscoe, Fenley & Spangler.

Oct. 7, 1929	81.55	May 22, 1930	89.00	Oct. 22, 1930	79.10
Nov. 14	82.65	June 23	84.50	Nov. 25	75.70
Dec. 7	83.83	July 22	80.00	Dec. 17	75.10
Jan. 16, 1930	85.73	Aug. 29	83.00	Apr. 15, 1931	69.95
Mar. 10	87.12	Sept.29	82.35	May 14	67.95

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-4-6--Continued					
Oct. 29, 1931	65.60	Oct. 23, 1940	68.62	Aug. 8, 1950	70.84
Jan. 14, 1932	66.65	Dec. 2	69.89	Dec. 6	73.85
Feb. 16	67.05	Jan. 23, 1941	70.76	Jan. 4, 1951	77.28
Apr. 1	67.30	May 26	65.33	May 14	82.02
Nov. 30	59.70	Aug. 11	62.74	Aug. 15	86.35
Apr. 10, 1933	59.05	Nov. 12	62.06	Dec. 19	92.30
July 18	60.70	Apr. 8, 1942	63.68	Mar. 12, 1952	96.90
Oct. 16	73.61	Aug. 6	66.15	Aug. 6	98.58
Aug. 12, 1935	63.99	Dec. 2	62.69	Sept.10	103.98
Jan. 27, 1936	59.90	May 1, 1944	70.69	Dec. 5	104.60
Aug. 20	a69.00	June 6, 1945	a68.65	Apr. 8, 1953	110.69
July 7, 1937	59.10	Apr. 2, 1946	76.75	Aug. 12	120.82
Aug. 21	60.04	July 1, 1947	67.22	Nov. 23	106.22
Sept.19, 1938	a61.68	Nov. 7	68.85	Apr. 13, 1954	113.15
Apr. 8, 1939	66.40	Apr. 21, 1948	73.11	June 2	108.26
Aug. 1	a66.95	Aug. 9	73.05	July 15	97.08
Jan. 15, 1940	63.85	Jan. 8, 1949	79.80	22	95.88
Feb. 24	65.25	Mar. 9	76.32	Aug. 25	96.94
Mar. 18	65.71	Apr. 14	71.19	Nov. 11	101.37
Apr. 26	66.29	Aug. 29	67.00	Jan. 14, 1955	104.75
May 22	66.34	Nov. 2	65.52	Mar. 9	107.36
June 19	65.53	Dec. 19	65.30	May 12	111.66
Aug. 22	66.30	Jan. 24, 1950	65.56	July 12	112.58
Sept.26	67.60	Apr. 4	67.25	Sept.14	114.36

(Continued on next page)

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

Well H-4-6--Continued

Date	Water level	Date	Water level	Date	Water level
Nov. 10, 1955	99.24	Jan. 11, 1957	123.90	Sept.12, 1957	102.66
Jan. 12, 1956	100.55	Feb. 6	124.98	Oct. 4	102.00
Mar. 15	104.22	Mar. 14	126.17	Nov. 4	96.51
May 8	108.35	Apr. 23	125.80	Dec. 3	94.50
July 12	115.12	May 16	118.65	Jan. 13, 1958	91.93
Aug. 29	118.40	July 10	97.74	Mar. 25	82.26
Nov. 15	120.80	Aug. 7	99.55		
a Pumping					

Well H-4-8

Owner: J. T. Hall.

Oct. 9, 1929	63.60	Aug. 4, 1930	59.65	Apr. 10, 1933	36.40
Nov. 23	65.90	27	62.50	July 18	39.60
Dec. 5	66.95	Sept.29	64.90	Oct. 15, 1934	56.62
Jan. 8, 1930	69.10	Oct. 22	45.58	Aug. 12, 1935	36.83
Feb. 6	70.15	May 13, 1931	39.34	Jan. 27, 1936	36.48
Mar. 10	71.09	July 10	39.84	Aug. 20	36.93
Apr. 5	71.85	Oct. 29	44.68	July 7, 1937	38.22
May 4	72.85	Jan. 13, 1932	47.14	Aug. 21	39.42
June 9	73.74	Feb. 16	47.73	Sept.19, 1938	39.08
23	47.71	Apr. 1	47.90		
July 2	46.69	Dec. 1	35.85		

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

Date	Water level	Date	Water level	Date	Water level

Well H-4-14

Owner: H. E. Stoy.

Oct. 7, 1929	81.90	Aug. 25, 1954	101.50	Dec. 3, 1957	96.77
Mar. 10, 1952	100.94	Aug. 29, 1956	122.62		
Sept.10	104.23	Feb. 6, 1957	127.53		

Well H-4-18

Owner: -- Witts.

Oct. 7, 1929	89.90	Sept.30, 1930	90.00	July 8, 1932	73.00
Nov. 14	90.20	Oct. 22	90.25	Dec. 1	89.55
Dec. 7	89.86	Nov. 25	89.95	Apr. 10, 1933	72.85
Jan. 17, 1930	89.89	Dec. 17	90.20	July 18	90.40
Feb. 14	89.87	May 14, 1931	82.40	Oct. 15, 1934	80.03
Mar. 10	89.93	July 11	85.35	Aug. 12, 1935	80.90
June 23	90.35	Jan. 13, 1932	141.30	Jan. 27, 1936	78.70
July 22	89.80	Feb. 16	86.10		
Aug. 29	90.10	Apr. 1	90.90		

Well H-4-28

Owner: R. P. Ingrum.

Oct. 3, 1929	28.50	May 22, 1930	36.00	Nov. 25, 1930	21.90
Nov. 14	29.75	June 23	18.05	Dec. 17	24.90
Dec. 7	31.18	July 22	23.25	May 14, 1931	15.90
Jan. 16, 1930	32.70	Aug. 29	27.90	July 10	17.60
Feb. 14	33.72	Sept.30	29.40	Oct. 29	21.10
Mar. 10	34.22	Oct. 22	19.05	Jan. 13, 1932	22.80

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-4-28--Continued					
Feb. 16, 1932	23.05	Dec. 9, 1938	19.02	Apr. 7, 1942	19.40
Mar. 31	23.20	Jan. 26, 1939	19.83	Aug. 5	20.90
July 8	13.00	Mar. 1	20.23	Dec. 2	13.82
Dec. 1	12.53	Apr. 1	20.57	Apr. 27, 1943	19.93
Apr. 10, 1933	13.75	29	20.87	Aug. 29	21.09
July 18	17.85	June 7	21.38	Dec. 16	22.91
Aug. 11, 1935	11.22	July 8	21.87	May 1, 1944	22.69
Jan. 27, 1936	13.15	Aug. 15	17.00	Aug. 17	23.01
Aug. 20	13.50	Sept.14	17.72	Dec. 21	21.88
July 7, 1937	16.26	Oct. 24	13.37	June 5, 1945	21.94
Aug. 21	16.92	Jan. 15, 1940	18.18	Apr. 2, 1946	25.18
Sept.25	18.26	Feb. 23	19.37	June 26, 1947	20.23
Oct. 19	18.78	Mar. 20	19.86	Nov. 7	21.31
Nov. 16	16.65	Apr. 24	20.29	Apr. 21, 1948	23.73
Dec. 16	19.86	May 21	20.54	Aug. 9	19.23
Jan. 19, 1938	18.41	June 18	18.14	Jan. 7, 1949	26.15
Feb. 25	12.78	July 24	18.69	Apr. 14	13.86
Mar. 16	13.91	Aug. 22	19.91	Aug. 29	12.88
Apr. 25	14.39	Sept.25	20.87	Dec. 20	16.45
May 26	12.90	Oct. 23	21.44	Apr. 4, 1950	19.98
June 28	15.48	Dec. 4	22.01	Aug. 8	22.33
July 27	12.56	Jan. 21, 1941	22.44	Dec. 7	24.17
Aug. 23	14.12	May 28	12.09	May 14, 1951	27.78
Sept.19	16.00	Aug. 12	15.62	Aug. 14	31.15
Oct. 27	17.90	Nov. 13	13.58		

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

Date	Water level	Date	Water level	Date	Water level

Well H-4-34

Owner: John Rosenall.

Mar. 22, 1939	162.20	June 5, 1945	170.56	Aug. 12, 1953	209.32
Jan. 9, 1940	157.00	Apr. 2, 1946	179.51	Nov. 20	174.02
Feb. 24	159.48	July 1, 1947	158.28	Apr. 13, 1954	197.52
Mar. 19	160.59	Nov. 7	164.12	June 2	174.90
Apr. 24	162.09	Apr. 21, 1948	172.58	July 14	174.91
May 21	161.94	Aug. 10	169.50	22	182.33
June 18	158.44	Jan. 7, 1949	174.30	Aug. 25	183.45
July 23	157.88	Mar. 8	164.60	Nov. 11	186.00
Aug. 22	160.58	Apr. 14	160.96	Jan. 14, 1955	a201.48
Sept.25	163.13	Aug. 29	157.44	Mar. 10	190.82
Oct. 23	165.10	Nov. 2	156.01	May 12	194.50
Jan. 21, 1941	169.00	Dec. 20	156.28	July 12	207.53
May 28	161.43	Jan. 24, 1950	156.21	Nov. 10	192.16
Aug. 12	156.77	Apr. 4	159.90	Jan. 10, 1956	188.15
Nov. 13	157.78	Aug. 8	168.36	Mar. 14	204.05
Aug. 5, 1942	179.32	Dec. 7	172.95	Aug. 31	b243.22
Dec. 2	159.81	Jan. 5, 1951	174.10	Nov. 13	216.91
Apr. 27, 1943	167.21	May 14	180.98	Jan. 9, 1957	192.94
Aug. 29	168.92	Aug. 14	183.99	Feb. 5	210.63
Dec. 16	171.94	Mar. 13, 1952	187.14	Mar. 12	198.45
May 1, 1944	170.81	Aug. 6	201.00	Apr. 23	200.26
Aug. 17	170.19	Dec. 5	189.39	May 14	188.83
Dec. 21, 1944	166.32	Apr. 8, 1953	202.03	July 10	178.71

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

Date	Water level	Date	Water level	Date	Water level
Well H-4-34--Continued					
Aug. 7, 1957	168.60	Nov. 5, 1957	164.21	Mar. 25, 1958	159.38
Sept.10	172.62	Dec. 4	165.01		
Oct. 4	172.63	Jan. 14, 1958	164.88		
a Pumping b Pumped recently					

Well H-4-40

Owner: Joe Moss.

Feb. 10, 1954	110.93	Nov. 10, 1955	87.13	Mar. 14, 1957	124.48
Apr. 13	111.19	Jan. 12, 1956	95.26	July 10	79.29
June 2	89.61	Mar. 15	98.97	Sept.12	96.46
July 15	73.52	May 8	103.60	Oct. 4	96.95
Jan. 15, 1955	100.66	Aug. 29	115.81	Nov. 4	86.14
Mar. 9	103.35	Nov. 15	118.20	Jan. 13, 1958	85.10
May 12	107.10	Jan. 11, 1957	122.19	Mar. 25	61.08
Sept.14	110.04	Feb. 5	123.44		

Well H-4-43

Owner: R. P. Ingrum.

Feb. 8, 1956	105.51	Oct. 25, 1956	127.05	June 13, 1957	72.80
Apr. 6	110.46	Dec. 4	129.48	July 8	82.92
May 14	113.71	Jan. 2, 1957	130.98	Aug. 5	97.97
June 4	116.24	Feb. 5	132.84	Sept. 4	105.00
July 3	119.58	Mar. 6	134.17	Oct. 4	105.90
Aug. 2	123.04	Apr. 2	134.95	Nov. 12	94.62
Sept. 7	125.51	26	128.33	Dec. 3	93.87
28	127.60	June 4	77.01		

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

Date	Water level	Date	Water level	Date	Water level

Well H-4-59

Owner: R. F. Gorman.

Feb. 4, 1954	85.50	Apr. 30, 1957	58.31	Sept. 4, 1957	83.67
Apr. 22, 1957	63.15	May 2	65.32	Oct. 4	79.56
23	63.95	12	81.04	Nov. 12	75.25
26	54.80	Aug. 5	74.45		

Well H-4-66

Owner: R. P. Ingrum.

Nov. 17, 1937	119.74	May 27, 1938	114.81	Mar. 1, 1939	126.80
Jan. 18, 1938	123.12	June 28	147.85	Apr. 1	120.47
Feb. 25	111.42	July 28	121.76	29	140.28
Mar. 22	117.73	Dec. 9	124.35	July 7	129.25
				Sept. 14	116.40

Well H-4-87

Owner: John Partridge.

Oct. 20, 1956	114.17	Apr. 23, 1957	113.55	Aug. 5, 1957	88.50
23	113.66	May 6	104.70	Sept. 4	71.53
29	112.32	June 4	77.35	Oct. 4	88.53
Jan. 2, 1957	115.94	19	82.95	Nov. 12	87.40
Feb. 7	115.34	July 8	85.51	Dec. 3	89.05

Well H-4-95

Owner: S. G. Nelson.

Nov. 1, 1955	102.20	May 6, 1956	110.00	July 3, 1956	117.12
Apr. 4, 1956	107.85	June 4	112.62	Aug. 2	118.74

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-4-95--Continued					
Sept. 7, 1956	120.06	Mar. 6, 1957	112.45	Aug. 5, 1957	100.99
Oct. 1	121.35	Apr. 23	120.36	Sept. 4	102.45
Oct. 31	118.92	26	118.20	Oct. 4	101.47
Dec. 4	121.07	May 6	112.97	Nov. 12	97.50
Jan. 2, 1957	121.76	June 6	101.53	Dec. 3	95.58
Feb. 5	122.67	July 8	98.52		
Well H-5-1					
Owner: City of Uvalde.					
Nov. 7, 1929	48.73	Aug. 21, 1936	28.34	Apr. 3, 1939	33.08
Dec. 5	49.54	July 6, 1937	26.74	May 4	33.50
Jan. 8, 1930	50.61	Aug. 21	27.77	June 10	34.62
Feb. 6	51.42	Jan. 19, 1938	30.22	July 8	35.27
Mar. 10	52.33	Feb. 5	29.55	Aug. 16	33.88
Apr. 5	52.90	Mar. 22	29.21	Sept.12	33.40
May 18	53.90	Apr. 25	29.06	Oct. 24	33.13
Aug. 29	49.45	May 27	28.93	Nov. 4	32.96
Oct. 22	48.30	June 28	29.60	Jan. 12, 1940	32.52
May 14, 1931	37.35	July 28	29.43	Feb. 24	32.97
July 10	34.95	Aug. 23	29.78	Apr. 23	33.77
Oct. 30	33.24	Sept.19	29.58	June 19	33.94
Dec. 1, 1932	27.40	Oct. 27	30.00	July 24	33.78
Oct. 15, 1934	38.24	Dec. 9	30.90	Aug. 22	34.26
Aug. 12, 1935	32.73	Jan. 28, 1939	31.50	Sept.25	34.92
Jan. 28, 1936	28.22	Mar. 3	32.12		

Recorder installed October 25, 1940

(Continued on next page)

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.

Well H-5-1--Continued

1940

5											35.82	-
10											35.87	-
15											35.97	-
20											36.05	-
25										35.61	36.16	-
End of month										35.74	36.26	-

1941

5	-	37.06	-	36.60	34.91	32.71	31.51	31.04	30.93	30.54	30.17	29.42
10	-	37.04	-	36.50	34.63	32.45	-	30.95	30.87	30.57	30.02	29.34
15	-	37.06	-	36.40	34.26	32.25	-	30.96	30.78	30.53	29.87	29.26
20	-	-	-	36.27	33.83	32.00	-	30.96	30.68	30.51	29.74	29.23
25	37.04	-	36.79	36.20	33.42	31.78	-	30.92	30.63	30.50	29.65	29.17
End of month	37.11	-	36.69	35.79	33.20	31.64	-	30.90	30.60	30.35	29.53	29.15

1942

5	29.15	29.14	29.40	29.95	30.48	-	31.59	32.31	32.92	32.04	31.36	30.73
10	29.15	29.21	29.47	30.02	30.60	-	31.52	32.46	32.73	31.95	31.26	30,65
15	29.14	29.15	29.53	30.10	30.73	-	-	32.63	32.59	31.85	31.12	-
20	29.15	29.27	29.68	30.17	-	31.35	31.80	32.66	32.45	31.76	31.00	-
25	29.13	29.26	29.72	30.25	-	31.47	31.96	32.85	32.28	32.64	30.88	-
End of month	29.16	29.30	29.89	30.36	-	31.61	32.15	32.94	32.17	31.51	30.80	-

1943

5	30.45	30.35	30.65	31.23	31.85	32.40	33.67	34.25	34.10	34.43	35.28	36.18
10	30.39	30.43	30.75	31.23	31.88	32.42	33.72	34.37	34.15	34.51	35.44	36.31
15	30.33	30.49	30.80	31.36	32.02	32.47	33.67	34.53	34.32	34.62	35.60	36.45
20	30.39	30.52	30.92	31.40	32.20	32.48	33.84	34.69	34.28	34.76	35.76	36.60
25	30.34	30.60	30.95	31.53	32.23	32.55	33.95	34.87	34.39	34.92	35.92	36.73
End of month	30.36	30.58	31.01	31.71	32.32	33.62	34.10	34.06	35.45	35.11	36.06	36.87

(Continued on next page)

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

Well H-5-1--Continued

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1944												
5	37.00	37.68	38.02	37.77	37.48	37.32	36.82	37.50	36.91	35.85	35.56	35.62
10	37.12	37.77	38.02	37.72	37.49	36.85	36.90	37.64	36.70	35.75	35.58	35.67
15	37.23	37.86	37.98	37.67	37.48	36.78	37.03	37.75	36.52	35.67	35.58	35.72
20	37.34	37.96	37.95	37.64	37.46	36.73	37.14	37.91	36.35	35.62	35.58	35.78
25	37.44	38.00	37.88	37.56	37.40	36.75	37.25	37.89	36.15	35.60	35.58	35.82
End of month	37.58	38.03	37.84	37.52	37.33	36.81	37.38	37.17	35.98	35.56	35.62	35.88
1945												
5	35.95	35.77	35.42	35.11	34.85	35.11	35.55	36.38	37.27	38.16	38.87	39.37
10	36.04	35.68	35.44	35.02	34.82	35.17	35.70	35.56	37.45	38.27	39.00	39.41
15	36.10	35.62	35.28	34.97	34.79	35.13	35.76	36.72	37.58	38.37	39.06	39.46
20	36.10	35.54	35.24	34.95	34.85	35.14	35.94	36.83	37.77	38.50	39.15	39.51
25	36.04	35.50	35.19	34.86	34.93	35.22	36.02	37.00	37.97	38.60	39.24	39.56
End of month	35.91	35.48	35.15	34.88	35.05	35.42	35.25	37.06	38.07	38.77	39.32	39.68
1946												
5	39.75	40.08	40.62	41.20	41.68	41.85	41.34	40.98	41.15	41.09	39.54	38.29
10	39.80	40.16	40.71	41.29	41.65	41.91	41.22	41.02	41.24	41.03	39.25	38.14
15	39.84	40.25	40.76	41.37	41.68	41.96	41.13	41.06	41.30	40.82	39.02	38.00
20	39.87	40.32	40.89	41.48	41.68	41.90	41.10	41.09	41.34	40.51	38.80	37.91
25	39.94	40.43	40.92	41.46	41.69	41.80	41.02	41.20	41.38	40.19	38.55	37.83
End of month	40.02	40.50	41.10	41.55	41.75	41.59	40.96	41.10	41.11	39.85	38.43	37.80
1947												
5	37.75	37.30	36.45	35.94	35.63	35.79	34.92	34.27	34.29	34.82	35.33	35.77
10	37.68	37.14	36.32	35.90	35.66	35.88	34.78	34.30	34.57	34.92	35.39	35.87
15	37.60	37.00	36.27	35.85	35.63	35.91	34.68	34.25	34.43	34.98	35.50	35.98
20	37.59	36.80	36.13	35.87	35.57	35.73	34.48	34.34	34.51	35.09	35.52	36.13
25	37.55	36.67	36.11	35.87	35.63	35.18	34.54	34.13	34.64	35.25	35.58	36.27
End of month	37.43	36.55	35.95	35.68	35.68	35.04	34.50	34.20	34.73	35.23	35.67	36.41

(Continued on next page)

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Well H-5-1--Continued												
1948												
5	36.60	37.37	38.15	39.36	40.33	41.26	-	41.36	41.63	42.04	42.60	43.52
10	36.76	37.47	38.30	39.60	40.50	-	-	41.37	41.62	42.24	42.73	43.74
15	36.89	37.62	38.46	39.81	40.57	41.79	-	41.63	41.60	42.45	42.86	43.89
20	37.00	37.78	38.71	40.02	40.74	42.10	41.43	41.39	41.62	42.35	42.98	44.03
25	37.15	37.86	38.88	40.07	40.82	42.19	41.34	41.49	41.70	42.36	43.14	44.17
End of month	37.31	37.95	39.15	40.18	41.00	42.11	41.39	41.51	41.81	42.46	43.33	44.36
1949												
5	44.52	45.29	44.30	-	39.50	38.44	37.10	37.03	36.27	35.27	34.25	-
10	44.71	45.43	43.79	-	39.20	38.14	37.11	36.75	36.01	35.20	-	33.86
15	44.83	45.60	43.28	-	38.96	38.69	37.07	36.64	35.80	35.12	-	33.85
20	44.94	45.75	42.83	40.55	38.70	37.38	36.91	36.48	35.55	35.10	-	33.76
25	45.03	45.46	42.35	40.14	38.59	-	36.95	36.40	35.41	34.57	-	33.71
End of month	45.17	44.89	41.97	39.78	38.45	37.35	36.88	36.35	35.36	34.37	-	33.70
1950												
5	33.65	33.64	33.99	35.05	35.66	35.99	37.00	37.71	38.48	39.20	40.60	41.96
10	33.64	33.62	34.12	35.18	35.86	36.13	37.30	37.82	38.72	39.35	40.85	42.23
15	33.60	33.67	34.75	35.20	35.70	36.30	37.20	37.99	39.01	39.54	41.05	42.51
20	33.64	33.76	34.47	35.22	35.80	36.45	37.30	38.07	39.06	39.79	41.29	42.68
25	33.61	33.85	34.70	35.32	35.92	36.56	37.50	38.31	39.11	40.03	41.55	42.88
End of month	33.63	33.87	34.92	35.50	36.05	36.80	37.72	38.32	39.90	40.37	41.70	42.06
1951												
5	43.24	44.19	45.47	46.51	47.96	46.66	49.49	51.75	53.60	54.74	55.10	56.45
10	43.44	44.59	45.91	46.69	48.03	47.73	-	52.03	54.00	-	55.27	56.79
15	43.60	44.76	46.11	46.86	47.94	47.89	-	52.32	54.05	-	55.60	56.95
20	43.80	44.79	46.33	47.15	47.83	48.19	50.70	-	54.00	-	55.77	57.07
25	44.04	45.07	46.50	47.46	47.73	48.60	51.03	-	54.22	55.47	55.95	57.70
End of month	44.19	45.26	46.37	47.67	47.69	49.05	51.37	53.13	54.53	55.14	56.22	58.01

(Continued on next page)

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Well H-5-1--Continued												
1952												
5	58.09	-	-	-	-	-	-	-	-	67.65	69.24	68.78
10	58.22	-	-	-	-	-	-	-	-	67.95	69.05	68.77
15	58.59	-	-	-	-	-	-	-	-	68.32	68.90	69.04
20	60.25	-	-	-	-	-	-	-	-	68.28	69.12	69.20
25	-	-	-	-	-	-	-	-	*67.15	68.55	68.98	69.60
End of month	-	-	-	-	-	-	-	-	-	68.81	68.80	69.74
* Measured												
1953												
5	69.68	71.50	73.22	74.54	77.30	80.79	83.32	86.21	81.07	75.49	72.45	72.77
10	69.91	71.78	73.19	75.33	77.78	81.18	84.03	86.39	78.43	74.61	72.48	72.95
15	70.21	71.89	73.25	76.01	77.96	81.85	84.35	86.82	77.34	74.20	72.70	72.94
20	70.46	72.28	73.52	76.10	78.50	82.86	84.73	86.99	76.69	74.06	72.89	72.75
25	70.73	72.36	74.19	76.75	79.05	83.39	85.21	86.49	76.38	73.53	72.96	72.74
End of month	71.20	72.65	74.72	77.11	79.93	83.08	85.90	85.68	76.06	72.85	73.06	72.65
1954												
5	72.80	73.49	75.71	78.67	79.99	76.04	71.47	70.00	68.61	68.91	69.76	70.88
10	73.06	73.86	76.24	78.85	80.49	75.34	70.58	69.97	69.59	68.20	69.86	70.98
15	72.93	74.34	76.72	78.66	81.00	75.21	70.15	69.92	69.67	68.20	70.00	71.23
20	73.11	74.95	77.08	78.62	81.71	74.51	69.69	69.61	69.54	68.41	70.43	71.35
25	73.20	75.27	77.66	79.31	79.67	74.47	69.40	68.72	69.83	68.62	70.63	71.69
End of month	73.31	75.61	78.38	79.57	77.32	72.70	69.57	68.70	70.08	69.23	70.87	71.91
1955												
5	72.07	72.47	74.06	76.03	79.34	78.00	79.74	80.36	81.26	78.62	73.10	70.55
10	71.93	72.26	74.47	76.55	79.37	77.86	80.20	80.23	81.83	77.32	71.99	70.72
15	71.80	72.42	75.23	77.07	78.35	77.94	80.51	80.00	82.14	76.23	71.43	70.75
20	72.10	72.50	75.35	78.14	77.35	78.66	79.70	80.10	82.06	75.12	71.07	70.83
25	72.48	73.11	75.00	78.36	77.28	79.90	79.47	80.92	81.74	74.33	71.11	70.94
End of month	72.49	73.41	75.08	78.92	77.50	80.43	79.81	81.29	80.60	73.43	71.03	71.00

(Continued on next page)

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

Well H-5-1--Continued

1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	71.05	70.70	73.17	76.46	78.18	81.52	83.76	87.44	87.65	90.13	87.37	90.13
10	71.05	70.88	73.87	76.73	79.14	82.43	84.16	87.78	87.86	90.35	87.36	89.99
15	71.22	71.48	74.54	77.49	79.39	83.33	85.22	88.05	88.75	90.23	87.80	90.61
20	71.28	72.13	74.92	77.85	80.29	82.87	85.95	87.83	89.12	88.57	88.26	89.97
25	71.02	72.10	75.45	77.40	80.15	83.43	86.25	86.95	89.43	87.55	88.98	89.63
End of month	70.88	72.64	75.94	77.73	80.80	84.28	86.85	87.28	89.72	87.40	89.53	89.93

1957

5	90.49	91.18	92.39	92.97	86.60	76.68	72.29	72.37	73.80	71.84	66.73	65.10
10	90.56	91.70	92.70	93.53	85.83	75.17	72.13	73.04	73.83	70.17	66.62	65.02
15	90.76	92.18	92.76	93.57	85.45	73.90	71.70	73.22	73.79	69.52	66.03	64.90
20	90.82	91.94	93.03	92.77	84.07	72.57	72.22	73.05	74.18	69.23	65.82	64.90
25	91.16	91.80	92.75	90.56	82.57	72.10	72.17	73.15	72.53	67.95	65.43	64.52
End of month	91.27	92.14	93.55	88.00	78.86	72.37	72.32	73.51	71.87	67.36	65.24	64.04

1958

5	63.68	61.53	58.70	55.75	54.42	53.28	50.39	49.62	48.30	44.94	42.13	40.17
10	63.20	61.25	58.12	55.59	54.09	53.45	50.02	49.58	47.73	44.60	41.70	39.91
15	62.95	60.96	57.58	55.38	53.70	53.65	49.83	48.80	47.35	44.14	41.30	39.61
20	62.66	60.92	57.01	55.01	53.33	52.14	49.77	48.56	46.53	43.67	41.12	39.39
25	62.17	59.71	56.49	55.01	53.08	51.37	49.68	48.45	45.93	43.33	40.78	39.13
End of month	61.79	59.37	56.10	54.77	53.01	50.88	49.61	48.42	45.40	42.68	40.54	38.76

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

Date	Water level	Date	Water level	Date	Water level

Well H-5-9

Owner: G. H. Heard.

Oct. 18, 1929	44.70	Sept.10, 1952	64.52	June 24, 1956	65.10
Mar. 10, 1952	60.50	Aug. 26, 1954	64.43		

Well H-5-13

Owner: Zimel Farms.

Oct. 21, 1929	66.05	Aug. 29, 1956	106.32	June 6, 1957	91.65
Mar. 9, 1952	81.50	Oct. 2	108.40	July 8	87.82
Aug. 26, 1954	86.22	31	106.05	Aug. 5	89.56
Apr. 4, 1956	94.33	Dec. 4	108.20	Sept. 3	91.81
May 6	95.75	Jan. 2, 1957	109.18	Oct. 4	88.78
June 4	99.52	Feb. 5	109.43	Nov. 12	83.06
July 3	101.87	Mar. 11	111.25	Dec. 3	82.00
Aug. 2	105.56	Apr. 23	108.41		

Well H-5-19

Owner: R. A. Ramsey.

Nov. 22, 1929	78.25	Sept.10, 1952	96.69	Aug. 29, 1956	115.50
Mar. 10, 1952	83.57	Aug. 25, 1954	91.16		

Well H-5-22

Owner: W. Henderson.

Nov. 20, 1929	77.85	May 21, 1930	82.87	Nov. 25, 1930	74.40
Dec. 24	79.00	June 24	83.65	Dec. 19	73.50
Jan. 17, 1930	79.90	July 23	78.05	May 14, 1931	64.80
Mar. 13	81.22	Aug. 28	77.90	Oct. 30	60.65

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-5-22--Continued					
Jan. 14, 1932	62.05	Jan. 23, 1941	64.99	Dec. 19, 1949	61.19
Feb. 16	62.05	May 26	60.23	Jan. 24, 1950	61.02
Apr. 1	61.50	Aug. 11	57.58	Apr. 4	62.50
July 8	59.80	Nov. 12	56.32	Aug. 8	65.57
Dec. 1	53.42	Apr. 8, 1942	56.73	Dec. 6	70.34
Apr. 10, 1933	52.90	Aug. 6	59.24	Jan. 3, 1951	71.70
July 20	54.30	Dec. 2	57.49	May 8	76.54
Oct. 15, 1934	66.50	Apr. 28, 1943	58.66	Aug. 15	80.95
Aug. 12, 1935	59.40	Aug. 28	61.10	Dec. 19	85.43
Jan. 27, 1936	54.30	Dec. 16	64.57	Mar. 10, 1952	89.98
Aug. 21	a62.30	Apr. 30, 1944	65.40	Aug. 6	94.00
Sept.21, 1938	55.98	Aug. 16	61.67	Sept. 8	96.36
Nov. 4, 1939	60.09	Dec. 20	63.60	Dec. 5	97.78
Jan. 15, 1940	59.84	June 6, 1945	62.46	Apr. 8, 1953	103.93
Feb. 24	60.34	Apr. 2, 1946	69.38	Aug. 12	105.17
Mar. 21	60.78	June 30, 1947	63.12	Nov. 24	102.02
Apr. 23	60.21	Nov. 7	63.82	Apr. 15, 1954	108.15
May 22	61.58	Apr. 22, 1948	69.25	July 15	99.11
June 19	61.24	Aug. 9	69.33	23	98.36
July 24	61.03	Jan. 7, 1949	73.00	Aug. 25	97.63
Aug. 22	61.62	Mar. 7	72.21	Nov. 11	97.17
Sept.26	62.56	Apr. 14	69.02	Jan. 14, 1955	101.12
Oct. 23	63.32	Aug. 29	63.78	Mar. 9	103.57
Dec. 2	64.24	Nov. 2	61.74	May 10	108.64

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-5-22--Continued					
July 13, 1955	109.53	May 8, 1956	107.63	Sept.12, 1957	102.95
Sept.14	111.14	July 12	113.50	Nov. 7	96.11
Nov. 14	101.45	Sept. 1	115.30	Jan. 16, 1958	92.10
Jan. 11, 1956	100.52	July 9, 1957	101.77	Mar. 25	84.26
Mar. 16	103.80	Aug. 7	102.50		
a Pumping					
Well H-5-26					
Owner: George Kennedy.					
Nov. 20, 1929	184.22	Apr. 1, 1932	162.05	May 22, 1940	163.54
Dec. 24	185.27	July 8	154.70	June 19	163.27
Jan. 16, 1930	185.87	Nov. 30	147.37	July 24	162.72
Mar. 13	187.09	Apr. 10, 1933	150.00	Aug. 22	163.62
May 21	188.20	July 19	150.90	Sept.26	164.75
June 24	184.30	Oct. 16, 1934	167.65	Oct. 23	165.62
July 23	185.45	Aug. 12, 1935	154.12	Dec. 4	166.77
Aug. 28	183.60	Jan. 28, 1936	150.30	Jan. 22, 1941	167.04
Sept.30	184.80	Aug. 21	150.70	May 28	156.03
Oct. 21	180.10	July 7, 1937	148.39	Aug. 11	154.99
Dec. 19	178.35	Aug. 21	149.31	Nov. 12	152.00
May 14, 1931	163.80	Jan. 15, 1938	154.20	Apr. 8, 1942	153.61
July 11	162.90	Jan. 15, 1940	161.54	Aug. 6	157.19
Oct. 30	159.60	Feb. 24	162.09	Dec. 2	155.30
Jan. 14, 1932	161.15	Mar. 21	162.71	Apr. 28, 1943	156.95
Feb. 16	161.45	Apr. 25	164.19	Aug. 28	159.72

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-5-26--Continued					
Dec. 16, 1943	164.88	Apr. 14, 1949	173.22	Aug. 26, 1954	a210.50
Apr. 30, 1944	166.37	Aug. 29	166.07	Aug. 30, 1956	230.60
Aug. 16	165.95	Nov. 2	164.21	Jan. 11, 1957	236.55
Apr. 3, 1946	169.72	Apr. 4, 1950	165.60	Mar. 14	a239.80
June 30, 1947	161.63	Aug. 8	169.01	May 16	a236.10
Nov. 7	164.43	Dec. 6	174.28	July 8	a226.68
Apr. 22, 1948	170.70	Jan. 5, 1951	177.10	Aug. 6	216.60
Aug. 9	173.26	Aug. 16	186.69	Nov. 7	209.37
Jan. 7, 1949	178.10	Aug. 6, 1952	202.45	Dec. 4	207.76
Mar. 8	173.65	Sept. 8	a205.80	Mar. 27, 1958	194.83
a Pumping					

Well H-5-35

Owner: -- Hooper.

Nov. 26, 1929	94.47	Sept. 9, 1952	105.60	Aug. 31, 1956	142.10
Mar. 9, 1952	94.22	Aug. 26, 1954	b117.44		
b Pumped recently.					

Well H-5-39

Owner: William Galloway.

Dec. 5, 1929	98.30	July 23, 1930	98.95	Apr. 15, 1931	88.20
Jan. 27, 1930	99.80	Aug. 28	98.05	May 14	85.00
Mar. 12	101.07	Sept. 30	98.50	July 11	81.80
Apr. 22	102.30	Oct. 23	97.45	Oct. 30	79.35
May 21	102.92	Dec. 3	94.90	Jan. 14, 1932	79.65
June 24	101.70	19	94.10	Feb. 16	79.90

(Continued on next page)

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

Well H-5-39--Continued

Date	Water level	Date	Water level	Date	Water level
Apr. 1, 1932	80.30	Mar. 18, 1938	74.31	Jan. 23, 1941	83.88
July 9	79.90	Apr. 25	74.42	May 26	79.01
Aug. 31	76.20	May 26	73.96	Aug. 13,	75.98
Dec. 1	71.55	June 28	a74.45	Nov. 12	74.59
Apr. 11, 1933	71.20	July 28,	74.37	Apr. 8, 1942	74.62
July 20	72.40	Aug. 23	a74.45	Aug. 6	77.38
Oct. 16, 1934	85.00	Sept.21	74.60	Dec. 2	76.08
Aug. 13, 1935	78.12	Oct. 27	a74.56	Apr. 28, 1943	76.98
Jan. 28, 1936	72.30	Dec. 9	76.00	Aug. 27	79.52
Aug. 21	72.38	Jan. 27, 1939	77.05	Dec. 16	83.04
June 10, 1937	80.40	Mar. 2	78.14	Apr. 30, 1944	84.59
July 8	81.37	Jan. 17, 1940	78.79	Aug. 16	84.22
9	70.43	Feb. 25	79.32	Dec. 21	82.38
Aug. 10	71.25	Mar. 18	79.64	June 6, 1945	81.13
Sept.18	81.20	Apr. 26	80.24	Apr. 3, 1946	88.19
26	72.60	May 20	80.62	Jan. 4, 1951	94.51
Oct. 19	73.39	June 19	80.57	Mar. 12, 1952	108.98
Nov. 4	79.10	Aug. 22	80.75	Sept. 9	115.43
Dec. 16	75.31	Sept.21	81.43	Aug. 26, 1954	129.44
Jan. 19, 1938	75.21	Oct. 23	82.25		
Feb. 25	75.11	Dec. 2	83.17		

a Pumping

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

Date	Water level	Date	Water level	Date	Water level

Well H-5-42

Owner: J. D. Mahaffey.

Jan. 1, 1930	87.10	Apr. 15, 1931	b98.70	Apr. 10, 1933	62.25
May 21	90.70	May 14	71.90	July 20	66.55
June 24	83.00	July 11	69.65	Aug. 13, 1935	65.06
July 23	88.20	Oct. 30	69.50	Jan. 28, 1936	65.15
Aug. 28	83.40	Jan. 14, 1932	70.45	July 9, 1937	64.51
Sept.30	88.30	Apr. 1	80.80	Aug. 10	65.21
Dec. 3	80.40	July 9	71.17	Sept.21, 1938	69.47
19	80.50	Dec. 1	62.19	Jan. 4, 1951	99.08
b Pumped recently					

Well H-5-51

Owner: O. T. Cardwell.

Oct. 5, 1929	50.90	July 11, 1931	40.60	Aug. 21, 1936	36.20
Nov. 13	51.15	Oct. 29	39.30	July 9, 1937	34.94
Dec. 19	51.78	Jan. 14, 1932	39.00	Aug. 10	35.68
Jan. 16, 1930	52.47	Mar. 31	39.10	Sept.21, 1938	37.21
Mar. 10	53.73	July 8	37.59	Apr. 8, 1939	38.60
Apr. 15	54.50	Aug. 31	37.85	Aug. 1	40.22
June 23	54.14	Dec. 1	35.35	Sept.15	39.37
July 22	53.55	Apr. 11, 1933	34.70	Oct. 24	39.08
Aug. 27	52.45	July 21	36.20	Jan. 15, 1940	38.55
Oct. 1	52.50	Oct. 16, 1934	42.23	Feb. 24	38.64
Dec. 17	49.30	Aug. 11, 1935	39.38	Mar. 18	38.83
May 14, 1931	41.90	Jan. 27, 1936	35.63	Apr. 24	39.14

(Continued on next page)

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

Well H-5-51--Continued

Date	Water level	Date	Water level	Date	Water level
May 22, 1940	39.38	Apr. 22, 1948	39.35	June 1, 1954	78.65
June 19	39.53	Aug. 9,	45.10	July 13	72.53
July 24	39.45	Jan. 7, 1949	47.12	23	72.93
Aug. 22	39.79	Mar. 9	47.34	Aug. 25	69.30
Sept. 25	40.15	Apr. 14	45.25	Nov. 10	69.12
Oct. 23	40.50	Aug. 29	41.74	Jan. 14, 1955	70.85
Dec. 2	40.90	Nov. 2	39.87	Mar. 9	72.09
Jan. 23, 1941	41.24	Dec. 19	39.50	May 10	76.89
May 26	39.38	Jan. 25, 1950	39.30	July 13	78.53
Aug. 11	37.74	Apr. 4	40.21	Sept. 14	79.83
Nov. 12	37.21	Aug. 8	42.27	Nov. 11	74.64
Apr. 8, 1942	36.72	Dec. 8	45.19	Jan. 12, 1956	70.46
Aug. 6	38.51	Jan. 3, 1951	45.62	Mar. 16	72.36
Dec. 2	37.51	May 8	50.18	May 8	76.76
Apr. 28, 1943	37.71	Aug. 15	53.91	July 12	82.42
Aug. 28	39.60	Dec. 19	58.24	Aug. 28	85.74
Dec. 16	40.81	Mar. 12, 1952	61.20	Mar. 15	86.78
May 1, 1944	41.88	Aug. 6	63.78	Jan. 9, 1957	88.51
Aug. 16	41.34	Sept. 9	66.94	Feb. 5	89.12
Dec. 21	40.47	Dec. 5	68.59	Mar. 15	90.13
June 6, 1945	39.06	Apr. 8, 1953	73.20	Apr. 23	89.60
Apr. 3, 1946	44.67	Aug. 12	84.57	May 16	82.52
July 1, 1947	36.01	Nov. 24	72.23	July 10	70.72
Nov. 7	36.41	Apr. 15, 1954	77.31	Aug. 6	70.75

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

Date	Water level	Date	Water level	Date	Water level
Well H-5-51--Continued					
Sept.11, 1957	72.43	Nov. 5, 1957	67.48	Mar. 24, 1958	59.77
Oct. 4	71.85	Jan. 16, 1958	63.32		

Well H-5-53

Owner: E. E. Capt.

Oct. 24, 1929	41.05	Aug. 31, 1932	28.30	Aug. 7, 1946	35.28
Nov. 1930	41.05	Dec. 1	26.03	Mar. 6, 1947	31.65
Apr. 5, 1931	34.20	Apr. 10, 1933	25.40	Jan. 4, 1951	36.52
May 13	32.20	July 21	26.60	Mar. 12, 1952	52.64
July 10	30.60	Oct. 16, 1934	32.75	Sept. 9	61.43
Oct. 29	29.50	Aug. 21, 1936	26.64	Aug. 25, 1954	59.10
Apr. 1, 1932	29.70	Sept.21, 1938	27.53	Aug. 29, 1956	79.60
July 8	28.60	Jan. 15, 1946	34.00	Mar. 18, 1957	83.72

Well H-5-57

Owner: J. O. Thompson.

Oct. 24, 1929	25.20	Jan. 5, 1946	20.56	Aug. 6, 1946	21.48
Sept.14, 1945	20.05	Feb. 18	20.75	Mar. 3, 1947	19.35

Well H-5-59

Owner: W. M. Beavers.

Oct. 7, 1929	59.70	Feb. 27, 1946	53.83	Mar. 3, 1947	51.95
Jan. 11, 1946	53.56	Aug. 6	55.28	Nov. 23, 1956	86.60

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

Date	Water level	Date	Water level	Date	Water level

Well H-5-84

Owner: W. R. Painter.

Jan. 15, 1946	28.23	Apr. 19, 1957	50.80	Sept. 4, 1957	50.30
Mar. 3, 1947	26.15	23	56.44	Oct. 4	50.51
Jan. 14, 1957	50.63	29	53.24	Nov. 12	50.01
Feb. 13	50.83	June 3	61.00	Dec. 4	49.42
Mar. 11	51.17	July 8	49.98		
30	50.72	Aug. 5	50.16		

Well H-5-126

Owner: H. R. Bishop.

Feb. 5, 1954	129.02	Sept. 7, 1956	144.24	Oct. 30, 1956	144.18
Apr. 6, 1956	129.70	Oct. 1	145.09	Dec. 4	147.21
June 8	138.12	20	145.02	Feb. 6, 1957	147.49
July 4	139.96	23	144.61	Dec. 3	122.34
Aug. 6	142.75	29	144.20		

Well H-5-162

Owner: U. S. Fish and Wildlife Service.

Feb. 7, 1956	74.00	Dec. 4, 1956	94.08	May 2, 1957	87.19
Apr. 6	81.41	Jan. 2, 1957	93.42	12	86.30
May 6	82.56	Feb. 5	93.49	June 6	77.06
June 4	86.42	Apr. 2	96.41	July 8	84.24
July 4	87.80	20	94.48	Aug. 5	74.85
Aug. 2	91.20	21	94.05	Oct. 4	74.26
Sept. 7	93.43	23	92.15	Nov. 12	69.54
Oct. 1	93.97	26	90.67	Dec. 3	68.76
31	90.87	30	88.37		

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.

Well H-5-174

Owner: U. S. Fish and Wildlife Service.

1951

5											56.0	56.8
10							*52.0	-	-	-	56.1	57.4
15											56.1	57.7
20											-	57.5
25											56.5	57.9
End of month							*52.0	-	-	-	56.8	58.1

* Measured

1952

5	58.5	60.5	60.9	61.3	60.2	-	63.1	64.3	66.1	66.4	66.8	67.1
10	58.8	60.4	60.9	60.8	60.6	63.1	-	64.3	66.1	66.3	66.7	66.9
15	58.8	-	60.9	60.6	60.7	62.4	-	64.6	65.9	66.5	66.5	67.1
20	59.4	60.7	60.9	60.5	60.9	61.9	-	65.1	66.4	66.4	66.4	67.5
25	60.4	60.9	60.8	60.4	60.8	62.5	64.1	65.6	66.2	66.4	66.5	67.9
End of month	60.9	60.9	60.6	60.0	-	62.4	64.2	65.9	66.1	66.5	66.5	67.8

1953

5	67.6	70.1	72.3	72.9	73.3	68.9	67.7	70.4	69.6	62.5	58.9	60.4
10	68.0	70.5	72.2	72.9	73.4	68.7	67.6	70.7	66.2	61.5	58.5	-
15	68.2	70.7	72.1	72.6	73.4	68.5	67.7	71.3	64.7	60.9	58.6	-
20	68.8	71.4	72.3	72.5	74.1	68.9	67.6	72.7	64.0	60.3	58.6	61.7
25	69.2	71.5	72.5	72.5	74.6	68.3	68.9	73.6	63.3	59.9	58.9	-
End of month	69.5	71.7	72.9	73.1	67.0	68.1	69.8	73.5	63.0	59.3	59.9	-

1954

5	-	63.3	65.5	67.5	65.6	58.8	55.9	55.1	57.0	55.8	55.5	57.6
10	62.7	63.2	65.5	67.3	65.5	58.2	55.0	55.5	56.9	55.2	55.6	57.9
15	62.7	63.7	66.0	66.8	66.1	58.1	54.4	55.8	56.6	55.2	55.6	58.0
20	62.8	64.7	65.9	66.5	65.9	57.5	54.0	56.2	56.3	55.2	56.0	58.0
25	-	64.6	66.3	66.5	-	57.3	54.1	56.8	56.4	55.2	56.9	58.2
End of month	63.2	65.3	67.1	65.9	60.2	56.1	54.1	56.9	56.3	55.4	57.4	58.5

(Continued on next page)

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

Well H-5-174--Continued

1955

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	58.7	59.2	58.5	-	61.0	57.3	61.4	63.2	63.2	60.6	58.8	58.2
10	58.9	59.1	58.6	-	61.0	56.9	62.0	63.6	63.1	59.6	58.4	-
15	58.8	58.4	58.9	-	60.4	55.0	62.5	63.4	63.2	59.2	58.1	-
20	58.8	58.3	59.0	-	58.9	55.2	62.5	63.1	63.8	59.0	58.1	58.4
25	59.0	58.3	58.8	59.9	57.8	56.9	62.0	63.4	63.1	59.0	58.1	58.5
End of month	59.1	58.4	-	61.2	57.5	59.7	61.8	63.0	62.1	58.7	57.9	58.6

1956

5	58.7	e58.2	-	58.9	59.5	60.8	63.0	63.3	64.9	66.0	64.5	68.1
10	58.6	e57.7	58.5	58.9	59.5	61.4	62.4	63.9	65.8	65.4	64.6	68.8
15	58.8	e57.5	58.5	59.1	60.0	62.2	63.2	64.0	65.8	66.0	64.8	69.2
20	59.0	e57.7	58.4	59.7	60.1	62.3	63.7	64.4	66.3	65.8	65.2	69.9
25	59.0	-	58.9	59.5	60.5	62.4	63.5	64.3	65.7	64.8	66.0	70.3
End of month	58.3	-	59.1	59.5	60.4	63.1	63.2	64.6	65.5	64.6	67.1	71.1

e Estimated

1957

5	71.9	66.7	64.9	65.9	59.6	52.7	50.3	51.8	54.7	54.1	52.1	52.6
10	71.8	66.6	65.2	65.7	58.9	51.7	50.4	52.7	55.1	53.4	52.3	53.1
15	70.5	66.3	65.2	65.4	58.8	51.2	50.5	53.2	54.7	52.8	51.9	53.8
20	69.2	66.0	65.2	64.4	57.3	50.5	50.9	53.6	54.9	52.5	51.9	53.8
25	68.5	65.5	65.5	62.5	55.9	50.3	50.9	53.9	54.6	52.2	52.0	53.8
End of month	67.4	65.3	66.2	60.3	54.0	50.3	51.5	54.3	54.3	52.1	52.4	53.8

1958

5	53.2	51.8	48.8	44.0	43.7	43.7	39.7	38.7	39.5	41.2	41.0	40.3
10	52.6	51.9	47.9	44.0	43.6	43.7	39.3	38.9	39.5	41.5	40.9	40.4
15	52.3	51.7	46.7	44.0	43.7	43.5	39.3	39.2	39.6	41.3	40.8	40.5
20	52.3	51.4	45.8	44.0	43.6	40.9	-	39.8	40.1	41.3	40.8	40.6
25	52.3	50.9	45.2	43.9	43.4	39.6	39.4	39.4	40.8	41.5	40.4	40.6
End of month	52.0	50.3	44.6	43.9	43.1	39.9	39.0	39.5	41.2	41.0	40.4	40.6

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

Date	Water level	Date	Water level	Date	Water level

Well H-5-178

Owner: Pete Stoy.

Apr. 9, 1956	226.54	Oct. 19, 1956	239.43	Apr. 4, 1957	243.51
May 7	228.63	23	239.07	26	242.64
June 14	230.79	31	238.77	May 6	238.99
July 3	232.60	Dec. 4	240.07	June 6	229.95
Aug. 2	234.62	Jan. 2, 1957	240.99	Aug. 5	223.10
Sept. 7	236.39	Feb. 7	242.10	Oct. 2	222.81
Oct. 1	238.25	Mar. 11	243.03	Dec. 3	215.02

Well H-5-192

Owner: -- Walcott.

Nov. 1, 1955	134.00	Oct. 23, 1956	150.31	June 6, 1957	138.55
Apr. 27, 1956	140.00	24	150.05	July 8	129.66
May 6	141.37	29	149.61	Aug. 5	128.60
June 4	143.05	30	149.50	Sept. 4	129.32
July 3	145.44	Dec. 4	148.74	Oct. 5	128.26
Aug. 1	147.35	Jan. 2, 1957	151.04	Nov. 12	119.93
Sept. 7	149.93	Feb. 6	152.54	Dec. 4	119.00
Oct. 1	149.36	Apr. 2	154.25		
20	150.44	May 6	149.80		

Well H-5-201

Owner: D. D. Pettit.

Apr. 5, 1956	137.20	June 4, 1956	138.42	Aug. 3, 1956	142.57
May 7	136.30	July 4	140.45	27	143.40

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-5-201--Continued					
Oct. 1, 1956	145.80	Apr. 2, 1957	150.58	Oct. 11, 1957	130.63
31	145.45	May 16	144.76	Nov. 4	126.01
Dec. 4	147.15	July 8	137.41	Dec. 6	123.27
Jan. 2, 1957	147.84	Aug. 7	131.45		
Feb. 6	148.94	Sept.10	132.22		
Well H-5-204					
Owner: R. V. Raney.					
Apr. 4, 1956	118.85	Oct. 29, 1956	126.14	June 6, 1957	124.24
May 6	120.50	30	126.14	July 8	119.55
June 4	121.52	Dec. 4	127.37	Aug. 5	118.92
July 4	122.40	Jan. 2, 1957	127.77	Sept. 4	118.42
Aug. 1	123.58	Feb. 6	128.20	Oct. 5	118.32
Sept. 7	124.77	Mar. 8	129.60	Nov. 12	113.86
Oct. 1	127.74	Apr. 2	129.48	Dec. 6	111.55
20	126.80	26	129.20		
23	126.50	May 6	127.91		
Well H-5-209					
Owner: W. H. Heine.					
Apr. 9, 1956	98.83	Sept. 7, 1956	109.78	Feb. 5, 1957	113.63
May 6	100.45	Oct. 1	111.60	Mar. 11	115.02
June 4	103.58	31	109.93	Apr. 23	114.03
July 3	105.90	Dec. 4	112.25	May 6	110.23
Aug. 2	108.89	Jan. 2, 1957	112.57	June 3	98.60

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-5-209--Continued					
July 8, 1957	94.22	Sept. 3, 1957	95.58	Nov. 12, 1957	88.35
Aug. 5	94.55	Oct. 4	94.02	Dec. 3	87.36

Well H-5-229

Owner: Will Hoag.

Mar. 2, 1956	54.00	Oct. 20, 1956	61.97	Apr. 24, 1957	59.24
Apr. 9	56.75	23	60.44	May 6	56.84
May 6	57.53	29	60.67	Aug. 5	54.48
June 4	58.96	30	60.80	Sept. 4	55.18
July 4	60.67	Nov. 7	61.20	Oct. 5	54.53
Aug. 1	62.00	22	61.98	Nov. 12	52.17
Sept. 7	61.35	Jan. 2, 1957	63.63	Dec. 4	51.50
Oct. 3	63.90	Feb. 6	64.15		
18	63.75	Mar. 11	64.98		

Well H-5-234

Owner: E. L. Sutherland.

Jan. 9, 1957	62.16	May 6, 1957	51.07	Sept. 4, 1957	49.08
14	62.22	10	52.62	Oct. 4	46.82
Mar. 13	63.11	June 6	48.03	12	44.19
Apr. 23	49.80	July 8	46.64	Dec. 4	42.47
25	49.50	Aug. 5	47.30	Mar. 3, 1958	39.34

Well H-5-255

Owner: Fred Ehlers.

Mar. 2, 1956	53.40	Oct. 20, 1956	53.88	Oct. 24, 1956	54.12

(Continued on next page)

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

Well H-5-255--Continued

Date	Water level	Date	Water level	Date	Water level
Oct. 29, 1956	53.64	Feb. 7, 1957	54.45	Apr. 3, 1958	44.68
Nov. 7	53.34	Mar. 11	54.77		
26	53.48	May 6	48.20		

Well H-5-259

Owner: Fred Ehlers.

Oct. 20, 1956	61.07	Feb. 7, 1957	61.24	May 6, 1957	59.98
23	60.89	Mar. 11	61.34	7	59.90
24	60.84	13	61.38	June 3	58.35
29	60.62	Apr. 24	60.91	6	58.02
Nov. 7	60.57	26	60.74	Oct. 29	55.57
26	60.67	May 1	60.34		

Well H-6-1

Owner: Duke Bryson.

Dec. 9, 1929	102.00	Dec. 3, 1930	96.25	Aug. 30, 1932	79.30
Jan. 27, 1930	102.05	19	96.13	Dec. 1	69.08
Mar. 12	102.90	Apr. 15, 1931	89.70	Apr. 10, 1933	81.90
Apr. 29	103.60	May 14	90.50	July 19	87.60
May 20	103.60	July 11	84.80	Oct. 24	95.50
June 24	102.75	Oct. 30	86.90	Aug. 13, 1935	64.28
July 23	101.90	Jan. 14, 1932	88.90	Jan. 28, 1936	79.53
Aug. 28	100.50	Feb. 16	90.10	Aug. 21	87.05
Sept. 30	101.35	Apr. 1	91.40	July 8, 1937	84.82
Oct. 23	99.50	July 9	83.35	Aug. 10	86.51

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
		Well H-6-1--Continued			
Sept.21, 1938	93.16	May 21, 1940	93.63	Aug. 6, 1942	90.86
Apr. 8, 1939	95.32	June 17	93.56	Dec. 3	91.19
Aug. 1	96.72	Aug. 23	93.62	Apr. 28, 1943	94.24
17	93.20	Sept.21	94.09	Aug. 27	94.74
Sept.18	92.34	Oct. 21	94.18	Dec. 15	95.13
Nov. 4	90.96	Dec. 2	94.44	May 3, 1944	95.76
Jan. 17, 1940	91.61	Jan. 20, 1941	94.96	Aug. 18	96.77
Feb. 20	92.54	May 26	82.14	Dec. 21	89.27
Mar. 21	92.87	Nov. 12	82.66	June 7, 1945	91.78
Apr. 26	93.43	Apr. 8, 1942	87.54	Apr. 1, 1946	95.56
		Well H-6-2			
Owner: Texas Trap Rock Co.					
Sept.20, 1929	138.20	July 13, 1955	208.02	Apr. 23, 1957	212.97
Mar. 9, 1952	171.45	Sept.14	208.21	May 17	198.59
Sept. 9	178.15	Nov. 11	198.23	July 18	184.42
Apr. 16, 1954	190.06	Jan. 10, 1956	194.09	Aug. 15	193.70
June 1	175.71	Mar. 15	207.83	Sept.10	189.95
July 13	192.87	May 8	211.75	Oct. 5	186.98
21	192.62	July 12	220.14	Nov. 4	154.99
Aug. 26	192.65	Aug. 28	220.04	Dec. 5	160.36
Nov. 11	186.77	Nov. 15	202.33	Jan. 13, 1958	159.24
Jan. 12, 1955	187.00	Jan. 11, 1957	215.75	Mar. 24	144.84
Mar. 9	189.37	Feb. 6	209.01		
May 10	213.65	Mar. 12	207.79		

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

Date	Water level	Date	Water level	Date	Water level

Well H-6-8

Owner: K. K. Woodley.

Dec. 9, 1929	76.96	Oct. 16, 1934	76.54	Mar. 2, 1939	71.08
Jan. 27, 1930	76.10	Aug. 12, 1935	70.00	Apr. 3	71.30
Mar. 12	76.62	Jan. 28, 1936	68.10	May 4	71.20
Apr. 21	78.35	Aug. 10	71.25	June 9	71.34
May 21	76.79	21	71.25	July 6	71.52
June 24	76.70	July 7, 1937	75.49	Aug. 17	71.48
July 23	78.15	Aug. 11	72.73	Sept.16	72.60
Aug. 28	77.70	Sept.26	70.26	Oct. 25	72.75
Sept.30	77.00	Oct. 19	69.91	Jan. 17, 1940	72.07
Oct. 23	76.55	Nov. 20	70.26	Feb. 21	71.67
Dec. 19	76.60	Dec. 19	69.81	25	71.72
Apr. 15, 1931	76.35	Jan. 19, 1938	70.10	Mar. 20	71.72
May 14	76.05	Feb. 25	70.19	21	71.66
July 11	75.45	Mar. 18	70.32	Apr. 23	72.02
Oct. 30	76.40	Apr. 26	70.54	May 20	71.67
Jan. 14, 1932	75.40	May 27	77.82	June 17	71.54
Feb. 16	77.60	June 28	70.87	July 22	71.77
Apr. 1	77.60	July 28	70.79	Aug. 22	71.93
July 9	74.80	Aug. 23	70.69	23	71.88
Aug. 31	74.85	Sept.27	70.75	Sept.21	71.94
Nov. 30, 1933	75.05	Oct. 22	70.79	Oct. 21	71.72
Apr. 10	72.70	Dec. 9	71.18	Dec. 2	73.34
July 19	72.75	Jan. 27, 1939	70.91	Jan. 20, 1941	71.60

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-6-8--Continued					
May 26, 1941	70.15	Dec. 19, 1949	68.60	July 13, 1955	71.62
Aug. 13	70.11	Apr. 4, 1950	68.61	Sept. 14	71.76
Nov. 12	69.26	Aug. 8	69.42	Nov. 11	71.93
Apr. 8, 1942	69.60	Dec. 6	69.57	Jan. 10, 1956	72.00
Dec. 2	70.41	May 8, 1951	70.17	Mar. 15	72.15
Apr. 26, 1943	70.65	Aug. 14	72.05	May 8	72.29
Aug. 27	70.24	Dec. 19	70.44	July 12	72.59
Dec. 15	70.67	Mar. 12, 1952	70.76	Sept. 5	72.58
Apr. 30, 1944	70.76	Aug. 6	71.04	Nov. 15	72.65
Aug. 9	70.91	Dec. 5	71.40	Jan. 8, 1957	73.15
Dec. 21	70.48	Apr. 8, 1953	71.29	Feb. 7	72.85
June 4, 1945	70.25	Aug. 12	71.75	Mar. 12	72.90
Apr. 1, 1946	71.02	Nov. 24	70.69	Apr. 25	73.85
June 28, 1947	70.07	Apr. 15, 1954	70.70	May 17	72.16
Nov. 7	69.88	July 13	70.79	July 8	69.44
Apr. 22, 1948	76.79	21	71.37	Aug. 7	69.30
Aug. 9	70.21	Nov. 11	71.42	Sept. 10	69.33
Jan. 6, 1949	70.50	Jan. 12, 1955	71.54	Oct. 5	69.47
Apr. 12	70.31	Mar. 9	71.40	Nov. 4	69.04
Aug. 26	70.10	May	71.47	Jan. 13, 1958	67.64

Well H-6-9

Owner: -- Albright.

Dec. 11, 1929	61.40	Mar. 13, 1930	60.90	July 23, 1930	41.25
Jan. 27, 1930	59.18	June 24	44.20	Aug. 28	44.30

(Continued on next page)

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

Well H-6-9--Continued

Date	Water level	Date	Water level	Date	Water level
Sept.30, 1930	48.20	Feb. 16, 1932	44.30	Aug. 12, 1935	37.67
Dec. 19	45.10	Apr. 1	44.10	Jan. 28, 1936	38.42
Apr. 15, 1931	42.15	July 9	40.82	Aug. 21	40.10
May 14	39.60	Aug. 31	40.10	July 7, 1937	41.52
July 11	40.70	Nov. 30	38.30	Aug. 10	42.13
Oct. 30	44.65	Apr. 10, 1933	39.20	Sept.21, 1938	45.62
Jan. 14, 1932	44.25	July 20	41.00		

Well H-6-10

Owner: Herbert Stevens.

Dec. 12, 1929	68.41	Jan. 4, 1932	67.85	Oct. 19, 1937	66.19
Jan. 27, 1930	68.45	Feb. 16	68.05	Nov. 20	66.63
Mar. 12	68.64	Apr. 1	68.20	Dec. 19	66.29
May 21	68.85	July 9	66.75	Jan. 19, 1938	66.44
June 24	68.30	Aug. 31	66.70	Feb. 25	66.54
July 23	68.20	Nov. 30	65.30	Mar. 16	66.56
Aug. 28	68.40	Apr. 10, 1933	66.45	Apr. 26	66.64
Sept.30	68.55	July 19	66.65	May 26	66.68
Oct. 23	68.30	Oct. 23, 1934	57.83	June 28	66.70
Dec. 3	68.10	Aug. 12, 1935	62.49	July 26	66.69
19	69.00	Jan. 28, 1936	66.95	Aug. 23	66.79
Apr. 15, 1931	67.25	Aug. 21	68.25	Sept.22	66.86
May 14	67.30	July 7, 1937	67.67	Oct. 26	66.93
July 11	67.30	Aug. 10	66.93	Dec. 9	67.09
Oct. 30	67.75	Sept.26	67.83	Jan. 27, 1939	67.19

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-6-10--Continued					
Mar. 2, 1939	67.59	Aug. 4, 1942	67.25	Aug. 6, 1952	67.10
Apr. 3	67.80	Dec. 2	66.05	Dec. 5	67.37
May 4	67.64	Apr. 26, 1943	65.70	Apr. 8, 1953	67.50
June 9	67.96	Aug. 29	65.02	Aug. 12	67.92
July 6	67.90	Dec. 15	65.33	Nov. 24	67.74
Aug. 17	68.15	Apr. 30, 1944	65.41	Apr. 15, 1954	67.56
Sept.16	67.73	Aug. 9	65.38	July 13	67.50
Oct. 25	67.93	Dec. 20	65.54	23	67.54
Jan. 16, 1940	68.03	Jan. 1, 1946	65.40	Jan. 1955	67.80
Feb. 25	68.09	June 28, 1947	66.54	Mar. 9	67.82
Mar. 21	68.37	Nov. 7	67.20	May 10	68.59
Apr. 23	68.38	Apr. 22, 1948	67.58	July 13	67.73
May 20	68.44	Aug. 2	67.08	Sept.14	67.81
June 17	68.43	Jan. 6, 1949	67.14	Nov. 10	67.81
July 22	68.42	Apr. 12	67.44	Jan. 10, 1956	67.97
Aug. 23	68.68	Aug. 25	66.44	Mar. 15	68.11
Sept.24	68.79	Dec. 19	66.08	May 8	68.23
Oct. 21	69.12	Apr. 4, 1950	65.71	July 12	68.42
Dec. 2	68.37	Aug. 8	65.77	Sept. 5	68.52
Jan. 23, 1941	68.37	Dec. 6	67.01	Nov. 15	67.73
May 26	67.13	May 8, 1951	66.66	Jan. 8, 1957	67.45
Aug. 13	66.27	Aug. 14	67.42	Feb. 7	67.33
Nov. 12	65.80	Dec. 19	68.79	Mar. 12	67.31
Apr. 6, 1942	69.92	Mar. 10, 1952	67.44	Apr. 25	67.28

(Continued on next page)

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

Date	Water level	Date	Water level	Date	Water level
Well H-6-10--Continued					
May 17, 1957	66.60	Aug. 7, 1957	64.00	Nov. 4, 1957	63.45
July 8	64.47	Sept.10	63.84	Jan. 13, 1958	63.17
Well H-6-16					
Owner: Kay Craig.					
Dec. 11, 1929	193.69	Sept.23, 1938	145.68	Apr. 30, 1944	175.08
Jan. 27, 1930	194.15	Jan. 17, 1940	170.55	Aug. 16	174.63
Mar. 13	210.35	Feb. 25	171.82	Dec. 21	172.79
Apr. 29	202.30	Mar. 21	172.43	Apr. 3, 1946	166.15
May 21	199.80	Apr. 23	173.39	June 28, 1947	169.44
June 24	199.05	May 20	173.90	Nov. 7	178.14
Sept.30	198.55	June 17	174.20	Apr. 22, 1948	183.62
Dec. 19	190.15	July 22	174.19	Aug. 9	184.20
Apr. 15, 1931	182.40	Aug. 22	174.57	Jan. 6, 1949	191.20
May 14	177.20	Sept.24	175.42	Apr. 13	186.31
July 10	167.90	Oct. 21	176.51	Aug. 26	178.72
Jan. 14, 1932	159.00	Dec. 2	178.04	Nov. 1	177.74
Nov. 20	141.27	Jan. 23, 1941	177.15	Dec. 19	175.59
Apr. 11, 1933	140.60	May 26	163.80	Jan. 24, 1950	175.03
July 20	147.20	Aug. 13	153.16	Aug. 8	178.82
Oct. 24, 1934	178.00	Nov, 12	146.14	Dec. 6	185.26
Jan. 28, 1936	133.85	Apr. 8, 1942	146.07	Jan. 4, 1951	193.06
Aug. 21	144.72	Aug. 4	a170.68	May 8	209.38
July 7, 1937	129.62	Aug. 27, 1943	158.88	Aug. 14	202.38
Aug. 10	131.33	Dec. 15	167.43	Dec. 19	202.28

(Continued on next page)

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

Well H-6-16--Continued

Date	Water level	Date	Water level	Date	Water level
Mar. 12, 1952	209.52	Mar. 9, 1955	235.50	Mar. 25, 1957	a267.98
Aug. 6	215.38	May 10	240.15	Apr. 25	267.98
Sept. 9	218.55	July 13	240.47	July 8	252.95
Dec. 5	216.10	Nov. 10	241.00	Aug. 8	a266.25
Apr. 8, 1953	223.50	Jan. 10, 1956	243.84	Sept.10	a244.26
Aug. 12	227.83	Mar. 15	252.03	Oct. 5	234.54
June 1, 1954	229.80	May 8	264.45	Nov. 4	239.91
July 13	228.13	July 12	262.65	Dec. 6	234.49
Aug. 26	230.50	Aug. 31	272.60	Jan. 16, 1958	217.89
Nov. 11	230.69	Nov. 15	272.55	Mar. 24	210.73
Jan. 12, 1955	232.98	Feb. 6, 1957	260.29		

a Pumping

Well H-6-25

Owner: Beverly Turner.

Feb. 10, 1954	177.56	Apr. 9, 1957	222.08	Nov. 5, 1957	181.59
Aug. 28, 1956	216.72	23	216.92	Dec. 3	179.78
Nov. 5	209.35	July 10	190.63	Mar. 27, 1958	153.25
Jan. 9, 1957	214.70	Aug. 6	193.74		
Feb. 6	218.02	Oct. 4	194.39		

Well H-8-2

Owner: Hines and Monigan.

Nov. 15, 1929	82.90	Sept. 9, 1952	99.97	Aug. 28, 1956	113.93
Mar. 12, 1952	99.75	Aug. 25, 1954	111.63	Mar. 28, 1958	98.26

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

Well H-8-13

Owner: W. E. Lee.

Date	Water level	Date	Water level	Date	Water level
Oct. 26, 1929	39.04	Oct. 1, 1930	40.40	Dec. 1, 1932	36.28
Nov. 8	39.15	21	39.81	Apr. 10, 1933	36.35
Dec. 23	39.40	Dec. 19	39.10	July 21	36.93
Jan. 15, 1930	39.37	May 13, 1931	37.10	Jan. 15, 1946	38.34
Apr. 8	39.58	July 10	37.35	Aug. 9	39.28
May 22	40.03	Oct. 29	37.34	Mar. 5, 1947	37.73
June 23	39.53	Jan. 13, 1932	37.88	Jan. 21, 1957	52.48
July 23	39.80	Apr. 2	36.46		
Aug. 29	40.20	July 8	35.05		

Well H-8-14

Owner: W. E. Lee.

Oct. 26, 1929	32.60	Jan. 21, 1957	42.90	Apr. 23, 1957	41.31
Jan. 18, 1946	31.77	Feb. 7	42.95	29	41.24
Aug. 9	32.20	Mar. 13	43.00	May 7	41.23
Mar. 6, 1947	31.51	Apr. 19	42.21		

Well H-8-19

Owner: A. W. West.

Oct. 28, 1929	83.20	June 25, 1930	55.35	Oct. 1, 1930	67.35
Dec. 23	61.79	July 24	60.15	Dec. 20	68.45
Jan. 14, 1930	58.65	Aug. 29	64.45	May 13, 1931	66.15

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

Date	Water level	Date	Water level	Date	Water level

Well H-8-27

Owner: J. E. Rabel.

Nov. 2, 1929	32.80	Aug. 9, 1946	31.73	May 6, 1957	52.64
Sept.12, 1945	32.15	Mar. 3, 1947	29.71		

Well H-8-28

Owner: J. E. Rabel.

Nov. 2, 1929	30.45	Jan. 5, 1946	28.94	Mar. 3, 1947	27.99
Sept.12, 1945	30.05	Aug. 10	30.09		

Well H-8-29

Owner: Frank Reeder.

Nov. 2, 1929	42.75	Jan. 5, 1946	31.86	Aug. 10, 1946	32.62
Sept.12, 1945	32.36	28	31.80	Mar. 3, 1947	30.78

Well H-8-30

Owner: J. M. Maberry.

Nov. 4, 1929	29.50	Jan. 5, 1946	27.98	Mar. 3, 1947	27.19
Sept.12, 1945	28.63	Aug. 8	28.72		

Well H-8-32

Owner: A. F. Seidel.

Nov. 4, 1929	35.15	Aug. 8, 1946	33.41	Jan. 11, 1957	39.64
Jan. 5, 1946	33.84	Mar. 3, 1947	32.09		

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

Well H-8-63

Owner: Ditch School.

Date	Water level	Date	Water level	Date	Water level
Sept.12, 1945	33.29	Mar. 9, 1950	31.75	Nov. 21, 1951	37.22
Jan. 5, 1946	32.54	Apr. 6	32.07	Dec. 21	38.11
Aug. 8	33.62	May 2	31.94	Jan. 24, 1952	38.52
Mar. 4, 1947	32.04	June 7	31.98	Feb. 22	38.87
Oct. 12, 1948	33.50	July 10	32.59	Mar. 12	39.61
Nov. 10	33.07	Aug. 3	32.88	26	40.19
Dec. 24	34.04	Sept. 5	33.17	Apr. 21	39.32
Jan. 20, 1949	34.31	Oct. 3	32.82	May 26	38.08
Mar. 7	32.08	Nov. 2	35.46	June 24	36.81
Apr. 12	31.87	Dec. 6	34.25	July 24	39.50
May 10	31.75	Jan. 13, 1951	35.60	Sept.25	41.86
June 15	32.14	Feb. 11	35.70	Oct. 22	42.74
July 17	32.49	May 4	35.78	Dec. 21	45.69
Aug. 10	32.66	June 1	33.40	Jan. 23, 1953	47.24
Sept.22	32.80	July 10	33.91	Feb. 24	47.96
Oct. 29	32.24	31	35.07	Mar. 24	49.16
Nov. 29	32.04	Sept.13	36.67	Apr. 23	50.80
Jan. 25, 1950	31.61	Oct. 24	36.98		

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.

Well H-8-65

Owner: Frank Reeder and O. T. Caldwell.

1946

5	28.04	27.90	27.95	-	28.19	27.89	28.40	29.05	29.00	27.73	27.54	27.42
10	28.07	27.99	28.02	-	27.98	27.98	28.61	29.20	28.89	27.66	27.51	27.50
15	28.03	28.06	27.97	-	27.98	28.07	28.63	-	28.80	27.65	27.50	27.52
20	-	27.99	27.90	-	27.56	28.32	28.85	29.27	28.40	27.62	27.50	27.54
25	27.84	27.93	-	-	27.70	28.23	28.76	29.29	28.29	27.58	27.47	27.54
End of month	27.86	27.93	-	-	27.79	28.29	28.97	29.13	27.68	27.56	27.47	27.52

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

Date	Water level	Date	Water level	Date	Water level

Well H-8-74

Owner: Mrs. --Drunzer.

Jan. 9, 1957	46.65	Apr. 23, 1957	45.70	July 8, 1957	40.90
Feb. 7	46.84	May 6	41.03	Sept.14	43.52
Mar. 11	47.03	9	40.84	Oct. 29	40.06
30	47.07	16	41.00	Dec. 4	41.52
Apr. 19	46.03	June 6	39.38	Mar. 3, 1958	38.25

Well H-8-75

Owner: F. A. Lundell.

Oct. 20, 1956	60.30	Jan. 10, 1957	60.61	Apr. 26, 1957	60.59
23	60.30	Feb. 7	60.65	May 1	60.38
29	60.15	Mar. 11	60.44	7	59.95
30	60.10	Apr. 23	60.60	June 6	56.84

Well H-8-82

Owner: B. T. Winkle.

Oct. 20, 1956	51.66	Feb. 7, 1957	51.74	May 6, 1957	47.65
23	50.13	Mar. 1	51.84	9	49.28
29	49.67	14	51.79	16	48.69
Jan. 17, 1957	51.57	Apr. 24	49.16	June 6	46.05

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

Well H-8-89

Owner: J. E. Rabel.

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5											48.58	48.58
10											48.53	48.57
15											48.48	48.57
20											48.50	48.57
25											48.54	48.55
End of month										48.76	48.60	48.51

1958

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	48.48	46.21	44.43	43.74	43.12	42.27	39.84	39.55	39.35	36.70	35.48	34.77
10	48.07	46.08	44.25	43.65	42.97	42.25	39.78	39.43	39.10	36.65	35.38	34.70
15	47.86	45.96	44.14	43.55	42.85	42.14	39.67	39.30	38.90	36.56	35.24	34.58
20	47.72	45.90	44.09	43.40	42.70	41.13	39.62	39.28	38.43	36.43	35.18	34.42
25	47.46	45.37	43.96	43.30	42.54	40.26	39.63	39.30	37.07	36.35	35.03	34.33
End of month	46.57	44.85	43.85	43.20	42.35	40.00	39.60	39.28	36.75	35.98	34.94	34.18

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

Date	Water level	Date	Water level	Date	Water level

Well H-9-1

Owner: W. N. Beavers.

Nov. 4, 1929	34.25	Jan. 5, 1946	31.25	Mar. 3, 1947	30.58
Sept.12, 1945	32.38	Aug. 8	32.02	Jan. 11, 1957	42.05

Well I-1-3

Owner: E. B. Kincaid.

Feb. 21, 1930	189.52	Aug. 26, 1954	321.00	Sept.10, 1957	329.41
Oct. 18, 1934	269.20	Jan. 11, 1957	345.40	Nov. 4	315.89
July 7, 1937	229.11	Feb. 7	345.65	Dec. 6	310.51
Aug. 11	232.61	Mar. 15	345.70	Jan. 13, 1958	306.56
Sept.23, 1938	245.05	Apr. 25	340.20	Mar. 24	288.40
Jan. 9, 1951	207.00	May 17	335.06		
Sept. 9, 1952	309.00	July 8	323.91		

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

Well I-4-35

Owner: City of Sabinal.

1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5							285.05	288.03	287.82	289.66	288.14	288.17
10						284.42	285.32	288.59	287.86	289.92	287.82	288.04
15						284.75	285.80	288.98	288.05	289.86	287.54	288.28
20						285.04	286.40	288.93	288.56	289.00	287.50	288.22
25						285.25	286.93	288.32	289.18	288.42	287.83	288.07
End of month						285.85	287.50	288.13	289.42	288.25	288.07	287.70

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	287.97	288.19	287.84	286.42	277.77	267.18	266.29	270.20	272.90	268.13	258.85	255.40
10	288.11	288.42	287.85	286.31	277.15	265.08	267.14	270.82	272.65	267.17	258.80	254.20
15	287.95	288.59	288.40	286.27	276.92	264.43	267.70	271.70	272.72	265.65	257.36	263.60
20	287.82	288.51	287.53	285.47	275.77	264.40	268.24	271.87	272.78	264.00	256.64	252.70
25	288.17	287.78	286.78	282.90	275.64	264.67	268.92	271.95	270.03	261.70	255.97	252.90
End of month	287.95	287.90	286.44	279.06	271.38	265.47	269.63	272.67	268.50	259.38	255.40	252.22

1958

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	251.70	244.35	237.00	229.50	229.78	229.46	220.82	220.77	223.07	-	-	-
10	250.30	243.97	234.60	229.63	228.66	229.98	219.52	221.82	222.26	-	200.88	-
15	249.56	243.52	-	229.87	228.23	230.57	218.57	221.57	221.80	-	199.35	188.59
20	248.43	243.10	-	229.67	227.77	225.83	218.57	221.50	216.82	-	198.60	187.99
25	246.95	239.35	230.67	229.77	227.54	223.38	219.00	222.05	-	-	197.33	188.03
End of month	245.62	-	229.72	230.45	228.00	221.70	219.94	222.65	-	-	196.67	187.74

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

Date	Water level	Date	Water level	Date	Water level

Well I-4-40

Owner: John Gulley

Dec. 8, 1955	252.00	July 16, 1956	236.75	Jan. 2, 1957	238.21
Mar. 15, 1956	229.85	Aug. 2	239.49	Feb. 7	236.69
Apr. 9	231.42	30	240.55	Apr. 3	236.30
May 7	233.58	Oct. 8	242.43	July 8	216.71
June 7	234.97	31	239.33	Dec. 6	203.77
July 3	235.70	Dec. 4	238.74		

Table 6.--Drillers' logs of wells in Uvalde County
(Word order is modified to conform to U. S. G. S. standards)

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well A-9-1

Owner: M. D. Cloudt. Driller: Phanton Oil Co.

Glen Rose limestone:			Lime shells ----------	30	875
Lime ----------	70	70	Lime, hard ----------	60	935
Lime, hard ----------	70	140	Lime, gray, hard, sandy	30	965
Shale ----------	90	230	Sand ----------	35	1,000
Lime, shelly ---------	26	256	Lime, broken ---------	20	1,020
Sand (water) ---------	4	260	Sand ----------	5	1,025
Lime, hard ----------	10	270	Lime, hard, sandy ----	5	1,030
Sand (water); hole full of water ------	5	275	Lime ----------	13	1,043
Shale, blue ----------	30	305	Sand (water); hole full of water ----------	13	1,056
Lime, hard ----------	48	353	Lime, white, hard ----	19	1,075
Shale, blue ----------	17	370	Sand (water) ---------	15	1,090
Lime, hard ----------	110	480	Lime, hard ----------	5	1,095
Shale, blue and gray -	45	525	Sand, medium ---------	25	1,120
Shale, sandy ---------	10	535	Lime ----------	28	1,148
Shale, gray ----------	30	565	Lime, white ----------	17	1,165
Lime ----------	15	580	Slate and lime shells; hole full of water -	20	1,185
Shale, white ---------	65	645	Slate ----------	10	1,195
Lime shells ----------	50	695	Lime ----------	3	1,198
Lime, sandy ----------	10	705	Travis Peak formation:		
Lime, white ----------	75	780	Slate; bailing hole dry, hole full of water; caving ----------	32	1,230
Lime, broken ---------	45	825	Shale, gray ----------	7	1,237
Sand (water) ---------	20	845			

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well A-9-1--Continued					
Rock, red	4	1,241	Shale, red, sandy	8	1,457
Sand, hard	6	1,247	Sand	28	1,485
Shale, sandy	23	1,270	Sand (water); hole full of fresh water	20	1,505
Rock, red	7	1,277	Gravel, fine	20	1,525
Slate	1	1,278	Sand, red, hard	10	1,535
Lime	3	1,281	Lime, white	2	1,537
Shale, sandy	7	1,288	Sand, pink (water)	12	1,549
Sand, hard	12	1,300	Sand, fine, and fine gravel	7	1,556
Sand (water); hole full of water	13	1,313	Sand (water)	13	1,569
Sand, hard	24	1,337	Sand, hard	4	1,573
Sand (water); hole full of water	8	1,345	Gravel, coarse	12	1,585
Sand, hard	15	1,360	Sand, very hard	15	1,600
Sand, soft	9	1,369	Sand, hard	3	1,603
Sand (water); hole full of water	8	1,377	Sand (water)	7	1,610
Sand	8	1,385	Sand and gravel	20	1,630
Sand (water)	7	1,392	Sand, gray, hard	33	1,663
Rock, red	7	1,399	Slate, hard, sandy	12	1,675
Sand	19	1,418	Lime, sandy	25	1,700
Sand (water); hole full of water	7	1,425	Lime	10	1,710
Sand	5	1,430	Sand, white, hard	35	1,745
Sand (water)	18	1,448	Lime, sandy	45	1,790
Lime, white	1	1,449	Lime, black, shaly	20	1,810
			Lime, sandy, hard	85	1,895

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well A-9-1--Continued					
Shale, black ---------	5	1,900	Lime, black ----------	52	2,442
Lime, sandy, hard ----	12	1,912	Lime and broken shale-	8	2,450
Lime shells, black, broken ----------	18	1,930	Shale, black, soft ---	10	2,460
Lime ----------	5	1,935	Lime, hard ----------	12	2,472
Lime and gray slate --	46	1,981	Shale ----------	7	2,479
Sand, gray, hard -----	29	2,010	Lime, hard ----------	3	2,482
Slate, black ---------	15	2,025	Lime shells, broken --	59	2,541
Lime, gray ----------	70	2,095	Lime, hard ----------	3	2,544
Lime, gray, sandy, hard	17	2,112	Slate, soft ----------	4	2,548
Shale, hard, sandy ---	6	2,118	Lime, hard ----------	4	2,552
Lime, hard, sandy ----	27	2,145	Lime shells and black slate----------	93	2,645
Sand, hard ----------	45	2,190	Slate ----------	27	2,672
Lime, hard ----------	48	2,238	Lime and broken slate-	10	2,682
Sand, hard ----------	4	2,242	Lime, hard ----------	2	2,684
Lime, hard, sandy ----	11	2,253	Slate, black ---------	7	2,691
Lime, black, hard ----	72	2,325	Lime, hard ----------	3	2,694
Lime shells, broken --	40	2,365	Slate, black ---------	15	2,709
Lime, hard, sandy ----	25	2,390			

Well A-9-5

Owner: Oscar Hope. Driller: -- Connell.

Soil ----------	12	12	Caliche and rock -------	17	64
Caliche and rock -------	31	43	Caliche, hard ----------	4	68
Caliche, yellow --------	4	47			

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)
Well A-9-5--Continued		
Glen Rose limestone:		
Shale, gray	128	196
Lime (seep)	8	204
Shale, gray	3	207
Shale, blue	7	214
Shale, gray	14	228
Mud, blue	4	232
Shale, gray	12	244
Lime	40	284
Shale, gray	73	357
Lime	36	393
Shale, gray	104	497
Lime	6	503
Shale, gray	7	510
Mud, blue	3	513
Shale, blue, sandy	7	520
Lime	27	547
Shale, gray	9	556
Lime, sandy	29	585
Shale, gray	15	600
Well B-8-1		
Owner: W. B. Patterson, Jr. Driller: Transcontinental Oil Co.		
Edwards limestone:		
Gravel	11	11
Lime, hard (water)	84	95
Lime, hard	155	250
Glen Rose limestone:		
Clay, blue	5	255
Lime, hard	195	450
Clay, blue	10	460
Lime, hard	60	520
Clay, blue	8	528
Lime, hard	242	770
Lime, brown, loose	5	775
Lime, brown, loose (water)	5	780
Lime, hard and soft	272	1,052
Clay, blue	8	1,060
Sand, pink, soft, and gypsum crystal	12	1,072
Lime, hard	118	1,190
Clay, blue	20	1,210
Sand, soft	6	1,216
Clay, blue	8	1,224
Lime, soft	7	1,231
Mud, blue	39	1,270
Lime, soft	5	1,275

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)
Well B-8-1--Continued		
Slate and shale ------	15	1,290
Travis Peak formation:		
Rock, red ----------	10	1,300
Shale and sand -------	30	1,330
Sand, soft (water) ---	5	1,335
Boulders, red --------	10	1,345
Lime -----------------	10	1,355
Shale, blue ----------	25	1,380
Sand, pink -----------	45	1,425
Rock, red ----------	5	1,430
Sand, pink -----------	22	1,452
Clay, blue -----------	12	1,464
Sand, pink -----------	46	1,510
Lime and shale -------	10	1,520
Lime shells, hard ----	10	1,530
Sand, pink -----------	22	1,552
Lime shells ----------	8	1,560
Sand (water) ---------	10	1,570
Lime shells ----------	5	1,575
Sand, gray (pebbles) -	52	1,627
Sand, fine (water) ---	7	1,634
Sand, coarse ---------	23	1,657
Rock, red ----------	3	1,660
Sand, coarse ---------	18	1,678
Clay, brown ----------	38	1,716
Sand -----------------	7	1,723
Paleozoic rocks:		
Slate ----------	1,077	2,800
Lime, black; salt water at 2,827 feet-	45	2,845
Slate ----------	95	2,940
Lime, black ----------	7	2,947
Lime, gray, gritty ---	5	2,952
Slate and shells -----	83	3,035
Lime, black ----------	8	3,043
Sand, brown ----------	4	3,047
Slate and shells -----	23	3,070
Lime, black, gritty --	48	3,118
Slate and shells -----	87	3,205
Lime, black ----------	47	3,252
Slate and shells -----	18	3,270
Lime, black, sandy ---	30	3,300
Sand, gray -----------	15	3,315
Slate and shells -----	422	3,737
Lime, black ----------	6	3,743
Lime, white ----------	13	3,756
Sand, gray -----------	12	3,768
Slate and shells -----	138	3,906
Lime -----------------	9	3,915
Slate and shells -----	15	3,930

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well B-9-16, partial log

Owner: C. C. Mitchell. Driller: The Texas Co.

No record ----------	9	9	Limestone, light, oölitic, and very abundant small oölites ----------	64	739
Caliche ----------	32	41	Pearsall formation:		
Glen Rose limestone:			Limestone, sandy, and poorly sorted sand -	30	769
Limestone, white, chalky, fossiliferous ------	42	74	Limestone, very fossiliferous ------	92	861
Limestone, light, porous, very fossiliferous; dark-gray nodules; some gypsum from 74 to 120 feet --------	121	195	Shale ----------	30	891
Limestone, light, dense, chalky ------	25	220	Sligo formation:		
Shale, light-gray, marly ----------	20	240	Limestone ----------	30	921
Limestone, light, dense, chalky ------	45	285	Hosston formation:		
Gypsum, light-brown, and chalky to fine sugary limestone ---	15	300	Sand, fine to medium, shaly streaks, and gravel; quartz and chert pebbles at base ----------	349	1,270
Limestone, dense, fossiliferous; some dark-gray nodules --	165	465	Pennsylvanian rocks, undifferentiated:		
Limestone, chalky, fairly porous, miliolid ----------	210	675	Shale, dark-gray, and red hematite sandy shale ----------	45	1,315
			TOTAL DEPTH ----------		6,503

Well G-6-1

Owner: J. B. Smythe. Driller: Gulf Production Co.

Anacacho formation and Austin chalk:			Clay, yellow ---------	40	60
Soil and gravel ------	20	20	Lime shell (fresh water) ----------	3	63

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)
Well G-6-1--Continued		
Slate, blue	5	68
Sand, sharp	20	88
Slate, blue	4	92
Lime	68	160
Shell, pyrites, and shale	5	165
Lime, hard	5	170
Lime	75	245
Slate, blue	8	253
Lime, hard	11	264
Lime, white	10	274
Slate, blue	6	280
Lime	40	320
Slate	5	325
Lime	35	360
Slate, blue	5	365
Lime	20	385
Slate, blue	6	391
Lime, white	40	431
Slate	4	435
Lime	30	465
Slate	2	467
Lime	20	487
Slate	5	492
Lime	16	508
Slate	8	516
Lime, white	29	545
Slate	15	560
Lime, white	300	860
Slate, black	10	870
Lime, white	5	875
Sand, brown	5	880
Shale, brown	20	900
Shale, black	140	1,040
Lime	8	1,048
Eagle Ford shale:		
Shale, black	77	1,125
Buda limestone:		
Lime, white	5	1,130
Lime, pink	30	1,160
Lime, white	45	1,205
Grayson shale:		
Slate, blue	120	1,325
Georgetown limestone:		
Lime, sandy	61	1,386
Edwards limestone:		
Sand, black (sulfur water)	40	1,426
Sand, white (water)	69	1,495
Lime, white	8	1,503

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)
Well G-6-1--Continued		
Lime, sandy	172	1,675
Iron pyrites and slate	13	1,688
Lime	22	1,710
Slate	8	1,718
Sand, black, and iron-	12	1,730
Lime, black, sandy	82	1,812
Lime, gray (water)	182	1,994
Comanche Peak limestone:		
Lime, white	14	2,008
Shale, light	70	2,078
Walnut clay and Glen Rose limestone:		
Lime, white	424	2,502
Shale, brown	4	2,506
Lime	14	2,520
Shale	90	2,610
Lime	15	2,625
Well G-9-1		
Owner: J. B. and W. A. Smythe. Driller: Pure Oil Co.		
Anacacho limestone, Austin chalk, and Eagle Ford shale:		
Rock, hard	3	3
Lime, hard, sandy	48	51
Rock, crystallized	31	82
Lime, blue, sandy	3	85
Shale, blue, putty, and asphalt	13	98
Rock asphalt	10	108
Gumbo, blue	47	155
Lime, gray	17	172
Gumbo, blue	3	175
Lime, gray	40	215
No record	10	225
Lime, gray	10	235
Shale, blue, and lime shells	3	238
Shale, blue and gray	22	260
Shale, gray, and gumbo	110	370
Shale, gray	70	440
Lime, gray, broken	12	452
Shale, blue	48	500
Shale, blue, sandy, and gumbo	28	528
Shale, gray	7	535
Lime, sandy	15	550
Lime shells, hard	30	580

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well G-9-1--Continued					
Lime, gray, sandy ----	5	585	Shale ----------	8	1,498
Lime, gray, hard -----	5	590	Lime, gray ----------	12	1,510
Shale, gray ----------	20	610	Lime ----------	7	1,517
Lime, hard ----------	2	612	Lime and sandy shale -	33	1,550
Shale, gray ----------	23	635	Shale, sandy; showing of oil ----------	17	1,567
Shale, gray, and broken lime --------	3	638	Lime, black and gray, sandy ----------	5	1,572
Lime, gray, broken ---	15	653	No record ----------	3	1,575
Shale, gray ----------	77	730	Lime, black and gray, sandy ----------	15	1,590
Lime ----------	60	790	Lime, gray and white -	15	1,605
Lime and blue shale --	80	870	Buda limestone:		
Lime and shale -------	70	940	Lime, gray and white -	5	1,610
Lime, broken ---------	45	985	Lime, white ----------	100	1,710
Lime, broken, and shale	35	1,020	Grayson shale:		
Shale and asphalt ----	20	1,040	Shale, blue ----------	5	1,715
Shale ----------	5	1,045	Shale, blue, soft ----	55	1,770
Lime, broken, and shale	60	1,105	Caving ----------	30	1,800
Shale, cement-colored-	65	1,170	Shale, blue, soft ----	15	1,815
Shale, white, hard ---	4	1,174	Shale, blue ----------	20	1,835
Shale, cement-colored-	56	1,230	Lime, broken, and shale	12	1,847
Lime ----------	3	1,233	Georgetown limestone:		
Lime, gray, hard -----	105	1,338	Lime, white; caving --	12	1,859
Shale, gray ----------	42	1,380	Lime, white ----------	51	1,910
Shale and slate ------	31	1,411			
Lime, gray ----------	79	1,490			

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)
Well G-9-1--Continued		
Edwards limestone:		
Lime, brown, soft ----	10	1,920
Lime, white ----------	127	2,047
Sand, white, hard, and lime ----------	28	2,075
Sand, brown ----------	5	2,080
Lime, dark, sandy ----	20	2,100
Sand, gray; hole full of water at 2,107 feet ----------	22	2,122
Sand, white (water) --	33	2,155
Sand, white ----------	2	2,157
Lime, white ----------	58	2,215
Sand, gray, soft -----	12	2,227
Lime, white; show of soft coal at 2,260 to 2,265 feet ------	63	2,290
Lime, white, hard; caving ----------	15	2,305
Lime, white ----------	10	2,315
Lime, black, hard ----	19	2,334
Lime, black ----------	36	2,370
Lime, black; show of oil ----------	8	2,378
No record ----------	37	2,415
Lime, gray, sandy ----	33	2,448
Lime, black, and white shell ----------	17	2,465
Lime, black; 2,470 to 2,474 feet, half full of water ----------	9	2,474
Lime, black ----------	32	2,506
Lime, black, sandy, and gravel ---------	8	2,514
Lime, black, and gravel	16	2,530
Lime, gray, sandy ----	14	2,544
Lime, gray ----------	461	3,005
Lime and shale -------	15	3,020
Lime, broken, and shale	43	3,063
Lime, broken ---------	24	3,087
Lime, gray, broken ---	58	3,145
Glen Rose limestone and Travis Peak formation:		
Lime, gray, broken ---	10	3,155
Lime, gray, hard -----	15	3,170
Lime, broken ---------	64	3,234
Shale, blue, and gray lime ----------	2	3,236
Lime, gray ----------	24	3,260
Shale, blue, and gray lime ----------	12	3,272
Lime, gray ----------	298	3,570
Sand, brown (water) --	22	3,592
Lime, brown, sandy; lost returns 3,608 to 3,640 feet ------	118	3,710

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well G-9-1--Continued					
Lime, gray, hard -----	12	3,722	Lime, hard ----------	2	4,060
Lime, gray ----------	16	3,738	Lime ----------	8	4,068
Sand, gray (water) ---	22	3,760	Lime shells and shale-	9	4,077
Lime, gray, sandy, soft ----------	27	3,787	Lime, gray, hard -----	62	4,139
Lime, gray, broken ---	18	3,805	Lime, gray, sandy ----	11	4,150
Sand (water) ---------	22	3,827	Shale, gray ----------	3	4,153
No record ----------	7	3,834	Lime, gray, hard, sandy	4	4,157
Lime, gray, sandy ----	23	3,857	Lime, gray, hard -----	7	4,164
Lime, gray ----------	18	3,875	Shale, light-blue ----	11	4,175
Lime, gray, hard -----	5	3,880	Shale, blue ----------	12	4,187
Sand, brown (water) --	3	3,883	Lime, gray ----------	27	4,214
Lime, broken ---------	10	3,893	Shale, blue ----------	10	4,224
Lime, gray ----------	13	3,906	Lime, gray, sandy ----	15	4,239
Lime ----------	19	3,925	Lime shell, black ----	2	4,241
Lime, hard, and shale-	11	3,936	Lime, gray ----------	13	4,254
Lime, soft ----------	11	3,947	Shale and lime shells-	16	4,270
Lime, gray, and shale-	24	3,971	Shell, blue ----------	6	4,276
Shale, light, and lime shell ----------	45	4,016	Shale, blue, and lime-	3	4,279
Lime, broken ---------	4	4,020	Lime, dark-gray ------	14	4,293
Lime and shale -------	6	4,026	Lime, gray ----------	15	4,308
Lime, gray, hard -----	2	4,028	Lime, gray, sandy ----	25	4,333
Lime, gray, sandy ----	28	4,056	Lime, gray ----------	27	4,360
Lime, brown, sandy ---	2	4,058	Lime, gray, and shale-	240	4,600
			Lime, gray, hard -----	26	4,626

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well G-9-1--Continued					
Lime, gray	76	4,702	Lime, gray, and blue shale	45	4,803
Lime, gray, hard	11	4,713	Lime, gray, sandy	7	4,810
Lime, gray	45	4,758			
Well G-9-2					
Owner: J. B. and W. A. Smythe. Driller: Pure Oil Co.					
Anacacho limestone and Austin chalk:			Shale and lime shells	30	274
Lime, sandy, hard	20	20	Shale, gray	26	300
Lime	7	27	Shale, blue, and lime shells	89	389
Asphalt	28	55	Shale, blue	36	425
Lime	20	75	Shale, blue, and lime	10	435
Lime, gray (water)	25	100	Shale, white	84	519
Shale, blue	20	120	Lime, white	42	561
Lime, gray, hard	6	126	Lime, light, sandy	19	580
Lime, gray, and shale	6	132	Lime, sandy	5	585
Shale and lime	23	155	Lime, white, sandy	43	628
Mud, white	10	165	Lime, gray	10	638
Gumbo, blue	5	170	Shale, white, and lime shells	35	673
Lime, gray, hard (water)	20	190	Lime, gray	235	908
Shale and lime	15	205	Lime, gray, soft; water at 995 feet	285	1,193
Mud, white	12	217	Shale, asphalt, and lime shells	42	1,235
Gumbo mud, blue	13	230	Eagle Ford shale:		
Lime shell, gray	3	233			
Gumbo mud, blue	11	244	Asphalt and lime shells	115	1,350

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

Well G-9-2--Continued

	Thickness (feet)	Depth (feet)
Shale, asphalt, and lime shells	43	1,393
Shale, black, and lime shells	43	1,436
Shale, black	14	1,450
Lime, gray, hard	16	1,466
Lime, gray	29	1,495
Shale, black	20	1,515
Buda limestone:		
Lime, white	100	1,615
Grayson shale:		
Shale, gray	70	1,685
Slate	22	1,707
Shale, gray	58	1,765
Georgetown limestone:		
Shale, gray	8	1,773
Lime, white	42	1,815
Edwards limestone:		
Water at 1,820 to 1,830 feet	200	2,015
Lime, brown	10	2,025
Lime, white; sulfur water at 2,203 feet	238	2,263
Lime, black	4	2,267
Sand, white to gray	28	2,295
Lime, black, sandy; very small show of oil at 2,355 feet	89	2,384
Lime, black, hard	36	2,420
Lime, black	25	2,445

Well H-2-23

Owner: W. E. Fitzgerald. Driller: R. V. Raney.

	Thickness (feet)	Depth (feet)
Gravel	30	30
Edwards limestone, gray; large cuttings	10	40
Limestone, gray to yellow	10	50
Limestone, gray to yellow; small cuttings	10	60
Limestone, light-brown; large cuttings	10	70
Limestone, light-brown, and flint; large cuttings	5	75
Limestone, yellowish, and flint; small cuttings	5	80
Limestone, yellowish, fine to powdery	5	85
Limestone, brown, hard, and trace of flint	5	90
Limestone, yellow, powdery	20	110

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-2-23--Continued					
Limestone, gray, fine, soft, slightly argillaceous	10	120	Limestone, dark-gray and buff	30	190
Limestone, gray, coarse; large cuttings	10	130	Limestone, dark-gray; small cuttings	10	200
Limestone, light- and dark-gray	5	135	Limestone, dark-gray, powdery	5	205
Limestone, dark-gray and buff	5	140	Clay, dark-gray, lumpy	10	215
Limestone, light-gray; small cuttings	5	145	Clay, gray	5	220
Limestone, dark-gray and gray to buff	5	150	Limestone, light-gray, soft, with dolomite	5	225
Limestone, light-gray, fine; coarse cuttings	10	160	Clay with dark limestone; may be dolomite	12	237
Well H-2-30					
Owner: D. E. Hale. Driller: R. V. Raney.					
Limestone, hard	5	5	Limestone, white, porous, and calcite scattering	20	280
Limestone, hard, with trace of chert	10	15	Limestone, white, recrystallized	20	300
Limestone, white, soft, porous	55	70	Limestone, tan, dense, with occasional fragments with pinpoint porosity and slight scattering of calcite	10	310
Limestone, white, slightly porous	10	80	Limestone, cream, dense, with rare fragments of very finely oölitic lime	10	320
Limestone, white, porous	110	190	Limestone, tan, porous, and small chert fragments	20	340
Limestone, white, porous, with scattering of calcite	60	250			
Limestone, white porous, with orange speckled, layered lime	10	260			

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-2-30--Continued					
Limestone, dark-cream, porous, and oölitic, gray lime	15	355	Limestone, white, crystalline, porous, fossiliferous	90	500
Limestone, porous, fossiliferous, crystalline	5	360	Limestone, white, crystalline, porous, fossiliferous, with tan, finely sugary textured dolomite	25	525
Lime, cream, miliolid, and rare fragments of miliolid chert	5	365	Limestone, white, crystalline, porous, fossiliferous	25	550
Chert, cream, recrystallized, porous, fossiliferous	10	375	Limestone, white, crystalline, porous, fossiliferous, with tan, finely crystalline limestone	20	570
Limestone, dark-cream, and gray and cream oolites	5	380	Limestone, cream, crystalline, porous, with some calcite rhombs	30	600
Dolomite, dark-tan, sugary, and dolomitic lime	5	385	Limestone, light-tan, porous, finely crystalline	35	635
Lime, tan, fossiliferous	5	390	Limestone, cream, fine	20	655
Lime, dark-gray, sandy, and very fine, sandy lime	10	400	Limestone, tan, finely crystalline	55	710
Lime, dark-cream, granular	5	405	No record	11	721
Lime, dark-cream, granular, and dark-brown speckled chert	5	410			

Well H-3-23

Owner: E. F. Jackson. Driller: R. V. Raney.

Gravel	20	20	Limestone, white, dense, hard; small black dendrites	40	80
Gravel and limestone	10	30	Limestone, yellowish, dense; trace of quartz crystals	5	85
Limestone, white, dense, hard	10	40			

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

Well H-3-23--Continued

	Thickness (feet)	Depth (feet)
Clay, tenacious, pyrite, and abundant Exogyra arietina -----	55	140
Edwards limestone:		
Limestone, hard, very fine, and flecks of calcite ----------	10	150
Limestone, hard, very fine; pores filled with calcite -------	20	170
Limestone, hard, very fine; contains a few miliolids ----------	10	180
Limestone, hard, very fine; abundant miliolids; trace of chert ----------	15	195
Limestone, hard, very fine; abundant miliolids and chert-	5	200
Limestone, white to light-brownish-gray, sugary; abundant recrystallized chert	50	250
Limestone, white, dense, fine, with flecks of calcite; 40 percent sugary, olive-gray limestone ----------	10	260
Limestone, white, dense, fine ----------	20	280
Limestone, white to olive-gray, sugary, and chert ----------	10	290
Limestone, sugary; 40 percent fine, white limestone; miliolids	10	300
Limestone, white, recrystallized, and 60 percent chert ------	10	310
Limestone, white, recrystallized; miliolids and chert ----------	30	340
Limestone, olive-gray, sugary, and chert --	15	355
Limestone, white to light-gray, sugary; 60 percent miliolids; 20 percent sugary, olive-gray limestone; 20 percent chert ---	5	360
Limestone, white, calcified, and chert	10	370
Limestone, white, calcified, and chert; miliolids ----------	10	380
Limestone, olive-gray, sugary, and miliolids	10	390
Limestone, white, and miliolids ----------	20	410
Limestone, olive-gray, sugary, calcitic, and 40 percent white limestone ----------	10	420
Limestone, olive-gray, sugary ----------	10	430
Limestone, white, dense, (characteristic miliolid), and 40 percent sugary, olive-gray limestone; chert ----------	10	440
Limestone, olive-gray, sugary ----------	10	450

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)
Well H-3-23--Continued		
Limestone, olive-gray, sugary; abundant free calcite	10	460
Limestone, olive-gray, sugary; abundant free calcite; few large shell fragments	10	470
Limestone, olive-gray, sugary	20	490
Limestone, white to light-brown, dense, rarely sugary	5	495
Dolomite, light-brownish-gray, sugary, and few shell fragments-	5	500
Dolomite, light-brownish-gray, sugary, and few shell fragments; 50 percent white limestone	5	505
Limestone, light olive-gray, sugary	5	510
Limestone, brownish-gray, and sugary dolomite, with small pieces of black material (dead oil ?)-	20	530
Limestone, olive-gray, sugary, with trace of chert	10	540
Limestone, white to olive-gray, (characteristic miliolid), and 50 percent chert	10	550
Limestone, white, sugary, one large shell fragment	10	560
Limestone, white, sugary	30	590
Limestone, white to light-brownish-gray, dolomitic, with trace of chert	10	600
Dolomite, brownish-gray, and 10 percent sugary limestone	10	610
Limestone, dolomitized, and few remnant miliolid characteristics	10	620
Limestone, dolomite, and 30 percent contaminated chert	10	630
No record	10	640
Clay, yellow, and 25 percent possibly contaminated limestone and dolomite -	5	645
Limestone, white, dense, 30 percent chert, and 20 percent dolomite and calcite	5	650
Limestone, white, miliolids, and trace of chert -	10	660
Chert with some miliolid limestone and dolomite	5	665
Limestone, white, with chert	15	680
Limestone, white, 60 percent miliolids, 30 percent chert, and 10 percent yellow clay-	20	700
Limestone, miliolids, and 10 percent chert	10	710

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-3-23--Continued					
Limestone, miliolids (dolomitized so that miliolid character obscured), and chert	10	720	Dolomite, light-brownish-gray, with white limestone	30	750
			No record	10	760

Well H-3-26

Owner: K. S. Truelove. Driller: T. T. Word.

Soil	10	10	Sand, gray, and sandy lime	83	1,863
Lime, broken	121	131	Lime, shaly, sandy	102	1,965
Shale	62	193	Sand, tan, fine	15	1,980
Lime	537	730	Lime, gray, sandy	30	2,010
Lime, sandy, and shale	245	975	Sandstone, gray, lime, and shale	95	2,105
Lime, sandy, lime, and shale	615	1,590	Shale, gray, sandy	148	2,253
Shale, sandy, and broken lime	190	1,780	Lime, sandy, and shale	25	2,278

Well H-4-37

Owner: W. P. Sights. Driller: Newell & Meyers.

Gravel, clay, and caliche	73	73	Clay, loose	22	112
Grayson shale	17	90	Edwards limestone	201	313

Well H-4-38

Owner: Calvin Gray. Driller: Walter Heine.

Eagle Ford shale	58	58	Edwards limestone	21	427
Buda limestone	38	96	Gumbo and white lime	5	432
Trap rock	100	196	Water	7	439
Buda limestone	101	297	Gumbo and white lime	21	460
Grayson shale	109	406			

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-4-41

Owner: R. P. Ingrum. Driller: Walter Heine.

Clay and gravel --------	38	38	Grayson shale ----------	99	650
Chalk, white; little water at 100 feet ----	290	328	No record ----------	54	704
Chalk, blue ----------	38	366	Lime and flint ---------	59	763
Eagle Ford shale -------	109	475	Gumbo ------------------	118	881
Buda limestone ---------	76	551	Water ------------------	3	884
			Lime -------------------	9	893

Well H-4-42

Owner: R. P. Ingrum. Driller: Walter Heine.

Clay and boulders ------	90	90	Grayson shale ----------	96	701
Chalk, white; little water at 146 feet ----	103	193	Lime, white ------------	37	738
Chalk, blue ------------	109	302	Lime, black and chocolate; little oil ----------	318	1,056
Eagle Ford shale -------	213	515	Lime and some flint ----	22	1,078
Buda limestone ---------	90	605	Water ------------------	5	1,083

Well H-4-43

Owner: R. P. Ingrum. Driller: Walter Heine.

Surface soil and white chalk; water at 126 feet ----------	147	147	Grayson shale; water in top of Edwards at 634 feet ----------	90	634
Chalk, blue ------------	135	282	Edwards limestone ------	19	653
Eagle Ford shale -------	187	469			
Buda limestone ---------	75	544			

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-4-44					
Owner: Julian Joplin. Driller: -- Virdell.					
Surface soil	3	3	Eagle Ford shale	280	495
Clay	27	30	Buda limestone	90	585
Clay and gravel	75	105	Grayson shale	110	695
Trap rock	95	200	Edwards limestone	160	855
Austin chalk	15	215			
Well H-4-45					
Owner: Burk Clements. Driller: Carlos Meyers.					
Surface	35	35	Buda limestone	87	504
Gravel	40	75	Grayson shale	96	600
Austin chalk	158	233	Edwards limestone	209	809
Eagle Ford shale	184	417			
Well H-4-47					
Owner: Otto Strubbe. Driller: R. F. Gorman.					
Surface soil	10	10	Buda limestone	82	415
Trap rock	55	65	Grayson shale	96	511
Austin chalk	65	130	Edwards limestone	205	716
Eagle Ford shale	203	333			
Well H-4-48					
Owner: Otto Strubbe. Driller: R. F. Gorman.					
Surface soil	10	10	Eagle Ford shale	188	292
Trap rock and gravel	43	53	Buda limestone	50	342
Austin chalk	51	104			

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-4-52					
Owner: D. Foster. Driller: E. H. Cannon.					
Soil, gravel, and Austin chalk	25	25	Georgetown limestone:		
Chalk, buff and yellow, sandy	75	100	Rock, gray, hard	15	635
Shale, blue, and serpentine	200	300	Limestone, yellow, porous streaks (water)	33	668
Shale, blue	5	305	Clay, dark-gray to black, hard streaks	62	730
Rock, black, very hard, basalt (?)	35	340	Edwards limestone:		
Rock, black; softer than above	106	446	Limestone, hard	6	736
Buda limestone:			Limestone, gray, brown streaks (water)	66	802
Lime, hard, gray	78	524	Edwards limestone; water at 850-860 feet	93	895
Grayson shale:			Shale, black, hard, limy	15	910
Clay, dark-gray	96	620	No record	50	960
Well H-4-54					
Owner: Burk Clements. Driller: Lynn Spurgeon.					
Soil	4	4	Eagle Ford shale, dark-gray and black, hard	205	460
Caliche	41	45	Buda limestone	85	545
Gravel	10	55	Grayson shale	105	650
Caliche and clay, yellow	75	130	Edwards limestone, light-yellow	150	800
Eagle Ford shale, soft	34	164	Lime, cracked (water)	126	926
Eagle Ford shale, hard	91	255			

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-4-55

Owner: Edgar Baker. Driller: Carlos Meyers.

Austin chalk ----------	215	215	Grayson shale ----------	95	805
Eagle Ford shale -------	395	610	Georgetown limestone ---	40	845
Buda limestone ---------	100	710	Edwards limestone ------	50	895

Well H-4-56

Owner: Knowlton Dairy. Driller: Lynn Spurgeon.

Soil -------------------	4	4	Grayson shale ----------	64	825
Caliche, yellow --------	39	43	Edwards limestone, hard-	26	851
Chalk ------------------	139	182	Edwards limestone, soft-	70	921
Eagle Ford shale -------	530	712	Edwards limestone, white	109	1,030
Buda limestone ---------	49	761			

Well H-4-88

Owner: Earl Hutcherson. Driller: A. Serber.

No record --------------	120	120	Buda limestone ---------	85	660
Austin chalk -----------	280	400	Grayson shale ----------	96	756
Eagle Ford shale -------	175	575	Edwards limestone ------	204	960

Well H-4-93

Owner: Vernon Harlan. Driller: Lynn Spurgeon.

Soil -------------------	4	4	Eagle Ford shale -------	185	550
Caliche ----------------	11	15	Buda limestone ---------	90	640
Gravel -----------------	30	45	Grayson shale ----------	100	740
Clay -------------------	10	55	Edwards limestone ------	381	1,121
Austin chalk -----------	310	365	No record --------------	79	1,200

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-4-96

Owner: R. A. Eads. Driller: L. Spurgeon.

Soil	4	4	Clay	44	84
Caliche and clay	32	36	Serpentine and trap rock	746	830
Gravel	4	40			

Well H-5-13, partial log

Owner: Zimel Farms. Driller: M. Fenley.

Soil, black	2	2	Lime, nearly blue	5	173
Austin chalk and Eagle Ford shale:			Grayson shale	90	263
			Georgetown limestone:		
Clay, red	10	12			
			Limestone, yellow (water)	22	285
Clay, yellow, rotten	6	18			
			Edwards limestone:		
Gravel, loose	24	42			
			Limestone, white, hard	15	300
Clay, yellow, and boulders	48	90			
			Limestone, white with yellow streaks	65	365
Buda limestone:					
			Limestone, white, hard; layers of flint, 2 or 3 breaks	25	390
Lime (water)	40	130			
			Flint ledges (water)	10	400
Lime, broken	25	155			
			TOTAL DEPTH		475
Lime, white, soft	10	165			
Lime, blue specks	3	168			

Well H-5-15

Owner: C. S. Bowman. Driller: M. Fenley.

Austin chalk and Eagle Ford shale:			Gravel, loose	20	45
			Limestone, hard	15	60
Soil	3	3			
			Basalt, yellow, rotten	10	70
Clay, white	22	25			

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-5-15--Continued					
Basalt, blue, hard ---	10	80	Clay, yellow, rotten, and boulders -------	30	220
Basalt, yellow, rotten	10	90	Buda limestone:		
Basalt, blue, rotten -	75	165	Lime ----------	65	285
Lime, yellow, hard ---	7	172	Lime, blue specks ----	23	308
Lime, yellow, soft, and clay ----------	11	183	Grayson shale ----------	99	407
Shale, brown ---------	7	190	Georgetown and Edwards limestone; water at 446-515 feet ---------	133	540
Well H-5-52					
Owner: D. H. Hancock. Driller: M. Fenley.					
Leona formation:			Lime, white, hard ----	120	475
Clay, yellow ---------	60	60	Lime, white, hard; beds and layers of flint ----------	20	495
Austin chalk:			Lime, yellow, broken (water) ----------	10	505
Lime, chalky ---------	7	67	Flint, hard, and beds of flint ----------	60	565
Eagle Ford shale -------	58	125	Lime, pinkish --------	10	575
Buda limestone ---------	92	217	Lime, yellow, rotten -	10	585
Grayson shale ----------	73	290	Lime, yellow, sandy(?)	15	600
Georgetown limestone ---	55	345	No record ----------	263	863
Edwards limestone:					
Rock, yellow, broken (water) ----------	10	355			
Well H-5-118					
Owner: -- Driller: Walter Heine.					
Buda limestone, clay, and boulders ---------	72	72	Grayson shale ----------	84	156

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-5-118--Continued					
Edwards limestone ------	14	170	Limestone, creamy, soft, light ----------	27	227
Edwards limestone, white	12	182	Chert ----------	169	396
Edwards limestone, cream	15	197	Water ----------	13	409
Gumbo, break ----------	3	200			
Well H-5-120					
Grayson shale, blue turned yellow at 95 feet ----------	129	129	Edwards limestone ------	96	225
Well H-5-135					
Surface soil ----------	100	100	Grayson shale ----------	110	290
Buda limestone ---------	80	180	Edwards limestone ------	33	323
Well H-5-146					
Surface soil ----------	4	4	Caliche, hard ----------	20	90
Caliche, white ---------	26	30	Edwards limestone, water at 170 feet ----------	100	190
Caliche, yellow --------	40	70			
Well H-5-159					
Surface soil and chalk-	80	80	Grayson shale ----------	90	450
Eagle Ford shale ------	190	270	Edwards limestone ------	120	570
Buda limestone --------	90	360			

Well H-5-120

Owner: Clyde Watkins. Driller: Newell & Meyers.

Well H-5-135

Owner: Zimel Farms. Driller: Walter Heine.

Well H-5-146

Owner: City of Uvalde. Driller: -- Spurgeon.

Well H-5-159

Owner: Ross Lane. Driller: Carlos Meyers.

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-5-160

Owner: E. A. Owen. Driller: Carlos Meyers.

Surface clay	65	65	Grayson shale	95	470
Eagle Ford shale	220	285	Edwards limestone	375	845
Buda limestone	90	375			

Well H-5-163

Owner: U. S. Fish and Wild Life Service. Driller: Walter Heine.

Soil and caliche	10	10	Austin chalk, solid	86	156
Caliche and clay	10	20	Austin chalk	9	165
Clay	10	30	Eagle Ford shale	185	350
Clay and marl	10	40	Buda limestone	90	440
Marl, blue	10	50	Grayson shale	100	540
Gravel (strong flow)	10	60	Edwards limestone	60	600
Austin chalk (little water)	10	70			

Well H-5-164

Owner: Huie H. Butler. Driller: Harvey & L. Spurgeon.

Soil	32	32	Austin chalk, hard	12	140
Austin chalk (some water)	42	74	Austin chalk, broken (water)	20	160
Austin chalk, hard	26	100	Austin chalk, tight	18	178
Austin chalk, broken; water at 115 feet	28	128	Rock, hard	2	180
			Eagle Ford shale	6	186

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-5-165

Owner: Huie H. Butler. Driller: H. Spurgeon.

No record	512	512	Georgetown limestone	20	572
Trap rock	21	533	Edwards limestone	10	582
Grayson shale	19	552	No record	270	852

Well H-5-166

Owner: City of Uvalde. Driller: Lynn Spurgeon.

Top soil	4	4	Buda limestone	98	174
Caliche	34	38	Grayson shale	87	261
Gravel	18	56	Edwards limestone	139	400
Clay	20	76			

Well H-5-168

Owner: City of Uvalde. Driller: Crawford & Roberts.

Clay and soil	30	30	Grayson shale	93	258
Gravel	28	58	Georgetown limestone	3	261
Clay	18	76	Edwards limestone	217	478
Buda limestone	89	165			

Well H-5-169

Owner: City of Uvalde. Driller: Lynn Spurgeon.

Soil	4	4	Grayson shale	90	212
Caliche and clay	36	40	Edwards limestone	18	230
Gravel	25	65	Edwards limestone, white	72	302
Clay, yellow	15	80	Lime, white	223	525
Buda limestone	42	122	Lime and flint	77	602

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-5-170

Owner: City of Uvalde. Driller: Meyers & Spurgeon.

Soil and gravel --------	56	56	Edwards limestone ------	34	140
Grayson shale ----------	39	95	No record --------------	21	161
Edwards limestone, hard-	11	106			

Well H-5-171

Owner: City of Uvalde. Driller: H. Spurgeon.

Soil and gravel --------	66	66	Grayson shale ----------	90	221
Buda limestone ---------	65	131	Edwards limestone ------	44	265

Well H-5-172

Owner: City of Uvalde. Driller: Lynn Spurgeon.

Soil -------------------	4	4	Edwards limestone, hard-	14	205
Clay and caliche -------	26	30	Edwards limestone, cracked (water) --------------	6	211
Gravel -----------------	15	45	Edwards limestone, white	185	396
Buda limestone ---------	53	98	Edwards limestone and flint ----------------	129	525
Grayson shale ----------	93	191			

Well H-5-174

Owner: U. S. Fish and Wild Life Service. Driller: M. Fenley.

Soil -------------------	23	23	Austin chalk -----------	30	390
Gravel -----------------	17	40	Eagle Ford shale -------	97	487
Serpentine, yellow -----	50	90	Buda limestone ---------	87	574
Serpentine, gray -------	240	330	Grayson shale ----------	98	672
Serpentine or basalt, hard ----------------	30	360	Edwards limestone ------	478	1,150

Well H-5-181

Owner: W. H. Kramer. Driller: Alton Echols.

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Top soil	31	31	Eagle Ford shale	200	780
Gravel	19	50	Buda limestone	55	835
Anacacho limestone	43	93	Grayson shale	85	920
Shale, blue	9	102	Edwards limestone; water between 1,008 and 1,070 feet	305	1,225
Serpentine	8	110			
Anacacho limestone	210	320	No record	10	1,235
Chalk	260	580			

Well H-5-186

Owner: Marcel Rambie. Driller: Soil Conservation Service.

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Edwards limestone:			Limestone, white, hard, medium-grained; contains many small gastropods	7	69
Limestone, white, soft, fine-grained; contains calcite veins and tiny black and brown dots; Kingena wacoensis common	53	53	Limestone, white, hard, medium-grained, slightly dolomitic; contains few small gastropods	10	79
Limestone, white, hard, very fine-grained; contains calcite veins, small black dendrites, and pockets of soft, yellow argillaceous material	9	62			

Well H-5-199, partial log

Owner: R. L. Anderson. Driller: Humble Oil & Refining Co.

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Edwards limestone	370	370	Limestone, brown, brownish-gray, and light-tannish-gray, finely crystalline; some oölitic or argillaceous limestone; a little gray shale	50	420
Glen Rose limestone:					

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)
Well H-5-199, partial log--Continued		
Shale, medium-gray, in part very finely sandy, and some tan limestone	10	430
Limestone, brownish-gray, partly soft and marly, and partly hard	10	440
Shale, gray	20	460
Shale and marl, brown to gray, finely laminated, and some brown limestone	25	485
Limestone, light-gray, finely crystalline; some brown shale and limestone in upper 20 feet	115	600
Limestone, light-gray, slightly oölitic, fossiliferous	160	760
Limestone, light-gray to tannish-gray, slightly granular, fossiliferous	100	860
Limestone, light-gray, finely crystalline; white anhydrite common	20	880
Limestone, light-gray, finely crystalline to slightly granular, oölitic, fossiliferous; a few thin seams of marl and shale; first appearance of Orbitolina texana (Roemer) at depths of 1,040-1,060 feet	220	1,100
Limestone, medium- to light-gray, oölitic, fossiliferous, some thin seams of marl and shale; abundant Orbitolina texana (Roemer)	340	1,440
Limestone, light-tan to tannish-gray, finely crystalline to slightly granular or finely oölitic; a few thin seams of marl; fossiliferous-	400	1,840
Limestone, light-gray and brownish-gray, slightly oölitic to slightly granular, fossiliferous	60	1,900
Pearsall formation:		
Limestone, tannish-gray, slightly sandy; some gray sandstone; a little gray shale; contains oyster-shell fragments and cuttings of Orbitolina texana (Roemer)	70	1,970
Limestone, tan	70	2,040
Limestone, gray, slightly glauconitic	40	2,080
Limestone, tan; reported cuttings of Orbitolina texana (Roemer)	20	2,100
Limestone, gray	60	2,160
Limestone, light-gray, partly shaly; interbedded with some gray shale	100	2,260

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)
Well H-5-199, partial log--Continued		
Limestone, gray, partly glauconitic; interbedded with considerable amount gray shale	40	2,300
Shale and limestone interbedded, gray	40	2,340
Sligo formation:		
Limestone, oölitic to dense gray and tan, and partings of gray shale; contains Orbitolina texana (Roemer), Miliolidae, ostracods, and oysters	140	2,480
Limestone, tan to gray, granular to slightly oölitic, partings of gray shale and nodules of anhydrite	20	2,500
Limestone, tan to gray, granular to slightly oölitic, partings of gray shale and nodules of anhydrite; fine-grained light-gray sandstone; contains Orbitolina texana (Roemer)	30	2,530
Limestone, tan to gray, granular to dense or slightly oölitic, partly sandy; contains some gray shale and anhydrite	20	2,550
Hosston formation:		
Sandstone, light-gray to tannish-gray, medium- to fine-grained, alternating with much gray to green shale and sandy shale and some gray sandy limestone; includes some lignite	150	2,700
Sandstone, light-gray to white, fine- to coarse-grained, alternating with some gray to green shale and sandy shale; traces of lignite	450	3,150
Conglomerate, varicolored, alternating with gray, medium- to coarse-grained sandstone, and gray to green shale and sandy shale; some pink shale in lower 100 feet	310	3,460
TOTAL DEPTH		5,015

Well H-5-219

Owner: W. H. Hill. Driller: R. V. Raney.

Soil and clay	34	34	Buda limestone	66	158
Gravel	23	57	Grayson shale	2	160
Clay, yellow	35	92			

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-5-227

Owner: Frank Winslow. Driller: Humble Oil & Refining Co.

Escondido formation ----	130	130	Grayson shale ----------	58	280
Anacacho limestone -----	47	177	Edwards limestone ------	264	544
Fault-zone material ----	27	204	Glen Rose limestone ----	76	620
Buda limestone ---------	18	222			

Well H-5-238

Owner: Sam O'Bryant. Driller: -- Spurgeon.

Soil -------------------	4	4	Buda limestone ---------	75	245
Caliche ----------------	41	45	Grayson shale ----------	110	355
Gravel -----------------	15	60	Edwards limestone ------	345	700
Clay -------------------	40	100	No record --------------	25	725
Eagle Ford shale -------	70	170			

Well H-5-240

Owner: W. R. Painter. Driller: Lynn Spurgeon.

Soil and clay ----------	18	18	Buda limestone ---------	80	400
Gravel -----------------	17	35	Grayson shale ----------	87	487
Austin chalk -----------	120	155	Edwards limestone ------	75	562
Eagle Ford shale -------	165	320			

Well H-5-248

Owner: P. C. Montgomery. Driller: Lynn Spurgeon.

Soil -------------------	5	5	Buda limestone ---------	92	275
Chalk; water at 46 feet-	78	83	Grayson shale ----------	87	362
Eagle Ford shale -------	100	183	Edwards limestone ------	170	532

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-5-265

Owner: R. Harris, well 3. Driller: U. S. Geological Survey.

Soil, dark-brown, clayey	1	1	Clay, gray to brown, less variegated; chips of decomposed limestone; minor sand and gravel content	5	27
Soil, brownish-red, clayey; some fine to medium gravel	3	4	Clay, sandy, variegated, ± 20 percent; secondary calcareous nodules	3	30
Clay, light-brown; some fine to medium gravel, amount decreasing with depth	11	15	Clay, yellow, sandy, ± 30 percent; coarse gravel; angular particles of chert	8	38
Clay, gray, brown, white, variegated; fine to coarse sand; fine to medium gravel; sand and gravel content increases from 3 percent at 15 feet to 10 percent at 20 feet	7	22			

Well H-5-266

Owner: R. Harris, well 2. Driller: U. S. Geological Survey.

Soil, dark-brown, clayey	1	1	Clay, reddish-brown, gray, white; contains coarse sand and fine gravel size and amount of gravel increases with depth; coarse gravel	4	12
Clay, dark-brown to light-yellow, tenacious	7	8			

Well H-5-267

Owner: P. Ehlers, well 2. Driller: U. S. Geological Survey.

Soil, dark-brown, clayey	2	2	Clay, rusty-brown and gray, and some sand and gravel, mostly limestone fragments	10	18
Clay, dark-reddish-brown, and some fine gravel, mostly limestone fragments	6	8	Clay, light-reddish-brown, gravel, and some fine sand and gravel, mostly limestone fragments	6	24

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-5-268

Owner: P. Ehlers, well 1. Driller: U. S. Geological Survey.

Soil, dark-brown, clayey	2	2	Clay, light-reddish-brown, gravelly; stringer of medium gravel at 34 feet; gravel content and size decreases with depth from 40 percent at 34 feet to 10 percent at 37 feet; coarse gravel	3	37
Clay, reddish-brown, silty, and fine gravel, mostly limestone -----	25	27			
Clay, rusty-brown, buff, gray, slightly sandy, about 3 percent of fine gravel, mostly limestone and flint --	7	34			

Well H-5-269

Owner: T. Johnson, well 1. Driller: U. S. Geological Survey.

Soil, black, clayey ----	1	1	Clay, buff to gray, rusty-brown oxidized spots; about 20 percent fine to medium sand; about 5 percent gravel in last 5 feet; coarse gravel ----------	17	25
Clay, light-brown; some fine to coarse sand and fine gravel ------	7	8			

Well H-5-270

Owner: E. E. Capt, well 1. Driller: U. S. Geological Survey.

Soil, black, clayey ----	1	1	Clay, light-brown, and some fine to coarse gravel ----------	5	6

Well H-5-271

Owner: City of Uvalde, well 1. Driller: U. S. Geological Survey.

Soil, black, clayey ---	1	1	Clay, rusty-brown, gray, tan; minor very fine to medium sand containing angular to subrounded quartz grains --------	11	19
Clay, light-brown; some fine to coarse sand and fine gravel ------	7	8			

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-5-271--Continued					
Clay, grayish-white, silty, with rusty-brown spots	6	25	Clay, yellow to buff; some fine sand and gravel; gravel composed of limestone fragments high in iron content and oxidized pieces of pyrite; hole abandoned, still in clay	14	49
Clay, reddish-brown to rusty; 20 to 40 percent coarse sand and fine gravel, sand and gravel content decreases to about 10 percent at 30 feet	10	35			
Well H-6-2					
Owner: Texas Trap Rock Co.					
Leona formation	46	46	Limestone	33	476
Austin chalk and Eagle Ford shale:			Grayson shale:		
First limestone	132	178	Clay, blue; oyster and iron pyrites	9	485
Soft slaty material	29	207	Clay, blue	80	565
Limestone	68	275	Georgetown limestone:		
Rock, black, soft (trace of water)	23	298	Clay, blue; limestone becoming whiter	2	567
Mud, blue	27	325	Limestone	32	599
Mud, blue; hard layers	34	359	Lime, thin veins of water-deposited	10	609
Mud, blue, harder	14	373	Limestone	3	612
Clay, white	20	393	Edwards limestone:		
Slate and blue mud	9	402	Limestone	13	625
Buda limestone:			Clay, white (water)	5	630
Limestone, white, solid	8	410	Clay (Potter's)	135	765
Limestone, white, solid thin, hard	6	416	Limestone, white, soft	20	785
Limestone, white, solid, thicker; soft layer-	27	443			

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-6-2--Continued					
Limestone, light-colored	14	799	Limestone, brownish milky	48	880
Limestone, very hard; water at about 810 feet	8	807	Limestone, whiter, harder, gritty	55	935
Limestone, very hard	20	827	Limestone, whiter, harder, gritty, becoming darker	11	946
Lime, white, sandy	5	832			
Well H-7-3					
Owner: George Lyles. Driller: Union Oil Co.					
Escondido formation:			Sand, saturated	38	474
Sand, coarse	21	21	Lime, gray	43	517
Rock, blue	9	30	Shale, white, sandy	158	675
Shell, hard	22	52	Austin chalk:		
Rock, blue, and hard shells	50	102	Shale, blue, sandy	415	1,090
Sandrock, saturated; oil 11 feet	56	158	Shale, black	10	1,100
Rock, blue; iron pyrites	21	179	Pyrites, some iron	70	1,170
Anacacho limestone:			Eagle Ford shale:		
Sand, saturated	5	184	Shale, white	130	1,300
Rock, blue	5	189	Buda limestone:		
Rock, blue, and iron pyrites	123	312	Lime, white	30	1,330
Rock, blue, hard	18	330	Grayson shale:		
Rock, saturated	40	370	Sand, oil 15 feet	5	1,335
Limestone, white	56	426	Shale, blue	75	1,410
Gas	10	436	Georgetown limestone:		
			Shale, white	90	1,500

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-7-3--Continued					
Edwards limestone:			Glen Rose limestone:		
Lime, white ----------	50	1,550	Sand, white, 5 feet --	6	2,045
Lime, gray ----------	75	1,625	Sand, gas ----------	105	2,150
Sand, oil ----------	75	1,700	Oil, 10 feet ---------	50	2,200
Lime, white ----------	50	1,750	Lime, blue, sandy ----	70	2,270
Lime, blue ----------	100	1,850	Gas, 2 feet ----------	10	2,280
Lime, white ----------	140	1,990	Lime, pink, 3 feet ---	686	2,966
Lime, sandy ----------	12	2,002	Shale, black, 11 feet-	181	3,147
Comanche Peak limestone:					
Lime, blue, sandy ----	37	2,039			
Well H-8-46					
Owner: J. O. Palmer.					
Clay ----------	37	37	Serpentine ----------	3	72
Gravel ----------	32	69			
Well H-8-69					
Owner: J. R. Farr. Driller: Lynn Spurgeon.					
Soil ----------	8	8	Buda limestone ---------	90	475
Chalk ----------	227	235	Grayson shale ----------	80	555
Eagle Ford shale -------	150	385	Edwards limestone ------	49	604
Well H-8-81					
Owner: W. E. Lee. Driller: -- Loessberg.					
Soil ----------	4	4	Clay, sandy ----------	26	38
Caliche ----------	8	12	Gravel, dry ----------	10	48

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-8-81--Continued					
Gravel (water)	8	56	Clay, blue	7	65
Clay, yellow	2	58			

Well H-8-107

Owner: R. Harris, well 1. Driller: U. S. Geological Survey.

Soil, black, clayey; few large pieces of flint	3	3	Clay, gray, brown, white, variegated; coarse gravel; 20 to 30 percent of fine to medium sand	7	20
Clay, dark-brown; some fine gravel	7	10			
Clay, gray to tan, sandy; 15 percent fine to medium sand	3	13			

Well H-8-108

Owner: Dudley Blair, well 1. Driller: U. S. Geological Survey.

Soil, black, clayey	4	4	Clay, gray to brown, variegated, minor sand	4	21
Clay, reddish-brown; some fine to medium gravel; small crystals of calcite	10	14	Clay, gray, some gravel and fine sand	2	23
Clay, gray and brown-spotted, some small calcareous nodules; gravel stringer at top ± 3 inches thick; fine to medium gravel	3	17	Clay, gray and light-brown, silty, and fine to medium gravel	5	28
			Clay, brownish-yellow; ± 20 percent of sand and silt; coarse gravel	4	32

Well H-8-109

Owner: Dudley Blair, well 2. Driller: U. S. Geological Survey.

Soil, dark-brown	4	4	Clay, light-yellowish-brown to pale yellow, very tenacious; slow drilling; abandoned at 25 feet	3	25
Clay, yellowish-brown, white, and black, silty	9	13			
Clay, light-yellowish-brown, sandy	9	22			

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-8-110

Owner: Dudley Blair, well 3. Driller: U. S. Geological Survey.

Soil	1	1	Clay, buff, silty	3	21
Clay, dark-brown to dark-gray, silty	3	4	Clay, buff, silty; disseminated fine gravel and coarse sand	3	24
Clay, light-brown, streaked with orange, silty; contains coarse sand	2	6	Clay, buff, silty; some spotty oxidation; little gravel; very coarse gravel	2	26
Clay, light-reddish-brown to buff; contains a few chalk nodules and coarse sand grains	12	18	No record	3	29

Well H-8-111

Owner: -- Winkle, well 2. Driller: U. S. Geological Survey.

Soil, dark-brown, clayey	4	4	Clay, gray, sandy	5	27
Clay, light-brown to white, variegated	4	8	Clay, sandy; fine gravel; medium to coarse sand-	8	35
Clay, brown, compact, variegated white; contains fine gravel	6	14	Clay, gray and brown, variegated, and coarse gravel	12	47
Clay, gray; contains some organic matter and fine gravel	8	22			

Well H-8-112

Owner: -- Winkle, well 1. Driller: U. S. Geological Survey.

Soil, dark-brown, clayey	1	1	Clay, brown and white variegated, sandy	2	11
Soil, light-brown, clayey; fine to medium sand --	1	2	Clay, brown and white variegated; very little sand	2	13
Clay, light-brown; some medium to fine gravel-	7	9			

(Continued on next page)

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)

Well H-8-112--Continued

Clay, brown and white variegated; fine to medium sand ----------	6	19	Clay, light-brown, about the same as above ----	1	32
Clay, brown to white variegated; very little sand ----------	9	28	Clay, brown to white variegated; fine to medium gravel; fine to coarse sand; 10 to 15 percent sand and gravel content ----------	1	33
Clay, brown to white variegated; fine to medium gravel; fine to coarse sand; ± 10 percent sand and gravel content ----------	3	31	Gravel, coarse ---------	1	34

Well H-8-113

Owner: W. E. Lee, well 1. Driller: U. S. Geological Survey.

Soil, black ----------	2	2	Clay, yellow, silty ----	1	22
Clay, reddish-brown ----	7	9	Gravel, fine to medium, and some sandy clay --	1	23
Clay, light-brown, silty, oxidized ----------	9	18	Clay, yellow to buff, sandy ----------	6	29
Clay, yellow, sandy ----	3	21	Gravel, coarse ---------	1	30

Well H-8-114

Owner: W. E. Lee, well 3. Driller: U. S. Geological Survey.

Soil, black, silty, clayey	4	4	Gravel, coarse ---------	1	10
Clay, reddish-brown ----	5	9			

Well H-8-115

Owner: W. E. Lee, well 2. Driller: U. S. Geological Survey.

Clay, brownish-black, silty ----------	1	1	Clay, pinkish-white; some fine to medium gravel-	4	7
Clay, tan to light-brown, silty ----------	2	3	Gravel ----------	1	8

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-8-116

Owner: W. E. Lee, well 7. Driller: U. S. Geological Survey.

Soil, black, clayey ----	1	1	Clay, reddish-brown, silty, and fine gravel ------	2	4
Soil, brown, clayey; some medium to fine gravel-	1	2	Clay, brown, silty -----	25	29

Well H-8-117

Owner: W. E. Lee, well 4. Driller: U. S. Geological Survey.

Soil, dark-reddish-brown	1	1	Limestone ----------	0	1

Well H-8-118

Owner: W. E. Lee, well 5. Driller: U. S. Geological Survey.

Soil, dark-red, sandy --	2	2	Limestone ----------	1	3

Well H-8-119

Owner: W. E. Lee, well 6. Driller: U. S. Geological Survey.

Soil, black, sandy -----	1	1	Caliche, grayish-white, sandy ----------	2	8
Soil, dark-red, sandy; some fine to medium gravel ----------	3	4	Clay, brown, sandy -----	2	10
Clay, brown, silty -----	2	6	Clay, tan, silty; high calcium content ------	9	19

Well H-9-9

Owner: F. Kincaid. Driller: Humble Oil & Refining Co.

Escondido formation:			Shale, blue, sandy (water) ----------	5	185
Sand, loose ----------	25	25	Shale, blue ----------	30	215
Gravel ----------	25	50	Lime, blue ----------	20	235
Clay, yellow ---------	11	61	Lime, white ----------	25	260
Shale, blue ----------	119	180			

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)
Well H-9-9--Continued		
Lime, gray, gritty ---	10	270
Shale, white ---------	7	277
Shale, gray ----------	8	285
Anacacho limestone:		
Sand, gray; hole full of water ----------	10	295
Sand, brown, fine; considerable gas and dead oil-asphalt --------	25	320
Shale, blue ----------	10	330
Shale, gray ----------	10	340
Lime, white ----------	30	370
Lime, white, broken --	15	385
Shale, sandy ---------	8	393
Shale, blue ----------	32	425
Lime, white ----------	30	455
Shale, blue ----------	20	475
Shale, gray ----------	70	545
Shale, blue ----------	40	585
Shale, gray ----------	10	595
Shale, gray, sandy ---	10	605
Lime, gray -----------	25	630
Shale, blue, sandy ---	10	640
Shale, blue ----------	30	670
Lime, gray -----------	25	695
Shale, blue ----------	50	745
Shale, blue, sandy ----	5	750
Shale, blue ----------	120	870
Austin chalk, Eagle Ford shale, and Buda limestone:		
Shale, blue, sandy (water) ----------	3	873
Shale, blue ----------	87	960
Lime, white ----------	10	970
Shale, blue, sandy; more water at 1,000 feet-	60	1,030
Shale, blue ----------	260	1,290
Shale, blue, sandy ---	60	1,350
Shale, blue ----------	228	1,578
Shale, blue, sandy ---	22	1,600
Shale, blue, and lime shells ----------	30	1,630
Grayson shale:		
Shale, blue, and lime shells ----------	31	1,661
Lime, gray, broken, and shale; run casing and corrected depth ----	19	1,680
Georgetown and Edwards limestone:		
Lime, gray, sandy; sulfur water at 1,680 feet rose nearly to top ------	26	1,706
Lime, gray, hard; flowed while bailing ------	19	1,725
Lime, gray, hard -----	7	1,732

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-9-9--Continued					
Lime, gray, and sand -	6	1,738	Lime and chalk -------	8	1,792
Lime, white ----------	11	1,749	Lime, white ----------	9	1,801
Sand, gray -----------	3	1,752	Lime, and chalk ------	10	1,811
Lime, white, pure ----	7	1,759	Lime -----------------	16	1,827
Lime, gray, and sand -	5	1,764	Lime and chalk -------	4	1,831
Lime, white ----------	6	1,770	Lime -----------------	4	1,835
Lime, white, sandy ---	5	1,775	Lime and chalk -------	17	1,852
Lime -----------------	9	1,784	Lime -----------------	200	2,052

Well H-9-10

Owner: F. Kincaid. Driller: Humble Oil & Refining Co.

Surface ----------	25	25	Shale, blue ----------	25	400
Gravel ----------	55	80	Shale, gray ----------	70	470
Shale, dark (water) ----	40	120	Shale, gray (water) ----	10	480
Shale, dark ----------	15	135	Shale, gray ----------	5	485
Sand, yellow and shale -	10	145	Shale, blue ----------	30	515
Shale, dark ----------	25	170	Sand, gray ----------	5	520
Shale, gray, sandy (water)	25	195	Shale, blue ----------	67	587
Shale, light, sandy ----	50	245	Lime, white ----------	3	590
Shale ----------	30	275	Sand, gray (water) -----	10	600
Shale, blue ----------	55	330	Shale, gray ----------	90	690
Sand, gray (water) -----	10	340	Shale, blue ----------	95	785
Sand, gray ----------	6	346	Gumbo, blue ----------	55	840
Shale, blue ----------	6	352	Sand, gray, and shale (water) ----------	10	850
Lime ----------	23	375			

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

Well H-9-10--Continued

	Thickness (feet)	Depth (feet)
Sand, gray, hard	20	870
Lime, gray, hard	15	885
Gumbo, blue	5	890
Shale, gray	10	900
Sand, gray, and lime	35	935
Sand, shale, and gray lime	40	975
Shale or mud, brown	10	985
Asphalt	15	1,000
Shale, blue	15	1,015
Chlorite	35	1,050
Mud, blue	15	1,065
Shale, blue, and sand	10	1,075
Shale, blue	100	1,175
Asphalt	5	1,180
Chlorite, blue	162	1,342
Chalk, white	27	1,369
Mud, blue	43	1,412
Chlorite, blue	22	1,434
Mud, blue	5	1,439
Chalk, white	16	1,455
Sand, gray, and chalk	10	1,465
Sand and white chalk	24	1,489
Chalk, white	131	1,620
Sand, gray, and chalk (water)	10	1,630
Chalk, white	20	1,650
Chalk, gray	70	1,720
Chalk, white	50	1,770
Sand, gray, and chalk	75	1,845
Lime, gray, sandy	5	1,850
Lime, gray, sandy, hard (Buda limestone)	15	1,865
Shale, black, sandy	35	1,900
Shale, black	80	1,980
Buda limestone:		
Lime, white	90	2,070
Grayson shale:		
Shale, blue	98	2,168
Edwards limestone:		
Lime, gray	6	2,174
Lime, white (water)	26	2,200
Lime, gray, sandy (water)	27	2,227
Lime, white	8	2,235
Lime, gray	7	2,242
Mud, blue	4	2,246
Lime, blue	8	2,254
Lime, white	21	2,275
Lime, gray	20	2,295
Chalk, white	15	2,310
Lime, white	14	2,324

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-9-11

Owner: F. Kincaid. Driller: Ballard & Underwood.

Sand and clay	8	8	Shale	15	450
Rock, hard, and sand	10	18	Gumbo	29	479
Rock and sand	20	38	Rock	2	481
Rock and sand, broken	4	42	Shale and boulders	19	500
Clay, yellow	26	68	Rock	4	504
Rock and sand	2	70	Rock and sand	20	524
Clay, surface	24	94	Shale	21	545
Rock and sand	9	103	Shale, sticky	22	567
Clay and gravel	26	129	Shale	15	582
Rock and sand	10	139	Rock	4	586
Sand and boulders, broken	35	174	Shale and boulders	37	623
Rock and sand	15	189	Shale, sticky	32	655
Lignite	11	200	Rock	5	660
Shale and bculders	2	202	Shale and boulders	19	679
Rock	6	208	Rock, hard, and sand	20	699
Shale and bculders	32	240	Shale, sticky	21	720
Rock	4	244	Rock	4	724
Sand and boulders	46	290	Shale, sticky	28	752
Rock and sand	4	294	Rock	6	758
Shale and bculders	83	377	Shale and boulders	16	774
Rock	17	394	Shale, sticky	31	805
Shale and gumbo	12	406	Rock	5	810
Sand	29	435	Shale and boulders	9	819

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-9-11--Continued					
Rock and sand	6	825	Shale and boulders	5	1,255
Shale, sticky	7	832	Rock and lime	127	1,382
Rock	13	845	Shale, hard, and broken lime	27	1,409
Shale and boulders	14	859	Lime	23	1,432
Sand and boulders	31	890	Chalk	504	1,936
Rock	4	894	Shale, broken, and chalk	72	2,008
Shale, sticky	56	950	Eagle Ford shale	72	2,080
Sand and boulders	10	960	Buda limestone	72	2,152
Shale and gumbo	40	1,000	Lime	12	2,164
Gumbo	90	1,090	Grayson shale	86	2,250
Rock	5	1,095	Georgetown limestone	45	2,295
Shale and boulders	10	1,105	Sand, hard, and pyrite	3	2,298
Gumbo and boulders	45	1,150	Lime and pyrite	2	2,300
Shale and boulders	33	1,183	Lime	3	2,303
Rock	7	1,190	Edwards limestone	348	2,651
Shale and boulders	20	1,210	Lime	121	2,772
Rock, hard, and lime	10	1,220	Lime, broken	42	2,814
Shale and lime, broken	20	1,240	Lime	18	2,832
Rock, hard, and lime	10	1,250			

Well H-9-21

Owner: F. Kincaid. Driller: Humble Oil & Refining Co.

Lime, sandy	20	20	Shale, white	10	110
Clay, yellow	45	65	Sand, gray	15	125
Shale, brown	35	100	Shale, gray	10	135

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

Well H-9-21--Continued

	Thickness (feet)	Depth (feet)
Shale, gray, sandy, and mud	20	155
Sand, gray	15	170
Gumbo, brown	10	180
Gumbo, white	10	190
Sand, gray (water)	10	200
Gumbo, brown	10	210
Gumbo, blue	65	275
Sand, gray	15	290
Lime, white, sandy	35	325
Gumbo, blue	35	360
Sand, brown (water)	10	370
Gumbo, blue	30	400
Sand, gray (water)	15	415
Gumbo, blue	23	438
Sand, gray (water)	20	458
Gumbo, blue	7	465
Gumbo, blue, sandy	30	495
Sand, gray (water)	8	503
Shale, blue	5	508
Lime, blue	17	525
Shale, blue, and mud	40	565
Shale, blue	25	590
Clay, blue	40	630
Shale, blue	80	710
Sand, brown (water)	20	730
Shale, blue (water and gas)	10	740
Sand, gray (water and gas)	15	755
Sand, gray	10	765
Shale, blue, and mud	10	775
Sand, gray, and shale	5	780
Clay, blue, and gumbo	14	794
Sand, gray, and lime	2	796
Clay, blue, and gumbo	4	800
Shale, gray, sandy	15	815
Chlorite, gray	165	980
Lime, gray	5	985
Chlorite, blue	85	1,070
Sand, gray (water)	20	1,090
Chlorite, blue	80	1,170
Chalk, white	54	1,224
Slate, white	11	1,235
Lime, white	18	1,253
Chalk, white	27	1,280
Chalk, blue	5	1,285
Lime, white, sandy	30	1,315
Lime, gray	10	1,325
Chalk, white	35	1,360

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)

Well H-9-22

Owner: F. Kincaid. Driller: Phillips Petroleum Co.

Sand and shale	35	35	Lime and shale	160	2,330
Lime and sand	145	180	Lime	55	2,385
Sand and shale	520	700	Shale and lime	115	2,500
Shale	223	923	Sand	30	2,530
Sand and shale	497	1,420	Lime and sand	143	2,673
Chalk	70	1,490	Lime and shale	67	2,740
Basalt	45	1,535	No record	11	2,751
Chalk	415	1,950	Lime	149	2,900
Shale	190	2,140	No record	53	2,953
Lime	30	2,170			

Well H-9-23

Owner: F. Kincaid. Driller: Phillips Petroleum Co.

Surface soil and sand	60	60	Shale	50	770
Shale	40	100	Sand, limy	30	800
Sand, limy, shaly	110	210	Shale, sandy; shale streaks	55	855
Sand	30	240	Sand (gas)	30	885
Sand, limy	120	360	Shale, sandy	55	940
Shale, sandy	10	370	Shale	80	1,020
Sand	70	440	Sand	30	1,050
Chalk	20	460	Shale	60	1,110
Shale	20	480	Serpentine and shale	20	1,130
Sand, limy; chalk streaks	140	620	Shale, calcite, and pyrite	40	1,170
Sand, shale streaks	100	720			

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Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well H-9-23--Continued					
Serpentine	120	1,290	Shale, sandy streaks	90	1,460
Shale, sandy; pyrite streaks	10	1,300	Shale, sandy	240	1,700
Basalt and serpentine	70	1,370	Shale, sandy, and chalk; calcite streaks	90	1,790
Well H-9-24					
Owner: F. Kincaid. Driller: Phillips Petroleum Co.					
Caliche	20	20	Shale, sandy, asphaltic	70	1,000
Sand and gravel	100	120	Shale, limy	180	1,180
Shale, sandy	4	124	Sand, limy	40	1,220
Sand and sandy shale	26	150	Sand, grainy, and serpentine	470	1,690
Shale	20	170	Chalk	390	2,080
Sand, coarse	50	220	Shale	300	2,380
Shale	60	280	Buda limestone	90	2,470
Sand and broken shale	100	380	Grayson shale	80	2,550
Shale and lignite	60	440	Edwards limestone:		
Sand, limy	30	470	Limestone, white, cherty	445	2,995
Shale	90	560			
Shale and broken sandy lime	370	930			
Well I-4-32					
Owner: Quinn Braden. Driller: T. T. Word, et al.					
Sand	3	3	Clay, yellow	17	42
Clay, red	12	15	Lime, blue	13	55
Gravel and clay	10	25	Shale, blue	40	95

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well I-4-32--Continued					
Lime, sandy	3	98	Lime	20	475
Shale, blue, and lime	27	125	Shale, green	10	485
Shale, green, and lime	25	150	Lime	50	535
Lime, gray, broken	17	167	Shale, gray	15	550
Lime	43	210	Chalk and lime	280	830
Shale, green	48	258	Shale, black	25	855
Lime shells, gray	12	270	Shale, black, and lime	74	929
Shale, green	10	280	Buda limestone, white	76	1,005
Lime, gray	45	325	Grayson shale, blue	72	1,077
Shale, blue	35	360	Edwards limestone	42	1,119
Shale, gray	30	390	Lime	46	1,165
Shale, green	65	455			
Well I-4-34					
Owner: City of Sabinal. Driller: J. W. Roberts.					
Soil	3	3	Austin chalk, and streaks of blue shale; water at 800 feet	490	840
Caliche	15	18	Eagle Ford shale	73	913
Gravel and clay	52	70	Buda limestone, water at 923-935 feet	72	985
Clay, yellow	10	80	Grayson shale	35	1,020
Anacacho limestone:			Georgetown limestone	28	1,048
Lime, black (water)	40	120	Edwards limestone	163	1,211
Hard; chalk streaks	230	350			

Table 6.--Drillers' logs of wells in Uvalde County--Continued

Well I-4-35

Owner: City of Sabinal. Driller: F. Trim & Son.

	Thickness (feet)	Depth (feet)
Anacacho limestone:		
Soil	3	3
Clay, yellow	32	35
Gravel	5	40
Clay, yellow	25	65
Gravel	5	70
Clay, yellow	12	82
Lime	8	90
Shale, blue	30	120
Lime	5	125
Shale, black	5	130
Lime	55	185
Shale, black	5	190
Lime	20	210
Shale, blue	10	220
Lime	5	225
Shale, blue	40	265
Shale, green	15	280
Shell	2	282
Shale, blue	18	300
Austin chalk:		
Shale, white	10	310
Shale, blue	25	335
Shale, white	30	365
Shale, blue	10	375
Shale, white	31	406
Lime	24	430
Slate, white	15	445
Lime; water at 515 feet	70	515
Slate and lime	75	590
Shale, brown	20	610
Lime	20	630
Slate, white	20	650
Lime	35	685
Eagle Ford shale:		
Slate, black	15	700
Shale, brown	65	765
Buda limestone:		
Lime, hard	10	775
Lime, chalky	13	788
Lime, hard	54	842
Grayson shale	73	915
Georgetown limestone; water and sand at 915 feet	25	940
Edwards limestone:		
Lime, white	110	1,050

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

Well I-4-35--Continued

	Thickness (feet)	Depth (feet)
Lime, gray	10	1,060
Lime, white	110	1,170
Lime, gray, and sand	10	1,180
Lime, hard	140	1,320
Limestone	150	1,470
Sandrock	8	1,478
Limestone, crystalline	12	1,490
Limestone, grayish-brown, crystalline	35	1,525
Limestone, grayish-brown and white	20	1,545
Limestone, gray	30	1,575
Limestone, light-gray, chalky	42	1,617
Limestone, gray	11	1,628
Limestone, gray, and marl	19	1,647
Comanche Peak limestone, Walnut clay, and Glen Rose limestone:		
Limestone, light-bluish-gray	23	1,670
Limestone, white	8	1,678
Limestone, white, and light-blue marl	17	1,695
Limestone, gray, and light-blue soft marl	5	1,700
Limestone, gray	10	1,710
Limestone, light-gray, and blue marl containing some gypsum	18	1,728
Limestone, white, and blue marl	36	1,764
Limestone, gray, bluish-gray, and blue marl	56	1,820
Limestone, light-gray, and light-blue marl	92	1,912
Limestone, dark-bluish-gray, and some white limestone	56	1,968
Marl, gray, and light-gray limestone	4	1,972
Marl, grayish-blue	8	1,980
Limestone, gray, and gray marl	20	2,000
Limestone, gray, organic fragmental	80	2,080
Limestone, gray, and bluish-gray shale	18	2,098
Limestone, gray, organic fragmental	9	2,107
Shale, dark-bluish-gray, marly, and light-gray limestone	13	2,120
Limestone, light-gray, and bluish-gray marly shale	15	2,135
Shale, bluish-gray, marly, and light-gray limestone	25	2,160
Limestone, light-gray-	15	2,175

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Well I-4-35--Continued

	Thickness (feet)	Depth (feet)
Shale, gray, marly	10	2,185
Shale, soft, bluish-gray, marly	25	2,210
Limestone, light-gray-	20	2,230
Limestone, light-gray, and bluish-gray marly shale	30	2,260
Limestone, gray	25	2,285
Limestone, light-gray, and some gray marly shale	35	2,320
Limestone, light-gray, porous, and some gray shale	15	2,335
Limestone, light-gray, and dark-gray marly shale	20	2,355
Limestone, light-gray-	98	2,453
Limestone, light-buff-	50	2,503
Limestone, light-buff, crystalline	25	2,528
Limestone, grayish-buff, crystalline	50	2,578
Limestone, fragmental, gray, organic, partly crystalline	27	2,605
Limestone, gray	28	2,633
Limestone, gray, organic fragmental	22	2,655
Limestone, gray	25	2,680
Limestone, gray, organic fragmental	20	2,700

Well I-4-49

Owner: Richard Nunley. Driller: J. A. Green.

	Thickness (feet)	Depth (feet)
Limestone, buff, and calcium veins	15	15
Serpentine, yellow, and calcite	125	140
Serpentine, green	35	175
Serpentine, green, and calcite	130	305
Serpentine and calcite veins	137	442
Limestone and calcite	63	505
Chalk, white, hard	120	625
Chalk, white, soft	25	650
Shale, dark-green, micaceous	400	1,050
Lime, white, hard	45	1,095
Lime, fossiliferous	75	1,170
Marl, buff, fine	75	1,245
Edwards limestone:		
Marl, medium-hard	332	1,577
Lime, gray to buff	253	1,830

(Continued on next page)

Table 6.--Drillers' logs of wells in Uvalde County--Continued

Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)

Well I-4-49--Continued

Glen Rose limestone:			Lime, broken ---------	40	2,310
Lime, broken ---------	50	1,880	Sand ----------	60	2,370
Lime and calcite -----	220	2,100	Sand, broken, and lime	630	3,000
Lime, broken, cavities	50	2,150	Lime, soft ----------	10	3,010
Sand ----------	30	2,180	Sand ----------	190	3,200
Shale ----------	90	2,270	Lime, brown ----------	311	3,511

Well I-7-9

Owner: T. M. Woodley. Driller: Wilcox Oil & Gas Co.

No record ----------	184	184	Chalk (Taylor marl) ----	20	1,710
Wilcox group ----------	196	380	Austin chalk ----------	260	1,970
Midway group ----------	90	470	Austin chalk - Eagle Ford shale transitional zone ----------	120	2,090
Navarro group ----------	660	1,130	Eagle Ford shale -------	100	2,190
Serpentine ----------	260	1,390	Buda limestone ---------	80	2,270
Limestone and altered serpentine ----------	180	1,570	No record ----------	130	2,400
Taylor marl fossils ----	50	1,620	Edwards limestone ------	690	3,090
Limestone and altered serpentine ----------	70	1,690			