TEXAS WATER DEVELOPMENT BOARD

REPORT 150

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GROUND-WATER CONDITIONS IN ANDERSON, CHEROKEE, FREESTONE, AND HENDERSON COUNTIES, TEXAS

By

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Prepared under contract for the
Texas Water Development Board

August 1972

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GROUND-WATER CONDITIONS IN ANDERSON, CHEROKEE, FREESTONE, AND HENDERSON COUNTIES, TEXAS

ABSTRACT

Anderson, Cherokee, Freestone, and Henderson Counties are in the rolling hills and forests of East Texas. The total population of the four counties in 1970 was slightly more than 97,000. The largest cities include Palestine, Jacksonville, and Athens.

The geologic units which constitute the principal aquifers are the Wilcox Group, Carrizo Sand, Queen City Sand, and Sparta Sand. The Wilcox and the Carrizo are much more important than the Queen City and the Sparta. Nearly all the municipal and industrial ground-water supplies are from either Wilcox or Carrizo wells.

Recharge is received by the aquifers from precipitation and streamflow on the outcrops. The aquifers are full to overflowing and most of the recharge is rejected as evapotranspiration and seepage in the stream valleys. For each aquifer the principal controlling factor in the amount of water which can be obtained from wells is the ability of the aquifer to transmit water from its recharge area to points of withdrawal.

Fresh water exists in the Wilcox Group over a wide area, extending from its outcrop in the western part of the four-county area essentially to a line trending northeast-southwest passing through southern Anderson and central Cherokee Counties. The maximum depth of occurrence of fresh water in the Wilcox is in excess of 2,000 feet in south-central Anderson County. Yields of individual wells range from a few gallons per minute to nearly 1,200 gallons per minute, depending upon location and type of construction. Total estimated pumpage from Wilcox wells in 1969 was 5.5 million gallons per day. The estimated total supply available from Wilcox wells is 48 million gallons per day. This estimate is based on the assumption that there will be no interference as a result of increased pumping outside the four-county area. The estimated maximum yield of an individual well ranges up to 1,500 gallons per minute, and the estimated maximum yield of an individual well field ranges up to 12 million gallons per day, depending on location.

Fresh water exists in the Carrizo Sand throughout the area of its occurrence in the four-county area. The water has less mineralization northwest of the Mount Enterprise fault zone. Yields of individual wells range up to 700 gallons per minute. Estimated pumpage from the Carrizo was 5.5 million gallons per day in 1969. The estimated potential yield of the Carrizo to wells is 35 million gallons per day. The estimated maximum yield of an individual well ranges up to 1,500 gallons per minute, and the estimated maximum yield of an individual well field ranges up to ten million gallons per day. The largest well-field yield is available in southeastern Cherokee County, but development of large quantities in this locality would reduce the yield of existing well fields in the Nacogdoches-Lufkin area to the east.

Fresh water occurs in the Queen City Sand over a large area in the central part of the four-county area. Because of its shallow and widespread extent, the Queen City contains the most readily available ground-water supplies over a large area, especially for rural domestic and livestock use. Only about one million gallons per day was pumped from the Queen City in 1969. The estimated potential yield from wells is eight million gallons per day. The estimated maximum yield of an individual well ranges up to 400 gallons per minute and the estimated yield of an individual well field ranges up to 1.5 million gallons per day.

The Sparta Sand has a small potential, mostly in southern Cherokee County. In 1969 the pumpage from the Sparta was about 0.2 million gallons per day. The estimated potential yield to wells is one million gallons per day. Depending upon location, the estimated maximum yield of an individual well ranges up to 500 gallons per minute, and the estimated maximum yield of an individual well field ranges up to one million gallons per day.

No evidence has been found of any serious, widespread contamination of ground water from oil-field brines. Encroachment of brackish water toward centers

of pumping is not a present problem, and there is little likelihood of its becoming a problem in the foreseeable future.

When maximum supplies of water are desired or developments are in areas of borderline quantity or quality, test-drilling programs and the use of pilot production wells are recommended. A more thorough continuing observation program on pumpage and water levels is recommended for the Carrizo and Wilcox aquifers.

GROUND-WATER CONDITIONS IN ANDERSON, CHEROKEE, FREESTONE, AND HENDERSON COUNTIES, TEXAS

INTRODUCTION

Purpose

The purpose of this report is to describe the occurrence, availability, and quality of the ground-water resources of Anderson, Cherokee, Freestone, and Henderson Counties. The report is particularly concerned with sources of moderate to large supplies of water suitable for public supply, industrial, and irrigation uses. Data have also been included, however, which will benefit persons desiring smaller supplies for domestic and livestock use.

It is believed that the report will be helpful as a guide in developing and obtaining the maximum benefits from the available ground-water supplies. In addition, the report is designed to provide information for use by regulatory agencies in protecting the fresh ground water from contamination.

Scope

This investigation has included, insofar as practicable with available data, a complete evaluation of the ground-water resources of each of the aquifers in the four counties. The geology of the water-bearing formations has been studied, together with the quality of water in each formation. A quantitative evaluation has been made of the water available for development from each principal aquifer.

The first phase of the investigation was to compile and study all available reports and records on the ground-water resources of the area. In addition to obtaining reports by the U.S. Geological Survey, the Texas Water Development Board, and others, this work included compilation and analysis of voluminous unpublished records on water wells and oil tests, primarily from the files of the Texas Water Development Board, the U.S. Geological Survey, and this firm.

A new inventory was then made in the field to locate and obtain additional data where necessary on all wells which have been drilled for municipal, industrial, and irrigation purposes, and representative wells used for domestic and livestock supplies. Information on the various wells was obtained from well owners, drillers, and consultants. For each well a determination was made of the formation supplying its water, as indicated by available well records, the geologic map (Bureau of Economic Geology, various dates), and nearby well logs. Depth to water measurements were made in wells where this was practicable, and water samples were taken from numerous wells for chemical analyses. Pumping tests to determine the hydraulic characteristics of the water-bearing formations were made of nearly all wells for which satisfactory tests could be obtained and which had not previously been tested.

Many additional electric logs of water wells and test holes and oil tests were obtained to supplement the logs already in the files of Texas Water Development Board and this firm. Every available log was obtained except in areas where logs are closely spaced in oil fields.

Records of total pumpage were obtained from major ground-water users as well as from the Texas Water Development Board's files. Records of past water levels in wells were obtained from the Texas Water Development Board and U.S. Geological Survey files and from well owners, drillers, and consultants.

All of the available information on the geology and hydrology of the ground-water resources has been analyzed, and the results have been tabulated and/or plotted on maps, cross sections, and graphs and are presented in this report.

The character, thickness, and depth of the water-bearing formations are described. Estimates have been made of the quantities of water which can be developed from each of the principal water-bearing formations, and the amounts of water which can be obtained from individual wells and well fields.

The construction and operating characteristics of existing wells are presented and available pumpage and water-level records are included. Rainfall, streamflow, natural recharge, and natural discharge are described and

discussed in the context of their relationship to the available ground-water resources.

The chemical quality of water in each formation is discussed and presented by means of chemical analyses of water from wells. In addition, interpretations of electric logs have been made to present estimates of the quality of water in the Wilcox Group at depths and in areas where chemical analyses of water from wells are not available. A review has been made of possible contamination problems, and the results of this review are discussed.

Finally, recommendations have been made with respect to a continuing observation program on pumpage, water-level fluctuations, and future development, and on methods for further investigation, especially test drilling, to determine optimum locations and yields of new wells and well fields.

The detailed records on which this report are based have been placed on file with the Texas Water Development Board. These include especially the well schedules on the individual wells and the drillers' and electric logs. Tables 7, 8, 9, and 10 give the most important information on all the wells, but the well schedules for some of the wells give additional information which may be of help in particular problems. All of the drillers' and electric logs are identified in Tables 7, 8, 9, and 10 and their locations are shown on Figures 25, 26, 27, and 28, but because of space limitations the only electric logs which are actually presented in the report are those in the geologic sections in Figures 30, 31, 32, 33, 34, 35, 36, and 37, and the only drillers' logs presented in the report are the representative logs included in Tables 11, 12, 13, and 14.

Area of Investigation

This investigation and report includes all of Anderson, Cherokee, and Henderson Counties. It includes all of Freestone County except a small part of its northwestern corner. Only that part of Freestone County northwest of the Wilcox outcrop (see Figure 29) is not included. The location of Anderson, Cherokee, Henderson, and Freestone Counties is shown on Figure 1.

The four counties are in the rolling hills and forests of East Texas. Farms and ranches predominate in the western two-thirds of the area, while in the eastern one-third, piney woods are common. Altitudes range from about 190 feet along the Trinity River in southeast Freestone County to about 760 feet near Rusk in central Cherokee County. The principal streams are the Trinity River, which separates Anderson and Freestone Counties; the Neches River, which forms the western boundary of Cherokee County and the eastern boundary of Anderson County; and the Angelina River, which forms a portion of the eastern boundary of Cherokee County.

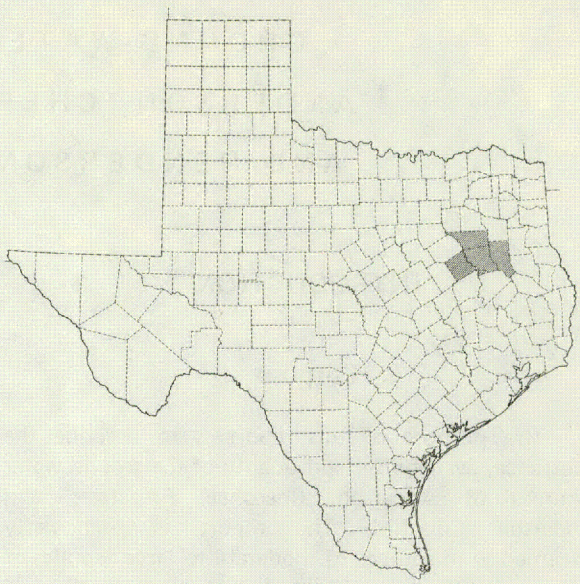


Figure 1.—Location of Anderson, Cherokee, Freestone, and Henderson Counties

Population

According to the U.S. Bureau of the Census, the 1970 county populations were as follows:

	1970 POPULATION
Anderson County	27,789
Cherokee County	32,008
Freestone County	11,116
Henderson County	26,466

The largest towns include Palestine in Anderson County, Jacksonville in Cherokee County, Teague in Freestone County, and Athens in Henderson County, with the following populations in 1970:

	1970 POPULATION
Palestine	14,525
Jacksonville	9,734
Teague	2,864
Athens	9,582

The largest other towns and their populations in 1970 are as follows:

	1970 POPULATION
Anderson County	
Elkhart	997
Frankston	1,056
Cherokee County	
Alto	1,045
Rusk	4,914
Freestone County	
Fairfield	2,074
Wortham	1,036
Henderson County	
Malakoff	2,045
Trinidad	1,079

Climate

The annual precipitation at Palestine, Dialville, Fairfield, and Athens is shown on Figure 2. Dailville is about midway between Jacksonville and Rusk in Cherokee County. The annual precipitation at the four stations has ranged from less than 20 inches, at Fairfield in 1963, to more than 60 inches, mostly at Dialville. The average annual precipitation at Fairfield is nearly 38 inches, and at Dialville it is nearly 46 inches. At Palestine and Athens it is about 40 inches.

Figure 2 also shows the average monthly precipitation and the average monthly temperature for the same stations. The average annual temperature is about 66 degrees Fahrenheit.

Previous Investigations

The earliest reports containing information on ground-water conditions in the four-county area were by Taylor (1907) and Deussen (1914). Records of a few of the earliest deep wells are included in those reports. In the mid-1930's thorough inventories of water wells and springs were made by Chenault (1937) in Freestone County, Cromack (1936) in Cherokee County, and Lyle (1936) in Henderson County. These inventories were conducted under the Works Progress Administration (WPA), and the results were published as mimeographed reports by the Texas Board of Water Engineers in 1936 and 1937. No such inventory was made in Anderson County.

In the 1940's and 1950's, studies were made of several local areas. Sundstrom (1940) and Bennett (1942) reported on conditions in the vicinity of Palestine. Ground-water conditions in the vicinity of Rusk were studied by Clark and Sundstrom (1940). McMillion (1956) made a study of conditions in the Elkhart area in southern Anderson County.

Reconnaissance investigations of the principal aquifers in the Trinity and Neches River basins, which include Anderson, Cherokee, Freestone, and Henderson Counties, were made by the Texas Water Commission, beginning in 1959. These investigations were reported on by Peckham and others (1963) and Baker and others (1963). Also, various consulting studies have been made in the area, particularly for the cities of Palestine and Jacksonville.

A bibliography is included at the end of the text of this report. Listed in the bibliography are the principal reports available on the geology and ground-water resources of Anderson, Cherokee, Henderson, and Freestone Counties, as well as the adjoining counties.

Well-Numbering System

The Texas Water Development Board's statewide well-numbering system is used in this report. As indicated on Figure 3, the system is based on longitude and latitude, with each well being assigned a seven-digit number. In addition, a two-letter county designation prefix is used.

Each 1-degree quadrangle in or overlapping into the State is given a two-digit number from 01 to 89. These are the first two digits of a well number. Each 1-degree quadrangle is further divided into sixty-four 7-1/2-minute quadrangles which are each assigned a two-digit number from 01 to 64. These two digits constitute the third and fourth digits of a well number. Each 7-1/2-minute quadrangle is subdivided into nine 2-1/2-minute quadrangles which are numbered 1 to 9. This is the fifth digit of a well number. Finally, each well within the 2-1/2-minute quadrangles is assigned a two-digit number beginning with 01. These two digits constitute the sixth and seventh digits of a well number.

Each seven-digit well number has a two-letter prefix to identify the county in which the well is located. The prefix for Anderson County is AA, for Cherokee County it is DJ, for Freestone County it is KA, and for Henderson County it is LT.

The four counties are in that part of Texas covered by 1-degree quadrangle numbers 33, 34, 35, 37, 38, and 39. The 7-1/2-minute quadrangles in these counties are as numbered on the location maps, Figures 25, 26, 27, and 28. On these location maps, the

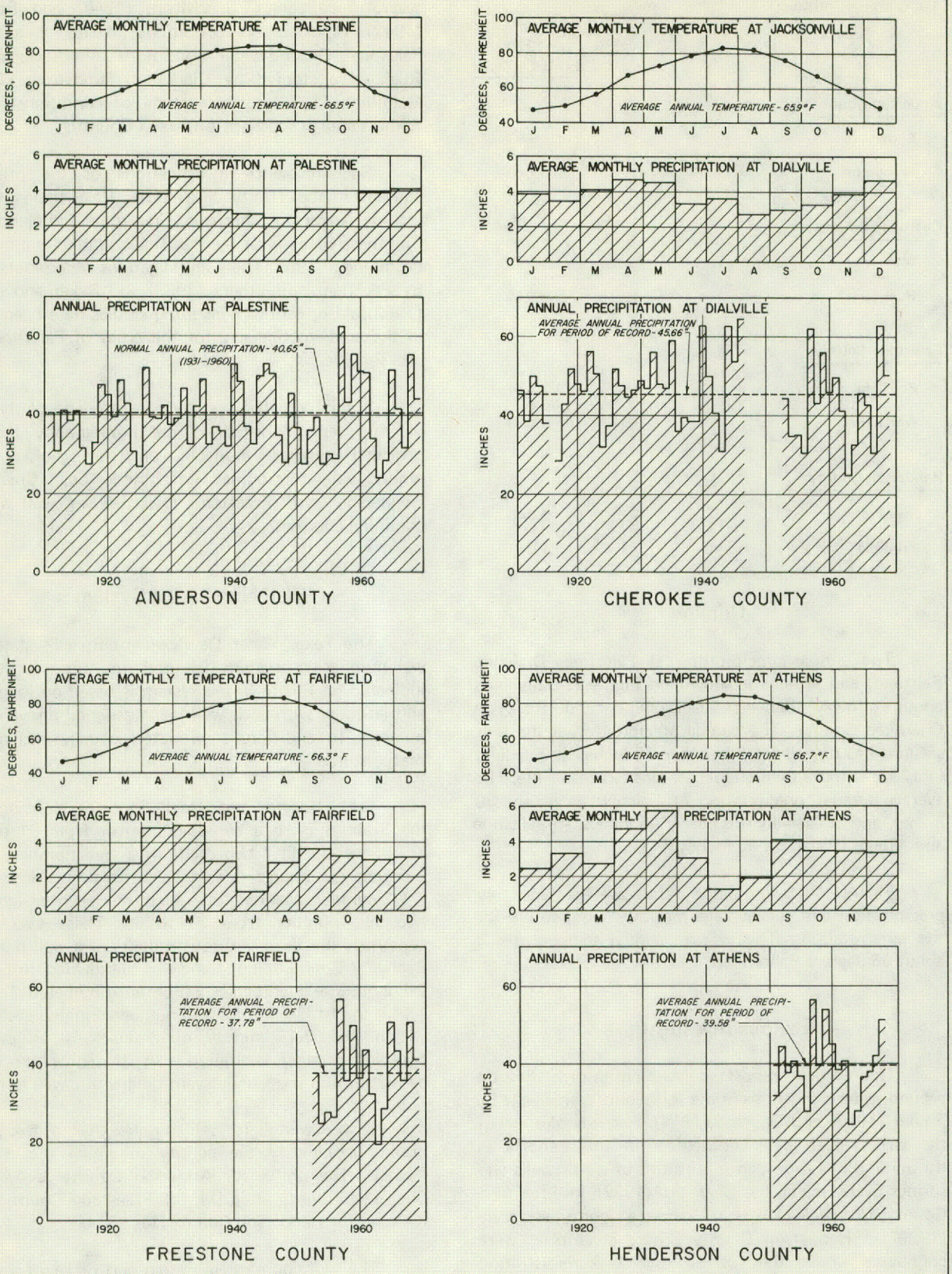


Figure 2

Temperature and Precipitation

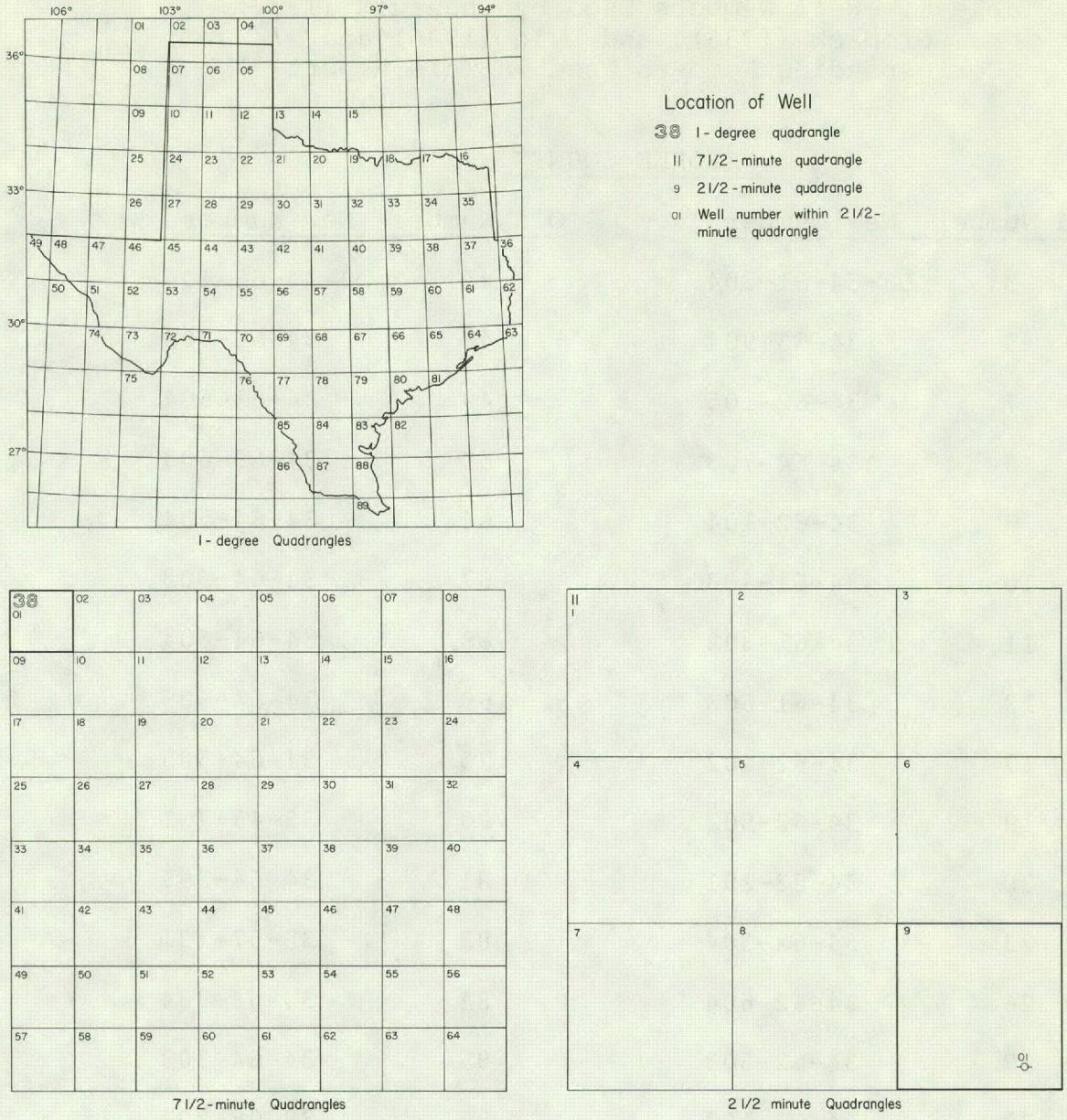


Figure 3.—Well-Numbering System

2-1/2-minute quadrangles are not gridded or numbered, for reason of space limitations. However, their notation occurs as the first digit of the three-digit number beside each well location.

In this report each complete well number is dashed as follows for convenience: AA-38-11-901. This is the designation for the city of Palestine's Water Well No. 1. The number indicates that it is Well 01 within 2-1/2-minute quadrangle 9, within 7-1/2-minute quadrangle 11, within 1-degree quadrangle 38, and within Anderson County.

The present well-numbering system is different from that used in earlier reports by Chenault (1937), Cromack (1936), and Lyle (1936). The numbers used for wells and springs in these earlier reports and the corresponding well numbers used for the same wells and springs listed in this report are given in Table 1.

Acknowledgements

Many persons, agencies, and companies contributed data for this investigation and made wells available for testing. Particular appreciation is expressed to the following: Texas Water Development Board; U.S. Geological Survey; Texas State Department of Health; the cities of Alto, Athens, Elkhart, Fairfield, Frankston, Jacksonville, Malakoff, Palestine, Rusk, Teague, and

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report

CHEROKEE COUNTY

Old Number	New Number	Old Number	New Number
3	DJ-34-61-304	44	DJ-34-63-406
5	34-53-904	48	34-63-903
7	34-62-105	49	34-63-604
8	34-54-703	50	34-63-603
9	34-62-104	64	34-64-504
10	34-61-303	67	34-64-503
11	34-61-302	68	34-64-604
13	34-61-603	69	34-64-605
17	34-62-402	70	34-64-505
19	34-62-502	80	35-49-701
20	34-62-201	81	34-64-305
25	34-62-304	83	35-57-101
26	34-62-604	84	34-64-304
27	34-62-603	85	34-64-303
30	34-63-103	96	38-08-204
31	34-63-104	100	38-08-606
38	34-63-206	101	38-08-303
40	34-63-105	103	38-08-205
43	34-63-405	110	34-64-804

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

CHEROKEE COUNTY--Continued

Old Number	New Number	Old Number	New Number
114	DJ-34-64-706	198	DJ-38-05-604
119	34-64-707	200	38-05-906
124	38-08-106	206	38-05-605
126	38-07-304	208	38-06-406
128	38-07-303	209	38-06-407
131	34-63-902	215	38-06-803
135	34-63-803	234	38-07-406
142	38-07-104	238	38-07-407
156	34-62-901	239	38-07-702
169	38-06-304	244	38-07-803
175	38-06-105	245	38-07-508
176	38-06-405	247	38-07-504
178	38-06-104	249	38-07-505
181	34-61-904	250	38-07-506
183	34-62-805	251	38-07-507
185	34-62-703	252	38-07-804
187	34-61-903	259	38-08-701
189	38-05-303	260	38-07-903
190	38-05-603	263	38-08-403

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

CHEROKEE COUNTY--Continued

Old Number	New Number	Old Number	New Number
265	DJ-38-08-404	322	DJ-38-16-905
266	38-08-502	323	38-16-501
267	38-08-803	325	38-16-604
269	38-08-804	326	38-16-502
271	38-08-503	327	38-16-503
272	38-08-504	329	38-16-203
274	38-08-505	330	38-16-204
277	38-08-607	332	38-16-205
278	38-08-608	333	38-08-805
281	38-08-901	338	38-16-102
301	38-08-902	339	38-16-103
304	38-16-304	341	38-16-504
308	38-16-305	342	38-16-404
309	37-09-103	346	38-16-703
311	38-16-603	351	38-24-303
314	37-09-402	354	38-24-201
317	37-09-703	357	38-24-203
318	37-09-701	368	38-23-305
320	38-16-906	369	38-23-304

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

CHEROKEE COUNTY--Continued

Old Number	New Number	Old Number	New Number
370	DJ-38-23-303	458	DJ-38-07-704
374	38-15-902	459	38-15-103
377	38-16-704	460	38-14-305
389	38-08-702	465	38-14-904
391	38-07-904	466	38-14-905
392	38-07-905	467	38-14-906
394	38-15-303	469	38-14-907
396	38-15-301	470	38-14-505
407	38-23-203	471	38-14-602
409	38-23-104	473	38-14-203
410	38-23-204	474	38-14-306
427	38-15-104	475	38-14-204
429	38-15-504	478	38-06-902
430	38-15-404	481	38-06-804
437	38-23-105	492	38-13-302
438	38-23-405	493	38-14-104
439	38-23-107	494	38-14-105
440	38-22-301	495	38-14-406
450	38-14-604	496	38-14-201

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

CHEROKEE COUNTY--Continued

Old Number	New Number	Old Number	New Number
497	DJ-38-14-506	632	DJ-37-17-402
498	38-14-404	638	38-24-903
501	38-13-901	640	37-17-704
502	38-14-703	642	37-17-403
503	38-14-403	648	37-17-703
506	38-14-504	651	38-24-901
510	38-14-802	657	38-24-801
604	38-23-404	658	38-24-802
607	38-23-403	663	38-23-902
608	38-23-604	668	38-23-705
609	38-23-505	669	38-23-704
611	38-24-404	679	38-32-103
615	38-24-402	681	38-24-706
620	38-24-505	684	38-32-102
626	38-24-502	689	38-32-205
627	38-24-503	690	38-24-805
628	38-24-601	691	38-32-204
630	38-24-504	693	38-32-206
631	38-24-602	694	38-32-302

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

CHEROKEE COUNTY--Continued

Old Number	New Number	Old Number	New Number
695	DJ-37-25-201	721	DJ-37-25-804
697	38-32-505	722	37-25-802
700	38-32-401	723	37-25-902
703	38-32-501	726	37-25-701
707	37-25-402	728	37-33-201
709	38-32-502	730	37-25-703
711	38-32-802	731	38-32-904
714	38-32-905	734	38-40-302
715	38-32-906	735	38-40-301
716	38-32-907	736	37-33-104
720	37-25-803	738	37-33-102

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

FREESTONE COUNTY

Old Number	New Number	Old Number	New Number
24	KA-39-14-803	68	KA-39-22-410
25	39-14-802	75	39-22-203
38	39-22-105	76	39-22-102
40	39-21-605	77	39-22-103
41	39-21-612	79	39-22-204
43	39-21-606	80	39-22-104
44	39-21-607	82	39-14-806
45	39-21-608	83	39-14-805
46	39-21-609	95	39-23-408
49	39-21-610	101	39-22-904
51	39-21-501	103	39-22-905
53	39-21-611	104	39-22-906
56	39-21-601	111	39-22-508
59	39-22-407	112	39-22-509
60	39-22-408	113	39-22-510
62	39-22-409	115	39-22-511
63	39-22-406	122	39-21-902
64	39-22-405	123	39-22-703
65	39-22-404	124	39-22-704

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

FREESTONE COUNTY--Continued

Old Number	New Number
213	KA-39-14-603
215	39-15-402
216	39-15-403
223	39-15-505
237	39-15-404
239	39-15-405
240	39-14-901
245	39-15-704
246	39-15-406
249	39-15-705
250	39-15-804
256	39-15-903
257	39-15-605
260	39-15-602
261	39-15-603
262	39-15-604
266	39-16-405
267	39-16-701
268	39-16-702
269	KA-39-16-704
270	39-16-705
271	39-16-703
274	39-15-904
276	39-15-905
280	39-15-805
282	39-15-806
284	39-15-803
285	39-15-807
300	39-23-504
302	39-23-505
304	39-23-506
305	39-23-507
312	39-23-302
314	39-23-306
316	39-23-307
322	39-23-305
400	39-07-601
402	39-08-101

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

FREESTONE COUNTY--Continued

Old Number	New Number	Old Number	New Number
404	KA-39-08-102	528	KA-38-25-203
405	39-08-401	538	38-25-303
406	39-08-701	540	38-25-304
408	39-08-702	541	38-25-305
409	39-08-703	544	38-26-102
413	39-16-101	546	38-26-104
414	39-16-102	547	38-26-105
418	39-16-203	548	38-26-106
419	39-16-103	606	39-23-605
421	39-16-403	613	39-24-101
424	39-16-404	614	39-24-102
425	39-16-402	616	39-24-202
426	39-16-401	618	39-24-203
517	38-17-402	622	39-24-504
518	38-17-403	625	39-22-501
521	38-17-805	626	39-24-502
524	38-17-704	627	39-24-503
525	38-17-703	629	39-24-402
527	38-25-202	630	39-22-403

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

FREESTONE COUNTY--Continued

Old Number	New Number	Old Number	New Number
631	KA-39-24-401	835	KA-39-30-608
635	39-23-604	836	39-30-607
644	39-24-702	837	39-30-601
648	39-31-303	839	39-31-410
649	39-31-304	841	39-31-102
650	39-31-302	842	39-31-103
667	39-32-206	853	39-31-202
668	39-32-207	858	39-31-203
670	39-32-104	860	39-31-204
675	39-32-208	872	39-30-905
681	38-25-102	873	39-30-603
682	38-25-103	874	39-30-602
692	39-32-502	875	39-30-604
693	39-32-503	877	39-31-405
810	39-23-705	879	39-31-407
814	39-23-706	881	39-31-406
820	39-23-704	882	39-31-408
821	39-23-703	887	39-31-602
824	39-30-302	901	39-39-101

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

HENDERSON COUNTY

Old Number	New Number	Old Number	New Number
8	LT-33-46-102	71	LT-33-47-807
9	33-46-201	101	33-48-102
10	33-46-202	102	33-48-503
12	33-46-203	103	33-48-504
15	33-46-303	109	33-48-613
16	33-46-302	116	33-48-614
20	33-47-104	120	33-48-611
34	33-47-405	121	33-48-903
35	33-47-406	122	33-48-505
37	33-47-402	124	33-48-401
40	33-46-603	137	33-47-906
42	33-46-604	138	33-47-905
43	33-46-503	140	33-47-907
46	33-46-602	143	33-48-803
47	33-46-502	144	33-48-802
54	33-47-408	158	33-55-304
57	33-47-805	160	33-55-305
58	33-47-806	161	33-55-306
68	33-47-702	164	33-55-307

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

HENDERSON COUNTY--Continued

Old Number	New Number	Old Number	New Number
165	LT-33-55-308	225	LT-34-41-804
167	33-56-506	226	34-41-602
170	33-56-407	227	34-41-603
173	33-55-602	229	34-42-106
174	33-55-603	230	34-42-502
177	33-55-604	231	34-42-407
180	33-55-605	232	34-42-707
203	34-42-406	233	34-42-708
204	34-42-105	234	34-42-709
205	34-41-302	237	34-41-904
208	34-41-203	239	34-41-905
210	34-41-407	242	34-41-805
211	34-41-107	243	34-41-806
212	34-41-108	245	34-41-708
214	33-48-303	246	34-41-709
218	34-41-408	261	34-41-707
219	33-48-610	265	34-49-104
220	33-48-612	267	34-41-807
224	34-41-409	279	34-50-505

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

HENDERSON COUNTY--Continued

Old Number	New Number	Old Number	New Number
280	LT-34-50-506	426	LT-34-43-705
290	34-50-102	428	34-43-706
292	34-50-105	429	34-43-703
311	34-49-505	433	34-50-304
314	34-49-506	435	34-50-305
315	34-49-507	436	34-51-105
316	34-49-508	437	34-51-106
318	34-49-606	438	34-51-206
319	34-49-203	439	34-51-303
325	34-49-401	440	34-51-207
402	34-43-506	441	34-51-605
404	34-43-105	502	34-45-101
409	34-42-605	504	34-45-405
413	34-43-704	505	34-45-102
414	34-43-605	508	34-44-204
415	34-43-507	511	34-44-502
417	34-43-606	512	34-44-405
421	34-43-903	513	34-43-607
425	34-43-805	514	34-44-406

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

HENDERSON COUNTY--Continued

Old Number	New Number	Old Number	New Number
515	LT-34-44-407	604	LT-34-52-506
516	34-44-703	606	34-52-505
517	34-44-503	608	34-52-403
518	34-44-501	609	34-52-704
520	34-44-504	612	34-61-106
523	34-44-604	614	34-61-405
527	34-45-703	615	34-61-107
537	34-45-704	619	34-52-804
538	34-44-906	622	34-60-406
543	34-44-704	624	34-60-407
544	34-44-705	628	34-60-408
545	34-51-304	702	34-51-606
546	34-52-105	704	34-51-904
552	34-52-306	706	34-51-505
554	34-52-307	707	34-50-604
556	34-44-905	710	34-50-605
560	34-52-305	715	34-50-804
563	34-52-205	717	34-50-903
567	34-52-404	719	34-51-703

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

HENDERSON COUNTY--Continued

Old Number	New Number	Old Number	New Number
721	LT-34-51-804	803	LT-34-50-404
722	34-51-905	805	34-49-809
723	34-59-203	809	34-49-703
724	34-59-204	810	34-49-704
726	34-59-205	813	34-49-402
728	34-51-704	814	33-56-904
732	34-58-203	816	33-56-905
733	34-58-303	823	34-49-903
735	34-59-106	824	34-57-304
736	34-59-107	825	34-57-305
737	34-59-503	831	34-58-204
740	34-59-304	834	34-58-103
741	34-59-305	842	34-57-504
742	34-59-504	845	34-57-505
743	34-59-505	846	34-57-601
744	34-59-405	847	34-57-602
750	34-58-901	855	34-57-703
751	34-58-604	857	34-57-403
752	34-59-406	862	33-64-604

Table 1.--Well Numbers Used by Chenault (1937), Cromack (1936), and Lyle (1936) and Corresponding Numbers Used in This Report--Continued

HENDERSON COUNTY--Continued

Old Number	New Number	Old Number	New Number
864	LT-33-64-902	919	LT-33-56-803
865	34-57-704	920	33-56-804
867	34-57-705	921	33-56-802
902	33-56-606	922	33-56-705
905	33-56-604	923	33-56-706
908	33-56-507	924	33-56-707
913	33-56-408	926	33-56-708
914	33-56-409	927	33-56-906
917	33-56-704		

Wells; the many rural water supply corporations in the area; drilling contractors including C. C. Innerarity, Layne Texas Company, Neal Drilling Company, Rehkop Drilling Company, R. K. Sims, Texas Water Wells, Frank Ward, and White Drilling Company; consulting engineers including S. M. Cothren and Associates, James C. Duff, K. G. Johnson, and Rady and Associates.

Grateful appreciation is also expressed to Mr. Hubert Guyod, logging consultant, Houston, Texas, for his assistance in estimating the quality of water in the Wilcox Group from electric logs.

INVENTORY OF WATER WELLS

In the course of this investigation, an inventory was made of all existing water wells used for municipal, industrial, and irrigation purposes. In addition, an inventory was made of representative domestic and livestock wells. Information on important test holes and springs was also obtained, and where possible on previous large wells which have been abandoned and destroyed. Figures 25, 26, 27, and 28 show the locations of the wells and springs inventoried. Information on each is listed in Tables 7, 8, 9, and 10.

The records of wells, test holes, and springs inventoried by Chenault (1937) in Freestone County, Cromack (1936) in Cherokee County, and Lyle (1936) in Henderson County have been preserved in this report in those instances where locations could definitely be determined on county road maps prepared by the Texas Highway Department. These earlier records are considered especially important because, for most of the large number of wells, test holes, and springs previously inventoried, results of chemical analyses of water are available. An effort was made to determine their locations as part of this study, and the locations of many could be determined. Others could not be located, either because the wells have long since been abandoned and destroyed or because of inaccuracies in earlier maps. Where necessary, the records of the old wells have been brought up to date.

The well records obtained by the Texas Water Commission during reconnaissance investigations of the ground-water resources in the Neches and Trinity River basins (Baker and others, 1963, and Peckham and others, 1963) were also used and updated in the course of this investigation. Also, many well records were obtained from drillers' reports on file with the Texas Water Development Board, well drillers, consultants, and individual well owners.

ELECTRIC LOGS AND DRILLERS' LOGS

Six hundred and sixty-five electric logs of oil tests, water wells, and test holes were used in this study. The electric logs are especially useful because of the detailed information they reveal concerning the subsurface stratigraphy of the formations and the quality of water in the formations. The lithologic character, depth, thickness, and sand thickness of the formations, as presented in this report, are based largely on studies and correlations of electric logs. The logs are identified in Tables 7 through 10, and copies are on file with the Texas Water Development Board. The numbers of logs used in each county are as follows:

Anderson County	203 logs
Cherokee County	213 logs
Freestone County	106 logs
Henderson County	143 logs

The wells for which drillers' logs are available are indicated in Tables 7 through 10. All of the actual logs are on file with the Texas Water Development Board. Representative drillers' logs of water wells and test holes are given in Tables 11 through 14.

GEOLOGY AS RELATED TO THE OCCURRENCE OF GROUND WATER

General Stratigraphy and Structure

The geologic units containing fresh water in Anderson, Cherokee, Freestone, and Henderson Counties include, from oldest to youngest: rocks of Cretaceous age; Midway Group, Wilcox Group, Carrizo Sand, Reklaw Formation, Queen City Sand, Weches Formation, Sparta Sand, and Cook Mountain Formation, all of Eocene age; and terrace and floodplain deposits of Pleistocene and Recent age. These geologic units have a combined thickness in excess of 4,000 feet in parts of the area and include deposits of continental, deltaic, and marine origin. Each of the units yields some fresh water to wells in one or more of the four counties.

The ranges in thickness, composition, and water-bearing properties of the formations are summarized in Table 2. Table 3 gives the thickness of the Eocene units at several localities within the four counties. The geologic sections (Figures 30 through 37) show the general altitude, depth, thickness, extent, and electric log character of the units, as well as the general quality of the water contained in the sands of the Wilcox, Carrizo, Queen City, and Sparta units.

The geologic map (Figure 29) shows the surface extent of the formations in Anderson, Cherokee, Henderson, and Freestone Counties. This generalized map was prepared directly from more detailed maps published by the Bureau of Economic Geology,

Table 2.--Stratigraphic Units and Their Water-Bearing Properties

Stratigraphic Unit	Approximate Range in Thickness (feet)	Principal Composition	General Water-Bearing Properties
Alluvium	0-50	Sand, silt, and clay, with some gravel.	Yields small quantities of fresh to brackish water.
Cook Mountain Formation	0-125	Clay.	Yields very small quantities of fresh water in outcrop area.
Sparta Sand	0-255	Interbedded sand and clay.	Yields small quantities of fresh water.
Weches Formation	0-155	Clay.	Yields very small quantities of fresh water in outcrop area.
Queen City Sand	0-555	Interbedded sand and clay.	Yields small quantities of fresh water.
Reklaw Formation	0-315	Clay, silt, and sand.	Yields very small quantities of fresh water.
Carrizo Sand	0-220	Massive sand.	Yields small to moderate quantities of fresh water.
Wilcox Group	0-2,710	Interbedded sand, silt, and clay.	Yields small to large quantities of fresh and brackish water.

Table 2.--Stratigraphic Units and Their Water-Bearing Properties--Continued

Stratigraphic Unit	Approximate Range in Thickness (feet)	Principal Composition	General Water-Bearing Properties
Midway Group	1/	Clay.	Yields very small quantities of water in outcrop area.
Rocks of Cretaceous age on Butler, Palestine, and Keechi Domes and in extreme northwestern Henderson County	1/	Clay, limestone, and marl.	Yields very small quantities of water in outcrop area.

1/ Not determined.

Table 3. -- Thicknesses of Stratigraphic Units

Stratigraphic Unit	Approximate Thickness of Unit (feet)								
	Anderson County			Cherokee County		Freestone County		Henderson County	
	at Palestine	at Frankston	at Elkhart	at Jacksonville	at Wells	at Fairfield	at Teague	at Athens	at Chandler
Cook Mountain Formation	1/	1/	50	1/	125	1/	1/	1/	1/
Sparta Sand	60	1/	200	50	250	1/	1/	1/	1/
Weches Formation	95	1/	60	70	115	1/	1/	1/	1/
Queen City Sand	450	370	365	360	95	1/	1/	1/	280
Reklaw Formation	175	180	240	210	310	1/	1/	1/	65
Carrizo Sand	100	100	90	90	100	1/	1/	110	100
Wilcox Group	1,550	1,140	1,900	1,500	2,710	700	690	800	980

1/ Not present

University of Texas. Figure 29 also shows the location of the principal faults and fault zones in the area and the locations of the Butler, Palestine, Keechi, and Boggy Creek domes.

The oldest geologic units having surface exposures within the four-county area are of Cretaceous age. These rocks crop out on the Butler, Palestine, and Keechi domes, and in a small area in the northwestern part of Henderson County. Formations of Eocene age occur at the surface over most of the four-county area, with the Wilcox and Queen City having by far the largest outcrop areas. The alluvial deposits of Pleistocene and Recent age are limited to the flood plains and closely associated terrace deposits along the Trinity, Neches, and Angelina Rivers and their principal tributaries. The most extensive alluvial and terrace deposits are those associated with the Trinity River.

The four counties lie across the southern portion of the East Texas embayment, or syncline. This large structural trough is a part of the even larger Gulf Coastal Plain. The East Texas syncline has a dominant influence on the geology and ground-water conditions of the Eocene formations throughout East and Northeast Texas. The axis of the East Texas syncline trends approximately north-south in the report area. It extends through Smith County, just east of the eastern boundary of Henderson County, and continues through Cherokee and Anderson Counties in the general vicinity of the Neches River.

The rocks dip toward the axis of the East Texas syncline from each side. The regional rate of dip of the formations in Henderson County is typically about 20 to 100 feet per mile to the east and east-southeast. Similar conditions exist in western Anderson County and in Freestone County. In northeastern Cherokee County, the dip of the formations is typically about 20 to 100 feet per mile to the west and west-southwest. In extreme southern Cherokee and Anderson Counties, the coastward dip of the Gulf Coastal Plain proper is dominant, and southerly dips of about 50 feet per mile persist in these localities.

There are many local structural features which significantly affect the depth, thickness, and dip of the formations, some of which are shown on Figure 29. Numerous salt domes occur in the study area, with the greatest concentration in the central part of the East Texas syncline. Also, two major zones of faulting cut across separate parts of the four-county area. Thus, locally, conditions are complex, and the exact depths of the formations in many areas cannot always be estimated accurately.

The salt domes result from the upward movement of salt due to differential pressure on deep-seated parent deposits. These upwellings of salt have pushed up, sometimes pierced, and nearly always influenced significantly the position of the overlying beds. The domes which have had the most pronounced effect upon the present day surface geology include the Butler dome in eastern Freestone County and the Palestine and Keechi domes in west-central Anderson County. Atop each of these domes, rocks of Cretaceous age and of the Midway Group have been pushed upward to the extent that they now occur at the surface. Over the Boggy Creek dome, in northeastern Anderson County and the adjoining part of Cherokee County, rocks of the Wilcox Group occur at the surface. Within the four counties there are several other domes, but most have not had as significant an effect on the Wilcox and younger formations as those already mentioned. These other domes and their locations are as follows:

ANDERSON COUNTY	
Concord Dome	11 miles north-northwest of Palestine
Bethel Dome	18 miles northwest of Palestine
Brushy Creek Dome	12 miles north-northeast of Palestine
FREESTONE COUNTY	
Oakwood Dome (extending into Leon County)	16 miles southeast of Fairfield
HENDERSON COUNTY	
La Rue Dome	10 miles east-southeast of Athens

A major zone of faulting, called the Mount Enterprise fault zone, extends from southwestern Anderson County northeastward into Cherokee County and across north-central Cherokee County and on into southern Rusk County. This zone is an irregular belt of faulting ranging in width from one to eight miles. The larger fault displacements range up to at least 600 feet, but more commonly are between about 50 and 200 feet. The faults are particularly significant with respect to ground-water conditions. They act as partial to complete barriers to the movement of ground water. Because of the faults, the quality of water in some areas is poorer than it might otherwise be. Also, the effects of the faults result in substantially larger long-term drawdowns of water levels in wells and well fields, with the largest effects being on those wells and well fields closest to the faults.

In the southwestern part of the Mount Enterprise fault zone, a large fault trough, or graben, occurs. It has been called the Elkhart graben. This structural feature, trending northeast-southwest, is about 16 miles in length and about 4 miles in width. It extends from about 6 miles southwest of the town of Elkhart to about 10 miles northeast of Elkhart (see Figure 29). The rocks in the central block of the graben are downfaulted, by amounts ranging from about 50 to 300 feet, relative to their positions on either side of the graben.

A fault zone known as the Luling-Mexia-Talco zone cuts across the northwestern tips of both Freestone and Henderson Counties (see Figure 29). This fault zone is an important part of the structural pattern of East Texas and is important for its associated oil fields. The surface extent of this zone of faulting lies almost wholly within the outcrop of the Midway Group and older formations, however, and the faulting does not affect the Eocene ground-water reservoirs.

Other areas of faulting exist within the four counties. In comparison with the Mount Enterprise fault zone and the Luling-Mexia-Talco fault zone, all are minor in extent. Most are in the vicinity of the Butler, Palestine, and Keechi domes.

Principal Water-Bearing Formations

The Wilcox Group, Carrizo Sand, Queen City Sand, and Sparta Sand are the most important water-bearing units in Anderson, Cherokee, Freestone, and Henderson Counties. The Wilcox and Carrizo are much more important than the Queen City and Sparta. Nearly all the municipal and industrial ground-water supplies are from either Wilcox or Carrizo wells. The largest capacity wells and the deepest wells in the four-county area are in the Wilcox Group. Large numbers of mostly small-capacity wells draw water from the Queen City because of its widespread surface and near-surface occurrence. Fewer wells tap the Sparta due to its more limited areal extent.

Wilcox Group

The Wilcox Group overlies the Midway Group and occurs at the surface mostly in a broad belt trending approximately north-south across Freestone and Henderson Counties. The Wilcox is a thick unit, and the width of its outcrop in Freestone and Henderson Counties ranges from 10 to 22 miles. In addition, the Wilcox is exposed at the surface in small areas on the Butler, Palestine, Keechi, and Boggy Creek domes, as well as in a few small areas in east-central Cherokee County. Elsewhere east of its outcrop in Henderson and Freestone Counties, the Wilcox occurs in the subsurface beneath younger strata.

The Wilcox consists mainly of interbedded sand, silt, and clay, with minor amounts of lignite. The sands are typically gray and most are relatively thin-bedded, fine-grained, and silty. Locally, however, some of the sands, particularly in the middle to lower part of the Wilcox, are fine- to coarse-grained and very thick-bedded. Individual beds within the Wilcox Group generally cannot be correlated from well to well due to lateral changes in character and thickness. In some areas, however, predominantly sandy zones within the Wilcox or predominently clayey zones do appear to correlate from well to well.

On the Waco Sheet (Bureau of Economic Geology, 1970), the Wilcox outcrop in Freestone County is divided into three formations. They are called from youngest to oldest the Calvert Bluff Formation, the Simsboro Formation, and the Hooper Formation. Of the three formations, the Simsboro typically contains more massive, coarse-grained sands, and in an area to the southwest of Freestone County, the Simsboro is known to be a prolific aquifer. As a part of the present study, an effort was made to differentiate the Simsboro Formation within the four-county area based on electric log characteristics. More electric logs from wells in Freestone County show definable Simsboro sections than do electric logs from wells in any of the other counties. However, even in Freestone County, the percentage of logs showing an easily recognizable Simsboro section is only slightly more than 30 percent. The percentage of logs showing an easily distinguishable Simsboro section in Anderson and Henderson Counties is about 30 percent. On only about 11 percent of the logs in Cherokee County is it possible to differentiate a section probably correlative with the Simsboro as mapped in Freestone County. Accordingly, it is not believed practicable to differentiate the formations of the Wilcox Group in the subsurface for any of the purposes of this report.

Figures 38, 39, 40, and 41 show the depth to the top and altitude of the top of the Wilcox Group. The altitude of the top of the Wilcox ranges from about 500 feet above sea level in northern Henderson County to about 800 feet below sea level in the most southern part of Cherokee County. The thickness of the Wilcox Group increases from the outcrop area toward the southeast across the four-county area. The Wilcox has a thickness of about 800 to 1,100 feet in the subsurface in Henderson and Freestone Counties where its full thickness is present. The Wilcox increases in thickness to about 1,500 feet and then 2,000 feet across central Anderson and central Cherokee Counties. It increases in thickness to more than 2,200 feet in southeastern Anderson County and attains a maximum thickness in the study area of over 2,700 feet in southernmost Cherokee County. Local variations in the thickness of the Wilcox occur in the salt dome areas. The Wilcox thins over those salt domes which were the most active during Wilcox time. These include the Palestine, Keechi, and Boggy Creek domes.

The quality of the water in the Wilcox of the four-county area varies from fresh to brackish to salty both laterally and vertically. The geologic sections, Figures 30 through 37, illustrate the general distribution of the fresh, brackish, and salty water within the Wilcox Group. The thickest fresh water sections or zones within the Wilcox occur in eastern Henderson County, central and northern Anderson County, and northwestern Cherokee County. The Wilcox contains mostly only brackish water in the southern third of Anderson County and the southeastern half of Cherokee County. There is some salty water in the lower part of the Wilcox

Group in some areas in each of the four counties, but the thickest salty water zones are in extreme southeastern Cherokee County.

Figures 42, 43, 44, and 45 show the intervals of the Wilcox Group containing fresh, brackish, and salty water based on interpretations of electric logs. The net sand thicknesses occurring within the fresh and brackish water zones of the Wilcox Group are also shown. Net sand thickness refers to the total thickness of sands suitable for screening in wells. In the fresh water section of the Wilcox the net sand thickness ranges up to 520 feet, but mostly is between 250 and 400 feet. The maximum depth of occurrence of fresh water in the Wilcox is in excess of 2,000 feet.

From the data given on Figures 38 through 45, the elevation of the base of the fresh water zones within the Wilcox can be determined. This is done by subtracting the thickness of the Wilcox Group containing fresh water from the elevation of the top of the Wilcox. Similarly, by subtracting both the thickness of the Wilcox containing fresh water and the thickness of the underlying part of the Wilcox containing brackish water from the elevation of the top of the Wilcox, the elevation of the base of the brackish water in the Wilcox can be determined.

Carrizo Sand

The Carrizo Sand directly overlies the Wilcox Group and occurs at the surface in a narrow belt one-fourth to four miles wide immediately east of the Wilcox outcrop in Freestone, Anderson, and Henderson Counties. Other surface outcrops occur around or near the Butler, Palestine, Keechi, and Boggy Creek and La Rue domes, along several faults of the Mount Enterprise zone in eastern Anderson County and northeast-central Cherokee County, and also in the northeastern corner of Cherokee County.

The Carrizo is typically reddish-brown to light gray and cross-bedded in surface outcrops. In the subsurface, the Carrizo is typically a white, massive, fine- to medium-grained quartz sand. It often contains a few thin clay lenses, but it is not usual for a significant part of the formation to be clay. In drillers' logs, the Carrizo is often described as "white sand," and frequently the notation "cuts good" is given, referring to a relatively fast drilling rate.

The Carrizo is rather uniform in composition and in its character on electric logs over much of the area. This uniformity and a markedly higher resistivity commonly distinguish it on electric logs from the overlying Reklaw and the underlying Wilcox sands. In some localities where little or no resistivity differences exist between the Carrizo and sands of either the Reklaw or Wilcox, and formation samples are not available, picking the upper or lower contacts of the Carrizo is arbitrary. This tends to be the case for the Reklaw-Carrizo contact in many localities in western Henderson County and for the Reklaw-Carrizo contact and Carrizo-Wilcox contact at several scattered locations throughout the report area. In this study the Carrizo determinations from electric logs generally have been made to include only the most massive and resistive of the sands of the possible Carrizo interval. Therefore, some sands of the Carrizo, if they are interbedded with clay, may have been included in the Reklaw or Wilcox. In all cases, the zone picked as Carrizo is believed to correlate with that hydrologic unit which, in much of the East Texas area, typically has a higher permeability than either overlying or underlying sands and is a prolific aquifer.

Figures 46, 47, 48, and 49 show the depth and altitude of the top of the Carrizo Sand. With few exceptions the Carrizo is at relatively shallow depths throughout the area of its occurrence in the report area. A fairly large area where the Carrizo is at moderate depths is in southern Cherokee County, southeast of Alto. Other smaller areas exist. They include the Coon Creek area in southwest Henderson County, the Elkhart graben area in southern Anderson County, and an area north of the Boggy Creek dome, including the common corners of Cherokee, Anderson, and Henderson Counties.

Figures 50, 51, 52, and 53 show the total thickness of the Carrizo as well as the net sand thickness within the formation. The total thickness of the Carrizo ranges from 10 to 220 feet within the report area. The net sand thickness within the Carrizo averages about 90 to 110 feet throughout southern Cherokee, southern Anderson, and in Freestone Counties. The Carrizo has a smaller average net sand thickness in and north of the Mount Enterprise fault zone in Cherokee County, in northeastern Anderson County, and in Henderson County. In these areas the average net sand thickness ranges from about 40 to 80 feet.

Figure 54 shows the localities where the Carrizo Sand has the best water-yielding characteristics and where its water-yielding capabilities are relatively poor. Figure 54 is based on electric log interpretations. It shows the localities where the Carrizo is massive in character and more than 100 feet in total thickness. It also shows those localities where the Carrizo either is less than 50 feet in total thickness or is very broken and clayey in character. It is apparent from Figure 54 that more of the thinner or clayey Carrizo sections exist in Henderson County, in northern Cherokee County, and in northeast Anderson County and that more of the thick and massive Carrizo sections occur in the southern half of the four-county area.

Queen City Sand

The Queen City Sand is an important water-bearing unit within the four-county area more because of its widespread, shallow extent than because

of the size of the supplies available from it. The Queen City is at the surface in a large area extending over the central part of the report area (see Figure 29). Thus, sands of the Queen City contain the most readily available ground-water supplies over a large area, especially for rural domestic and livestock use.

The Queen City directly overlies the Reklaw Formation and consists mostly of alternating beds of very fine- to fine-grained quartz sand and clay. Because of its shallow occurrence, most of the electric logs available do not show the character of the entire section of Queen City present at the log locations. Most show only the lower portion of the Queen City section. Because of lateral changes in character and thickness, individual beds within the Queen City generally cannot be correlated on available electric logs, except in very closely spaced holes.

Figures 55, 56, and 57 show the outcrop of the Queen City Sand, the depth to the base of the formation, the total thickness of the formation, and the net sand thickness within the formation in Anderson, Cherokee, and Henderson Counties. No similar map is included for the Queen City in Freestone County because of its limited extent in that county. The surface extent of the Queen City in Freestone County is shown on Figure 29.

The Queen City occurs at the surface or underlies shallower formations in essentially the following areas: all of western Henderson County; all of Anderson County, except for an area along its western edge and atop a few of the salt domes; and most of Cherokee County, except mainly in areas in northeastern Cherokee County both north and south of the Mount Enterprise fault zone.

The thickness of the Queen City Sand changes markedly within the report area. The thickest sections of the Queen City occur along the axis of the East Texas syncline. The formation thins both east and west of the axis as well as to the south and east across southern Cherokee County. The Queen City is mostly between 200 and 450 feet thick in those parts of the area where it is thickest. Throughout its large outcrop area, its thickness is partly controlled by topography, and it attains a maximum known thickness of 555 feet in a structural depression north of the Boggy Creek dome in the northeastern corner of Anderson County. In southern Cherokee County, the thickness of the formation ranges from 65 to 100 feet.

The net sand thickness within the Queen City, on logs showing its entire thickness, averages between 50 and 60 percent of the total thickness. The net sand thickness ranges from as little as 45 feet in southeastern Cherokee County to more than 300 feet in localities where the Queen City is the thickest.

In Freestone County, the Queen City outcrops to the south of the Butler dome and in an area along the southeastern Freestone County line between Upper Keechi Creek and Buffalo Creek, adjacent to the Oakwood dome. In the vicinity of the Oakwood dome, the Queen City attains a maximum thickness of approximately 200 feet, with about half the formation being sand.

Sparta Sand

The Sparta Sand caps the very tops of a few scattered hills in western Henderson County. It caps some of the highest hills in the northern two-thirds of Anderson and Cherokee Counties. It occurs at the surface in a larger area in southern Anderson County in the vicinity of the Elkhart graben. As a source of water in these areas, however, it is not overly important because of its limited extent and/or high topographic position. In southern Cherokee County, the Sparta is of more than limited importance. South of Alto in Cherokee County, the Sparta outcrops in a belt about three to eight miles wide trending east-west and dipping to the south beneath the Cook Mountain Formation.

The Sparta consists mostly of very fine- to fine-grained quartz sand, clay, and silty clay containing some lignitic beds. Typically about half the total thickness of the formation is sand. Individual sand zones within the Sparta can only rarely be correlated from well to well. Figure 58 shows the depth and altitude of the top of the Sparta at the few localities for which data are available in southern Cherokee County. The total thickness and net sand thickness for the Sparta are also included on Figure 58.

Other Formations

Cretaceous Rocks

Rocks of Cretaceous age occur in the deep subsurface throughout the four-county area, except in a small area in northwestern Henderson County where they occupy a normal position in the Gulf Coastal Plain sequence, or where they have been pushed upwards and at present occur at the surface in small areas atop the Butler, Palestine, and Keechi salt domes. The Palestine Sheet (Bureau of Economic Geology, 1967) indicates that Buda, Woodbine, Eagleford, Austin, Taylor, and Navarro strata have been identified on the Palestine dome; Navarro and Taylor rocks on the Keechi dome; and Navarro rocks on the Butler dome. The Cretaceous strata shown on Figure 29 as outcropping in northwestern Henderson County have been termed the Kemp Clay. The Cretaceous rocks, where present, consist of clay, marl, and chalk with lesser amounts of limestone and sandstone.

No water wells are known that tap the Cretaceous rocks within the four counties except for three shallow dug wells in northwestern Henderson County which apparently tap the Kemp Clay. The presently available geologic map shows the Kemp to be at the surface in the area of the three wells, indicating that the wells draw from the Kemp. However, it is believed possible that a thin, unmapped veneer of alluvial deposits may exist in the area, and if so, could be furnishing water to the wells either exclusively or in combination with the Cretaceous strata. Accordingly, the producing formation for these wells is in question and is indicated as "K?" throughout this report.

Midway Group

The Midway Group overlies Cretaceous rocks and underlies the Wilcox Group. It crops out in northwestern Freestone and Henderson Counties and in small areas atop the Butler, Palestine, and Keechi domes. The Midway consists almost entirely of clay and silt and is largely impermeable. Probably only a few water wells draw any water from the Midway and all are shallow dug wells on the Midway outcrop in northwestern Freestone and Henderson Counties. For some wells in northwestern Henderson County adjacent to the Trinity River, the available geologic map shows the Midway to be at the surface in the area of the wells, indicating the wells draw from the Midway. It is believed possible, however, and even probable in some cases judging from drillers' logs, that a thin unmapped veneer of alluvial deposits may exist in the area. If so, the alluvial deposits may be furnishing the water to the wells either exclusively or in combination with the Midway. For all such wells, the producing formation is shown as "M?" in this report.

Reklaw Formation

The Reklaw Formation overlies the Carrizo Sand and has a maximum thickness of about 315 feet in southern Cherokee County. It thins to the north and west, ranging in thickness from 135 to 240 feet in northern Cherokee County to about 40 to 150 feet in Henderson County. It is about 110 to 190 feet in thickness in central Anderson County and slightly more than 100 feet in eastern Freestone County.

From outcrops in Leon County, Stenzel (1938) divided the Reklaw Formation into two members, with the Marquez Shale being the upper part and the Newby Sand being the lower part. Similar units appear to exist throughout the southern half of the four-county area. There the upper part of the Reklaw is principally clay, with the lower 20 to 70 feet of the formation generally being a silty, glauconitic, fine-grained, quartz sand. In Henderson County and to some extent in northern Anderson and Cherokee Counties, the Reklaw Formation is thinner and of a different character. The thick clays characteristic of the upper part of the Reklaw farther south are not present, and the formation consists principally of interbedded sand and clay. Where such conditions exist, it is not always possible to distinguish with certainty the upper part of Reklaw from the overlying Queen City, or the lower part of the Reklaw from the underlying Carrizo. It is quite often impossible to make the distinction based on drillers' logs. It can usually be done more readily from formation samples than from electric logs. It is considered important to distinguish between the basal Reklaw sands and sands of the underlying Carrizo inasmuch as the Reklaw is probably much less permeable, and also because in parts of the area the Reklaw is believed to contain more mineralized water than that contained in the underlying Carrizo.

Weches Formation

The Weches Formation overlies the Queen City Sand and consists principally of glauconitic clays and silts with some fine-grained sands. In some areas, especially in the central part of Cherokee County, the Weches Formation contains rock with a relatively high iron content. Because of its resistance to weathering, this rock forms high hills and scarps. The Weches outcrops in many, mostly small areas in Anderson and Cherokee Counties. In central Anderson and Cherokee Counties, it typically is capped by the overlying Sparta Sand.

The Weches is 115 to 155 feet thick in the subsurface in southern Cherokee County. Throughout most of the area of its occurrence in Anderson and central and northern Cherokee Counties, however, it is from 50 to 70 feet in thickness. Few wells are known which tap the Weches Formation, and all are probably of very small capacity.

Cook Mountain Formation

In southern Cherokee County and in the Elkhart graben in southern Anderson County, the Cook Mountain Formation occurs at the surface overlying the Sparta Sand. It consists mostly of clay and probably has a maximum thickness on the order of 50 to 100 feet in the heart of the Elkhart graben. In southern Cherokee County, its maximum thickness is estimated to be about 125 feet. Few wells draw from the Cook Mountain and all are probably of very small capacity.

Alluvium

Terrace and floodplain deposits occur along the Trinity, Neches, and Angelina Rivers and their principal tributaries. The most extensive deposits occur along and adjacent to the Trinity River. The alluvium consists of sand, silt, and clay, with some gravel. The alluvium and terrace deposits are believed to attain a maximum

thickness of approximately 50 feet. A few shallow dug wells obtain water from the alluvium and all are of relatively small capacity.

RECHARGE, MOVEMENT, AND NATURAL DISCHARGE OF GROUND WATER

The water-bearing formations receive recharge in their outcrops from precipitation and streamflow. At present, a very large percentage of this recharge is rejected because the formations are full, and the water spills out of them into the stream valleys crossing the outcrops, where it is discharged principally by evapotranspiration but partly by seepage. A very large, unknown amount of recharge is rejected by these means from the four principal aquifers, the Wilcox, Carrizo, Queen City, and Sparta. If the amount of rejected recharge were 2 inches of the total yearly precipitation of 38 to 46 inches, the total rejected recharge would be nearly 300 million gallons per day for these four aquifers. Quite likely the amount is even more.

Some of the recharge moves down the dips of the formations. Under natural conditions, prior to pumping, a very small amount moves generally down the dip of a formation for many miles and along the way slowly seeps upward through confining beds, eventually to be discharged at the land surface through seeps and/or evapotranspiration. For the Wilcox, Carrizo, Queen City, and Sparta aquifers, the total amount moving in such a manner is estimated to be only a few million gallons per day.

Rates of water movement in the formations, where unaffected by pumping wells, range from infinitesimally slow to as much as several hundred feet per year locally. The rates of movement in most of the sand formations, however, are between 10 and 100 feet per year.

Pumping from a well changes the pattern of flow nearby so that water moves into the well from all directions. Figure 4 is a diagrammatic sketch showing recharge from precipitation and streams and the position of the piezometric surface, both prior to pumping and during pumping. A gentle slope of the piezometric surface down the dip of the formation is shown prior to pumping, with a cone of depression sloping toward the well both updip and downdip during pumping. The direction of movement is shown toward the well from both updip and downdip directions during pumping.

Any water which is pumped from wells must be balanced by a reduction in natural discharge, a reduction in the amount of recharge being rejected through seeps and/or by evapotranspiration, or withdrawal of water from storage, or a combination of these. Thus, to have a perennial supply which does not continue to withdraw water from storage and eventually dry up the formation, the pumpage must be balanced by an equal amount of recharge being diverted to the wells. The two major quantitative factors which limit the amount of ground water which can be obtained on a perennial basis, therefore, are the recharge available for interception by pumping and the rate at which water can flow from the recharge area to the wells.

These counties are in an area of high precipitation, and the aquifers are principally artesian and are comprised of sand. In situations of this type, it is very rare to have a shortage of recharge. Nearly always, the limiting factor is the transmissibility of the formation, which controls the amount of head loss, or drawdown of piezometric surface, caused by the water moving from the recharge area to the wells. Conversely, almost always there is a surplus of available recharge and the formations continue to reject recharge in their outcrop areas by returning it to the surface and atmosphere through seepage and evapotranspiration.

Within these four counties, the water table in the outcrop of every aquifer is above the base level of the major streams crossing the outcrop, and its position appears to be controlled by the elevations of the stream valleys. The water table is highest in the divide areas, sloping away from the divides toward the valleys, where most of the evapotranspiration and seepage takes place. The water table also slopes in the direction of the dip of the formation, so that some of the water entering the outcrop can move into and through the artesian portion of the aquifer to be discharged downdip by natural discharge or by wells.

The major streams in and adjacent to the four-county area are shown on Figure 5. Also given on this figure are summaries of available records of streamflow. All of the streams vary widely in flow between dry and wet periods. During very dry periods there is little or no flow in the streams. This means that at these times only a very small part or none of the recharge rejected from the water-bearing formations actually is rejected as seepage into streams. Instead, by far the greatest part of the rejected recharge at these times, as well as at other times, is evapotranspiration where the water tables are shallow in and near the stream valleys.

Also shown on Figure 5 is the average annual runoff for the drainage basin above each gaging station. In the four-county area, the annual runoff averages about 8 inches per year out of a total precipitation of some 38 to 46 inches. Thus, on the order of 30 to nearly 40 inches of the precipitation is (1) consumed by evapotranspiration soon after it falls on the ground, (2) enters the outcrops of the water-bearing formations and then is discharged back to the surface and/or atmosphere, or (3) moves down the dip of the formations.

It is next to impossible with any reasonable amount of investigation to measure the total available

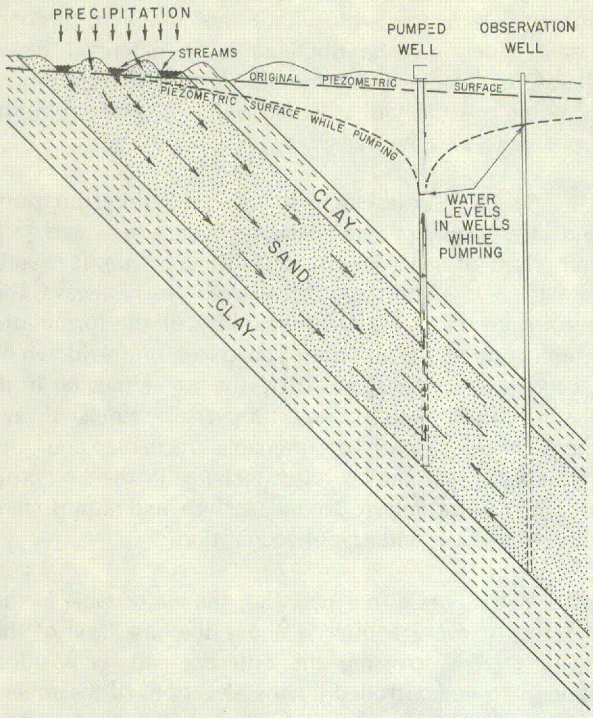


Figure 4.—Diagrammatic Sketch Showing Recharge and Drawdown in Typical Artesian Sand

recharge directly because of the stratification of the formations in their outcrops, the difficulty in obtaining average values for infiltration rates, and the difficulty of obtaining average values for evapotranspiration from the water table. About the only way reliable measurements of the total available recharge can be obtained in an area of this kind is to actually overpump the formation and then determine how much shortage occurs. When this is done, the water table is lowered below the reach of plants throughout the outcrop area, including the stream valleys, and measurements are made of the very slow continuing rate of decline of water level with continued pumping. In these counties, the water tables for the principal aquifers are now essentially as high as they have always been, and it appears certain they can never be lowered to the point of salvaging all rejected recharge, amounting to hundreds of millions of gallons per day, under any practicable arrangement of wells and well yields. In other words, the abilities of the aquifers to transmit water from recharge areas to wells is much more of a limiting factor than the availability of recharge to the formations.

WELL CONSTRUCTION AND DISTRIBUTION

The types of water well construction and the distribution of wells may be determined by a study of Tables 7, 8, 9, and 10 and Figures 25, 26, 27, and 28. Except for dug wells of shallow depth, nearly all of the wells are cased and have screen or slotted pipe opposite the zones from which they draw water. A very few wells are completed open hole. All of these are small in diameter and are low yielding.

The larger municipal and industrial wells have cemented casings and are gravel packed, as illustrated by the drawing of a well belonging to Industrial Generating Company on Figure 6. Smaller wells are usually not cemented or gravel packed and may be as little as two inches in diameter. Most of the largest wells have 14-inch, 16-inch, or 18-inch surface casing and 8-inch, 10-inch, or 12-inch screen and liner.

In recent years a distinctly different pattern of well use and source of supply has occurred in many of the smaller communities and much of the rural area within the four counties. Rural water-supply corporations stemming from a program of the U.S. Department of Agriculture's Farmers Home Administration have been formed. These water-supply corporations distribute water over wide areas. There are 35 water-supply corporations, obtaining their supplies from wells, within the four-county area. Fourteen are in Anderson County, nine in Cherokee County, five in Freestone County, and seven in Henderson County. The water-supply corporations were formed beginning in the middle of the 1960's. By 1967 or 1968, 80 percent of the existing water-supply corporations were in operation. Within the areas served, most of the private wells formerly supplying domestic and livestock requirements have been abandoned. Thus, there are many private domestic and livestock wells which have been abandoned for from three to five years.

There are over 1,300 water wells listed in Tables 7, 8, 9, and 10. About half of the water wells are drilled and half are dug wells. The drilled wells range in diameter from 2 to 20 inches and in depth from less than 50 feet to more than 2,300 feet. The dug wells are of large diameter and are mostly between 20 and 60 feet in depth.

There are 141 public supply wells, 53 industrial wells, and 33 irrigation wells listed in Tables 7, 8, 9, and 10. More than a thousand wells are listed which are currently or were formerly used for domestic and/or livestock purposes. Well yields range from very small up to nearly 1,200 gallons per minute.

More than 80 percent of the water wells in the area are from four water-bearing units, the Wilcox Group, Carrizo Sand, Queen City Sand, and Sparta Sand. There are 563 wells listed as drawing from the Wilcox Group. Of these, 91 are used for municipal purposes and 32 for industrial purposes. There are 12 irrigation wells in the Wilcox. The deepest Wilcox well is 2,355 feet in depth. Reported pumping rates for Wilcox wells range up to 1,176 gallons per minute. Most of the Wilcox wells are in Freestone County and in central Henderson

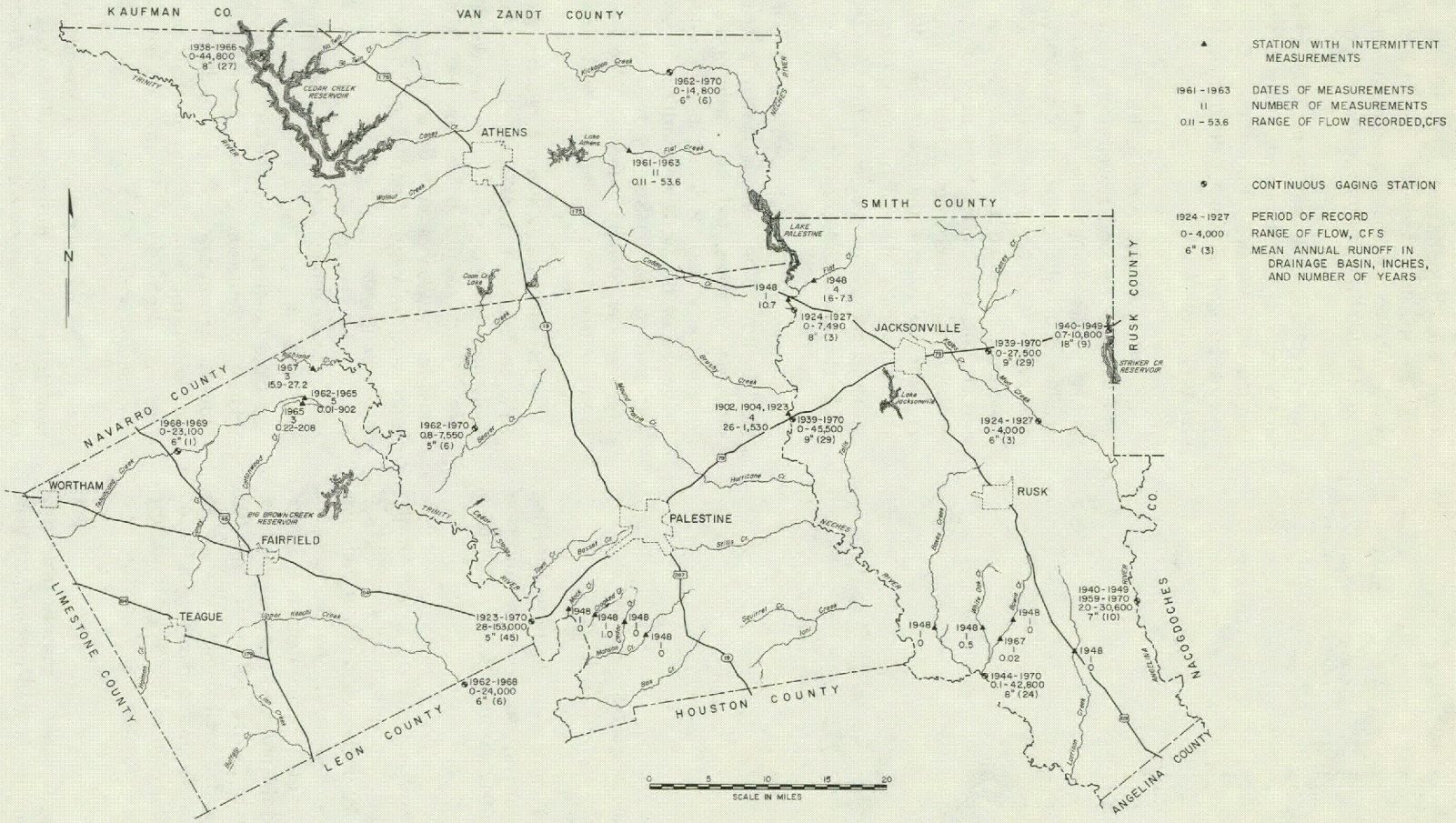


Figure 5

Surface-Water Flow Measurements

Base from Texas State Highway Department county maps

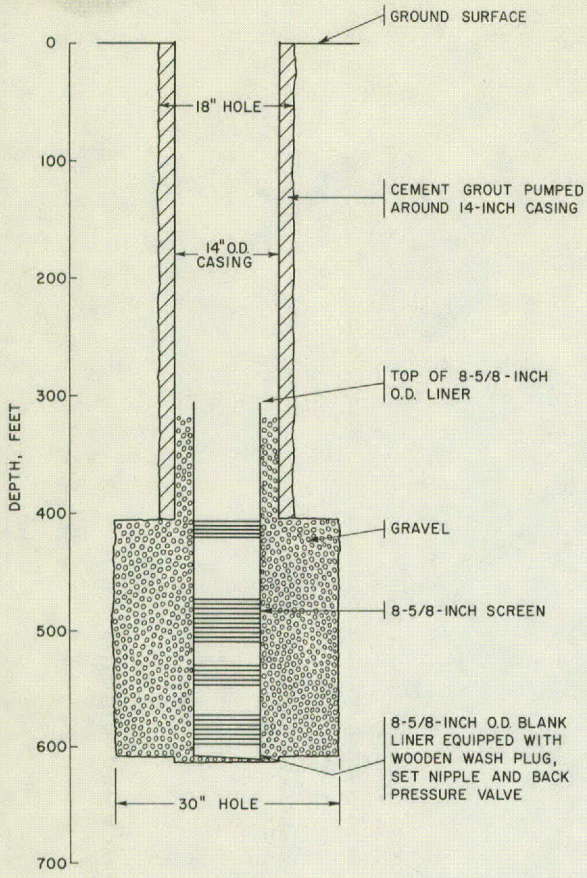


Figure 6.—Construction of Production Well

County. There are no Wilcox wells southeast of a line passing through Slocum in southeastern Anderson County and approximately through Rusk in Cherokee County.

One hundred fifty-five wells are listed for the Carrizo Sand. About half are drilled wells, ranging in diameter from 2 to 18 inches, and about half are large-diameter, shallow dug wells. Of the 155 wells, 30 are used for municipal or other public supplies, 9 are for industrial supplies, and 14 are for irrigation purposes. Reported pumping rates of Carrizo wells range up to 700 gallons per minute. Carrizo well depths range up to 1,060 feet, with most of the larger capacity wells having depths ranging from about 400 to 750 feet. Most of the large-capacity wells are located in Anderson and Cherokee Counties.

There are 322 wells listed as drawing from the Queen City Sand. They are located predominantly in Anderson, Cherokee, and eastern Henderson Counties. Most are shallow dug wells, but some are drilled wells ranging up to 640 feet deep. The greatest reported yield is 72 gallons per minute. There are 11 Queen City wells currently being used for public supply purposes, and one industrial well and one irrigation well.

Seventy-six wells are shown for the Sparta Sand. Most of these are in Cherokee or southern Anderson County. Shallow dug wells predominate. Drilled wells range in depth to 400 feet. There are one industrial well and one irrigation well currently in use. All the other wells listed for the Sparta are currently or were formerly used for domestic and for livestock purposes.

Tables 7, 8, 9, and 10 list 208 wells as drawing from rocks of Cretaceous age, Midway Group, Reklaw Formation, Weches Formation, Cook Mountain Formation, and alluvium. All of these formations are relatively weak aquifers.

Three wells are shown as drawing water from rocks of Cretaceous age, and 32 wells from the Midway Group. All are small-yielding wells. Nearly all are large-diameter, shallow dug wells located in the northwestern tip of Henderson County. For many of these wells, the producing formation is shown as "K?" or "M?" in this report. This is because of the possibility, and even the probability in some cases, that a thin veneer of alluvial deposits may exist in the area of the wells, and that the alluvial deposits may be furnishing water to the wells either exclusively or in combination with the Cretaceous rocks or Midway Group.

There are 82 wells listed as drawing from the Reklaw Formation. One is currently being used for industrial purposes, and the remainder are currently or were formerly used for domestic and livestock purposes. Only nine of the wells were drilled. These range up to 480 feet in depth. Seventy-three of the wells are large-diameter, shallow dug wells. There are no public supply or irrigation wells tapping the Reklaw.

The formation which occurs above the Queen City Sand, the Weches, is mostly clay. Shallow, large-diameter wells have been constructed in the Weches to obtain water for domestic and livestock use. Of the 29 wells listed for the Weches, only six are currently in use. The wells range in depth from 21 to 55 feet, and all are low-yielding wells.

The total number of Cook Mountain wells listed is ten, and all are located in extreme southeastern Cherokee County, except for one well located south of Elkhart in Anderson County. The wells in the Cook Mountain Formation are all large-diameter, dug wells used solely for domestic and livestock purposes. They range in depth from 15 to 50 feet, and all are low-yielding wells.

Of the 52 wells shown for the alluvium, nine are used for industrial purposes. All the rest are used for domestic and livestock purposes or are abandoned. Most of the wells in the alluvium are located in the northwestern part of Henderson County adjacent to the Trinity River, although a few are at scattered locations throughout the four-county area. Typically, the wells in the alluvium are shallow dug wells, mostly between 20 and 60 feet deep. There are 12 drilled wells ranging in

diameter from two to eight inches. All the wells in the alluvium are relatively small-yielding wells.

CHEMICAL QUALITY OF GROUND WATER

The results of available chemical analyses of water from wells listed in Tables 7, 8, 9, and 10 are given in Tables 15, 16, 17, and 18. Included are the results of 1,331 chemical analyses of ground water. Four hundred sixty-five of these analyses were made as a part of this investigation. The other chemical analyses were made in connection with earlier investigations, or were provided by well owners or others who had them made for special purposes. In addition to the analyses listed in Tables 15, 16, 17, and 18, the dissolved-solids contents of water from various wells are given for the different water-bearing formations in Figures 59, 60, 61, 62, and 63. Some of the values for dissolved solids in these illustrations have been estimated from partial analyses. In order to provide better coverage, dissolved-solids contents are included for some wells which were inventoried in previous investigations, but which could not be located in this investigation, and therefore are not included in the tables giving well records or chemical analyses. For these wells the approximate locations as determined from maps in earlier reports are given along with the dissolved solids as reported by, or estimated from, the analyses in those reports.

In addition to sampling and analyzing water from selected wells and compiling previous analyses, the quality of the ground water has been studied by means of electric logs made in water wells, oil wells, and test holes. The electric logs are listed in Tables 7 through 10 and their locations are shown on Figures 25 through 28. Nearly all the water contained in the Sparta, Queen City, and Carrizo Formations is fresh throughout the four-county area. The Wilcox contains large amounts of both fresh water and poor quality water. Where the electric logs are reasonably suitable for interpretation, the quality of water shown by them to occur in the Wilcox Group has been designated as "fresh," "brackish," or "salty." The term "fresh" as used here denotes water of less than 1,000 parts per million dissolved solids. The term "brackish" means water with 1,000 to 3,000 parts per million dissolved solids, and the term "salty" denotes water having more than 3,000 parts per million dissolved solids. The Wilcox interpretations were made with the help of Mr. Hubert Guyod, Logging Consultant of Houston, Texas. Partly because of the basic limitations of electric logs, partly because the original logs were made under a variety of conditions and with various types of equipment, and partly because much of the data necessary for careful control of quality of water interpretations is lacking, the interpretations are considered to be approximations, generally having a possible range of error up to about 30 percent. The interpretations of the electric logs have been used to define the extent of the fresh, brackish, and salty water in the Wilcox. These interpretations are given on Figures 42, 43, 44, and 45.

Some fresh water can be obtained from every formation outcropping within the four-county area. The freshest water normally is obtained from very shallow wells in and near the outcrops, but more highly mineralized water can also be found in these areas. The water normally becomes more highly mineralized with depth and distance downdip from the outcrop or source of recharge. At some distance downdip, each formation contains only salty water. The formations which contain fresh water the greatest distances downdip are those with the greatest transmissibilities and the greatest hydraulic continuity. Those which contain brackish and salty water in the most places are those which are generally the poorest producers of ground water and in which sands are the most disconnected, providing for the least flushing action from recharge.

Wilcox Group

In the outcrop area in Freestone and Henderson Counties and to some extent downdip from the outcrop area, the sands of the Wilcox Group contain mostly fresh water, generally having less than 500 parts per million dissolved solids, with many analyses showing less than 300 parts per million dissolved solids. Farther downdip to the south and southeast the water in the Wilcox typically becomes more mineralized. In Anderson and Cherokee Counties, the available analyses indicate water more in the range of 500 to more than 1,000 parts per million dissolved solids. Southeast of a generally northeast-southwest trending line approximately paralleling the Mount Enterprise fault zone and passing across Anderson County a few miles north of Elkhart and on across Cherokee County, electric logs indicate that sands of the Wilcox contain mostly brackish and salty water, with only relatively thin sands in the uppermost part of the Wilcox in some localities containing any fresh water. In the few places in southeastern Cherokee County where fresh water exists in sands in the uppermost Wilcox, these sands are probably connected with those of the Carrizo which also carry fresh water.

Some tonguing or interfingering of the fresh, brackish, and salty water in the Wilcox is noticeable. In some places brackish water overlies fresh water and in others there is an alternation of zones containing fresh and brackish water. The area where the most significant tonguing appears to occur is generally in a zone approximately parallel to the northeast-southwest trending line described above as passing across Anderson County a few miles north of Elkhart and on across Cherokee County. Some tonguing of fresh, brackish, and salty water is also evident in the vicinities of some of the domes, notably the Butler and Oakwood domes in southeastern Freestone County. The water quality pattern in the Wilcox both in the vicinities of the domes

and along the Mount Enterprise fault zone is, in detail, much more complex than is shown by the available data included in the geologic sections or in Figures 42, 43, 44, and 45.

In a few cases in the outcrop of the Wilcox, water from dug wells is very highly mineralized. Such is the case for a few wells in the outcrops of other formations as well. These are anomalous situations, however, and do not represent the quality of water generally present in the outcrops of either the Wilcox or the other formations. It is believed that the water quality from these wells is due to very local conditions, probably mostly to either lack of flushing of poor quality water principally from clay zones, or the concentration of minerals by evapotranspiration. Such occurrences have no significant bearing on the quality of the water in the Wilcox as a whole.

Normally the hardness of the water in the deep, fresh water Wilcox wells is quite low, generally being less than 20 to 30 parts per million. In shallower wells it may be high or low, ranging in some wells to over 300 parts per million.

Some of the wells in the Wilcox show high iron contents, the amounts ranging up to several parts per million. The analyses for many wells, however, show low iron contents. Generally the wells with the high iron contents are near the outcrop, although some of the wells and test holes downdip also show high iron contents.

The pattern of occurrence of iron in the water from Wilcox wells, as well as from other water-bearing formations in the area, is not clearly shown by the available data. It is believed this is because of the relative ease of obtaining false samples with respect to iron. Very small amounts of turbidity in water, such as from drilling mud where the samples were taken from test holes, are known to give false iron results. Also, most of the water samples collected during this study were obtained from small-diameter, drilled wells from which it was only possible to sample after the water passed through a pressure tank. The same is believed to be true for many of the previous analyses available on smaller capacity wells in the area. For such samples it is impossible to exclude the effects of corrosion from water standing in steel well casings or pressure tanks. In addition, samples of water from pressure tanks or other storage tanks or from dug wells may show iron contents too low because of prior precipitation of the iron. For these reasons many of the iron contents reported in Tables 15, 16, 17, and 18 are suspect and are not considered strictly applicable to the natural water.

Carrizo Sand

The Carrizo Sand contains fresh water throughout the area of its occurrence within the four-county area. It tends to be a continuous, massive sand, and the quality of the water from the Carrizo is very consistent over large areas, as well as from top to botton in the formation. The Carrizo contains water of low dissolved-solids content throughout a large part of the four-county area. Analyses available for wells in Freestone County typically show dissolved-solids contents much less than 200 parts per million. The same is true for the data available in Henderson County and in most of Anderson County. In and south of the Mount Enterprise fault zone in Anderson and Cherokee Counties, the mineralization of the Carrizo water is somewhat higher, typically being between 300 and 700 parts per million dissolved solids. The southern limit of Carrizo water containing less than 1,000 parts per million dissolved solids lies south of Cherokee and Anderson Counties in Angelina and Houston Counties, outside the area covered by this report. Its closest proximity to Cherokee County is estimated to be three to four miles south of the most southern corner of Cherokee County.

The hardness of the Carrizo water is typically low everywhere except near and in its outcrop area, generally being less than 20 to 40 parts per million. In wells in and near its outcrop it may be high or low, ranging in some wells to over 200 parts per million.

A few Carrizo wells produce slightly turbid water. Also in some wells the Carrizo water has a sulfur odor due to minor amounts of hydrogen sulfide. These occurrences appear to be more frequent in the southeastern half of Cherokee County, but do occur in other parts of the four-county area.

Queen City Sand

The Queen City Sand contains water which is typically quite fresh in its outcrop, although a few shallow dug wells contain highly mineralized water. The dissolved-solids contents for Queen City wells normally are below 200 parts per million. Where the Queen City Sand occurs at depth, in southeastern Cherokee County and within the Elkhart graben in southern Anderson County, the dissolved-solids content of the water ranges from less than 200 parts per million to slightly over 500 parts per million. In the extreme southeastern edge of Cherokee County near Wells, the Queen City probably contains even poorer quality water, and interpretation of electric logs indicates that the water is brackish.

Hardness of the Queen City water has a considerable range, but most values are between 20 and 100 parts per million. Objectionable iron staining from the water is commonly reported.

Sparta Sand

Within its outcrop area, the Sparta Sand contains water which is very fresh. Many analyses for wells in

outcrop areas have less than 100 parts per million dissolved-solids. In downdip wells in southeastern Cherokee County, dissolved-solids contents range up to 920 parts per million. Hardness of the water ranges to over 200 parts per million, but most analyses show less than 100 parts per million.

Other Formations

Figures 59, 60, 61, and 63 show the dissolved-solids contents for water from the rocks of Cretaceous age, Midway Group, Reklaw Formation, Weches Formation, Cook Mountain Formation, and alluvium. All of these formations are relatively weak aquifers.

The analyses available for wells listed for the Cretaceous and Midway have a considerable range in dissolved-solids content, extending from very fresh to highly mineralized. As stated earlier, it is possible that many of these wells may produce water in combination with or even exclusively from alluvial deposits.

Analyses are available for Reklaw wells ranging in depth from 10 feet to 480 feet. Most analyses are for wells in the outcrop area. Some wells in the outcrop area contain highly mineralized water, but most of the wells produce relatively fresh water. At downdip locations, the dissolved-solids content for the lower part of the Reklaw ranges up to 775 parts per million. The lower part of the Reklaw, although not a high-yielding aquifer, appears to be hydraulically connected with the Carrizo and therefore contains relatively fresh water to considerable depths. It appears that water in the lower Reklaw at downdip locations in the southern half of the four-county area is more mineralized than that in the Carrizo, and it appears that wherever the Reklaw contains fresh water, the underlying Carrizo also contains as fresh or fresher water.

The Weches and Cook Mountain Formations are essentially clay, and all the wells in these formations are dug wells in the respective outcrop areas. The water from all wells for which data are available is fresh, but the formations are very poor aquifers.

The dissolved-solids contents of water from wells tapping the alluvium range from very fresh to highly mineralized. Available analyses indicate a range from less than 100 to nearly 10,000 parts per million dissolved solids. Existing supplies from the alluvium are small, but in parts of northwestern Henderson County it is the only ground water available.

Surface Water

Records of chemical quality of surface water are available at a few places in Anderson, Henderson, Cherokee, and Freestone Counties. Most of the available analyses show very fresh water. Analyses of water from the Trinity River show somewhat more mineralized water than for most of the other streams in the area. This is mostly a reflection of upstream conditions and not of side inflow to the Trinity within the area.

A few of the small streams in the four-county area have shown abnormally high mineralizations which have been attributed to the past disposal of oil field brines (Leifeste and Hughes, 1967, and Hughes and Leifeste, 1967). These include the lower reaches of Tehuacana and Richland Creeks in Freestone County and the upper reaches of Striker Creek (Bowles Creek) along the Cherokee-Rusk county line.

TEMPERATURE OF GROUND WATER

Figure 7 shows the temperature of water produced by wells of various depths. The data are coded by producing formation. Temperatures shown on the graph are those measured during the present study, as well as the temperatures reported by previous investigators. For each well, the water temperature has been plotted against either the total well depth, or if known, the depth of the middle of the interval screened in the well.

The data shown on Figure 7 indicate that the average temperature gradient in the area is about 1-1/2°F per hundred feet of depth. The water temperature from a depth of 200 feet averages about 70°F, from 900 feet about 80°F, and from 1,500 feet about 90°F.

OIL AND GAS FIELDS

Locations

Numerous oil and gas fields occur in the four-county area. Figure 8 shows the locations of the oil and gas fields. Many of the fields shown on Figure 8 have production from several zones, and separate field designations have been assigned to these zones by the Railroad Commission of Texas. Several of the fields shown on Figure 8 have had no production in recent years. With few exceptions, all the fields were discovered after 1940. Production depths range from about 500 feet for the shallowest pay (Carrizo) in the Slocum Field to over 11,000 feet for the deepest pay (Smackover).

Surface Casing

An act of the Texas Legislature in 1899 required that oil and gas wells be cased to prevent all water from above from penetrating the oil- and gas-bearing rocks. Later acts of 1919, 1931, 1932, and 1935 gave broad

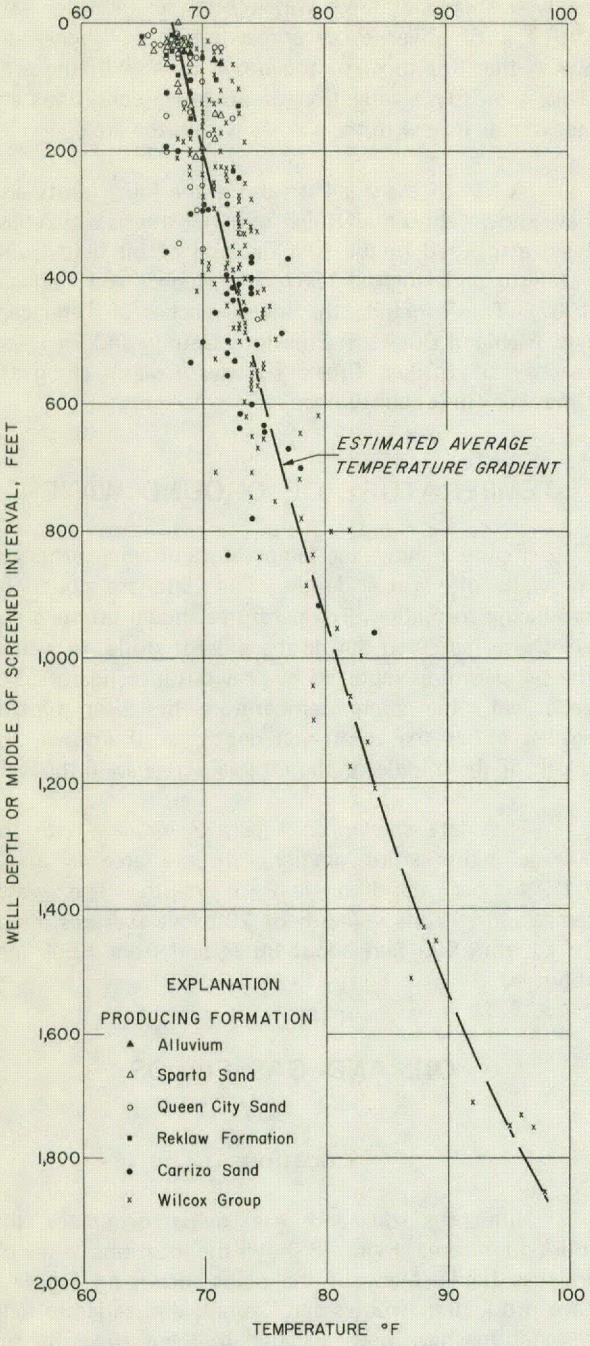


Figure 7.—Temperature of Ground Water

powers to the Railroad Commission of Texas to prevent oil and natural gas and water from escaping from the strata in which they are found into other strata.

The Railroad Commission first handled the determination of the amount of surface casing that should be set in a well. Subsequently, the Texas Board of Water Engineers and its successors, the Texas Water Commission and the Texas Water Development Board, have made recommendations concerning the protection of water considered to be of usable quality. The protection can be by means of surface casing or one of several of the cementing techniques available to the oil and gas industry. Water with dissolved-solids concentrations up to at least 3,000 parts per million is recommended for protection by the Water Development Board. Water with higher mineral concentrations is recommended for protection if it is being used.

Some of the earliest requirements for surface casing in the area probably were not adequate for protection of the ground-water supplies. The recommendations made in recent years, however, appear entirely adequate to protect ground water containing 3,000 parts per million dissolved solids or less. At least by the middle 1950's, the recommendations were generally for protection down to the base of the Wilcox throughout the area. Beginning in the early 1960's, an effort was begun to gather more information so that better recommendations could be given. Recommendations are now given to a depth and not a stratigraphic reference, and in some areas zones of protection are given, together with positions of cement plugs if the hole is abandoned.

For many of the fields in the four-county area, the Railroad Commission has included the depth of fresh water protection in field rules. These field rules were reviewed during the present study with respect to adequacy of the depth of fresh water protection included in the requirements. The depth included in all of the field rules appears to be entirely adequate to protect ground water containing 3,000 parts per million dissolved solids or less.

Plugging of Abandoned Test Holes and Wells

In recent years, the plugging of abandoned test holes and wells has been supervised by the Texas Railroad Commission. Insofar as known, all such holes are adequately plugged. Undoubtedly some of the older test holes and wells were not carefully plugged, but no indication of contamination of ground-water supplies from improper plugging was found during this study.

Disposal of Salt Water

Few records are available on the history of production and disposal of salt water produced from oil and gas wells in the area. Originally all water produced probably was disposed of on the surface either by placing it into surface drainage or into pits. In the 1950's, the disposal of produced salt water by injection wells began. Available records for 1956 show that in Anderson, Cherokee, Freestone, and Henderson Counties the amount of produced salt water disposed of by injection wells was 74, 29, 21, and 13 percent, respectively, of the total water produced. The remainder was disposed of on the surface, either into surface drainage or into pits. Subsequently, disposal by injection wells became increasingly common. By 1962 about 80

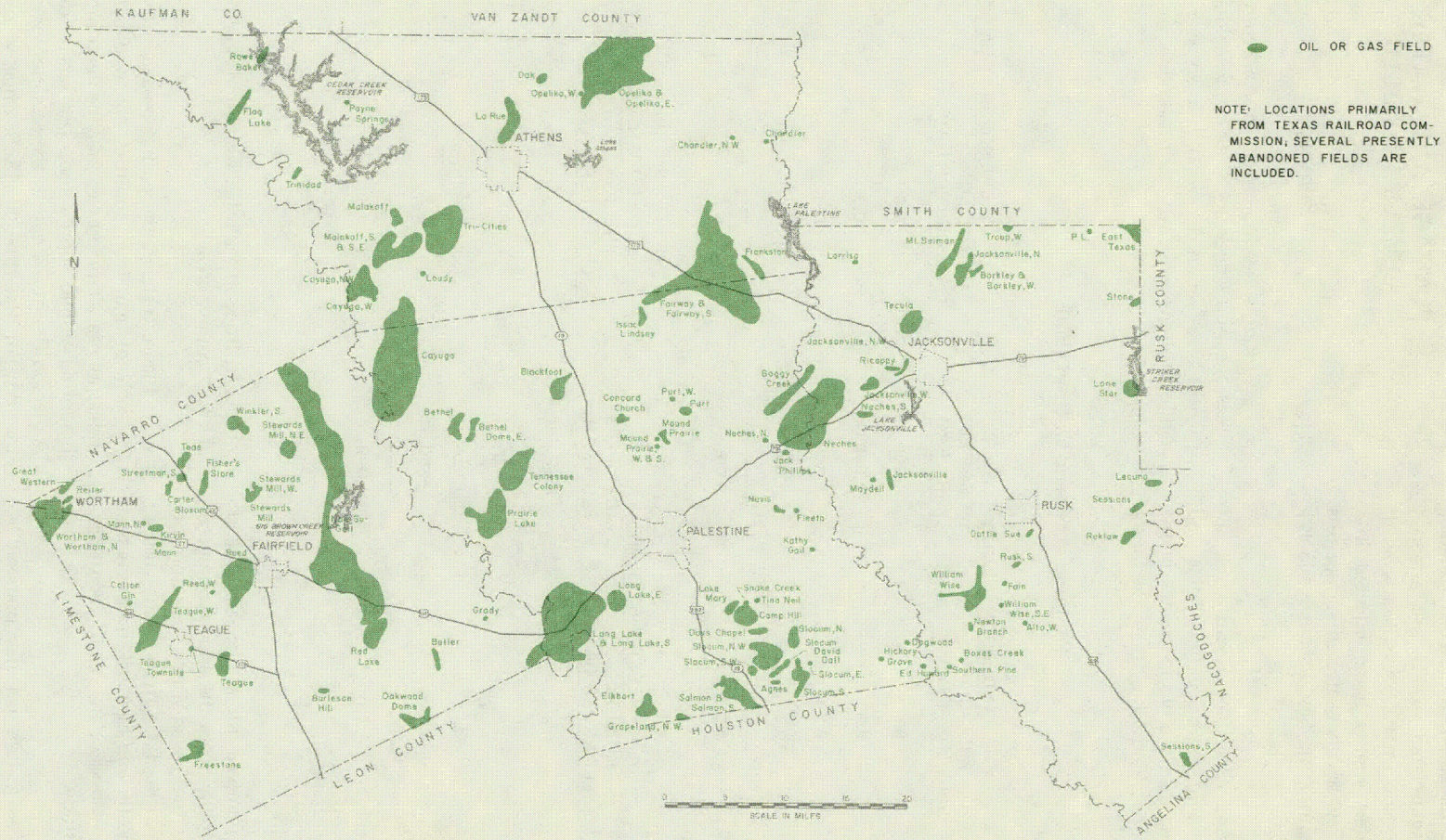


Figure 8

Locations of Oil and Gas Fields

Base from Texas State Highway Department county maps

percent of the salt water produced was disposed of through injection wells. The percentage became even higher in later years.

The Railroad Commission of Texas issued a statewide order banning unlined surface pits effective January 1, 1969. As a result of this order, nearly all of the produced salt water is now being injected into disposal wells. Only a few widely scattered surface pits appeared to be in use during the field checks made as a part of this study in 1970.

Only minor amounts of surface damage from salt water were found in any of the oil and gas fields, and there are no indications that the ground water in the vicinity of any of the fields has been seriously contaminated over wide areas. None of the analyses of water from wells which have been compiled indicates contamination from oil field brines.

PUMPAGE AND WATER LEVELS IN WELLS

Pumpage

Ground-water pumpage in Anderson, Cherokee, Freestone, and Henderson Counties totaled an estimated 14,100 acre-feet in 1969. This is an average of 12.7 million gallons per day. The breakdown by use in each county was:

Pumpage of Ground Water in 1969

USE	ANDERSON COUNTY		CHEROKEE COUNTY	
	MILLION GALLONS PER DAY	ACRE-FEET PER YEAR	MILLION GALLONS PER DAY	ACRE-FEET PER YEAR
Public supply	0.8	900	2.9	3,300
Industrial	2.5	2,800	0.3	300
Irrigation	0.3	300	0.1	100
Rural domestic and livestock	0.9	1,000	1.2	1,300
Total	4.5	5,000	4.5	5,000

USE	FREESTONE COUNTY		HENDERSON COUNTY	
	MILLION GALLONS PER DAY	ACRE-FEET PER YEAR	MILLION GALLONS PER DAY	ACRE-FEET PER YEAR
Public supply	0.6	650	0.8	900
Industrial	1/	1/	0.8	900
Irrigation	1/	1/	1/	1/
Rural domestic and livestock	0.6	650	0.9	1,000
Total	1.2	1,300	2.5	2,800

1/ Amount very small.

The amounts of pumpage for public supply and industrial use are principally from the annual pumpage inventory conducted by the Texas Water Development Board, supplemented with data from some users. Pumpage for rural domestic and livestock purposes has been estimated from census data and conditions observed in the present study.

Of the 12.7 million gallons per day pumped in 1969, about 5.5 million gallons per day was from the Carrizo Sand, with about the same from the Wilcox Group. About one million gallons per day is pumped from the Queen City. Only very small amounts are produced from all the other formations yielding water in the four-county area.

Figure 9 shows the past pumpage of ground water in each of the four counties for public supply and industrial use. The increases over the years mostly reflect mounting public supply use. The recent decrease for Anderson County is due to the cessation of pumping by the city of Palestine in 1969 when a surface-water supply began to be used.

The areal distribution of the major pumpage for 1969 is shown on Figure 10. Included are all users

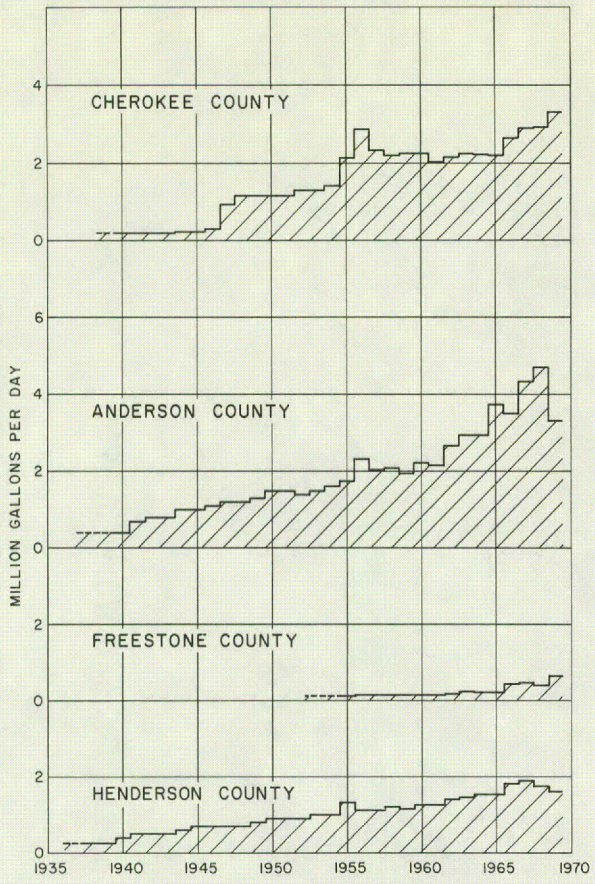


Figure 9.—Pumpage of Ground Water for Public Supply and Industrial Purposes

pumping an average daily amount of 50,000 gallons or more. As shown on Figure 10, most of the Wilcox pumpage in the area occurs in the northwestern half of the four-county area, whereas most of the Carrizo pumpage occurs in the southeastern half. The largest single user in 1969 was the city of Jacksonville which pumped 1.8 million gallons per day. At no other locality within the four-county area was much more than one million gallons per day being pumped in 1969. There were numerous users pumping between about 0.2 million gallons per day and one million gallons per day. These included the smaller cities and towns, a few industries, and numerous water supply corporations furnishing water to rural communities and areas.

In earlier years, the largest single user in the four-county area was the city of Palestine, which pumped as much as 2.2 million gallons per day from Wilcox wells in 1967 and nearly that much in 1968. Since 1969 the city of Palestine has obtained its supply from Lake Palestine. Similarly, the city of Athens now obtains most of its supply from Lake Athens, but formerly pumped as much as one million gallons per day from the Wilcox.

Water Levels in Wells

Altitudes of water levels in representative wells in 1970 and 1971 are shown on Figures 64, 65, 66, and 67. Representative water levels in wells are also listed in Tables 7, 8, 9, and 10.

Drawdowns in water levels as a result of pumping from Wilcox and Carrizo wells are noticeable within the four-county area in a few wells. No large or regional drawdowns are indicated in wells in any of the other formations. From the data available for wells tapping the Wilcox, noticeable water-level declines have occurred in one area in southeastern Henderson County. About a half million gallons per day was produced there in 1969 for oil field waterflooding purposes, and more recently the pumpage has been higher. Smaller, less noticeable drawdowns have occurred in Wilcox wells principally at Fairfield and in the Slocum area. Some water-level declines in Wilcox wells were formerly present at Athens and Palestine, but they now have largely disappeared due to the cessation of pumping by these cities.

From the water levels in Figures 64, 65, 66, and 67, the most noticeable drawdowns occurring in wells tapping the Carrizo Sand are at Jacksonville, in extreme southeastern Cherokee County at Wells, and to a lesser extent, in the Rusk area. The Carrizo water levels at Jacksonville are deep in relation to the relatively small pumpage. This is due to the barriers to movement created by the faults in the vicinity.

In extreme southeastern Cherokee County, in the vicinity of Wells, water levels in the Carrizo have been drawn down on the order of 150 to 170 feet. The area is on the northwestern side of a large, area-wide cone of depression in the piezometric surface for the Carrizo Sand. The decline in water levels has been the result of pumping from the Carrizo to the east in Angelina and Nacogdoches Counties, where in 1968 pumpage from the Carrizo was nearly 27 million gallons per day. The city of Wells is about 16 miles west of the Carrizo pumpage in Angelina and Nacogdoches Counties.

RESULTS OF PUMPING TESTS

Results of pumping tests to determine specific capacities of wells and the transmissibility and storage coefficients of the principal aquifers are given in Tables 4 and 5. Examples of such tests are shown on Figure 11. A pumping test is essentially a process of measuring the effect on the water level in one or more wells caused by a change in rate of pumping. The results of the pumping tests are used in determining how much water can be pumped under given conditions on a long-term basis.

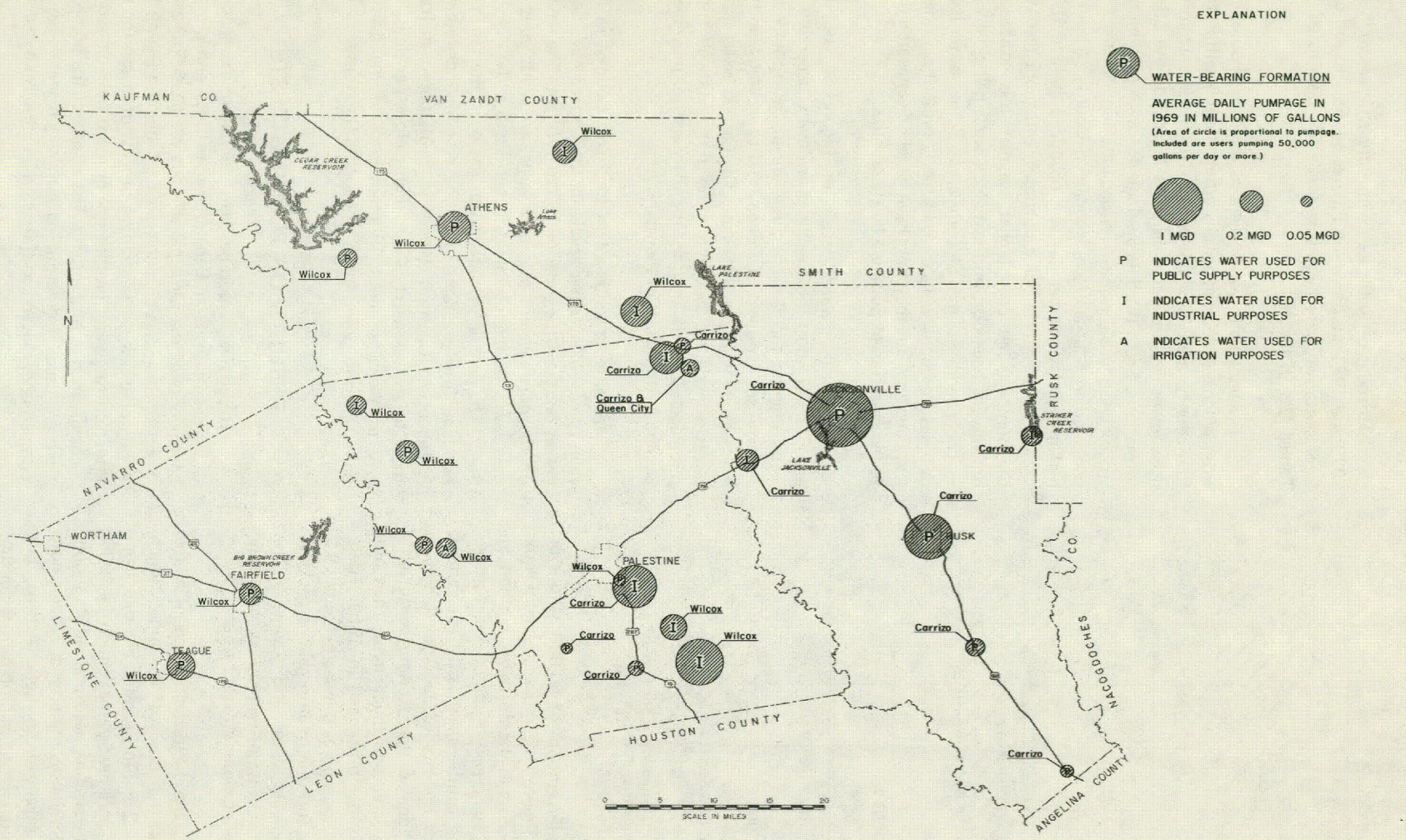


Figure 10

Areal Distribution of Major Pumpage of Ground Water in 1969

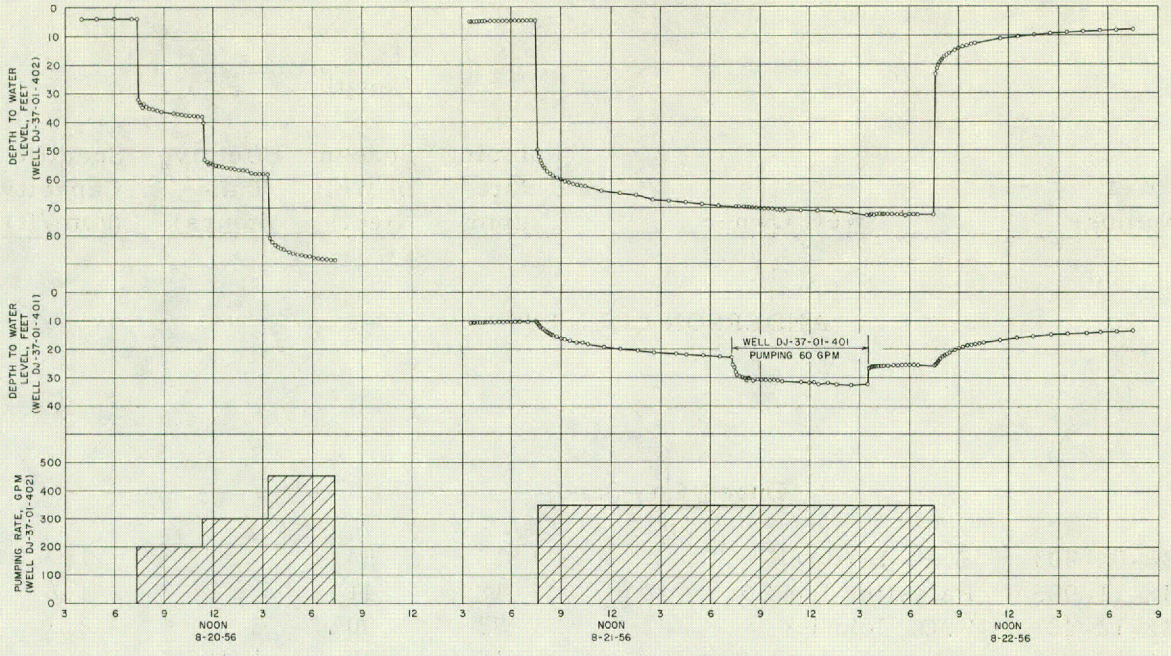


Figure 11.—Example of Pumping Test

Specific Capacities of Wells

The specific capacity of a well is a measure of the amount of water that the well will produce with a given amount of drawdown of water level within the well itself in a relatively short period of time. The units commonly used are gallons per minute per foot of drawdown. The specific capacity of a well is affected partly by the hydraulic characteristics of the formation from which it obtains water and partly by the type of construction and efficiency of construction of the well itself.

Table 4 gives the specific capacities measured for wells within the four-county area. The specific capacities for Wilcox wells range from 0.1 to 22.5 gallons per minute per foot of drawdown. For Carrizo wells they range from 0.8 to 21.1 gallons per minute per foot of drawdown. For Queen City wells they range from 0.7 to 2.1 gallons per minute per foot of drawdown. No specific capacity information is available for wells tapping other formations.

Averages computed from the data in Table 4 are as follows:

WATER-BEARING UNIT	NUMBER OF WELLS	AVERAGE SPECIFIC CAPACITY (GPM/FT)	AVERAGE SCREEN LENGTH (FEET)	AVERAGE SPECIFIC CAPACITY PER HUNDRED FEET OF SCREEN (GPM/FT)
Queen City Sand	7	1.4	45	3.1
Carrizo Sand	34	7.1	66	10.7
Wilcox Group	72	3.9	87	4.5

Coefficients of Transmissibility, Permeability, and Storage

Table 5 lists the coefficients of transmissibility, permeability, and storage determined from pumping tests of Queen City, Carrizo, and Wilcox wells in Anderson, Cherokee, Freestone, and Henderson Counties. The coefficient of transmissibility is a measure of the amount of water that will move through an aquifer under a unit hydraulic gradient. It is expressed in gallons per day per foot of width of the formation. From the coefficient of transmissibility and the thickness of sand at the pumped well the field coefficient of permeability may be determined. This is equal to the transmissibility divided by the thickness of sand and is expressed in gallons per day per square foot of cross-sectional area through which the water moves.

The coefficient of storage, which is obtained from a pumping test when one or more separate observation wells are used, is a measure of how much water is given up from storage when the piezometric surface is lowered. It is dimensionless and is equal to the number of cubic feet of water which is released in each column of the aquifer with a base of one square foot when the

Table 4.--Specific Capacities of Wells

Well Number	Well Owner	Pumping Rate (gpm)	Length of Screen in Well (feet)	Effective Time[1] (hours)	Specific Capacity (gpm/ft)
	ANDERSON COUNTY				
	Queen City Sand				
AA-38-04-403	E. B. Birdwell	15	54		1.5
AA-38-11-905	Palestine Ice Co.	18	41		1.6
AA-38-12-403	K. G. Johnson	72	90	2	2.1
AA-38-27-305	Pilgram Water Supply Corp.	15	20	1-1/2	0.7
	Carrizo Sand				
AA-34-60-602	City of Frankston No. 1	202	40	24	6.1
AA-34-60-603	City of Frankston No. 2	300	45	1	3.5
AA-34-60-903	Hunt Oil Co.	302	56	3	6.4
AA-34-61-501	Upper Neches Municipal River Authority	135	30	3	1.6
AA-38-12-402	Norwood Water Supply Corp.	60	30		1.2
AA-38-13-106	Neches Water Supply Corp.	134	100	2	9.0
AA-38-19-802	Lakeview Methodist Assembly No. 2	99	40	2	7.3
AA-38-19-803	Lakeview Methodist Assembly No. 1	65	20		2.3
AA-38-20-103	Vernon Calhoun Packing Co. No. 1	278	50		9.0
AA-38-20-203	Vernon Calhoun Packing Co. No. 2	703	75	1	15.3
AA-38-20-801	City of Elkhart No. 2	477	88	1	11.3
AA-38-21-706	Slocum Water Supply Corp.	18	45	6	2.6

For footnotes see end of table.

Table 4. --Specific Capacities of Wells--Continued

Well Number	Well Owner	Pumping Rate (gpm)	Length of Screen in Well (feet)	Effective Time[1/] (hours)	Specific Capacity (gpm/ft)
	ANDERSON COUNTY--Continued				
	Wilcox Group				
AA-34-57-801	J. T. Whitman	20	100		0.5
AA-34-58-901	Newman	20	20		2.0
AA-38-01-101	Getty Oil Co.	115			1.5
AA-38-01-103	Cayuga Water Supply Corp.	35	52		0.2
AA-38-02-302	B. B. S. Water Supply Corp.	79	38	1-1/2	2.6
AA-38-02-402	Arnold Wisenbaker	15	21		1.0
AA-38-03-701	Montalba Water Supply Corp.	58	51	1-1/2	5.3
AA-38-05-401	W. T. Todd	180	51		5.3
AA-38-09-601	State of Texas-Dept. of Corrections	680	130	2	7.6
AA-38-11-603	Lone Pine Water Supply Corp.	52	55	1	3.0
AA-38-11-801	City of Palestine No. 2	975	243	24	13
AA-38-11-901	City of Palestine No. 1	923	248	24	8
AA-38-11-902	City of Palestine No. 4	1,176	325	24	16
AA-38-11-903	Missouri Pacific Railroad	715	311		6
AA-38-18-602	Getty Oil Co.	221	83		9.2
AA-38-18-901	Woodhouse Consolidated School	100	15		1.1
AA-38-19-201	Four Pines Water Supply Corp.	151	50	1	2.3
AA-38-19-301	City of Palestine No. 3	1,140	285	24	9
AA-38-19-402	Hunt Oil Co.	234	51		3.5
AA-38-20-104	Walston Springs Water Supply Corp.	180	87		3.0

For footnotes see end of table.

Table 4. --Specific Capacities of Wells--Continued

Well Number	Well Owner	Pumping Rate (gpm)	Length of Screen in Well (feet)	Effective Time[1/] (hours)	Specific Capacity (gpm/ft)
	ANDERSON COUNTY--Continued				
	Wilcox Group--Continued				
AA-38-20-604	Kimball Production Co.	448	114	1/2	5.0
AA-38-21-703	Shell Oil Co. - B. F. Weaver No. 1	285	120	2	22.5
AA-38-21-704	Shell Oil Co. - J. B. Parker No. 1	137	60	1-1/2	7.3
AA-38-21-705	Shell Oil Co. - J. B. Parker No. 2	325	100	1	18.0
AA-38-29-105	Texaco, Inc.	455	110	1/2	16.8

For footnotes see end of table.

Table 4.--Specific Capacities of Wells--Continued

Well Number	Well Owner	Pumping Rate (gpm)	Length of Screen in Well (feet)	Effective Time[1] (hours)	Specific Capacity (gpm/ft)
	CHEROKEE COUNTY				
	Queen City Sand				
DJ-38-32-903	Forest Water Supply Corp.	50	60	2	1.8
	Carrizo Sand				
DJ-37-01-401	Texas Power & Light Co. No. 1	343	76	24	5.4
DJ-37-01-402	Texas Power & Light Co. No. 2	350	66	12	5.4
DJ-37-09-101	Reklaw Water Supply Corp. No. 2	43	52	2	4.5
DJ-37-33-202	City of Wells No. 2	102	70	2	12.0
DJ-38-05-903	Humble Oil & Refining Co. No. 1	263	95	1/2	6.4
DJ-38-05-904	Humble Oil & Refining Co. No. 2	277	80	1/2	15.4
DJ-38-06-402	Sheffield Steel Corp.	580	122	3	8.8
DJ-38-06-501	City of Jacksonville No. 2	680	100	1/2	21.1
DJ-38-06-603	City of Jacksonville No. 3	692	50	2	13.1
DJ-38-06-604	City of Jacksonville No. 1	621	105	12	10.3
DJ-38-08-104	New Summerfield Water Supply Corp.	108	50	24	3.1
DJ-38-14-503[2]	Maydelle Water Supply Corp.	39	67	2	1.8
DJ-38-15-102	Dialville-Oakland Water Supply Corp.	30	36	2	2.1

For footnotes see end of table.

Table 4.--Specific Capacities of Wells--Continued

Well Number	Well Owner	Pumping Rate (gpm)	Length of Screen in Well (feet)	Effective Time[1/] (hours)	Specific Capacity (gpm/ft)
	CHEROKEE COUNTY--Continued				
	Carrizo Sand--Continued				
DJ-38-15-502	W. R. Nichols	473	101	24	7.1
DJ-38-15-601	City of Rusk No. 1	348	60	1/2	4.4
DJ-38-15-603	City of Rusk No. 3	457	90	19	10.9
DJ-38-15-604	State of Texas - Dept. of Mental Health and Mental Retardation	350	95	18	11.7
DJ-38-24-804	City of Alto No. 2	402	88	1	11.2
	Wilcox Group				
DJ-34-64-402	Blackjack Water Supply Corp.	63	42	2	6.1
DJ-34-64-502	New Concord Water Supply Corp.	62	84	1/2	2.0
DJ-37-09-102	Reklaw Water Supply Corp. No. 1	75	94	2	7.1
DJ-38-08-105	New Summerfield Water Supply Corp.	102	76	2	7.4

For footnotes see end of table.

Table 4.--Specific Capacities of Wells--Continued

Well Number	Well Owner	Pumping Rate (gpm)	Length of Screen in Well (feet)	Effective Time[1] (hours)	Specific Capacity (gpm/ft)
		FREESTONE COUNTY			
		Wilcox Group			
KA-38-17-301	R. L. Lipsey	752	600	1/12	3.9
KA-38-17-401	Butler Water Supply Corp.	93		1	1.9
KA-39-15-601	Industrial Generating Co.	335	115	2	3.7
KA-39-15-703	Pleasant Grove Water Supply Corp.	35	30		0.5
KA-39-15-902	H. B. Zachry Construction Co.	229	30	1-1/2	4.2
KA-39-16-502	Industrial Generating Co.	302	92	2-1/2	3.2
KA-39-16-503	Brown and Root, Inc.	60	40	2	1.0
KA-39-22-901	City of Teague	300	120	1	1.3
KA-39-23-101	Kirvin Water Supply Corp.	50	30		1.0
KA-39-23-301	City of Fairfield No. 2	205	100	1	2.7
KA-39-23-302	City of Fairfield No. 1	123	100	1	3.6
KA-39-23-303	City of Fairfield No. 3	316	136	1/2	5.2
KA-39-23-304	Ward Prairie Water Supply Corp.	40	40		0.5
KA-39-24-905	Humble Oil and Refining Co.	60	74		1.1
KA-39-24-906	W. D. Morse	20	80		1.0

For footnotes see end of table.

Table 4. --Specific Capacities of Wells--Continued

Well Number	Well Owner	Pumping Rate (gpm)	Length of Screen in Well (feet)	Effective Time[1/] (hours)	Specific Capacity (gpm/ft)
		HENDERSON COUNTY			
		Queen City Sand			
LT-34-44-203	W.H. Nickie	50	30		1.1
LT-34-61-404	Foster Ready Mix	20	21		0.7
		Carrizo Sand			
LT-34-45-403[3/]	Henderson County Municipal Water Authority	170	90	2	0.8
LT-34-58-401	Koon Kreek Klub	366	42		8.7
LT-34-61-104	Wes McGuffey, Jr.	50	42		1.2
LT-34-61-105	James Berry	60	40		0.8
		Wilcox Group			
LT-33-56-601	City of Malakoff No. 1	200	50	1/12	3.1
LT-33-56-604	City of Malakoff No. 3	165	62		2.9
LT-34-42-403	Bethel-Ash Water Supply Corp.	43	30	2	1.3
LT-34-43-501	Lone Star Producing Co. No. 4	225	93		1.7
LT-34-43-702	City of Murchison	154	58	2	1.5
LT-34-44-401	City of Brownsboro	125	81		2.1
LT-34-44-404	T & F Dairy	20	84		2.0
LT-34-49-503	The Arthur Hawn Co.	20	30		1.0
LT-34-49-603	W.B. Fields	14	20		0.7

For footnotes see end of table.

Table 4.--Specific Capacities of Wells--Continued

Well Number	Well Owner	Pumping Rate (gpm)	Length of Screen in Well (feet)	Effective Time[1] (hours)	Specific Capacity (gpm/ft)
		HENDERSON COUNTY--Continued			
		Wilcox Group--Continued			
LT-34-49-604	A. C. Rasco	20	20		1.5
LT-34-49-605	Hampton Concrete Co.	15	21		0.1
LT-34-49-807	Crescent Heights Water Supply Corp.	130	60		1.6
LT-34-49-902	Dogwood Estates	60	62		4.3
LT-34-50-101	City of Athens No. 5	246	120		2.1
LT-34-50-102	City of Athens No. 3	410	178		5.3
LT-34-50-104	City of Athens No. 6	640	155	2	4.5
LT-34-50-201	Christian Youth Foundation No. 1	35	58		0.8
LT-34-50-303	Damon Douglas	24	40		0.3
LT-34-50-802	Virginia Hill Water Supply Corp.	150	40		3.0
LT-34-52-103	Moores Station Water Supply Corp.	87	55	2	3.5
LT-34-57-203	C. C. Miller	20	67		0.5
LT-34-58-402	Koon Kreek Klub	137	45	12	0.5
LT-34-58-502	G. E. Brown	27	20		1.0
LT-34-58-503	Hubert Mott	20	20		1.3
LT-34-58-504	John Murchison	200	120	2	1.4
LT-34-60-202	Hunt Oil Co. No. 1	450	180		3.3
LT-34-60-203	Hunt Oil Co. No. 3	401	125		1.1
LT-34-60-204	Hunt Oil Co. No. 4	503	132		4.2

1/ Where no effective time is given, the exact time is unknown and may range from a few minutes to one day.
2/ Well also screens part of Wilcox Group.
3/ Well also screens part of Reklaw Formation.

Table 5. --Results of Pumping Tests

Pumped Well	Pumping Rate (gpm)	Length of Test (hours)	Alignment of Data	Sand Thickness at Pumped Well (feet)	Coefficient of Transmissibility (gpd/ft)	Field Coefficient of Permeability[1] (gpd/ft^2)
ANDERSON COUNTY						
Queen City Sand						
AA-38-12-403	72	2	Good	94	3,000	32
AA-38-27-305	15	3-1/2	Good	42	3,000	71
Carrizo Sand						
AA-34-60-602	210	1-1/2	Good	90	14,200	158
AA-38-13-106	134	2	Good	110	20,800	189
AA-38-19-802	99	2	Good	85	15,000	176
AA-38-20-801	477	2	Good	80	14,000	175
AA-38-21-706	18	1	Good	60	12,800	214
Wilcox Group						
AA-38-02-302	79	2	Good	38[2]	5,400	142
AA-38-03-701	58	2	Good	110	16,400	149
AA-38-09-601	680	2	Good	149	9,600	65
AA-38-11-801	975	9	Good	295	24,000	81
AA-38-11-801	975	8	Good	295	16,000[3]	54
AA-38-11-901	922	8	Good	219	17,200	78
AA-38-11-902	1,176	48	Fair	325	22,000	68
AA-38-19-301	1,150	9	Fair	284	14,000	49
AA-38-21-703	285	2	Good	120	40,500	338
AA-38-21-704	137	1-1/2	Good	150[4]	47,000	313

For footnotes see end of table.

Table 5.--Results of Pumping Tests--Continued

Pumped Well	Pumping Rate (gpm)	Length of Test (hours)	Alignment of Data	Sand Thickness at Pumped Well (feet)	Coefficient of Transmissibility (gpd/ft)	Field Coefficient of Permeability[1/] (gpd/ft^2)
CHEROKEE COUNTY						
Queen City Sand						
DJ-38-32-903	50	2	Good	45	3,000	67
Carrizo Sand						
DJ-37-01-401	343	24	Good	75	10,900	145
DJ-37-01-402	350	24	Good	60	11,400	190
DJ-37-01-402	350	12	Good	75	12,300[5/]	164
DJ-37-09-101	43	2	Good	52[2/]	11,000	212
DJ-37-33-202	102	2	Good	70[2/]	34,000	476
DJ-38-06-604	621	12	Good	90	12,700	141
DJ-38-06-603	692	2	Fair	80	18,500	231
DJ-38-15-102	30	2	Good	36[2/]	4,200	117
DJ-38-15-502	473	24-1/2	Good	101[2/]	15,600	154
Wilcox Group						
DJ-34-64-402	63	2	Good	90	13,100	145
DJ-37-09-102	75	2	Good	94[2/]	12,800	136
DJ-38-08-105	102	2	Good	90	24,500	272

For footnotes see end of table.

Table 5.--Results of Pumping Tests--Continued

Pumped Well	Pumping Rate (gpm)	Length of Test (hours)	Alignment of Data	Sand Thickness at Pumped Well (feet)	Coefficient of Transmissibility (gpd/ft)	Field Coefficient of Permeability[1/] (gpd/ft^2)
FREESTONE COUNTY						
Wilcox Group						
KA-38-17-401	93	2-1/2	Good		4,300	
KA-39-15-601	335	2	Good	115[2/]	6,000	52
KA-39-15-802	75	2	Good	50[2/]	1,400	28
KA-39-15-902	229	2	Good	30[2/]	2,400	80
KA-39-16-502	358	2	Good	134	3,800	28
KA-39-22-901	310	1-1/2	Fair	120[2/]	2,000	17
KA-39-23-301	205	8	Fair	117	4,200	36
KA-39-23-302	123	2	Good	132	5,800	44
KA-39-23-303	465	10	Fair	133	9,500	71
KA-39-23-404	90	2	Good	90[2/]	1,900	21

For footnotes see end of table.

Table 5--Results of Pumping Tests--Continued

Pumped Well	Pumping Rate (gpm)	Length of Test (hours)	Alignment of Data	Sand Thickness at Pumped Well (feet)	Coefficient of Transmissibility (gpd/ft)	Field Coefficient of Permeability[1] (gpd/ft^2)
HENDERSON COUNTY						
			Carrizo Sand			
LT-34-45-403[6]	170	2	Fair	90[2]	2,000	22
			Wilcox Group			
LT-33-56-604	122	2	Good	62[2]	2,600	42
LT-34-42-403	43	2	Good	70	4,200	60
LT-34-43-702	154	2	Good	46	2,000	43
LT-34-50-101	246	2	Fair	120[2]	2,400	20
LT-34-50-104	640	2	Good	100	6,700	67
LT-34-52-103	87	2	Good	80	12,500	156
LT-34-58-402	100	6	Fair	45	1,400	31
LT-34-58-504	200	2	Good	142	2,500	18
LT-34-60-202	450	6	Fair	170	9,200	54
LT-34-60-203	450	6	Fair	125	5,700	46

1/ Based on sand thickness, or length of screen if sand thickness not available.
2/ Screen length.
3/ Based on interference test using AA-38-11-901 as observation well. Coefficient of storage from test is 0.00037.
4/ Estimated data.
5/ Based on interference test using DJ-37-01-401 as observation well. Coefficient of storage from test is 0.00011.
6/ Well also screens part of Reklaw Formation.

piezometric surface is lowered one foot. In an unconfined aquifer (under water-table conditions), the coefficient of storage is essentially equal to the effective porosity of the water-bearing formation and may be as large as 0.3. In a confined aquifer (under artesian conditions), the coefficient of storage is very much smaller (usually less than 0.001). It is controlled by the compressibility of the aquifer, the compressibility of water, the compressibility of clay bodies interbedded with and adjacent to the aquifer, and leakage from adjacent beds.

If a pumping test is made on a well which completely penetrates the aquifer, the coefficient of transmissibility computed from the test represents the entire aquifer. If not, it usually represents only a portion of the aquifer, and the transmissibility for the entire aquifer must be estimated from the permeability of the sand as determined from the pumping test and thicknesses of sand determined from logs of other wells which completely penetrate the aquifer. None of the individual pumping tests made on wells tapping the Wilcox Group or Queen City Sand was on a well which completely penetrated the aquifer. Most of the Carrizo tests were on completely penetrating wells.

The areal distribution of the pumping tests and the average coefficients recorded in the various localities are shown on Figure 12. Of the 51 tests available, 3 are for Queen City wells, 15 are for Carrizo wells, and 33 are for Wilcox wells.

Recorded permeabilities for the Wilcox Group range from 17 to 338 gallons per day per square foot and average about 88 gallons per day per square foot. Those for the Carrizo Sand range from 22 to 476 gallons per day per square foot and average 184 gallons per day per square foot. Permeabilities for the sands in the Queen City Sand, as determined from the tests, range from 32 to 71 gallons per day per square foot and average about 57 gallons per day per square foot.

INTERFERENCE BETWEEN WELLS AND LONG-TERM DRAWDOWNS OF WATER LEVELS

Under natural conditions and prior to pumping from wells, an aquifer is in a state of approximate dynamic equilibrium. Over a climatic cycle the natural recharge is balanced by the natural discharge, and except for temporary fluctuations the piezometric surface of the aquifer, as represented by water levels in wells, remains stable.

When a well is pumped a cone of depression is created in the piezometric surface around the well to cause water to flow from the aquifer into the well. In the report area, the cone of depression continues to grow in all directions until it reaches the outcrop area and causes additional water to flow from the outcrop to the well essentially at the same rate at which it is pumped. At first the water from the outcrop is drawn from storage, and the water table in the outcrop slowly declines. This causes a small part of the water which formerly was evaporated, or transpired, or seeped to surface streams to move in the aquifer toward the well, eventually in an amount equal to the pumpage. At that time the piezometric surface again becomes stabilized, and no further decline of water levels in wells is caused by the pumping (see Figure 4).

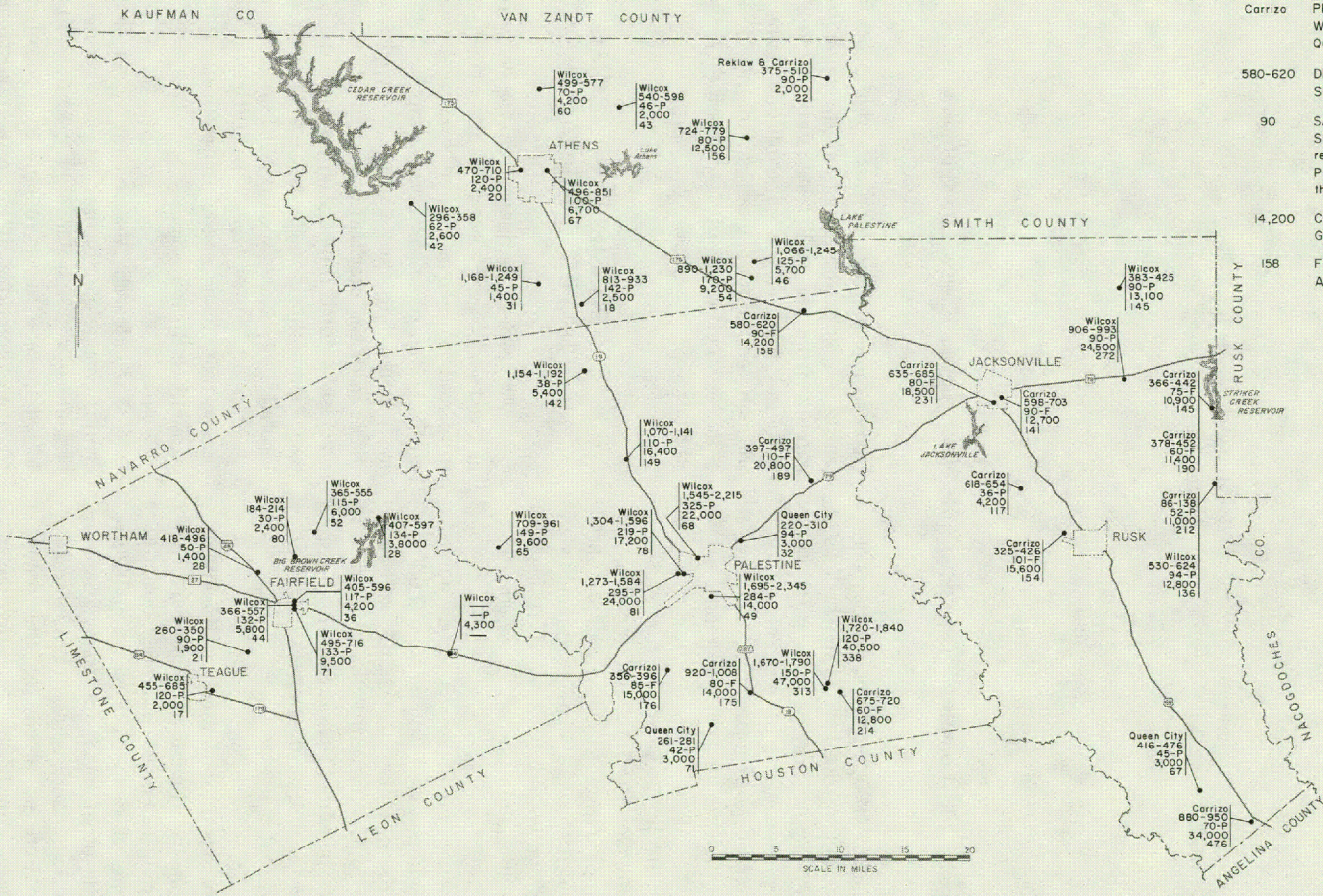
The depth and rate of growth of the cone of depression in the piezometric surface is controlled by the coefficient of transmissibility, the coefficient of storage, and the geometric boundaries of the aquifer. If these factors are known, the Theis non-equilibrium formula may be used, with time and distance as variables, to compute the cone of depression at any time after pumping begins.

After equilibrium conditions are reached, the extent and shape of the cone of depression in the piezometric surface are controlled only by the coefficient of transmissibility and the geometry of the boundaries of the aquifer, as the coefficient of storage is no longer a factor. In other words, the coefficient of storage assists in controlling the time at which equilibrium conditions are reached, but does not control the final amount of drawdown and the final shape of the cone of depression.

In making calculations of drawdowns, the outcrop (source of recharge) is considered as a line source, and a fault which completely displaces a formation is considered as a line barrier. In the calculations the effects of both are handled mathematically by image wells, the locations of which are determined by the positions of the outcrop and/or barrier.

Cones of depression created by individual wells overlap, and under artesian conditions they are additive. This means that the effect of pumping two or more separate wells may be determined by computing the effect of each and adding them together.

Figure 13 is comprised of graphs made by means of the Theis non-equilibrium formula, showing the drawdown of water level (piezometric surface) at different times after pumping begins, assuming a pumping rate of 500 gallons per minute, a coefficient of transmissibility of 10,000 gallons per day per foot, a coefficient of storage of 0.00005, and a distance to line source (outcrop) of 15 miles. Graphs are presented of the drawdown after pumping one day, after pumping one month, and after equilibrium conditions are reached. The drawdowns shown are proportional to the pumping rate. If the pumping rate were 1,000 gallons per minute instead of 500 gallons per minute, the drawdown would be twice as much as shown by the graph. At equilibrium the drawdown is inversely proportional to the coefficient of transmissibility, and if the coefficient of transmissibility were 20,000 gallons



EXPLANATION

- • WELL LOCATION
- Carrizo PRINCIPAL FORMATION SCREENED IN WELLS TESTED (Wilcox, Carrizo, or Queen City)
- 580-620 DEPTH TO TOP AND BOTTOM OF SCREENS IN WELL, FEET
- 90 SAND THICKNESS OR LENGTH OF SCREEN IN WELL (F- indicates test represents full thickness of formation. P- indicates test represents part of full thickness of formation.)
- 14,200 COEFFICIENT OF TRANSMISSIBILITY, GPD/FT
- 158 FIELD COEFFICIENT OF PERMEABILITY, GPD/FT^2

Figure 12

Results of Pumping Tests

Base from Texas State Highway Department county maps

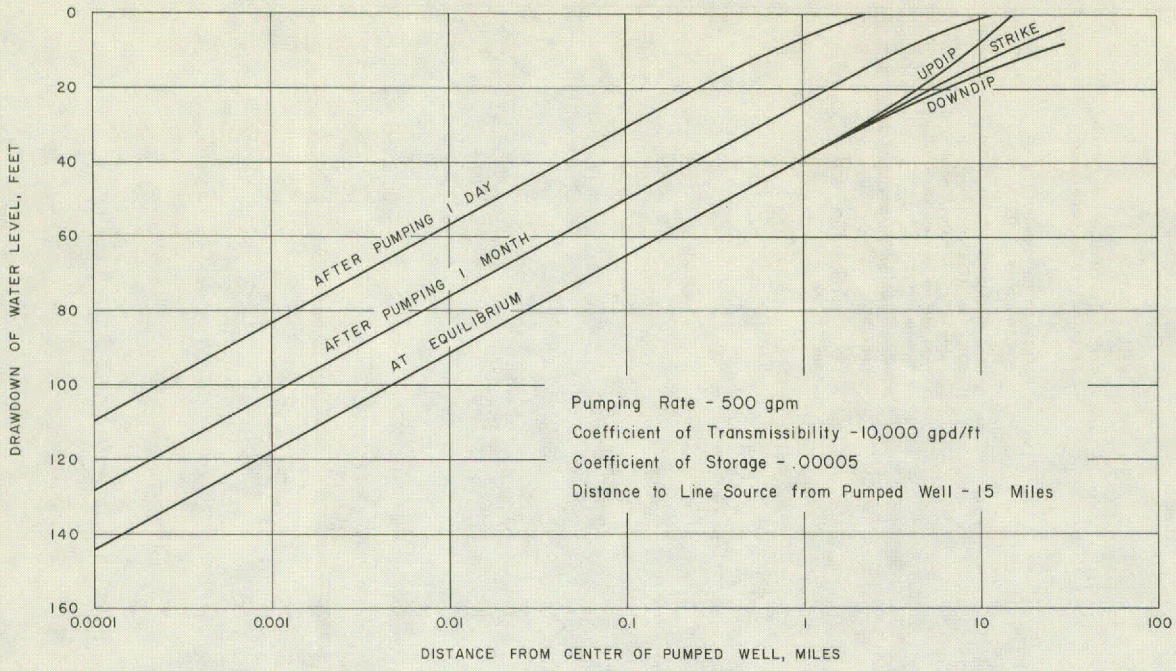


Figure 13.—Computed Drawdown of Water Levels Caused by Pumping

per day per foot instead of 10,000 gallons per day per foot, the drawdown would be one-half as much. This relationship also would apply for periods prior to equilibrium if both the coefficient of transmissibility and the coefficient of storage were changed by the same percentage from the coefficients used for the graphs.

The position of the line source determines the drawdown at equilibrium, along with the transmissibility coefficient and the pumping rate. If the line source were closer to the pumped well than 15 miles as shown, the drawdown at equilibrium would be less. If it were farther, the drawdown at equilibrium would be greater.

Drawdowns are shown on Figure 13 for distances from the center of the pumped well ranging from 0.0001 mile to 30 miles. The distance of 0.0001 mile is approximately one-half foot, representing the radius of a well about 12 inches in diameter. The drawdown shown at this distance is the theoretical drawdown in a 100 percent efficient well of that diameter.

For an aquifer which is rather uniform in thickness and character, the average coefficient of transmissibility determined from pumping tests can be applied directly in determining the cone of depression resulting from pumping a well. On the other hand, for an aquifer in which the sands are lenticular and represent only a small portion of the formation as a whole, the many boundaries to the sands created by their lenticular nature must be taken into consideration in using the average coefficient of transmissibility with the non-equilibrium formula to predict drawdowns of water levels. The coefficient of transmissibility as determined from a pumping test normally represents only a short period of time during which the cone of depression extends from the well tested for no more than a few thousand feet. If the cone of depression later grows through additional, more confining boundaries the effective coefficient of transmissibility then becomes smaller.

POSSIBLE BRACKISH WATER ENCROACHMENT

At present, pumpage from the water-bearing sands in the four-county area is relatively small and distances from wells to brackish water are generally great. There is no likelihood of brackish water moving into the existing fresh water wells except where the wells are already on the edge of the brackish water. Future encroachment of brackish water is unlikely unless there is development of heavy pumping close to areas where brackish water is located. Only under such conditions can brackish water be brought into wells in sufficient quantities to substantially change the mineralization of the water pumped from the wells.

The mineralization of the water from the wells cannot change greatly until the water between the wells and the brackish water is pumped out. Considering the fact that water moves radially to the center of pumpage from all directions, it normally takes many years for brackish water to move to well fields from any great distance. Accordingly, any change in mineralization is normally slow, and it occurs over a long period of time. If periodic observations of quality of water are made,

there is ample opportunity to relocate wells or to develop a supplemental supply before the mineralization of the water becomes too great.

AVAILABILITY OF GROUND WATER

Although some fresh ground water is available from every formation outcropping within Anderson, Cherokee, Freestone, and Henderson Counties, only the Wilcox Group, Carrizo Sand, Queen City Sand, and Sparta Sand are capable of yielding large quantities. Of the four, the Wilcox Group and Carrizo Sand are by far the most important. The Queen City is next in importance. The Sparta's capability is small, mostly in a small area in southern Cherokee County. Of all the remaining formations the Reklaw Formation and alluvium are each slightly better than the Cretaceous rocks, Midway Group, Weches Formation, or the Cook Mountain Formation, but all are weak producers and should be considered only for very small to small water supplies.

The basal Reklaw sands are hydraulically connected to the Carrizo in many places and should not be considered as a source of ground water entirely separate from the Carrizo. Wells yielding 50 to 100 gallons per minute might be obtained in some places in the basal Reklaw, however, if there were reason to make such wells in this sand instead of in the Carrizo. Yields of existing wells in the alluvium range up to about 30 gallons per minute. This is believed to be about the limit for individual well yields obtainable from the alluvium. With the exception of the Reklaw and alluvium none of the "weak producing" formations should be expected to yield more than a few gallons per minute to a well at any place, and even this is too much to expect in many places.

From the standpoint of availability of the ground-water supply it should be pointed out that wherever the Cook Mountain Formation contains fresh water the Sparta, Queen City, or Carrizo also contain fresh water and provide a much better source. Similarly, wherever the Weches contains fresh water the Queen City, Carrizo, or Wilcox also contain fresh water. And, wherever the Reklaw contains fresh water the sands of the Carrizo or Wilcox also exist and provide a much better source of fresh ground water.

In the extreme northwestern parts of Freestone and Henderson Counties, northwest of the Wilcox outcrop, the Midway Group and the alluvium (where it exists) are the only units capable of producing fresh ground-water supplies. In these areas many users have had difficulties in developing even a domestic supply, and the availability of ground water is very limited.

Information on yields and the more favorable areas for development from the Wilcox, Carrizo, Queen City, and Sparta aquifers is presented in the following sections of the report. Only water containing less than 1,000 parts per million dissolved solids is considered.

Yields of Individual Wells

In estimating yields of wells, it is necessary to establish criteria with respect to well construction and drawdown of water level. For the following discussion on maximum individual well yields obtainable it is assumed that the screens in the wells will be at least eight inches in diameter and of sufficient diameter so that there will be very little head loss due to turbulent flow in the wells. It is further assumed that all the sands in the producing sections will be screened and that the wells will be constructed and developed in such a manner that they are essentially 100 percent efficient. In other words, it is assumed that there will be no extra drawdown in the wells due to restriction of water movement through the faces of the wells. Finally, it is assumed that the drawdown in a well due to its own pumping is approximately 100 feet in the first day of pumping, provided this does not draw the pumping level below the top of the producing section of the aquifer. In cases where less than 100 feet of available drawdown exists to the top of the producing section, some provision has been made for partial dewatering of the formation, and also the one-day drawdowns have been reduced to less than 100 feet as necessary.

Wilcox Group

The estimated maximum yields obtainable from individual wells producing fresh water from sands of the Wilcox Group are shown on Figure 14. In addition to the assumptions described above, it is assumed with respect to the Wilcox wells that no more than 400 feet of thickness of the Wilcox will be included in the developed portion of any Wilcox well. In other words, it is assumed that the distance between the top of the top screen and the bottom of the bottom screen will be no more than 400 feet. Within this limitation, it is assumed that the well will be screened in that portion of the Wilcox having the greatest amount of sand which produces fresh water, provided there is at least 100 feet of available drawdown to the top of the producing section.

The estimated maximum yields of individual wells range up to 1,500 gallons per minute. To obtain the largest yields will require gravel-walled wells with screens of at least 10 inches in diameter and preferably 12 or 14 inches.

Carrizo Sand

Figure 15 shows the estimated maximum yields of individual wells for the Carrizo Sand. They also range up to 1,500 gallons a minute. As for the Wilcox, to obtain

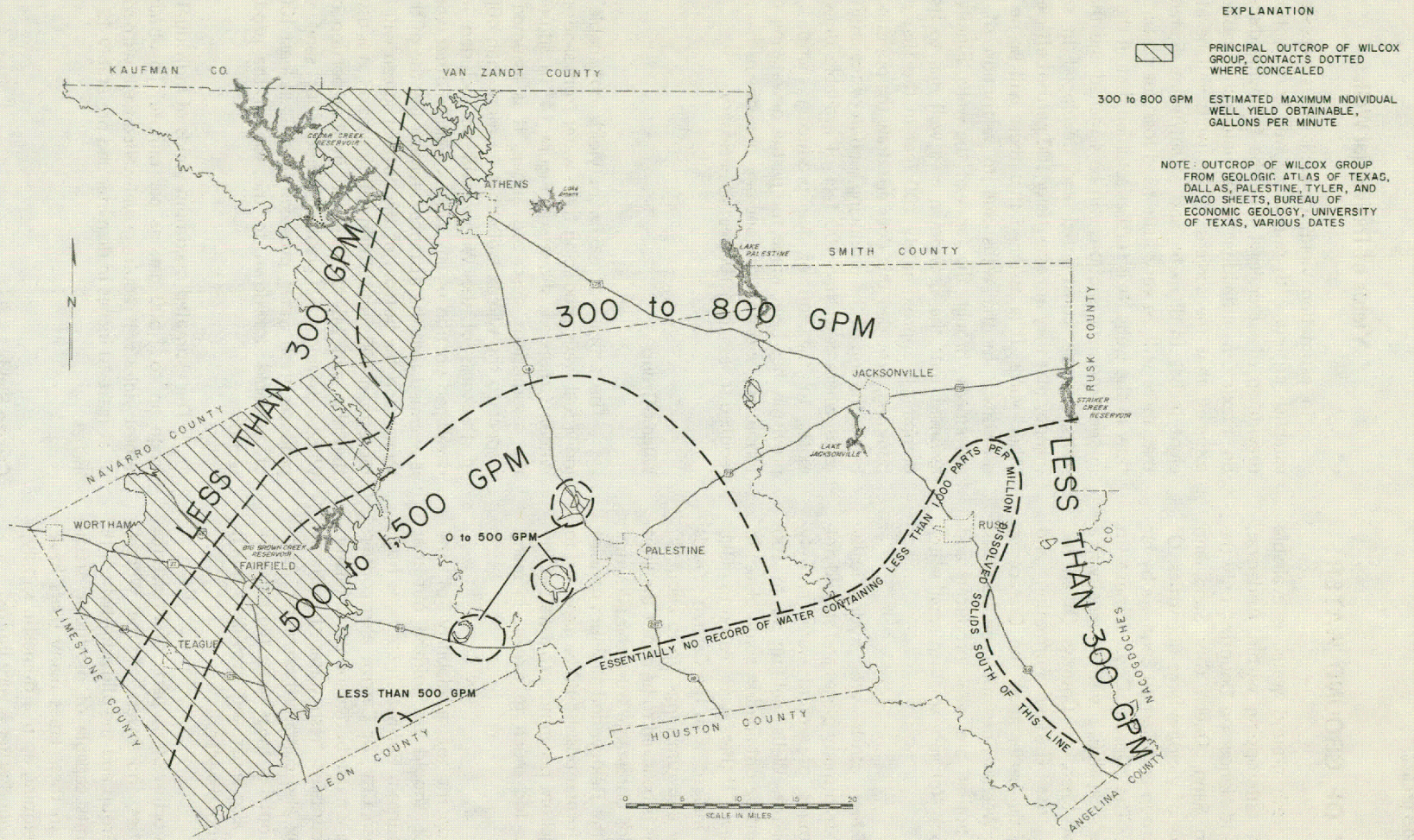


Figure 14

Estimated Maximum Individual Well Yields-Wilcox Group

Base from Texas State Highway Department county maps

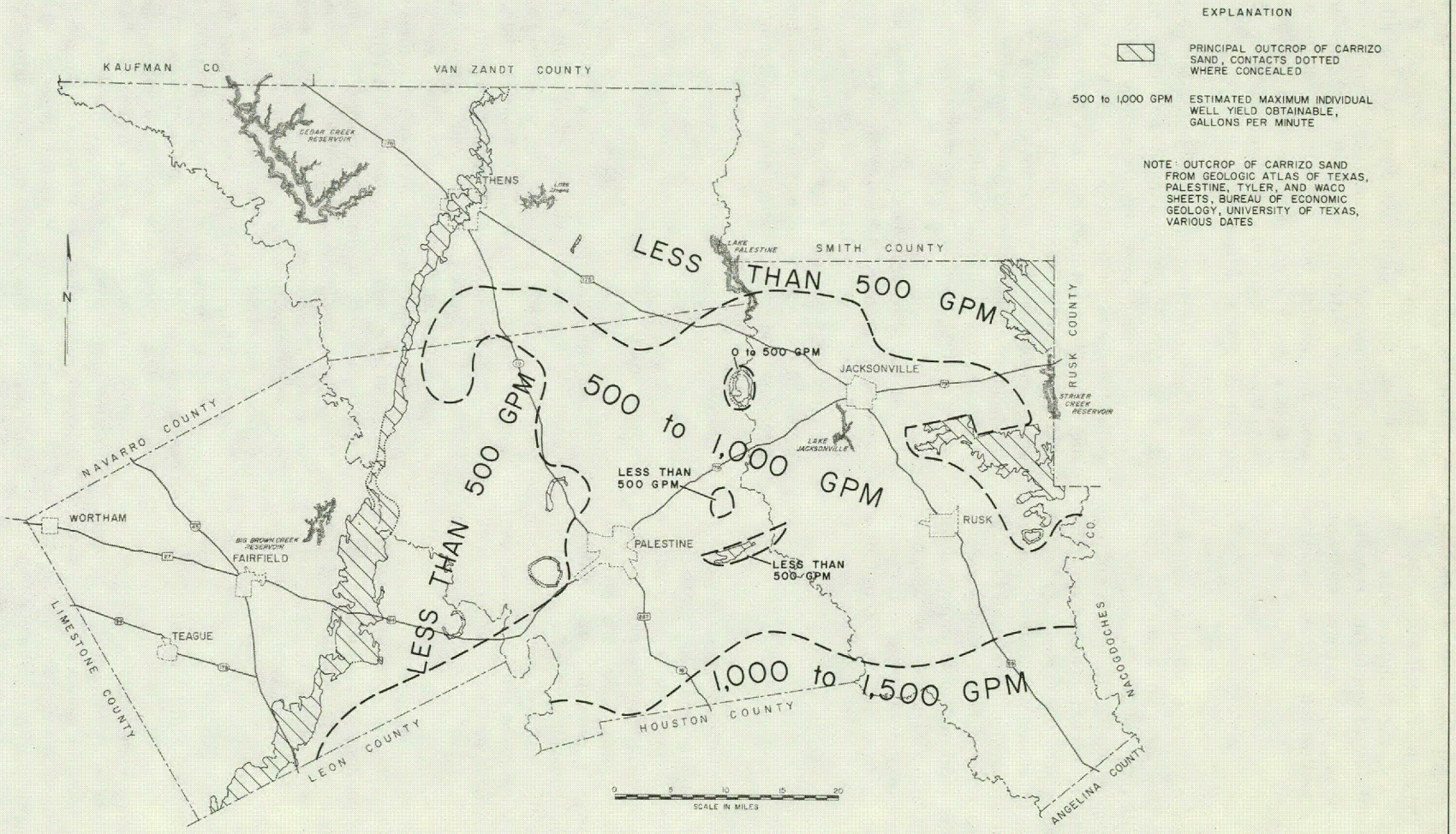


Figure 15

Estimated Maximum Individual Well Yields-Carrizo Sand

Base from Texas State Highway Department county maps

the largest yields will require gravel-walled wells with screens of at least 10 inches in diameter and preferably 12 or 14 inches. Generally, the estimated maximum yields increase from northwest to southeast. Generally, the largest yields are available in extreme southern Anderson County and in southeastern Cherokee County.

Queen City Sand

Estimated maximum yields of individual wells are shown for the Queen City Sand on Figure 16. They range up to 400 gallons per minute. In making the estimates an average permeability of 57 gallons per day per square foot is used. The highest yields are generally available in those areas where the Queen City is the thickest. This is mostly in an area paralleling the axis of the East Texas syncline in western Henderson County, northwestern Cherokee County, and central Anderson County. Elsewhere, the estimated maximum yields of individual wells are less than 200 gallons a minute, with the exception of a small area in southwestern Henderson County where they range from 150 to 300 gallons a minute.

Sparta Sand

Figure 17 shows the estimated maximum yields of individual wells for the Sparta Sand. They range up to 500 gallons per minute in the only area considered, which is in extreme southeastern Cherokee County. Elsewhere in the four-county area, the saturated thickness of the Sparta is generally too small for moderately yielding wells, except within the part of the Elkhart graben where the Sparta is overlain by Cook Mountain. There, it is estimated that maximum well yields of about 150 gallons per minute are obtainable locally.

The estimates for the Sparta assume an approximate effective transmissibility range of 4,000 to 10,000 gallons per day per foot for the full thickness of the Sparta. This range in transmissibility is based upon tests made in adjacent counties. No wells suitable for testing are completed in the Sparta within the report area.

Individual Well-Field Yields

Additional criteria are necessary with respect to estimating maximum yields of individual well fields. First and most important, no allowance is made for interference effects between one well field and another. This means that the estimates of maximum yield are, for the most part, valid for only one well field in the aquifer at the present time. Each well field will create drawdown of the piezometric surface throughout much of the aquifer, and this will have an effect on the drawdown available for use by each additional field which may be installed. Furthermore, each additional field that is installed will have an effect on the first field which was developed, thus reducing the drawdown available for it and its maximum potential yield. The effects of interference between well fields are considered in succeeding sections of this report, but for this section, the purpose of which is to estimate the maximum available yield of any one well field, it is not practicable to consider such interference effects.

Next, in estimating the yield of a well field it has been necessary to assume a maximum number of wells, spacing between wells, and the desired yields of the wells. For the estimates, therefore, it has been assumed that no well field will contain more than ten wells and that the wells in a field will generally be spaced in a line approximately one-half mile apart. Where practicable, the yields of individual wells have been selected so that about 100 feet of drawdown will be created in each well during the first day from its own pumping.

It has also been necessary to assume limits for allowable drawdown. Allowable drawdown, as used in this report, refers to the distance between the piezometric surface and either the top of the producing section in the wells or some other level considered to be a reasonable depth for pumping levels. The limits used for each aquifer are given in the following sections of the report.

Wilcox Group

Because the portion of the Wilcox Group containing fresh water sands is so thick, more than one well may be made at a single site, under the limitation imposed that no more than 400 feet of section will be taken into any one well. Therefore, in estimating the yield of the Wilcox Group, the Wilcox sands have been divided into separate sections. This has been done by splitting the Wilcox into an upper 400-foot thick section and then allocating the remainder of the Wilcox to one or two other sections depending on the total remaining fresh water thickness of the Wilcox. The allowable drawdown is assumed to be the distance between the original piezometric surface and the top of the Wilcox section developed by the wells. The maximum drawdown allowed in the estimates is 500 feet. Recharge areas for each of the Wilcox sections are considered to be in Freestone and Henderson Counties and to the east of Cherokee County in parts of Rusk and Nacogdoches Counties. The boundary effects created by the Mount Enterprise fault zone are also taken into consideration in making the estimates. On the basis of these conditions and assumptions, the estimated ranges in maximum individual well-field yield are shown in Figure 18.

The estimates range up to 12 million gallons per day. The largest Wilcox well-field yields can be obtained to the east of its outcrop in Freestone, Anderson, and Henderson Counties. In these areas, the thickness of the

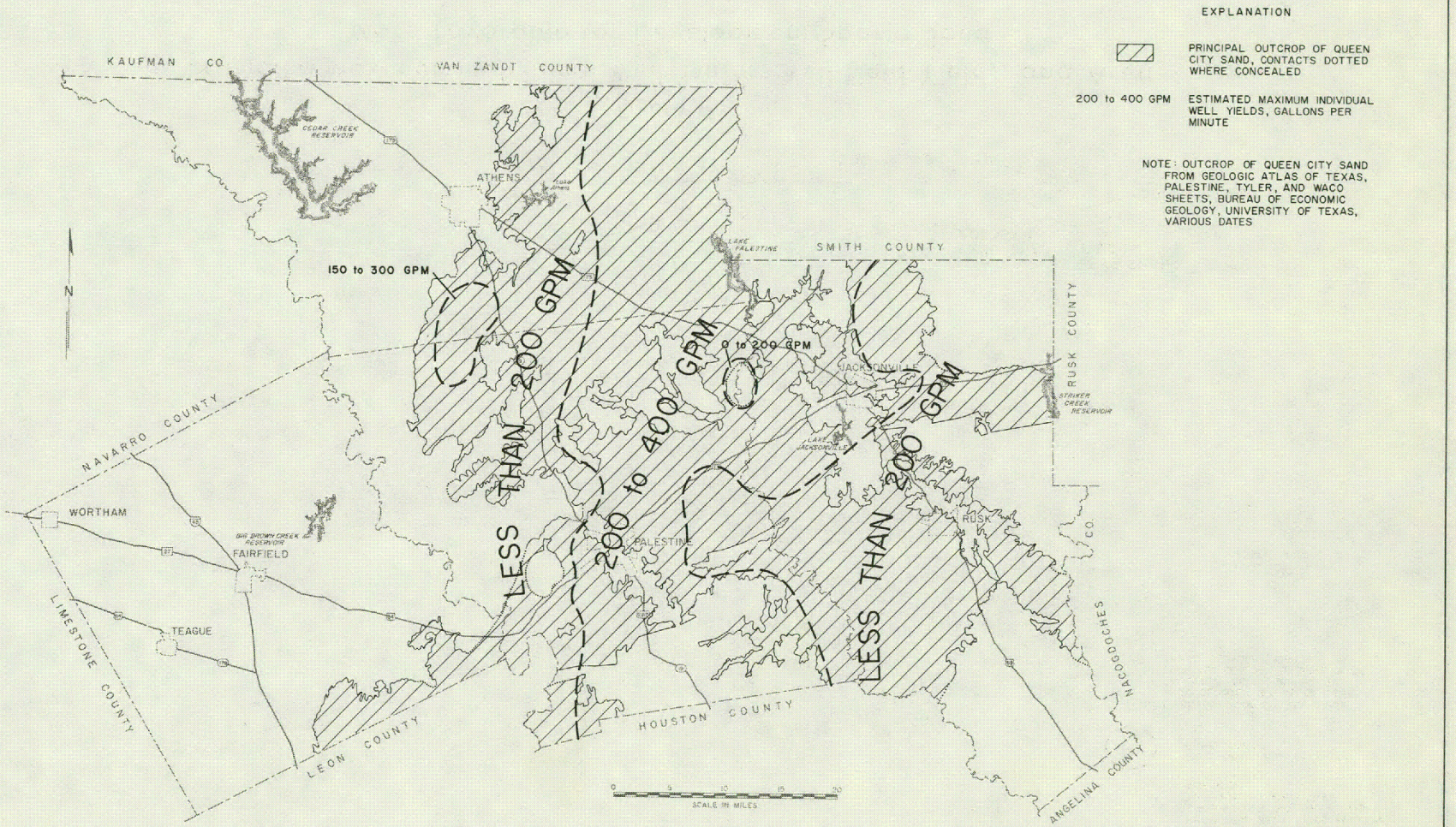


Figure 16

Estimated Maximum Individual Well Yields-Queen City Sand

Base from Texas State Highway Department county maps

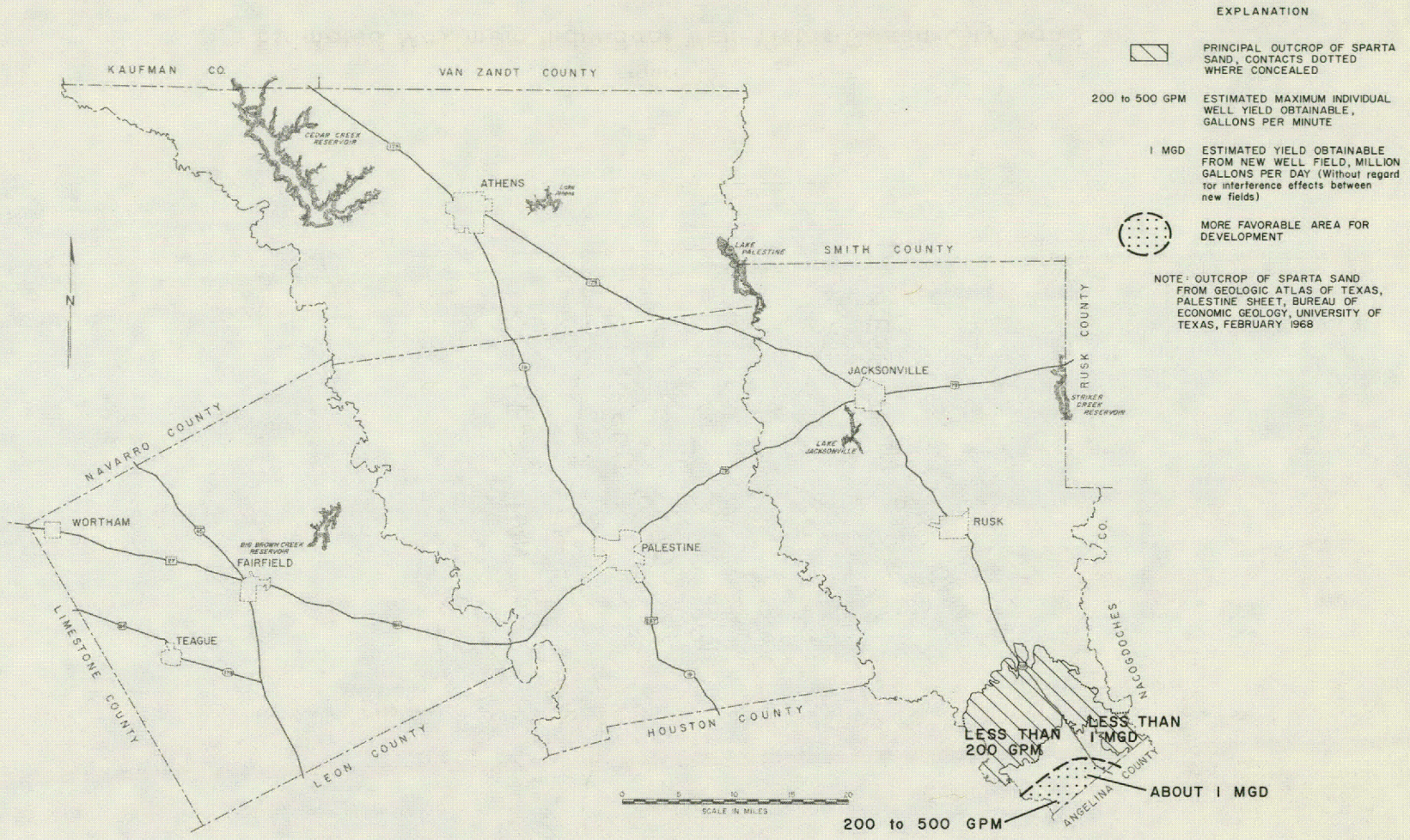


Figure 17

Estimated Maximum Individual Well Yields, Well-Field Yields, and Area More Favorable for Development-Sparta Sand

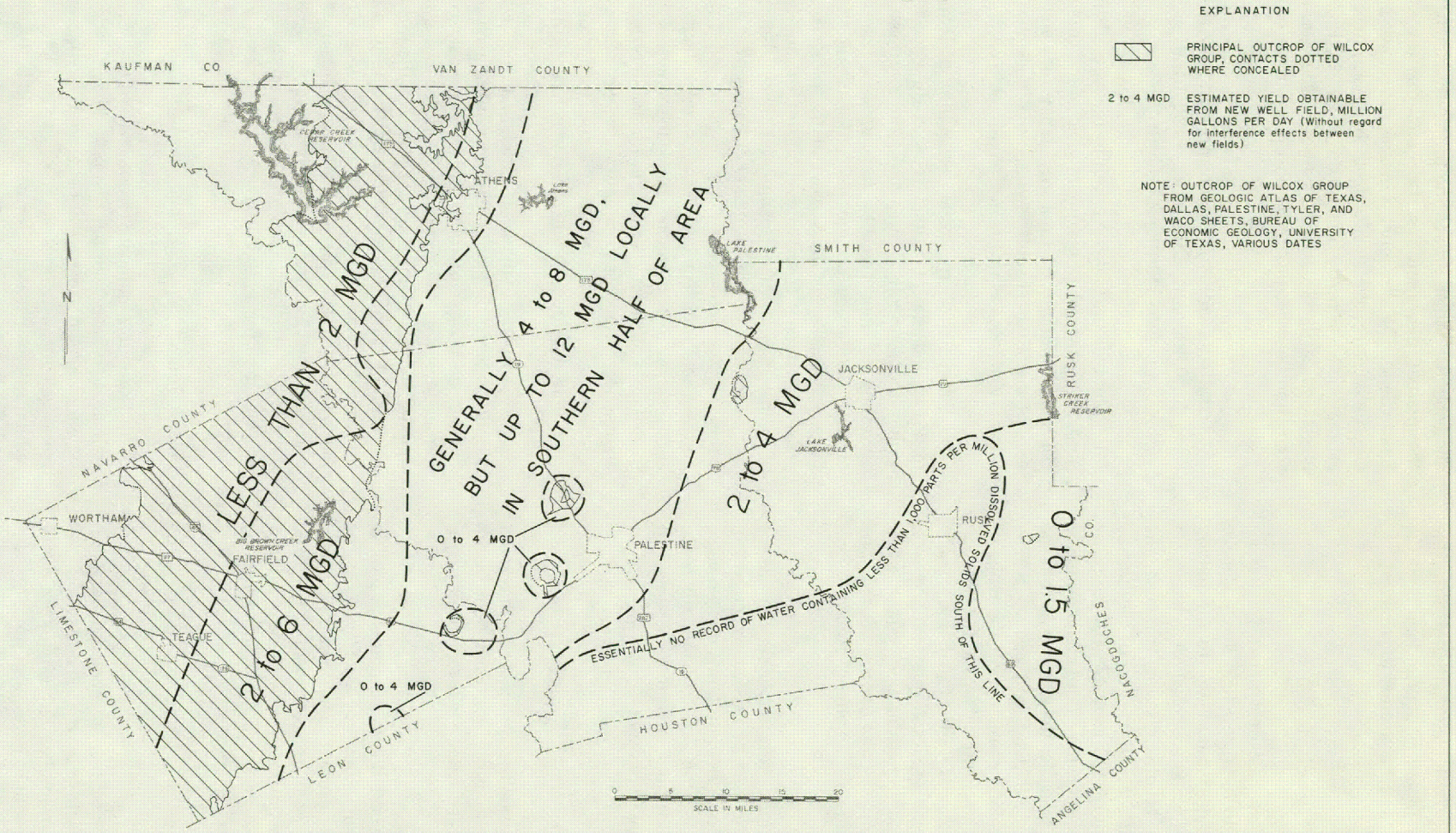


Figure 18

Estimated Individual Well-Field Yields-Wilcox Group

Base from Texas State Highway Department county maps

Wilcox sands containing fresh water is the greatest, the boundary effects of the Mount Enterprise fault zone the least, and the distances to recharge areas the smallest.

Carrizo Sand

Figure 19 shows the estimated maximum individual well-field yield for a new field in the Carrizo Sand. The estimated yield ranges up to 10 million gallons per day. The estimates are based on an allowable drawdown amounting to the distance between the original piezometric surface and the top of the Carrizo Sand, up to a maximum of 500 feet. As with the other aquifers, the estimates are made without considering the effects of the new field on either the existing wells in the Carrizo or on any new well field, and vice versa. The estimates of yield take into consideration the range of transmissibilities considered to exist in the Carrizo over the area and the boundary effects of the Mount Enterprise fault zone. In applicable parts of the area, they also take into consideration the actual pumpage-drawdown experience for the Lufkin-Nacogdoches area in adjoining Angelina and Nacogdoches Counties.

The Carrizo occurs at reasonably shallow depths throughout much of the area of its occurrence within the four-county area. This generally limits the allowable drawdown to the top of the Carrizo Sand and hence limits the well-field yields obtainable to values less than they would if the Carrizo were deeper.

Queen City Sand

Figure 20 shows the estimated maximum individual well-field yield for a new well field in the Queen City Sand. The estimated yield ranges up to 1.5 million gallons per day.

The assumed deepest allowable pumping level is the top of the producing section of the Queen City or 500 feet below the present piezometric surface, whichever is shallower. As in the case of all of the other formations, these estimates are made without considering the effects of the new field on either existing wells or on any new field, and vice versa.

Sparta Sand

Figure 17 shows the estimated maximum individual well-field yield for the Sparta Sand. As explained earlier, only in southeastern Cherokee County does the Sparta generally have the potential for moderate production. There, the estimates range from less than 1 million gallons per day, principally in its outcrop area, to about 1 million gallons per day in a small area in extreme southern Cherokee County southwest of Wells. The estimates are based on an allowable drawdown amounting to the distance between the present piezometric surface and the top of the Sparta Sand. The maximum allowable drawdown present is estimated at about 140 feet. In the outcrop the estimates are less partly because the allowable drawdown is less and partly because the saturated thickness of the formation becomes less going northward in the outcrop.

Total Availability of Ground Water Within Anderson, Cherokee, Freestone, and Henderson Counties

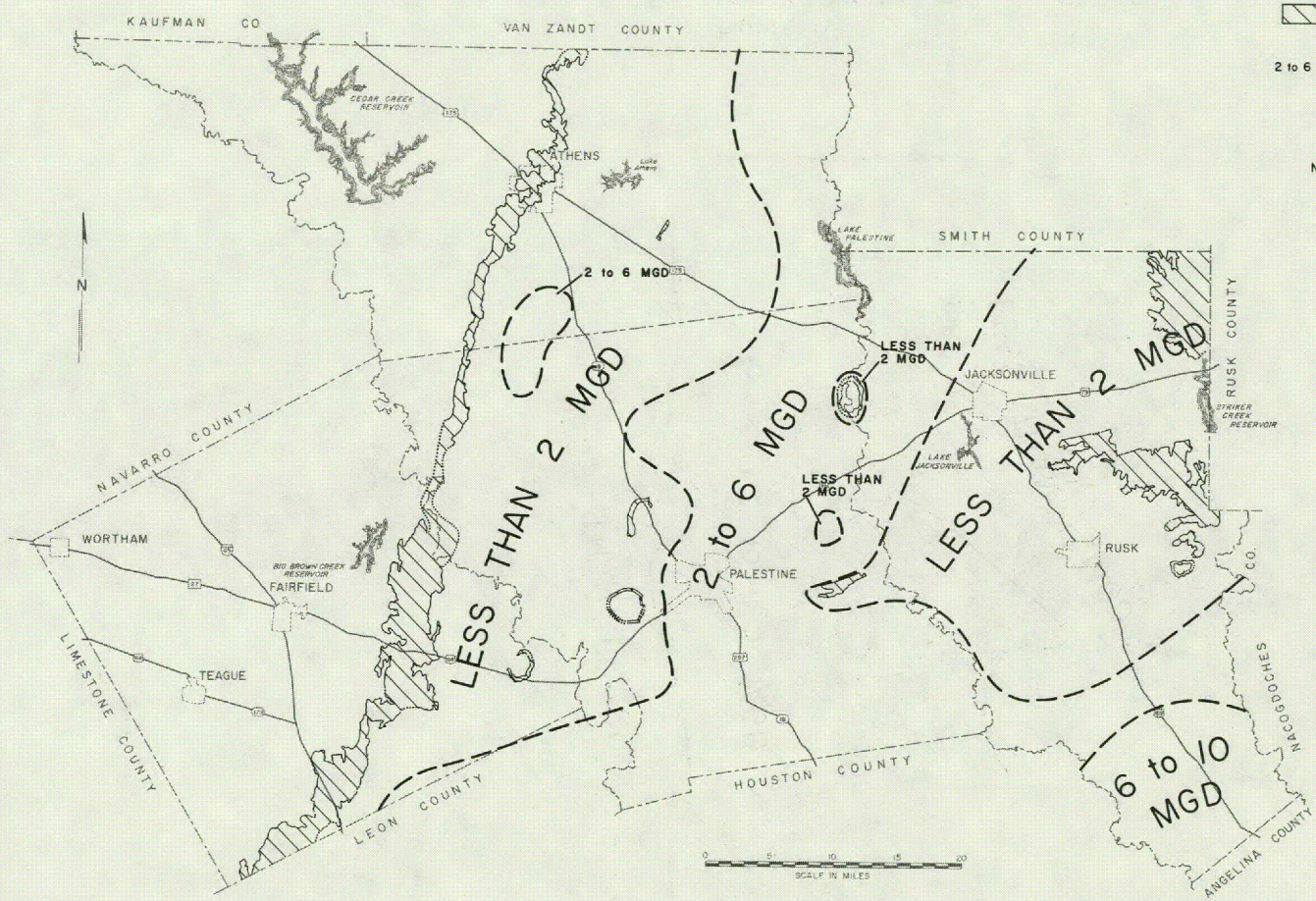
More important and more realistic than the preceding estimates of maximum yield of individual well fields are estimates of total availability of water from each of the principal aquifers within the four counties. A summary of these estimates is given in Table 6.

Estimates of the total availability of water are made to include pumping from existing well fields within the four-county area and from new well fields consisting of moderate- to large-yielding wells. The estimates are made on the basis of locating the new fields reasonable distances apart in the most favorable areas with respect to transmissibility of the aquifer and allowable drawdown of water level. They also assume that new fields will be located at distances from existing fields in the four-county area which will preclude unreasonable interference effects on these fields. They also assume that pumpage from the aquifers is not increased in adjacent counties, as no new interference is allowed for from these counties. In this respect, the estimates are perhaps somewhat too high, for some additional development will occur in adjacent counties.

A second method of estimating the available supplies is based on the full development of each aquifer throughout its extent, both inside and outside of the four-county area. The figures given for the available supplies by this method are estimates of the maximum amounts of water that will flow down the dips of the formations from their outcrops to wells in the four-county area. The estimates are based on the estimated effective transmissibilities of the formations, the dips of the beds, and the widths of the areas of occurrence of the aquifers in the four counties.

Wilcox Group

The 1969 pumpage from the Wilcox Group is estimated to have been 5.5 million gallons per day. The supply available from well fields with no increase in pumpage outside these counties is estimated at 48 million gallons per day. This water would be taken from well fields spaced about seven miles apart located in areas to obtain the maximum transmissibility and maximum allowable drawdown up to 500 feet. The estimate of the maximum amount of water that can flow from the outcrop to points of withdrawal in the



EXPLANATION

PRINCIPAL OUTCROP OF CARRIZO SAND, CONTACTS DOTTED WHERE CONCEALED

2 to 6 MGD — ESTIMATED YIELD OBTAINABLE FROM NEW WELL FIELD, MILLION GALLONS PER DAY (Without regard for interference effects on other fields)

NOTE: OUTCROP OF CARRIZO SAND FROM GEOLOGIC ATLAS OF TEXAS, PALESTINE, TYLER, AND WACO SHEETS, BUREAU OF ECONOMIC GEOLOGY, UNIVERSITY OF TEXAS, VARIOUS DATES

Figure 19

Estimated Individual Well-Field Yields-Carrizo Sand

Base from Texas State Highway Department county maps

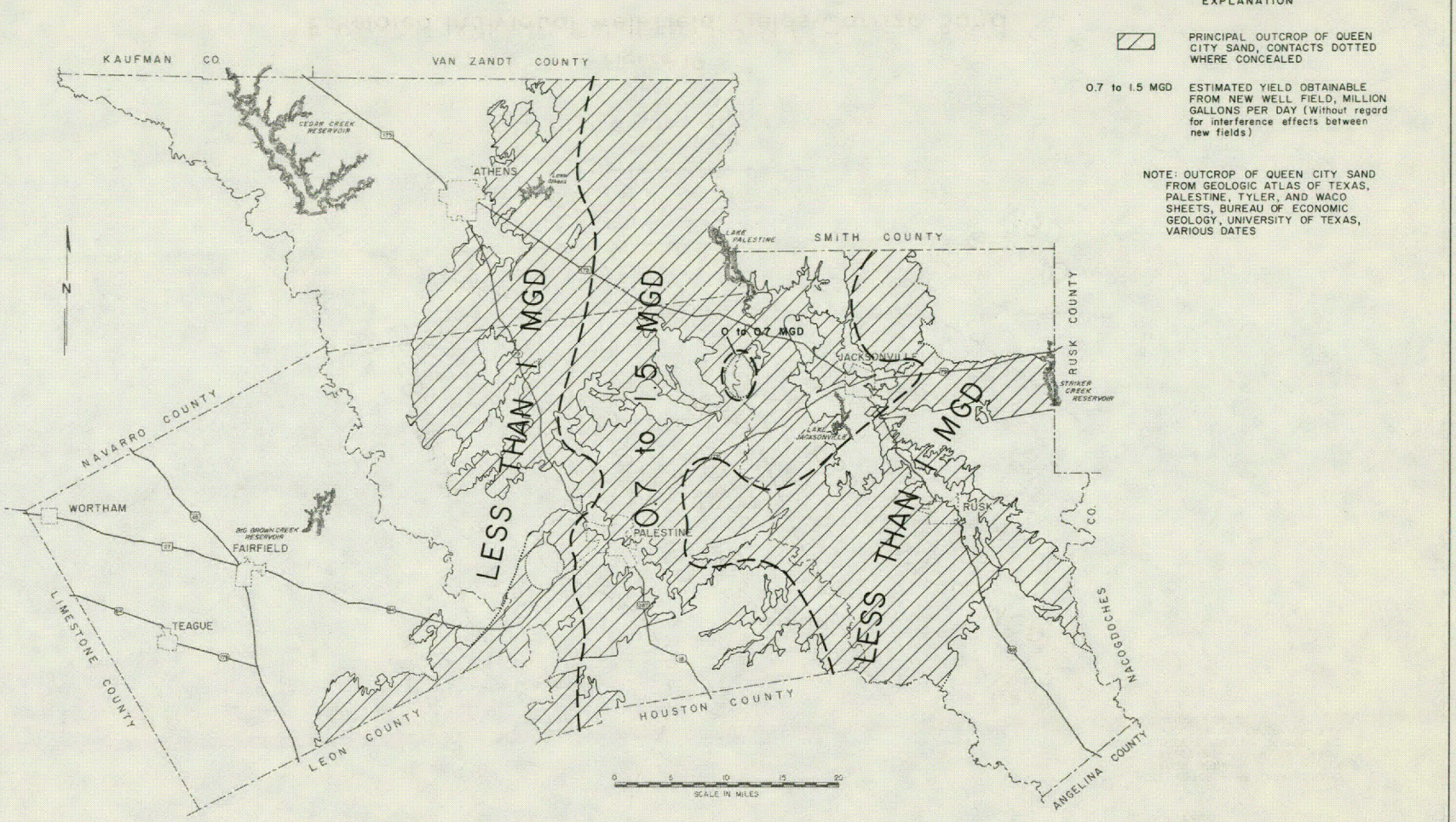


Figure 20

Estimated Individual Well-Field Yields-Queen City Sand

Base from Texas State Highway Department county maps

Table 6.--Estimated Total Amount of Ground Water Available in Anderson, Cherokee, Freestone, and Henderson Counties

Aquifer	1969 Pumpage (million gallons per day)	Supply Available under Practical Conditions, but with No Increase in Pumpage Outside These Counties[1/] (million gallons per day)	Supply Available from Maximum Possible Number of Wells, with Full Development Outside These Counties[2/] (million gallons per day)
Wilcox Group	5.5	48	30
Carrizo Sand	5.5	35	22
Queen City Sand	1.0	8	14
Sparta Sand	0.2	1	2

1/ The figures in this column are based on the sum of the estimated maximum yields from well fields of small to moderate size spaced uniformly in areas of greatest transmissibility and greatest allowable drawdown. The well fields in each aquifer interfere with one another, but the estimates assume that pumpage from the respective formations in adjacent counties will remain the same as at present, and there will be no interference from these outside counties.

2/ The figures in this column represent estimates of the maximum amounts of water that will flow down the dips of the respective formations from their outcrops into and in Anderson, Cherokee, Freestone, and Henderson Counties, if the aquifers are also fully developed in adjacent counties.

four-county area without unwatering the aquifer is 30 million gallons per day. This estimate is less than the estimate of the amount of water which can be developed by well fields. This is primarily because the locations of the hypothetical Wilcox well fields are such that they can draw a substantial part of their water from adjacent counties.

Carrizo Sand

The 1969 pumpage from the Carrizo Sand is estimated to have been 5.5 million gallons per day within the four-county area. The supply estimated to be available from well fields with no additional development outside the four-county area is 35 million gallons per day. Approximately two-fifths of this water would be available from well fields located in those parts of southern Anderson and southeastern Cherokee County where the allowable drawdown is greatest. Development of this water, however, would lower water levels in existing well fields to the east at Nacogdoches and Lufkin to such an extent that well yields there would be seriously affected.

The estimated amount of water which will flow down the dip of the Carrizo Sand from its outcrop without unwatering part of the formation is about 22 million gallons per day. This is less than the estimate of the amount of water which can be developed from well fields because the location of the hypothetical Carrizo well fields are such that they can draw a large part of their water from adjacent counties.

Queen City Sand

Present pumpage from the Queen City Sand is low, amounting to an estimated 1 million gallons per day. The supply estimated to be available from well fields, with no additional development outside the four-county area, is 8 million gallons per day. Most of this water would be available from well fields located in those parts of the area where the Queen City is the thickest. This is in western Henderson and in parts of Anderson and Cherokee Counties along the axis of the East Texas syncline.

The estimated supply available from the Queen City based on flow down the dip of the beds and assuming full development outside these counties is 14 million gallons per day. This is more than is estimated to be available from well fields, due to assuming the well fields to be of moderate size, similar to what a city or industry would expect.

Sparta Sand

Present pumpage from the Sparta Sand is estimated to be 0.2 million gallons per day, and the supply estimated to be available from well fields, with no additional development outside the four counties, is 1 million gallons per day. Most of this water would be available from one well field in extreme southern Cherokee County, where the allowable drawdown is greatest. The estimated supply of water available from the Sparta based on the flow down the dip of the beds and assuming full outside development is 2 million gallons per day.

Interrelationship Between Ground Water and Surface Water

Estimates of the total availability of water from existing well fields and/or new well fields for the Wilcox, Carrizo, Queen City, and Sparta aquifers total 92 million gallons per day. Should most or all of this water be developed there would eventually be a relatively small decrease in the base flow of the streams in the four-county area. However, the amount of decrease would be only a portion of the 92 million gallons per day.

Most of the base flow does not arrive at the streams by deep percolation but comes to them from relatively high- and intermediate-level seeps and springs. This is evidenced by the degree of fluctuation in the base flow, and by the fact that all the streams have essentially no flow in dry times. The seeps and springs which make up the bulk of the base flow of the streams owe their existence to the very stratified and lenticular character of the formations in the area. They represent rejected recharge from perched and semi-perched ground-water zones. Under conditions of full ground-water development, water levels in the perched and semi-perched zones would be little affected, and these zones would largely continue to furnish water to the streams. Most of the water to support the ground-water pumpage would come from salvaging water presently being discharged from the formations by evapotranspiration, and only a relatively small part would come from salvaging recharge to the formations currently being rejected by seepage to streams.

MORE FAVORABLE AREAS FOR GROUND-WATER DEVELOPMENT

Wilcox Group

The area considered to be more favorable for development of the Wilcox Group is shown on Figure 21. In selecting the area, consideration has been given to individual well yields, well-field yields, and quality of water. The area has been kept several miles away from known brackish water to minimize danger of brackish water encroachment.

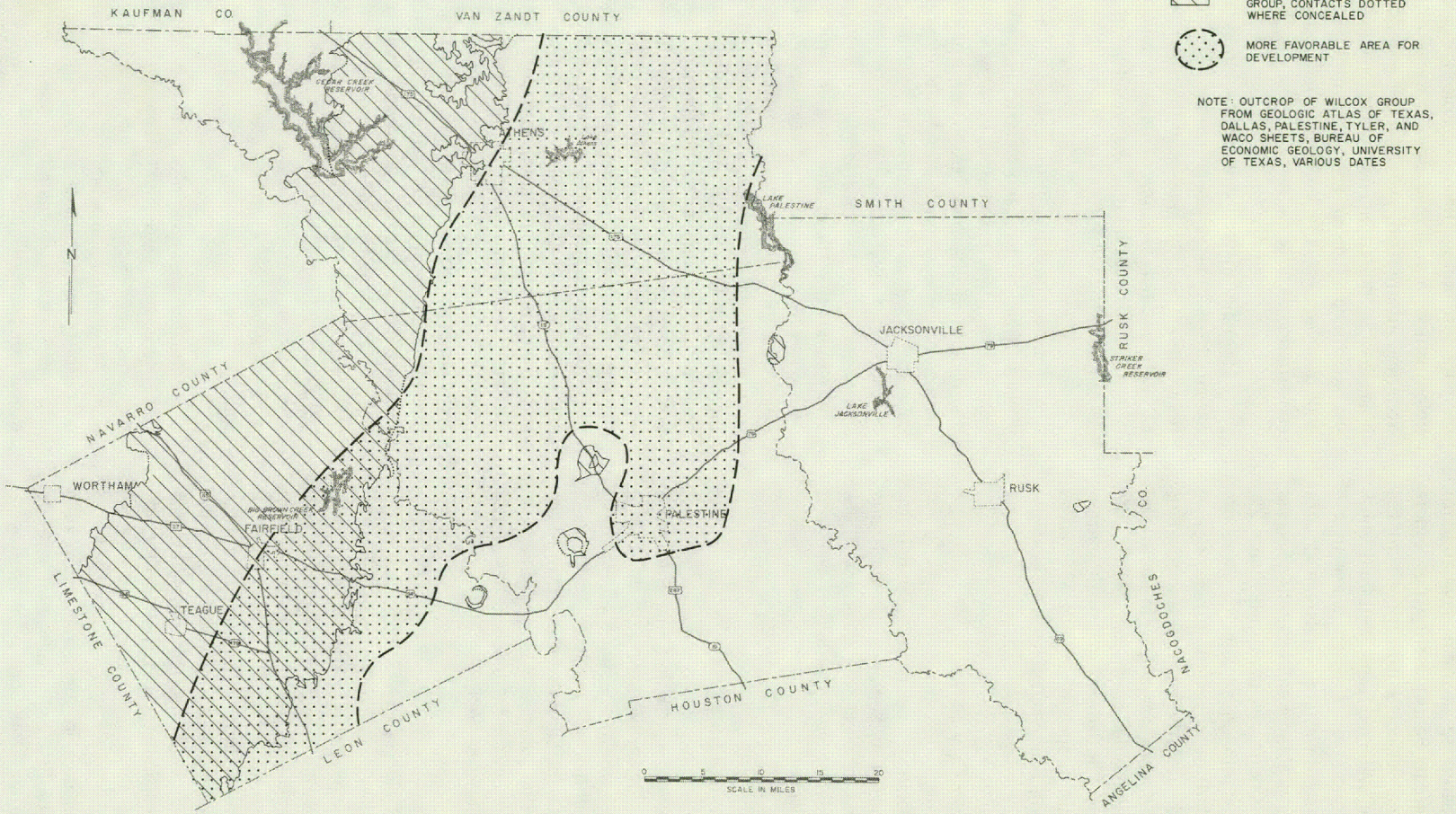


Figure 21

More Favorable Area for Development-Wilcox Group

Base from Texas State Highway Department county maps

Carrizo Sand

The areas considered to be more favorable for development of the Carrizo Sand are shown on Figure 22. The areas have been selected primarily from the standpoint of available well yield and well-field yield. The dissolved-solids content of Carrizo water in the more favorable area in southwestern Henderson County and in the more favorable area extending across northeastern Anderson County, as shown on Figure 22, is about 200 parts per million or less. In the more favorable area indicated in southern Anderson and southeastern Cherokee County, the dissolved-solids content is significantly higher, ranging from about 350 to 700 parts per million. As mentioned earlier, the development of large quantities in southeastern Cherokee County would reduce the yields of existing Carrizo well fields at and near Nacogdoches and Lufkin.

Queen City Sand

The area considered to be more favorable for development of the Queen City Sand is shown on Figure 23. Included is the area in which the thickness of the Queen City is the greatest and the largest well and well-field yields are expected.

Sparta Sand

Within the four-county area, the area considered to be more favorable for development of the Sparta Sand is very limited. As shown on Figure 17, the most favorable area is downdip from the Sparta outcrop in Cherokee County, where the allowable drawdown to the top of the Sparta is the greatest. Basically this only includes a very small area in the extreme southern tip of Cherokee County southwest of Wells.

TEST DRILLING

The estimates of well yields, well-field yields, and total availability of water and quality of water which are given in this report are believed to be the best which can be made based on the available data. There is always a possibility, however, that some differences from the estimates will be found in actual practice, for even the most uniform of the water-bearing units in the four-county area has sufficient variability to preclude absolute prediction.

It is common practice in the construction of a large well in the area to first drill a pilot hole entirely through the water-bearing formation to be developed. From the information obtained from this hole, a decision is made whether to complete the well. If so, the well is then designed on the basis of that information. When the greatest possible yield is desired or when the desired yield or quality of water is near the estimated limits of the ability of the aquifer to produce, it is desirable to precede the construction of wells with one or more test holes. These test holes are small diameter holes which are drilled solely for the purpose of obtaining information, and then are abandoned. Several holes may be drilled in a particular locality to determine the variations in ground-water conditions which exist and to select the site or sites which appear best for construction of large wells.

Normally the test drilling program is conducted to obtain three types of information: (1) information on the positions and thicknesses of the water-bearing sands, (2) representative samples of each water-bearing sand, and (3) information on the quality of the water contained in the sands.

The positions and thicknesses of the sands are obtained from drillers' and electric logs, and samples of sand are normally obtained as cuttings collected during the drilling of the hole. Cores are not usually taken because of the expense required to obtain representative coverage. It is important, however, that the drill cuttings be taken in a very careful manner so that they are as representative of the water-bearing sands as possible. This requires that the drilling mud entering the drill stem be kept as free as possible of sand and that the hole be cleaned of all drill cuttings prior to drilling the interval from which the sample of sand is desired. Then during the drilling of the interval to be sampled a portion of the drilling fluid should be diverted through a large sampling box or other receptacle within which the sand the mud is carrying can be separated in order to obtain a representative sample of the sand. After the bottom of the interval to be sampled is reached, drilling should stop and circulation of the drilling fluid should be continued and the sampling process continued until all drill cuttings have been carried to the surface. It is normal practice to take drill cutting samples at intervals of approximately ten feet in all the water-bearing sands of interest. Sieve analyses are made of the samples of sand thus obtained in order to determine their range in grain size. This information is used, together with other data obtained, in estimating the yield of water which might be obtained from a well at the site and in selecting the size of screen, and type and grading of gravel if the well is to be gravel packed, to be used in construction of the well.

Quality of water information is obtained from a test hole in two ways, one by actually taking samples of the water and the other from the electric log made in the hole. An electric log which is made under controlled conditions with proper, standardized equipment normally can be evaluated to determine the general degree of mineralization of the water. It cannot, however, be evaluated closely enough to determine the precise degree of mineralization, nor is there any way to determine the concentration of various mineral constituents in the water. Therefore, when this

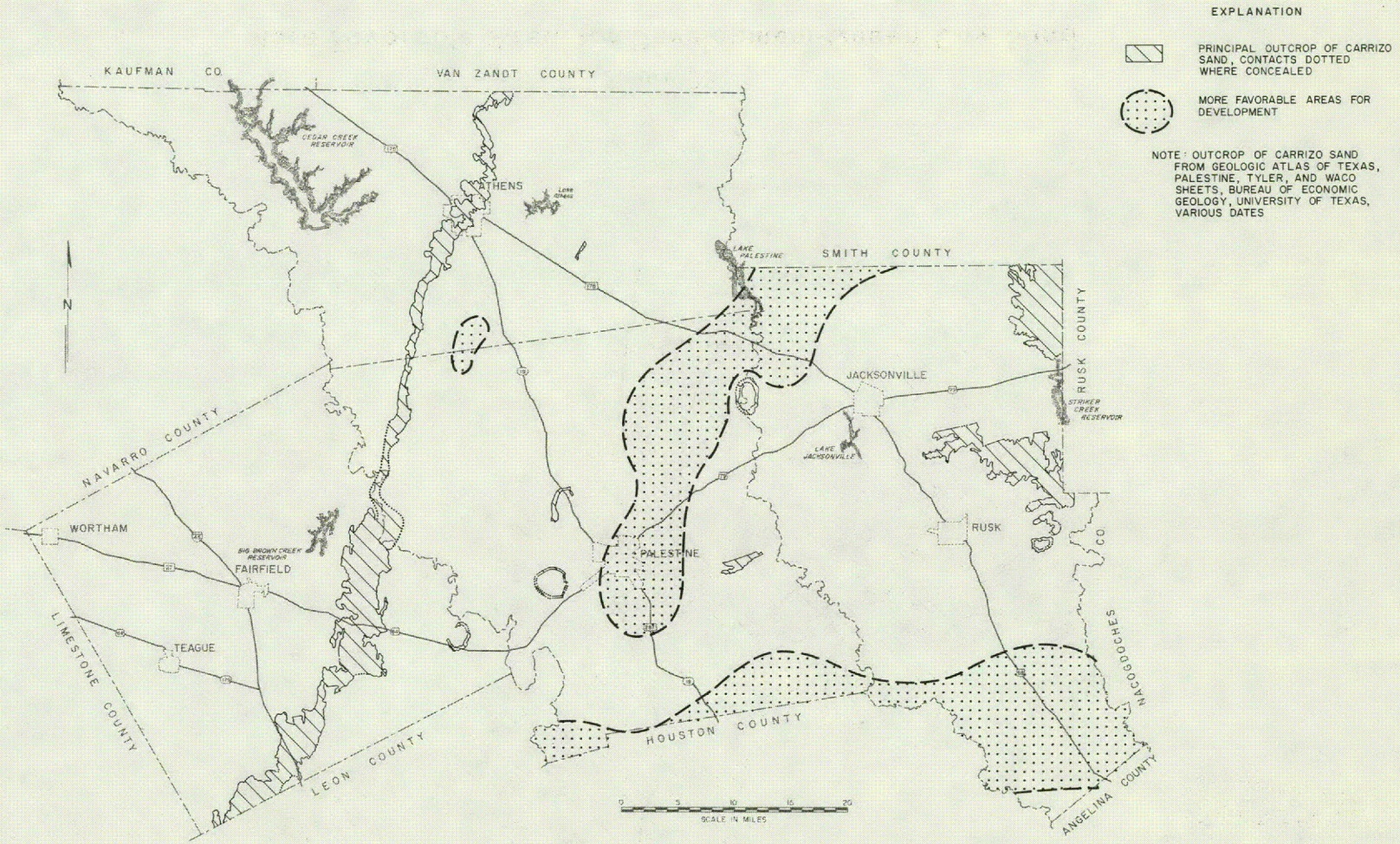


Figure 22

More Favorable Areas for Development-Carrizo Sand

Base from Texas State Highway Department county maps

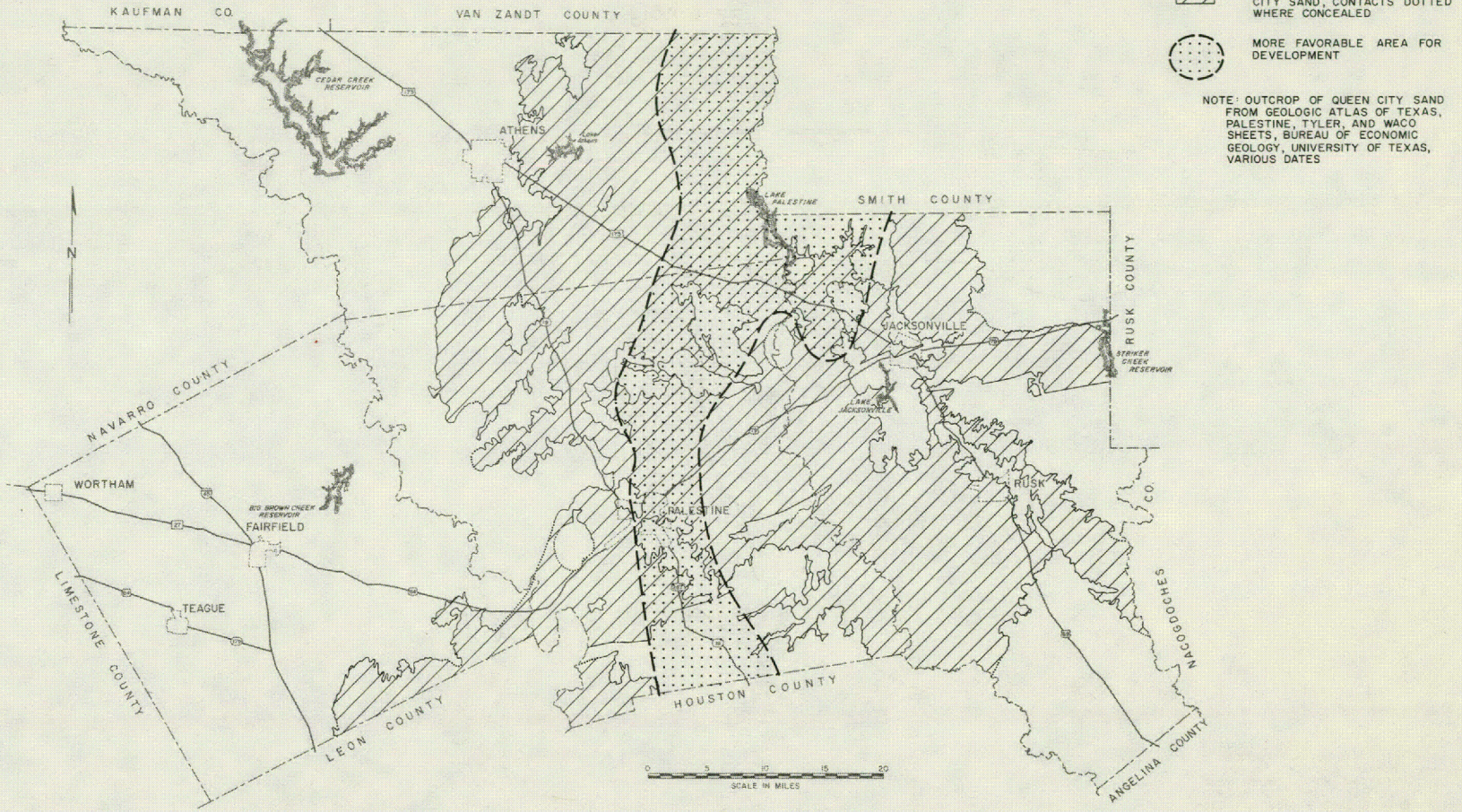


Figure 23

More Favorable Area for Development-Queen City Sand

Base from Texas State Highway Department county maps

information is desired, it must be obtained by taking water samples.

A standard method for taking water samples from a test hole is shown in Figure 24. In this method, the original hole drilled is 6-3/4-inches in diameter. When the hole penetrates about 15 to 30 feet into a sand from which a water sample is desired, drilling is stopped. The position and shape of the hole at that time is indicated by the drawing at the left side of Figure 24. Next, the hole is reamed to a diameter of 9-7/8-inches down to a point just above the zone selected for water sampling. Then the original 6-3/4-inch hole is washed out to its original depth. The hole at that time is illustrated by the center drawing. Then a string of pipe with packer and screen is set in the hole, as shown at the right of Figure 24. The pipe is usually 4 inches in diameter, and the packer is a commercial rubber cone type, with typical dimensions of 6 by 9 by 14 inches. Often a canvas "shirt tail" is wrapped on the packer to assist in sealing. The packer is set on the shoulder between the 6-3/4-inch and the 9-7/8-inch portion of the hole. Below the packer a commercial 4-inch water well screen 10 to 20 feet long is attached to the 4-inch pipe. After the packer is seated, the temporary well thus constructed is pumped by airlift. The well is usually pumped for several hours until the water becomes clear. If pH, hydrogen sulfide, iron, and manganese are not problems, final samples for chemical analysis are taken at the end of this airlift pumping period. Otherwise, after the water becomes clear the airline is removed from the 4-inch pipe, and a small diameter turbine or hi-lift pump is installed and the temporary well is again pumped until the water becomes clear, after which the final samples are taken. In this case, the pH and hydrogen sulfide are determined in the field at the time the sample is taken. The water normally must be pumped until it is entirely clear, because even a very small amount of mud left in the water will affect the determination of iron and manganese in the water and show falsely high contents of these constituents.

At the end of the pumping, periodic measurements are made of the recovery of the water level in this temporary well, usually for about 2 hours. By study of the rate of water-level recovery, reasonably reliable estimates can usually be made of the static water level, and sometimes valuable information can be obtained concerning the transmissibility of the water-bearing sand which is screened.

The casing and screen are then pulled from the hole, and drilling of the 6-3/4-inch hole is resumed until a second water-bearing zone is encountered from which a water sample is desired, at which time the entire water-sampling process is repeated.

If a large well field is desired, the test-drilling program may be followed by the construction of a pilot production well. This is a well which is located and designed on the basis of the results of the test-drilling

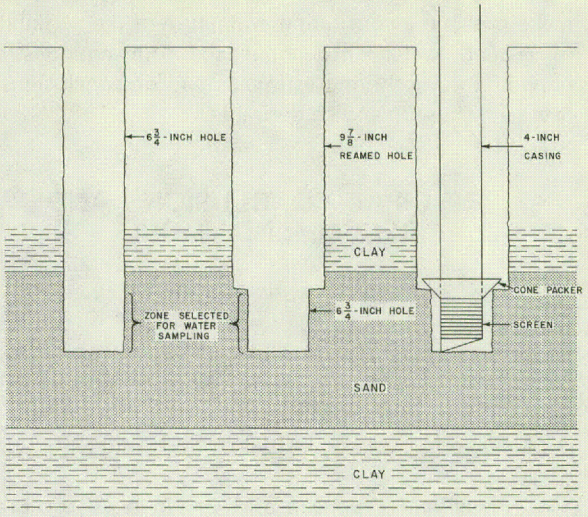


Figure 24.—Procedure for Water Sampling From Test Hole

program and which is intended to serve as the first well in the proposed well field if successful. After the pilot production well is constructed, it is tested in a thorough manner to determine the operating characteristics of the well, the quality of the water, the coefficients of transmissibility and storage, and any local boundaries of the aquifer. From the tests, decisions are made as to whether the well yield and water quality are satisfactory for the proposed well field and what spacing will be desirable for other wells. Any necessary changes in design of the other wells also are made at this time. Should the pilot production well prove unfavorable, a decision can be made to abandon the project or change its scope before additional wells are constructed.

Moderately yielding wells in the area may be constructed in a manner similar to that shown on Figure 6. Diameters may be enlarged or reduced to more or less than those shown, for greater or lesser yields.

OBSERVATION PROGRAM

At present, an annual survey of ground-water pumpage by major users in this area is conducted by the Texas Water Development Board. Additional observations on the ground-water conditions would be desirable, however, especially for the Carrizo and Wilcox aquifers. Periodic measurements of water levels should be made in a network of wells tapping these aquifers. In addition, occasional inventories should be made of all important new wells which are drilled, and any new electric logs which become available should be compiled. With these records as a base, the observation program may be expanded as needed to observe the effects of any new well fields and to cover other formations.

The results of such an observation program will make possible a continuing evaluation of the availability of ground water throughout the four counties and provide for modifying estimates and/or conclusions as new data show this to be desirable.

PRINCIPAL CONCLUSIONS AND RECOMMENDATIONS

The principal water-bearing formations in Anderson, Cherokee, Freestone, and Henderson Counties are the Wilcox Group, Carrizo Sand, Queen City Sand, and Sparta Sand, in that order. Other geologic formations in these counties are capable of producing only small quantities of fresh water.

Fresh water in the Wilcox Group mostly occurs in its outcrop and downdip to the southeast to a line trending generally northeast-southwest and passing just north of Slocum in Anderson County and Reklaw in Cherokee County. The line approximately parallels the Mount Enterprise fault zone. The estimated 1969 pumpage from the Wilcox Group was 5.5 million gallons per day. The estimated total supply available from wells is 48 million gallons per day, assuming no increase in pumping from outside areas. The estimated maximum yield of a single well ranges up to 1,500 gallons per minute, and the estimated maximum yield of an individual well field up to 12 million gallons per day, depending upon location. The quality of water is better in the western part of the area than in most of Cherokee County, where, although termed fresh, much of the water is considerably more mineralized than the water obtained from the overlying Carrizo Sand.

The Carrizo Sand contains fresh water throughout its area of occurrence in the four-county area. Pumpage during 1969 is estimated to have been 5.5 million gallons per day. The total supply available from the Carrizo from well fields is estimated at 35 million gallons per day with no increase in pumpage outside the four-county area. Estimated maximum individual well yields range up to 1,500 gallons per minute, and the estimated maximum individual well-field yield ranges up to 10 million gallons per day in one area but is generally less than 6 million gallons per day. The largest well-field yield can be obtained near the southern and southeastern edge of the area, particularly in southeastern Cherokee County, but development of such supplies will lower water levels to such an extent in adjoining areas to the east that the yields of existing well fields at and near Nacogdoches and Lufkin will be seriously affected.

Fresh water is found in the Queen City Sand throughout its outcrop area, which is extensive within the four-county area, and in two relatively small localities downdip, one in southern Anderson County and one in southern Cherokee County. The estimated pumpage from the Queen City Sand in 1969 was 1 million gallons per day. The estimated supply available from wells is 8 million gallons per day. Most of this supply is available in the central part of the area along the axis of the East Texas syncline where the Queen City is the thickest. Estimated maximum yields of individual wells in the Queen City range up to 400 gallons per minute, and the estimated maximum yield of an individual well field ranges up to 1.5 million gallons per day. The quality of water in the Queen City is quite fresh throughout its outcrop area. In extreme southeastern Cherokee County the Queen City water is brackish.

The Sparta Sand has a limited extent within the four-county area. The most important area of its occurrence is in southern Cherokee County where a small area has potential for development. Pumpage from the Sparta in 1969 is estimated to have been about 0.2 million gallons per day, and the estimated supply available is 1 million gallons per day. The estimated maximum individual well yield ranges up to 500 gallons per minute, and the estimated maximum individual well-field yield ranges up to 1 million gallons per day.

A test-drilling program would be desirable before a large development is undertaken in any of the formations in the area where test holes and/or large wells have not previously been drilled or where conditions may be borderline from the standpoint of obtaining the desired quantity or quality of water.

Continuing programs of observation, primarily on pumpage and water levels in wells, should be conducted for the Wilcox and Carrizo aquifers. None of the other formations have enough present development to warrant an observation program.

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Buffalo	1:24,000	Mexia	1:24,000
Bullard	1:62,500	Oakwood	1:24,000
Butler	1:24,000	Palestine	1:62,500
Chandler	1:24,000	Rosser SW	1:24,000
Creslenn Ranch	1:24,000	Roustabout Camp	1:24,000
Cushing	1:62,500	Rusk	1:62,500
Dew	1:24,000	Slocum	1:62,500
Donie	1:24,000	Stewards Mill	1:24,000
Douglass	1:62,500	Streetman	1:24,000
Elkhart	1:62,500	Styx	1:24,000
Fairfield	1:24,000	Teague North	1:24,000
Farrar	1:24,000	Teague South	1:24,000
Frankston	1:62,500	Tennessee Colony	1:62,500
Henderson	1:62,500	Tool	1:24,000
Jacksonville	1:62,500	Troup	1:62,500
Keechi	1:24,000	Turlington	1:24,000
Kennard NE	1:24,000	Wells	1:24,000
Kerens	1:24,000	Winkler	1:24,000
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Table 7.--Records of Wells, Springs, and Test Holes in Anderson County

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-34-57-701	L. Tennison		1965	290	690	C	10-3/4	0	390	Wilcox	33	1965	S,E 1	D,S		
						S	10-3/4	390	650							
						C	10-3/4	650	690							
801	J. T. Whitman	Rekhop Drilling Co.	1969	500	446	C	4-1/2	0	346	Wilcox	150	7-29-69	S,E 1-1/2	D,S	D	Drilled to 460 feet. Pumped 20 gpm from 190 feet on 7-29-69. Temperature 70° F.
						S	4-1/2	346	446							
58-701	E. E. Price		1930	370	29	C	30	0	29	Queen City	15.7	8-5-70	H	S		
801				295		C	4-1/2			Carrizo	+5	11-16-60		N		Flowed approximately 45 gpm on 8-14-70.
											+	8-14-70				
901	Newman	Rekhop Drilling Co.	1967	420	560	C	4-1/2	0	500	Wilcox	103	8-25-67	S,E 1-1/2	D,S	D	Bailed 20 gpm from 115 feet on 8-25-67.
						C	2-1/2	477	540							
						S	2-1/2	540	560							
902	Wiggins, Hyde, & Continental Oil Co. - Landis No.1		1943		5,224										E	Oil test.
59-701	Anlaco, Inc.	West & Rekhop Drilling Co.	1963	460	560	C	4-1/2	0	500	Wilcox	190	1963		D		
						C	2-1/2	476	540							
						S	2-1/2	540	560							
801	Anlaco, Inc.		1955	500	600	C	6-5/8			Carrizo, Wilcox	155.3 174.9	7-11-60 8-5-70	T,G 25	N		Reported high iron content.
802	W. C. Perryman & I. P. LaRue - Anderson County Land Co. No.1		1957		5,026										E	Oil test.
803	Anlaco, Inc.	West & Rekhop Drilling Co.	1961	470	760	C	7	0	700	Wilcox	260	1961	S,E	D,S		
						C	4-1/2	690	720							
						S	4-1/2	720	760							
804	W. C. Perryman & I. P. LaRue - W. W. Henderson No.1		1957		5,030										E	Oil test.
805	W. C. Perryman & I. P. LaRue - J. W. Bailey No.1		1957		4,984										E	Oil test.
901	The Texas Co. - C. W. Hanks No.1		1951		10,758										E	Oil test.
902	M. G. Hilton		1955	480	56	C	30	0	56	Queen City	47.3	8-5-70	J,E 2	D,S		
60-403	Ben Douglas	White Drilling Co.	1957	480	180	C	4-1/2	0	165	Queen City	89.3	8-5-70	S,E 1	S		
						S	2-1/2	165	180							
404	Humble Oil & Refining Co.- Maggie Follis No.1		1956		10,915										E	Oil test.
501	Hunt Graham, et al - Henderson Estate No.1		1955		5,250										E	Oil test.
601	City of Frankston		1928	420	20	C	144	0	20	Queen City	8 0 0	6-14-44 10-60 8-18-70	Cf,E 1	P		Pumped 75 gpm on 6-14-44. Temperature 65.5° F. Stand by use.
602	City of Frankston No.1	Layne Texas Co.	1949	440	652	C	10-3/4	0	477	Carrizo	143	7-49	T,E	P	D,E	Drilled to 688 feet. Pumped 202 gpm from 176 feet in July 1949. Pumped 220 gpm from 245 feet in May 1968. Pumped 210 gpm on 8-20-70.
						C	6-5/8	377	580		200	5-68	30			
						S	6-5/8	580	620		246.2	8-20-70				
						C	6-5/8	620	652							
603	City of Frankston No.2	Texas Water Wells	1964	420	605	C	12-3/4	0	548	Carrizo	180	8-64	T,E	P	D	Drilled to 647 feet. Pumped 300 gpm from 266 feet in August 1964.
						C	8-5/8	448	550		210	8-27-69	30			
						S	6-5/8	550	595		203	8-6-70				
						C	6-5/8	595	605							

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-34-60-701	W. T. Lang			370	>200	C	4-1/2			Queen City	+ +	7-11-60 8-10-70	N	N		Flowed 1 gpm on 7-11-60. Temperature 67° F.
702	Humble Oil & Refining Co.-T. O. Milner No.1		1948		9,774										E	Oil test.
801	W. R. Baker		1946	560	50	C	30	0	50	Sparta	28	7-70	J,E 1/2	D,S		
901	Humble Oil & Refining Co.-N. M. Thompson No.1		1961		10,320										E	Oil test.
902	Frankston Rural Water Supply Corp.	Rekhop Drilling Co.	1969	580	739	C C S C S C	8-5/8 4-1/2 4-1/2 4-1/2 4-1/2 4-1/2	0 537 646 656 680 720	640 646 656 680 720 739	Carrizo	300	12-23-69	S,E 15	P	D,E	Drilled to 910 feet. Pumped 52 gpm from 505 feet on 12-23-69.
903	Hunt Oil Co.	Texas Water Wells	1967	380	560	C C S C	12-3/4 6-5/8 6-5/8 6-5/8	0 400 494 550	492 494 550 560	Carrizo	118	10-67	T,Ng	Ind.	D,E	Drilled to 1,133 feet. Pumped 302 gpm from 165 feet in October 1967. Temperature 72.6° F.
61-401	R. H. & W. Oil Co. - A. C. Sanders No.1		1941		4,971										E	Oil test.
403	Frankston Independent School District	White Drilling Co.	1959	450	760	C C S	4-1/2 2-1/2 2-1/2	0 686 740	691 740 760	Carrizo	180 170.6	9-29-59 8-4-70	S,E 1	P		
501	Upper Neches Municipal River Authority	Katy Drilling Co.	1969	385*	900	C C S C	12-3/4 8-5/8 8-5/8 8-5/8	0 0 868 898	868 868 898 900	Carrizo	137 132	12-22-69 8-10-70	S,E 7-1/2	P	D,E	Drilled to 904 feet. Pumped 135 gpm from 218 feet on 12-22-69. Temperature 72° F.
701	Max Baker	Verdal Drilling Co.	1955	435	562	C S	10-3/4 10-3/4	0 362	362 562	Queen City, Reklaw, Carrizo	90	1955	T,E 60	Irr.		Pumped 500 gpm from 165 feet in 1955. Reported high iron content.
702	Max Baker		Old	430	32	C	30	0	32	Queen City	27.7	11-17-60	J,E	D,S		Temperature 69° F.
703	B. L. Saunders	White Drilling Co.	1967	400	615	C C S C	4-1/2 2-1/2 2-1/2 2-1/2	0 520 584 614	525 584 614 615	Carrizo	130	12-28-67	S,E 1-1/2	D	D	Pumped 50 gpm from 190 feet on 12-28-67.
801	Watburn Oil Co. - Holman No.1		1954		4,963										E	Oil test.
802	B. R. Bivens			350	63	C	30	0	63	Queen City	29.7	8-4-70	H	D		
38-01-101	Getty Oil Co.	Layne Texas Co.	1939	313*	531	C S	13-3/8 8-5/8			Wilcox	71	12-30-40	T,E 10	Ind.		Pumped 115 gpm from 149 feet on 12-30-40.
102	Getty Oil Co.	West Drilling Co.	1948	301*	510	C S	6-5/8 6-5/8	0 467	467 510	Wilcox	53.7	8-19-70	A	Ind.		
103	Cayuga Water Supply Corp.	Andrews & Foster Drilling Co.	1965	315	370	C C S C S	8-5/8 4-1/2 4-1/2 4-1/2 4-1/2	0 225 276 286 328	275 276 286 328 370	Wilcox	68 78	9-29-65 8-20-70	S,E 5	P		Pumped 35 gpm from 240 feet on 9-29-65. Temperature 73° F.
104	Cayuga Water Supply Corp.-T. H. No.1	Andrews & Foster Drilling Co.	1965	315	774										E	Test hole.
201	Globe Drilling Co. - M. A. Davey Estate No.1		1959		4,699										E	Oil test.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-01-202	H. M. Thomas		1927	440	18	C	30	0	18	Carrizo	13.9	8-20-70	J,E 1/3	D,S		
301	LaReata Ranch	Bill Albright	1964	420	450	C	4-1/2	0	260	Carrizo	70	1964	C,E 1/2	D		Temperature 67° F.
401	City of Cayuga	West Drilling Co.	1946	310	388	C	4-1/2	0	348	Wilcox	45	1946	C,E 1-1/2	N		
						S	4-1/2	348	388		60	1960				
402	Tidewater Oil Co. - H. R. Rampy No.8		1962		4,200										E	Oil test.
501	B. C. Y. Water Supply Corp. No.2	Rekhop Drilling Co.	1969	370	673	C	7	0	590	Wilcox	190	10-1-69	S,E 7-1/2	P	D	Pumped 125 gpm from 198 feet on 10-1-69.
						C	3-1/2	507	596							
						S	3-1/2	596	646							
						C	3-1/2	646	673							
502	Ansley McMahon	John Cobb Drilling Co.	1964	370	165	C	4-1/2	0	118	Carrizo	52.2	8-20-70	N	N		Reported high iron content.
503	Ansley McMahon	O. F. Miller	1964	370	470	C	7-5/8	0	220	Wilcox	90	1964	S,E 1-1/2	D,S		
						C	4-1/2	220	430							
						S	4-1/2	430	470							
601	State of Texas - Parks & Wildlife			260	90	C	8-5/8			Carrizo	+	1960	N	N		Flow estimated at 300 gpm on 7-11-60 and 8-14-70. Temperature 69° F.
											+	8-14-70				
602	State of Texas - Parks & Wildlife	Carruth Drilling Co.	1965	360	170	C	4-1/2	0	150	Carrizo			S,E	D	D	Reported high iron content.
						S	2-1/2	150	170							
701	R. Yarbrough		1949	310	58	C	30	0	3	Alluvium, Carrizo	52.8	8-20-70		N		
801	Fort Bend Oil Co. - E. C. Williams No.2		1953		5,934										E	Oil test.
802	The Texas Co. - E. C. Williams No.1		1955		5,800										E	Oil test.
803	The Texas Co. - E. C. Williams No.3		1956		6,135										E	Oil test.
804	The Texas Co.- A. P. Colley No.1		1957		6,103										E	Oil test.
805	The Texas Co. - Sherwood Cook No.1		1957		5,975										E	Oil test.
806	B. C. Y. Water Supply Corp. No.1	Andrews & Foster Drilling Co.	1967	370	514	C	8-5/8	0	377	Wilcox	80.9	8-24-70	N	N	D	Drilled to 1,062 feet. Pumped 117 gpm from 190 feet in May 1967.
						C	4-1/2	367	412							
						S	4-1/2	412	432							
						C	4-1/2	432	450							
						S	4-1/2	450	470							
						C	4-1/2	470	514							
901	State of Texas - Parks & Wildlife	West Drilling Co.	1945	375	136	C	4-1/2	0	126	Carrizo	64	1956	N	N		Reported high iron content.
						S	4-1/2	126	136							
902	State of Texas - Parks & Wildlife	R. C. English	1954	375	280	C	8-5/8	0	173	Wilcox	60	1954	S,E 1	D	D	Drilled to 300 feet. Temperature 70° F.
						C	4-1/2	0	260		67.8	8-25-70				
						S	4-1/2	260	280							
903	State of Texas - Parks & Wildlife	Carruth Drilling Co.	1965	375	162	C	4-1/2	0	142	Carrizo	60.2	8-25-70	S,E 1/2	D		Reported high iron content.
						S	2-1/2	142	162							
02-101	Anlaco, Inc.			290		C	5-1/2			Carrizo	+	7-11-60	N	N		Flow estimated at 300 gpm on 7-11-60. Temperature 70° F.
											+	8-14-70				
201	W. C. Perryman & G. J. Greer - H. L. Forrester No.1		1960		5,320										E	Oil test.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-02-202	Bob Jenkins		1920	390	22	C	30			Reklaw	12.9	8-18-70	J,E	N		
301	C. W. Thompson			400	30	C	42			Queen City	24.6 18.7	11-16-60 8-14-70	N	N		
302	B. B. S. Water Supply Corp.	Wes-Tex Tool Co.	1965	520	1,206	C C S C	8-5/8 4-1/2 4-1/2 4-1/2	0 1,048 1,154 1,192	1,154 1,154 1,192 1,206	Wilcox	220 225.3	5-13-65 8-26-70	S,E 10	P		Drilled to 1,223 feet. Pumped 130 gpm from 277 feet on 5-13-65. Pumped 79 gpm from 256 feet on 9-11-70. Temperature 82° F.
401	J. H. Isabell			260	110	C	5-1/2			Carrizo	+ +	7-11-60 8-14-70	N	S		Flow estimated at 200 gpm on 7-11-60 and 8-14-70. Sulfur odor. Temperature 67° F.
402	Arnold Wisenbaker	Rekhop Drilling Co.	1969	420	630	C C S C	4-1/2 2-1/2 2-1/2 2-1/2	0 536 548 569	548 548 569 630	Wilcox	155 133.9	4-25-69 8-13-70	S,E 2	D,S	D	Pumped 15 gpm from 170 feet on 4-25-69.
501	J. L. Petty	Carl Dobbs	1965	390	160	C S	4-1/2 4-1/2	0 100	100 160	Reklaw			J,E 1/3	D,S		
601	The Texas Co. - Dock Hanks No.1		1948		10,080										E	Oil test.
602	The Texas Co. - Barnard No.2		1949		5,790										E	Oil test.
603	Phillips Petroleum Co. - Broadway No.1		1948		9,994										E	Oil test.
604	Texas Minerals, Inc. - Irma A. Nixon No.1		1964		5,490										E	Oil test.
605	J. Forester	West & Rekhop Drilling Co.	1956	400	425	C	10-3/4			Wilcox			T,E 5	D,S		
701	Butter & Douglas - E. M. Cross No.1		1954		5,303										E	Oil test.
702	W. K. Brown		1940	360	24	C	30	0	24	Queen City	15.2	8-18-70	J,E 1/3	D,S		
801	Sunray - Mid-Continent Oil Co. - C. Smith No.1		1957		5,870										E	Oil test.
802	O. H. Hogg, Estate			360	15	C	30	0	15	Reklaw	11.3	8-20-70	H	S		
803	O. L. Williams		1950	290	200	C	12-3/4			Carrizo	+10	8-24-70	N	S		Temperature 67° F.
901	W. F. Robertson		1900	420	33					Queen City	24.3	8-13-70	C,W	D,S		Temperature 66° F.
03-101	R. S. Costlow	Hampton Drilling Co.	1966	540	77	C	30	0	77	Queen City	55.7	8-12-70	J,E 1/3	D,S	D	
102	Cities Service Oil Co. - Carl Riddles No.1		1953		10,457										E	Oil test.
201	M. P. Holcomb	Hampton Drilling Co.	1964	560	50	C	30	0	50	Queen City	36.8	8-12-70	J,E 1/3	D,S	D	
202	W. C. Perryman & I. P. LaRue - W. J. Inmon No.1		1957		5,090										E	Oil test.
301	Andy Page	Hampton Drilling Co.	1968	510	51	C	30	0	51	Queen City			J,E 1/3	D,S	D	
401				480	40	C	30			Queen City	33.3	11-16-60	N	N		

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-03-402	A. M. Johnson		1945	390	26	C	30	0	21	Queen City	22	5-70	C,E 1/3	D,S		
501	R. L. Parker	East Texas Earth Boring Co.	1967	560	34	C	30	0	34	Sparta	27 21.5	5-19-67 8-13-70	J,E 1/3	D	D	
502	Carter - Gragg Oil Co. - N. Jaramillo No.1		1943		5,675										E	Oil test.
601	McKellar & Tynes - Ruby Hall No.1		1968		5,593										E	Oil test.
602	Fred Woody	John Cobb Drilling Co.	1964	680	759	C C	6-5/8 4-1/2	0 220	220 660	Carrizo	180	1969	S,E 1-1/2	D,S		
701	Montalba Water Supply Corp.	Layne Texas Co.	1963	450	1,163	C C S C S C	7 3 3 3 3 3	0 960 1,070 1,085 1,105 1,141	1,067 1,070 1,085 1,105 1,141 1,163	Wilcox	160 168.9	9-17-63 9-14-70	S,E 7-1/2	P	D,E	Drilled to 1,193 feet. Pumped 108 gpm from 198 feet on 9-18-63. Pumped 55 gpm from 180 feet on 9-14-70.
702	LaGorce Oil Co. - Royall National Bank No.1		1959		5,400										E	Oil test.
801	Humble Oil & Refining Co.- J. H. Horwitz No.1		1961		2,326										E	Oil test.
802	C. Andrade & W. M. Knight-Fitzgerald No.1		1948		5,233										E	Oil test.
803	H. S. Hamm	Carruth Drilling Co.	1956	480	190	C S	5-1/2 5-1/2	0 140	140 190	Queen City	25 26	1956 1969	J,E 1/3	D		
804	H. S. Hamm	Andrews & Foster Drilling Co.	1970	480	185	C	4-1/2	0	104	Queen City	50	1-70	S,E 1/2	D		Temperature 67° F.
901	L. A. Douglas & F. K. Johnson - J. W. Braly No.1		1950		5,416										E	Oil test.
902	J. W. Jones	John Cobb Drilling Co.	1964	440	760	C	4-1/2			Carrizo	189.5	8-11-70	S,E 1-1/2	D,S		
04-101	Parrish		1956	460	21	C	36	0	21	Queen City	9.4 10.9	11-16-60 8-11-70	J,E 1/4	D		
201	W. H. Whitehurst	White Drilling Co.	1967	410	655	C C S C	4-1/2 2-1/2 2-1/2 2-1/2	0 555 624 654	560 624 654 655	Carrizo	115 114.2	7-11-67 8-11-70	S,E 1-1/2	D,S	D	
301	Mrs. J. E. Elliott	Carruth Drilling Co.	1959	480	420	C S	4-1/2	0 405	405 420	Queen City	120	9-59	N	N	D	Reported high iron content.
302	Watburn Oil Co. - Madison Cook No.1		1955		5,436										E	Oil test.
303	Herring Drilling Co. - Beard No.1		1955		5,818										E	Oil test.
304	Whiffen Estate, Inc. - Dora Shackleford No.1		1959		5,783										E	Oil test.
305	E. L. Petty	Patrick Drilling Co.	1969	490	864	C C S	4-1/2 3 3	0 784 843	785 843 864	Wilcox	190	1-70	S,E 1-1/2	D		
401	Humble Oil & Refining Co.- Royall National Bank No.2		1962		3,320										E	Oil test.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data				Indicated Water-bearing Unit	Static Water Level 3/		Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
						Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)		Depth (feet)	Date				
AA-38-04-402	Humble Oil & Refining Co.- G. O. Firod No.1		1967		11,475										E	Oil test.
403	E. B. Birdwell	Rekhop Drilling Co.	1970	580	340	C C S	4-1/2 2-1/2 2-1/2	0 256 286	286 286 340	Queen City	180 183.1	7-70 8-11-70	S,E 2	D	D	Pumped 15 gpm from 190 feet in July 1970.
501	B. Coleman		1969	500	32	C	30	0	32	Sparta	16	1970	J,E 1/3	D		
601	B. G. Byars - McLaurine No.1		1954		5,515										E	Oil test.
602	Newt Woodard		1966	430	44	C	30	0	44	Sparta	33.8	8-11-70	J,E 3/4	D,S		
603	Haynes B. Ownby Drilling Co. - E. T. Herrin No.1		1956		5,700										E	Oil test.
701	M. H. Shaw - Reed No.1		1960		5,472										E	Oil test.
702	Leon Barnes		Old	520	35	C	36	0	6	Queen City	29.6	8-12-70	J,E 1/2	D		
801	C. D. Davis		Old	480	90	C	48			Queen City	73.6	7-12-60	J,E 1/2	D		
803	U. S. Smelting, Refining, & Mining Co. - T. R. Bowker No.1		1955		5,638										E	Oil test.
804	M. H. Sellar	Taylor		510	127					Queen City			N	N		Reported high iron content.
805	M. H. Sellar	White Drilling Co.	1960	510	707	C C S	4-1/2 2-1/2 2-1/2	0 663 686	664 686 706	Carrizo	235	12-14-60	S,E 2	D	D	
901	Fred Birdsong, et al - Royall National Bank No.1		1954		5,515										E	Oil test.
902	Ruby Green	O. F. Miller	1968	480	357	C S	4-1/2 4-1/2	0 336	336 357	Queen City	125	2-28-68	S,E 3/4	D	D	Temperature 68° F.
05-101	John B. Stephens, Jr. - F. B. Dabbs No.1		1954		5,555										E	Oil test.
102	Clarence House			320	Spring					Queen City						Flow estimated at 5 gpm on 8-6-70.
103	Ben H. Carpenter	Carruth Drilling Co.	1963	420	805	C C S C	4-1/2 2-1/2 2-1/2 2-1/2	0 750 770 790	750 770 790 805	Carrizo	170 140	1963 1968	S,E 2	D,S		Temperature 74° F.
401	W. T. Todd	Layne Texas Co.	1929	462*	712	C C C S C	12-1/2 10-3/4 4-1/4 4-1/4 4-1/4	0 0 563 656 707	107 582 656 707 712	Wilcox	190	7-30-29	T,E 50	N	D	Pumped 180 gpm from 224 feet on 7-30-29. Pumped 240 gpm from 235 feet on 6-25-40.
402	Clemons School			370	30	C	30			Queen City	5.5 15.6	11-17-60 8-6-70	N	N		
403	Garvin Oil Co. - Roberts No.5		1948		3,565										E	Oil test.
404	Cougar Petroleum, Inc. - Jesse Purvey No.1		1966		4,405										E	Oil test.
405	Texaco, Inc. - Elvira Jones No.1		1960		8,650										E	Oil test.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-05-501	Humble Oil & Refining Co.-Northeast Neches Oil Unit No.1		1953		5,493										E	Oil test.
504	John Hurbrough & Pat H. Cain - A. B. Mandelstam No.4		1965		3,740										E	Oil test.
701	The Texas Co. - C. J. Arrington No.1		1954		4,920										E	Oil test.
702	E. F. Klein			360	Spring					Queen City			N	D		Flow estimated at 3 gpm on 8-6-70.
801	Sun Oil Co. - Boyling No. 3		1954		4,663										E	Oil test.
804	Humble Oil & Refining Co.-W. T. Todd No.D-1		1954		4,745										E	Oil test.
805	Humble Pipeline Co.	West Drilling Co.	1954	340	380	C S	4-1/2 4-1/2	0 360	360 380	Carrizo			J,E 1	Ind.		Temperature 77° F.
09-101	J. C. Cox		1957	270	44	C	30	0	44	Reklaw	37.5	8-20-70	J,E 1/3	D,S		
201	A. M. Jackson		1939	280	29	C	30			Reklaw	20.6	8-21-70	J,E 1/3	D,S		
301	Jesse Ingram		1966	290	40	C	30	0	40	Reklaw	31.7	8-20-70	J,E 1/3	D		
501	State of Texas - Dept. of Corrections	Frank Ward	1960	225	>600	C	8-5/8			Wilcox	23.5	11-15-60	N	N		
601	State of Texas - Dept. of Corrections	Layne Texas Co.	1966	250	985	C C S C S C S C	14 8-5/8 8-5/8 8-5/8 8-5/8 8-5/8 8-5/8 8-5/8	0 599 709 729 737 767 881 961	700 709 729 737 767 881 961 985	Wilcox	36 10.1	10-27-66 10-8-70	T,E 30	P	D,E	Pumped 503 gpm from 99 feet on 10-27-66. Pumped 680 gpm from 102 feet on 10-8-70. Temperature 82° F.
901	Continental Oil Co. - W. R. Cady No.1		1951		9,820										E	Oil test.
10-101	Stafford Spring School	Taylor	1953	300	610	C S C S	6-5/8 4-1/2 4-1/2 4-1/2	0 344 365 580	344 365 580 610	Wilcox	50	8-53	T,E 2	P		
102	Magnolia Petroleum Co. - Woolverton No.1		1952		9,862										E	Oil test.
201	Gragg Drilling Co. - Hudson Oil Unit No.1		1962		4,516										E	Oil test.
202	Humble Oil & Refining Co.-R. B. Douglas No.1		1952		9,740										E	Oil test.
203	Shell Oil Co. - S. H. Nassey No.1		1942		5,215										E	Oil test.
204	O. L. Williams		1951	420	>500	C	4-1/2			Wilcox	165	1967	S,E 1-1/2	D,S		
301	Montalba Providence School		1940	410	30	C	36			Queen City	23.2	7-12-60	J,E 1/2	N		
401	Charles Carroll		1932	235	375	C	5-1/2			Wilcox	+ +	7-11-60 8-25-70	J,E 1/2	S		Temperature 70° F.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-10-402	Magnolia Petroleum Co. - Bob Coleman No.1		1952		8,938										E	Oil test.
403	Continental Oil Co. - Royall National Bank No.4		1951		9,000										E	Oil test.
501	Standard Oil Co. of Texas-Nettie Jackson et al No.1		1963		5,100										E	Oil test.
502	Paris Young			370	36	C	30	0	30	Reklaw	28.1	8-25-70	H	D		
601	H. P. Adams			350	55	C	36	0	50	Reklaw	42.4 42.6	7-12-60 8-26-70	J,E 1/2	D,S		Temperature 70° F.
602	J. A. Messenger et al - M. A. Davey, Jr. Unit A No.1		1961		5,120										E	Oil test.
701	Charles Carroll		1957	225	1,015	C S	8-5/8 8-5/8	0 977	977 1,015	Wilcox	+6 +	11-15-60 8-25-70	N	Irr.		Temperature 83° F.
801	Mrs. J. H. Barrett	Andrews & Foster Drilling Co.	1970	300	580	C C S C	4-1/2 2-1/2 2-1/2 2-1/2	0 500 525 542	500 525 542 580	Wilcox	71.3	8-26-70	S,E 1	D		Temperature 69° F.
802	O. V. Calloway	Andrews & Foster Drilling Co.	1964	320	520	C C S	4-1/2 2-1/2 2-1/2	0 500 510	500 510 520	Wilcox	54	1964	S,E 1-1/2	D,S		
901	Deven-Leduc - J. H. Barrett No.1		1954		5,261										E	Oil test.
902	J. N. Mack	Andrews & Foster Drilling Co.	1962	310	260	C	4-1/2	0	180	Carrizo	65 71.5	1962 8-25-70	S,E 1/2	D,S		Temperature 69° F.
11-101	The Texas Co. - S. W. O'Flynn No. 1		1957		5,863										E	Oil test.
102	L. H. Harrison	Andrews & Foster Drilling Co.	1968	385	842	C C S C S C	4-1/2 2-1/2 2-1/2 2-1/2 2-1/2 2-1/2	0 725 746 756 819 829	738 746 756 819 829 842	Wilcox	76.8	8-27-70	S,E 1	D,S	D	
201	E. B. LaRue, Jr. & F. R. Jackson - Nathan Scott No.1		1958		3,693										E	Oil test.
202	E. B. LaRue, Jr. & Jackson Oil Co. - R. V. Jernigan No.1		1958		3,711										E	Oil test.
203	Anderson County			440	Spring					Queen City			N	D		Flow estimated at .5 gpm on 8-28-70.
301	Jack Frost et al - Connie Lee Walker No.1		1959		5,705										E	Oil test.
302	L. W. Storms, Jr. - G. B. Broyles No.1		1958		5,660										E	Oil test.
303	C. L. Walker	Carruth Drilling Co.	1958	590	196	C S	8-5/8 8-5/8	0 156	156 196	Queen City	156	1958	S,E 1	D,S		
401	Louis Winkler		1925	370	51	C	8	0	51	Reklaw	37.3	9-30-70	H	D		Temperature 67° F.
501	Mark Taylor			460	46	C	30	0	46	Queen City	26.9	9-25-70	J,E 1/3	D		

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-11-601	Bill R. Tipton - Joe Chotiner No.1		1955		5,807										E	Oil test.
602	M. T. Halbouty - B. H. Gardner No.1		1960		5,790										E	Oil test.
603	Lone Pine Water Supply Corp.	Texas Water Wells	1964	600	1,550	C	6-5/8	0	1,483	Wilcox	419	9-21-64	S,E	P	D,E	Drilled to 1,596 feet. Pumped 76 gpm from 449 feet on 9-21-64. Temperature 87° F.
						C	3	1,383	1,485		368	9-24-70	10			
						S	3	1,485	1,540							
						C	3	1,540	1,550							
701	T. J. Johnson & P. B. Berry - W. A. Armstrong No.1		1957		4,735										E	Oil test.
702	W. R. Owens		1960	410	36	C	30	0	36	Queen City	27.8	9-9-70	J,E 1/2	D,S		
801	City of Palestine No.2	Layne Texas Co.	1940	405	1,604	C	16	0	1,260	Wilcox	173	7-16-40	T,E	P	D,E	Pumped 1,340 gpm from 279 feet on 7-16-40. Pumped 964 gpm from 298 feet on 9-18-58. Temperature 88° F.
						C	8-5/8	1,260	1,273		255	11-9-53	100			
						S	8-5/8	1,273	1,388		255	2-11-54				
						C	8-5/8	1,388	1,426		290	7-55				
						S	8-5/8	1,426	1,471		218	7-56				
						C	8-5/8	1,471	1,479		233.8	9-18-58				
						S	8-5/8	1,479	1,502		230	9-4-60				
						C	8-5/8	1,502	1,514		173.8	9-29-70				
						S	8-5/8	1,514	1,584							
						C	8-5/8	1,584	1,604							
802	O. F. Meeck			430	20	C	36			Queen City	3.5	1-19-61	J,E	D,S		
											10.5	8-28-70	1/3			
803	H. B. Pyle - Henderson No.1		1951		5,638										E	Oil test.
901	City of Palestine No.1	Layne Texas Co.	1940	405	1,617	C	16	0	1,289	Wilcox	148	5-31-40	T,E	P	D,E	Drilled to 2,018 feet. Well plugged back to 1,590 feet in 1958. Pumped 1,023 gpm from 273 feet on 5-31-40. Pumped 923 gpm from 330 feet on 9-17-58. Temperature 89° F.
						C	8-5/8	1,194	1,304		240	3-30-53	100			
						S	8-5/8	1,304	1,395		223.0	9-17-58				
						C	8-5/8	1,395	1,439							
						S	8-5/8	1,439	1,596							
						C	8-5/8	1,596	1,617							
902	City of Palestine No.4	Layne Texas Co.	1955	616*	2,227	C	16	0	1,545	Wilcox	403	4-8-55	T,E	P	E	Drilled to 2,370 feet. Pumped 1,176 gpm from 478 feet on 4-7-55. Pumped 1,125 gpm from 458 feet on 12-16-58.
						C	9-5/8	1,383	1,545		405	7-56	300			
						S	9-5/8	1,545	1,640		400	7-57				
						C	9-5/8	1,640	1,695		400	7-58				
						S	9-5/8	1,695	1,780		395	12-16-58				
						C	9-5/8	1,780	1,880		410	9-4-60				
						S	9-5/8	1,880	1,905		366	9-29-70				
						C	9-5/8	1,905	1,932							
						S	9-5/8	1,932	1,947							
						C	9-5/8	1,947	2,010							
						S	9-5/8	2,010	2,030							
						C	9-5/8	2,030	2,075							
						S	9-5/8	2,075	2,095							
						C	9-5/8	2,095	2,150							
						S	9-5/8	2,150	2,215							
						C	9-5/8	2,215	2,227							
903	Missouri Pacific Railroad	Layne Texas Co.	1946	510	1,950	C	16	0	1,500	Wilcox	300	9-23-46	T,E	Ind.	D,E	Pumped 715 gpm from 419 feet on 9-23-46. Temperature 92° F.
						C	8-5/8	1,371	1,519		254.1	4-21-49	100			
						S	8-5/8	1,519	1,579		292	5-19-53				
						C	8-5/8	1,579	1,603		278.8	10-25-60				
						S	8-5/8	1,603	1,662							
						C	7	1,662	1,663							
						S	7	1,663	1,711							
						C	7	1,711	1,759							
						S	7	1,759	1,903							
						C	7	1,903	1,950							

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-11-904	Missouri Pacific Railroad	Layne Texas Co.	1944	510	1,944	C	16			Wilcox					E	Well never completed.
905	Palestine Ice Co.	Layne Texas Co.	1947	510	380	C	8-5/8	0	323	Queen City	109	5-26-47	N	N	D	Bailed 18 gpm from 120 feet on 5-26-47. Temperature 70° F.
						C	4-1/2	252	335		112.4	10-25-60				
						S	4-1/2	335	376		117.1	9-8-70				
						C	4-1/2	376	380							
906	Coats Drilling Co. & Colorado Oil & Gas Co. - Jeff Kale No.1		1955		5,631										E	Oil test.
12-101	L. A. Douglas & L. A. Grelling - Royall National Bank No.1		1954		5,454										E	Oil test.
102	Byrd Oil Corp. - R. L. Springer No.1		1953		4,878										E	Oil test.
103	W. C. Perryman - Royall National Bank No.1		1962		5,540										E	Oil test.
104	Norwood Terry		1969	430	30	C	30	0	30	Queen City	22.2	9-8-70	J,E 1/3	D		
201	J. T. Davis		Old	390	43	C	36			Queen City	19.4	7-12-60	N	N		
											21.4	9-8-70				
202	T. J. Johnson - Ophelia Barnett No.1		1958		5,561										E	Oil test
301	Sid Katz Explorations & Holly Development Co. - Mrs. J. B. McDonald No.1		1954		5,240										E	Oil test.
302	Jack Garrett			390	29	C	36	0	29	Queen City	23.8	9-9-70	H	D		
401	F. R. Jackson & J. C. Robbins - C. A. Dial No.1		1956		5,710										E	Oil test.
402	Norwood Water Supply Corp.	Frye Drilling Co.	1966	480	654	C	6-5/8	0	619	Carrizo	207	10-2-66	S,E 7-1/2	P	D	Pumped 60 gpm from 258 feet on 10-2-66.
						C	3	606	619		213	8-28-70				
						S	3	619	649							
						C	3	649	654							
403	K. G. Johnson	Rekhop Drilling Co.	1970	420	310	C	7-5/8	0	220	Queen City	48.1	10-15-70	S,E 5	Irr.	D	Pumped 72 gpm from 82.3 feet on 10-15-70. Temperature 69° F.
						S	7-5/8	220	310							
501	Ray Humphrey		1950	400	47	C	30	0	47	Queen City	42.6	9-9-70	N	N		Reported high iron content.
601	Sinclair Oil & Gas Co. - Royall National Bank No.1		1954		5,802										E	Oil test.
602	Hunt Oil Co. - H. C. Carroll No.1		1954		5,500										E	Oil test.
603	David T. Roche - L. W. Martin No.1		1954		5,300										E	Oil test.
604	Jeff Kale	Dale Shroyer	1965	350	350	C	4-1/2	0	330	Carrizo	95.1	9-9-70	S,E 1	S		
						S	2-1/2	330	345							
701	W. G. Elrod		1938	450	47	C	36			Queen City	37.1	7-12-60	J,E 1/2	D		
702	Wheelock & Weinschel - M. Howard No.1		1955		5,916										E	Oil test.
703	Roselawn Park	Andrews & Foster Drilling Co.	1961	470	725	C	7-5/8	0	650	Carrizo			S,E 5	Irr.		
						S	4-1/2	650	713							
						C	4-1/2	713	725							

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-12-801	D. C. Beason		1945	460	28	C	36	0	28	Queen City	18.3	9-9-70	J,E 1/3	D		
901	E. A. Ellison, R. G. McKellar & Rotary Drilling Co. - Will Clewis No.1		1964		5,415										E	Oil test.
902	British American Oil Production Co. - E. L. Richardson No.1		1961		6,307										E	Oil test.
13-102	Horace Mann School - Neches School Dist.	Crockett Drilling Co.	1956	420	420	C	4-1/2			Carrizo	160	8-56	S,E 3	N		
103	Valley Mission Baptist Church		1960	435	30	C	30			Queen City	17.5 17.1	11-17-60 9-14-70	J,E	D		
104	L. A. Crelling - Taylor No.1		1954		5,200										E	Oil test.
105	Purnell & Coleman et al - A. Flick No.1		1957		5,043										E	Oil test.
106	Neches Water Supply Corp.	C. C. Innerarity	1965	410	502	C C S C	6-5/8 3-1/2 3-1/2 3-1/2	0 367 397 497	397 397 497 502	Carrizo	145 159	2-9-65 9-24-70	S,E 15	P	D,E	Pumped 140 gpm from 183 feet on 2-9-65. Pumped 134 gpm from 174 feet on 9-24-70. Temperature 73.5° F.
202	Loyce Phillips - Bell Ballard No.1		1954		5,000										E	Oil test.
401	Ada Oil Co. - Ezell Heirs No.1		1956		4,880										E	Oil test.
402	Johnson Cone - Lalla Ritner No.1		1951		5,165										E	Oil test.
403				385	35	C	30			Queen City	24.0	11-17-60	N	N		
404	Standard Oil Co. of Texas-Walter B. Brown No.1														E	Oil test.
405	Harold Greve	John Cobb Drilling Co.	1969	390	455	C	4-1/2	0	381	Carrizo	125 137.2	9-19-69 10-1-70	S,E 1-1/2	D,S	D	
501	Ralph Spence - Bower's Family No.1		1968		2,129										E	Oil test.
502	Crest Drilling Exploration Co. - Cletus Brown, Jr. No.1		1960		5,267										E	Oil test.
601	Herring Production Service Co. - Browning Estate No.1		1959		5,208										E	Oil test.
701	Watburn Oil Co. - Rice-Woodard Southern Pine No.1		1954		5,130										E	Oil test.
702	Johnson Cone & Watburn Oil Co. - Palestine Fishing Club No.1		1955		5,161										E	Oil test.
703	Atlantic Refining Co. - Meadow Langston No.1		1958		5,340										E	Oil test.
704	W. T. Ellis		1960	460	87	C	30	0	87	Queen City	73.1	9-14-70	J,E 1/3	D		

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data				Indicated Water-bearing Unit	Static Water Level 3/		Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
						Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)		Depth (feet)	Date				
AA-38-13-801	J. C. Cook - Davey & Royal No.1		1938		4,292										E	Oil test.
803	Happy Gist - H. C. Swanson Estate No.1		1960		5,405										E	Oil test.
804	Rotary Drilling Co., Inc.- Francis K. Royall No.1		1963		5,110										E	Oil test.
805	Charlie Soucek	Carruth Drilling Co.	1956	280	248	C S	6-5/8 6-5/8	0 208	208 248	Wilcox	22	1956	J,E 1/2	D,S		
18-101	F. R. & E. L. Jackson - M. A. Davey No.1		1961		5,650										E	Oil test.
201	Harry D. Kahn - A. V. Conyers No.1		1960		5,530										E	Oil test.
202	Walter D. Callaway	John Cobb Drilling Co.	1969	270	215	C	4-1/2	0	170	Carrizo	61.5	8-26-70	S,E 3/4	D	D	
301	N. F. Jimenez		1950	290	37	C	36			Queen City	32.7 32.0	11-15-60 8-26-70	N	N		
601	W. R. Hughey & Adam Cone, Jr. - Cern & Shaw No.1		1959		5,330										E	Oil test.
602	Getty Oil Co.	Layne Texas Co.	1939	285	525	C C S C	13 8-5/8 8-5/8 8-5/8	0 0 436 519	356 436 519 525	Wilcox	29 69 44.6	10-29-39 7-24-43 8-26-70	S,E	N	D	Pumped 221 gpm from 53 feet on 10-29-39. Pumped 100 gpm from 83 feet on 7-24-43.
603	Lone Star Gas Co.	Andrews Drilling Co.	1953	290	517	C S C S	8-5/8 4-1/2 4-1/2 4-1/2	0 454 474 496	474 496 517	Wilcox	63	8-5-53	T,E 5	N		
604	Lone Star Gas Co.		1938	290	231	C S	6-5/8 4-1/2	209	231	Carrizo	78 70.6	1938 10-28-60	N	N		Reported high iron content.
901	Woodhouse Consolidated School	Layne Texas Co.	1946	260	359	C C S C	6-5/8 4-1/2 4-1/2 4-1/2	0 313 341 356	340 341 356 359	Wilcox	9 10 8.1	5-7-46 4-49 7-12-60	J,E 1	N	D	Pumped 100 gpm from 100 feet on 5-7-46.
902	Kent B. Diehl et al, Coats & Hearrell - Sally Rucker No.1		1950		5,323										E	Oil test.
903	Stroube & Stroube - J. O. Monnig No.10		1964		5,370										E	Oil test.
904	Stroube & Stroube - J. O. & Hugo Monnig No.2-PG		1968		5,350										E	Oil test.
19-101	The Texas Co. - Forest Long No.1		1952		4,335										E	Oil test.
102	The Texas Co. - George A. Wright No.1		1948		3,190										E	Oil test.
103	R. L. Carroll		1953	350	30	C	30	0	30	Wilcox	20	9-70	J,E 1/3	D		
201	Four Pine Water Supply Corp.	Texas Water Wells	1964	370	1,380	C C S C	6-5/8 3-1/2 3-1/2 3-1/2	0 1,195 1,320 1,370	1,295 1,320 1,370 1,380	Wilcox	220	10-64	S,E 15	P	D,E	Drilled to 1,479 feet. Pumped 151 gpm from 288 feet in October 1964.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-19-301	City of Palestine No.3	Layne Texas Co.	1955	592*	2,355	C	16	0	1,690	Wilcox	397	2-10-55	T,E	P	E	Pumped 1,140 gpm from 512 feet on 2-11-55.
						C	9-5/8	1,540	1,695		435	7-56	300			
						S	9-5/8	1,695	1,770		445	7-57				
						C	9-5/8	1,770	1,785		405	12-5-58				
						S	9-5/8	1,785	1,805		430	9-4-60				
						C	9-5/8	1,805	1,820		356	9-29-70				
						S	9-5/8	1,820	1,830							
						C	9-5/8	1,850	2,050							
						S	9-5/8	2,050	2,105							
						C	9-5/8	2,105	2,110							
						S	9-5/8	2,110	2,165							
						C	9-5/8	2,165	2,295							
						S	9-5/8	2,295	2,345							
						C	9-5/8	2,345	2,355							
302	Jack Frost & E. L. Howard-Persons - Lemac No.1		1958		6,026										E	Oil test.
303	Pleasant Springs Water Supply Corp.	Triangle Pump & Supply	1966	540	1,700	C	7	0	1,608	Wilcox	240	6-15-66	S,E	P	D,E	Drilled to 1,757 feet. Pumped 60 gpm from 398 feet on 6-15-66.
						C	3-1/2	1,545	1,614				10			
						S	3-1/2	1,614	1,700							
401	Tucker Water Supply Corp.			295	315	C	10-3/4			Carrizo	80	2-11-42	S,E	P		Well drilled before 1942 to supply refinery. Temperature 72° F.
											106	9-49	5			
											107	9-30-70				
402	Hunt Oil Co.	Layne Texas Co.	1940	293*	590	C	10-3/4	0	518	Wilcox	60	3-8-40	J,E	P	D	Pumped 234 gpm from 127 feet on 3-8-40. Temperature 74° F.
						C	5	0	522		67.3	4-22-49	1-1/2			
						S	5	522	573		52.2	9-29-70				
						C	5	573	590							
403	Anderson Refinery Co.	Carl Ryan Drilling Co.	1964	300	614	C	4-1/2	0	402	Wilcox	70	6-17-64	S,E	Ind.	D	
							2-1/2	402	614		40.6	9-15-70	5			
501	T. D. Humphrey & Sons, Ltd. & M. B. Rudman - East Texas National Bank No.1		1958		5,713										E	Oil test.
502	Tex-Harvey Oil Co. - J. K. Collier No.2		1949		5,591										E	Oil test.
503	F. G. Brown		1970	390	26	C	30	0	17	Queen City	16.2	9-15-70	J,E	D		
						C	24	17	26				1/3			
601	Ebro Oil Co., Mack Hays, Jr. & T. J. Johnson-Dale Smith No.1		1950		5,578										E	Oil test.
602	Mitchell	Frye Drilling Co.	1969	460	579	C	4-1/2	0	502	Carrizo	216	1-69	S,E	D	D	
						C	2-1/2	501	503				2			
						S	2-1/2	503	523							
						C	2-1/2	523	579							
702	Carter-Cragg Oil Co. - Morrow No.4		1968		5,607										E	Oil test.
703	Hunt Oil Co. - C. L. Smith No.2		1949		5,300										E	Oil test.
801	Lakeview Methodist Assembly		1960	360	400	C	8-5/8	0	212	Carrizo	123.6	7-12-60	N	N		
802	Lakeview Methodist Assembly No.2	Dale Shroyer	1960	300	408	C	7			Carrizo	78.5	7-12-60	S,E	P	D	Pumped 99 gpm from 90 feet on 7-25-60. Temperature 74° F.
						S	4-1/2	356	396		77.7	7-25-60	5			
											82.3	9-15-70				
803	Lakeview Methodist Assembly No.1	Layne Texas Co.	1948	300	388	C	6-5/8	0		Carrizo	70	7-8-48	T,E	P	D	Drilled to 583 feet. Pumped 65 gpm from 98 feet on 7-8-48.
						S		365	385				7-1/2			

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-19-804	Carter-Gragg Oil Co. - Davey-Monnig No.1		1954		5,587										E	Oil test.
805	L. A. Grelling - Peter Bridges No.1		1953		5,740										E	Oil test.
806	H. C. Hargrove & Sam B. King - B. Y. Milam No.1		1958		5,570										E	Oil test.
901	Happy Gist - Wilson No.1		1959		5,810										E	Oil test.
902	Q. N. McCann	John Cobb Drilling Co.	1969	340	470	C	4-1/2	0	412	Carrizo	120 102.6	9-3-69 9-15-70	S,E 1	D	D	
20-101	Thomas Jordan, Inc. - M. McFarlane No.1		1953		5,963										E	Oil test.
102	Thomas Jordan, Inc. - L. Dora Morris et al No.1		1952		6,220										E	Oil test.
103	Vernon Calhoun Packing Co. No.1	Layne Texas Co.		510	764	C C S C S C	8-5/8 4-1/2 4-1/2 4-1/2 4-1/2 4-1/2	0 540 665 690 704 729	640 665 690 704 729 764	Carrizo	199 191	12-17-56 4-28-58	T,E 40	Ind.		Reworked in 1956. Pumped 152 gpm from 210 feet on 12-17-56. Pumped 278 gpm from 222 feet on 4-28-58.
104	Walston Springs Water Supply Corp.	Layne Texas Co.	1964	490	2,244	C C S C S C S C	8-5/8 4-1/2 4-1/2 4-1/2 4-1/2 4-1/2 4-1/2 4-1/2	0 1,506 2,020 2,030 2,126 2,168 2,183 2,218	1,750 2,020 2,030 2,126 2,168 2,183 2,218 2,244	Wilcox	297	9-25-64	S,E 25	P	E	Pumped 180 gpm from 353 feet on 9-25-64.
201	Delton Rosson		1952	450	55	C	36			Queen City	27.9 24.6	10-22-59 2-3-61	J,E 3/4	D		
202	Delton Rosson			450	200	C	4-1/2			Queen City	27.5	5-22-60	S,E 1	D		
203	Vernon Calhoun Packing Co. No.2	Layne Texas Co.	1964	420	720	C C S C	14 8-5/8 8-5/8 8-5/8	0 525 635 710	625 635 710 720	Carrizo	172	12-21-64	T,E 75	Ind.	D,E	Pumped 703 gpm from 225 feet on 12-21-64. Temperature 77° F.
301	John B. Coffee - T. C. Lassiter No.1		1969		5,756										E	Oil test.
302	Henry Davenport		1950	380	40	C	36			Queen City	36	1970	J,E 1/3	D,S		
401	Tex-Harvey Oil Co. - Bell Hall No.1		1946		2,067										E	Oil test.
402	Beulah Baptist Church			430	22	C	30	0	22	Queen City	19.7	9-17-70	H	D		
501	T. D. Humphrey & Sons, Ltd. - Lee Camp et al No.1		1957		6,025										E	Oil test.
502	H. R. Denman		1930	590	20	C	36	0	20	Sparta	10.6	9-18-70	J,E 1/3	D,S		
601	British-American & Pan-American et al - E. A. Ferguson No.1		1960		5,723										E	Oil test.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-20-602	Concho Petroleum Co. et al-J. B. Parker No.1		1960		5,614										E	Oil test.
603	W. H. Bryant et al - Lasiter et al No. 1-B		1959		5,595										E	Oil test.
604	Kimball Production Co.	Layne Texas Co.	1968	560	1,840	C	13-3/8	0	1,665	Wilcox	345	10-3-68	T,E 100	Ind.		Pumped 448 gpm from 444 feet on 10-3-68. Temperature 95° F.
						C	8-5/8	1,513	1,675							
						S	8-5/8	1,675	1,720							
						C	8-5/8	1,720	1,753							
						S	8-5/8	1,753	1,822							
						C	8-5/8	1,822	1,840							
605	Tenneco Oil Co.	Patrick Drilling Co.	1969	540	1,800	C	7	0	1,600	Wilcox			S,E 40	Ind.		Reportedly pumps 150 gpm.
						C	5-1/2	1,584	1,606							
						S	5-1/2	1,606	1,671							
						C	5-1/2	1,671	1,737							
						S	5-1/2	1,737	1,800							
701	B. G. Byars - C. M. Howell No.1		1956		5,975										E	Oil test.
702	Miss Ivey Payne	White Drilling Co.	1967	440	860	C	4-1/2	0	792	Wilcox	205	11-21-67	S,E 1-1/2	D,S	D	
						C	2-1/2	787	829		200.1	9-16-70				
						S	2-1/2	829	859							
						C	2-1/2	859	860							
801	City of Elkhart No.2	Texas Water Wells	1957	405	1,060	C	10-3/4	0	912	Carrizo	165	6-7-57	T,E 30	F	E	Drilled to 1,628 feet. Pumped 307 gpm from 193 feet on 6-17-57. Pumped 477 gpm from 215 feet on 9-16-70. Sulfur odor. Temperature 84° F.
						S	5-1/2	920	1,008		167.3	9-15-70				
						C	5-1/2	1,008	1,060							
901	Cook & Mayo - Southern Pine Lumber Co. No.1		1939		5,280										E	Oil test.
902	F. R. Jackson - D. M. Holcomb No.2		1957		5,649										E	Oil test.
903	G. W. Wilson, Clark, & Cowden Exploration Co. et al - E. T. Mace No.1		1963		5,466										E	Oil test.
904	J. C. Hamby		1968	420	28	C	30	0	18	Sparta	27.1	9-17-70	J,E 1/3	D		Temperature 68° F.
905	L. J. Wilson	Frye Drilling Co.	1967	420	203	C	4-1/2	0	158	Queen City	90	11-16-67	S,E 1/2	D	D	
						C	2-1/2	158	178							
						S	2-1/2	178	193							
						C	2-1/2	193	203							
21-101	British American Oil Production Co. - Davey-Royall No.1		1958		6,215										E	Oil test.
301	Oil Properties - Mildred Ogg Fisher et al No.1		1956		5,140										E	Oil test.
302	Placid Oil Co. - Southern Pine Lumber Co. No.1		1961		5,065										E	Oil test.
401	D. Clewis	D. Clewis	1942	490	30	C	30	0	30	Sparta	26.7	9-23-70	H	D		Temperature 67° F.
502	P. G. Lake & Ralph Spence-Day Estate No.1		1956		5,342										E	Oil test.
503	C. L. Ewell et al - Homer E. Casey No.1		1957		5,780										E	Oil test.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-21-504	Deltex Oil Co. - S. S. Day Estate No.1		1960		5,598										E	Oil test.
505	B. L. & H. Drilling Co. - Koepnick No.1		1959		5,870										E	Oil test.
506	A. L. Melton		1900	470	24	C	36	0	10	Sparta	13.2	9-23-70	C,E 1/3	D,S		
601	Hastings, Tomlinson & Johnson - V. M. Johnston et al No.1		1957		5,800										E	Oil test.
701	L. A. Douglas & L. A. Grelling - Mays No.1		1955		5,862										E	Oil test.
702	Gibson Drilling Co. et al-G. C. Mays No.1		1958		5,350										E	Oil test.
703	Shell Oil Co. - B. F. Weaver No.1	Layne Texas Co.	1966	453*	1,855	C C S C	10-3/4 6-5/8 6-5/8 6-5/8	0 1,548 1,720 1,840	1,710 1,720 1,840 1,855	Wilcox	177 216.5	9-19-66 10-13-70	T,E 60	Ind.	D,E	Drilled to 1,907 feet. Pumped 325 gpm from 194 feet on 9-19-66. Pumped 285 gpm from 230 feet on 10-13-70.
704	Shell Oil Co. - J. B. Parker No.1	Layne Texas Co.	1964	495	1,818	C C S C S C	8-5/8 4-1/2 4-1/2 4-1/2 4-1/2 4-1/2	0 1,545 1,670 1,690 1,750 1,790	1,655 1,670 1,690 1,750 1,790 1,818	Wilcox	210 261.1	3-7-64 10-7-70	T,E 20	Ind.	E	Pumped 100 gpm from 222 feet on 3-7-64. Pumped 137 gpm from 280 feet on 10-7-70. Temperature 96° F.
705	Shell Oil Co. - J. B. Parker No.2	Layne Texas Co.	1966	440	1,810	C C S C	10-3/4 6-5/8 6-5/8 6-5/8	0 1,549 1,695 1,795	1,685 1,695 1,795 1,810	Wilcox	165	10-20-66	T,E 60	Ind.	D,E	Drilled to 1,853 feet. Pumped 325 gpm from 183 feet on 10-20-66. Temperature 97° F.
706	Slocum Water Supply Corp.	Lanford Drilling Co.	1965	480	720	C C S	7 3 3	0 635 675	675 675 720	Carrizo	255 249.1	5-13-65 10-9-70	S,E 7-1/2	P	D,E	Drilled to 757 feet. Pumped 75 gpm from 281 feet on 5-13-65. Pumped 18 gpm from 256 feet on 10-9-70. Temperature 78° F.
801	J. S. Michael - H. W. McIver No.1		1957		5,770										E	Oil test.
802	L. D. Johnston		1930	460	20	C	36			Sparta	15.2	9-23-70	J,E 1/3	D		
901	S. A. Cochran et al - Wright Matthews No.1		1957		6,000										E	Oil test.
902	Apache Drilling Co. - V. M. Johnston No.1		1955		5,761										E	Oil test.
903	M. B. Gilmore	Frye Drilling Co.	1955	350	520	C C S C	4-1/2 2-1/2 2-1/2 2-1/2	0 467 488 508	487 488 508 520	Carrizo	103	8-55	S,E 1	D		Temperature 72° F.
22-101	Ralph Spence & P. G. Lake, Inc. - M. A. Davey Heirs No.1		1955		5,660										E	Oil test.
102				400	70	C	30			Queen City	58.3	11-18-60	N	N		
401	Peyton McKnight, Jr. - Southern Pine Lumber Co. No.1		1957		5,625										E	Oil test.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-22-501	Lone Star Producing Co.-Temple Industries, Inc. No.1		1968		5,400										E	Oil test.
701	R. W. Harrison, Agent - Southern Pine Lumber Co. No.1		1967		2,803										E	Oil test.
702	Pack Watkins			480	Spring					Sparta				D		Estimated flow at 5 gpm on 9-24-70. Temperature 70° F.
801	Cooper-Herring Drilling Co. - Jesse Watkins No.1		1953		5,386										E	Oil test.
802	Mrs. J. M. Bowman		1880	380	62	C	36	0	20	Queen City	26.9	9-24-70	J,E 1/3	D,S		
27-201	Emmett Coleman	Laird	1953	205	565	C	11-3/8			Carrizo	+44 +	7-13-61 9-24-70	N	Irr.		Flows. Reported sulfur odor.
202	Kadane - Brown - Alfred Cooper No.1		1965		5,575										E	Oil test.
203	Steve D. Fort - J. G. McLen et al No.1		1948		5,503										E	Oil test.
301	Jerry Coleman		1956	390	28	C	36			Sparta	21.2	7-13-60	J,E 1/2	D		Temperature 68° F.
302	Shell Oil Co. - Raymond Kyle No.1		1959		5,797										E	Oil test.
303	Byrd-Frost, Inc. - M. L. Marsh No.1		1943		5,703										E	Oil test.
304	Emmett Coleman	Carruth Drilling Co.	1957	440	330	C S	4-1/2 4-1/2	0 278	278 330	Queen City	217.5 217.9	7-31-61 9-15-70	S,E 1/2	S	D	Drilled to 350 feet. Temperature 73° F.
305	Pilgram Water Supply Corp.	Andrews & Foster Drilling Co.	1968	360	302	C C S C	5-1/2 2-1/2 2-1/2 2-1/2	0 219 261 281	232 261 281 302	Queen City	85 119.7	5-7-68 10-14-70	S,E 2	P	D	Pumped 27 gpm from 135 feet on 5-7-68. Pumped 15 gpm from 142 feet on 10-14-70. Temperature 72° F.
401	Moore & Wardlaw	Moore & Wardlaw		200	417	C S	9-5/8 9-5/8	0 317	317 417	Carrizo	+22.3 +	7-25-64 9-30-70	N	Irr.		Flowed 200 gpm on 7-25-64. Temperature 74° F.
402	Halbert Drilling Co. et al - John Dickerson No.1		1958		5,900										E	Oil test.
501	E. L. Howard - L. H. Coleman No.1		1953		5,768										E	Oil test.
502	American Liberty Drilling Co. - SuHon & Jackson No.1		1947		5,565										E	Oil test.
601	Bluebird Investment Co. - L. B. Taylor No.1		1948		5,760										E	Oil test.
602	Mary Johnson			250	36	C	30			Queen City	31.2	9-16-70	H	D,S		Temperature 68° F.
702	Moore & Wardlaw			200		C	9-5/8			Carrizo, Wilcox	– –	5-13-63 9-30-70	N	Irr.		Estimated flow at 250 gpm on 5-13-63. Temperature 74° F.
703	Moore & Wardlaw			200		C	9-5/8			Carrizo, Wilcox	+ +	1964 9-30-70	N	Irr.		Temperature 76° F.
704	Moore & Wardlaw	Moore & Wardlaw		200		C	9-5/8			Carrizo, Wilcox	+30.4 +	7-25-64 9-30-70	N	Irr.		Flowed 520 gpm on 7-25-64. Temperature 76° F.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-27-705	Moore & Wardlaw			220		C	8-5/8			Carrizo	+10.9 +	7-25-64 9-30-70	N	Irr.		Estimated flow at 10 gpm on 7-25-64. Temperature 74° F.
706	Moore & Wardlaw		1959	220	425	C	8-5/8			Carrizo	+ +	7-25-64 9-30-70	N	Irr.		Temperature 74° F.
803	Coats Drilling Co. - O. L. Lively No.1		1958		6,005										E	Oil test.
28-101	W. O. Doolittle	John Cobb Drilling Co.	1969	470	347	C	4-1/2	0	265	Queen City	190.7	9-18-70	S,E 1	D	D	
102	C. M. Mitchell	John Cobb Drilling Co.	1967	450	171	C	4-1/2	0	101	Queen City	81	5-18-67	S,E 1	D	D	Reported high iron content.
201	Sam B. King - H. G. Lassiter No.6		1957		6,325										E	Oil test.
202	City of Elkhart No.1	Layne Texas Co.	1935	380	640	C C S	8-5/8 6-5/8 6-5/8	0 370 582	388 582 640	Queen City	100	1957	N	P	D	
203	T. J. Johnson - Raymond Ray No.1		1957		6,336										E	Oil test.
204	Earl Seymour		1930	370	42	C	36			Cook Mountain	18.7	9-18-70	J,E 1/3	D		
301	Talbert & Hughey Drilling Co. & Oil Properties - M. P. Reese No.1		1956		5,745										E	Oil test.
302	Placid Oil Co. et al - Polk No.4		1959		5,650										E	Oil test.
303	W. E. Garland	Frye Drilling Co.	1968	400	229	C C S C	4-1/2 2-1/2 2-1/2 2-1/2	0 179 183 208	179 183 208 229	Sparta	60	3-15-68	S,E 1	D	D	Temperature 70° F.
304	R. H. Alfred	R. C. English	1969	500	115	C S	4-1/2 4-1/2	0 95	95 115	Sparta	60	3-22-69	S,E 1	D	D	Temperature 68° F.
403	J. R. Simpson		1967	380	40	C	30	0	40	Sparta	37.2	9-22-70	J,E 1/2	D		
404	Cable Tool & Rotary Drilling Co. - J. F. Durnell No.1		1957		6,150										E	Oil test.
405	LaCoastal Petroleum Corp. - J. W. Bridges No.1		1966		5,920										E	Oil test.
502	J. A. Gunnels		1961	390	49	C	30	0	49	Sparta	44.5	9-22-70	J,E 1/3	D		Temperature 67° F.
503	L. A. Douglas - McElroy No.1		1958		6,058										E	Oil test.
602	M. L. Mayfield et al - Springman Chaffin Unit No.1		1957		6,103										E	Oil test.
603	F. R. Jackson, Jr. - W. McMahon No.1		1957		6,407										E	Oil test.
29-102	Oil Properties, Inc. et al - Garrison No.2		1956		5,702										E	Oil test.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-38-29-103	Art Machin & Associates - M. A. Davey No.1		1965		5,965										E	Oil test.
104	Seaboard Oil Co. - Harry Denson No.5		1957		5,800										E	Oil test.
105	Texaco, Inc.	Layne Texas Co.	1970	500	1,925	C C S C	10-3/4 6-5/8 6-5/8 6-5/8	0 1,658 1,800 1,910	1,790 1,800 1,910 1,925	Wilcox	260	7-24-70	T,E 40	Ind.	D,E	Drilled to 1,962 feet. Pumped 455 gpm from 291 feet on 7-24-70. Temperature 98° F.
106	Tenneco Oil Co.	Patrick Drilling Co.	1969	460	1,852	C C S	8-5/8 6-5/8 6-5/8	0 1,707 1,737	1,737 1,737 1,852	Wilcox			S,E 60	Ind.		
107	Slocum Gas Co.		1970	470	31	C S	16 16	0 10	10 31	Sparta	10	1-70	J,E 1-1/2	Ind.		Temperature 67° F.
201	Apache Drilling Co. & A. Crevlin - Determine & Roland Gibson No.1		1955		5,964										E	Oil test.
202	T. D. Humphrey, Jr. - F. S. Starkey No.1		1969		6,060										E	Oil test.
203	T. D. Humphrey & Son, Ltd - Wallace No.2														E	Oil test.
204	J. B. Hutchens		1946	460	25	C	30	0	30	Sparta	18	9-70	J,E 1/3	D		
205	Bobby Allen	Carruth Drilling Co.	1960	400	220	C S	4-1/2 2-1/2	0	100	Queen City			J,E 1	D		
301	Oil Properties, Inc. - N. P. Thompson No.1		1956		5,900										E	Oil test.
302	Caroline Hunt Sands - Iris C. Wagner No.1		1957		6,125										E	Oil test.
303	J. L. Hobson		1955	495	26	C	30	0	26	Sparta	21.5	9-24-70	J,E 1/3	D,S		
401	Travis Mosely		1935	500	109	C S	36 4-1/2	0 75	75 104	Sparta	59.8	7-13-60	J,E 1/2	D		
405	English L. Jackson, Jr. - E. L. Denman No.1		1962		6,213										E	Oil test.
503	C & G Oil Co. - Newsome No.1		1937		6,003										E	Oil test.
30-101	Jerry Sadler			460	280					Queen City				S		
201	W. C. Perryman - Southern Pine Lumber Co. No.1		1959		5,853										E	Oil test.
202	Mrs. C. F. Monk		1932	420	33	C	36	0	33	Queen City	29.3	9-24-70	J,E 1/3	D,S		
301	E. L. Howard, Cooper, Herring, Roosth & Genecov - Odell Clewis No.1		1950		5,290										E	Oil test.
39-08-301	Albert Rampy	West Drilling Co.	1940	305	309	C S	4-1/2 4-1/2	0 294	294 309	Wilcox	40 50	1940 1958	C,E 1/2	D		
302	Lone Star Gas Co.	McMaster	1934	305	327	C	4-1/2			Wilcox			T,E 7-1/2	P		Temperature 73° F.

For footnotes see end of table.

Table 7.--Records of Wells, Springs, and Test Holes in Anderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Casing and Screen Data: Diameter (inches)	Casing and Screen Data: Depth in Feet (from)	Casing and Screen Data: Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
AA-39-08-303	American Petrofina Co. of Texas - Ware & Bailey No.1		1963		4,090										E	Oil test.
601	Getty Oil Co.	George Crooke	1934	301*	310	C	8-5/8	0	205	Wilcox	59.2	8-19-70	T,E	P		
						S	8-5/8	205	307				5			
						C	8-5/8	307	310							
602	Lone Star Gas Co.		1946	265	320	C	6-5/8			Wilcox	34	1960	S,E	Ind.		Temperature 74° F.
											23	7-70	2			

1/ Altitudes which have asterisks (*) are from aneroid or differential leveling surveys. All other altitudes are estimated from USGS topographic quadrangle maps having 10-foot or 20-foot contour intervals.

2/ Identifying letters used are:

- C - Casing or blank liner
- S - Screen

3/ Reported water levels are given in feet; measured water levels are given in feet and tenths. + indicates water level above land surface.

4/ Identifying letters used are:

- A - airlift
- C - cylinder
- Cf - centrifugal
- J - jet
- S - submersible
- T - turbine
- E - electric
- G - gasoline
- H - hand
- Ng - natural gas
- N - none
- W - windmill

Number indicates horsepower.

5/ Identifying letters used are:

- D - domestic
- Ind. - industrial
- Irr. - irrigation
- N - none
- P - public
- S - livestock

6/ D indicates drillers' log available; E indicates electric log available. Drillers' logs and electric logs are in files of Texas Water Development Board.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-34-53-903	W. J. Weaver, Trustee - Maud Blow No.1		1955		5,519										E	Oil test.
904	Buddy Slover			415	31					Weches	18.6	3-6-36	N	N		
54-702	E. A. Ellison - L. C. Wilkinson No.1		1960		5,270										E	Oil test.
703	J. J. Bailey	Carol Boles	1935	540	23	C	36			Weches	14.6	3-10-36	N	N		
801	J. E. Boyle	White Drilling Co.	1966	500	1,097	C	4	0	996	Wilcox	221	6-15-66	S,E 5	D,S	D	
						C	2-1/2	991	1,038							
						S	2-1/2	1,038	1,068							
						C	2-1/2	1,068	1,082							
						S	2-1/2	1,082	1,092							
						C	2-1/2	1,092	1,097							
55-701	Claud B. Hamill - L. L. Franklin No.1		1965		4,431										E	Oil test.
806	Lyons Petroleum Co. - W. E. Rucker No.1		1964		4,242										E	Oil test.
807	Lyons Petroleum Co. - W. E. Rucker No.2		1964		4,715										E	Oil test.
911	Paul L. Miller - John Rork No.1		1964		4,525										E	Oil test.
912	J. H. Rork	White Drilling Co.	1966	430	235	C	4	0	196	Carrizo	100	11-12-66	S,E	D	D	
						C	2-1/2	192	214							
						S	2-1/2	214	234							
						C	2-1/2	234	235							
56-702	Russell Hamilton	Robert Howeth	1969	475	191	C	4	0	175	Carrizo			S,E 1	D,S	D	
						S	4	175	191							
801	Sinclair Oil & Gas Co. - Minnie O'Neal No.1		1963		4,310										E	Oil test.
901	Doug Proctor - R. T. Ward No.1		1955		3,840										E	Oil test.
61-301	Pure Transportation Co.				55	C	30			Weches	48.2	3-9-71	J,E	D		Temperature 67.5° F.
302	Herbert Fair		1913	520	38	C	30			Weches	25.7	3-9-36	N	N		
303	Charles Schulze		1905	405	32					Weches	16.9	3-6-36	N	N		
304	Mrs. Archie Miller		1875	420	30	C	30			Weches	16.0	3-6-36	J,E	D		
601	C. L. Newberne	White Drilling Co.	1955	430	745	C	6			Carrizo			S,E 2	D,S		
602	Humble Oil & Refining Co.- Paul M. Rothermel Jr. No.1		1966		11,150										E	Oil test.
603	L. G. Hunley	Ed Fletcher	1925	465	37					Sparta	32.2	3-9-36	N	N		
802	Tejas Oil & Gas Co. - Isoria L. Sneed No.1		1956		5,927										E	Oil test.
901	Talbert & Hughey Drilling Co. & J. L. Gulley - T. Perkins No.1		1955		5,518										E	Oil test.

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-34-61-902	Southern Blue Catfish Farm, Inc.	John Murchison	1968	420	668	C S	7 3	 622	 666	Carrizo	170	1968	S,E 20	Irr.		Temperature 75° F.
903	W. D. Baker			360	Spring					Queen City				N		
904	Quinn Lewis		1934	440	38	C	36			Queen City	30.9	3-11-36	N	N		
62-101	E. A. Ellison - Matt Williams No.1		1952		5,315										E	Oil test.
102	E. A. Ellison - W. P. Douglas No.1		1957		5,214										E	Oil test.
103	J. E. Biscoe			550	35	C	36			Sparta	28.6	3-10-71	J,E	D,S		
104	W. C. J. Stephens Estate		1915	500	29					Weches	19.9	3-9-36	N	N		
105	Mrs. L. C. Wilkinson		1885	520	47					Weches	34.2	3-9-36	N	N		
201	J. C. Hall & Jack Tarrant			520	26	C	30			Weches	12.8	3-13-36	N	N		
202	George D. Huddleston			500	40	C	30			Weches			J,E 1/2	D,S		
301	P. G. Lake Inc. et al-Nyman Gas Unit No. A-1		1958		4,565										E	Oil test.
302	L. W. Dennis - Ivey No.1		1950		5,027										E	Oil test.
303	Mrs. Francis Snow			520	16	C	30			Queen City	13.8	3-9-71	Cf,E 1/3	D,S		
304	Clyburn Estate	W. F. Clyburn	1924	500	76	C	21			Queen City	69.9	3-13-36	N	N		
401	Bobby Manziel - Citizens National Bank No.1		1941		4,988										E	Oil test.
402	G. W. Buchanan Estate		1920	470	51					Queen City	29.6	3-10-36	N	N		
403	Mrs. Norene Shaffer			400	35	C	36			Queen City	0.5	3-10-71	J,E 3/4	D,S		Temperature 66° F.
501	H. R. Lewis	J. M. Allen	1966	580	31	C	30			Sparta			Cf,E	D	D	Temperature 65° F.
502	Dean Lewis		1915	500	47					Weches	39.0	3-10-36	N	N		
601	Union Producing Co. - Thurman No. A-1		1957		5,291										E	Oil test.
602	L. J. Spraggins	Jordan	1955	550	190	C	4			Queen City			S,E 1/2	D		
603	Roper	G. A. McKee	1895	690	34					Queen City	23.1	3-4-36	N	N		
604	Gladys Downs		1915	660	23					Queen City	19.0	3-4-36	N	N		
701	Atlantic Refining Co. - Richey & Sneed No.1		1957		6,019										E	Oil test.
702	T. L. Gary	Robert Howeth	1967	560	297	C S	4 4	0 265	265 297	Queen City			S,E 1	S	D	
703	Phillip Roebuck			560	Spring					Sparta				N		
801	Gulf Oil Corp. - Quaitt Dodson, Jr. No.1		1956		5,250										E	Oil test.

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-34-62-802	Shell Oil Co. - Tol Smith No.1		1958		4,885										E	Oil test.
803	Happy Gist & W. C. Perryman - W. E. Stone No.1		1960		4,947										E	Oil test.
804	Billy Smith	O'Dell Drilling Co.	1960	640	104	C	4			Queen City			J,E 3/4	D	D	
805	Levi Sherman	Levi Sherman	1910	500	24					Queen City	13.7	3-10-36	N	N		
901	Eunice Sanborn	Layne Texas Co.	1935	710	388	C C S C S C	16 8 8 8 8 8	0 0 248 290 329 366	228 248 290 329 366 388	Queen City			T,E 25	P	D	
902	Watburn Oil Co. - Elizabeth McGowen No.1		1954		4,771										E	Oil test.
903	Trice Producing Co. - McNeil No.1		1957		5,097										E	Oil test.
63-101	A. L. Looney	White Drilling Co.	1961	430	580	C	4	0	277	Wilcox	145	6-15-61	S,E 1	S		
102	Jack L. Phillips - L. A. Amsden No.1		1958		4,515										E	Oil test.
103	A. L. Looney	J. W. Langston	1900	440	27	C	36			Queen City	18.2	3-13-36	N	N		
104	Reading Ranch	R. L. Burns	1935	400	27	C	30			Queen City	15.4	3-13-36	N	N		
105	J. M. Lawson			400	27	C	30			Queen City	16.9	3-26-36	N	N		
201	Cott Copper Corp. - J. W. Frazier Lula Hale No.1		1945		4,746										E	Oil test.
202	Stroube Central Co. & W. H. Bryant et al - K. R. Dukes et al - No.1		1960		4,325										E	Oil test.
203	R. M. Bass - Thrash No.1		1951		4,298										E	Oil test.
204	Earl Hendrick	J. M. Allen	1967	425	55	C	30	0	55	Queen City	22.3	3-8-71	J,E	D	D	
205	H. L. Andrews		1954	415	300	C	4			Carrizo	124.0	3-8-71	J,E 1	D		
206	Irene Armstrong	J. F. Armstrong	1913	395	24					Queen City	12.0	3-26-36	N	N		
301	L. S. Wilson	White Drilling Co.	1966	470	284	C C S C	4 2-1/2 2-1/2 2-1/2	0 235 263 283	239 263 283 284	Carrizo	130 135.2	3-16-66 3-5-71	S,E	D,S	D	
401	Union Producing Co. - Slawson No.1		1958		9,500										E	Oil test.
402	Union Producing Co. - Travis No.1		1948		9,575										E	Oil test.
403	Union Producing Co. - Sanders et al - No.1		1950		5,000										E	Oil test.
404	Pair Barnley - Alexander No.1		1953		4,262										E	Oil test.

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-34-63-405	Sam Stockton			420	Spring					Queen City				N		
406	Clyde Cain	Dean Stockton	1920	420	29					Queen City	6.6	3-25-36	N	N		
501	J. G. Hefner	Rehkop Drilling Co.	1971	360	380	C	4	0	194	Wilcox			N	N		
						C	2	180	300							
						S	2	300	380							
502	H. H. Cullom			380	200	C	4			Carrizo			J,E	D		
503	J. G. Hefner	Rehkop Drilling Co.	1971	360	153	C	4-1/2	0	126	Carrizo	70	3-71	S,E 1-1/2	D		
						C	2-1/2	123	132							
						S	2-1/2	132	153							
601	Conely Oil Co.- H. C. Grissom No.1		1951		5,000										E	Oil test.
602	James Godwin	White Drilling Co.	1967	400	540	C	4	0	403	Wilcox	137	3-8-67	S,E 2	D,S	D	
						C	2-1/2	393	519							
						S	2-1/2	519	539							
						C	2-1/2	539	540							
603	T. Stovall	Joe Northcutt	1931	390	34	C	6			Queen City	10.7	3-27-36	N	N		
604	Beau Wilson	Alfred Walker	1936	320	11	C	36			Reklaw	7.1	3-27-36	N	N		
605	J. Paul Karcher	Rehkop Drilling Co.	1969	380	443	C	4-1/2	0	205	Wilcox	76	4-19-69	S,E 3/4	D	D	
						C	2	194	210							
						S	2	210	231							
						C	2	231	401							
						S	2	401	443							
606	Pat Mills	Robert Howeth	1969	390	187	C	4	0	171	Carrizo			S,E 3/4	D	D	
						S	4	171	187							
607	J. Paul Karcher	West Drilling Co.	1956	325	310	C	6-5/8	0	230	Wilcox			T,G	Irr.		Drilled to 755 feet.
						S	6-5/8	230	310							
701	Happy Gist - Dr. J. M. Travis No.1		1962		4,670										E	Oil test.
702	Rather Duty		1925	405	28	C	30			Queen City	22.0	3-9-71	J,E 1/2	D		
801	Watson W. Wise & Decker - W. E. Pierce et al No.1		1952		4,770										E	Oil test.
802	V. E. Pierce	Jordan	1957	410	210	C	4	0	200	Carrizo			J,E 1	D		
						S	4	200	210							
803	H. O. Simpson	W. N. Alexander	1933	420	18	C	48			Queen City	12.3	3-25-36	N	N		
901	Bill R. Tipton & George D. Blaylock - A. J. Searcy No.1		1955		4,610										E	Oil test.
902	H. A. Northcutt	A. J. Searcy	1914	360	38					Reklaw	23.8	3-27-36	N	N		
903	Roger Tilman		1927	360	20					Reklaw	10.0	3-27-36	N	N		
64-101	Rexall, Gant & Barnett - T. F. Norman Estate No.1		1954		4,144										E	Oil test.
102	W. D. Wilkinson	White Drilling Co.	1969	405	466	C	4	0	439	Wilcox	125	8-20-69	S,E	D	D	
						C	2-1/2	435	444							
						S	2-1/2	444	464							
						C	2-1/2	464	466							

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-34-64-201	L. A. Grelling - Talley Heirs No.1		1955		4,051										E	Oil test.
202	Alvin Davis	White Drilling Co.	1954	405	276	C C S C	4 2-1/2 2-1/2 2-1/2	0 246 255 275	251 255 275 276	Wilcox	115	12-23-54	J,E 1	D		
203	Virginia Pruitt	Robert Howeth	1969	480	250	C S	4 4	0 234	234 250	Wilcox			S,E 1/2	D,S	D	
302	B. A. & M. A. Florence	Robert Howeth	1968	410	103	C S C	4 4 4	0 69 97	69 97 103	Carrizo	42.9	3-4-71	S,E 1-1/2	D	D	Temperature 68° F.
303	J. M. Buckalew Estate	J. M. Buckalew	1916	405	53	C	36			Carrizo	45.5	3-18-36	N	N		
304	Allen Childress	Horace Pope	1929	340	26	C	12			Carrizo	12.1	3-16-36	N	N		
305	Mrs. E. H. Sadler	Fennie Sadler	1928	410	14	C	36			Carrizo	8.3	3-16-36	N	N		
401	Don Williamson et al - J. F. Shamblin No.1		1965		4,458										E	Oil test.
402	Blackjack Water Supply Corp.	Lanford Drilling Co.	1970	440	425	C S	6-5/8 4-1/2	0 383	383 425	Wilcox	138 142.7 144.3	4-19-70 3-8-71 5-20-71	S,E 5	P	D,E	Pumped 63 gpm from 154.7 feet on 5-20-71. Temperature 72° F.
501	Gibson Drilling Co. - Fitch No.1		1960		4,250										E	Oil test.
502	New Concord Water Supply Corp.	Key Water Well & Drilling Co.	1965	420	427	C C S C	8-5/8 3-1/2 3-1/2 3-1/2	0 293 335 419	335 335 419 427	Wilcox	115.3	3-3-71	S,E 5	P	D,E	Pumped 62 gpm from 146 feet on 3-3-71. Temperature 72° F.
503	Mrs. Ross Martin	Ross Martin		380	53					Carrizo	44.6	3-19-36	N	N		
504	Evans		1900	500	35					Queen City	20.5	3-27-36	N	N		
505	Mrs. L. H. Holcomb	L. H. Holcomb	1925	425	16					Reklaw	8.8	3-19-36	N	N		
601	R. L. Peveto et al - Burton No.1		1966		4,015										E	Oil test.
602	Atlas Drilling Co. & D. D. Feldman Oil & Gas Co. - Ida Brown No.1		1956		4,030										E	Oil test.
603	Hulen Martin	Robert Howeth	1968	410	118	C S	2 2	0 102	102 118	Carrizo			J,E 1	D,S	D	
604	Mrs. V. Brown		1900	400	25					Carrizo	12.6	3-20-36	N	N		
605	Mrs. Jess Hamilton	Jess Hamilton	1929	415	73	C	6			Carrizo	51.7	3-20-36	N	N		
701	Jack McCubbin - Shaw Estate No.1		1955		4,159										E	Oil test.
702	Don B. Williamson et al - O. H. Dickey No.1		1965		4,600										E	Oil test.
703	Don Williamson - Annie C. Leadbetter No.1		1963		4,350										E	Oil test.
704	Billy Powell	Rehkop Drilling Co.	1967	410	200	C S	7 7	0 130	130 200	Carrizo			S,E 5	D,Irr.		

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-34-64-705	Billy Powell	Rehkop Drilling Co.	1970	410	205	C	7	0	138	Carrizo	69.5	3-4-70	S,E 15	Irr.	D	Temperature 69° F.
						S	7	138	205							
706	G. L. Henry			395	24	C	30			Reklaw	14.4	3-27-36	N	N		
707	Mrs. J. M. Johnson	J. M. Johnson	1900	380	43	C	30			Reklaw	26.8	3-27-36	N	N		
801	W. C. Perryman & George J. Greer - Edwin Brown No.1		1958		4,309										E	Oil test.
802	W. C. Perryman - E. Houghton No.1		1958		4,255										E	Oil test.
803	J. D. Evans			440	147	C	4			Reklaw	109.0	3-4-71	S,E	D,S		Temperature 69° F.
804	W. R. Murphy			385	27					Reklaw	15.4	3-30-36	N	N		
901	McMillan & Stone - F. A. Williamson No.1		1957		4,071										E	Oil test.
902	I. L. Pool	J. M. Allen	1968	440	78	C	30			Carrizo	68.7	3-4-71	J,E 1-1/2	D		
903	I. L. Pool		1933	410	73	C	24			Carrizo	68.3	3-20-36	N	N		
35-49-701	H. B. Kelley		1931		38	C	6			Carrizo	27.7	3-16-36	N	N		
57-101	Allen Burton				29	C	30			Carrizo	19.6	3-16-36	N	N		
401	Striker Oil Co. - Ira Kee No.2		1954		3,742										E	Oil test.
402	V. B. Stone - Bond Deloach No.1		1952		3,840										E	Oil test.
37-01-401	Texas Power & Light Co. No.1	Texas Water Wells	1956	306*	447	C	18	0	356	Carrizo	7.2	7-2-56	T,E 40	Ind.	D,E	Pumped 343 gpm from 70.8 feet on 7-3-56.
						C	10-3/4	0	366							
						S	10-3/4	366	442							
						C	10-3/4	442	447							
402	Texas Power & Light Co. No.2	Texas Water Wells	1956	300	457	C	18	0	370	Carrizo	8.0	8-21-56	T,E 40	Ind.	D,E	Pumped 350 gpm from 72.2 feet on 8-21-56. Temperature 72.5° F.
						C	10-3/4	0	378							
						S	10-3/4	378	392							
						C	10-3/4	392	400							
						S	10-3/4	400	452							
						C	10-3/4	452	457							
403	T. G. Shaw Trustee - J. L. Bailey No.3		1948		3,969										E	Oil test.
701	Bernard Esunas & M. B. Rudman - H. H. Richey No.1		1965		4,242										E	Oil test.
09-101	Reklaw Water Supply Corp. No.2	C. C. Innerarity		300	138	C	8-5/8	0	82	Carrizo	47.7	12-15-70	S,E	P		Pumped 43 gpm from 56.3 feet on 5-18-71. Temperature 69° F.
						C	5	0	86		46.9	5-18-71	3			
						S	5	86	138							
102	Reklaw Water Supply Corp. No.1	Wes-Tex Tool Co.	1965	300	639	C	8-5/8	0	530	Wilcox	30	4-65	S,E	P	E	Pumped 75 gpm from 34.2 feet on 5-18-71.
						C	4-1/2	446	530		23.6	12-15-70	3			
						S	4-1/2	530	624		23.7	5-18-71				
						C	4-1/2	624	639							
103	Looney Estate		1922	240	22	C	48			Carrizo	16.4	4-27-36	N	N		

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-37-09-401	Carco Drilling Co. - Walker No.1		1949		4,720										E	Oil test.
402	S. P. Sessions			275	19					Reklaw	6.8	4-27-36	N	N		
701	R. W. Sales	R. W. Sales	1875	315	22	C	36			Reklaw	15.9	4-28-36	N	N		
702	R. W. Sales	R. W. Sales		315	21					Reklaw	18.1	12-16-70	J,E	D,S		Temperature 65° F.
703	Shine Gulledge			285	28	C	36			Reklaw	23.4	4-28-36	N	N		
17-401	Rayford Rice		1967	300	25	C	30			Queen City	16.5	10-19-70	J,E 1/2	D,S		Temperature 68.5° F.
402	James Williams		1916	280	39					Queen City	32.3	6-19-36	N	N		
403	R. L. Roberts		1924	260	19					Queen City	13.9	6-30-36	N	N		
701	Mack Hays et al - B. F. Dickey No.1		1953		5,610										E	Oil test.
702	Mrs. Engledow	Crockett Drilling Co.	1968	310	150	C S	4 4	0 130	130 150	Queen City	84.2	10-19-70	J,E 1-1/2	D,S		Temperature 69° F.
703	A. G. Geter	A. G. Geter	1921	320	32					Weches	22.1	5-15-36	N	N		
704	Mrs. A. J. McCuiston	A. J. McCuiston	1896	300	23					Queen City	18.8 19.8	6-19-36 10-20-70	Cf,E	D		
25-201	Jack Findley		1927	300	35	C	42			Weches	30.2	6-2-36	N	N		
401	Bobby Jackson	C. C. Innerarity		360	360	C	2			Queen City			J,E 1	D,S		Temperature 70° F.
402	Silvin Hathorn		1925	360	34	C	42			Sparta	28.9	5-21-36	N	N		
501	E. H. Moore, Inc. - Chronister Lumber Co. No.1		1937		5,926										E	Oil test.
601	H. C. Warren		1955	210	21					Alluvium	18.3	10-8-70	J,E 1/2	D		
701	W. H. Bailey	W. H. Bailey	1933	300	39	C	36			Cook Mountain	30.4	5-20-36	N	N		
702	E. S. Crow	C. C. Innerarity	1964	330	185	C S	4 4	0 175	175 185	Sparta	84.8	10-8-70	S,E 1/2	D		Temperature 71° F.
703	Mrs. Vera Dew			285	34	C	18			Cook Mountain	19.1	5-15-36	N	N		
801	Ralph Betty		1968	360	50	C	30			Cook Mountain	34.4	10-14-70	J,E 1	D		Temperature 69° F.
802	Stokes			300	28	C	36			Sparta	23.1	5-18-36	N	N		
803	Mrs. Merle Wilson			350	42	C	36			Cook Mountain	28.0	5-18-36	N	N		
804	Mrs. Red	J. W. & W. R. Ellerbee	1906	310	43					Sparta	26.3	5-18-36	N	N		
901	Union Producing Co. - Sessions No.1		1958		10,739										E	Oil test.
902	R. E. Stockin			260	39	C	48			Sparta	28.6	5-20-36	N	N		
903	Guy Luce	Fred Doss	1915	260	17					Sparta	15.5	10-14-70	Cf,E 1/3	D,S		

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-37-33-101	S. W. Mettlen	Innerarity & Leubner Drilling Co.	1966	280	149	C S	4 4	0 139	139 149	Sparta	39.3	10-6-70	S,E 1/2	D,S	D	Temperature 71° F.
102	W. A. Pounds		1890	295	25	C	48			Cook Mountain	9.3 10.8	5-19-36 10-7-70	N	N		
103	J. J. Grubbs	Innerarity & Leubner Drilling Co.	1966	225	135	C S	4 4	0 125	125 135	Sparta			J,E 1/2	D	D	
104	Chandler			235	15					Cook Mountain	7.0 10.9	5-19-36 10-7-70	N	N		
201	City of Wells	N. Scroggins	1935	325	400	C S	8 6	301	400	Sparta			N	N	D	
202	City of Wells	Layne Texas Co.	1955	325	960	C C S C	8-5/8 4-1/2 4-1/2 4-1/2	0 748 880 950	875 880 950 960	Carrizo	128 214.8 215.3	6-17-55 10-6-70 5-19-71	T,E	P	D,E	Pumped 102 gpm from 223.6 feet on 5-19-71. Temperature 79.5° F.
203	Delta - J. W. McFarlane - Warner No.1		1968		6,303										E	Oil test.
38-05-201	John Hurbough & Pat H. Cain - Harry Lee Carter No. B-2		1965		3,725										E	Oil test.
301	Chambers - Kilroy & McKnight - Cunningham No.1		1957		5,220										E	Oil test.
302	Wayne Crews			485	150	C	4			Queen City	114.7	2-25-71	J,E 1-1/2	D,S		
303	Simpson Estate			600	19	C	36			Queen City	14.1	4-14-36	N	N		
503	John Hurbrough & Pat H. Cain - Harry Lee Carter No. B-1		1965		3,715										E	Oil test.
601	Ralph Spence - Carroll No.1		1955		4,920										E	Oil test.
602	Humble Oil & Refining Co.- E. B. Reynolds No.2		1955		4,813										E	Oil test.
603	Willie Simpson			370	Spring					Queen City				N		
604	Sam Hammonds	T. J. Hardaway	1916	360	49	C	36			Queen City	43.7	4-14-36	N	N		
605	Christian Estate	J. A. Christian	1936	460	32	C	36			Queen City	25.9	4-14-36	N	N		
802	Humble Oil & Refining Co.- Neches State Land No.1		1954		4,752										E	Oil test.
803	Gulf Oil Corp. - J. E. Patton No.1		1954		4,812										E	Oil test.
901	American Liberty Oil Co.- Cobb-Holman No.1		1944		4,918										E	Oil test.
902	E. A. Simpson	Layne Texas Co.	1944	420	466	C	8			Carrizo			T,G	Irr.	E	
903	Humble Oil & Refining Co. No.1	Texas Water Wells	1955	340	350	C C S C	14 8-5/8 8-5/8 8-5/8	0 145 250 345	245 250 345 350	Carrizo	80 105.0	5-55 2-25-71	T,E 20	Ind.	D,E	Pumped 263 gpm from 121 feet in May, 1955.

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-05-904	Humble Oil & Refining Co. No.2	Texas Water Wells	1955	340	340	C	14	0	250	Carrizo	78	6-30-55	T,E 20	Ind.	D,E	Pumped 277 gpm from 96 feet on 6-30-55. Temperature 70° F.
						C	8-5/8	150	255							
						S	8-5/8	255	335							
						C	8-5/8	335	340							
905	American Liberty Oil Co. - Jeff Austin No.1		1941		4,746										E	Oil test.
906	Ewing Estate			420	41					Queen City	36.3	4-14-36	N	N		
06-101	Delta Drilling Co. - Adeline Sanders No.1		1954		5,580										E	Oil test.
102	W. M. Coats - Fowler No.1/		1947		4,989										E	Oil test.
103	J. D. Bearden			460	225	C	4			Queen City			J,E	S		
104	J. D. Bearden		1900	495	48					Queen City	42.3	3-12-36	N	N		
105	J. H. Walker Estate		1911	700	37					Sparta	17.9	4-14-36	N	N		
201	Hunt Oil Co. - T. G. Andrews No.1		1946												E	Oil test.
202	Gulf Oil Corp. - Fred Fowler No.1		1955		5,200										E	Oil test.
203	I. M. Lemon - Ramsey - Sockwell		1961		4,875										E	Oil test.
204	Stroube & Stroube - Glen Haberle No.1		1954		5,165										E	Oil test.
205	B. D. Hood		1959	480	36	C	30			Queen City	17.0	3-11-71	J,E 3/4	D,S		Temperature 66.5° F.
206	City of Jacksonville	Layne Texas Co.	1950	486*	1,150										E	Test Hole No.3.
207	City of Jacksonville	Layne Texas Co.	1950	491*	851										E	Test Hole No.1.
301	Hunt Oil Co. - Iria Tucker No.1				4,959										E	Oil test.
302	F. R. Jackson - W. T. Pinkard No.1		1948		5,004										E	Oil test.
304	C. S. Merritt		1885	600	27					Weches	15.0	3-12-36	N	N		
401	L. A. Grelling - Kate Adams No.1		1954		4,908										E	Oil test.
402	Sheffield Steel Corp.	Layne Texas Co.	1948	560	700	C	22	0	534	Carrizo	266	1-1-49	N	N	D,E	Pumped 580 gpm from 332 feet on 1-1-49.
						C	10-3/4	439	538							
						S	10-3/4	538	559							
						C	10-3/4	559	569							
						S	10-3/4	569	670							
						C	10-3/4	670	700							
403	Happy Gist - Daisy Reynolds		1959		5,257										E	Oil test.
404	Slago Oil Co. & M. B. Rudman - E. S. McNair No.1		1961		4,998										E	Oil test.
405	Peyton Lane Estate		1926	420	28	C	36			Queen City	18.6	4-14-36	N	N		

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-06-406	E. W. Mullinax	J. H. Reynolds	1916	460	67	C	36			Queen City	49.7	4-10-36	N	N		
407	John Christopher Estate			440	42					Queen City	32.6	4-14-36	N	N		
501	City of Jacksonville No.2	Layne Texas Co.	1954	460	788	C	20	0	647	Carrizo	284	8-24-54	T,E	P	D,E	Pumped 680 gpm from 324 feet on 8-24-54.
						C	12-3/4	0	650				100			
						C	10-3/4	650	652							
						S	10-3/4	652	752							
						C	10-3/4	752	788							
502	E. A. Ellison - W. M. Grimes No.1		1955		5,251										E	Oil test.
601	Pinkston, Davis & Williamson - Phelps No.1		1955		5,335										E	Oil test.
602	Hunt Graham, Trustee - Allen Gay No.1		1963		5,010										E	Oil test.
603	City of Jacksonville No.3		1965	500	700	C	20	0	628	Carrizo	371	4-2-65	S,E	P	D,E	Pumped 692 gpm from 421 feet on 4-2-65.
						C	12-3/4	0	632		385.6	2-19-71				
						C	10-3/4	632	635							
						S	10-3/4	635	685							
						C	10-3/4	685	700							
604	City of Jacksonville No.1	Layne Texas Co.	1948	460	720	C	22	0	592	Carrizo	205.7	3-1-49	T,E	P	D,E	Drilled to 1,565 feet. Pumped 621 gpm from 263.5 feet on 3-1-49.
						C	10-3/4	0	598							
						S	10-3/4	598	703							
						C	10-3/4	703	720							
605	T. J. Robberts		1969	425	35	C	30			Queen City	23.2	2-26-71	J,E 1/3			Temperature 68° F.
606	City of Jacksonville	Layne Texas Co.	1950	525*	704										E	Test Hole No.2.
607	City of Jacksonville	Layne Texas Co.	1950	523*	773										E	Test Hole No.4.
701	Bill Tipton - E. W. Meador Estate No.1		1952		5,200										E	Oil test.
702	J. N. Miles	J. M. Allen	1965	400	45	C	30			Queen City	28.0	3-2-71	J,E 1/2	D,S		
801	D. D. Feldman Oil & Gas Co. - R. B. Johnson No.1		1954		5,103										E	Oil test.
802	M. T. Tidwell		1950	460	36	C	30			Queen City	20.4	3-2-71	Cf,E	D,S		Temperature 66° F.
803	Ray Hawthorn			580	27					Sparta	19.3	4-17-36	N	N		
804	John Chapman Estate			480	43					Queen City	29.6	4-17-36	N	N		
901	Trans-Tex Drilling Co. - Mattie Melvin No.1		1952		5,625										E	Oil test.
902	Glass Estate		1860	485	38					Queen City	19.7	4-20-36	N	N		
903	H. C. Wenglar	Sparkman	1964	440	40	C	30			Queen City	27.3	3-2-71	J,E 1/2	D		
07-101	Oil Properties, Inc. - Brightwell & Townley No.1		1956		5,060										E	Oil test.
102	Jacksonville Country Club	Layne Texas Co.	1949	380	851										D,E	Test hole.
103	Ferguson & Gish - Ximenia Hughes No.1				5,010										E	Oil test.

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-07-104	Westbrook	W. F. Turney	1931	440	77					Queen City	72.7	3-17-36	N	N		
201	Bill R. Tipton - L. C. Priestly et al No.1		1955		4,819										E	Oil test.
202	A. O. Phillips - A. J. Henderson No.1		1956		4,955										E	Oil test.
203	Park Lake Club		1950	360	165	C	6			Queen City	76.7	2-24-71	J,E 1-1/2	P		
301	B. G. Byars - Jessie Shaw No.1		1955		4,715										E	Oil test.
302	L. T. Gregory	Chambers & Phillips	1958	405	206	C S	2 2	0 194	194 206	Reklaw			J,E 1-1/2	D		
303	Byron Tilly			320	Spring					Queen City				N		
304	Sam Tipton	W. D. Tipton	1910	400	23					Queen City	17.4	4-13-36	N	N		
401	Harry Mummert et al - Keller - Acker No.1		1955		4,890										E	Oil test.
402	U. S. Smelting, Refining & Mining Co. - Wayne Goodson No.1		1955		5,321										E	Oil test.
403	Bill Broadway	J. M. Allen	1969	460	52	C	30			Queen City	24 25.8	9-11-69 2-24-71	J,E 1	P	D	
404	Bill Broadway	J. M. Allen	1970	460	60	C	30			Queen City			J,E 1	P		
405	S. N. Meador	J. M. Meador	1917	425	60	C	36			Queen City	45.2	2-24-71	J,E 1-1/2	S		
406	Lawerence Tinsley			490	22	C	36			Queen City	14.0	3-7-36	N	N		
407	Willie Morris			440	24					Queen City	15.0	3-7-36	N	N		
501	Shell Oil Co. - J. H. Barksdale No.1		1957		5,000										E	Oil test.
502	T. J. Johnson & Vega Producing Co. - J. H. Peacock No.1		1960		4,665										E	Oil test.
503	J. H. Barksdale	White Drilling Co.	1964	420	1,220	C C S C S C S C	4 2-1/2 2-1/2 2-1/2 2-1/2 2-1/2 2-1/2 2-1/2	0 712 975 995 1,125 1,140 1,195 1,215	716 975 995 1,125 1,140 1,195 1,215 1,220	Wilcox	200	7-64	S,E 3	D,S		Temperature 79° F.
504	J. L. Caveness			340	Spring					Queen City				N		
505	John H. Maloney		1905	380	38	C	36			Queen City	33.2	3-17-36	N	N		
506	S. W. Leggett			460	29					Weches	12.2	4-6-36	N	N		
507	Meadors Estate	C. D. Meadors	1916	380	35	C	24			Carrizo	22.2	4-7-36	N	N		
508	Turney School District			400	36					Weches	6.3	4-6-36	N	N		

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-07-601	R. R. Scurlock et al - C. S. & G. G. Ousley No.1		1962		3,675										E	Oil test.
602	Pinkston, Davis & Williamson - L. D. Emerson No.1		1955		4,802										E	Oil test.
701	Bobby Manziel - C. W. Ault No.1		1955		4,764										E	Oil test.
702	C. M. Shell		1921	440	33					Queen City	16.7	3-7-36	N	N		
703	E. B. Casper	West & Rehkop Drilling Co.	1963	520	400	C C S	4 2-1/2 2-1/2	0 317 380	345 380 400	Carrizo			S,E 1-1/2	D,Irr.		Temperature 72° F.
704	Martin	W. H. Odem	1916	640	33					Sparta	19.7	4-20-36	N	N		
801	George Williamson, Jr. - Jack Jones No.1		1956		4,660										E	Oil test.
802	F. A. Shinalt & Sons			410	16	C	36			Reklaw	5.2	2-18-71	J,E 1/2	Ind.		
803	T. H. Cole	T. L. Cole	1935	410	32					Reklaw	20.2	4-6-36	N	N		
804	Marshall Pippin	W. M. Hilton	1919	360	20					Reklaw	10.2	4-6-36	N	N		
901	A. C. McGahhey et al - Harris No.1		1951		4,958										E	Oil test.
902	Gallatin Water Supply Corp.	Key Water Well & Drilling Co.	1965	400	370	C S	6-5/8 3	0 310	312 370	Carrizo	140.6	2-16-71	S,E 10	P	D	
903	J. H. Jones		1906	360	21	C	36			Reklaw	13.1	4-1-36	N	N		
904	Sam Hicks	H. N. Hicks	1920	400	37	C	30			Reklaw	32.3	4-6-36	N	N		
905	Sam Hicks			380	Spring					Reklaw				N		
08-101	Bill Tipton - Roscoe Gill No.1		1954		4,470										E	Oil test.
102	John R. Bunn - Mack Allen No.1		1947		4,558										E	Oil test.
103	W. C. Perryman & George J. Greer - Thomas Gill No.1		1958		4,750										E	Oil test.
104	New Summerfield Water Supply Corp.	Layne Texas Co.	1962	510	585	C C S C	10-3/4 6-5/8 6-5/8 6-5/8	0 419 505 555	500 505 555 585	Carrizo	240	11-30-62	N	N	D,E	Pumped 108 gpm from 275 feet on 11-30-62.
105	New Summerfield Water Supply Corp.	Layne Texas Co.	1968	510	1,008	C C S C S C	8-5/8 4-1/2 4-1/2 4-1/2 4-1/2 4-1/2	0 793 906 916 927 993	900 906 916 927 993 1,008	Wilcox	225 230.6 230.9	4-2-68 2-15-71 5-14-71	S,E	P	D,E	Drilled to 1,124 feet. Pumped 102 gpm from 244 feet on 5-14-71. Temperature 81° F.
106	L. J. Limeback	J. A. Dodson	1935	470	40	C	42			Queen City	32.7	3-23-36	N	N		
201	W. H. Foster & et al Co. - O. K. Ellis No.1		1946		4,334										E	Oil test.

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Casing and Screen Data: Diameter (inches)	Casing and Screen Data: Depth in Feet (from)	Casing and Screen Data: Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-08-202	Jake L. Hamon - Thompson No.1		1970		4,843										E	Oil test.
203	L. A. Grelling - Zack Taylor No.1		1954		4,287										E	Oil test.
204	J. D. Thompson Estate		1930	560	39					Weches	22.9	3-24-36	N	N		
205	R. E. Sample			550	29					Sparta	19.7	3-23-36	N	N		
301	Rotary Drilling Inc. J. W. Baumgardner - Frost National Bank of San Antonio No.1		1965		4,305										E	Oil test.
302	Stryker Lake Water Supply Corp.	Rehkop Drilling Co.	1966	565	304	C S	8-5/8 5	0 282	281 304	Queen City	205 178.7	4-15-66 2-16-71	S,E 7-1/2	P	D,E	Temperature 69.5° F.
303	Walker		1932	420	45	C	24			Queen City	40.2	3-23-36	N	N		
401	Wise & Benton - J. T. Brown No.1				4,770										E	Oil test.
402	T. G. Shaw Jr. - M. Tilley No.1		1946		4,479										E	Oil test.
403	Bailey Estate		1933	415	55					Queen City	48.4	3-31-36	N	N		
404	J. T. Brown		1910	425	39					Queen City	32.8	3-31-36	N	N		
501	Purnell & Coleman - Inez Tipton No.1		1957		4,832										E	Oil test.
502	H. M. McCaul	Arnold McCaul	1926	420	31					Queen City	27.0	4-2-36	N	N		
503	Herndon Estate		1890	460	28					Queen City	17.1	4-2-36	N	N		
504	O. R. Perkin			520	Spring					Weches				N		
505	Neal		1875	500	38					Queen City	26.6	4-3-36	N	N		
601	T. G. Shaw - J. A. Bailey No.1		1953		4,168										E	Oil test.
602	W. B. Hinton - M. E. Mays No.1		1945		4,512										E	Oil test.
603	J. R. Bunn et al - C. Bounds No.2		1938		4,075										E	Oil test.
604	Purnell & Coleman - J. T. Brazier et al-No.1		1957		4,850										E	Oil test.
605	C. C. Byrd	Jordan	1953	440	150	C	4			Carrizo	63.4	2-17-71	J,E	D		
606	J. H. Brazier		1900	500	36					Weches	14.2	4-4-36	N	N		
607	C. C. Byrd		1917	420	33	C	30			Reklaw	21.8	4-1-36	N	N		
608	Dean Christopher		1900	420	39					Queen City	23.0	4-2-36	N	N		
701	A. A. Monmouth		1916	310	23	C	24			Carrizo	23.4 19.9	4-3-36 2-18-71	H	D		
702	C. E. Jenkins		1926	340	38					Reklaw	25.6	4-1-36	N	N		
801	Delta Drilling Co. et al-Bailey No.1		1947		4,380										E	Oil test.

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Casing and Screen Data: Diameter (inches)	Casing and Screen Data: Depth in Feet (from)	Casing and Screen Data: Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-08-802	Sun Oil Co. - Bobbitt No.1		1947		4,232										E	Oil test.
803	J. S. Bennett	C. E. Brazier	1930	320	38	C	24			Carrizo	33.3	3-3-36		D		
804	Kyle Estate	J. L. Kyle	1904	355	37					Carrizo	32.0	4-1-36	N	N		
805	Stafford Lake Club			265	11	C	36			Alluvium	7.2	4-22-36	N	N		
901	Christopher	B. A. Thompson		280	27					Carrizo	19.8	4-1-36	N	N		
902	W. H. McCrary	W. H. McCrary	1917	500	37					Reklaw	29.5	5-2-36	N	N		
13-201	Wise Drilling Co. - H. O. Slider No.1		1954		5,111										E	Oil test.
301	Union Producing Co. - O. O. Batton No.1		1968		5,051										E	Oil test.
302	Hammonds & Ray	J. R. Batton	1913	485	46					Weches	24.7	4-15-36		D		
303	D. C. Tillman			585	23	C	36			Sparta	17.8	1-13-71	J,E	D		
304	W. M. Seeton	White Drilling Co.	1969	580	648	C C S C	4 2-1/2 2-1/2 2-1/2	0 561 627 647	566 627 647 648	Carrizo	340	5-21-69	S,E 2	S	D	Temperature 73° F.
602	Ronnie Thrash - F. M. Boone No.1		1965		5,025										E	Oil test.
901	Southern Pine Lumber Co.			280	Spring					Alluvium				N		
14-101	General Crude Oil Co. - H. K. Black No.1		1947		4,937										E	Oil test.
102	Standard of Texas - Birmingham No.1		1946		2,006										E	Oil test.
103	Robinson Research Inc. - Pearl Humble No.1		1960		4,850										E	Oil test.
104	McMahon Estate	E. McMahon	1925	400	49	C	30			Queen City	43.6	4-15-36	N	N		
105	Mrs. Susan Jones	Alec Jones	1918	440	32	C	36			Queen City	29.0 30.5	4-16-36 1-13-71	H	D		
201	Mullinax Estate		1890	675	25	C	42			Sparta	10.9	4-17-36	N	N		
202	Raymond Grimes	J. M. Allen	1970	620	32					Sparta	26.8	1-12-71	J,E	D		Temperature 67° F.
203	Reuben Gay	Allen Gay	1922	620	17	C	36			Sparta	12.8	4-10-36	N	N		
204	David B. Parker		1875	625	31					Sparta	23.6	4-10-36	N	N		
301	Watburn Oil Co. - H. W. Thomason Estate No.1		1954		5,211										E	Oil test.
302	Pennzoil Producing Co. - W. G. Bell No.1		1970		5,116										E	Oil test.
303	K. Hughes - Susie Hill No.1		1958		5,115										E	Oil test.
304	C. H. Cotton	J. M. Allen	1963	635	32	C	36			Sparta			J,E 1/3	D		Temperature 67.5° F.
305	J. B. Brunson	J. A. Durett	1917	640	21					Sparta	16.6	4-20-36	N	N		
306	Harold Thompson			620	29					Sparta	22.1	6-12-36	N	N		

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Casing and Screen Data: Diameter (inches)	Casing and Screen Data: Depth in Feet (from)	Casing and Screen Data: Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-14-401	Lion Oil Co. - Croft No.1		1955		5,200										E	Oil test.
402	F. R. Jackson - A. J. Sherman No.1		1954		4,817										E	Oil test.
403	B. L. French		1850	380						Queen City	28.6	1-7-71	N	N		
404	G. W. Allen		1924	425	32	C	42			Queen City	27.1	4-17-36	N	N		
405	M. M. Croft	Andrews & Foster Drilling Co.	1966	380	500	C	4			Wilcox			S,E 1-1/2	D,S		Temperature 72° F.
406	Mullinax Estate			340	Spring					Queen City				N		
501	Joseph W. Clark	Pat Henry	1957	410	267	C	4			Reklaw			J,E	N		
502	B. L. French	Pat Henry	1960	390	255	C	4			Carrizo			J,E 1-1/2	N		
503	Maydelle Water Supply Corp.	C. C. Innerarity	1964	460	448	C C S	6-5/8 3 3	0 339 381	381 381 448	Carrizo, Wilcox	205 213.4 213.2	12-17-64 1-6-71 5-13-71	S,E 10	P	D,E	Drilled to 700 feet. Pumped 39 gpm from 234.8 feet on 5-13-71. Temperature 74° F.
504	Adair Acker			415	22					Queen City	8.6	4-17-36	N	N		
505	L. A. Sherman	Lotis A. Sherman	1934	370	30					Queen City	25.7	5-6-36	N	N		
506	Bob Meador		1924	660	36					Sparta	19.0	4-17-36	N	N		
601	Talbert & Gulley et al-L. T. Moore Estate No.1		1957		5,200										E	Oil test.
602	C. D. Nolley		1924	410	22					Queen City	17.5	6-12-36	N	N		
603	Bob Ezell			425	14					Queen City	12.2	1-13-71	J,E	D		Temperature 66° F.
604	T. L. Linzy	O. P. Lenzy	1934	460	33	C	36			Queen City	28.9	4-21-36	N	N		
701	F. R. Jackson - W. W. Sherman No.1		1958		5,006										E	Oil test.
702	R. L. Ezell	Carruth Drilling Co.		320	180	C	4			Carrizo	81.2	1-8-71	S,E	D		
703	Texas State Forest Service	Little	1935	420	1,420	C	6			Wilcox			N	N		
801	Johnson Drilling Co. & Happy Gist - Rip Bailey, Jr. No.1		1957		5,225										E	Oil test.
802	Roach Estate		1933	370	27	C	36			Queen City	20.5	5-27-36	N	N		
803	G. W. Allen			335	252	C	4			Carrizo			S,E	D,S		
804	Robert Bailey	Andrews & Foster Drilling Co.	1962	380	417	C	4			Wilcox	135.8	1-8-71	N	N		
901	Angle Oil Co. - S. M. Leftwich No.1		1955		5,375										E	Oil test.
902	Brandor Petroleum Co. & Happy Gist - J. E. Durrett No.1		1961		5,300										E	Oil test.
903	Mustang Drilling Corp. - J. T. Wallace No.1		1956		5,370										E	Oil test.
904	Sheffield Steel			660	24					Sparta	20.4	5-1-36	N	N		

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-14-905	Scott Estate		1934	460	44	C	30			Queen City	37.0	5-1-36	N	N		
906	Ball Estate	J. T. Ball		445	Spring					Queen City				N		
907	H. E. Ross	H. E. Ross	1914	420	34	C	36			Queen City	22.7	5-6-36	H	D		
15-101	Haxsey Oil Co. - Zack T. Baker No.1		1954		5,200										E	Oil test.
102	Dialville - Oakland Water Supply Corp.	Layne Texas Co.	1965	620	670	C	7	0	613	Carrizo	365	2-11-65	S,E	P	D,E	Drilled to 749 feet. Pumped 30 gpm from 381.5 feet on 5-13-71. Temperature 75° F.
						C	3-1/2	533	618		367.8	1-6-71				
						S	3-1/2	618	654		367.9	5-13-71				
						C	3-1/2	654	670							
103	Moody Glass	M. N. Barnett	1935	640	19	C	48			Sparta	11.2	4-20-36	N	N		
104	Miss Nell Grishom	J. M. Grishom	1922	445	34	C	30			Queen City	29.7	4-21-36	N	N		
201	Hunt Oil Co. - New Birmingham Development Co. No.1		1957		5,192										E	Oil test.
202	Forest Dyess	Chambers Water Well Drilling Co.	1970	560	177	C	4			Queen City			S,E	S	D	
301	R. C. Blankenship		1922	465	35					Queen City	26.3	4-23-36	N	N		
302	J. M. Blankenship			580	56	C	30			Queen City			J,E	D		Temperature 69° F.
303	J. E. Johnson		1916	460	30					Queen City	24.4	4-3-36	N	N		
401	Bill Tipton - Clifton Johnson No.1		1955		5,130										E	Oil test.
402	C & G Oil Co. - King No.1		1938		5,510										E	Oil test.
403	Thomas Peters	J. Sparkman	1958	415	40	C	36			Queen City	30.7	1-14-71	J,E	D		Temperature 69° F.
404	Mrs. Belle Lloyd	Joe Lloyd	1932	440	36	C	36			Queen City	30.8	4-21-36	N	N		
501	W. R. Nichols	Layne Texas Co.	1945	465	429	C	18	0	309	Carrizo	213	1945	T,E	N	D	
						C	12-3/4	290	322		230	1-31-53	50			
						S	12-3/4	322	423		233	7-20-61				
						C	12-3/4	423	429		237.4	1-13-71				
502	W. R. Nichols	Layne Texas Co.	1945	505	429	C	18	0	316	Carrizo	246	6-9-45	T,E	D,Ind.	D	Pumped 473 gpm from 313 feet in June, 1945.
						C	12-3/4	279	325		271	1-30-53	75			
						S	12-3/4	325	426		284	7-20-61				
						C	12-3/4	426	429							
503	W. R. Nichols	Layne Texas Co.	1945	460	428	C	18	0	315	Carrizo			N	N	D	
						C	12-3/4	278	324							
						S	12-3/4	324	425							
						C	12-3/4	425	428							
504	L. P. Halbert Jr.			450	Spring					Queen City				N		
601	City of Rusk No.1	Layne Texas Co.	1949	530	487	C	16	0	402	Carrizo	287	2-12-49	T,E	P	D,E	Drilled to 1,505 feet. Pumped 348 gpm from 364 feet on 2-12-49. Temperature 72.5° F.
						C	10-3/4	293	405		309.2	10-27-70				
						S	8-5/8	405	465							
						C	8-5/8	465	487							
602	City of Rusk No.2	Texas Water Wells	1954	700	660	C	18	0	545	Carrizo	472	1955	T,E	P	E	
						C	10-3/4	0	550		498.3	10-27-70				
						S	10-3/4	550	595							
						C	10-3/4	595	605							
						S	10-3/4	605	650							
						C	10-3/4	650	660							

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-15-603	City of Rusk No. 3	Layne Texas Co.	1961	500	450	C	18	0	345	Carrizo	265	8-20-61	T,E	P	D,E	Pumped 457 gpm from 307 feet on 8-21-61.
						C	12-3/4	0	350		260.6	9-18-61				
						S	12-3/4	350	440		270	10-27-70				
						C	12-3/4	440	450							
604	State of Texas - Department of Mental Health & Mental Retardation	Layne Texas Co.	1939	560	550	C	16	0	400	Carrizo	298	2-1-40	T,E	P	D	Pumped 350 gpm from 328 feet on 2-1-40.
						C	10-3/4	302	427		330.6	1-15-71	50			
						S	8-5/8	427	522							
						C	8-5/8	522	550							
605	Bill R. Tipton - Stanolind Oil & Gas Co. No.1		1956		5,215										E	Oil test.
606	J. L. McElroy	White Drilling Co.	1965	640	520	C	4	0	458	Carrizo	400	10-15-65	S,E	Irr.	D	Temperature 74.5° F.
						C	2-1/2	453	489				5			
						S	2-1/2	489	519							
						C	2-1/2	519	520							
607	State of Texas - Department of Mental Health & Mental Retardation	Katy Drilling, Inc.	1969	700	675	C	20	0	555	Carrizo	479	5-6-69	S,E	P	D	Pumped 380 gpm on 1-15-71. Temperature 73° F.
						C	12-3/4	0	565		474.6	1-15-71	60			
						S	12-3/4	565	665							
						C	12-3/4	665	675							
701	W. C. Perryman & George J. Greer - R. P. Stewart No.1 et al		1958		5,110										E	Oil test.
702	Travis Halbert		1970	390	38	C	36			Queen City	19.0	1-12-71	J,E	D		
													3/4			
801	Watburn Oil Co. et al - William Broughton No.1		1955		5,193										E	Oil test.
802	Arnella Jones			470	55	C	30			Queen City	50.6	1-14-71	J,E	D		
901	N. P. Powell - J. B. Love No.1		1961		5,290										E	Oil test.
902	W. T. Brown		1885	480	50	C	36			Queen City	37.2	5-4-36	N	N		
903	Jim Scott	J. M. Allen	1963	485	66					Queen City			J,E	D,S		Temperature 68° F.
													1/2			
16-101	Jackson Oil Co., Whitehurst & Moore - J. N. Partridge No.1		1957		4,900										E	Oil test.
102	B. L. Watson	Wade Kennedy	1929	360	26	C	30			Reklaw	14.5	3-31-36	N	N		
103	Bob Parsons	D. W. Baxter	1934	390	13	C	30			Reklaw	6.1	4-29-36	N	N		
104	R. S. Dyess	Chambers Water Well Drilling Co.	1970	380	295	C	4	0	281	Carrizo	101.3	1-11-71	S,E	D,S	D	Temperature 72° F.
						S	4	281	291				1-1/2			
						C	4	291	295							
201	John G. Mayo et al - New Birmingham Development Co.		1942		4,510										E	Oil test.
202	R. A. Colville	Pat Henry		410	501	C	4			Wilcox	145.4	1-11-71	J,E	D,S		
203	Jasper Glen			400	24					Reklaw	16.9	4-29-36	N	N		
204	Roy Kennedy	J. L. Kennedy	1896	340	25	C	30			Reklaw	12.0	4-22-36	N	N		
205	W. H. Mannion	W. H. Mannion	1926	335	32					Reklaw	28.3	4-22-36	N	N		

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-16-301	Bill R. Tipton - S. S. Thorson Heirs No.1				4,530										E	Oil test.
302	W. A. White	Linsey	1969	300	33					Reklaw	20.4	12-16-70	J,E	S		
303	J. L. McElroy	Oren Miller	1969	320	211	C S	6 6	0 190	190 211	Wilcox	62.7	1-5-71	S,E 5	Irr.		Pumped 75 gpm on 1-5-71. Temperature 69° F.
304	J. L. McElroy			320	22	C	30			Reklaw	17.3 14.7	4-22-36 1-5-71	H	D		
305	W. A. White			300	26	C	48			Reklaw	21.9	4-27-36	N	N		
401	Bill R. Tipton - Robert W. Cowart No.1		1955		4,910										E	Oil test.
402	Phillip Berry & T. J. Johnson et al - J. M. Banks et al - Unit W. No.1		1957		4,910										E	Oil test.
403	A. L. Roberts		1960	740	40					Sparta			J,E 3/4	D,S		Temperature 68° F.
404	Ed Hurt		1932	540	38	C	48			Queen City	26.9	4-29-36	N	N		
405	Douglas Parsons		1969	420	40					Queen City			J,E 1	S		
501	T. O. McCarty		1925	380	20	C	24			Queen City	13.8	4-28-36	N	N		
502	T. I. Frazier			355	31					Reklaw	9.4	4-29-36	N	N		
503	Frazier Estate			340	Spring					Reklaw				N		
504	B. G. Dunn			400	21	C	36			Reklaw	7.9	4-29-36	N	N		
505	M. D. & Billy Helm	Frye Drilling Co.	1964	440	250	C S	4 2-1/2	0 225	225 245	Carrizo	160 160.5	3-25-64 1-12-71	S,E 1	D,S	D	
601	Apache Drilling Co. - R. C. Priest No.1		1955		4,430										E	Oil test.
602	Lester Session	Lester Session	1952	330	30					Reklaw	22.3	12-16-70	H	D		
603	B. B. Perkins Estate		1931	330	29					Reklaw	23.3	4-27-36	N	N		
604	B. F. Hunter	Walter Copeland	1905	325	19	C	36			Reklaw	8.7	4-27-36	N	N		
701	The Texas Co. - Cherokee Development Co. No.1		1940		5,114										E	Oil test.
702	Lloyd Collins			720	40					Sparta			J,E	D,S		Temperature 66° F.
703	J. C. Kelley		1910	740	38					Sparta	30.2	4-30-36	N	N		
704	Cindy Kennedy		1894	700	28					Sparta	17.8	4-30-36	N	N		
801	Wayne Babb - Frances Philleo No.1		1957		5,015										E	Oil test.
802	Charles Wilcox	Frye Drilling Co.	1969	420	248	C S	4 2	0 218	215 233	Carrizo			S,E 1	D	D	
902	Humble Oil & Refining Co.- Carl Wipprecht et al-No.1		1955		9,065										E	Oil test.

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Casing and Screen Data: Diameter (inches)	Casing and Screen Data: Depth in Feet (from)	Casing and Screen Data: Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-16-903	Lavender & Weaver - Riley Maness No.1		1956		4,690										E	Oil test.
904	Chesley Richards		1967	320	135	C	4			Wilcox			S,E	D,S		Temperature 68.5° F.
905	David Richards		1885	320	59	C	42			Reklaw	36.0	4-28-36	N	N		
906	J. H. Sessions			365	29					Queen City	21.4	4-28-36	N	N		
22-103	W. C. Perryman et al - Southern Pine Lumber Co. No.1		1959		5,133										E	Oil test.
201	R. S. Hamilton - G. F. McCreight Heirs et al - No.1		1955		5,175										E	Oil test.
202	Union Producing Co. - Temple Industries Inc. No. A-1		1966		5,210										E	Oil test.
301	J. B. Barefield Estate		1875	315	23	C	36			Queen City	13.5	5-12-36	N	N		
302	Mrs. H. D. Berry	H. D. Berry	1950	400	24	C	42			Queen City	19.7	10-29-70	J,E 1/2	D		
601	C. O. Pollard & R. B. Powers - Benny Berry, Jr. No.1		1961		5,210										E	Oil test.
901	L. O. McMillian - Southern Pine Lumber Co. No.1				5,222										E	Oil test.
902	Happy Gist - New Birmingham Development Co. No.1		1963		5,387										E	Oil test.
903	Bill R. Tipton et al - Southern Pine Lumber Co. No.1-A		1953		5,373										E	Oil test.
904	Texas Forest Service		1952	260	212	C	4			Carrizo	60.2	10-28-70	S,E 1	D,Irr.		Temperature 70° F.
23-101	Merica Oil Co. - New Birmingham Development Co. No.1		1938		5,276										E	Oil test.
102	Purnell & Coleman - Schwartz No.1		1958		5,202										E	Oil test.
103	Jack L. Burrell - Birmingham Development Co. No.1		1967		5,260										E	Oil test.
104	Mrs. Emma Gibard		1895	440	36	C	30			Queen City	21.1	5-11-36	N	N		
105	Mrs. Alvin Sherman			370	34	C	36			Queen City	15.1	5-11-36	N	N		
106	G. W. Transvier		1956	320	294	C	7			Carrizo			J,E	D,S		Temperature 70° F.
107	Mrs. H. D. Berry		1926	355	11	C	30			Queen City	3.5	5-11-36	N	N		
108	Thomas Sparkman	C. C. Innerarity	1952	360	390	C C	4 2	0 200	200 390	Carrizo	135.4	1-14-71	S,E 1-1/2	D,S		

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-23-201	J. B. Dial - New Birmingham Development Co. No.1		1949		5,186										E	Oil test.
202	Carl Wipprecht	Carruth Drilling Co.	1964	410	320	C	4	0	320	Queen City	58.2	10-22-70	S,E 3/4	D		
203	Carl Wipprecht	E. B. Parks	1915	410	30	C	42			Queen City	25.3	6-22-36	J,E	D		
204	Mrs. Troublefield			390	41	C	36			Queen City	8.0	5-11-36	N	N		
301	J. E. Amis, Jr. - C. H. Hudson No.1		1960		5,310										E	Oil test.
302	La Gorce Oil Co. - Guenzel No.1		1957		5,200										E	Oil test.
303	R. R. Middleton	R. R. Middleton	1926	480	30	C	42			Queen City	25.1	6-25-36	N	N		
304	Hudson Estate		1916	480	34					Queen City	28.3	5-5-36	N	N		
305	J. W. Thompson		1891	450	48	C	36			Queen City	40.7	5-5-36	N	N		
306	Earnest Hudnall	Frye Drilling Co.	1964	480	348	C S	4 2-1/2	0 328	329 348	Carrizo	210	9-12-64	S,E 1	S	D	
401	L. O. McMillian & Nathan - J. O. Huggins No.1				5,161										E	Oil test.
402	Watburn Oil Co. et al - H. E. Pryor No.1		1955		5,171										E	Oil test.
403	J. O. Huggins		1934	355	15					Queen City	7.8	6-22-36	N	N		
404	D. L. Hassell	Roy Hassell	1936	310	22					Queen City	18.3	6-22-36	N	N		
405	James Gilbert	R. W. Berry	1934	360	22	C	24			Queen City	14.2	6-6-36	N	N		
406	J. L. Hassell	Jordan	1952	360	254	C S	4 4	0 234	234 254	Carrizo			J,E 2	D,S		Temperature 73° F.
501	C. M. Ashby - C. H. Fain et al		1953		5,163										E	Oil test.
502	Watburn Oil Co. - New Birmingham Development Co. No.1		1955		5,292										E	Oil test.
503	- - - Alton Jones No.1				5,900										E	Oil test.
504	Ray Crump			480	125	C	4			Queen City			J,E 1-1/2	D		Temperature 68.5° F.
505	Walter Beard				35					Queen City	33.2 27.9	5-5-36 10-22-70	J,E 1/2	D		
506	J. D. Hassell			420	150	C	4			Queen City			J,E	D		Temperature 72.5° F.
601	Danciger Oil & Refining Co. - New Birmingham Development Corp. No.1		1948		5,905										E	Oil test.
602	R. J. Caraway - Ray McGee No.1		1949		5,127										E	Oil test.
603	Jack W. Trantham, Chapman & Poland - Birmingham Development Co. No.1		1964		5,450										E	Oil test.

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Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-23-604	J. Jones			450	49					Queen City	40.1	5-5-36	N	N		
701	Hancock Oil Co. - Southern Pine Lumber Co. No.1		1953		5,747										E	Oil test.
702	Delta Drilling Co. - Southern Pine No.1		1946		5,255										E	Oil test.
703	Zack Gholston		1957	320	303	C S	4 4	0 282	282 303	Carrizo	113.6	10-28-70	S,E 1-1/2	D		Temperature 70.5° F.
704	Cerine			330	31	C	18			Queen City	22.1	6-22-36	N	N		
705	R. F. Holcomb			330	Spring					Queen City				S		
801	Joe Canterbury - Jimmie Hargrove No.1		1955		5,449										E	Oil test.
802	Marshall Steffenson - Wood Holliday et al-No.1		1956		5,346										E	Oil test.
803	M. L. Reid	Innerarity & Leubner Drilling Co.	1966	410	340	C S	4 4	0 330	330 340	Carrizo	203.6	10-26-70	S,E 3/4	D	D	
901	J. Rayford Holcomb	Pat Henry	1959	360	450	C	4			Carrizo			S,E	D		
902	Nellie Singletary			340	51	C	36			Queen City	43.9	6-15-36	N	N		
24-101	D. W. Hampton	J. M. Allen	1970	480	56	C	30			Queen City	42.0	10-22/70	J,E 1	D		Temperature 69.5° F.
201	C. E. Ramey		1920	470	50	C	24			Queen City	37.8 40.6	5-8-36 10-21-70	J,E	D		
202	Moore	Frye Drilling Co.		500	500	C	4			Carrizo			S,E 1	D		Temperature 70° F.
203	Robert Starling	F. B. Bradford	1911	640	33	C	36			Sparta	30.7 30.5	4-30-36 10-30-70	J,E 1/4	D		
302	Allied Oil Co. - Ruth Franks No.1		1945		5,412										E	Oil test.
303	J. W. Lanier, Jr.	J. W. Lanier	1901	380	27					Queen City	20.6	4-30-36	N	N		
401	Trant Drilling Co. - Nero York Heirs No.1		1955		10,150										E	Oil test.
402	J. G. Tullis	J. J. Tullis	1916	400	42					Queen City	34.8	6-17-36	N	N		
403	J. H. Tullis	Sparkman	1956	370	47	C	30			Queen City	39.9	10-22-70	J,E 1/2	D		Temperature 67° F.
404	Jimmy Netters			360	50					Queen City	46.4	6-17-36	N	N		
501	T. M. Ball		1921	460	31					Weches	26.3	10-20-70	J,E 1/3	D,S		Temperature 68° F.
502	Mrs. Edith Rose			445	34					Weches	29.8	6-29-36	N	N		
503	H. L. Hill			500	30	C	36			Weches	25.4	6-29-36	N	N		
504	H. D. Harrison		1896	540	38					Sparta	14.4	5-7-36	N	N		
505	W. H. Dickey			500	37					Weches	15.5	5-8-36	N	N		

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Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-24-506	W. J. Payne	Frye Drilling Co.	1954	500	510	C	4	0	464	Carrizo			S,E	D,S		Temperature 76.5° F.
						S	4	464	510							
601	Carl Yowell			480	39					Weches	31.0	6-29-36	N	N		
602	J. D. Kelsay			410	39					Queen City	32.3	5-8-36	N	N		
701	Samedan Oil Corp. - A. N. Powers No.1		1955		5,290										E	Oil test.
702	B. A. Skipper - M. E. McClure No.1		1943		5,514										E	Oil test.
703	M. C. Shuptrine	J. M. Allen	1969	340	55	C	30	0	40	Queen City	23	11-22-69	J,E 1/2	D,S	D	Temperature 67° F.
704	Grady C. Singletary	Pat Henry	1958	340	420	C	4	0	400	Carrizo	107.8	10-21-70	S,E 3/4	D,S		Temperature 73° F.
						S	4	400	420							
705	Grady C. Singletary	Innerarity & Leubner Drilling Co.	1965	350	97	C	4	0	87	Queen City	61.6	10-21-70	J,E 3/4	S		Temperature 70° F.
						S	4	87	97							
706	Ollie Henderson	S. W. Henderson	1903	400	41					Weches	26.9	6-26-36	N	N		
801	City of Alto		1922	430	605	C	6			Carrizo	224.4	10-20-70	N	N		
802	City of Alto No.1	Layne Texas Co.	1929	435	558	C	10	0	223	Carrizo	141	1929	T,E	P	D	Pumped 250 gpm from 169 feet in 1929.
						C	8	223	458		154	1944	30			Temperature 72° F.
						C	6	446	491		182	12-53				
						S	6	491	557		223.2	10-30-70				
						C	6	557	558							
803	Oil Properties, Inc. - C. Brunt No.1		1957		5,500										E	Oil test.
804	City of Alto No.2	Texas Water Wells	1963	460	614	C	16	0	500	Carrizo	254	9-30-63	T,E	P	D,E	Pumped 402 gpm from 290 feet on 9-30-63. Temperature 72° F.
						C	10	0	504		256.6	10-30-70	40			
						S	10	504	582							
						C	10	582	594							
						S	10	594	604							
						C	10	604	614							
805	Mrs. Hillory Jones			375	17					Sparta	5.3	5-21-36	N	N		
901	Wade Covington			350	16	C	36			Sparta	8.5	5-14-36	N	N		
902	Albert Wilson			440	25	C	48			Weches	19.3	10-20-70	J,E	D		Temperature 66° F.
903	Beard			375	21					Weches	12.5	6-30-36	N	N		
31-101	Geier & Jackson - Southern Pine Lumber Co. No.1		1948		5,455										E	Oil test.
102	Nugent & Eley, Inc. - J. M. Dixon Unit No.1		1964		5,170										E	Oil test.
103	Gas & Oil Exploration Co.- Southern Pine Lumber Co. No.1		1953		5,369										E	Oil test.
201	Arthur G. Black			340	40					Queen City	34.9	10-16-70	J,E 1/2	D		Temperature 66° F.
301	F. R. Jackson - Wiley Black No.1		1953		5,720										E	Oil test.
302	W. G. Dominy	Innerarity & Leubner Drilling Co.	1968	340	178	C	4	0	168	Queen City	95.6	10-16-70	S,E 1	D,S	D	Temperature 70.5° F.
						S	4	168	178							

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-31-303	Texas Forest Service	Crockett Drilling Co.	1953	260	425	C	6	0	410	Carrizo			T,E 5	D,Irr.		Temperature 72° F.
						S	4	405	425							
502	Humble Oil & Refining Co.- Southern Pine Lumber Co. No. B-1		1957		2,404										E	Oil test.
32-101	R. J. Felder, Jr.			310	Spring					Sparta			Cf,E 1/2	D		Temperature 68° F.
102	Riley Felder		1934	330	16					Sparta	4.5	6-11-36	N	N		
103	Lem Felder	Lem Felder	1930	420	29					Sparta	17.4	6-11-36	N	N		
201	H. A. Lindsey	Jordan	1955	380	245	C	4			Queen City	135	7-61	J,E 1	D,S		
202	W. M. Wingate	C. C. Innerarity	1970	360	270	C	4	0	240	Queen City	106.6	10-20-70	S,E	D		Temperature 70° F.
						S	4	240	270							
203	B. W. Smith			380	59	C	36			Sparta	50.5	10-15-70	J,E 1/2	D,S		Temperature 69° F.
204	Viron Grogan			380	33	C	24			Sparta	16.8	5-21-36	N	N		
205	Spears		1928	340	24	C	36			Sparta	15.2	5-8-36	N	N		
206	Tom Niker			340	19	C	30			Sparta	9.8	5-22-36	N	N		
301	Alton Hicks	J. M. Allen	1966	350	35	C	30			Sparta	30.4	10-15-70	J,E 1/3	D	D	Temperature 68.5° F.
302	C. M. Harry	C. M. Harry	1934	320	24	C	36			Sparta	16.7	5-21-36	N	N		
401	Mrs. Earnest Felder	Earnest Felder	1934	360	53	C	36			Sparta	48.2	6-11-36	N	N		
501	P. D. Holloway		1911	360	42	C	36			Sparta	34.9	5-13-36	N	N		
502	Lilly Spears Estate	J. E. Spears	1926	380	43	C	30			Sparta	37.8	5-13-36	N	N		
503	P. D. Holloway	English Drilling Co.	1962	330	163	C	10	0	120	Sparta	30.7	10-15-70	S,E 3/4	Irr.		Temperature 69° F.
						S		120	140							
504	P. D. Holloway	English Drilling Co.	1965	340	100	C	4	0	90	Sparta	39.3	10-15-70	J,E	D		Temperature 68° F.
						S	4	90	100							
505	Ollie Campbell	Ollie Campbell	1932	315	15					Sparta	8.9	5-21-36	N	N		
601	Sam Bright (Trustee) - Thomas Lindstrom No.1		1954		5,850										E	Oil test.
602	Carter - Jones Drilling Co. - Mary J. White et al-No.1		1954		6,192										E	Oil test.
603	L. E. Hicks	C. C. Innerarity	1952	340	345	C	2	0	325	Queen City			J,E 2	D		
						S	2	325	345							
801	V. J. Ballard	English Drilling Co.	1969	290	225	C	4	0	200	Sparta	40	10-29-69	J,E 1	D		Temperature 69.5° F.
						S	2	200	220							
802	Bert Blalock	E. G. Williams	1914	340	28					Sparta	18.0	5-13-36	N	N		
901	Mrs. C. A. Odom	C. C. Innerarity	1960	300	298	C	2			Sparta			J,E 1	D		
902	Jackson Oil Co. & Bill R. Tipton - Pauline G. Crossman No.1		1958		6,132										E	Oil test.

For footnotes see end of table.

Table 8.--Records of Wells, Springs, and Test Holes in Cherokee County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
DJ-38-32-903	Forest Water Supply Corp.	C. C. Innerarity	1967	300	476	C	7	0	404	Queen City	74.1	10-7-70	S,E	P	D,E	Pumped 50 gpm from 102.8 feet on 5-19-71. Temperature 74.5° F.
						C	3	366	416		75.3	5-19-71				
						S	3	416	476							
904	Grady Dial			280	15					Cook Mountain	9.0	5-13-36	N	N		
905	Louis Latham		1906	320	49					Sparta	43.9	5-20-36	N	N		
906	T. D. Durham		1916	320	58	C	36			Sparta	52.4	5-13-36	N	N		
907	Chronister Lumber Co.			260	50	C	36			Sparta	43.4	5-15-36	N	N		
908	R. S. Hadaway	Innerarity & Leubner Drilling Co.	1965	320	241	C	2	0	231	Sparta			J,E 1	N		
						S	2	231	241							
40-201	James Thompson	C. C. Innerarity	1968	240	147	C	4	0	137	Sparta	33.0	10-14-70	J,E	D	D	Temperature 71.5° F.
						S	4	137	147							
301	Simpson Estate		1934	285	22	C	36			Cook Mountain	13.3	5-19-36	N	N		
302	Mrs. Weatherford			280	18	C	36			Cook Mountain	7.4	5-19-36	N	N		

1/ Altitudes which have asterisks (*) are from aneroid or differential leveling surveys. All other altitudes are estimated from USGS topographic quadrangle maps having 10-foot or 20-foot contour intervals.

2/ Identifying letters used are:

C - Casing or blank liner
S - Screen

3/ Reported water levels are given in feet; measured water levels are given in feet and tenths.

4/ Identifying letters used are:

Cf - centrifugal
J - jet
S - submersible
T - turbine
E - electric
G - gasoline
H - hand
N - none

Number indicates horsepower.

5/ Identifying letters used are:

D - domestic
Ind. - industrial
Irr. - irrigation
N - none
P - public
S - livestock

6/ D indicates drillers' log available; E indicates electric log available. Drillers' logs and electric logs are in files of Texas Water Development Board.

Table 9.--Records of Wells and Test Holes in Freestone County

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-38-09-701	J. A. Hughes	J. A. Hughes	1956	300	17	C	36			Carrizo	13.0	8-7-70	H	D		Temperature 68° F.
801	Ron Harris	Wes Hatchit	1967	300	38	C	36			Reklaw	30.4	8-7-70	J,E 1	D,S		
902	J. L. Collins - F. E. Hill No. 1		1938		5,285										E	Oil test.
17-101	Brothers Oil Co.- Ball No. 1		1939		5,505										E	Oil test.
102	Leonard Farms			360	485	C	4			Wilcox	83.6	8-4-70	J,E 1	D,S		Temperature 73.5° F.
201	Gulf Oil Corp.- H. B. Pearson No. 1		1956		6,013										E	Oil test.
202	Leonard Farms		1969	370	480	C	4			Wilcox	78.2	8-4-70	J,E 1	D,S		Temperature 73° F.
203	Mercedes Alford		1900	355	31	C	36			Reklaw	19.8	8-4-70	J,E 1/2	D		
301	R. L. Lipsey	Katy Drilling, Inc.	1969	340	779	C S	14 14	0 179	179 779	Wilcox	162	10-17-69	T,E 100	Irr.	D	Drilled to 809 feet. Pumped 752 gpm from 345 feet on 10-17-69. Temperature 78° F.
302	F. E. Hill		1954	235	650	C	4			Wilcox	+	8-4-70	N	D,S		Flowed 15 gpm on 8-4-70. Temperature 74° F.
303	La Coastal Petr. Corp.- Hill No. 1		1965		5,880										E	Oil test.
401	Butler Water Supply Corp.	Andrews & Foster Drilling Co.	1965	385	800					Wilcox	100.9	8-4-70	S,E	P	E	Pumped 93 gpm from 148 feet on 8-4-70. Temperature 80.5° F.
402	Red Lake Club	Burleson & Red	1930	350	19	C	36			Reklaw	14.5	6-9-36	N	N		
403	Red Lake Club	Burleson & Red	1929	350	20	C	36			Reklaw	14.7	6-9-36	N	N		
501	Sarah Jordan			320	25	C	36			Reklaw	16.3	8-7-70	Cf,E	D		
601	Ella Jackson	R. K. Sims	1970	295	145	C S	4 2	0 116	145 145	Reklaw	38 43.8	4-21-70 7-31-70	S,E 1/2	D	D	Casing perforated 116-145 feet. Temperature 73° F.
701	McClinton Malone	Adam Wade	1965	375	20	C	36			Reklaw	11.4	8-4-70	C,E 1/4	D,S		Temperature 67.5° F.
702	W. F. Wright	Jake Ward		375	480	C	4			Wilcox			S,E	D,Irr.		Pumped 25 gpm on 8-4-70. Temperature 73.5° F.
703	Shiloh Baptist Church	Will Jones	1915	370	15	C	36			Reklaw	12.9	6-9-36	N	N		
704	Mally Woods	Will Jones	1905	390	28	C	48			Reklaw	4.7	6-9-36	N	N		
801	Gulf Oil Corp.- Homer Wilson No. 1		1956		5,614										E	Oil test.
802	Roger Steward - Mary Harris No. 1		1960		5,300										E	Oil test.
803	Allen Beatty	Neal Drilling Co.	1969	340	421	C C S	4-1/2 2-1/2 2-1/2	0 384 406	401 406 421	Wilcox	67 60.2	2-11-69 8-4-70	S,E 1	D	D	
804	Humble Oil & Refining Co.- Ruth Holton No. 1		1959		5,199										E	Oil test.
805	Cervance Estate	Alfred Manning		360	19	C	36			Reklaw	7.7	6-9-36	N	N		

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Casing and Screen Data: Diameter (inches)	Casing and Screen Data: Depth in Feet (from)	Casing and Screen Data: Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-38-17-901	Daniel Memorial Orphanage	Dale Schroyer	1950	340	856	C S	7 4	0 836	700 856	Wilcox	83.5	8-3-70	S,E 1-1/2	N		
902	James Burns			380	38	C	36			Queen City	30.4	8-3-70	J,E 1/2	D		Temperature 71° F.
903	W. C. Perryman - Daniel Memorial Orphanage No.3		1958		5,746										E	Oil test.
18-401	Boyd Ranch	Texaco	1900	220	68	C	8			Carrizo			N	D,S		Flowed 15 gpm on 7-31-70. Temperature 67.5° F.
402	Boyd Ranch	Layne Texas Co.	1956	220	414	C C S C S C S C	16 8-5/8 8-5/8 8-5/8 8-5/8 8-5/8 6-5/8 6-5/8	0 0 103 131 210 239 360 404	100 103 131 210 239 260 404 414	Wilcox	+	10-56	N	N	D,E	Pumped 254 gpm from 45 feet in 1956. Temperature 72° F.
403	W. K. Solomon			290	90	C	4			Reklaw	46.1	7-31-70	J,E	D,S		Temperature 71° F.
703	Edell Price	Harden	1958	295	38	C	32			Queen City	26.5	8-3-70	J,E	D		Temperature 71.5° F.
704	T. J. Johnson - O. S. Carter No.1		1959		6,231										E	Oil test.
801	La Coastal Petr. Co.- S. Carter No.1		1964		5,730										E	Oil test.
802	Sanford E. McCormick - Murphy Haley No.1		1969		5,445										E	Oil test.
803	Easter Price	Frank Ward	1970	270	95	C S	4 4	0 83	83 95	Reklaw	45 47.4	4-5-70 8-7-70	S,E 1/3	D	D	
25-101	Humble Oil & Refining Co.- Greer Bros. No. C-1		1958		5,275										E	Oil test.
102	Bradford Manning			370	15	C	36			Reklaw	5.1 8.1	6-9-36 8-4-70	Cf,E 1/3	D,S		
103	Abe Jones		1926	390	22	C	36			Reklaw	13.6	6-9-36	N	N		
201	Humble Oil & Refining Co.- Greer Bros. et al No. B-1		1958		5,299										E	Oil test.
202	Fanny Malone	Ed Malone	1915	370	16	C	24			Reklaw	5.8	6-9-36	N	N		
203	Fanny Malone	Ed Malone	1900	370	22	C	36			Reklaw	14.9	6-9-36	N	N		
301	Myrtle Yarbrough	Richard Burnley		380	38	C	36			Queen City	36.7	8-3-70	H	D		
302	Hunt, Graham & E.L.Howard- Mary Britton et al No.1		1958		5,363										E	Oil test.
303	Carl Williford	Jake Carter	1905	350	22	C	48			Reklaw	17.8	6-19-36	N	N		
304	Mildred Webb		1933	350	34	C	48			Reklaw	32.8	6-19-36	N	N		
305	Greer		1935	355	10	C	36			Reklaw	7.4	6-19-36	N	N		
401	The Texas Co. - Arthur Rabe No. 1		1958		5,859										E	Oil test.
402	Lily Jones			395	39	C	8			Reklaw	29.8	8-4-70	H	D		Temperature 67.5° F.
403	John Connolly		1968	360	22	C	36			Queen City	13.5	8-5-70	Cf,E 1/3	D		

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Casing and Screen Data: Diameter (inches)	Casing and Screen Data: Depth in Feet (from)	Casing and Screen Data: Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-38-25-501	The Texas Co.- Arthur Rabe No. 2		1958		6,115										E	Oil test.
502	W. D. McBee - Holley No. 1		1959		5,873										E	Oil test.
601	John B. Stephens Pope No. 1		1965		6,109										E	Oil test.
703	W. B. McBee		1958	450	565	C S	3 3	0 525	525 565	Wilcox	103.9	8-6-58	N	N		
704	L. C. Arndt		1964	445	530	C	4			Wilcox			S,E 1	D,S		
705	W. P. Miller	Morris Sneed	1953	440	230	C	4			Reklaw	137.4	8-5-70	S,E	D		Temperature 72.5° F.
706	W. D. McBee - Marie W. Storms et al No.1		1960		6,102										E	Oil test.
26-101	Arthur L. Anders		1966	310	26	C	32			Queen City	13.6	8-3-70	Cf,E	D,S		Temperature 68° F.
102	J. D. Guess		1906	380	26	C	48			Queen City	22.8	6-19-36	N	N		
103	Carter-Gragg Oil Co.- Barkley No. 1		1946		5,529										E	Oil test.
104	J. D. Guess	E. Guess	1900	375	30	C	36			Queen City	33.2 21.6	6-19-36 9-9-70	J,E 3/4	D,S		
105	Jesse Lee Estate	Jesse Lee	1929	360	26	C	30			Queen City	20.2	6-19-36	N	N		
106	Jack Lipsey		1920	350	11	C	36			Queen City	6.2	6-19-36	N	N		
39-06-901	John R. Bunn - R. H. Robinson No. 1		1939		2,948										E	Oil test.
902	Minze			380	58	C	36			Wilcox	38.3	8-27-70	J,E 1/2	D		
07-401	B. J. French		Old	380	40	C	30			Wilcox	33.1	8-27-70	J,E 1/2	D,S		Temperature 69.5° F.
501	John R. Bunn & Sumas Producing Co.-Jefferies No.1		1939		3,952										E	Oil test.
502	R. P. Pillans	R. P. Pillans	1951	360	230	C S	3 3	0 220	220 230	Wilcox	80	1951	C,E	D,S		Temperature 71.5° F.
503	W. A. Pillans	R. K. Sims	1966	360	252	C S	4 2-1/2	0 222	252 252	Wilcox	92.2	7-29-70	S,E 3/4	D,S		Temperature 70° F.
601	J. & G. V. Williams			370	28					Wilcox	24.0	8-21-36	N	N		
602	Basin Operating Co.- Carpenter Gas Unit No.2		1962		3,735										E	Oil test.
603	Texas Petroleum Exploration Co.- Mona Edens No.1		1964		4,216										E	Oil test.
701	Humble Oil & Refining Co.- T. R. Bonner No. 1-B		1954		4,380										E	Oil test.
702	Stroube & Stroube - Mona Edens No. 1		1954		4,000										E	Oil test.
901	Humble Oil & Refining Co.- Marjorie Watson Bass No.1		1952		2,510										E	Oil test.
902	L. G. Daugherty	Jake Ward	1953	325	310	C S	4 4	0 268	268 310	Wilcox			S,E 2	D,S		Pumped 21 gpm on 8-12-70. Temperature 71° F.

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-07-903	L. G. Daugherty	Herman Mayhew Co.	1953	325	306	C	5-5/8	0	231	Wilcox	58.8	8-12-70	S,E 2	Irr.		
08-101	Ben H. Carpenter		1928	295	79	C	36			Wilcox	44.7	9-21-36	N	N		
102	L. Granville	Henry Smith	1900	280	35					Wilcox	30.5	9-23-36	N	N		
103	Ben H. Carpenter			300	300	C	4			Wilcox	50.3	8-27-70	J,E 1	D,S		
201	Secure Trust - J.W. Carpenter et al No. 1		1967		4,305										E	Oil test.
401	Jake Ward			260	23					Wilcox	17.6	8-23-36	N	N		
402	Basin Operating Co.- Carpenter Gas Unit No. 1		1962		4,150										E	Oil test.
403	Basin Operating Co.- Carpenter Gas Unit No. 3		1962		3,700										E	Oil test.
404	R. P. Pillans	Frank Ward	1963	255	382	C	4			Wilcox	+1	7-29-70	N	S		
405	Ben Ward	Frank Ward	1969	330	107	C	5	0	105	Wilcox	75	11-7-69	J,E 1/2	D	D	
406	Ben H. Carpenter			300	150	C	4			Wilcox	53.0	8-27-70	J,E 1	S		
501	Humble Oil & Refining Co.- C. J. Cartwright No. 1		1952		7,520										E	Oil test.
601	Ed Overton & W.E. Richey- H. Berk No. 1		1964		4,138										E	Oil test.
701	E. M. Watson		1915	280	15	C	36			Alluvium	14.2	4-24-36	N	N		
702	E. M. Watson	Joe Folk	1924	335	63	C	6			Wilcox	58.6	4-24-36	N	N		
703	E. M. Watson	Ernest Folk	1936	335	68	C	6			Wilcox	62.4	4-24-36	N	N		
704	Sun Ray Mid-Continent Oil Co.- Edd Bonner No.1		1960		4,300										E	Oil test.
801	Basin Operating Co.- Grandberry Gas Unit No.1		1964		3,860										E	Oil test.
802	Basin Operating Co.- Carpenter Gas Unit No. 6		1963		3,965										E	Oil test.
803	Ben H. Carpenter			300	380	C	8			Wilcox			S,E 3	D,S		Temperature 72° F.
14-301	Tidewater Oil Co.- Roy Miller No. 1		1967		1,523										E	Oil test.
302	Getty Oil Co.	Rehkop Drilling Co.	1967	340	121	C S	7 7	0 86	86 121	Wilcox	52.7	8-11-70	S,E 10	Ind.	D	Drilled to 170 feet. Temperature 69° F.
501	Ruell Lopes	R. K. Sims	1969	420	123	C S	4 4	0 97	97 123	Wilcox	49.8	8-24-70	S,E	D,S	D	
502	Ruell Lopes		1970	415	34	C	36			Wilcox	30.2	8-24-70	J,E	D,S		
601	Carter-Gragg Oil Co.- D. O. Nettle No. 1		1939												E	Oil test.
602	O. C. Pullin		1960	400	125	C	4			Wilcox			J,E 1	D,S		Temperature 71° F.

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Casing and Screen Data: Diameter (inches)	Casing and Screen Data: Depth in Feet (from)	Casing and Screen Data: Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-14-603	Mrs. B. C. Whatley	W. J. Davis	1934	360	60	C	36			Wilcox	54.4	4-6-36	N	N		
701	Ethel Woods	Aubrey Jones	1969	450	61	C	36			Wilcox	58.6	8-24-70	J,E 1/2	D		Temperature 71.5° F.
801	Jack Frazier - Marberry No. 1		1939												E	Oil test.
802	J. C. Adams		1935	460	31	C	48			Wilcox	19.7	4-9-36	N	N		
803	Harper	Jim Tear	1914	460	24	C	48			Wilcox	21.7	4-9-36	N	N		
804	L. C. Coleman	Jake Ward	1967	440	208	C S	4 4	0 196	196 208	Wilcox	39.2	8-27-70	S,E 1	D		Temperature 69° F.
805	L. C. Coleman		1915	445	26	C	48			Wilcox	11.6	4-20-36	N	N		
806	Buck Carter		1890	430	32	C	36			Wilcox	5.3	4-20-36	N	N		
901	W. J. Tate		1928	335		C	10			Wilcox	+ +	1936 7-28-70	N	S		Flowed 1/2 gpm on 7-28-70. Temperature 70.5° F.
902	Shell Oil Co.- W. J. Tate No. 1		1967		12,365										E	Oil test.
903	Bruce Teer	R. K. Sims	1967	410	137	C S	4 4	0 117	117 137	Wilcox	51.7	8-27-70	S,E 1/2	D,S		Temperature 70° F.
15-101	Gibson Drilling Co.		1970	290	80	C	4	0	80	Wilcox			A,G	Ind.		
102	Ovel Kimball	Frank Ward	1969	390	247	C	4	0	217	Wilcox	90 92.9	10-10-69 8-12-70	S,E 1	D	D	Temperature 72° F.
201	K. B. Germany & C. W. Killough - K. Wolen No.1		1941		4,100										E	Oil test.
301	Humble Oil & Refining Co.			325		C	4			Wilcox	83.1	1-20-61	N	N		
302	Humble Oil & Refining Co.- T. R. Bonner No. 1		1952		7,915										E	Oil test.
401	Arthur Bonner	Minion Bonner & Sneed Miller	1954	370	34	C	36			Wilcox	31.8	8-11-70	H	D		Temperature 67.5° F.
402	Guy Coleman		1931	370	35	C	36			Wilcox	33.6	4-6-36	N	N		
403	John L. Bonner	John Baker	1933	390	74	C	8			Wilcox	71.1	4-14-36	N	N		
404	Jim Frazier Estate	Pete Loder	1915	420	48	C	48			Wilcox	40.0	4-3-36	N	N		
405	Mrs. K. L. Tinnecal	George Vernon	1932	400	25	C	48			Wilcox	22.5	4-3-36	N	N		
406	Leo Cherry	Will Davis	1936	410	28	C	36			Wilcox	21.8	4-3-36	N	N		
501	J. L. Collins & Co.- W. W. Steward No. 1		1941		4,050										E	Oil test.
502	Carter-Gragg Oil Co.- O. B. Utley No. 1		1948		4,050										E	Oil test.
503	Mrs. Marsters		Old	350	35	C	36			Wilcox	31.5	8-11-70	J,E 1/2	D		Temperature 69° F.
504	Sue B. Thorton	Jake Ward	1955	390	300	C	4	0	300	Wilcox			S,E 1/2	D		
505	Frank Bragg	J. B. Lewis	1925	380	19					Wilcox	16.5	4-14-36	N	N		

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-15-601	Industrial Generating Co.	Layne Texas Co.	1970	405	570	C	14	0	355	Wilcox	120	3-19-70	T,E	Ind.	D,E	Drilled to 589 feet. Pumped 335 gpm from 236 feet on 7-29-70. Temperature 75° F.
						C	8-5/8	293	365		140.5	7-29-70	40			
						S	8-5/8	365	445							
						C	8-5/8	445	520							
						S	8-5/8	520	555							
						C	8-5/8	555	570							
602	Tom Willard	Leslie Tidwell	1935	400	24	C	36			Wilcox	20.9	6-20-36	N	N		
603	Tommie Willard	Tommie Willard	1930	385	29	C	48			Wilcox	17.4	6-20-36	N	N		
604	Dude Whitaker	Leslie Tidwell	1935	390	20	C	36			Wilcox	17.1	6-20-36	N	N		
605	J. F. Aultman Estate	Leslie Tidwell	1934	420	41	C	36			Wilcox	33.1	4-13-36	N	N		
701	A. G. W. Biddle - D. O. Nettles No. 1		1939		4,115										E	Oil test.
702	H. J. Cannon	Neal Drilling Co.	1965	430	510	C	4	0	492	Wilcox	98	2-65	S,E	D,S		Temperature 73° F.
703	Pleasant Grove Water Supply Corp.	Andrews & Foster Drilling Co.	1968	400	502	C	6	0	355	Wilcox	90	7-8-68	S,E	P	D	Pumped 35 gpm from 154 feet on 7-9-68. Temperature 73° F.
						C	2-1/2	283	367		102.6	7-28-70	3			
						S	2-1/2	367	397							
						C	2-1/2	397	502							
704	Leonard York	Roy Minchew		410	29	C	36			Wilcox	25.6	4-16-36	N	N		
705	Mrs. M. J. Tate	Leslie Tidwell	1933	400	42	C	36			Wilcox	39.0	4-3-36	N	N		
801	Roger Steward - R. N. Cannon No. 1		1964		4,270										E	Oil test.
802	Thomas Cannon	Neal Drilling Co.	1969	410	496	C	7	0	416	Wilcox	89	8-12-69	S,E	Ind.	D	Pumped 75 gpm on 7-28-70. Temperature 75° F.
						C	4-1/2	397	418		109.3	7-28-70	7-1/2			
						S	4-1/2	418	447		110.4	7-31-70				
						C	4-1/2	447	475							
						S	4-1/2	475	496							
803	R. N. Cannon	John Baker		380	61	C	6			Wilcox	52.9	4-3-36	N	N		
804	Walter Freeman	Claypool	1830	420	38	C	36			Wilcox	32.9	4-14-36	J,E	D,S		
805	Texas Power & Light		1928	430	20	C	36			Wilcox	15.2	4-13-36	N	N		
806	Texas Power & Light	John Baker	1935	420	85	C	6			Wilcox	78.9	4-13-36	N	N		
807	J. L. Miller	J. C. Ivy	1930	410	32	C	36			Wilcox	30.0	4-3-36	N	N		
901	C. L. Lambert	Neal Drilling Co.	1964	400	192	C	4	0	179	Wilcox	124	3-12-64	S,E	D,S		Temperature 73.5° F.
						C	2-1/2	172	177		123.2	7-30-70	3/4			
						S	2-1/2	177	192							
902	H. B. Zachry Construction Co.	R. J. Swinehart	1970	365	214	C	10	0	184	Wilcox	66.3	9-9-70	T,D	Ind.	D	Drilled to 310 feet. Pumped 229 gpm from 119 feet on 9-9-70. Temperature 71.5° F.
						C	8	177	184							
						S	8	184	214							
903	Mrs. B. R. Speed Estate	Robert Speed	1935	440	46	C	36			Wilcox	42.0	4-13-36	N	N		
904	Sneed Aultman		1910	450	80	C	6			Wilcox	77.9	4-13-36	N	N		
905	Mrs. J. W. Day	Hugh Talley	1910	450	115	C	6			Wilcox	106.0	6-20-36	N	N		
16-101	L. E. Spencer	Joe Folk	1929	365	30					Wilcox	25.6	4-24-36	N	N		
102	W. T. Cole	Joe Folk	1929	365	105	C	6			Wilcox	90.1	4-24-36	N	N		
103	L. Haydon	Ernest Folk	1933	365	41	C	6			Wilcox	37.9	4-23-36	N	N		
104	Ed Woodard	Frank Ward	1969	360	150	C	4-1/2	0	130	Wilcox	65	8-17-69	S,E	D,S	D	Temperature 73° F.
						S	4-1/2	130	150		70.2	7-29-70	1/3			

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-16-105	Ralph LaMar	John Cobb Drilling Co.	1967	370	357	C	5	0	305	Wilcox				D	D	
						S	2-1/2	305	357							
201	B. G. Byars et al - T. F. Young No. 1		1952		4,503										E	Oil test.
202	Roger Young, Jr.	Morris Sneed	1949	360	150	C	4			Wilcox	50	8-61	J,E 1-1/2	D		
203	Paul Coleman	Joe Folk	1929	355	47	C	6			Wilcox	37.9	4-23-36	N	N		
204	T. F. Young III	Jake Ward	1963	355	330	C	4			Wilcox	86.3	7-29-70	S,E 1/2	D		Temperature 73.5° F.
205	Gragg Drilling Co.- Maggie Underwood No.1		1962		4,295										E	Oil test.
206	Basin Operating Co.- Coates Gas Unit No.1		1964		4,065										E	Oil test.
301	O. L. Gragg		1969	300	400	C	5			Wilcox			S,E 1/2	D		Temperature 74° F.
302	O. L. Gragg - Gragg Ranch No.2		1960		4,455										E	Oil test.
401	John McCann	Bob Bean	1915	395	65	C	48			Wilcox	48.6	6-15-36	N	N		
402	J. S. Newman	Ted Owens	1880	415	55	C	48			Wilcox	46.8	6-15-36		D		
403	Roy Casey	Roy Minchew	1934	390	48	C	36			Wilcox	42.9	6-15-36	N	N		
404	Brady Gunter	Ernest Folk	1935	410	23	C	6			Wilcox	17.9	6-15-36	N	N		
405	Mrs. Wallace McGuyer		1915	450	32	C	36			Wilcox	28.5	6-20-36	N	N		
406	W. N. Moore	Frank Ward		430		C	4			Wilcox	103.2	7-30-70	S,E 3/4	D		
501	Virgil Keaton	Frank Ward	1969	350	110	C	4-1/2	0	95	Wilcox	40	7-17-69	S,E 1/3	D,S	D	Temperature 71.5° F.
						S	4-1/2	95	110							
502	Industrial Generating Co.	Texas Water Wells	1968	324*	607	C	14	0	404	Wilcox	54.0	8-5-70	T,E 50	Ind.	D,E	Drilled to 860 feet. Pumped 302 gpm from 208 feet on 12-4-68. Pumped 358 gpm on 8-5-70.
						C	8-5/8	304	407							
						S	8-5/8	407	422							
						C	8-5/8	422	474							
						S	8-5/8	474	510							
						C	8-5/8	510	530							
						S	8-5/8	530	548							
						C	8-5/8	548	574							
						S	8-5/8	574	597							
						C	8-5/8	597	607							
503	Brown & Root, Inc.	Rehkop Drilling Co.	1968	325	240	C	4-1/2	0	180	Wilcox	72	1-3-69	S,E 5	Ind.	D	Pumped 60 gpm from 132 feet in 1968.
						C	2-1/2	163	184							
						S	2-1/2	184	224							
						C	2-1/2	224	240							
504	Basin Operating Co.	Frank Ward	1962	355	345	C	4	0	305	Wilcox	91.0	7-29-70	S,E 1	Ind.		Temperature 74.5° F.
						S	4	305	345							
505	Basin Operating Co.- Hill Gas Unit No. 10		1964		4,223										E	Oil test.
506	Basin Operating Co.- Atwalt Gas Unit No. 1		1965		4,150										E	Oil test.
601	J. B. Daniels - F. R. Hill et al No. 1		1946		4,665										E	Oil test.

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-16-602	L. Tiders	Jake Ward	1963	320	72	C	6			Wilcox	60.6	8-7-70	H	D		Temperature 70° F.
701	Rick Lee	Ernest Folk	1933	455	39	C	6			Wilcox	33.1	4-23-36	N	N		
702	Mrs. H. A. Lee	Ernest Folk	1932	460	56	C	6			Wilcox	45.0	4-23-36	N	N		
703	E. J. Folk	Lee Mallard	1936	440	14	C	48			Wilcox	8.7	4-23-36	N	N		
704	Ord Keaton		1900	440	50	C	8			Wilcox	24.6	6-15-36	N	N		
705	Ord Keaton		1910	440	20	C	6			Wilcox	12.3	6-15-36	N	N		
706	John B. Stephens, Jr.- J. W. Brown No.1		1958		4,740										E	Oil test.
801	Watburn Oil Co. & Roger Steward-Flora Crenshaw No. 1		1960		4,742										E	Oil test.
901	Johnson & Gist - Keys No.1		1958		5,255										E	Oil test.
21-301	S. R. Partlow	R. K. Sims		500	120	C	4			Wilcox	50	8-24-70	J,E 1-1/2	D,S		Temperature 70.5° F.
501	Clay McKinney		1920	515	32	C	36			Wilcox	21.0	3-5-36	N	N		
601	Will Barkouskie		1900	520	65	C	60			Wilcox	52.0	3-5-36	N	N		
602	B. L. Alewine			530	120	C	4			Wilcox	52.1	8-20-70	S,E 1/2	D		Temperature 71.5° F.
603	B. L. Alewine	R. K. Sims	1970	530	148	C S	4 4	0 123	123 148	Wilcox	48	5-14-70	S,E 3/4	D	D	
604	Andy Miller	R. K. Sims		510		C	6			Wilcox	28.5	8-20-70	J,E 1/3	D,S		Temperature 72° F.
605	W. T. West		1915	515	62	C	36			Wilcox	55.1	3-10-36	N	N		
606	R. T. Smith	Manns		520	67	C	48			Wilcox	61.9	3-10-36	N	N		
607	W. W. Crawley		1920	470	29	C	48			Wilcox	23.5	3-5-36	N	N		
608	New Hope School		1920	455	34	C	36			Midway	30.6	3-5-36	N	N		
609	Mrs. J. H. Collins		1914	455	45	C	36			Midway	43.2	3-5-36	N	N		
610	Mrs. Winn	Vernon Gilliam	1934	475	44	C	48			Wilcox	32.0	3-5-36	N	N		
611	McKinney		1916	510	29	C	36			Wilcox	25.8	3-5-36	N	N		
612	J. V. Tiner		1915	510	47	C	48			Wilcox	42.3	3-10-36	N	N		
901	McKenzie Jackson	R. V. Wright	1970	470	21	C	36			Wilcox	16.0	8-20-70	J,E 1/3	D		Temperature 69° F.
902	Jim Clements Estate			495	47	C	48			Wilcox	40.8	3-6-36	N	N		
22-101	J. Trayn Moore	J. Trayn Moore	1937	460	27	C	36			Wilcox	20.0	8-25-70	J,E	D,S		Temperature 69° F.
102	Ed Collins		1931	470	32	C	48			Wilcox	27.6	3-9-36	J,E	S		
103	W. T. Moore			480	56	C	48			Wilcox	44.1	3-7-36	J,E	D		
104	W. T. Moore		1915	475	53	C	48			Wilcox	40.4	3-7-36	N	N		
105	W. T. West	McKinney	1895	460	37	C	60			Wilcox	26.9	3-10-36	N	N		
201	T. L. McGlathery	Morris Sneed	1955	470	80	C	4	0	80	Wilcox			J,E 1	D		Temperature 71° F.

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-22-202	J. N. Vickers	Neal Drilling Co.	1969	505	260	C	4-1/2	0	191	Wilcox	109	11-20-69	S,E	D	D	Temperature 72° F.
						C	2-1/2	184	196		111.3	8-28-70	1			
						S	2-1/2	196	216							
						C	2-1/2	216	250							
						S	2-1/2	250	260							
203	H. P. Milligan		1936	505	23	C	48			Wilcox	14.5	3-7-36	N	N		
204	W. T. Moore	W. T. Moore	1934	480	41	C	48			Wilcox	24.5	3-7-36	N	N		
401	Roy M. Johnson et al - Clark No. 1		1938		4,030										E	Oil test.
402	R. K. Sims	R. K. Sims	1960	515	157	C	4	0	127	Wilcox	45	6-60	J,E	D,S		
						S	4	127	157				1			
403	Careta Watson	R. K. Sims	1968	520	132	C	4	0	102	Wilcox	49.7	8-24-70	J,E	D		
						S	4	102	132				3/4			
404	R. Alderman		1890	520	34	C	48			Wilcox	27.4	4-3-36	N	N		
											26.9	8-24-70				
405	Cotton Gin School		1930	520	22	C	48			Wilcox	14.9	4-3-36	N	N		
406	Withrow Gin Co.		1920	515	20	C	36			Wilcox	9.1	4-3-36	N	N		
407	Clifford Boyd		1933	495	35	C	48			Wilcox	32.5	2-20-36	N	N		
408	McKinney		1850	500	40	C	48			Wilcox	30.9	2-20-36	N	N		
409	Winfrey's Service Station			500	347	C	6			Wilcox	47	1936	C,W	D		
410	Tray-Hart Ranch			460	37	C	48			Wilcox	24.9	3-9-36	N	N		
501	Teague Chamber of Commerce		1936	520	470	C	8	0	262	Wilcox	90.8	1-14-38	N	N	D	Drilled to 470 feet. Pumped 210 gpm in 1938.
						S	6				76.3	1-17-61				
502	Sexton Orms			520	671	C	4	0	400	Wilcox	49	1-61	J,E	D,S		Temperature 73.5° F.
													3/4			
503	Humble Oil & Refining Co.			505		C	6			Wilcox	66.0	1-17-61	N	N		
504	Humble Oil & Refining Co.- W. Teague Gas Unit No. 3 Well No. 2		1954		7,522										E	Oil test.
505	Humble Oil & Refining Co.- Teague Gas Unit No. 2 Well No. 2		1954		7,548										E	Oil test.
506	Humble Oil & Refining Co.- J. H. Horton No. 1		1953		7,963										E	Oil test.
507	Humble Oil & Refining Co.- Teague West Gas Unit No.6		1954		7,555										E	Oil test.
508	Magnolia Pipe Line Co.			520	58	C	8			Wilcox	40.4	4-3-36	N	N		
509	Magnolia Pipe Line Co.		1915	520	150	C	6			Wilcox	38	1936	N	N		
510	Wiley			520	23	C	48			Wilcox	12.6	4-3-36	N	N		
511	O. J. Miner		1933	510	42	C	6			Wilcox	32.9	4-3-36	N	N		
512	Art Dickerson	Neal Drilling Co.	1968	490	380	C	4-1/2	0	309	Wilcox	89	8-20-68	S,E	D	D	Drilled to 580 feet. Temperature 72.5° F.
						C	2-1/2	297	319		97.6	8-28-70	5			
						S	2-1/2	319	339							
						C	2-1/2	339	360							
						S	2-1/2	360	380							

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-22-601	Humble Oil & Refining Co.-Cas Unit No. 5 Well No. 1		1954		7,548										E	Oil test.
602	J. C. Sheffield	Neal Drilling Co.	1964	450	480	C	4-1/2	0	459	Wilcox	107.2	8-25-70	S,E 3/4	D,S		Temperature 73.5° F.
						C	2-1/2	439	460							
						S	2-1/2	460	480							
702	Emory Ross	Neal Drilling Co.	1970	465	180	C	4-1/2	0	142	Wilcox	40	4-1-70	S,E 3/4	D	D	Temperature 71° F.
						C	2-1/2	134	156		31.6	8-20-70				
						S	2-1/2	156	176							
703	Richardson Community Center	Sam Vernon	1930	470	26	C	48			Wilcox	22.3	3-6-36	N	N		
704	J. Johnson	Jim Palm	1935	460	49	C	36			Wilcox	17.5	3-6-36	N	N		
801	Humble Oil & Refining Co.-Hervert Neyland No. 1		1952		8,101										E	Oil test.
802	William R. Day	Neal Drilling Co.	1966	500	428	C	4-1/2	0	408	Wilcox	128.3	8-20-70	S,E 1	D		Temperature 73° F.
						C	2-1/2	387	408							
						S	2-1/2	408	428							
901	City of Teague	Layne Texas Co.	1965	515	700	C	16	0	450	Wilcox	155	4-19-65	T,E 60	P	D,E	Drilled to 900 feet. Pumped 300 gpm from 380 feet on 4-17-65. Pumped 310 gpm on 9-10-70.
						C	10-3/4	0	455							
						S	10-3/4	455	505							
						C	10-3/4	505	585							
						C	6-5/8	585	590							
						S	6-5/8	590	620							
						C	6-5/8	620	645							
						S	6-5/8	645	685							
						C	6-5/8	685	700							
902	P. R. Hinders	Neal Drilling Co.	1965	510	508	C	4-1/2	0	484	Wilcox	177.6	8-25-70	S,E	D,S		Temperature 76° F.
						C	2-1/2	467	488							
						S	2-1/2	488	508							
903	Alvie Lee Jones	Neal Drilling Co.	1969	450	440	C	4-1/2	0	404	Wilcox	97	10-10-69	S,E 1-1/2	D	D	
						C	2-1/2	384	405							
						S	2-1/2	405	440							
904	T. B. Connell	T. B. Connell	1933	475	70	C	48			Wilcox	59	1936	N	N		
905	H. J. Vibrock	H. J. Vibrock	1928	465	15	C	48			Wilcox	6.7	2-13-36	N	N		
906	G. C. Ward			460	86	C	36			Wilcox	57.3	2-13-36	N	N		
23-101	Kirvin Water Supply Corp.	Andrews & Foster Drilling Co.	1968	370	242	C	5-1/2	0	169	Wilcox	35	7-1-68	S,E 2	P		Pumped 50 gpm from 82 feet on 7-2-68.
						C	2-1/2	160	170		43.6	7-27-70				
						S	2-1/2	170	200							
						C	2-1/2	200	242							
102	Hugh Blakeney	R. K. Sims	1957	435	99	C	6			Wilcox	77.6	8-25-70	J,E	D,S		
201	J. B. Daniels - L. T. Kay No. 1		1947		4,225										E	Oil test.
301	City of Fairfield No. 2	Layne Texas Co.	1948	485	607	C	12-3/4			Wilcox	180	10-28-48	T,E 30	P	D,E	Pumped 205 gpm from 257 feet on 10-28-48.
						C	6-5/8		405		173	2-17-49				
						S	6-5/8	405	465		170.1	4-49				
						C	6-5/8	465	556							
						S	6-5/8	556	596							
						C	6-5/8	596	607							

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-23-302	City of Fairfield No. 1	Layne Texas Co.	1935	470	581	C	12	0	366	Wilcox	147	3-1-35	T,E	P	D	Pumped 123 gpm from 205 feet on 1-20-61.
						C	6	306	366		148.8	4-49	25			
						S	6	366	388		165.2	1-20-61				
						C	6	388	406							
						S	6	406	427							
						C	6	427	500							
						S	6	500	557							
						C	6	557	581							
303	City of Fairfield No. 3	Layne Texas Co.	1963	460	726	C	16	0	490	Wilcox	161	8-28-63	T,E	P	D,E	Drilled to 744 feet. Pumped 465 gpm from 271 feet on 8-28-63.
						C	10-3/4	0	495		191.3	7-27-70	50			
						S	10-3/4	495	548							
						C	10-3/4	548	558							
						S	10-3/4	558	582							
						C	10-3/4	582	589							
						S	10-3/4	589	605							
						C	10-3/4	605	620							
						S	10-3/4	620	633							
						C	10-3/4	633	676							
						S	10-3/4	676	694							
						C	10-3/4	694	704							
						S	10-3/4	704	716							
						C	10-3/4	716	726							
304	Ward Prairie Water Supply Corp.	Andrews & Foster Drilling Co.	1967	450	715	C	6-5/8	0	518	Wilcox	120	11-21-67	S,E	P	D,E	Pumped 40 gpm from 201 feet on 11-21-67. Temperature 78° F.
						C		507	570		173.9	7-28-70	3			
						S		570	580							
						C		580	664							
						S		664	694							
						C		694	715							
305	John Kent	Giles Kent	1935	460	20	C	24			Wilcox	15.7	4-23-36	N	N		
306	Mrs. Misildine		1900	480	21	C	36			Wilcox	15.6	6-15-36	N	N		
307	Mrs. J. C. Ritter	J. C. Ritter	1924	480	15	C	36			Wilcox	11.4	6-15-36	N	N		
401	Humble Oil & Refining Co.-John Lewis Brown No. 1		1957		4,326										E	Oil test.
402	Humble Oil & Refining Co.		1957	475	100	C	4			Wilcox	67.0	1-18-61	N	N		
403	Freestone County Country Club	Neal Drilling Co.	1968	460	560	C	6-5/8	0	520	Wilcox	118	10-11-68	S,E	P	D	Drilled to 655 feet.
						C	3-1/2	459	520				5			
						S	3-1/2	520	530							
						C	3-1/2	530	540							
						S	3-1/2	540	560							
404	Freestone County Country Club	Neal Drilling Co.	1968	460	350	C	8-5/8	0	260	Wilcox	141.7	7-30-70	S,E	Irr.	D	Pumped 89 gpm on 7-30-70. Temperature 73° F.
						C	4	238	260				15			
						S	4	260	350							
405	C. L. Brown - J. J. Beasley No. 1		1947		4,303										E	Oil test.
406	Union Producing Co.-W. F. Chancellor No. 1		1968		4,720										E	Oil test.
407	J. W. Mitchell	Neal Drilling Co.	1969	430	430	C	4-1/2	0	407	Wilcox	86	7-8-69	S,E	D,S	D	Temperature 73° F.
						C	2-1/2	388	410		87.6	8-25-70				
						S	2-1/2	410	430							
408	Nelson	L. L. Rudasill	1935	480	15	C	48			Wilcox	6.9	2-19-36	N	N		
409	Miss Dayle Driver	Neal Drilling Co.	1968	470	425	C	4-1/2	0	402	Wilcox	125	4-30-68	S,E	D,S	D	
						C	2-1/2	333	405				1-1/2			
						S	2-1/2	405	425							
501	Purnell & Coleman - Mrs. Berta Davis No. 1		1961		4,390										E	Oil test.

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-23-502	Purnell & Coleman - T. J. Hall & W. H. Kenney No.1		1960		4,360										E	Oil test.
503	Robert Dunlop, Jr.	Neal Drilling Co.	1969	490	662	C C S	4-1/2 2-1/2 2-1/2	0 619 642	638 642 662	Wilcox	177 170.3	6-19-69 8-26-70	S,E 1-1/2	D,S	D	Drilled to 780 feet. Pumped 30 gpm on 8-26-70. Temperature 75° F.
504	Robert Dunlop, Jr.	L. R. Boyd	1925	490	45	C	36			Wilcox	34	4-29-36	N	N		
505	Walter Johnson		1929	490	25	C	6			Wilcox	21.6	4-26-36	N	N		
506	Annie McGee		1933	480	11	C	48			Wilcox	4.8	4-26-36	N	N		
507	Mat McGee Estate	Mat McGee	1928	500	19	C	36			Wilcox	14.0	4-26-36	N	N		
601	Athel Ivy	Neal Drilling Co.	1963	420	460	C C S	4-1/2 2-1/2 2-1/2	0 388 430	400 430 460	Wilcox	87 90.5	6-27-63 8-10-70	S,E 3/4	D,S		Temperature 75.5° F.
602	Hunt Petroleum Corp.- Ivy Gas Unit No.1		1965		15,944										E	Oil test.
603	J. C. Leadbetter	Neal Drilling Co.	1969	450	368	C C S	7 4-1/2 4-1/2	0 262 283	289 283 368	Wilcox	112	8-22-69	S,E 7-1/2	Ind.	D	Drilled to 380 feet. Temperature 74° F.
604	Sim Chavers		1920	450	65	C	48			Wilcox	63.3	3-27-36	N	N		
605	F. E. Hill	Will Davis	1935	420	40	C	36			Wilcox	36.0	4-25-36	N	N		
701	Purnell & Coleman - Carolyn G. Wood No. 1		1958		4,475										E	Oil test.
702	D. B. Drennan			500	275	C	4			Wilcox			J,E 1	D,S		Temperature 74° F.
703	P. R. French	Black	1931	530	46	C	6			Wilcox	14.9	3-13-36	N	N		
704	P. R. French	P. R. French	1932	530	11	C	24			Wilcox	8.4	3-13-36	N	N		
705	Lake Watson	Floyd Rankin	1932	490	17	C	36			Wilcox	13.2	5-29-36	N	N		
706	Pyburn School	C. D. Lindsey	1935	480	26	C	36			Wilcox	8.1	5-29-36	N	N		
707	A. S. Itchue	Neal Drilling Co.	1970	450	480	C C S	4-1/2 2-1/2 2-1/2	0 398 420	420 420 480	Wilcox	80	3-26-70	S,E 5	Irr.	D	Temperature 75° F.
801	V. V. Henderson	V. V. Henderson	1945	410	28	C	36			Wilcox	21.2	8-18-70	J,E 1	D		Temperature 70.5° F.
901	H. H. Delavan			400	32	C	4			Wilcox	27.4	8-10-70	J,E	D,S		
902	B.G. Byars & R.L. Peveto- W. E. Riley No.1		1953		4,700										E	Oil test.
24-101	Grady Ivy	Vernon Gilliam	1934	460	25	C	36			Wilcox	12.1	4-7-36	J,E	D		
102	Clinton Mullin	Clinton Mullin	1934	480	33	C	36			Wilcox	31.2	4-7-36	N	N		
103	Joe M. Griffith & J. P. G. Oil Co.- Roy R. Pittman Estate No.1		1965		4,755										E	Oil test.
201	Jack L. Phillips- Nan-Su-Gail Gas Unit No.5		1958		4,790										E	Oil test.
202	Will Creel	Will Creel	1935	490	22					Wilcox	17.9	4-27-36	J,E	D		

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-24-203	Rankin	George Creel	1931	500	30	C	36			Wilcox	24.8	4-27-36	N	N		
301	Basin Operating Co.- Shields Gas Unit No.1		1963		4,655										E	Oil test.
302	M. B. Rudman & Dorfman Production Co.- Emma Hill No.1		1961		4,514										E	Oil test.
401	Leonard Emmons	Joe Folk	1925	450	49	C	6			Wilcox	34.4	4-7-36	J,E	D		
402	J. F. Emmons	J. F. Emmons	1931	460	22	C	48			Wilcox	20.1	4-7-36	J,E	D,S		
403	J. S. Ivy	Vernon Gilliam	1934	465	64	C	36			Wilcox	61.6	4-7-36	J,E	D,S		
501	Mt. Zion Methodist Church		1875	450	39	C	36			Wilcox	22.6	4-7-36	N	N		
502	A. F. McAdams	Ben Black	1924	460	48	C	6			Wilcox	33.7	6-9-36	N	N		
503	L. V. Jones		1931	485	25	C	36			Wilcox	16.6	6-9-36	N	N		
504	J. A. Claridge	Alford	1910	480	31	C	6			Wilcox	0.5	4-7-36	N	N		
505	Fred Whiteside	Frank Ward	1970	480	72	C	4	0	60	Wilcox	20	5-29-70	J,E	D	D	Drilled to 152 feet.
						S	4	60	72		16.9	7-30-70				
506	Turlington Water Supply Corp.	C. C. Inerarity	1967	450	700	C	4-1/2	0	534	Wilcox	132.3	7-27-70	S,E 5	P	D,E	Temperature 79.5° F.
						C	2-1/2	532	595							
						S	2-1/2	595	658							
						C	2-1/2	658	700							
507	Loyce Phillips - Nan-Su-Gail Unit No. 7		1960		4,854										E	Oil test.
601	Zephyr Oil Company - P.D.C. Ball Estate No.1		1942		5,014										E	Oil test.
602	Watburn Oil Co.- P.D.C. Ball Estate - Gas Unit No. A-1		1963		4,692										E	Oil test.
701	Maxwell-Herring Drilling Co.- Hill No.1		1960		4,723										E	Oil test.
702	Edith Johnson		1927	430	7	C	36			Wilcox	2.2	4-25-36	N	N		
801	Richards			380	64	C	36			Wilcox	45.8	8-6-70	J,E	S		
901	N. B. Pyle - P. D. C. Ball Estate No.3		1964		4,600										E	Oil test.
902	Billy J. Knott & Bob Kirkland - J. J. & Grady Ivy No.1		1961		4,617										E	Oil test.
903	Humble Oil & Refining Co.- G. J. Weaver et al No. 1		1946		4,473										E	Oil test.
904	Springer - P. D. C. Ball No. 3		1968												E	Oil test.
905	Humble Oil & Refining Co.	White Drilling Co.	1970	460	400	C	4	0	326	Wilcox	140	3-10-70	N	N	D	Pumped 60 gpm from 195 feet on 3-10-70.
						S	4	326	400		146.6	7-30-70				
906	W. D. Morse	Rehkop Drilling Co.	1968	415	400	C	4-1/2	0	310	Wilcox	70	11-68	J,E 1-1/2	D,S	D	Drilled to 560 feet. Pumped 20 gpm from 90 feet in 1968. Temperature 73.5° F.
						S	4-1/2	310	390							
						C	4-1/2	390	400							
30-102	Aycock			410		C	8			Wilcox	+	8-20-70	N	S		Flowed 1 gpm on 8-20-70. Temperature 69.5° F.

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-30-103	Aycock			410	295	C	8			Wilcox	+	8-20-70	N	S		Flowed 1 gpm on 8-20-70. Temperature 69.5° F.
201	J. A. Dobbins			470	35	C	36			Wilcox	15.6	8-20-70	J,E 1/3	D,S		
202	W. H. Stoecker	Neal Drilling Co.	1970	470	475	C C S	4-1/2 2-1/2 2-1/2	0 425 455	436 455 475	Wilcox	98 100.8	4-13-70 9-10-70	S,E 3/4	S		
301	W. Myracle	Perkins		470	11	C	36			Wilcox	9.1	8-21-70	Cf,E 1/3	D		
302	Tom Blackmon		1915	500	26	C	36			Wilcox	17.8	5-15-36	N	N		
502	Alton Sartar	R. K. Sims	1962	450	165	C S	4 2-1/2	0 145	165 165	Wilcox			S,E 1/2	D,S		Casing perforated 145-165 feet. Temperature 72° F.
601	B. C. Gilliam	John Dean	1933	470	18	C	6			Wilcox	8.5	2-10-36	N	N		
602	Rogers		1925	500	35	C	48			Wilcox	30.8	5-15-36	J,E	D		
603	J. B. Sandifer	Ed Stevens	1925	480	28	C	48			Wilcox	23.3	5-15-36	N	N		
604	Weldon Wren		1925	485	22	C	48			Wilcox	13.2 17.0	5-15-36 8-19-70	J,E 1/2	D,S		Temperature 68.5° F.
605	Roy Beene	Neal Drilling Co.	1963	480	421	C	4			Wilcox	101.2	8-19-70	S,E 3/4	D,S		Temperature 74.5° F.
607	Ed Martin	Ed Martin	1920	470	16	C	36			Wilcox	11.2	5-15-36	N	N		
608	W. C. Miller	W. C. Miller	1935	480	12	C	48			Wilcox	9.4	5-15-36	N	N		
901	Humble Oil & Refining Co.-R. P. McWatters No. 1		1947		5,178										E	Oil test.
902	Humble Oil & Refining Co.-C. C. Thompson No. 1		1950		8,505										E	Oil test.
903	Humble Oil & Refining Co.-B. F. Farrell Sr. No. 1		1953		8,416										E	Oil test.
904	Humble Oil & Refining Co.		1947	478*		C	5			Wilcox	110.4	1-18-61	N	N		
905	E. Beene			505	33	C	60			Wilcox	25.6	2-24-36	N	N		
906	J. L. Miller	Ed Stevens	1926	485	33	C	36			Wilcox	28.5	8-19-70	J,E 1/2	D,S		Temperature 68° F.
31-101	Jess O. Maddox		1970	510	27	C	36			Wilcox	22.8	8-14-70	J,E 1/2	D		Temperature 67° F.
102	D. W. Curry Estate			530	50	C	6			Wilcox	37.7	5-15-36	N	N		
103	Reaves Ranch	Ed Stevens	1920	520	35	C	36			Wilcox	28.2	5-15-36	N	N		
201	Jasper McAdams	Neal Drilling Co.	1962	490	322	C	4-1/2	0	281	Wilcox	138 139.7	10-62 8-14-70	S,E 3/4	D	D	Temperature 73° F.
202	L. Peters	Calloway	1915	470	48	C	48			Wilcox	28.4	3-12-36	J,E	D		
203	Smith Johnson	Smith Johnson	1935	470	37	C	6			Wilcox	22.1	3-24-36	N	N		
204	Bill Moore			460	35	C	36			Wilcox	27.3	3-24-36	N	N		
301	D. D. Hall	Neal Drilling Co.	1969	490	629	C C C S	7 4 2-1/2 2-1/2	0 0 332 609	266 380 609 629	Wilcox	145.7	8-6-70	S,E 3/4	D,S		Temperature 73.5° F.

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-31-302	D. D. Hall	Jeff Ham	1896	490	16	C	36			Carrizo	6.6 10.9	6-9-36 8-6-70	J,E	D		
303	Dew School	R. C. Black	1930	465	48	C	12			Wilcox	38	4-27-36	Cf,E 1/2	P		
304	Mrs. A. H. White	L. D. Hartley	1932	465	18	C	36			Wilcox	10.2	4-27-36	J,E	D		
401	Humble Oil & Refining Co.-McSwane No. 1		1951		7,563										E	Oil test.
402	Mrs. Earnest Moore			495	100	C	4			Wilcox			J,E 3/4	D,S		Temperature 73° F.
403	Lloyde Knight	Neal Drilling Co.	1969	500	312	C C S	4-1/2 2-1/2 2-1/2	0 270 292	285 292 312	Wilcox	136	12-69	S,E 1	D	D	
404	John Eppes	Neal Drilling Co.	1969	490	331	C C S	4-1/2 2-1/2 2-1/2	0 289 311	303 311 331	Wilcox	128 128.8	12-69 8-14-70	S,E 1	D,S	D	Drilled to 350 feet.
405	John Eppes		1925	490	28	C	6			Wilcox	7.9	4-11-36	N	N		
406	Homer Cagle		1915	470	16	C	48			Wilcox	10.1	4-11-36	N	N		
407	Jack Shelly		1929	475	32	C	6			Wilcox	24.9	4-11-36	N	N		
408	Homer Cagle		1930	475	37	C	6			Wilcox	31	4-11-36	N	N		
409	R. G. McSwane	Neal Drilling Co.	1968	475	400	C C S	4-1/2 2-1/2 2-1/2	0 348 380	360 380 400	Wilcox	112	5-8-68	S,E 3/4	S	D	
410	D. W. Curry Estate	Ed Stevens	1915	530	55	C	36	0	15	Wilcox	33.3	5-15-36	J,E	S		
501	Joe Philpott	R. K. Sims	1951	455	44	C	6			Wilcox	35.4	8-13-70	H	D		Temperature 71° F.
601	Roger Tatum	Wesley Hatcher	1963	395	64	C	36			Wilcox	47.4	8-13-70	J,E 1/2	D		Temperature 72.5° F.
602	Roger Tatum	Cotters Baty	1920	395	27	C	48			Wilcox	8.4	4-24-36	N	N		
603	Grady McAdams	Neal Drilling Co.	1962	470	280	C	4-1/2	0	260	Wilcox	130 124.1	7-62 8-13-70	S,E 3/4	D,S	D	Temperature 73° F.
701	Jerry Huskey	Carruth Drilling Co.	1958	450	360	C	4 4	0 300	300 360	Wilcox	40	9-58	T,E 1-1/2	D,S		
702	W. T. Brumlow	Neal Drilling Co.	1965	470	320	C C S	4-1/2 2-1/2 2-1/2	0 247 300	268 300 320	Wilcox	110 110.1	3-11-65 8-14-70	S,E 3/4	D,S		Temperature 73.5° F.
703	P. R. Hinders	Neal Drilling Co.	1967	460	402	C C S	4-1/2 2-1/2 2-1/2	0 340 362	362 362 402	Wilcox	107	7-22-67	S,E 5	D		Pumped 60 gpm on 8-25-70. Temperature 70.5° F.
801	J. P. Knight	R. K. Sims		475	40	C	8			Wilcox	13.4	8-13-70	J,E 1/4	D		Temperature 71° F.
802	Purnell & Coleman - L. B. Cothran et al No. 1		1961		8,730										E	Oil test.
803	Adams Ranch	Neal Drilling Co.	1967	435	295	C C S	4-1/2 2-1/2 2-1/2	0 238 260	257 260 295	Wilcox	74 93.4	5-67 8-28-70	S,E 5	D,S		Temperature 73° F.
901	G. W. Stanfield		1970	390		C	4			Wilcox	62.0	8-13-70	J,E 3/4	D		

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-31-902	Fred M. Garrett & T. J. Johnson - C.C. Blair No. 1		1959		5,250										E	Oil test.
32-101	Wayne Whittington	Neal Drilling Co.	1966	450	320	C C S	4-1/2 2-1/2 2-1/2	0 290 300	297 300 320	Wilcox	107 105.7	1-13-66 8-6-70	S,E 3/4	D,S		Temperature 73.5° F.
102	Faye Hagen	Neal Drilling Co.	1968	450	340	C C S	4-1/2 2-1/2 2-1/2	0 298 320	315 320 340	Wilcox	112	3-2-68	S,E 3/4	D	D	
103	Humble Oil & Refining Co.-McAdams No. 1		1951		9,645										E	Oil test.
104	Tackett	Ben Black	1910	460	35					Wilcox	12.0	6-9-36		D		
202	E. P. Dawson			460	35	C	36			Carrizo	27.9	8-6-70	J,E	S		
203	Acie Nevills	Neal Drilling Co.	1965	445	406	C C S C S	4-1/2 2-1/2 2-1/2 2-1/2 2-1/2	0 343 364 372 394	365 364 372 394 406	Wilcox	108 101.2	8-25-65 8-6-70	S,E 1/2	D,S		Temperature 70.5° F.
204	Neal & Co.	R. K. Sims	1965	430	293	C S	4 2	0 218	218 293	Wilcox	100	8-30-65	S,E 3/4	D,S	D	
205	F. M. Herndon	Neal Drilling Co.	1968	415	324	C C C	4-1/2 2-1/2 2-1/2	0 282 304	302 304 324	Wilcox	86	8-26-68	S,E 3/4	D	D	
206	Wood George	Ben Black	1930	460	26	C	6			Wilcox	14.2	6-9-36	N	N		
207	Wood George	Green	1936	460	31					Wilcox	13.1	6-9-36	N	N		
208	R. C. Thomas	Charlie Luckett	1920	455	17	C	48			Carrizo	2.4	6-9-36	N	N		
301	O. W. Killiam - O. W. Killiam No. 1		1946		5,325										E	Oil test.
302	L. R. Boyd	Morris Sneed		375		C	4			Wilcox	63.2	8-5-70	S,E 1	D,S		
303	H. L. Adkins	Neal Drilling Co.	1967	395	586	C C S	4-1/2 2-1/2 2-1/2	0 556	520 556 586	Wilcox	67.4	8-13-70	S,E 1-1/2	D		Temperature 74.5° F.
401	Humble Oil & Refining Co.-M. E. Gehrels et al No. 1		1954		9,132										E	Oil test.
402	M. W. Whitlock	Neal Drilling Co.	1968	470	425	C C S	4-1/2 2-1/2 2-1/2	0 368 390	392 390 425	Wilcox	127 130.6	9-25-68 8-10-70	S,E 3	D,S	D	Temperature 75° F.
501	O. W. Killiam - J. W. Hartley No. 1		1958		5,644										E	Oil test.
502	A. Weaver	J. B. Ward	1926	405	19					Queen City	16.2	4-30-36	N	N		
503	A. Weaver		1895	395	17	C	36			Queen City	8.6	4-30-36	N	N		
601				400		C	6			Queen City	11.0	1-20-61	H	D		
602	Artie L. Collins			430	38	C	6			Queen City	24.5	8-4-70	H	D		
603	H. G. Williams			410		C	4			Reklaw			J,E 2	D		
604	Vernice Taylor	R. K. Sims	1968	420	100	C S	4 4	0 80	80 100	Reklaw	33.0	8-4-70	J,E 3/4	D	D	Temperature 72.5° F.

For footnotes see end of table.

Table 9.--Records of Wells and Test Holes in Freestone County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
KA-39-32-605	Dillard Hartley		1920	430	42	C	36			Queen City	37.5	8-10-70	J,E	D		Temperature 71.5° F.
701	R. G. McSwane	Neal Drilling Co.	1968	465	552	C	4-1/2	C	515	Wilcox	125	4-20-68	S,E	D,S	D	Temperature 75° F.
						C	2-1/2	510	532		125.5	8-10-70	3/4			
						S	2-1/2	532	532							
702	Edwin Best	Neal Drilling Co.	1969	430	560	C	7			Wilcox	98.6	8-13-70	S,E	Ind.		Temperature 73.5° F.
						C	4-1/2	320	341				7-1/2			
						S	4-1/2	341	376							
						C	4-1/2	376	520							
						S	4-1/2	520	560							
703	G. B. Martin	Wesley Hatcher	1960	470	51	C	36			Carrizo	37.5	8-13-70	J,E	D	-	
													1/2			
801	Mrs. Preston Morrison			355	50	C	30			Queen City	40.2	8-5-70	H	D		
802	LaGrone	Neal Drilling Co.	1964	340	295	C	4-1/2	0	273	Wilcox	40	10-7-64	S,E	D		
						C	2-1/2	254	275		38.1	8-6-70	3/4			
						S	2-1/2	275	295							
901	Robert Barnes			400	42	C	6			Queen City	31.3	8-6-70	J,E	D,S		
													1/2			
38-301	W. A. Loomis	Byers Drilling Co.	1951	445	470	C	10			Wilcox			S,E	D,S	E	Converted oil test, Humble Oil & Refining Co. Freestone Gas Unit No. 4. Temperature 73° F.
						S	10	450	470				3			
302	F. D. Thompson			450	58	C	36			Wilcox	48.0	8-19-70	J,E	D		Temperature 70° F.
													1/2			
39-101	Alvis Harris			485	22	C	60			Wilcox	18.6	2-24-36	H	D		
102	City of Donie No. 1	Neal Drilling Co.	1949	505	700	C	4-1/2			Wilcox			T,E	P		
													7-1/2			
103	City of Donie No. 2	Neal Drilling Co.	1962	500	852	C	4-1/2	0	592	Wilcox	146	9-18-62	T,E	P		
						C		582	792				7-1/2			
						S		792	852							
104	John G. Voight - I. W. Whitaker No. 1		1964		9,015										E	Oil test.
201	John G. Voight & Rotary Drilling Co.-Rice Institute No. 1		1963		8,925										E	Oil test.
202	J. A. Fulton	Neal Drilling Co.	1965	460	260	C	4-1/2	0	231	Wilcox	93	6-12-65	S,E	D,S		Temperature 73.5° F.
						C	2-1/2	219	240		91.2	8-26-70	3/4			
						S	2-1/2	240	260							
301	I. W. Whitaker	Neal Drilling Co.	1968	440	535	C	4-1/2	0	506	Wilcox	85	5-18-68	S,E	S	D	
						C	2-1/2	493	515		85.1	8-26-70	5			
						S	2-1/2	515	535							
401	Carlie Walker	Neal Drilling Co.	1968	475	410	C	4-1/2	0	378	Wilcox	118	11-21-68	S,E	D,S	D	
						C	2-1/2	368	390				3/4			
						S	2-1/2	390	410							
402	B. W. Moore	R. K. Sims	1968	470	690	C	4	0	645	Wilcox	120	8-19-68	S,E	D	D	Temperature 74.5° F.
						S	2-1/2	645	690				1			
403	R. J. Caraway - Marcus R. Holmes No. 1		1967		16,018										E	Oil test.
404	J. B. Lawler	Neal Drilling Co.	1968	480	447	C	4-1/2	0	427	Wilcox	127	7-11-68	S,E	D,S	D	Temperature 73.5° F.
						C	2-1/2	405	427		127.0	8-26-70	1			
						S	2-1/2	427	447							
40-101	I. W. Whitaker	Neal Drilling Co.	1966	370	254	C	4-1/2			Wilcox	57	3-26-66	S,E	D,S		Temperature 72° F.
											42.7	8-28-70	3/4			

For footnotes see end of table.

1/ Altitudes which have asterisks (*) are from aneroid or differential leveling surveys. All other altitudes are estimated from USGS topographic quadrangle maps having 10-foot or 20-foot contour intervals.

2/ Identifying letters used are:

C	-	Casing or blank liner
S	-	Screen

3/ Reported water levels are given in feet; measured water levels are given in feet and tenths. + indicates water level above land surface.

4/ Identifying letters used are:

A	-	airlift	D	-	diesel	Number indicates horsepower.
C	-	cylinder	E	-	electric	
Cf	-	centrifugal	G	-	gasoline	
J	-	jet	H	-	hand	
S	-	submersible	N	-	none	
T	-	turbine	W	-	windmill	

5/ Identifying letters used are:

D	-	domestic	N	-	none
Ind.	-	industrial	P	-	public supply
Irr.	-	irrigation	S	-	livestock

6/ D indicates drillers' log available; E indicates electric log available. Drillers' logs and electric logs are in files of Texas Water Development Board.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data				Indicated Water-bearing Unit	Static Water Level 3/		Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
						Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)		Depth (feet)	Date				
LT-33-46-101	H. D. Dosier		1956	370	60	C	30	0	60	Alluvium	45.4	8-25-70	J,E	D		Temperature 71.5° F.
102	H. D. Dosier	W. D. Bonds	1919	370	49	C	12			Alluvium	47.0	3-9-36	N	N		
201	Matty E. Aday			375	41	C	18			Alluvium	34.0	2-29-36	N	N		
202	George C. Mullen		1926	365	60	C	18			Alluvium			N	N		
203	Sam Blythe			375	30	C	18			Alluvium	27.0	2-29-36	N	N		
301	H. L. Turner		1945	385	34	C	30			Cretaceous?	32.9	8-25-70	H	D		Temperature 67.5° F.
302	H. Prigmore	John Sanders	1932	385	30	C	36			Cretaceous?	22.0	2-24-36	N	N		
303	Tom Williams	Tom Armstrong	1916	395	114	C	36			Alluvium	3.0	2-29-36	N	N		
501	Ralph Lacey		1957	360	43	C	30			Alluvium	37.2	8-25-70	J,E	D,S	D	Temperature 68.5° F.
502	S. D. Henson			315	27	C	18			Alluvium	25.5	3-9-36	N	N		
503	James Haley	N. Aday	1911	365	57	C	6			Alluvium	50.0	2-27-36	N	N		
601	Joe Byers	Hampton Drilling Co.	1966	350	50	C	30	0	50	Alluvium	40.9	8-26-70		D	D	
602	Joe Byers	John Sanders	1916	350	46	C	24			Alluvium	41.7	3-9-36	N	N		
603	Aley High School		1931	335	22	C	2			Cretaceous?	12.0	2-25-36	N	N		
604	Joe Telica	Will Bond	1918	365	52	C	6			Alluvium	43.0	2-27-36	N	N		
901	Pan American Petroleum Corp.- E. P. Harwill Trust No.1		1966		9,868										E	Oil test.
47-101	F. R. Jackson - Todd Estate No.1		1954		3,520										E	Oil test.
102	T. D. Phillips	Hampton Drilling Co.	1966	390	31	C	30	0	31	Midway?	8.9	8-26-70		D	D	
103	J. O. Johnson	Hampton Drilling Co.	1964	380	20					Midway?				D	D	
104	J. A. Johnson	W. C. Pritchett	1910	385	20					Midway?	10.5	2-29-36		D		
301	Roosth and Genecov - Lucy Mallory Alison No.1		1954		3,506										E	Oil test.
401	T. A. Powell, Sr.	Hampton Drilling Co.	1965	390	41					Midway?			J,E	D	D	
402	Woodie Perkins	J. J. Winge	1933	380	22	C	36			Midway?	19.0	2-25-36	N	N		
403	Bob Fincher	Hampton Drilling Co.	1966	385	33	C	30	0	33	Midway?				D	D	
404	Clarence L. Young	Hampton Drilling Co.	1965	385	45	C	30			Midway?			J,E	D	D	
405	S. E. Pritchett	S. E. Pritchett	1935	390	25	C	36			Midway?	14.0	2-24-36		D		
406	T. B. Mayo heirs	T. B. Mayo	1935	385	36	C	36			Midway?	30.3	2-20-36	N	N		
407	Joe E. Cox	Hampton Drilling Co.	1968	360	46	C	30	0	46	Midway?				D	D	
408	William King	Jim Mathis	1915	360	22	C	36			Midway?	15.2	2-20-36	N	N		
501	Mack Hays, Jr. - Mrs. F. E. Cooley No.1		1954		3,178										E	Oil test.
502	Union Producing Co. - Mason No.1		1967		4,800										E	Oil test.
601	Harry Hines - Russell Mallory No.1		1939		3,510										E	Oil test.

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-33-47-602	Robert Tarleton	Hampton Drilling Co.	1965	345	40	C	30			Midway?			J,E	D		
702	R. L. Tarkington			320	20	C	2			Alluvium	16.2	2-14-36	N	N		
801	Gulf States Exploration Co. - Dan Smith No.1		1957		3,515										E	Oil test.
802	J. W. White	Hampton Drilling Co.	1968	375	26	C	30	0	28	Midway?	15.0	8-26-70	Cf,E	D	D	
803	Albert Borchardt	Hampton Drilling Co.	1964	380	44	C	30	0	44	Midway?	27.4	8-26-70	N	N	D	
804	L. C. Brown	Hampton Drilling Co.	1968	350	40					Midway?	19.8	8-27-70	N	N	D	
805	John Sanders	John Sanders	1910	350	22	C	24			Midway?	15.0	2-20-36	N	N		
806	J. M. Dowdy	Dempsey Reese	1928	350	24	C	36			Midway?	21.5 21.1	2-20-36 8-27-70	N	N		
807	M. J. McClinock	Will Snowden	1930	365	34	C	36			Midway?	32.5	2-20-36		D		
901	Pan American Petroleum Corp. - Mattie McCord No.1		1966		11,598										E	Oil test.
902	Lewis Avant	Hampton Drilling Co.	1965	345	64	C	30			Midway?				D	D	
903	A. J. Bellany	Hampton Drilling Co.	1965	340	57	C	30			Alluvium				D	D	
904	Hardy Mason	Hampton Drilling Co.	1965	345	52	C	30			Alluvium	20.8	8-27-70		D	D	
905	Community Water Co.	John Sanders	1917	335	50	C	20			Alluvium			N	N		
906	W. A. Peavy	John Sanders		350	51	C	8			Midway?	41.4	3-13-36		D		
907	Ft. Worth Water Works			335	52	C	36			Midway?	50.2	2-13-36	N	N		
48-101	B. G. Byars - G. L. Pippin No.1		1955		4,015										E	Oil test.
102	B. B. Killian Estate	B. B. Killian	1924	370	25	C	36			Midway?	16.4	3-18-36	N	N		
201	Mrs. Clyde Baker	Hampton Drilling Co.	1963	380	45	C	30			Alluvium	30.1	9-4-70	J,E	D		Temperature 69° F.
302	Homer Kirkpatrick	Pete Lavasas	1968	410	105	C S	6 6	0 45	45 100	Wilcox	33.5	9-4-70	J,E 1/2	D,S		Temperature 69° F.
303	Homer Kirkpatrick		1906	370	18	C	36			Wilcox	4.9	3-18-36	N	N		
401	Harding			375	16	C	36			Midway?	9.6	3-18-36	N	N		
501	W. S. Hamrick	Hampton Drilling Co.	1969	405	51	C	30	0	51	Wilcox	37.0	9-8-70	J,E 1/2	D,S	D	
502	C. R. Greenhaw	Hampton Drilling Co.	1968	380	46	C	30	0	46	Wilcox	29.9	9-9-70		D	D	
503	C. B. Tapp	Jess Filter	1916	370	38	C	36			Wilcox	35.3	3-18-36	N	N		
504	C. R. Greenhaw	John Halbert	1910	380	31	C	36			Wilcox	29.3	3-19-36	N	N		
505	C. C. Bonsal	C. C. Bonsal	1926	390	27	C	36			Wilcox	19.0	3-4-36	N	N		
601	Roy Frazier No.5	Andrews	1957	420	240	C S	6 6	0 110	110 240	Wilcox			C,E 5	P		
602	Roy Frazier No.3	West Drilling Co.	1938	420	240	C	6	0	240	Wilcox			C,E 1	P		
603	Roy Frazier No.2	Andrews	1956	420	240	C S	7 7	0 110	110 240	Wilcox			N	N		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Casing and Screen Data: Diameter (inches)	Casing and Screen Data: Depth in Feet (from)	Casing and Screen Data: Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-33-48-604	Roy Frazier No.1	Andrews	1957	420	242	C S	6 6	0 110	110 242	Wilcox			C,E 1	P		
605	Green	Chambers & Phillips	1967	410	191	C	4	0	100	Wilcox	60	3-15-67	J,E 1	D	D	
606	Roy Frazier	Andrews & Foster Drilling Co.	1965	420	180	C S	4 4	0 160	160 180	Wilcox			S,E 3/4	P		Temperature 69° F.
607	Roy Frazier	John Cobb Drilling Co.	1964	430	185	C S	4 4	0 130	130 185	Wilcox			S,E 3/4	P		
608	Roy Frazier	Albright	1965	425	180	C S	4 4	0 140	140 180	Wilcox			S,E 3/4	P		Temperature 70° F.
609	Roy Frazier	Andrews & Foster Drilling Co.	1964	430	156	C S	4 4	0 98	98 156	Wilcox			C,E 1	P		
610	J. C. Harris	Huddleston & O'Neal	1929	425	89	C	8			Wilcox	70.8	2-3-36	N	N		
611	Mrs. Julia Holland		1916	430	82	C	8			Wilcox	59.2	2-3-36	N	N		
612	J. M. Gardiner		1912	435	14	C	36			Wilcox			N	N		
613	Lucille Lonon	Galliger & Haskell	1914	370	36	C	36			Wilcox	20.6	3-18-36	N	N		
614	Mary Anthony	Molton	1936	380	22	C	8			Wilcox	17.5	1-31-36	N	N		
701	F. L. Meredith	Hampton Drilling Co.	1964	350	55	C	30			Alluvium	33.4	9-8-70	J,E 1/2	D,S		Temperature 71° F.
801	C. E. Smith			380	18	C	30			Wilcox	14.5	9-8-70	Cf,E	D		
802	C. E. Smith	Asa Holt		380	14	C	36			Wilcox	10.5	3-4-36	N	N		
803	P. A. Carson	Frank Huddleston	1913	380	68	C	6			Wilcox	59.6	3-4-36	N	N		
901	Humble Oil & Refining Co.- R. A. Huddleston		1964												E	Oil test.
902	Lawrence K. Mosely	John Cobb Drilling Co.	1968	400	200	C	4	0	106	Wilcox	63.1	9-8-70		N	D	
903	Mrs. P. W. Whisenant	Ike Landes	1910	420	89	C	8			Wilcox	72.5	3-4-36	N	N		
55-301	Cockrell Corp. - Paul W. Lewis No.1		1967		11,600										E	Oil test.
302	John Key	Hampton Drilling Co.	1965	305	36	C	30			Alluvium	3.0	8-28-70	S,E 1-1/2	D,S	D	
303	Helen Braswell	Hampton Drilling Co.	1966	340	57	C	30			Alluvium	24.7	8-28-70	J,E 1/2	D	D	
304	Ft. Worth Water Works			335	50	C	2			Alluvium			N	N		
305	Robert Tise			305	17	C	36			Alluvium			N	N		
306	Robert Tise		1925	305	29	C	2			Alluvium			N	N		
307	John Key		1889	335	63	C	2			Alluvium			N	N		
308	Mrs. Dean Jackson			335	51	C	36			Alluvium			N	N		
601	Edson Petroleum Co. - J. L. Gunnels No.1		1966		11,991										E	Oil test.
602	Key Ranch	John Hollifield	1928	335	40	C	36			Alluvium	39.0	2-13-36	N	N		
603	Key Ranch	Fate Miller	1935	305	29	C	36			Alluvium			N	N		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-33-55-604	Key Ranch	Fate Miller	1935	305	24	C	36			Alluvium	19.5	2-10-36	N	N		
605	Marvin Farmer		1916	295	20	C	2			Alluvium			N	N		
56-101	Key Ranch Estates		1967	335	50	C	30			Midway?	20.4	8-28-70	S,E 1-1/2	P		
201	J. W. Smothers	Rehkop Drilling Co.		345	200	C	4			Wilcox			S,E 2	P		Temperature 70° F.
202	Cedar Creek Enterprises No.1	Rehkop Drilling Co.	1964	390	81	C	7			Wilcox			J,E	P		
203	Cedar Creek Enterprises No.2	Rehkop Drilling Co.	1970	390	81	C	4			Wilcox	34.5	9-3-70	S,E	P		
301	W. C. Windsor, Jr. et al-Wilmington Savings & Trust Co. No.1		1955		4,188										E	Oil test.
302	J. W. Smothers	Rehkop Drilling Co.		345	180	C	4			Wilcox			S,E 2	P		
303	Cedar Creek Enterprises	Rehkop Drilling Co.	1964	355	200	C	7			Wilcox	54.0	9-3-70	S,E	P		
304	William Cockrell	Oren Miller	1967	340	161	C	7			Wilcox			S,E 2	P		
305	T. H. Matthews No.1	Oren Miller	1966	350	147	C	4			Wilcox			S,E 1	P		
306	T. H. Matthews No.2	Oren Miller	1968	350	168	C	4			Wilcox	69.0	9-4-70	S,E 1	P		
307	J. L. Reaves	Oren Miller		335	200	C	4			Wilcox			S,E	P		
308	B. J. McLaughlin	John Cobb Drilling Co.	1968	350	202	C	6-5/8	0	100	Wilcox	44.2	9-4-70	S,E 1	P	D	
309	Log Cabin Estates	Oren Miller	1969	390	240	C S	7 4-1/2	0 195	200 240	Wilcox	130	9-26-69	S,E	P	D	
401	Lakewood	Hampton Drilling Co.	1966	330	55					Midway?	16.4	8-28-70	S,E	P		
402	James C. Cain		1967	330	37	C	30	0	60	Midway?	9.0	8-28-70	S,E	P		
403	C. W. Bramlett	Hampton Drilling Co.	1966	320	40	C	30	0	40	Wilcox	29.7	9-2-70	S,E 2	D,S	D	
404	Chambers & Phillips Water Systems	Chambers & Phillips	1968	335	68	C S	2 2	0 60	60 68	Midway?			J,E 1-1/2	P		
405	Chambers & Phillips Water Systems	Chambers & Phillips	1968	330	70	C S	4 4	0 60	60 70	Midway?			S,E 2	P		
406	Chambers & Phillips Water Systems	Chambers & Phillips		330	65	C S	2 2	0 57	57 65	Midway?			J,E 1-1/2	P		
407	Key Ranch	Boss Cherry	1934	335	49	C	36			Midway?	42.0	3-12-36	N	N		
408	Leonard McClendon			325	47	C	36			Wilcox	44.0	3-13-36	N	N		
409	Charles Skills		1910	330	43	C	36			Wilcox	37.5	3-13-36	N	N		
501	J. W. Smothers	Rehkop Drilling Co.	1950	345	185	C	4			Wilcox			S,E 2	P		
502	J. W. Smothers	Rehkop Drilling Co.	1965	340	180	C	4			Wilcox			S,E 2	P		Temperature 69° F.

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-33-56-503	Cedar Creek Enterprises No.1	West & Rehkop Drilling Co.	1965	345	188	C	7	0	188	Wilcox	41.6	9-3-70	S,E 5	P	D	
504	Cedar Creek Enterprises No.2	Rehkop Drilling Co.	1968	345	180	C	7			Wilcox			S,E	P		
505	Cedar Creek Enterprises No.3	Rehkop Drilling Co.	1970	345	82	C	7	0	62	Wilcox	30	8-15-70	S,E	P	D	
						S	7	62	74		28.2	9-3-70				
						C	7	74	82							
506	St. Paul School	Charles O'Neal	1936	345	33	C	6			Alluvium	24.3	4-1-36	N	N		
507	A. M. Roberts Estate	Goodgame	1910	360	16	C	36			Wilcox	13.4	3-12-36	N	N		
601	City of Malakoff No.1	Texas Water Wells	1949	350	371	C	11-3/4	0	308	Wilcox	153	8-49	T,E 30	P	D,E	Pumped 200 gpm from 233 feet in August 1956. Formerly called Well No.3.
						C	6-5/8	256	311							
						S	6-5/8	311	361							
						C		361	371							
603	Texas Power & Light No.2	Layne Texas Co.	1928	375	377	C	10			Wilcox	101.3	4-6-61	T,E 25	S		
604	City of Malakoff No.3	Layne Texas Co.	1926	360	358	C	12	0	184	Wilcox	85	1-13-26	T,E	P	D	Pumped 165 gpm from 142 feet in 1926 and pumped 122 gpm on 9-23-70. Formerly Hugh Drane Ice Co.
						C	8	162	296		116.1	4-6-61	15			
						S	8	296	358		175.3	9-23-70				
605	Pan American Petroleum Corp.- P. T. Kilman No.1		1964		13,143										E	Oil test.
606	Pool		1934	380	100	C	9			Wilcox	85.7	4-1-36	N	N		
703	Texas Power & Light	Layne Texas Co.		295	42 (max.)	C	12			Alluvium	19	4-5-61	S,Cf,E	Ind.		Total of nine wells in use within an area of about 200 yards radius. Includes four dug and five drilled wells.
						C	40									
704	Brison			300	30	C	36			Alluvium	23.0	3-10-36	N	N		
705	Trinidad School	M. Moore	1925	300	30	C	36			Alluvium			N	N		
706	Sharp	Jap Hashay	1903	300	29	C	8			Alluvium	24.5	2-7-36	N	N		
707	Mary Peoples		1916	300	30	C	36			Alluvium	28.0	2-7-36	N	N		
708	J. P. Nicholson	J. P. Nicholson	1933	305	25	C	72			Alluvium			N	N		
801	T. B. Abbe			340	240	C	4			Wilcox	85.6	9-11-70	J,E	N		
802	Lone Star Gas Co. No.1		1935	290	205	C	10	0	29	Wilcox	33.6	4-5-61	N	N		
						C	8	0	60		23.2	9-2-70				
						C	4	0	80							
						S	4	80	100							
						C	4	100	205							
803	Lone Star Gas Co. No.2		1935	290	198	C	10	0	30	Wilcox	8.3	4-5-61	N	N		
						C	8	0	60		8.9	9-2-70				
						C	6	0	80							
						S	6	80	100							
						C	6	100	198							
804	C. W. Carpenter Estate		1922	295	15	C	36			Alluvium	12.8	3-20-36	N	N		
901	Malakoff Lions Club			375	380	C	4	0	360	Wilcox	91.0	10-7-70	S,E 1	D		
						S	4	360	380							
902	Joe Faulk	Ed Roy Pierce	1960	360	402	C	4	0	200	Wilcox			S,E 1/3	D		
903	City of Malakoff No.2		1925	350	360	C	6			Wilcox	84	7-28-43	T,E 7-1/2	P		Formerly called Well No.1.

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-33-56-904	Roy Surls	Henry Barton	1901	310	43	C	36			Wilcox	36.3	4-2-36	N	N		
905	Wright Edmundson	S. H. Goodgame	1935	370	68	C	6			Wilcox	57.5	3-24-36	N	N		
906	Yarrabee Ranch			345	32	C	36			Wilcox			N	N		
64-101	Creslenn Ranch No.9	West & Rehkop Drilling Co.		290	51	C	4	0	51	Alluvium	23.9	10-2-70	J,E 3/4	D,S		
102	Creslenn Ranch No.26	West & Rehkop Drilling Co.	1965	280	43	C	4	0	43	Alluvium			S,E 1/3	S	D	
201	Creslenn Ranch No.18	West & Rehkop Drilling Co.	1964	265	225	C	4	0	225	Wilcox	20.7	10-2-70	J,E 1/3	S		
301	J. A. McLain	Andrews	1954	330	400					Wilcox	87.6	9-29-70	J,E 1	D,S		
302	Creslenn Ranch No.46	Rehkop Drilling Co.	1968	285	75	C	4	0	75	Wilcox	12.5	10-5-70	S,E 1/3	S	D	
501	J. W. Murchison	Andrews & Foster Drilling Co.	1969	265	320	C C S C	10 8 8 8	0 218 235 310	218 235 310 320	Wilcox			T,Ng	Ind.	D	
502	Creslenn Ranch No.19C	West & Rehkop Drilling Co.	1966	265	225	C	4	0	225	Wilcox	19.1	10-2-70	S,E 1/3	S	D	Temperature 69° F.
503	Creslenn Ranch No.34	West & Rehkop Drilling Co.	1965	265	180	C	4	0	180	Wilcox			S,E 1/3	S	D	Temperature 68° F.
601	Star Oil Co. - Gamble & Lancaster No.1		1948		4,017										E	Oil test.
602	B. F. Phillips - L. B. Walsh No.1		1943		4,105										E	Oil test.
603	Creslenn Ranch	V. E. West	1964	265	360	C C S	20 10-3/4 10-3/4	0 0 300	50 300 350	Wilcox	26.6	10-2-70	T,Ng	Irr.		
604	E. A. Boyd Estate	Abney	1926	310	106	C	2			Wilcox	50.0	3-27-36	N	N		
901	Ward Oil Co. - Seven-Eleven Ranch No.C-1.		1963		4,085										E	Oil test.
902	Joe A. Wortham	Joe Wortham	1936	310	503	C	6			Wilcox			N	N		
34-41-104	Gilbert D. Galloway	Chambers & Phillips	1969	400	165	C S	2 2	0 156	156 162	Wilcox	70	8-7-69	J,E 1	D,S	D	Temperature 70° F.
105	W. W. Lewis	Chambers & Phillips	1962	400	260	C S	2 2	0 240	240 260	Wilcox			J,E	D,S		Temperature 71° F.
106	W. W. Lewis	Cobb & Alexander	1950	400	500	C	6			Wilcox	57.3	9-10-70	C,W	N		
107	H. H. Lewis			410	27	C	6			Wilcox	23.3	3-6-36	N	N		
108	Ross Smith		1916	430	21	C	60			Wilcox	16.8	3-6-36	N	N		
202	Iowa-Payne Oil Co. - L. C. Larkin No.1		1951		4,807										E	Oil test.
203	Basher		1920	500	28	C	36			Wilcox	22.0	3-6-36	N	N		
302	J. C. Meredith	J. C. Meredith	1935	575	44	C	36			Carrizo	39.6	5-8-36	N	N		
401	Roy Frazier No.4	Andrews	1958	420	240	C S	6 6	0 110	110 240	Wilcox			S,E	P		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-41-402	W. Bonner	John Cobb Drilling Co.	1958	420	264	C	7	0	180	Wilcox			T,E 7-1/2	Irr.		
						S	7	180	200							
						C	7	200	220							
						S	7	220	260							
403	Dulup Oil Co. - S. B. Cornelious No.1		1939		4,250										E	Oil test.
404	Charles Plotz	Chambers & Phillips	1967	440	197	C	2	0	177	Wilcox	75	2-4-67	J,E 1	D	D	
						S	2	177	193							
						C	2	193	197							
405	City of Eustace No.2	Lanford Drilling Co.	1970	400	262	C	8-5/8	0	182	Wilcox	79	3-19-70	S,E	P	D	
						C	4-1/2	154	182		79.8	9-4-70				
						S	4-1/2	182	262							
406	City of Eustace No.1	Lanford Drilling Co.	1970	400	260	C	8-5/8	0	180	Wilcox	79	3-19-70	S,E	P	D	
						C	4-1/2	152	180		79.2	9-4-70				
						S	4-1/2	180	260							
407	Tyler Estate	A. C. Turner	1921	470	19	C	30			Wilcox	10.8	3-6-36	N	N		
408	J. L. Williams		1929	430	41	C	8			Wilcox			N	N		
409	Bruce Allison			420	39	C	8			Wilcox	28.9	3-6-36	N	N		
501	Roy Hendley	Andrews & Foster Drilling Co.	1969	435	480	C		0	336	Wilcox	87	6-5-69		D,S	D	
601	Earnest Clousid	Alexander & Foster		460	585	C	4			Wilcox			S,E	D		
602	Archie Dennis		1906	450	33	C	30			Wilcox	29.8	3-2-36	N	N		
603	A. F. Beeson, Jr.			480	Spring					Wilcox				N		
703	I. L. Harris	John Cobb Drilling Co.	1967	440	410	C	4	0	300	Wilcox	65	5-1-67	J,E 1/2	D,S	D	Temperature 71° F.
704	I. L. Harris	Bill Albright	1961	430	227	C	6	0	187	Wilcox	47.2	9-10-70	S,E 1/2	S		
705	C. C. Warren	Chambers & Phillips	1967	420	167	C	2	0	157	Wilcox	70	2-9-67	J,E 1	D	D	
						S	2	157	163							
						C	2	163	167							
706	Jettie Kirk	Chambers & Phillips	1968	430	185	C	2	0	165	Wilcox	80	8-10-68	J,E 1	D	D	
						S	2	165	181							
						C	2	181	185							
707	Suia Tatum		1907	420	37	C	8			Wilcox			N	N		
708	I. L. Harris	Eli Young	1933	435	12	C	36			Wilcox	4.0	2-5-36	N	N		
709	I. L. Harris	Morell Harris	1933	435		C	36			Wilcox	42.8	2-5-36	N	N		
801	Humble Oil & Refining Co.- Joe Benge et al No.1		1946		6,338										E	Oil test.
802	Scott Syler	Rehkop Drilling Co.	1969	425	485	C	4	0	391	Wilcox	100	10-18-69	S,E 1/2	D	D	Temperature 72° F.
						C	2	359	401							
						S	2	401	485							
803	Paul Clanton	John Cobb Drilling Co.	1969	440	497	C	4-1/2	0	470	Wilcox			S,E 1-1/2	D	D	Temperature 72.5° F.
						S	3	470	490							
804	George Shoffner		1906	425	28	C	36			Wilcox	18.9	2-2-36	N	N		
805	Wheeler		1920	480	43	C	36			Carrizo	34.0	3-2-36	N	N		
806	Roy Russell		1905	455	80	C	8			Wilcox	70.8	2-5-36	N	N		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-41-807	Pickens			405	39	C	8			Wilcox	17.1	4-6-36	N	N		
901	E. B. LaRue - R. H. Davis No.1		1940		4,546										E	Oil test.
902	Hunt Graham et al - Rowan et al No.1		1956		4,497										E	Oil test.
903	H. Moore	Dolphus Young	1950	490	31	C	30			Wilcox	22.0	9-9-70	J,E 1/2	D		
904	Archie Dennis			560	26	C	36			Carrizo	6.3	3-2-36	N	N		
905	W. J. Benge Estate		1920	520	12	C	8			Carrizo	4.2	3-2-36	N	N		
42-101	Shultz		1957	510	70	C	30	0	70	Carrizo	15.5 17.4	5-3-61 11-3-70	J,E 1	D,S		
103	A. Aubrey	Hampton Drilling Co.	1965	540	40	C	30	0	40	Carrizo	24.6	11-3-70	J,E 1/2	D		
104	Fred E. Miller	Chambers & Phillips	1963	510	360	C S	2 2	0 340	340 356	Wilcox			J,E 1	D,S		
105	E. B. Rowland		1870	540	27	C	48			Carrizo	20.7	5-8-36	N	N		
106	Meredith Camp Ground			540	Spring					Wilcox				N		
201	Hernden Youngblood	Hampton Drilling Co.	1965	440	71	C	30			Carrizo	8.2	11-3-70	J,E 1/2	D,S	D	
302	Billy Perry	Andrews & Foster Drilling Co.	1967	485	400	C	4	0	325	Wilcox	82.2	11-10-70	S,E 1-1/2	D		
401	The Ohio Oil Co. - W. K. Coker No.1		1944		9,279										E	Oil test.
402	W. C. Perryman & I. P. LaRue - R. T. Sanders No.1		1957		4,670										E	Oil test.
403	Bethel-Ash Water Supply Corp.	Rehkop Drilling Co.	1968	520	587	C C S C S C	7 4 4 4 4 4	0 431 499 519 567 577	460 499 519 567 577 587	Wilcox	165.8 161.2	10-8-70 12-18-70	S,E 5	P	E	Pumped 43 gpm from 195 feet on 12-18-70. Temperature 75° F.
404	Maxwell Herring Drilling Corp.	White Drilling Co.	1968	500	300	C S C S C	3 3 3 3 3	0 203 245 262 275	203 245 262 275 300	Wilcox	105	10-22-68	N	N		
405	Joe Burnett	Chambers & Phillips	1970	525	640	C S C	2 2 2	0 620 636	620 636 640	Wilcox	140	12-5-70		D,S	D	
406	Mrs. W. K. Coker		1880	515	32	C	30			Wilcox			N	N		
407	Jesse Lowry		1915	470	21	C	36			Wilcox	4.6	2-26-36	N	N		
501	Martin Slayton	Hampton Drilling Co.	1968	470	41	C	30	0	41	Reklaw	22.2	11-3-70	J,E 1/2	D		
502	Bud Bufford	Nelson		540	25	C	36			Reklaw	24.5	2-26-36	N	N		
601	W. C. Perryman & Samedan Oil Corp.- Roguemore No.1		1965		8,990										E	Oil test.
602	E. A. Rice	Hampton Drilling Co.	1963	490	30	C	30	0	30	Queen City	4.6	11-4-70	Cf,E 1/3	D,S		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-42-603	Roy Dodson	Andrews & Foster Drilling Co.	1966	440	466	C	4	0	380	Wilcox	75.6	11-4-70	S,E 1/2	D,S		
						C	2-1/2	370	435							
						S	2-1/2	435	465							
604	John C. Willard	Hampton Drilling Co.	1967	500	55	C	30	0	55	Queen City	29.3	11-10-70		D,S	D	
605	A. B. Jones Estate		1900	460	15	C	36			Reklaw	11.1	5-6-36	N	N		
701	Lone Star Producing Co. - J. C. Killough No.1		1947		8,265										E	Oil test.
702	Lone Star Producing Co. - Faulk No.1		1947		5,250										E	Oil test.
703	W. C. Perryman et al - Dewey Gibson et al No.1		1960		4,694										E	Oil test.
704	Maxwell Herring Drilling Corp.	White Drilling Co.	1970	465	480	C	3	0	413	Wilcox	100	6-10-70	N	N	D	
						S	3	413	480							
705	Joe Milam	Andrews & Foster Drilling Co.	1963	505	480	C	4	0	440	Wilcox	104	8-63	S,E 1/4	D,S		
706	L. M. Morton	Bill Albright	1958	470	484	C	4	0	417	Wilcox	119.0	11-3-70	S,E 1	D		
707	Brown	D. A. Gloss	1933	460	33	C	36			Wilcox	24.0	2-26-36	N	N		
708	R. L. Lee, Sr.		1933	450	9	C	6			Alluvium	4.6	2-26-36	N	N		
709	E. M. Morgan	T. Russell		500	24	C	40			Carrizo	5.8	5-8-36	N	N		
801	Delmer Smith	Rehkop Drilling Co.	1970	520	936	C	4-1/2	0	715	Wilcox	179	4-10-70	S,E	P	D	
						C	2	666	750		178.0	11-4-70	5			
						S	1-1/2	750	770							
						C	1-1/2	770	831							
						S	1-1/2	831	852							
						C	1-1/2	852	873							
						S	1-1/2	873	936							
802	Ash Baptist Church	Hampton Drilling Co.	1964	550	41	C	30	0	41	Queen City	20.0	11-4-70	J,E 1/3	D	D	
901	C. H. Dragert	Andrews & Foster Drilling Co.	1964	530	500	C	4	0	480	Wilcox	151.2	11-4-70	S,E 1-1/2	D,S		
						S	2-1/2	480	500							
43-102	Lone Star Producing Co. - Ira Buckalew No. B-1		1949		5,627										E	Oil test.
103	George Kearney	Andrews & Foster Drilling Co.	1968	435	640	C	4	0	500	Wilcox	73.4	11-10-70	S,E 1/2	D		
104	Lone Star Gas Co.	Lone Star Gas Co.	1946	475	829	C	4	0	726	Wilcox	90.7	11-11-70	A	Ind.	E	
						S	4	726	806							
105	Pauline Porter	James Mott	1935	440	15	C	36			Queen City	10.9	5-6-36	N	N		
204	Magnolia Petroleum Corp.- L. W. Hearne No.1		1949		8,780										E	Oil test.
205	Floyd Cornett	Rehkop Drilling Co.	1969	460	560	C	4-1/2	0	497	Wilcox	140	1-20-69	S,E	D	D	Temperature 71° F.
						C	2-1/2	477	519		102.1	11-10-70	1			
						S	2-1/2	519	539							
						C	2-1/2	539	560							
303	Lone Star Producing Co. - E. S. Hatton No.1		1947		5,564										E	Oil test.
401	Lone Star Producing Co. - Laco Oil Co. No.2		1949		5,468										E	Oil test.

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-43-402	Lone Star Producing Co. - Maude Saylors No. E-8		1949												E	Oil test.
403	The Texas Co. - Cox No.2		1948		5,625										E	Oil test.
404	D. F. Little	Chambers & Phillips	1966	450	247	C S	2 2	0 227	227 247	Wilcox			J,E 1	D	D	Temperature 69° F.
501	Lone Star Producing Co. No.4	Layne Texas Co.	1955	445	795	C C S C	10-3/4 6-5/8 6-5/8 6-5/8	0 558 667 770	665 667 770 795	Wilcox	190.0	4-17-61	T,E 30	Ind.		Temperature 78° F.
502	Lone Star Producing Co. No.2	Layne Texas Co.	1940	440	547	C C S C S C S C S C	10-3/4 5-1/2 5-1/2 5-1/2 5-1/2 5-1/2 5-1/2 5-1/2 5-1/2 5-1/2	0 290 360 393 417 432 450 470 510 530	347 360 393 417 432 450 470 510 530 547	Wilcox	190	4-49	T,S 25	Ind.	D	
503	Lone Star Producing Co. - No.3	Ketchum	1945	440	613	C C C S C S C S C	9-5/8 7 6 6 6 6 6 6 6	0 195 410 457 477 530 550 578 598	195 410 457 477 530 550 578 598 613	Wilcox			T,S 25	Ind.		
504	Lone Star Producing Co. - J. M. Harvard No.1		1964		11,150										E	Oil test.
505	Lone Star Producing Co. - W. Y. Howell No.1		1962		11,839										E	Oil test.
506	J. A. Tullas Estate	Leo Wilson	1931	445	24	C	36			Queen City	21.0	4-7-36	N	N		
507	Corley	R. I. Washburn	1925	420	13	C	36			Queen City	1.0	4-6-36	N	N		
601	O. R. Ricker	York	1958	430	43	C	30	0	43	Queen City	14.4 21.4	4-27-61 11-11-70	J,E 1/2	D,S		
602	Lone Star Producing Co. - First State Bank of Brownsboro No.1		1948		5,290										E	Oil test.
603	Ira Echols	Echols & Cobb	1963	420	500	C S	4 4	0 468	468 500	Wilcox	119.5	11-11-70	J,E 1	D,S		
604	Truman Voyles			405	38	C	36			Queen City	32.4	11-11-70	J,E 1/3	D		
605	Horton Kidd	T. E. Kent	1930	420	20	C	36			Queen City	16.7	4-7-36	N	N		
606	D. F. Saylors, Jr.	D. F. Saylors	1928	415	30	C	48			Queen City	25.4	4-7-36	N	N		
607	C. A. Saylors		1925	400	38	C	36			Queen City	34.4	4-7-36	N	N		
701	Murchison School		1958	450	30	C	30			Queen City	4.7	4-27-61	N	N		
702	City of Murchison	Andrews & Foster Drilling Co.	1965	450	612	C S	8-5/8 4	0 540	470 598	Wilcox	115.4 111.6	12-17-70 12-18-70	S,E 15	P	E	Pumped 154 gpm from 218 feet on 12-18-70. Temperature 74° F.
703	N. Lewis		1924	450	14	C	36			Queen City	5.0	5-7-36	N	N		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-43-704	Willy Shelton	Jake Wheeler	1906	485	8	C	48			Queen City	4.0	4-8-36	N	N		
705	W. S. Walker	W. S. Walker	1916	500	20	C	6			Queen City	14.2	4-8-36	N	N		
706	Methodist Church		1924	450	14	C	36			Queen City	7.1	5-7-36	N	N		
801	Lone Star Producing Co. - Allyn Estate No.B-1		1961		14,500										E	Oil test.
802	Roberts & Murphy - R. O. Echols No.1		1956		4,732										E	Oil test.
803	Daniel B. Scott	Hampton Drilling Co.	1963	525	36	C	30	0	36	Queen City	14.1	11-11-70	J,E 1	D,S		
804	Lewis Dairy	Hampton Drilling Co.	1966	480	45	C	30	0	45	Queen City	18.9	11-12-70	J,E 1-1/2	S	D	
805	Mrs. W. H. Barron	Jim Parker	1930	540	46	C	6			Queen City	31.9	5-7-36	N	N		
901	W. C. Windsor, Jr. - L. E. Kelton, Jr. No.1		1959		4,923										E	Oil test.
902	Leagueville Water Supply Corp.	Andrews & Foster Drilling Co.	1966	575	661	C C S C S C S C	8-5/8 4 4 4 4 4 4 4	0 436 470 490 547 568 616 626	461 470 490 547 568 616 626 661	Wilcox			S,E	P	D,E	Pumped 38 gpm on 10-8-70. Drilled to 862 feet. Temperature 74.5° F.
903	Mrs. Nell Parker	Parker & Harrison	1934	470	37	C	36			Queen City	36.0	5-4-36	N	N		
44-102	Byars, Bond & Andrade - H. W. Tempkins No.1		1950		5,230										E	Oil test.
103	Mrs. T. R. Crow	Andrews	1955	460	315	C	4	0	315	Queen City	64.1	11-12-70	N	N		
202	J. W. Breedlove	East Texas Earth Boring Co.	1965	550	104	C	30			Queen City	29.7	11-12-70	J,E 1/3	D,S		
203	W. H. Nickie	White Drilling Co.	1966	420	185	C S	4 2-1/2	0 155	155 185	Queen City	35	1-66	S,E 2	D	D	Pumped 50 gpm from 80 feet in January 1966.
204	K. Donoghey			445	21	C	36			Queen City	21.1	4-24-36	N	N		
302	Winston Reagan			500	31	C	36	0	31	Queen City	24.0	11-12-70	J,E 1/3	D		
401	City of Brownsboro	Layne Texas Co.	1950	400	620	C C S C	10-3/4 6-5/8 6-5/8 6-5/8	0 417 537 618	530 537 618 620	Wilcox	68	4-18-61	T,E	P		Formerly owned by Brownsboro Ind. School Dist.
402	Union Hill Water Supply Corp.	Wes-Tex Drilling Co.	1962	620	600	C C S C S C S	8-5/8 4 4 4 4 4 4	0 440 510 522 538 548 570	490 510 522 538 548 570 600	Carrizo			S,E	P		
403	Troy Crumpton	White Drilling Co.	1969	420	395	C C S C	4 2-1/2 2-1/2 2-1/2	0 337 373 393	354 373 393 395	Carrizo	78 67.5	6-21-69 11-12-70	S,E 1	D		Drilled to 480 feet.
404	T & F Dairy	Rehkop Drilling Co.	1970	430	780	C S	4-1/2 2	0 696	683 780	Wilcox	83 97.7	9-28-70 11-12-70	S,E 1	S	D	Pumped 20 gpm from 93 feet on 9-28-70.

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-44-405	H. S. Tompkins		1926	400	185	C	2			Queen City	+ +	4-24-36 11-18-70	N	S		
406	Kenneth Porter		1935	400	320	C	6			Carrizo	3.4	4-24-36	N	N		
407	J. E. Tedford	Rison	1856	420	34	C	36			Queen City	28.7	4-21-36	N	N		
501	Cuba English	Pete English	1900	440	43					Queen City	27.5 29.5	2-21-36 11-19-70	N	N		
502	Porter	E. Gartman	1930	455	13	C	36			Queen City	6.8	4-24-36	N	N		
503	I. A. Simmons Estate		1910	440	29	C	36			Queen City	21.0	2-21-36	N	N		
504	J. B. Sims Estate	J. B. Sims	1930	400	25	C	36			Queen City	23.0	2-21-36	N	N		
601	Three Community Water Supply Corp.	Rehkop Drilling Co.	1968	420	747	C C S C	7 4-1/2 4-1/2 4-1/2	0 603 688 730	622 688 730 747	Wilcox	108.5	11-12-70	S,E 3	P	D	Temperature 74° F.
602	Alton Cade	White Drilling Co.	1955	440	512	C S	4 4	0 480	480 510	Carrizo	65.5	11-12-70	J,E 1-1/2	D,S		
603	Terris Bailey	Chambers & Phillips	1965	380	300	C S	2 2	0 282	282 300	Queen City			J,E 1	D	D	
604	State Highway Dept.	Mager Brown	1934	370	7	C	36			Alluvium	5.0	2-21-36	N	N		
701	W. C. Windsor, Jr. - Ella Whitehead et al No.1		1959		5,106										E	Oil test.
702	Travis Wright	Chambers & Phillips	1967	480	212	C S C	2 2 2	0 190 206	190 206 212	Queen City	50	6-24-67	J,E 1	D,S	D	
703	Tergeson Estate		1906	440	37					Queen City	27.7	2-23-36	N	N		
704	Olson Estate		1830	500	48	C	36			Queen City	44.7	2-21-36	N	N		
705	Olson Estate	Tom Barton	1930	500	46	C	36			Queen City	30.8	2-21-36	N	N		
801	Mrs. Selma Hopson	Hopson	1950	480	49	C	30	0	49	Queen City	42.1	11-18-70	J,E 1/3	D,S		
901	DeKalb Agricultural Assoc., Inc. - Lucy A. Lawrence et al No.1		1954		5,177										E	Oil test.
902	B. G. Byars - Blanch Thedford No.1		1955		5,998										E	Oil test.
903	Donald Lawrence	White Drilling Co.	1966	430	435	C C S C	4 2-1/2 2-1/2 2-1/2	0 403 415 430	415 415 430 435	Carrizo	138 89.1	10-7-66 11-12-70	J,E 1	D,S	D	Drilled to 456 feet.
904	Odis A. Parmer	East Texas Earth Boring Co.	1965	410	41	C	30	0	24	Queen City	23.8	11-18-70	J,E 1/3	N		
905	W. T. Birdwell		1906	420	14	C	36			Queen City	10.9	2-23-36	N	N		
906	Mayer Davis & Gladys Davis	J. Davis	1932	360	50	C	6			Queen City	+	2-29-36	N	N		
45-101	Mrs. McMahan			435	11	C	36			Queen City	7.2	2-25-36	N	N		
102	Paul Young		1911	545	23	C	36			Weches	18.9	2-25-36	N	N		
401	Hewitt McKay	White Drilling Co.	1956	360	510	C	4	0	273	Reklaw, Carrizo	11.4 20.3	5-1-61 11-18-70	J,E 1/3	D,S		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-45-402	The Texas Co. - Morse No.1		1944		3,190										E	Oil test.
403	Henderson County Municipal Water Authority	Layne Texas Co.	1963	430	517	C	14	0	370	Reklaw, Carrizo	100.8	12-17-70	T,E	P	D,E	Drilled to 987 feet. Pumped 170 gpm from 313 feet on 12-18-70.
						C	8-5/8	0	375		95.8	12-18-70	30			
						S	8-5/8	375	425							
						C	8-5/8	425	450							
						S	8-5/8	450	470							
						C	8-5/8	470	490							
						S	8-5/8	490	510							
						C	8-5/8	510	517							
404	S. L. Rumbo	White Drilling Co.	1964	420	600	C	4	0	580	Wilcox	97.2	11-18-70	S,E 1	D,S		
						S	2-1/2	580	600							
405	Scott			390	29	C	36			Queen City	27.5	2-25-36	N	N		
506	Stroube & Stroube & L. A. Grelling - Jack Hardy No.1		1954		5,200										E	Oil test.
702	F. O. Burcham	White Drilling Co.	1959	380	770	C	4	0	650	Wilcox	70.0	11-19-70	S,E 1/2	D,S		
						C	2-1/2	642	730							
						S	2-1/2	730	770							
703	F. O. Burcham	Fred Hargett	1925	380	42	C	36			Queen City	37.7	2-23-36	N	N		
704	Mrs. J. C. Hicks	Petroleum Shell Co.	1932	340	500	C	18			Wilcox	+	2-29-36	N	N		
49-101	W. C. Windsor, Jr. & Hunt Graham - J. L. Williams No.1		1955		4,465										E	Oil test.
102	Kaemmerer & Folwell - Stevens No.1		1956		4,175										E	Oil test.
103	Community Water Co.	Community Water Co.	1965	320	260	C	4	0	196	Wilcox	27.7	9-3-70	S,E 1-1/2	P	D	
						S	4	196	260							
104	C. J. Holloway		1906	330	17	C	26			Wilcox	13.3	4-6-36	N	N		
201	Ezra Flemming	John Cobb Drilling Co.	1970	380	377	C	4	0	355	Wilcox			S,E 1	D		Temperature 72° F.
202	Ezra Flemming	John Cobb Drilling Co.	1969	380	455	C	4	0	300	Wilcox	47.7	9-9-70	N	N	D	
203	W. J. Carter	W. J. Carter	1915	460	27	C	6			Carrizo	18.8	3-17-36	N	N		
301	McElreath & Suggett - Deen No.1		1938												E	Oil test.
302	Iowa Payne Oil Co. - H. C. Moseley No.1		1951		4,399										E	Oil test.
303	C. F. Hahn Ranch	Rehkop Drilling Co.	1968	390	367	C	4-1/2	0	324	Wilcox	110	11-12-68	S,E 1/2	S	D	
						C	2-1/2	304	346		67.1	9-10-70				
						S	2-1/2	346	367							
304	J. R. Gregg	John Cobb Drilling Co.	1948	365	150	C	5	0	130	Wilcox	+	9-10-70		D,S		Flowed 2 gpm on 9-10-70. Temperature 70° F.
						S	5	130	150							
401	Texas Power & Light Old Mine No.3	J. A. Moore	1932	425	382	C	6			Wilcox	100.8	11-10-70	S,E 1	D		
402	Alfred Williams			360	36	C	36			Wilcox	32.3	2-10-36	N	N		
501	Gist & Walker - M. M. Thompson No.1		1953												E	Oil test.

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-49-502	J. V. Scrivener - American Livestock & Fuel No.1		1939		4,398										E	Oil test.
503	The Arthur Hawn Co.	Rehkop Drilling Co.	1968	420	430	C C S	4-1/2 2-1/2 2-1/2	0 370 400	370 400 430	Wilcox	85	8-16-68	S,E 1/2	P	D	Pumped 20 gpm from 105 feet on 8-16-68.
504	Grady Till	Fitzgerald	1970	400	386	C	6	0	355	Wilcox	77.9	10-2-70	S,E 1-1/2	D		Temperature 72.5° F.
505	W. F. Christopher	Sam Goodgame	1935	400	43	C	6			Wilcox	36.7	2-7-36	N	N		
506	Meek		1921	420	62	C	6			Wilcox	58.0	2-7-36	N	N		
507	J. W. Junell		1921	420	42	C	8			Wilcox	30.2	2-7-36	N	N		
508	Christopher Estate	Tom Russell	1906	420	54	C	72			Wilcox	40.0	2-7-36	N	N		
601	W. B. Henton, E. L. Howard & J. H. Roberts - J. M. Criswell Estate No.1		1948		8,742										E	Oil test.
602	Walter Lee Hampton	Rehkop Drilling Co.	1966	470	400	C S	4 4	0 380	380 400	Wilcox			S,E	D,S		
603	W. B. Fields	Rehkop Drilling Co.	1968	510	465	C C S	4-1/2 2-1/2 2-1/2	0 403 445	420 445 465	Wilcox	245	1-15-68	S,E 3	D	D	Pumped 14 gpm from 265 feet in January 1968. Temperature 73° F.
604	A. C. Rasco	Rehkop Drilling Co.	1968	460	410	C S	4 2-1/2	0 380	368 400	Wilcox	260	8-28-68	S,E 2	D,S	D	
605	Hampton Concrete Co.	West & Rehkop Drilling Co.	1966	490	550	C S	4 2-1/2	0 529	449 550	Wilcox	280	6-14-66	S,E 3	Ind.	D	Pumped 15 gpm from 400 feet on 6-14-66.
606	G. W. Green	L. Tipton	1910	460	23	C	36			Carrizo	16.1	3-13-36	N	N		
701	Blanch & Ballard et al - J. A. Jackson No.1		1955		4,942										E	Oil test.
702	E. McDaniel	Walter Lichsfield	1965	405	380	C	4			Wilcox	120.2	10-5-70	S,E 3/4	D		Temperature 73° F.
703	Carson Estate			335	44	C	8			Wilcox	27.2	4-2-36	N	N		
704	Carson Estate		1927	325	21	C	6			Wilcox	14.9	4-2-36	N	N		
802	Lone Star Gas Co. - Tri-Cities Gas Storage Unit No. 21-B		1968		7,700										E	Oil test.
803	W. B. Hinton J. L. Evans No.1		1947		7,991										E	Oil test.
804	W. B. Hinton - S. A. Gladney No.1		1946		7,836										E	Oil test.
805	W. B. Hinton - S. A. Ballard Estate No.1		1948		8,238										E	Oil test.
806	Crescent Heights Water Supply Corp.	Andrews & Foster Drilling Co.	1965	405	445	C C S	8-5/8 4 4	0 283 395	287 395 445	Wilcox	120.1	11-2-70	S,E 3	P	E	Drilled to 651 feet.

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-49-807	Crescent Heights Water Supply Corp.	Rehkop Drilling Co.	1969	405	365	C	7	0	168	Wilcox	100	8-7-69	S,E	P		Pumped 130 gpm from 191 feet in August 1969. Temperature 71° F.
						S	7	168	198							
						C	7	198	254							
						S	7	254	269							
						C	7	269	335							
						S	7	335	350							
						C	7	350	365							
808	Lone Star Gas Co.	Andrews Drilling Co.	1955	392*	251	C	13	0	60	Wilcox	78.9	10-7-70	J,E 2	D,Ind.	E	Temperature 71° F.
						C	7	0	209							
						S	7	209	251							
809	W. F. Leopard	Henry Welch		420	50	C	40			Wilcox	47.1	3-2-36	N	N		
901	Nolan Wayne Boyd	John Cobb Drilling Co.	1968	490	255	C	4	0	200	Wilcox			S,E 1/2	D	D	
902	Dogwood Estates	Rehkop Drilling Co.	1969	525	495	C	4-1/2	0	370	Wilcox	208	4-15-69	S,E 5	P	D	Drilled to 520 feet. Pumped 60 gpm from 222 feet on 4-15-69.
						S	4-1/2	370	412							
						C	4-1/2	412	475							
						S	4-1/2	475	495							
903	C. R. Boyd		1926	500	40	C	12			Reklaw	32.0	3-2-36	N	N		
50-101	City of Athens No.5	Layne Texas Co.	1950	530	732	C	18	0	460	Wilcox	238	4-28-61	T,E	P		Pumped 246 gpm on 9-25-70.
						C	12-3/4	0	467		227.8	9-25-70	100			
						C	8-5/8	467	470							
						S	8-5/8	470	490							
						C	8-5/8	490	520							
						S	8-5/8	520	540							
						C	8-5/8	540	600							
						S	8-5/8	600	650							
						C	8-5/8	650	660							
						S	8-5/8	660	670							
						C	8-5/8	670	690							
						S	8-5/8	690	710							
						C	8-5/8	710	732							
102	City of Athens No.3	Layne Texas Co.	1932	490	794	C	12-1/2	0	330	Wilcox	218.8	5-2-61	T,E	P		
						C	6	297	317				25			
						S	6	317	337							
						C	6	337	360							
						S	6	360	381							
						C	6	381	487							
						S	6	487	531							
						C	6	531	575							
						S	6	575	619							
						C	6	619	732							
						S	6	732	781							
						C	6	781	794							
103	City of Athens No.4	Layne Texas Co.	1948	490	800	C	24	0	179	Wilcox	233	5-2-61	T,E	P		
						C	12-3/4	0	180		168.2	10-23-70	60			
						S	12-3/4	180	200							
						C	12-3/4	200	214							
						S	12-3/4	214	228							
						C	12-3/4	228	272							
						S	12-3/4	272	294							
						C	12-3/4	294	450							
						S	12-3/4	450	490							
						C	12-3/4	490	491							
						C	8-5/8	491	518							
						S	8-5/8	518	542							
						C	8-5/8	542	641							
						S	8-5/8	641	707							
						C	8-5/8	707	757							
						S	8-5/8	757	777							
						C	8-5/8	777	800							

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-50-104	City of Athens No.6	Layne Texas Co.	1954	485	859	C	18	0	490	Wilcox	188	5-24-54	T,E	P	D,E	Pumped 560 gpm from 360 feet on 5-24-54. Pumped 640 gpm from 313 feet on 9-18-70.
						C	12-3/4	0	496		229	5-2-61	100			
						S	8-5/8	496	546		177.3	9-18-70				
						C	8-5/8	546	631							
						S	8-5/8	631	641							
						C	8-5/8	641	656							
						S	8-5/8	656	676							
						C	8-5/8	676	736							
						S	8-5/8	736	751							
						C	8-5/8	751	791							
						S	8-5/8	791	851							
						C	8-5/8	851	859							
105	Hugh Drane Ice Co.	Layne Texas Co.	1926	490	513	C	12			Wilcox	77.8	3-28-61	N	N		
						S	8				66.5	10-28-70				
106	Athens Canning Co.	Andrews	1958	490	729	C	8	0	405	Wilcox			T,E	Ind.		
						S	8	405	729				25			
107	Lone Star Producing Co. - Rusk No. 1-A		1948		8,280										E	Oil test.
108	Lone Star Producing Co. - W. R. Thomas No.1		1948		8,218										E	Oil test.
109	Edwin L. Cox, Jr.	West Drilling Co.	1956	505	600	C	8	0	440	Wilcox			T,E	D,S	E	
													40			
201	Christian Youth Foundation No.1	Layne Texas Co.	1943	500	649	C	6-5/8	0	550	Wilcox	142	10-14-43	S,E	P	D,E	Pumped 35 gpm from 184 feet on 10-14-43.
						C	4-1/2	530	550				3			
						S	4-1/2	550	568							
						C	4-1/2	568	607							
						S	4-1/2	607	647							
						C	4-1/2	647	649							
202	Christian Youth Foundation No.2	West Drilling Co.	1958	500	657	C	5	0	610	Wilcox	175.8	11-2-70	S,E	P		
						S	5	610	650				3			
						C	5	650	657							
203	Wiggins Brothers - Julie Watkins No.1		1958		4,700										E	Oil test.
301	W. C. Perryman et al - W. R. Nowlin No.1		1957		4,865										E	Oil test.
302	John & Jack Penrod	West Drilling Co.	1951	490	330	C	4	0	300	Wilcox	86.2	11-4-70	S,E	D,S	E	Drilled to 653 feet.
						S	2-1/2	300	330				1-1/2			
303	Damon Douglas	West & Rehkop Drilling Co.	1966	505	740	C	4-1/2	0	562	Wilcox	280	4-1-66	S,E	D	D	Pumped 24 gpm from 357 feet on 4-1-66.
						S	2-1/2	580	600				3			
						S	2-1/2	720	740							
304	Athens Fish & Game Club		1921	480	21	C	36			Queen City	16.8	3-8-36	N	N		
305	W. L. Roby		1932	500	46	C	6			Queen City	37.2	3-27-36	N	N		
401	E. B. LaRue, Jr. - J. I. Robbins No.1		1954		4,607										E	Oil test.
402	Billy Brown	West & Rehkop Drilling Co.	1960	485	700	C	8	0	500	Wilcox			S,E	P		
						S	4						3			
403	Dan Wolf	Andrews & Foster Drilling Co.	1969	480	205	C	4	0	165	Wilcox	54.1	10-23-70	S,E	D	D	Temperature 68.5° F.
						S	4	165	205							
404	Earl Hendry	Sam Goodgame	1932	470	35	C	6			Carrizo	23.7	3-5-36	N	N		
501	W. C. Perryman & M. B. Rudman - Cochran No.1		1956		4,675										E	Oil test.

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Casing and Screen Data: Diameter (inches)	Casing and Screen Data: Depth in Feet (from)	Casing and Screen Data: Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-50-502	Wiggins Brothers, Inc. - Woodie George No.1		1956		4,791										E	Oil test.
503	Leonard Nichols	Rehkop Drilling Co.	1968	460	635	C C S	4-1/2 2-1/2 2-1/2	0 490 615	505 615 635	Wilcox	160 124.6	12-1-68 10-28-70	S,E 1	D,S	D	Pumped 20 gpm from 166 feet on 12-1-68.
504	Jimmie Anderson	Chambers & Phillips	1969	440	181	C S C	2 2 2	0 162 178	162 178 181	Wilcox			J,E 1	D	D	
505	Theo Daniel		1860	485	20	C	60			Reklaw	12.3	5-10-36	J,E	D		
506	Theo Daniel		1857	480	41	C	36			Reklaw	25.5	3-10-36	N	N		
601	W. C. Perryman & Drilling & Exploration Co. - S. M. Cain Estate No.1		1956		4,787										E	Oil test.
602	C. B. Porter	Andrews & Foster Drilling Co.	1969	500	620	C S	4 2-1/2	0 600	600 620	Wilcox			S,E 1	D		
603	Thomas Franks			505	22	C	36	0	30	Queen City	12.0	10-28-70	J,E 1/2	D,S		Temperature 68.5° F.
604	Annie Bogaty	W. E. Johnson	1906	505	15	C	144			Queen City	9.4	3-10-36	N	N		
605	Tim Forrester	George Adams	1905	465	18	C	36			Reklaw	13.2	3-10-36	N	N		
701	Ira F. Warren	Andrews & Foster Drilling Co.	1965	480	420	C	5	0	420	Wilcox			S,E 1	D		Temperature 69.5° F.
702	Joe McNair	Rehkop Drilling Co.	1967	475	590	C C S	4 2-1/2 2-1/2	0 539 560	548 560 590	Wilcox	180 159.8	9-13-67 10-21-70	S,E 2	D,S	D	Temperature 74° F.
801	Virginia Hill Water Supply Corp.	Holly Mining Co.	1964	485	616	C C S C	8 4 4 4	0 445 545 595	545 545 595 616	Wilcox	142.8	10-5-70	S,E 15	P	E	Drilled to 927 feet.
802	Virginia Hill Water Supply Corp.	Rehkop Drilling Co.	1970	485	920	C C S C	8-5/8 4 4 4	0 744 865 905	835 865 905 920	Wilcox	200 179.5	7-1-70 10-5-70		P	D,E	Drilled to 1,030 feet. Pumped 150 gpm from 250 feet on 7-1-70. Temperature 78.5° F.
803	J. J. Stevens	Rehkop Drilling Co.	1970	405	580	C C S C	4-1/2 2-1/2 2-1/2 2-1/2	0 485 550 570	526 550 570 580	Wilcox	140 84.2	9-25-70 10-22-70	S,E 1-1/2	D	D	Pumped 15 gpm from 175 feet on 9-25-70. Temperature 74° F.
804	Pine Grove School		1930	420	20	C	36			Reklaw			N	N		
901	Wiggins & Hyde - Wyrick No.1		1951		5,468										E	Oil test.
902	Earnie Berry		1962	445	50	C	30	0	50	Reklaw	14.7	10-28-70	J,E 1/3	D,S		
903	D. Woodlee	Holland Morgan	1929	465	10	C	36			Reklaw	4.8	4-14-36	N	N		
51-102	W. C. Perryman & I. P. LaRue - Annie L. Forrester No.1		1957		4,590										E	Oil test.
103	Edwin White	Hampton Drilling Co.	1967	460	41	C	30	0	41	Queen City	8.9	11-2-70	J,E 1	D	D	
104	Lone Star M V Camp			460	360	C	4			Wilcox	84.7	11-3-70	S,E 3	P		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-51-105	Colleen Musselwhite	R. L. Parrett	1909	485	12	C	36			Queen City	12.0	4-27-36	N	N		
106	J. B. Paroline	J. B. Paroline	1935	470	15	C	36			Queen City	3.4	5-4-36	N	N		
201	W. H. Rounsaball		1930	460	47	C	48			Queen City	37.2 43.1	4-27-61 10-30-70	J,E 1-1/2	D,S		
202	W. C. Perryman & I. P LaRue - Mollie Wagers No.1		1957		4,495										E	Oil test.
203	E. L. Howard & Sanders & Murchison - E. W. Adair No.1		1952		4,675										E	Oil test.
204	F. T. Williams, Jr.	Andrews & Foster Drilling Co.	1968	420	656	C C S C S C S	4 2-1/2 2-1/2 2-1/2 2-1/2 2-1/2 2-1/2	0 270 280 550 560 645	265 270 280 550 560 645 655	Wilcox			S,E 1	D		
205	C. A. Lott	Hampton Drilling Co.	1966	460	56	C	30	0	56	Queen City	31.4	11-2-70	J,E 1/2	D,S	D	
206	Sam Lee	B. F. Avant	1936	445	14	C	36			Queen City	7.6	5-4-36	N	N		
207	A. Caddell	L. Meadows	1930	430	35	C	36			Queen City	30.6	5-5-36	N	N		
301	LaRue - Browning - R. W. Monk No.1		1957		4,540										E	Oil test.
302	Kenneth Richardson	Rehkop Drilling Co.	1960	410	700	C C S C	4-1/2 2 2 2	0 511 616 679	585 616 679 700	Wilcox	96.2	11-19-70	S,E 3	D,S		
303	State Highway Dept.	Charles Frazier	1920	420	37	C	36			Queen City	32.9	5-4-36	N	N		
304	George Curry	George Curry	1925	440	31	C	36			Queen City	26.1	5-4-36	N	N		
401	Gulf Oil Corp. - Frizell No.1		1944		5,316										E	Oil test.
402	Mrs. Maude Steel	Hampton Drilling Co.	1966	520	42	C	30	0	42	Queen City	24.1	10-30-70	J,E 1/3	D,S	D	
501	Sanders & Murchison - Minnie Tindel No.1		1954		4,943										E	Oil test.
502	Hugh Reynolds	Rehkop Drilling Co.	1970	460	720	C C S	4-1/2 2 2	0 573 660	660 660 720	Wilcox	148 167.0	6-12-70 10-30-70		D,S	D	
503	Sholars & Holcomb	Andrews & Foster Drilling Co.	1968	480	440	C S	4 2-1/2	0 400	400 430	Wilcox	139.9	10-30-70	S,E 2	D,S		Temperature 72.5° F.
504	Charles D. Meador	East Texas Earth	1967	470	50	C	30			Queen City	36 31.8	7-27-67 11-2-70	J,E 1/2	D,S	D	
505	Tom Faulk, Jr.	Russell	1936	495	33	C	48			Queen City	29.8	4-10-36	N	N		
601	Bracken Oil Co. - Hubert Tindel No.1		1955		4,731										E	Oil test.
602	W. P. Luse - Hall No.1		1951		4,506										E	Oil test.
603	Theopa Dingler			455	60	C	36	0	60	Queen City	52.2	11-20-70	J,E 3/4	D		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-51-604	S. W. Bickley		1900	480	42	C	30	0	42	Queen City	32.8	11-20-70	J,E 1/4	D,S		
605	D. Dingler	T. R. Dingler	1921	440	33	C	36			Queen City	27.2	5-5-36	N	N		
606	John McMachin	J. F. Godwin	1912	475	20	C	36			Queen City	14.9	4-27-36	J,E	D		
701	Wilma Wadell & B. A. Kaemmerer - Stephens No.1		1956		4,658										E	Oil test.
702	Gilbert Perry	Rehkop Drilling Co.	1970	480	756	C	4-1/2	0	666	Wilcox	210	10-19-70	S,E 1-1/2	D,S	D	Temperature 74° F.
						C	2-1/2	652	736		169.6	10-30-70				
						S	2-1/2	736	756							
703	Elmer Hargraves	Wheeler Gore	1934	560	29	C	24			Queen City	25.9	4-16-36	N	N		
704	Elmer Hargraves	Tom Russell	1931	485	66	C	36			Queen City	61.3	5-1-36	N	N		
801	Anlaco Ranch	Layne Texas Co.	1946	500	599	C	5	0	534	Wilcox			T,E 5	D,S	E	
						C	3-1/2	512	533							
						S	3-1/2	533	596							
						C	3-1/2	596	599							
802	E. B. LaRue, Jr.- Faulk & Coleman No.1		1947		2,938										E	Oil test.
803	Jack Garner	Albright	1964	555	605	C	4	0	585	Wilcox			S,E 2	D,S		Temperature 73.5° F.
						S	2-1/2	585	605							
804	L. D. Henderson		1915	500	32	C	36			Queen City	28.6	5-5-36	N	N		
901	Carter-Jones Drilling Co.- Fred R. Splawn No.1		1955		4,808										E	Oil test.
902	C. L. Norsworthy, Jr. - J. S. Abercrombie No.1		1957		4,602										E	Oil test.
903	Paul Harden	Less Meadows	1945	590	53	C	36			Queen City	39.2	11-24-70	S,E 1/2	D,S		
904	Dennis Sholars	Sholars & Tindel		515	62	C	36			Queen City	57.1	4-10-36	N	N		
905	V. Meyer Estate		1915	535	15	C	36			Queen City	10.5	5-5-36	N	N		
											7.7	11-11-70				
52-101	The Ohio Oil Co. - J. R. Adair No.1		1955		11,589										E	Oil test.
102	Gene Goff - H. H. Richardson No.1		1950		4,802										E	Oil test.
103	Moores Station Water Supply Corp.	Rehkop Drilling Co.	1969	600	800	C	7	0	723	Wilcox	289	4-24-69	S,E 15	P	D	Drilled to 900 feet. Pumped 100 gpm from 327 feet on 4-24-69. Pumped 87 gpm from 310 feet on 12-17-70. Temperature 76° F.
						C	3-1/2	640	724		285.1	10-8-70				
						S	3-1/2	724	779		284.9	12-17-70				
						C	3-1/2	779	800							
104	Bob Tindel	Greer	1958	435	368	C	4	0	326	Carrizo	41.0	11-20-70	N	N		
						S	4	326	368							
105	E. C. Lewis	Magnolia Petroleum Co.	1932	380	40	C	36			Queen City	35.6	5-4-36	N	N		
201	Haynes B. Ownby Drilling Co. et al - Pearl Wofford No.1		1955		5,006										E	Oil test.
202	Georesearch, Inc. - Mikeal Buford Heirs No.1		1956		5,415										E	Oil test.
203	Charles Mathis	East Texas Earth Boring Co.	1968	425	49	C	30	0	33	Queen City	33.0	11-19-70	J,E 1/2	S		Temperature 68° F.
						C	20	33	49							

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-52-204	W. C. Welch	Chambers & Phillips	1968	490	180	C	2	0	160	Queen City			J,E	S		
						S	2	160	176				1			
						C	2	176	180							
205	Mathis Estate			420	Spring					Queen City				N		
301	E. B. LaRue, Jr. - S. A. Pollard No.1		1957		5,005										E	Oil test.
302	C. L. Cooper	Greer	1958	390	127	C	4			Queen City			J,E 1/2	N		
303	Texas Pecan Nursery	Andrews & Foster Drilling Co.	1962	400	410	C	6	0	280	Queen City, Carrizo			T,E	D,Irr.		
						S	4	280	300				5			
						C	4	300	380							
						S	4	380	410							
304	H. C. Morman	B & C Drilling Co.	1955	415	102	C	4	0	82	Queen City			J,E	D		
						S	4	82	102				1			
305	Joe Meyer	Sid Hightower	1934	380	29	C	36			Queen City	26.6	4-20-36	N	N		
306	Alvin Greer	J. W. Hanna	1936	420	10	C	36			Queen City	6.7	4-21-36	N	N		
307	Mrs. Murphy	R. L. Boyd	1911	380	32	C	36			Queen City	20.7	4-23-36	N	N		
401	Fairway Operating Co. - Mrs. Ada Hightower No.1		1960		4,800										E	Oil test.
402	T. L. Crossley	John Cobb Drilling Co.	1958	510	256	C	4	0	226	Queen City	56.1	11-20-70	N	N		
						S	4	226	256							
403	T. L. Crossley	J. C. Bickley	1906	500	70	C	36			Queen City	65.6	4-27-36	N	N		
404	W. N. Crawford	Sid Hightower	1934	460	58	C	36			Queen City	54.5	5-5-36	N	N		
501	J. C. Cook, et al - Geo. Smith No.1		1941		4,890										E	Oil test.
502	Central High School		1936	440	71	C	30	0	71	Queen City	46.7	4-27-61	N	N		
503	E. B. LaRue, Jr. - Allen Estate No.1		1956		5,405										E	Oil test.
504	Central High School	Andrews & Foster Drilling Co.	1963	440	650	C	4	0	580	Wilcox	126.2	11-24-70	S,E	P		
						C	2-1/2	580	600				1/3			
						S	2-1/2	600	640							
505	Wallace	W. H. Boles	1934	440	21	C	36			Queen City	19.4	5-5-36	N	N		
506	Miller Estate	Sandy McDonald	1934	475	27	C	36			Queen City	26.5	4-20-36	N	N		
601	Greenbrier Oil Co. - Rudman & Genecov No.1		1956		5,336										E	Oil test.
602	Byars, Hickey, & Randall-Mary Rice Estate No.1		1955		5,830										E	Oil test.
603	Badie Warren	Industrial Tile	1962	410	40	C	30	0	40	Queen City	29.8	11-19-70	J,E 3/4	D		
701	E. B. LaRue - B. L. Garrett No.1		1956		4,780										E	Oil test.
702	Allan Currington		1963	485	48	C	30	0	45	Queen City	43.7	11-20-70	H	D		
703	Homer Earl	Chambers & Phillips	1968	500	162	C	2	0	154	Queen City			J,E	D,S		
						S	2	154	162				1			
704	Thomas Faulk	McGreen	1910	490	53	C	36			Queen City	52.2	5-5-36	N	N		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-52-801	The Texas Co. - F. R. Faulk No.1		1948		5,015										E	Oil test.
802	Watburn Oil Co. - Xenia Miller No.1		1955		5,210										E	Oil test.
803	A. C. Prestwood			440	38	C	30	0	38	Queen City	29.6	11-19-70	J,E 1/3	N		
804	Jack Barton	Dan Dansby	1934	500	51	C	36			Queen City	47.7	4-21-36	N	N		
901	Frank & George Frankel - Xenia Miller No.1		1959		10,774										E	Oil test.
53-102	Humble Oil & Refining Co.- Chandler Oil Unit No.1		1956		10,625										E	Oil test.
103	True-Line Development Co.	Andrews & Foster Drilling Co.	1968	360	710	C C S	4 2-1/2 2-1/2	0 596 680	628 680 710	Wilcox	48.4	11-19-70	S,E 2	P		
401	Fairway Operating Co. - Morrison No.1		1959		4,775										E	Oil test.
702	John W. Murchison & M. B. Rudman - Rudman Oil Unit No.1		1967		5,995										E	Oil test.
703	Ralph Howell	White Drilling Co.	1970	365	436	C C S	4 2-1/2 2-1/2	0 374 395	390 395 435	Carrizo	95 67.1	9-10-70 11-19-70	S,E 5	P	D	
704	D. Foster	White Drilling Co.	1970	370	940	C C S C	7 3 3 3	0 827 890 930	860 890 930 940	Wilcox	100 91.4	8-3-70 11-25-70	S,E 5	P	D	
57-101	W. K. Hayes	White Drilling Co.	1966	330	216	C C S C	4 2-1/2 2-1/2 2-1/2	0 185 194 214	189 194 214 216	Wilcox	79	3-19-66	S,E	D	D	
102	L. J. Fontenat	Rehkop Drilling Co.	1970	360	360	C C S	4 2 2	0 234 300	304 300 360	Wilcox	115 88.9	6-10-70 10-7-70	S,E 1-1/2	D	D	
103	J. T. Hayes	White Drilling Co.	1969	400	246	C C S C	4 2-1/2 2-1/2 2-1/2	0 194 224 244	198 224 244 246	Wilcox	102	4-22-69	S,E	D	D	
201	W. B. Hinton - E. K. Gladney No. C-1		1948		8,454										E	Oil test.
202	Stanolind Oil & Gas Co. - Unit "E" No.1		1945		2,519										E	Oil test.
203	C. C. Miller	Rehkop Drilling Co.	1970	380	460	C C S C S	4-1/2 2 2 2 2	0 282 325 350 418	322 325 350 418 460	Wilcox	120 90.9	7-16-70 10-7-70	S,E 1-1/2	D	D	Pumped 20 gpm from 160 feet in July 1970.
204	J. C. Rogers	Rehkop Drilling Co.	1969	520	220	C C S	4-1/2 2-1/2 2-1/2	0 179 200	189 200 220	Wilcox	97.5	10-20-70	S,E 3/4	D,S	D	Pumped 15 gpm in February 1969. Temperature 68° F.
301	Circle 10 - Boy Scouts of America	Rehkop Drilling Co.	1969	445	210	C C S	4-1/2 2-1/2 2-1/2	0 169 190	180 190 210	Carrizo	84 45.4	1-27-69 10-1-70	S,E 1/2	D	D	Temperature 68° F. Ranger house well.

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-57-302	Circle 10 - Boy Scouts of America	West & Rehkop Drilling Co.	1967	505	1,066	C S C S	8-5/8 4-1/2 4-1/2 4-1/2	0 1,016 1,046 1,056	1,006 1,046 1,056 1,066	Wilcox	225 208.5	6-15-67 10-1-70	S,E 10	P	D,E	Drilled to 1,105 feet. Pumped 50 gpm from 582 feet on 6-15-67. Temperature 79° F. Main camp well.
303	J. M. Boyd	Chick West	1952	360	80	C	6	0	80	Carrizo	+	10-21-70	N	N		Flowed 45 gpm on 10-21-70. Temperature 68° F.
304	J. M. Boyd	Sun Oil Co.	1934	360	70	C	36			Carrizo	+	6-5-36	N	N		
305	Billings	J. A. Moore		390	36	C	48			Reklaw	31.2	3-5-36	N	N		
401	Crossroads School	West	1939	390	180	C S	6 6	0 160	160 180	Wilcox	104.2	10-7-70	S,E 1	P		Temperature 71.5° F.
402	W. B. Hinton - W. D. Thornton No.1		1948		8,625										E	Oil test.
403	Mary Thomas	Jack Barton	1928	360	37	C	6			Wilcox	22.7	3-26-36	N	N		
501	Sidney Pinkston, Jr. & Ed Overton - H. M. Gage No.1		1962		4,332										E	Oil test.
502	Mrs. S. M. Pate	Miller Drilling Co.	1967	525	250	C	4	0	222	Wilcox	160	8-15-67	S,E 3/4	D	D	
503	Jack Riddlesperger		1948	400	135	C	6	0	135	Wilcox			N	N		
504	Mrs. R. P. Cotton	Sam Goodgame	1934	405	91	C	6			Wilcox	34.7	4-29-36	H	D		
505	F. Locke		1928	380	54	C	8			Wilcox	23.7	3-31-36	N	N		
601	J. D. Goodgame Estate	Frank Rogers	1930	425	14	C	36			Reklaw	5.8	3-30-36	N	N		
602	Bud Anding	Orville Anding	1932	430	29	C	36			Reklaw	26.3	3-30-36	N	N		
702	F. R. Litchfield	Fred M. Allison	1939	330	390	C	7			Wilcox	74.3	10-7-70	S,E 1/3	D		
703	H. A. Willingham	Jim Barton	1931	340	48	C	6			Wilcox	35.0	3-26-36	N	N		
704	Mrs. C. R. Litchfield	Jack Barton	1913	330	62	C	2			Wilcox	39.4	3-26-36	N	N		
705	Dolphus Pettit Estate	Jim Barton	1934	330	46	C	6			Wilcox	37.8	3-11-36	N	N		
802	Craig Gartside	Andrews & Foster Drilling Co.	1970	410	402	C	4	0	306	Wilcox	55.4	10-7-70	S,E 1/2	D	D	Temperature 72° F.
901	Sun Oil Co. & Magnolia Petroleum Co. - Genecov & Roosth No.1		1944		6,449										E	Oil test.
58-101	William C. Wettstein - Koon Kreek Klub No.1		1957		5,890										E	Oil test.
102	Clyde Pace	Rehkop Drilling Co.	1965	425	640	C C S	4 2 2	0 557 620	571 620 640	Wilcox			S,E 1/3	D		
103	Stella Pace	Morrill Harris	1935	420	57	C	36			Queen City	51.2	4-19-36	N	N		
201	W. C. Windsor, Jr. & Halbert Drilling Co. - Robbins Estate No.1		1956		5,145										E	Oil test.
202	Mack Adams	Rehkop Drilling Co.	1964	390	555	C C S	4 2-1/2 2-1/2	0 471 534	490 534 555	Wilcox	57.1	11-24-70	S,E 1-1/2	D,S		
203	L. B. Teague	John Sullivan	1919	350	30	C	36			Queen City	27.1	2-12-36	N	N		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-58-204	Percy Harris	Charles McCool	1935	440	19	C	36			Queen City	15.9	4-29-36	N	N		
301	Continental Oil Co.														E	Oil test.
302	R. A. Lambright	Andrews & Foster Drilling Co.	1965	420	550	C	4	0	520	Wilcox	100.7	10-22-70	S,E 1	D,S		
						S	2	530	550							
303	R. A. Lambright	N. E. Webb	1905	400	26	C	36			Queen City	21.4	4-30-36	N	N		
401	Koon Kreek Klub	Layne Texas Co.	1936	315	480	C	7	0	430	Carrizo	+42	6-36	N	Irr.		Flowed 366 gpm in June 1936.
						C	4-1/2	415	436		+	4-24-61				
						S	4-1/2	436	478		+	10-21-70				
						C	4-1/2	478	480							
402	Koon Kreek Klub	Holly Mining Co.	1964	365	1,249	C	8	0	1,168	Wilcox	63	12-12-64	S,E	D	D,E	Drilled to 1,344 feet. Pumped 137 gpm from 350 feet on 12-13-64. Pumped 125 gpm on 10-21-70. Temperature 84° F.
						C	4-1/2	1,068	1,168		68.8	10-21-70	30			
						S	4-1/2	1,168	1,192							
						C	4-1/2	1,192	1,228							
						S	4-1/2	1,228	1,249							
501	W. C. Windsor et al - J. S. French No.1		1955		6,272										E	Oil test.
502	G. E. Brown	West & Rehkop Drilling Co.	1965	380	520	C	4-1/2	0	462	Wilcox	65	3-25-65	S,E	D,S	D	Pumped 27 gpm from 90 feet on 3-25-65.
						S	2-1/2	500	520		57.6	10-21-70	2			
503	Hubert Mott	Rehkop Drilling Co.	1966	380	520	C	4	0	463	Wilcox			S,E	D,S	D	Pumped 20 gpm on 11-10-66.
						C	2-1/2	437	500				1-1/2			
						S	2-1/2	500	520							
504	John W. Murchison	Rehkop Drilling Co.	1969	330	943	C	8-5/8	0	697	Wilcox	28	9-1-69	S,E	D,Irr.	D	Pumped 200 gpm from 170 feet on 12-21-70. Temperature 79° F.
						C	4-1/2	607	813		25.3	10-22-70	15			
						S	4-1/2	813	933		24.2	12-21-70				
						C	4-1/2	933	943							
505	Terraverde Ranch	Andrews & Foster Drilling Co.		490	480	C	4	0	450	Reklaw	132.1	11-25-70	S,E	D,S		
						S	2-1/2	470	480				1			
506	Terraverde Ranch	Andrews & Foster Drilling Co.		480	720	C	4	0	650	Wilcox	153.2	11-25-70	S,E	D		
						S	2-1/2	690	720				1-1/2			
601	L. O. McMillian - H. C. Gross No.1		1943		4,930										E	Oil test.
602	Hugh M. Cunningham	Andrews & Foster Drilling Co.	1962	390	800	C	8			Wilcox	72.5	10-22-70	T,E 25	Irr.		
603	Carroll Springs Church	Andrews & Foster Drilling Co.	1968	430	850	C	5	0	820	Wilcox	126.7	10-22-70	S,E	Irr.		Temperature 74.5° F.
						S	2	830	850				1			
604	Lonnie Lambright	Tracy Lambright	1924	450	20	C	6			Queen City	9.5	4-30-36	N	N		
802	Jimmie F. Weaver			410	40	C	30			Queen City	22.5	10-22-70	J,E 1/3	D		
903	E. L. Giles	E. L. Giles		450	26	C	36			Queen City	21.0	2-24-36	N	N		
59-101	W. C. Windsor, Jr. et al - Smith No.1		1956		4,600										E	Oil test.
102	Caroline Hunt Trust Estate D. N. Farmer No.1		1954		4,808										E	Oil test.
103	Edwin L. Cox & B. J. Knox - A. A. Zimmerman No.1		1956		4,695										E	Oil test.

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	Depth in Feet (to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Static Water Level 3/: Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-59-104	Rainbo Club	White Drilling Co.	1961	380	560	C	4	0	409	Wilcox	75.3	11-23-70	S,E	D		
						C	2	404	506				3/4			
						S	2	506	536							
						C	2	536	560							
105	Walter Hairgrove	Hampton Drilling Co.	1969	500	27	C	30	0	27	Queen City	7.0	11-23-70	J,E	D,S		
													1/2			
106	Bill Lightfoot	A. F. Lightfoot	1926	420		C	6			Queen City	50.1	5-1-36	N	N		
107	W. C. Peavy	Greer	1929	465	55	C	42			Queen City	49.0	5-1-36	N	N		
201	W. C. Perryman & I. P. LaRue - W. M. Wofford No.1		1957		4,810										E	Oil test.
202	Matt Burns	West Drilling Co.	1957	510	300	C	6	0	260	Queen City	35.1	10-29-70	S,E	N	E	Drilled to 661 feet.
						S	4	260	300				1			
203	Mrs. Horton Young		1933	500	28	C	36			Queen City	25.2	4-16-36		S		
204	J. R. Hallmark			555	43	C	36			Queen City	38.5	4-16-36	N	N		
205	State Highway Dept.	Humble Oil Co.	1933	440	90	C	3			Queen City	+	4-16-36	N	N		
301	R. B. Sanders & Hunt Graham - J. M. Miller No.1		1954		5,577										E	Oil test.
302	LaPoyner School	Andrews & Foster Drilling Co.	1968	495	622	C	4	0	517	Wilcox			S,E	P	D	
						C	2-1/2	498	540				3			
						S	2-1/2	540	580							
						C	2-1/2	580	622							
303	Mrs. H. E. Dulaney	Andrews & Foster Drilling Co.	1969	460	582					Wilcox	115	10-29-69		D,S	D	
											142.2	11-24-70				
304	Owen Young Estate	Baker	1918	490	44	C	6			Queen City	38.0	4-16-36	N	N		
305	LaPoyner School		1936	490	56	C	36			Queen City	51.6	4-16-36	N	N		
401	L. O. McMillian - Warren No.1		1944												E	Oil test.
402	E. L. Howard - Gilbert No.1		1949		4,754										E	Oil test.
403	Wiggins & Hyde & Continental Oil Co. - W. A. Palmer No.1				5,045										E	Oil test.
404	Louis F. Lindsey	Hampton Drilling Co.	1960	485	45	C	30	0	35	Queen City	32.7	10-29-70	J,E	D,S		
													1/2			
405	Farris Estate	M. C. Farris	1930	500	86	C	36			Queen City	78.3	4-30-36	N	N		
406	Palmer Estate	J. W. Palmer	1916	520	75	C	6			Queen City	64.5	4-30-36	N	N		
501	Cities Service Oil Co. - M. C. Pharris		1956		11,175										E	Oil test.
502	Douglas Warren	Albright	1964	540	715	C	4	0	642	Wilcox	226.8	10-29-70	S,E	D,S		Temperature 71° F.
						C	2-1/2	642	702				2			
						S	2-1/2	702	712							
503	Williams Estate	I. Owens	1924	585	114	C	36			Queen City	110.5	4-17-36	N	N		
504	J. M. Miller	J. W. Taylor	1928	520	54	C	36			Queen City	49.3	4-17-36	N	N		
505	Rodenberg		1906	560	111	C	36			Queen City	102.0	4-30-36	N	N		

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-59-601	Fred Agnich	Andrews & Foster Drilling Co.		500	303	C	4			Reklaw	73.8	11-23-70	S,E 1/2	D,S		
60-101	Humble Oil & Refining Co.-George F. Mixon, Sr. No.1		1962		10,610										E	Oil test.
102	Girl Scouts of America	White Drilling Co.	1967	610	577	C	7	0	20	Carrizo	258	10-31-67	S,E 2	P	D	
						C	4	0	525		266.7	11-24-70				
						C	2-1/2	495	530							
						S	2-1/2	530	570							
						C	2-1/2	570	577							
201	Delta Drilling Co.& TEAS-Hunt & Miller No.1		1945		5,250										E	Oil test.
202	Hunt Oil Co. No.1	Texas Water Wells	1966	530	1,235	C	13-3/8	0	885	Wilcox	248	3-17-66	T,Ng	Ind.	D,E	Pumped 450 gpm from 390 feet on 3-17-66. Temperature 82° F.
						C	7	790	890		320	6-10-67				
						S	7	890	960		300	2-7-70				
						C	7	960	1,070							
						S	7	1,070	1,090							
						C	7	1,090	1,100							
						S	7	1,100	1,130							
						C	7	1,130	1,170							
						S	7	1,170	1,230							
						C	7	1,230	1,235							
203	Hunt Oil Co. No.3	Texas Water Wells	1970	515	1,260	C	14	0	1,060	Wilcox	343.9	10-1-70	T,Ng	Ind.	E	Pumped 450 gpm from 728 feet on 1-15-70.
						C	8-5/8	960	1,066							
						S	8-5/8	1,066	1,095							
						C	8-5/8	1,095	1,130							
						S	8-5/8	1,130	1,157							
						C	8-5/8	1,157	1,163							
						S	8-5/8	1,163	1,209							
						C	8-5/8	1,209	1,222							
						S	8-5/8	1,222	1,245							
						C	8-5/8	1,245	1,260							
204	Hunt Oil Co. No.4	Texas Water Wells	1970	435	1,250	C	14	0	1,010	Wilcox	300	5-26-70	T,Ng	Ind.	D,E	Pumped 503 gpm from 406 feet on 5-26-70. Temperature 83.5° F.
						C	8-5/8	910	1,017							
						S	8-5/8	1,017	1,030							
						C	8-5/8	1,030	1,040							
						S	8-5/8	1,040	1,084							
						C	8-5/8	1,084	1,096							
						S	8-5/8	1,096	1,142							
						C	8-5/8	1,142	1,203							
						S	8-5/8	1,203	1,212							
						C	8-5/8	1,212	1,226							
						S	8-5/8	1,226	1,246							
						C	8-5/8	1,246	1,250							
301	Cities Service Oil Co. - C. E. Gardner No.1		1956		10,150										E	Oil test.
302	James L. Ellis - Cain No.1		1966		10,050										E	Oil test.
303	Sorelle & Sorelle - Spencer Swaney No.1		1954		5,434										E	Oil test.
304	Jessie B. Gipson	East Texas Earth Boring Co.	1969	430	48	C	30	0	48	Queen City	36.6	11-24-70	J,E 1/3	D		
401	Louis Holliman		1958	410	12	C	30	0	12	Queen City	3.6	11-24-70	Cf,E 1-1/2	P		
402	Louis Holliman	West	1950	400	490	C	3	0	260	Queen City, Wilcox	+	4-18-61	N	N		Estimated flow 5 gpm on 11-24-70.
						S	3	260	280		+	11-24-70				
						C	3	280	470							
						S	3	470	490							

For footnotes see end of table.

Table 10.--Records of Wells, Springs, and Test Holes in Henderson County--Continued

Well Number	Well Owner	Driller	Year Completed	Altitude of Land Surface (feet) 1/	Depth of Well (feet)	Casing and Screen Data: Casing or Screen 2/	Diameter (inches)	Depth in Feet (from)	(to)	Indicated Water-bearing Unit	Static Water Level 3/: Depth (feet)	Date	Method of Lift and Power 4/	Use of Water 1970 5/	Logs Available 6/	Remarks
LT-34-60-405	Jess Tolly	White Drilling Co.	1970	440	800	C	4	0	720	Wilcox	240	2-3-70	S,E 3	D	D	
						C	2-1/2	716	759							
						S	2-1/2	759	799							
						C	2-1/2	799	800							
406	Wyatt			440	65	C	2			Queen City	49.0	4-20-36	N	N		
407	Poynor Sawmill & Gin			400	18	C	60			Queen City	+	4-17-36	N	N		
408	T, N, N & O Railroad			400	16	C	24			Queen City	4.2	4-20-36	N	N		
502	James Fisher	J. M. Allen	1969	470	64	C	30	0	64	Queen City	52	1-8-69	J,E 3/4	D,S	D	
											50.3	11-24-70				
61-102	Iowa Payne Oil Co. - T. J. Weenshe No.1		1948		5,116										E	Oil test.
103	W. C. Perryman & George J. Greer, et al - Larkin P. Smith No.1		1958		5,162										E	Oil test.
104	Wes McGuffey, Jr.	Rehkop Drilling Co.	1968	390	685	C	4-1/2	0	586	Carrizo	190	9-1-68	S,E 5	P	D	Pumped 50 gpm from 230 feet on 9-1-68.
						C	2-1/2	559	622		146.0	11-25-70				
						S	2-1/2	622	664							
						C	2-1/2	664	685							
105	James Berry	Rehkop Drilling Co.	1969	380	650	C	4-1/2	0	547	Carrizo	126	7-5-69	S,E 5	P	D	Pumped 60 gpm from 206 feet on 7-5-69.
						C	2-1/2	534	589							
						S	2-1/2	589	629							
						C	2-1/2	629	650							
106	R. B. Atwood			380	54	C	36			Queen City	50.3	4-18-36	N	N		
107	Baker	Less McDonald	1932	370	28	C	36			Queen City	24.0	4-18-36	N	N		
404	Foster Ready Mix	Rehkop Drilling Co.	1969	460	272	C	4-1/2	0	207	Queen City	69	4-18-69	S,E 1	Ind.	D	Pumped 20 gpm from 98 feet on 4-18-69.
						C	2-1/2	188	251							
						S	2-1/2	251	272							
405	Baker		1925	360	29	C	36			Queen City	27.5	4-18-36	N	N		

1/ Altitudes which have asterisks (*) are from aneroid or differential leveling surveys. All other altitudes are estimated from USGS topographic quadrangle maps having 10-foot or 20-foot contour intervals.

2/ Identifying letters used are:

C - Casing or blank liner
S - Screen

3/ Reported water levels are given in feet; measured water levels are given in feet and tenths. + indicates water level above land surface.

4/ Identifying letters used are:

A - airlift
C - cylinder
Cf - centrifugal
J - jet
S - submersible
T - turbine
E - electric
H - hand
Ng - natural gas
N - none
S - steam
W - windmill

Number indicates horsepower.

5/ Identifying letters used are:

D - domestic
Ind. - industrial
Irr. - irrigation
N - none
P - public
S - livestock

6/ D indicates drillers' log available; E indicates electric log available. Drillers' logs and electric logs are in files of Texas Water Development Board.

Table 11.--Drillers' Logs of Representative Wells in Anderson County

Well AA-34-57-801

Owner: J. T. Whitman
Driller: Rekhop Drilling Co.

	THICKNESS	DEPTH
Red clay	30	30
Fine sand	46	76
Clay	8	84
Sand	18	102
Shale and coal	68	170
Silty sand	10	180
Shale	20	200
Silty sand	30	230
Shale	60	290
Broken sand	10	300
Shale	35	335
Broken sand	15	350
Shale	5	355
Broken shale	8	363
Shale	22	385
Broken sand	5	390
Shale	10	400
Sand	10	410
Broken sand	30	440
Shale	20	460

Well AA-34-58-901

Owner: Newman
Driller: Rekhop Drilling Co.

Clay	20	20
Blue clay	30	50
Sand	30	80
Clay	25	105
Rock	1	106
Sand	24	130
Rock	2	132
Shale	33	165
Sand	95	260
Coal	1	261
Shale	149	410
Broken sand	20	430
Rock	5	435
Broken sand	70	505
Water sand	55	560

Well AA-34-60-603

Owner: City of Frankston No.2
Driller: Texas Water Wells

Rotary to ground level	11	11
Red clay and gray shale	57	68
Sand	21	89
Gray shale	31	120
Lignite and shale	100	220
Sandy shale	36	256
Shale and sand	125	381
Sand and sandy shale	72	453
Shale	32	485
Rock	2	487
Sand	13	500
Shale	22	522
Rock	4	526
Sand, good	70	596
Shale with sand streaks	51	647

Well AA-34-61-703

Owner: B. L. Saunders
Driller: White Drilling Co.

Red and yellow sandy clay	6	6
Red and white pack sand	39	45
Gray sandy shale with thin sand streaks	55	100
Gray sticky shale	54	154
Gray sand	206	360
Gray sandy shale	50	410
Gray sticky shale	10	420
Green sand	25	445
Gray and brown shale with rock layers	24	469
Green sand	11	480
Green and brown sandy shale	30	510
Gray sticky shale	20	530
Gray sandy shale with fine sand streaks	25	555
White shale	15	570
White sand (medium fine)	45	615

Well AA-38-01-806

Owner: B.C.Y. Water Supply Corp. No.1
Driller: Andrews & Foster Drilling Co.

Red clay	10	10
Sand	138	148
Shale	12	160
Sand and shale	20	180
Shale and sand	10	190
Sand	60	250
Shale	20	270
Sand	20	290
Shale	15	305

	THICKNESS	DEPTH
Well AA-38-01-806 (Continued)		
Shale	15	320
Shale	55	375
Sand	115	490
Shale and sand	18	508
Shale	7	515
Sand and rock	20	535
Shale	45	580
Sand	90	670
Shale	50	720
Soft sandy shale	20	740
Shale	28	768
Sandy shale	44	812
Shale	53	865
Sandy shale	30	895
Shale	19	914
Soft sandy shale	26	940
Shale and rock breaks	122	1,062
Well AA-38-02-402		
Owner: Arnold Wisenbaker Driller: Rekhop Drilling Co.		
Surface	7	7
Sand	28	35
Shale	15	50
Sand	18	68
Shale	62	130
Sand	90	220
Shale	90	310
Broken sand and shale	55	365
Shale	165	530
Broken sand and shale	15	545
Sand	25	570
Sand with shale streaks	55	625
Shale	5	630
Well AA-38-03-701		
Owner: Montalba Water Supply Corp. Driller: Layne Texas Co.		
Top soil	3	3
Hard red clay	25	28
Rock	2	30
Layers of rock and sand streaks	18	48
Clay and rock	12	60
Fine sand	8	68
Clay and sand layers	26	94
Shale and sand	244	338

	THICKNESS	DEPTH
Well AA-38-03-701 (Continued)		
Fine sand	18	356
Shale	8	364
Sand	87	451
Shale	15	466
Hard shale and lignite	129	595
Sandy shale	8	603
Rock	5	608
Shale and layers of rock	2	610
Gray shale, sandy shale and hard streaks	46	656
Sandy shale (cut good)	20	676
Shale	10	686
Lignite	14	700
Light gray sandy shale	41	741
Sandy shale and sand	42	783
Sand and lignite	60	843
Shale	23	866
Sandy shale and shale	177	1,043
Shale	5	1,048
Shale and sand streaks	9	1,057
Sand and shale layers (cut hard)	22	1,079
Sand, lignite and shale breaks	31	1,110
Sand, layers of lignite and shale	29	1,139
Sand and shale streaks	23	1,162
Sand and shale breaks	5	1,167
Shale	3	1,170
Shale, sand layers and lignite	23	1,193
Well AA-38-04-201		
Owner: W. H. Whitehurst Driller: White Drilling Co.		
Red pack sand	30	30
White clay with coarse sand streaks	45	75
Brown shale	5	80
Gray sticky shale	23	103
Brown and gray sandy shale	52	155
Brown sticky shale	64	219
Brown sand with sandy shale streaks	26	245
Gray sticky shale	20	265
Gray sand	45	310
Gray sticky shale	20	330
Gray sandy shale	10	340
Gray sticky shale	18	358
Gray sand with rock layers	51	409
Brown sandy shale	3	412
Gray sticky shale	33	445

Well AA-38-04-201 (Continued)

	THICKNESS	DEPTH
Brown and green sandy shale	35	480
Green sand	20	500
Brown sandy shale	10	510
Gray sticky shale with rock layers	10	520
Brown shale	5	525
Green sand	25	550
Gray sticky shale	15	565
Green and brown sandy shale with sand streaks	20	585
White sand	15	600
White shale	20	620
White sand	16	636
Gray shale	2	638
Good gray sand	17	655

Well AA-38-05-401

Owner: W. T. Todd
Driller: Layne Texas Co.

Surface sand	9	9
Clay	6	15
Sand, rock	16	31
Sandy clay	23	54
Hard rock	1	55
Iron ore	5	60
Hard sandy shale	12	72
Fine gray water sand	22	94
Hard shale	14	108
Fine white water sand	15	123
Hard shale	7	130
Sandy shale with streaks of sand and lignite	68	198
Fine gray sand, dry	20	218
Shale and lignite	3	221
Sandy shale and lignite	9	230
Gumbo	27	257
Fine gray sand	28	285
Gumbo	6	291
Hard rock	1	292
Sandy shale and boulders	102	394
Brown shale	37	431
Sandy shale	31	462
Sand, rock	2	464
Shell	23	487
Sand, rock	1	488
Shale	25	513
Rock	1	514
Shale	5	519

Well AA-38-05-401 (Continued)

	THICKNESS	DEPTH
Gumbo	25	544
Sandy shale and boulders	14	558
Hard sandy shale and boulders	15	573
Packed sand	5	578
Hard sandy shale and shale streaks	67	645
Hard white rock	50	695
Shale and lignite	15	710
Gumbo	9	719
Rock	1	720

Well AA-38-09-601

Owner: State of Texas Dept. of Corrections
Driller: Layne Texas Co.

Clay and sandy clay	90	90
Brown sand and lignite	315	405
Sandy shale and streaks of lignite	132	537
Sand, broken	25	562
Sandy shale and streaks of sand	30	592
Sand and sandy shale	108	700
Lignite	5	705
Sand	63	768
Shale, streaks of sand and lignite	110	878
Sand	90	968
Shale	17	985

Well AA-38-11-901

Owner: City of Palestine No.1
Driller: Layne Texas Co.

Surface sand	13	13
Clay	22	35
Lignite	2	37
Sand, shale and lignite	120	157
Shale	25	182
Sand	62	244
Shale	16	260
Sandy shale	45	305
Sand	6	311
Sand, shale and lignite	71	382
Shale	14	396
Shale, layers of rock	4	400
Shale	32	432
Sand	12	444
Sand, shale	23	467
Shale	23	490
Sand, shale	48	538
Sand	27	565

Well AA-38-11-901 (Continued)

	THICKNESS	DEPTH
Shale	10	575
Sandy shale	25	600
Shale	19	619
Sandy shale	101	720
Rock	2	722
Shale	22	744
Fine gray sand	32	776
Lignite	8	784
Sand, shale	98	882
Sand	14	896
Sandy shale	216	1,112
Hard sandy shale	74	1,186
Shale	99	1,285
Rock (very hard)	9	1,294
Sand	90	1,384
Shale	16	1,400
Shale and sand	36	1,436
Sand	153	1,589
Shale	78	1,667
Fine shaly sand and lignite	50	1,717
Sand, shale	44	1,761
Hard shale	30	1,791
Sandy shale	94	1,885
Rock	1	1,886
Shale	27	1,913
Sand	25	1,938
Shale	80	2,018

Well AA-38-13-106

Owner: Neches Water Supply Corp.
Driller: C. C. Innerarity

Reddish clay	12	12
Coffee ground formation	13	25
Small sand streaks	10	35
Blue clay	70	105
Sand, clay	30	135
Sand and blue clay	30	165
Blue clay	33	198
Blue clay	22	220
Sand and clay streaks	40	260
Blue clay	96	356
Sand	19	375
Hard clay	5	380
Sand and clay	40	420
Sand, very little clay	96	516
Hard clay	29	545

Well AA-38-13-106 (Continued)

Tight sand	56	601
Hard clay	4	605

Well AA-38-18-901

Owner: Woodhouse Consolidated School
Driller: Layne Texas Co.

Soil	1	1
Red clay	7	8
Sand	7	15
Clay	2	17
Sand	5	22
Rock	2	24
Clay	6	30
Rock	1	31
Gray sand	12	43
Rock	1	44
Coarse gray sand	12	56
Sand and thin clay layers	20	76
Gray sandy clay	22	98
White sand	31	129
Sand and clay layers	14	143
Gray sand	21	164
Red shale	1	165
Shale	36	201
Sandy shale	22	223
Shale	24	247
Rock (hard)	1	248
Shale	21	269
Rock (hard)	6	275
Shale and sandy shale	31	306
Shale and sandy shale	25	331
Shale and sand layers	9	340
Sand, gray (good)	19	359
Shale	2	361

Well AA-38-19-803

Owner: Lakeview Methodist Assembly No.1
Driller: Layne Texas Co.

Clay	56	56
Sand and shale	32	88
Shale	47	135
Sand and shale	29	164
Shale	94	270
Sand	10	280
Shale	4	284
Sand and breaks of shale	23	307

Well AA-38-19-803 (Continued)

	THICKNESS	DEPTH
Shale	8	315
Fine white sand	95	410
Shale	173	583

Well AA-38-20-702

Owner: Miss Ivey Payne
Driller: White Drilling Co.

Red, yellow and white sandy clay	15	15
Yellow and brown clay	15	30
Green shale with sand streaks	30	60
Brown sand and sandy shale	50	110
Brown and green sandy shale	33	143
Brown sand	53	196
Gray and brown sandy shale	20	216
Gray sand with shale streaks	64	280
Gray shale	10	290
Fine gray sand with shale and lignite streaks	70	360
Brown shale	30	390
Brown and gray sandy shale	55	445
Brown sand	6	463
Brown and gray sandy shale	97	560
Brown shale and sandy shale	15	575
Brown and green sandy shale	30	605
Green sandy shale and green sand	30	635
Green and brown sand and sandy shale	40	675
White sand	82	757
Gray shale	42	799
Medium fine gray sand with thin streaks of sandy shale	61	860

Well AA-38-21-705

Owner: Shell Oil Co., J. B. Parker No.2
Driller: Layne Texas Co.

Surface soil	10	10
Shale and hard streaks	60	70
Streaks of shale and sand	85	155
Sand and streaks of shale	51	206
Shale	14	220
Sand and streaks of shale	80	300
Sandy shale, streaks of lignite and rock	193	493
Shale and sand streaks	12	505
Sand and streaks of shale	89	594
Shale and streaks of sand	61	655
Shale	95	750
Shale and streaks of lime	75	825
Shale and streaks of lignite	193	1,018

Well AA-38-21-705 (Continued)

	THICKNESS	DEPTH
Rock	3	1,021
Shale and lignite	39	1,060
Sand	24	1,084
Shale	6	1,090
Sand and streaks of shale	45	1,135
Shale	16	1,151
Sand	10	1,161
Shale, streaks of lime and lignite	142	1,303
Shale and sandy shale	245	1,548
Fine sand	40	1,588
Lime	2	1,590
Sandy shale	50	1,640
Shale and streaks of sand	82	1,722
Coarse sand and streaks of lignite	50	1,772
Lignite and shale	5	1,777
Coarse sand and lignite	31	1,808
Shale and lignite	10	1,818
Fine sand and lignite	10	1,828
Shale and sandy shale	25	1,853

Well AA-38-27-705

Owner: Emmett Coleman
Driller: Carruth Drilling Co.

Sand and surface clay	30	30
Hard shale and shells	35	65
White sand (no water)	55	120
Shale	140	260
Tight sand	20	280
Water sand	50	330
Water sand	20	350

Well AA-38-28-202

Owner: City of Elkhart No.1
Driller: Layne Texas Co.

Surface clay	60	60
Blue shale	20	80
Blue soft shale	80	160
Gumbo	18	178
Hard gumbo	101	279
Hard shale	23	302
Sand, rock and boulders	28	330
Water sand	40	370
Hard shale	58	428
Water sand and sand rocks	40	468
Hard shale	4	472
Hard shale, mixed with sand	98	570
Water sand	70	640

Well DJ-34-54-801

Owner: J. E. Boyle
Driller: White Drilling Co.

	THICKNESS	DEPTH
Red, white, and yellow clay	17	17
Green shale with rock layers	43	60
Brown shale with brown sand streaks	110	170
Gray shale and sandy shale	30	200
Coarse gray sand	222	422
Brown sandy shale	27	449
Gray shale	6	455
Gray and brown sandy shale	153	608
Gray sticky shale	25	633
Gray and brown shale	45	678
Green sand with rock layers	12	690
Brown sandy shale with rock layers	10	700
Green sand	10	710
Brown sandy shale	15	725
Clear, white sand	8	733
Brown sandy shale and green sand	22	755
White shale and sandy shale	14	769
Gray shale and lignite streaks	11	780
Fine gray sand	11	791
Gray sandy shale	29	820
Fine gray sand	10	830
Hard brown shale	6	836
Hard brown shale	4	840
Gray sticky shale	5	845
Fine gray sand	22	867
Gray sticky shale	23	890
Gray and brown shale	32	922
Very fine gray sand	6	928
Gray sandy shale	8	936
Fine gray sand	9	945
Hard gray shale	11	956
Brown sandy shale	28	984
Gray sticky shale	32	1,016
Gray sandy shale	19	1,035
Fine gray sand	32	1,067
Gray sandy shale	15	1,082
Medium fine sand	10	1,092
Gray shale	19	1,111
Very fine gray sand	5	1,116
Hard shale	7	1,123

Well DJ-34-62-901

Owner: Eunice Sanborn
Driller: Layne Texas Co.

	THICKNESS	DEPTH
Sandy soil	6	6
Rock	2	8
Red rock and hard sand	7	15
Blue and yellow hard sand	5	20
Blue rock	11	31
Rotten green shale	6	37
Rock	1	38
Rotten green shale	7	45
Rock	2	47
Blue rock	21	68
Brown clay and hard layers of fine sand	74	142
Brown sand	83	225
White salt and pepper sand	73	298
Shale and sand	25	323
Sand	40	363
Shale	26	389
Hard shale	15	404
Brown shale	80	484
Rock	1	485
Boulders	2	487
Brown shale	63	550
Rock and boulders	8	558
Boulders and shale	10	568
Shale and boulders	48	616
Tough shale	5	621
Shale	22	643
Fine sand	28	671
Shale	17	688
Shale and shells	67	755
Tough shale	18	773
Shale and shells	22	795
Shale	40	835
White sand	11	846
Sand and lignite (coal)	22	868
Broken layers of sand - lignite and shale	57	925
Lignite coal	10	935
Tough shale	17	952
Shale and shells	24	976
Rock	3	979
Tough shale	23	1,002
Shale	23	1,025

Well DJ-34-63-301

Owner: L. S. Wilson
Driller: White Drilling Co.

	THICKNESS	DEPTH
Red, yellow and white clay	20	20
Brown shale with some green shale	72	92
Gray and brown shale	23	115
Gray sticky shale	13	128
Brown and green shale	49	177
Green sand	10	187
Brown shale with thin sand streaks	23	210
Fine sand and sandy shale	22	232
Gray sticky shale	5	237
Gray and brown shale	4	241
White sand	43	284

Well DJ-34-63-605

Owner: J. Paul Karcher
Driller: Rehkop Drilling Co.

Surface	12	12
Shale	43	55
Rock	1	56
Shale	89	145
Sand	10	155
Broken sand and shale	55	210
Sand	15	225
Shale	125	350
Silty sand	63	413
Sand	7	420
Shale	10	430
Sand	18	448

Well DJ-34-64-402

Owner: Blackjack Water Supply Corp.
Driller: Lanford Drilling Co.

Clay	90	90
Brown fine sand	28	118
Brown shale	64	182
Medium grey shale	22	204
Shale	179	383
Medium grey shale	92	475
Shale	79	554

Well DJ-34-64-502

Owner: New Concord Water Supply Corp.
Driller: Key Water Well and Drilling Co.

Surface soil	20	20
Surface sand	20	40
Sandy shale	15	55
Water sand	20	75
Shale	7	82
Sand	3	85
Sandy shale	25	110
Water sand	81	191
Sandy shale	40	231
Sand	9	240
Sandy shale	40	280
Sand with shale brake	52	332
Water sand	83	415
Shale	12	427

Well DJ-37-01-401

Owner: Texas Power and Light Co. No. 1
Driller: Texas Water Wells

Surface	15	15
Sand	45	60
Sandy clay	19	79
Clay	11	90
Hard sand and shale	79	169
Shale	46	215
Shale and hard streaks	82	297
Soft shale and hard streaks	13	310
Sandy shale	20	330
Sand	23	353
Sandy shale	4	357
Sand soft streaks	89	446
Shale	4	450
Sandy shale hard	17	467
Hard sand	7	474
Hard sandy shale	26	500

Well DJ-37-33-202

Owner: City of Wells
Driller: Layne Texas Co.

Clay	16	16
Sand	4	20

Well DJ-37-33-202 (Continued)

	THICKNESS	DEPTH
Clay	31	51
Clay and sand streaks	17	68
Rock	2	70
Shale and sand streaks	60	130
Hard shale	59	189
Sandy shale	20	209
Find sand	35	244
Shale and streaks of sand	129	373
Shale and sandy shale	120	493
Sand and shale streaks	48	541
Shale and sandy shale	131	672
Rock	4	676
Hard shale	21	697
Rock	1	698
Sandy shale	40	738
Shale and rock layers	9	747
Shale and sandy shale	55	802
Sand and shale streaks	36	838
Sand	24	862
Sandy shale and shale	19	881
White sand	59	940
Sand and shale streaks	9	949
Shale	11	960

Well DJ-38-05-903

Owner: Humble Oil and Refining Co. No. 1
Driller: Texas Water Wells

Surface sand and clay	6	6
Red clay	11	17
Sand and gravel, streaks of red clay	16	33
Gray shale	27	60
Fine gray sand	22	82
Gray shale	37	119
Rock, hard	2	121
Gray shale	33	154
Rock, hard	1	155
Gray shale, streaks of rock	30	185
Rock	1	186
Green sand	24	210
Shale	3	213
Brown sand	24	237
Shale	11	248
Sand streaks	52	300

Well DJ-38-05-903 (Continued)

	THICKNESS	DEPTH
Sand, small streaks of lignite	45	345
Sandy shale	4	349
Sand	7	356
Rock, hard	2	358
Shale - streaks rock	18	376
Hard sand, lignite	42	418
Hard rock	2	420
Sandy rock shale	19	439
Shale streaks, rock and streaks of sand	34	473
Sand and streaks of rock	11	484
Shale	18	502
Rock	1	503
Shale	2	505

Well DJ-38-06-604

Owner: City of Jacksonville No. 1
Driller: Layne Texas Co.

Iron ore and green rock	7	7
Iron ore and green rock	10	17
Green rock	10	27
Green rock and clay	16	43
Fine white sand	9	52
Yellow and brown clay	61	113
Brown clay	27	140
Packed white sand	12	152
Brown clay	7	159
Blue sand and shale	45	204
Soft gray sand and shale layers	28	232
Sandy shale and shale	57	289
Gray green sand (good)	43	332
Sandy shale and lignite	40	372
Brown shale	9	381
Green sandy shale	20	401
Blue sandy shale	19	420
Blue and gray shale	11	431
Green and blue shale and boulders	16	447
Fine brown sand	9	456
Gray shale and boulders	14	470
Sandy shale and boulders	10	480
Blue shale and boulders	21	501
Brown and blue shale	22	523
Blue sandy shale and boulders	20	543

Well DJ-38-06-604 (Continued)

	THICKNESS	DEPTH
Fine blue gray sand	10	553
Blue sandy shale and lignite	5	558
Fine white sand	25	583
Gray green sand and sandy shale	26	609
Coarse white sand	54	663
White sand (cuts good)	34	697
Hard blue shale	6	703
Brown sandy clay and lignite streaks	55	758
Hard brown shale	36	794
Brown shale and thin layers of lignite	39	833
Rock	1	834
Brown shale	15	849
Sandy shale	13	862
Brown shale	24	886
Gray shale and lignite	31	917
Gray sandy shale	11	928
Gray sand - good	50	978
Shale and hard lignite	5	983
Sand (cuts good)	3	986
Hard shale, lignite and sand breaks	19	1,005
Sand (cuts good)	6	1,011
Packed sand shale and lignite	5	1,016
Sand (cuts good)	15	1,031
Sandy shale and lignite	25	1,056
Fine gray sand (cuts good)	16	1,072
Sandy shale	8	1,080
Fine gray packed sand and lignite	21	1,101
Gray sand - drills good	57	1,158
Hard sand	4	1,162
Hard gray shale	23	1,185
Hard brown sand lignite and shale	15	1,200
Gray fine sand	15	1,215
Gray sticky shale	24	1,239
Shale and boulders	25	1,264
Gray shale and sand breaks	42	1,306
Sandy shale	7	1,313
Hard rock	3	1,316
Sandy shale	14	1,330
Hard sand rock	1	1,331
Sand	15	1,346
Hard sand rock	1	1,347
Sand - drills good	23	1,370

Well DJ-38-06-604 (Continued)

	THICKNESS	DEPTH
Hard rock	4	1,374
Shale and sand breaks	11	1,385
Sand and lignite	5	1,390
Sticky shale	5	1,395
Sand and lignite	5	1,400
Rock	1	1,401
Shale, sand breaks, lignite	63	1,464
Hard shale	8	1,472
Sandy shale	21	1,493
Sand and brown sand	72	1,565

Well DJ-38-07-902

Owner: Gallatin Water Supply Corp.
Driller: Key Water Well and Drilling Co.

Surface and clay	30	30
Shale	218	248
Sand	20	268
Shale	39	307
Water sand	63	370
Shale	10	380

Well DJ-38-08-105

Owner: New Summerfield Water Supply Corp.
Driller: Layne Texas Co.

Red clay and iron rock	16	16
White clay and sand layers	8	24
Brown clay	36	60
Gray sandy clay	40	100
Sandy shale and lignite	31	131
Sand	5	136
Sandy shale	55	191
Sand	10	201
Sand and shale	17	218
Sand (cut good)	10	228
Sandy shale	97	325
Rock	1	326
Sandy shale	79	405
Sand and shale	20	425
Sandy shale layers	23	448
Shale	6	454
Sand and shale layers	21	475
Shale and sand streaks	20	495
Sandy shale	7	502

Well DJ-38-08-105 (Continued)

	THICKNESS	DEPTH
Sand (hard)	26	528
Sand and shale	6	534
Sand	12	546
Sand and shale	29	575
Shale and hard layers	13	588
Shale and sand layers	80	668
Sand (fine)	9	677
Shale and sand layers	25	702
Sand	3	705
Shale and sand layers	84	789
Rock	1	790
Sand	8	798
Lignite	3	801
Sandy shale and layers of sand	47	848
Sand and thin shale layers	27	875
Sand and shale layers	10	885
Sand and thin shale layers	35	920
Sand and thin shale layers	2	922
Sand	80	1,002
Shale and sand layers	8	1,010
Sandy shale and lignite	62	1,072
Shale and sand	18	1,090
Sand and shale	34	1,124

Well DJ-38-08-302

Owner: Stryker Lake Water Supply Corp.
Driller: Rehkop Drilling Co.

Sand	8	8
Iron ore rock	1	9
Green sand	51	60
Queen City sand	30	90
Shale	40	130
Sand	50	180
Shale	30	210
Sand	66	276
Shale	2	278
Carrizo sand	26	304
Shale	12	316

Well DJ-38-13-304

Owner: W. M. Seeton
Driller: White Drilling Co.

Surface sand	8	8
Red and yellow clay	9	17

Well DJ-38-13-304 (Continued)

	THICKNESS	DEPTH
Green shale/rock layers	44	61
Green sand	24	85
Brown shale and sandy shale	35	120
Fine gray sand with shale streaks	75	195
Gray shale	10	205
Gray sand	5	210
Gray shale	5	215
Gray sand with shale streaks	112	327
Gray sandy shale with lignite streaks	17	344
Gray sand with sandy shale streaks	29	373
Brown and gray sandy shale	59	432
Gray sticky shale	9	441
Gray sandy shale	7	448
Brown and gray sticky shale	7	455
Brown sandy shale	20	475
Brown shale with rock layers	56	531
Green and brown shale with rock layers	50	581
Gray sand	5	586
Gray shale	14	600
Gray clear sand	20	620
White shale	7	627
Good white sand	21	648

Well DJ-38-14-503

Owner: Maydelle Water Supply Corp.
Driller: C. C. Innerarity

Red and white clay	13	13
Red surface sand	12	25
White clay	10	35
Hard blue clay	168	203
Sand	1	204
Hard blue clay	28	232
Sand	1	233
Blue clay (soft)	35	268
Sand	2	270
Soft clay	14	284
Clay	30	314
Sand	17	331
Clay	9	340
Sand	3	343
Clay	5	348
Sand	1	349

	THICKNESS	DEPTH
Well DJ-38-14-503 (Continued)		
Clay	2	351
Sand with 3" to 4" clay strips	15	366
Clay	24	390
Sand (400-404 good)	14	404
Hard clay	42	446
Sand	4	450
Hard clay	45	495
Soft clay	14	509
Clay with sand streaks	64	573
Soft shale	7	580
Sand with shale	7	587
Sand streaks with shale	100	687
Clay	10	697
Hard clay	3	700
Well DJ-38-15-102		
Owner: Dialville - Oakland Water Supply Corp. Driller: Layne Texas Co.		
Surface	3	3
Rock	4	7
Rock and sandy clay	21	28
Sandy clay and streaks sand	56	84
Sand and sandy clay	85	169
Sand	25	194
Sand and sandy clay	16	210
Sand and sandy clay	45	255
Sand	51	306
Sandy clay	9	315
Rock	1	316
Sandy clay and sand	58	374
Shale	98	472
Sandy shale and hard streaks	41	513
Sand (broken)	17	530
Sand (broken)	20	550
Sand and gravel	43	593
Clay and streaks sand	19	612
Sand	40	652
Shale (broken)	20	672
Sand	20	692
Sandy clay	49	741
Clay	8	749

	THICKNESS	DEPTH
Well DJ-38-15-601		
Owner: City of Rusk No. 1 Driller: Layne Texas Co.		
Bed clay	15	15
Sandy clay and gravel layers	2	17
Fine yellow sand	20	37
Fine brownish sand	16	53
Brown clay	22	75
Sand	40	115
Hard sand	5	120
Hard brown and yellow shale	24	144
Hard fine grey sand	15	159
Hard fine grey shale, sandbreaks - hard	28	187
Hard fine shale	37	224
Rock	4	228
Shale	55	283
Rock	2	285
Hard brown shale	28	313
Hard brown shale	4	317
Fine grey broken sand	15	332
Fine grey sand - cut good	25	357
Fine hard grey sand, blue, red, white shale	25	382
Fine hard packed grey sand	22	404
Soft grey sand	31	435
Soft grey sand	25	460
Grey shale and sand	37	497
Grey shale and sand	122	619
Grey shale	37	656
Grey shale, sandy shale, layers of lignite	19	675
Grey sandy shale and sand	56	731
Fine grey sand and shale (cut fair)	41	772
Fine light grey sand (cut fair)	19	791
Good grey sand (cuts little hard)	33	824
Sand and hard lignite	6	830
Lignite	20	850
Fine grey sand (cut fair)	15	865
Lignite and hard sand	25	890
Hard grey shale with breaks of fine grey sand and lignite	45	935
Fine grey sand and lignite	25	960
Gray sand with lignite and shale breaks	24	984

	THICKNESS	DEPTH
Well DJ-38-15-601 (Continued)		
Grey sand with lignite	25	1,009
Grey sand (cuts good)	25	1,034
Grey sand and lignite	25	1,059
Grey shale and lime	16	1,075
Grey sand and lime shale	26	1,101
Rock	4	1,105
Rock	1	1,106
Coarse sand, shale, lignite and shell	39	1,145
Coarse grey sand (good)	30	1,175
Rock	2	1,177
Rock	2	1,179
Hard blue shale and lignite	25	1,204
Shale and lignite	32	1,236
Rock	1	1,237
Shale	25	1,262
Rock	2	1,264
Fine light grey shale and sand	25	1,289
Soft grey sand	42	1,331
Light grey sand and shale streaks	143	1,474
Sand, shale and lignite layers	24	1,498
Sandy shale and lignite	7	1,505
Well DJ-38-23-306		
Owner: Earnest Hudnall Driller: Frye Drilling Co.		
Top soil and sand	22	22
Shale, some rock	17	39
Shale, some rock	41	80
Shale, some rock	21	101
Shale	20	121
Soft shale	21	142
Soft shale	20	162
Soft shale, rock	21	183
Shale, rock	20	203
Shale, some rock	41	244
Shale, fine sand	21	265
Sand, shale, sand	20	285
Interbedded sand and shale	21	306
Good sand, some shale	20	326
Good sand	22	348

	THICKNESS	DEPTH
Well DJ-38-24-804		
Owner: City of Alto No. 2 Driller: Texas Water Wells		
Ground level	4	4
Clay	2	6
Rock	4	10
Clay	15	25
Shells, shale and sand streaks	51	76
Shale	36	112
Sand	108	220
Shale	240	460
Sand	12	472
Sandy shale	28	500
Sand	86	586
Shale	5	591
Sand	14	605
Shale	8	613
Well DJ-38-32-908		
Owner: R. S. Hadaway Driller: Innerarity and Leubner Drilling Co.		
Red clay	15	15
Surface sand	35	50
Blue clay	7	57
Sand strips	3	60
Blue clay	49	109
Sand strips	28	137
Blue clay	18	155
Sand strips	25	180
Clay and sand strips	20	200
Clay	25	225
Sand	16	241

Table 13.--Drillers' Logs of Representative Wells in Freestone County

Well KA-38-17-301

Owner: R. L. Lipsey
Driller: Katy Drilling, Inc.

	THICKNESS	DEPTH
Surface - clay	15	15
Clay - sand breaks	15	30
Sand - rock	22	52
Clay	35	87
Sand and clay breaks	30	117
Sand - rock - lignite	41	158
Clay - lignite	61	219
Sand	7	226
Clay	31	257
Sand - rock	14	271
Clay - lignite	37	308
Clay	100	408
Sand	18	426
Shale - lignite	90	516
Sand	5	521
Shale - lignite	11	532
Sand - shale breaks	11	543
Shale	57	600
Sand	10	610
Shale	5	615
Sand	30	645
Shale	37	682
Sand	75	757
Shale	14	771
Sand	11	782
Shale	27	809

Well KA-38-17-803

Owner: Allen Beatty
Driller: Neal Drilling Co.

	THICKNESS	DEPTH
Clay	23	23
Sand	9	32
Blue shale, rock at 35 feet	13	45
Sand	20	65
Sandy shale	15	80
Blue shale	20	100
Gray sandy shale, rock at 120 and 134 feet	40	140
Sandy shale	10	150
Gray shale	7	157
Sandy shale	13	170
Sand	15	185
Gray shale	15	200
Blue shale	20	220
Gray shale, rock at 294 feet	96	316

Well KA-38-17-803 (Continued)

	THICKNESS	DEPTH
Sandy shale	39	355
Gray shale	17	372
Sand	6	378
Gray shale	12	390
Sand	5	395
Gray shale	10	405
Sand	25	430

Well KA-38-18-803

Owner: Easter Price
Driller: Frank Ward

Red Clay	4	4
Yellow sandy clay	16	20
Yellow coarse sand	20	40
Rock hard	1	41
Dark shale, traces rock	29	70
Rock hard	1	71
Sand	3	74
Hard shale	2	76
Sand gray light	19	95

Well KA-39-08-405

Owner: Ben Ward
Driller: Frank Ward

Top soil	1	1
Red clay	2	3
Yellow clay	15	18
Yellow coarse sand	3	21
Yellow clay	14	35
Coal	7	42
Shale, trace sand, coal	28	70
Dark shale	10	80
Gray sand	25	105
Gumbo dark	2	107

Well KA-39-14-501

Owner: Ruell Lopes
Driller: R. K. Sims

Red clay	10	10
Sandy clay	1	11
White clay	6	17
Blue shale	5	22
Rock	15	37
Red sand	3	40
Sandy shale	30	70
Blue shale	20	90

	THICKNESS	DEPTH
Well KA-39-14-501 (Continued)		
Shale, water, sand	10	100
Shale	22	122
Well KA-39-15-102		
Owner: Ovel Kimball Driller: Frank Ward		
Top soil	12	12
Red clay	8	20
Yellow clay	15	35
Dark shale	54	89
Hard rock	1	90
Sand shale dark	20	110
Dark shale	30	140
Dark shale, traces of sand	40	180
Dark gumbo	37	217
Rock hard	1	218
Gray sand	27	245
Dark gumbo	2	247
Well KA-39-15-601		
Owner: Industrial Generating Co. Driller: Layne Texas Co.		
Top soil	2	2
Clay	26	28
Lignite	3	31
Clay	50	81
Sand with hard streaks	50	131
Shale with streaks of sand	41	172
Rock	1	173
Shale	13	186
Sand	25	211
Shale	21	232
Sand with hard streaks	53	285
Shale with streaks of lignite and sand	20	305
Shale	30	335
Sand and shale	42	377
Sand (cut good)	72	449
Shale with streaks of sand	13	462
Shale	52	514
Sand with streaks of lignite	7	521
Sand (broken) (poor)	34	555
Shale	34	589

	THICKNESS	DEPTH
Well KA-39-15-703		
Owner: Pleasant Grove Water Supply Corp. Driller: Andrews and Foster Drilling Co.		
Sandy shale	10	10
White sand	60	70
Blue shale	8	78
Sand, lignite at 87 feet	10	88
Shale	22	110
Rock	1	111
Shale	2	113
Lignite	3	116
Shale	19	135
Sandy shale	10	145
Lignite	4	149
Sand	7	156
Shale	43	199
Sand	61	260
Sandy shale	42	302
Shale	16	318
Sandy shale	30	348
Shale	14	362
Sand and shale	8	370
Sand	30	400
Shale	30	430
Shale with a few sand breaks	30	460
Hard blue shale	42	502
Well KA-39-16-105		
Owner: Ralph Lamar Driller: John Cobb Drilling Co.		
Gray clay	95	95
Gray clay,sandy	55	150
Sandy gray clay	100	250
Gray clay	50	300
Sand	57	357
Well KA-39-16-502		
Owner: Industrial Generating Co. Driller: Texas Water Wells		
Ground level	3	3
Clay	17	20
Sand and shale streaks	120	140
Shale and sand streaks	190	330
Sand and shale	20	350
Shale	50	400
Sand	30	430
Sandy shale	40	470

Well KA-39-16-502 (Continued)

	THICKNESS	DEPTH
Sand	40	510
Shale	20	530
Sand	20	550
Shale	14	564
Sand and shale streaks	36	600
Shale	50	650
Sand	20	670
Shale	30	700
Sand	30	730
Shale	130	860

Well KA-39-21-603

Owner: B. L. Alewine
Driller: R. K. Sims

	THICKNESS	DEPTH
Yellow sand	8	8
Sandy clay	17	25
Shale	15	40
Red streaked sand	25	65
Blue sand	63	128
Rock	3	131
Blue sand	1	132
Blue shale	16	148

Well KA-39-22-512

Owner: Art Dickerson
Driller: Neal Drilling Co.

	THICKNESS	DEPTH
Sand and clay	20	20
Sand	18	38
Lignite	2	40
Blue shale	70	110
Sandy shale	15	125
Gray shale	95	220
Sandy shale	45	265
Gray shale	30	295
Sandy shale	13	308
Sand	28	336
Shale	22	358
Sand	26	384
Shale, gray	43	427
Sandy shale	18	445
Gray shale	33	478
Rock	2	480
Sandy shale	20	500
Black shale	80	580

Well KA-39-22-901

Owner: City of Teague
Driller: Layne Texas Co.

	THICKNESS	DEPTH
Top soil	2	2
Clay	5	7
Clay and sandy clay	18	25
Sand	47	72
Sandy clay	5	77
Clay	15	92
Clay, shale and lignite	41	133
Shale and sandy shale	20	153
Sandy shale	7	160
Sand and shale streaks	48	208
Shale	12	220
Lignite	6	226
Sand and lignite	19	245
Shale	11	256
Coarse sand	57	313
Shale	27	340
Sandy shale and shale	70	410
Shale	8	418
Sand and shale streaks	12	430
Shale and sandy shale	20	450
Shale and sand streaks	41	491
Shale and sandy shale	13	504
Hard rock	5	509
Sandy shale	11	520
Shale and sandy shale	75	595
Fine sand and streaks of shale	26	621
Shale	37	658
Rock	1	659
Sand and streaks of shale	30	689
Sandy shale and shale	48	737
Rock	1	738
Sandy shale	19	757
Shale and sand streaks	24	781
Sandy shale	11	792
Sandy shale and streaks of sand	31	823
Shale and sandy shale	77	900

Well KA-39-23-101

Owner: Kirvin Water Supply Corp.
Driller: Andrews and Foster Drilling Co.

Red and yellow clay	10	10
White sand	35	45
Dark shale, lignite at 54 feet	15	60
Gray sand	7	67

	THICKNESS	DEPTH
Well KA-39-23-101 (Continued)		
Shale	3	70
Sand, shale and lignite	25	95
Shale	40	135
Sandy shale	10	145
Sand and rock at 156 feet	15	160
Shale	10	170
Sand	42	212
Rock	1	213
Shale	12	225
Rock	1	226
Shale	16	242
Well KA-39-23-303		
Owner: City of Fairfield No. 3 Driller: Layne Texas Co.		
Soil	1	1
Red clay	5	6
Sandy clay	49	55
Clay	15	70
Gray shale and sand streaks	66	136
Gray shale and lignite	24	160
Sand and shale layers	13	173
Shale, lignite and sand	41	214
Gray shale and layers of sand	44	258
Shale and sandy shale	6	264
Sand and streaks of shale	16	280
Lignite, shale and sand	9	289
Shale, streaks of shale and lignite	18	307
Sand, shale and lignite streaks	6	313
Shale and sandy shale	34	347
Shale and lignite	26	373
Sand	5	378
Shale	4	382
Sand	4	386
Shale and sandy shale	15	401
Sand and sandy shale layers	14	415
Shale and lignite	17	432
Sand (cut good), streaks of shale	23	455
Shale, few sand streaks	29	484
Shale	5	489
Sand	5	494
Shale	2	496
Sand	7	503
Shale	2	505
Sand, few shale layers	30	535
Shale	3	538

	THICKNESS	DEPTH
Well KA-39-23-303 (Continued)		
Sand, thin shale layers	12	550
Shale and sand	8	558
Sand (cut good)	27	585
Shale	3	588
Sand (cut good)	17	605
Sand and shale layers	7	612
Sand and shale	3	615
Sand, thin shale layers	20	635
Shale, sand and lignite streaks	25	660
Shale and hard streaks	14	674
Sand and shale layers	22	696
Shale, streaks of shale and lignite	8	704
Sand, streaks of shale and lignite	13	717
Shale and streaks of lignite	7	724
Sand, lignite and shale streaks	8	732
Shale and hard streaks of lime	5	737
Shale	7	744
Well KA-39-23-304		
Owner: Ward Prairie Water Supply Corp. Driller: Andrews and Foster Drilling Co.		
Red clay	25	25
Sand	10	35
Shale	50	85
Sand and lignite	15	100
Shale and lignite	65	165
Sand	10	175
Shale	25	200
Sandy shale	88	288
Sand	57	345
Shale, sand and lignite	60	405
Sand	38	443
Shale, sand and lignite	52	495
Shale	25	520
Sand and shale	83	603
Shale	7	610
Sand	10	620
Shale and sand streaks	35	655
Sand	37	692
Rock	1	693
Sand	22	715
Well KA-39-23-403		
Owner: Freestone County Country Club Driller: Neal Drilling Co.		
Clay	6	6

Table 13.--Drillers' Logs of Representative Wells in Freestone County--Continued

	THICKNESS	DEPTH
Well KA-39-23-403 (Continued)		
Sand	34	40
Sandy shale	20	60
Sand	115	175
Hard sand	5	180
Hard sandy shale	20	200
Sand	20	220
Sandy shale	52	272
Sand	23	295
Sandy shale	11	306
Sand	19	325
Sandy shale	20	345
Sand	18	363
Lignite	9	372
Gray shale	12	384
Sandy shale, rock at 393 feet	9	393
Gray shale, rock at 403 feet	17	410
Sandy shale	10	420
Gray shale	74	494
Sandy shale	53	547
Sand	15	562
Gray shale	58	620
Sandy shale	20	640
Gray shale	15	655
Well KA-39-23-407		
Owner: J. W. Mitchell Driller: Neal Drilling Co.		
Clay	10	10
Sand	20	30
Sandy shale	10	40
Brown shale	7	47
Sand, rock at 53 feet	6	53
Blue shale, rock at 75 feet	22	75
Sandstone	5	80
Gray shale	10	90
Lignite	10	100
Sand	54	154
Gray shale	6	160
Sandy shale	5	165
Sand	25	190
Gray shale	6	196
Sand	4	200
Gray shale	10	210
Lignite	10	220
Gray shale, rock at 225 feet	25	245
Sand	9	254
Lignite	8	262

	THICKNESS	DEPTH
Well KA-39-23-407 (Continued)		
Gray shale	25	287
Sand	5	292
Gray shale	8	300
Sandy shale	40	340
Lignite	10	350
Sandy shale	5	355
Sand	5	360
Gray shale	46	406
Sand	38	444
Well KA-39-23-503		
Owner: Robert Dunlop, Jr. Driller: Neal Drilling Co.		
Sand	4	4
Clay	16	20
Sandy shale	20	40
Blue shale	40	80
Brown shale	20	100
Gray shale	40	140
Sand	50	190
Gray shale, rock at 202 feet	40	230
Sand	90	320
Sandy shale	30	350
Sand	20	370
Sandy shale	15	385
Sand, tested very little water	25	410
Gray shale	40	450
Rock	2	452
Gray shale, rock at 455 feet	18	470
Sandy shale, rock at 470 feet	4	474
Sand	8	482
Gray shale, rock at 523 feet	78	560
Sandy shale	20	580
Gray shale, rock at 600 feet	62	642
Sand	20	662
Gray shale, rock at 728 feet	66	728
Gray shale	52	780
Well KA-39-23-603		
Owner: J. C. Leadbetter Driller: Neal Drilling Co.		
Clay	10	10
Sand	10	20
Sand and clay	20	40
Blue shale	40	80
Gray shale	42	122
Lignite	4	126

	THICKNESS	DEPTH
Well KA-39-23-603 (Continued)		
Sand	4	130
Gray shale	15	145
Sand	5	150
Sandy shale	5	155
Brown shale	5	160
Gray shale	20	180
Sand, stiff shale	70	250
Gray shale	10	260
Sandy shale	30	290
Sand	90	380
Well KA-39-24-506		
Owner: Turlington Water Supply Corp.		
Driller: C. C. Innerarity		
Surface clay	20	20
Blue clay	155	175
Sand	3	178
Blue clay	2	180
Tight sand	5	185
Sand	30	215
Blue clay	7	222
Sand, good	26	248
Blue clay	5	253
Sand	15	268
Clay and sand streaks	37	305
Hard blue clay	30	335
Rock	1	336
Sand	39	375
Hard blue clay	10	385
Sand	13	398
Sand and clay	42	440
Sand	5	445
Sand	10	455
Sand and clay streaks	51	506
Sand	4	510
Clay	30	540
Good sand	115	655
Hard and soft clay	45	700
Well KA-39-24-906		
Owner: W. D. Morse		
Driller: Rehkop Drilling Co.		
Surface	30	30
Broken sand	90	120
Clay	100	220
Broken sand and clay	70	290
Clay	20	310

	THICKNESS	DEPTH
Well KA-39-24-906 (Continued)		
Sand	80	390
Shale	10	400
Sand	10	410
Sandy clay	150	560
Well KA-39-31-404		
Owner: John Eppes		
Driller: Neal Drilling Co.		
Clay	30	30
Brown shale	30	60
Sandy shale	20	80
Sand	22	102
Sandy shale	23	125
Sand	5	130
Gray shale	60	190
Brown shale	10	200
Gray shale	27	227
Rock	2	229
Brown shale	11	240
Sand	3	243
Brown shale	22	265
Sandy shale	5	270
Gray shale	15	285
Sandy shale	20	305
Sand	45	350
Well KA-39-31-603		
Owner: Grady McAdams		
Driller: Neal Drilling Co.		
Top sand	7	7
Clay	5	12
Sand, red	18	30
Shale, light gray	14	44
Sandy shale	20	64
Shale	10	74
Sand	9	83
Shale	9	92
Sand	5	97
Shale	23	120
Sand, iron	6	126
Shale	4	130
Sand	6	136
Shale	21	157
Sand	9	166
Shale	8	174
Sand with shale streaks	52	226
Sand, rock, stone	3	229

	THICKNESS	DEPTH
Well KA-39-31-603 (Continued)		
Shale	19	248
Sand and lignite	8	256
Shale	6	262
Sand, fine and hard	16	278
Shale	2	280
Well KA-39-32-102		
Owner: Faye Hagen Driller: Neal Drilling Co.		
Clay	20	20
Blue shale	20	40
Sandy shale, rock at 66 feet	40	80
Lignite	3	83
Sand	52	135
Gray shale	20	155
Sand, very little water	85	240
Gray shale	45	285
Sandy shale	22	307
Sand	33	340
Well KA-39-32-402		
Owner: M. W. Whitlock Driller: Neal Drilling Co.		
Sand	6	6
Clay	34	40
Sandy shale	40	80
Brown shale	6	86
Sand	9	95
Brown shale	5	100
Sand	3	103
Brown shale	17	120
Gray shale	20	140
Lignite	7	147
Sandy shale	16	163
Gray shale	14	177
Sand	10	187
Gray shale	13	200
Brown shale	17	217
Sand, tested and was iron water	26	243
Gray shale	17	260
Sandy shale	127	387
Sand, good water	38	425
Well KA-39-32-701		
Owner: R. G. McSwane Driller: Neal Drilling Co.		
Sand and clay	20	20
Sand	50	70

	THICKNESS	DEPTH
Well KA-39-32-701 (Continued)		
Blue shale	10	80
Sandy shale	20	100
Gray shale, lignite 127-130 feet	70	170
Sand	15	185
Gray shale	115	300
Sandy shale	35	335
Gray shale	15	350
Sand, set and tested iron	55	405
Sandy shale	35	440
Gray shale	78	518
Sandstone, hard	2	520
Sand, good	30	550
Well KA-39-39-301		
Owner: I. W. Whitaker Driller: Neal Drilling Co.		
Sand	60	60
Gray shale	40	100
Hard sandy shale	40	140
Gray shale	88	228
Sand, iron water	26	254
Gray shale	46	300
Sandy shale	25	325
Gray shale	115	440
Sandy shale	5	445
Gray shale	25	470
Sandy shale	15	485
Hard sand	5	490
Gray shale	10	500
Hard sand, good	35	535
Well KA-39-39-404		
Owner: J. B. Lawler Driller: Neal Drilling Co.		
Clay	20	20
Sandy shale	87	107
Sand	13	120
Sandy shale	22	142
Sand	14	156
Sandy shale	24	180
Blue shale, rock at 195 feet	50	230
Sandy shale	50	280
Blue shale	25	305
Sandy shale	55	360
Gray shale	65	425
Sand	22	447

Table 14.--Drillers' Logs of Representative Wells in Henderson County

Well LT-33-47-902

Owner: Lewis Avant
Driller: Hampton Drilling Co.

	THICKNESS	DEPTH
Clay	12	12
Sand	14	26
Clay	25	51
Water, sand and clay	13	64

Well LT-33-55-302

Owner: John Key
Driller: Hampton Drilling Co.

	THICKNESS	DEPTH
Black clay	7	7
Yellow clay	5	12
Water, sand and gravel	10	22
Blue shale	14	36

Well LT-33-56-601

Owner: City of Malakoff No. 1
Driller: Texas Water Wells

	THICKNESS	DEPTH
Surface clay and sand	20	20
Gray sandy shale	72	92
Gray sand, streaks of lime and lignite	23	115
Fine sand, streaks of lime	25	140
Soft sand	22	162
Hard sand and lime	36	198
Shale	3	201
Light gray shale	50	251
Light gray sandy shale	41	292
Sandy shale	22	314
Soft gray sand	14	328
Hard sand	4	332
Sand, hard streaks	38	370
Sand and lime	10	380
Shale and lime	7	387

Well LT-33-64-501

Owner: J. W. Murchison
Driller: Andrews & Foster Drilling Co.

	THICKNESS	DEPTH
Sand	12	12
Shale	3	15
Gravel, sand	5	20
Lignite	3	23
Shale	52	75
Sand and shale	20	95
Shale	25	120
Sand	10	130
Shale	5	135
Rock	1	136

Well LT-33-64-501 (Continued)

	THICKNESS	DEPTH
Shale	24	160
Sand	10	170
Shale	55	225
Sand	10	235
Rock	2	237
Sand	53	290
Rock	2	292
Sand	18	310
Shale	10	320

Well LT-34-41-501

Owner: Roy Hendley
Driller: Andrews & Foster Drilling Co.

	THICKNESS	DEPTH
Red clay	22	22
Sand	48	70
Shale and lignite	10	80
Blue shale	80	160
Sandy shale	10	170
Sand	110	280
Sandy shale	55	305
Shale	55	360
Shale and sand breaks	70	430
Sand	50	480

Well LT-34-42-403

Owner: Bethel-Ash Water Supply Corp.
Driller: Rehkop Drilling Co.

	THICKNESS	DEPTH
Surface	20	20
Clay	25	45
Sand	75	120
Shale	100	220
Broken sand and shale	90	310
Shale	36	346
Sand	24	370
Shale with sand streaks	80	450
Sand	72	522
Shale	30	552
Sand (Wilcox)	33	585
Shale with coal streaks	2	587

Well LT-34-42-801

Owner: Delmer Smith
Driller: Rehkop Drilling Co.

	THICKNESS	DEPTH
Surface	5	5
Clay	5	10
Sand	28	38
Clay	47	85

Well LT-34-42-801 (Continued)

	THICKNESS	DEPTH
Sand	65	150
Shale	50	200
Broken sand and shale	30	230
Shale	30	260
Broken sand and shale	60	320
Shale	80	400
Broken sand	35	435
Shale	100	535
Sand	15	550
Shale	50	600
Sand	27	627
Shale	5	632
Sand	18	650
Shale	65	715
Broken sand (Tested-would only make 10 gpm from 500 foot setting)	55	770
Shale	55	825
Sand	25	850
Shale	25	875
Sand	55	930
Shale	13	943

Well LT-34-43-205

Owner: Floyd Cornett
Driller: Rehkop Drilling Co.

Sand	20	20
Shale	85	105
Sand	12	117
Shale	188	305
Sand	5	310
Shale	180	490
Sand	60	550
Sandy shale	30	580

Well LT-34-44-601

Owner: Three Community Water Supply Corp.
Driller: Rehkop Drilling Co.

Clay	40	40
Sand	20	60
Lignite	3	63
Blue shale with sand streaks	394	457
Sand	33	490
Shale	140	630
Carrizo sand	105	735
Shale	12	747

Well LT-34-45-403

Owner: Henderson County Municipal Water Authority
Driller: Layne Texas Co.

	THICKNESS	DEPTH
Sandy clay and caliche	30	30
Sandy clay and clay	61	91
Clay	22	113
Hard rock	2	115
Shale	13	128
Streaks of sand, shale and lignite	28	156
Shale and sandy shale	54	210
Sand	10	220
Shale and streaks of sand	44	264
Sand and streaks of shale	17	281
Shale	32	313
Fine gray sand	25	338
Sand and streaks of shale	10	348
Fine gray sand and lignite	13	361
Shale	6	367
Fine gray sand and lignite	61	428
Shale	16	444
Shale, streaks of sand and rock	15	459
Sand and shale streaks	11	470
Shale and streaks of sand	23	493
Sand	16	509
Shale	18	527
Shale, streaks of sand and lignite	41	568
Sand	5	573
Shale	6	579
Lignite	10	589
Sand and streaks of shale	13	602
Shale and lignite	50	652
Sand	7	659
Shale and lignite	41	700
Sand and lignite	20	720
Shale and lignite	112	832
Sandy shale, shale and lignite	110	942
Sandy shale and shale	45	987

Well LT-34-49-605

Owner: Hampton Concrete Co.
Driller: West & Rehkop Drilling Co.

Surface	20	20
Shale	115	135
Sand	75	210
Shale	240	450
Sand	22	472

	THICKNESS	DEPTH
Well LT-34-49-605 (Continued)		
Shale	38	510
Water, sand	40	550
Well LT-34-50-802		
Owner: Virginia Hill Water Supply Corp. Driller: Rehkop Drilling Co.		
Sand	20	20
Clay	50	70
Broken sand	30	100
Sand	70	170
Shale	50	220
Broken sand	45	265
Shale	12	277
Broken sand	123	400
Sand	50	450
Shale	70	520
Broken shale	10	530
Sand	75	605
Shale	2	607
Sand	8	615
Shale	145	760
Broken shale	40	800
Shale	40	840
Broken sand	20	860
Sand	43	903
Broken sand	9	912
Shale	8	920
Sand	17	937
Shale	18	955
Sand	10	965
Shale	30	995
Sand	35	1,030
Well LT-34-51-502		
Owner: Hugh Reynolds Driller: Rehkop Drilling Co.		
Surface	5	5
Clay	5	10
Sand	25	35
Clay	50	85
Sand	30	115
Clay	95	210
Sand	40	250
Shale	10	260
Broken sand and shale	175	435
Shale	55	490

	THICKNESS	DEPTH
Well LT-34-51-502 (Continued)		
Sand	25	515
Shale	5	520
Sand	5	525
Sandy shale	135	660
Sand	60	720
Well LT-34-52-103		
Owner: Moore Station Water Supply Corp. Driller: Rehkop Drilling Co.		
Surface	5	5
Sand	195	200
Broken sand and shale	100	300
Shale	40	340
Broken sand and shale	60	400
Shale	80	480
Sand	30	510
Shale	10	520
Sand	60	580
Shale	140	720
Sand	80	800
Shale	100	900
Well LT-34-53-704		
Owner: D. Foster Driller: White Drilling Co.		
Yellow and red sand and sandy clay	11	11
Red, white and yellow clay	19	30
Red and yellow sand with little gravel	10	40
White sand	20	60
Gray sand with shale and lignite streaks	25	85
Gray shale with sand streaks	30	115
Gray sand	20	135
Gray shale with lignite and shale streaks	19	154
Gray sand and lignite and shale streaks	61	215
Gray and brown shale with sandy shale and sand streaks	60	275
Gray sand	18	293
Gray shale	53	346
Green sand with green and brown shale streaks	14	360
Gray and brown shale with sand streaks	30	390
Green sand and fossils with shale streaks	15	405
Brown and green shale with sand streaks and lignite	30	435
Gray shale with sand streaks and lignite	25	460

	THICKNESS	DEPTH
Well LT-34-53-704 (Continued)		
Clear gray sand	15	475
Gray shale	5	480
Gray sand	13	493
Gray and brown shale	134	627
Gray sand	13	640
Gray sandy shale and shale	25	665
Gray shale with sandy shale streaks and lignite	55	720
Gray sandy shale with lignite streaks	95	815
Gray shale	10	825
Gray sandy shale with lignite and shale streaks	65	890
Gray sand	40	930
Very sandy shale	10	940
Well LT-34-57-302		
Owner: Circle 10-Boy Scouts of America Driller: West & Rehkop Drilling Co.		
Sand	90	90
Rock and coal	2	92
Broken sand with shale	233	325
Sand	45	370
Shale	10	380
Sand	58	438
Shale	47	485
Sand	10	495
Shale with sand streaks	110	605
Shale	50	655
Sand	10	665
Broken shale and sand	320	985
Sand	40	1,025
Shale	10	1,035
Sand	15	1,050
Shale	55	1,105
Well LT-34-58-402		
Owner: Koon Kreek Klub Driller: Holly Mining Co.		
Sand and clay	28	28
Shale	38	66
Sand and gravel	24	90
Shale	70	160
Sandy shale	45	205
Lignite and shale	20	225
Sandy shale	113	338
Shale and lignite	32	370
Rock	6	376

	THICKNESS	DEPTH
Well LT-34-58-402 (Continued)		
Shale and rock	25	401
Sand	15	416
Shale and lignite	80	496
Sand	24	520
Shale and sand streaks	34	554
Shale	150	704
Sand	62	766
Sand and shale streaks	31	797
Shale and sandy lignite	83	880
Sand	24	904
Shale	16	920
Sand	30	950
Sandy shale	100	1,050
Sand	40	1,090
Shale	34	1,124
Sand with shale streaks	76	1,200
Shale	32	1,232
Sand	21	1,253
Shale	91	1,344
Well LT-34-58-504		
Owner: John W. Murchison Driller: Rehkop Drilling Co.		
Sand	70	70
Shale	27	97
Sand	13	110
Shale	15	125
Sand	48	173
Shale	10	183
Sand	73	256
Shale	29	285
Sand (flowed)	212	497
Shale	51	548
Coal	4	552
Sand	36	588
Shale	102	690
Sand	25	715
Shale	25	740
Sand	6	746
Shale	44	790
Sand	142	932
Shale	18	950

Well LT-34-59-302

Owner: La Poyner School
Driller: Andrews & Foster Drilling Co.

	THICKNESS	DEPTH
Red clay and rock	20	20
Sand	80	100
Lignite	2	102
Sand	208	310
Shale	10	320
Rock	2	322
Shale	38	360
Sand	28	388
Shale	20	408
Sand	32	440
Shale	45	485
Sand	3	488
Shale	44	532
Sand	68	600
Sand and shale	22	622

Well LT-34-60-202

Owner: Hunt Oil Co.
Driller: Texas Water Wells

	THICKNESS	DEPTH
Sandy clay	15	15
Sand	77	92

Well LT-34-60-202 (Continued)

	THICKNESS	DEPTH
Sand and gravel	262	354
Sand and shale	254	608
Shale	257	865
Sand	125	990
Shale	60	1,050
Sand	80	1,130
Shale	45	1,175
Sand	55	1,230
Shale	20	1,250

Well LT-34-61-104

Owner: Wes McGuffey, Jr.
Driller: Rehkop Drilling Co.

	THICKNESS	DEPTH
Surface	20	20
Gravel	10	30
Clay	70	100
Broken sand and clay	100	200
Sand	50	250
Shale	320	570
Carrizo water sand	110	680
Shale	5	685

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-34-57-701	L. Tennison	390-650	Wx	8-19-70	TSDH	14	0.20		8	5	378			437	<4	360	0.2	<0.4	980*	41	1,690	8.1
801	J. T. Whitman	346-446	Wx	8-19-70	TSDH	14	0.30		5	4	72		2	171	18	19	0.1	<0.4	218*	29	355	8.4
58-701	E. E. Price	29	Qc	8-5-70	TSDH	35			30	5	20	12		63	24	31	0.2	40	228*	97	336	6.7
59-701	Anlaco, Inc.	540-560	Wx	8-5-70	TSDH	17	0.04		11	2	57			135	39	6	0.2	<0.4	198*	35	312	8.2
803	Anlaco, Inc.	720-760	Wx	8-5-70	TSDH	14			4	2	82		2	165	48	7	0.1	1.0	241*	17	381	8.4
902	M. G. Hilton	56	Qc	8-5-70	TSDH	37			11	1	17			41	7	20	<0.1	3.5	117*	33	160	6.2
60-403	Ben Douglas	165-180	Qc	8-5-70	TSDH	22	11.0		3	3	6			21	<4	8	<0.1	<0.4	63*	19	65	5.9
601	City of Frankston	20	Qc	6-14-44	USGS	24	0.01		5.0	1.6	3.0	2.6		13	4	3	0.4	11	61*	19		6.7
601	City of Frankston	20	Qc	7-47	TSDH	30	0.32	<0.05	10	4	2*				4	16	0.2	18		42		5.7
602	City of Frankston No.1	580-620	Cz	6-30-49	CL				6.8	2.1	76*		10	176	17	8				26		8.0
602	City of Frankston No.1	580-620	Cz	7-16-62	TSDH		0.06	<0.05	6	2	66			176	21	7	0.1	2	191*	21	340	7.4
602	City of Frankston No.1	580-620	Cz	8-20-70	TSDH	13	0.16		6	3	63			171	19	5	<0.1	1.0	194*	25	315	8.2
603	City of Frankston No.2	550-595	Cz	8-18-64	TSDH		1.37	<0.1	14	2	76			123	19	58	0.2	1	232*	42	434	7.8
701	W. T. Lang	>200	Qc	7-11-60	USGS	31	10.2		15	10	7.5*			<1	58	48	0	0	205	78	318	4.0
801	W. R. Baker	50	Sp	8-5-70	TSDH	30	0.06		7	2	9			22	<4	13	0.1	5	77*	25	92	6.0
902	Frankston Rural Water Supply Corp.	646-720	Cz	12-18-69	PTL		0.14		10.4	2.4	39*		22	88	17	9	0.05	1.5	144*	36	220	8.8
902	Frankston Rural Water Supply Corp.	646-720	Cz	12-24-69	TSDH		0.24															
903	Hunt Oil Co.	494-550	Cz	10-27-67	CL	14	<0.05	<0.05	9.8	1.7	64*			176	13	8	0.05	0.04	217	32	380	8.0
903	Hunt Oil Co.	494-550	Cz	10-1-70	TSDH	11	0.04		9	4	59			176	14	6	0.1	<0.4	190*	38	311	8.2
61-403	Frankston Independent School District	740-760	Cz	8-4-70	TSDH	8	0.20		7	3	91			217	39	7	0.2	<0.4	262*	29	434	8.3
501	Upper Neches Municipal River Authority	855 5/	Cz	12-3-69	EWL	11			8	3	107*			157	99	23			329*	31	544	7.7
501	Upper Neches Municipal River Authority	883 5/	Cz	12-3-69	EWL	10			9	3	112*			153	108	28			347	35	565	7.6
501	Upper Neches Municipal River Authority	868-898	Cz	8-10-70	TSDH	15	1.04		4	2	49		16	85	12	6	<0.1	<0.4	147*	12	229	9.4
702	Max Baker	32	Qc	8-4-70	TSDH	16	<0.02		7	4	6			20	<4	13	<0.1	13	69*	33	101	5.9

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-34-61-703	B. L. Saunders	584-614	Cz	8-4-70	TSDH	12	<0.02		12	5	52			173	14	6	0.2	<0.4	186*	52	306	8.2
802	B. R. Bivens	63	Qc	8-4-70	TSDH	34	0.10		71	8	17			167	18	43	<0.1	32	305*	213	494	7.3
38-01-101	Getty Oil Co.	531	Wx	8-19-70	TSDH	14			2	2	288		5	471	<4	170	0.2	<0.4	710*	15	1,191	8.5
103	Cayuga Water Supply Corp.	276-370	Wx	9-29-65	TSDH		0.10	<0.05	4		306		18	483	6	187	0.3	<0.4	758*	10	1,452	8.8
103	Cayuga Water Supply Corp.	276-370	Wx	8-20-70	TSDH	13	0.16		2	1	317		11	490	<4	205	0.3	<0.4	790*	12	1,340	8.6
104	Cayuga Water Supply Corp. T.H.No.1	550-650	Wx	8-12-65	PTL	16	0.1		3.2	1.0	472*		29	488	8	412	0.4		1,181*	12		8.7
202	H. M. Thomas	18	Cz	8-20-70	TSDH	18	0.06		68	15	17	32		109	15	49	0.1	170	438*	232	652	6.8
301	LaReata Ranch	260-450	Cz	8-27-70	TSDH	12	17.2		2	1	5			12	<4	5	<0.1	<0.4	48*	10	42	5.9
501	B. C. Y. Water Supply Corp. No.2	650 5/	Wx	9-18-69	PTL		1.6	0.08	41.6	5.4	94*		10	181	103	42	0.2	2.2	388*	126	590	8.2
501	B. C. Y. Water Supply Corp. No.2	596-646	Wx	10-2-69	PTL		1.5	0.7	96.9	16.5	82*			207	230	56	0.1	3.6	589*	310	820	7.2
501	B. C. Y. Water Supply Corp. No.2	596-646	Wx	10-31-69	TSDH		2.9	1.16	106	19	75			198	256	57	0.3	<0.4	615*	344	1,160	7.2
503	Ansley McMahon	430-470	Wx	8-27-70	TSDH	32	2.56		33	7	30			149	26	22	0.2	<0.4	226*	113	354	7.5
701	R. Yarbrough	58	Al & Cz	8-20-70	TSDH	23	0.06		155	18	138			373	72	266	0.2	8.0	861*	460	1,460	7.6
806	B. C. Y. Water Supply Corp. No.1	412-470	Wx	5-25-67	PTL		4.0		32.0	7.3	40*			54	88	21	0.1	1.0	221*	110	300	6.3
902	State of Texas Parks & Wildlife	260-280	Wx	7-26-54	TSDH	31	2.1		22	8	15*			85	16	25	0.1	0.4	162*	88		6.4
902	State of Texas Parks & Wildlife	260-280	Wx	8-25-70	TSDH		8.1		9	4	10	2		22	10	29	<0.1	<0.4	84*	39	163	5.8
02-101	Anlaco, Inc.		Cz	7-11-60	USGS	11	2.1		7.2	4.0	9.9*			4	34	12	0.1		80*	34	125	5.0
302	B. B. S. Water Supply Corp.	1,154-1,192	Wx	5-11-65	TSDH		0.18	<0.05	2	1	247		10	399	<4	142	0.2	<0.4	598*	10	1,125	8.5
302	B. B. S. Water Supply Corp.	1,154-1,192	Wx	9-11-66	TSDH		0.2	<0.05	2	1	248		7	406	4	143	<0.1	<0.4	605*	7	1,148	8.3
302	B. B. S. Water Supply Corp.	1,154-1,192	Wx	8-26-70	TSDH	18	0.13		1	1	250			420	<4	149	0.1	<0.4	630*	8	1,043	8.3
401	J. H. Isabell	110	Cz	8-14-70	TSDH	11	1.00		3	2	6			8	12	6	<0.1	<0.4	45*	15	64	5.8

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-38-02-402	Arnold Wisenbaker	548-569	Wx	8-13-70	TSDH	14	0.36		2	1	188	<1	16	459	<4	8	0.3	<0.4	455*	10	718	8.8
501	J. L. Petty	100-160	R	8-19-70	TSDH	50	8.20		12	14	37			<1	257	60	0.5	<0.4	628*	88	770	3.2
605	J. Forester	425	Wx	8-18-70	TSDH	15	0.10		6	2	59			155	14	4	0.1	<0.4	176*	23	282	7.9
702	W. K. Brown	24	Qc	8-18-70	TSDH	46	0.06		29	5	11			100	13	13	0.1	8.0	174*	95	247	6.6
803	O. L. Williams	200	Cz	8-24-70	TSDH	15	0.10		4	2	68		5	168	12	6	0.1	<0.4	195*	18	306	8.6
901	W. F. Robertson	33	Qc	8-13-70	TSDH	36	<0.02		6	6	70			27	27	84	0.2	28	270*	41	444	5.8
03-101	R. S. Costlow	77	Qc	8-12-70	TSDH	16	<0.02		48	3	6			133	<4	9	<0.1	25	172*	133	285	7.4
201	M. P. Holcomb	50	Qc	8-12-70	TSDH	16	1.38		87	20	18	34		88	29	47	<0.1	270	565*	298	796	6.8
301	Andy Page	51	Qc	8-12-70	TSDH	36	0.13		157	15	73			362	143	131	0.2	<0.4	733*	455	1,121	7.4
402	A. M. Johnson	26	Qc	8-13-70	TSDH	13	0.20		15	5	8			28	<4	18	<0.1	32	105*	59	184	6.1
501	R. L. Parker	34	Sp	8-13-70	TSDH	17	<0.02		24	2	2			73	<4	4	<0.1	6	91*	68	139	7.5
602	Fred Woody	660-759	Cz	8-12-70	TSDH	13	0.06		30	7	7	10		122	19	7	<0.1	<0.4	153*	103	250	7.8
701	Montalba Water Supply Corp.	1,070-1,141	Wx	9-18-63	MSL	13	0.24		1	0.4	159*		24	305	37	14			398	4	655	8.8
701	Montalba Water Supply Corp.	1,070-1,141	Wx	10-30-63	TSDH		0.34	<0.1	1	1	155		11	331	44	12	0.3	<0.4	388*	6	690	8.7
701	Montalba Water Supply Corp.	1,070-1,141	Wx	9-11-70	TSDH	17	0.06		2	1	154		8	340	40	13	0.2	<0.4	404*	10	633	8.7
803	H. S. Hamm	140-190	Qc	8-12-70	TSDH	50	8.1		6	5	15	2		<1	55	12	0.2	<0.4	163*	37	181	4.7
804	H. S. Hamm	104-185	Qc	8-12-70	TSDH	23	8.2		14	6	12	1		44	26	20	<0.1	<0.4	132*	61	197	6.1
902	J. W. Jones	760	Cz	8-11-70	TSDH	12	1.45		13	3	31	3		123	11	4	<0.1	<0.4	138*	46	224	7.8
04-101	Parrish	21	Qc	8-11-70	TSDH	41	0.68		51	4	12			159	15	17	0.1	<0.4	219*	145	326	6.8
201	W. H. Whitehurst	624-654	Cz	8-6-70	TSDH	13	0.04		3	2	84			224	7	7	0.1	<0.4	226*	15	359	8.2
305	E. L. Petty	843-864	Wx	9-28-70	TSDH	11	0.74		2	2	102			262	12	8	0.1	<0.4	267*	11	427	7.9
403	E. B. Birdwell	286-340	Qc	8-11-70	TSDH	28	6.90		26	8	6	4		129	5	10	<0.1	<0.4	157*	98	238	6.9
501	B. Coleman	32	Sp	8-11-70	TSDH	27	0.06		32	3	4			107	<4	4	<0.1	5.5	129*	93	191	7.5
602	Newt Woodard	44	Sp	8-11-70	TSDH	24	0.34		29	2	5			79	<4	7	<0.1	15	121*	80	176	7.0
702	Leon Barnes	35	Qc	8-12-70	TSDH	57	0.13		1	<1	7			4	<4	3	0.1	8	78*	4	47	5.7
801	C. D. Davis	90	Qc	7-12-60	USGS	22	1.2		52	20	48	5.9		25	36	168	0.1	28	392*	212	738	6.1

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-38-04-805	M. H. Sellar	686-706	Cz	2-20-61	USGS	9	0.13		6.0	2.1	59*			154	13	9	0.1		172	24	285	7.7
902	Ruby Green	336-357	Qc	8-10-70	TSDH	14	0.86		21	5	33	4		146	19	9	<0.1	<0.4	178*	73	288	8.1
05-102	Clarence House	Spring	Qc	8-6-70	TSDH	27	0.04		3	2	8			6	<4	16	<0.1	11	70*	18	84	5.6
103	Ben H. Carpenter	770-790	Cz	8-6-70	TSDH	16	0.13		3	<1	160		6	397	14	8	0.4	<0.4	402*	10	642	8.5
401	W. T. Todd	656-707	Wx	3-12-40	USGS	43	0.40		6.2	2.2	335*		10	612	2	165	0.3	0.25	865*	25		
401	W. T. Todd	656-707	Wx	4-21-49	USGS	12	0.2		5.6	2.1	327	4.8		618	1	163	0.9	0.8	822*	22	1,420	8.3
702	E. F. Klein	Spring	Qc	8-6-70	TSDH	18	0.06		3	2	6			6	<4	13	<0.1	7	52*	17	69	5.5
805	Humble Pipeline Co.	360-380	Cz	8-6-70	TSDH	4	0.98		2	1	86		88	35	8	12	0.2	<0.4	219*	10	429	10.4
09-101	J. C. Cox	44	R	8-20-70	TSDH	24	0.22		21	3	4			68	<4	5	<0.1	5.0	95*	63	144	7.1
201	A. M. Jackson	29	R	8-21-70	TSDH	35	0.30		20	4	23			48	9	37	<0.1	14	166*	66	251	6.3
301	Jesse Ingram	40	R	8-20-70	TSDH	39	0.10		84	24	102			43	81	298	0.3	<0.4	650*	309	1,149	6.1
601	State of Texas Dept. of Corrections	709-961	Wx	10-28-66	MSL	12	<0.05		2	1	238*		14	563	6	24			574	7	939	8.4
10-101	Stafford Spring School	344-610	Wx	7-26-54	TSDH		0.14	<0.05	2	1	246*		24	555	19	21	0.9	<0.4	587*	12		8.5
204	O. L. Williams	>500	Wx	8-24-70	TSDH	15	0.06		2	1	98	<1		235	24	9	0.2	<0.4	265*	10	421	8.3
301	Montalba Providence School	30	Qc	7-12-60	USGS	30	0.45		9.5	5.0	8.3*			21	<1	24		14	101*	44	145	6.1
401	Charles Carroll	375	Wx	7-11-60	USGS	12	0.04		4.2	1.7	147*			365	18	14	0.3		372	18	604	8.0
502	Paris Young	36	R	8-25-70	TSDH	73	<0.02		17	2	37	<1		51	16	21	<0.1	53	244*	50	284	6.3
601	H. P. Adams	55	R	7-11-60	USGS	36	0.48		14	6.9	20*			28	18	31		27	167*	63	250	6.2
701	Charles Carroll	977-1,015	Wx	8-25-70	TSDH	16	0.06		2	1	252		14	600	8	30	0.6	<0.4	620*	8	972	8.6
801	Mrs. J. H. Barrett	525-542	Wx	8-26-70	TSDH	20	0.52		7	2	97	2	32	214	6	6	0.2	<0.4	277*	24	435	9.3
902	J. N. Mack	180-260	Cz	8-25-70	TSDH	14	1.84		32	8	34	3		118	72	19	0.1	<0.4	242*	116	402	7.1
11-102	L. H. Harrison	746-829	Wx	8-27-70	TSDH	62	3.20		5	2	45	<1		98	11	23	0.1	<0.4	199*	23	246	7.3
203	Anderson County	Spring	Qc	8-28-70	TSDH	27	0.22		27	2	6			87	8	7	<0.1	1.5	122*	76	178	7.3
303	C. L. Walker	156-196	Qc	8-28-70	TSDH	27	0.42		48	4	10	<1		150	4	13	<0.1	21	201*	138	317	7.3
401	Louis Winkler	51	R	9-30-70	TSDH	16	0.10		244	109	171			123	500	590	0.4	<0.4	1,690*	1,060	2,600	6.3
501	Mark Taylor	46	Qc	9-25-70	TSDH	44	0.20		15	2	22			35	17	22	<0.1	17	156*	46	206	7.1

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-38-11-603	Lone Pine Water Supply Corp.	1,485-1,540	Wx	9-13-64	CL	14	0.3		2.0	0.6	85*			217	5	5	0.08		239	8	341	8.2
603	Lone Pine Water Supply Corp.	1,485-1,540	Wx	9-19-64	TSDH		0.16		3		79		1	199	7	4	0.2	<0.8	191*	9	346	8.4
603	Lone Pine Water Supply Corp.	1,485-1,540	Wx	10-1-70	TSDH	19	0.06		3	2	75			210	6	4	<0.1	<0.4	212*	16	327	8.3
702	W. R. Owens	36	Qc	9-9-70	TSDH	10	0.04		22	5	21			22	30	22	<0.1	50	171*	76	280	6.4
801	City of Palestine No.2	1,273-1,584	Wx	7-24-40	USGS	20	0.04		3.1	0.4	66*		10	151	7	4	0.2	0.17	185*	9		7.8
801	City of Palestine No.2	1,273-1,584	Wx	6-14-44	USGS	20	0.06		3.6	0.7	56	1.8	11	129	5	3	0.2	0.8	166*	12	260	8.1
801	City of Palestine No.2	1,273-1,584	Wx	11-13-46	TSDH	17	0.12	<0.05	5	1	79*			201	7	11	0.2	<0.4	219*	17		7.7
801	City of Palestine No.2	1,273-1,584	Wx	2-29-52	TSDH	19	0.05	<0.05	12	2	56*		6	153	13	7	0.2	<0.4	191*	38		8.7
801	City of Palestine No.2	1,273-1,584	Wx	2-15-55	TSDH	17	0.2	<0.05	4	2	76*		6	177	12	11	0.1	<0.4	215*	18		
801	City of Palestine No.2	1,273-1,584	Wx	6-22-60	TSDH		0.04	<0.05	4	<1	62*		2	172	9	8	0.1	<0.4	170*	11	295	8.4
801	City of Palestine No.2	1,273-1,584	Wx	4-22-65	TSDH		<0.02	<0.05	3	1	61		2	155	7	4	0.2	<0.4	155*	11	275	8.5
801	City of Palestine No.2	1,273-1,584	Wx	5-16-68	TSDH		0.28	<0.05	3	1	73			183	8	6	0.1	<0.4	181*	11	324	8.3
802	O. F. Meeck	20	Qc	1-19-61	USGS	13	0.12		49	9.0	18	18		203	23	11	0.3	13	254*	159	427	7.0
901	City of Palestine No.1	1,304-1,596	Wx	6-16-40	USGS	20	0.22		2.4	0.5	86*		10	200	7	5		0	228*	8		8
901	City of Palestine No.1	1,304-1,596	Wx	2-18-41	TSDH	15	0.06	<0.05	4	1	69*			165	8	14	<0.4	<0.4	192*	13		8.1
901	City of Palestine No.1	1,304-1,596	Wx	6-14-44	USGS	20	0.02		3.4	0.8	72	1.7	10	175	3	5	0.4	0	202*	12	332	8.2
901	City of Palestine No.1	1,304-1,596	Wx	4-23-51	TSDH	20	0.13	<0.05	5	3	80*			214	8	11	0.1	<0.4	232*	25		8.2
901	City of Palestine No.1	1,304-1,596	Wx	2-25-52	USGS	19	0.01	0.00	1.8	0.7	79	2.0		201	6	6		0	214*	7	334	8.0
901	City of Palestine No.1	1,304-1,596	Wx	2-15-55	TSDH	16	0.08	<0.05	3	1	89*		12	189	14	11	0.1	<0.4	239*	12		8.3

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-38-11-901	City of Palestine No.1	1,304-1,596	Wx	6-22-60	TSDH		0.03	<0.05	3	<1	73*		6	183	12	7	0.1	<0.4	191*	8	387	8.6
901	City of Palestine No.1	1,304-1,596	Wx	4-22-65	TSDH		0.04	<0.05	3		75			189	7	6	0.2	2	185*	8	323	8.2
901	City of Palestine No.1	1,304-1,596	Wx	5-16-68	TSDH		0.06	<0.05	2	2	110			245	6	35	0.3	<0.4	276*	12	507	8.3
902	City of Palestine No.4	703-730 5/	Cz	2-24-55	CL	11	28.0		23	7	21*			55	57	20			189*	86		6.0
902	City of Palestine No.4	1,604-1,694 5/	Wx	3-2-55	CL	14	1.2		8	2	71*		12	183	2	7			207*	24		8.3
902	City of Palestine No.4	1,721-1,754 5/	Wx	3-11-55	CL	16	0.3		16	3	89*		12	244	13	10			279*	52		8.2
902	City of Palestine No.4	2,113-2,133 5/	Wx	3-11-55	CL	18	0.2		4	1	332*		30	464	<1	216			829*	14		8.5
902	City of Palestine No.4	1,545-2,215	Wx	4-8-55	CL	13	0.1		4	1	198*		12	337	<1	104			497*	14		8.3
902	City of Palestine No.4	1,545-2,215	Wx	7-27-55	TSDH	19	0.08	<0.05	3	1	241*		18	494	5	67	0.4	<0.4	597*	12		8.7
902	City of Palestine No.4	1,545-2,215	Wx	6-22-60	TSDH		0.06	<0.05	5	4	157*			325	8	87	0.1	<0.4	421*	27	790	8.3
902	City of Palestine No.4	1,545-2,215	Wx	4-22-65	TSDH		<0.02	<0.05	5	2	247			406	<4	143	0.3	<0.4	597*	20	1,120	8.2
902	City of Palestine No.4	1,545-2,215	Wx	5-16-68	TSDH		0.04	<0.05	4	2	190		4	350	5	101	0.3	<0.4	478*	19	900	8.4
903	Missouri Pacific Railroad	1,519-1,903	Wx	3-18-69	USPH		0.16	<0.05	1	<1	146*		5	368	5	6	0.3	1.0	346*	5	608	8.5
905	Palestine Ice Co.	335-376	Qc	4-21-49	USGS	20	24		21	12	21	4.4		57	48	42	0.1	0.2	221*	102	350	6.2
12-104	Norwood Terry	30	Qc	9-8-70	TSDH	36	0.16		28	2	13			87	6	6	<0.1	23	157*	78	210	7.6
201	J. T. Davis	43	Qc	7-12-60	USGS	26	0.28		44	10	58*			154	38	36		75	368	151	562	6.6
302	Jack Garrett	29	Qc	9-9-70	TSDH	62	0.88		7	5	103			9	189	40	0.2	1.0	412*	37	578	5.6
402	Norwood Water Supply Corp.	619-649	Cz	9-30-66	PTL		0.2		38.0	3.2	46*			122	51	38	0.5	0.5	238*	108	380	7.4
402	Norwood Water Supply Corp.	619-649	Cz	3-15-68	TSDH		6.10	0.15	9	5	36			66	40	23	0.3	<0.4	152*	46	290	6.5
403	K. G. Johnson	220-310	Qc	9-10-70	TSDH	34	2.56		7	4	8			9	30	11	<0.1	<0.4	98*	36	134	5.5

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-38-12-604	Jeff Kale	330-345	Cz	9-25-70	TSDH	9	0.36		15	4	59	3		200	15	9	0.1	<0.4	212*	56	347	7.7
701	W. G. Elrod	47	Qc	7-12-60	USGS	29	4.0		6.0	2.3	4*			8	<1	13		9.9	68*	24	83	5.5
703	Roselawn Park	650-713	Cz	9-9-70	TSDH	11	0.22		15	5	41			153	14	6	0.1	1	168*	59	280	7.7
801	D. C. Beason	28	Qc	9-9-70	TSDH	22	2.88		30	16	26			22	<4	68	<0.1	93	269*	140	445	6.1
13-106	Neches Water Supply Corp.	397-497	Cz	2-10-65	PTL	16	0.13		8.0	2.9	93*		12	222	17	11	0.3		269*	32		8.3
106	Neches Water Supply Corp.	397-497	Cz	12-3-65	TSDH		0.10	<0.05	8	2	90			243	17	9	0.1	<0.4	246*	28	438	8.3
106	Neches Water Supply Corp.	397-497	Cz	9-15-70	TSDH	11	0.04		7	3	89			244	14	9	0.1	<0.4	253*	29	413	8.1
405	Harold Greve	381-455	Cz	10-1-70	TSDH	10	0.46		10	5	77			229	15	10	0.1	<0.4	240*	45	395	7.8
704	W. T. Ellis	87	Qc	9-14-70	TSDH	25	<0.02		4	1	13			12	8	10	<0.1	11	78*	15	101	6.2
805	Charlie Soucek	208-248	Wx	9-14-70	TSDH	11	0.22		3	2	198			510	<4	20	0.5	<0.4	486*	17	777	8.1
18-202	Walter D. Callaway	170-215	Cz	8-26-70	TSDH	13	1.62		35	8	19	2		124	43	16	<0.1	<0.4	197*	123	330	7.3
602	Getty Oil Co.	436-519	Wx	3-2-40	USGS	14	0.16		6.4	1.9	278*		16	694	1	21	0.6	0.1	681*	24		
602	Getty Oil Co.	436-519	Wx	4-22-49	USGS	14	0.3		4.2	1.6	251	3.2		657	<1	18	0.7	0.2	617*	17	1,010	8.1
603	Lone Star Gas Co.	454-517	Wx	1-19-55	LSG	13	2.5		8.8	0.5	474*			816	2	264			1,165*	24		7.5
901	Woodhouse Consolidated School	341-356	Wx	7-12-60	USGS	13	0.23		6.8	2.7	259*			682	0	20	1.2	0	626	28	1,020	7.7
19-103	R. L. Carroll	30	Wx	9-30-70	TSDH	40	0.10		15	4	11			50	13	10	<0.1	11	129*	52	164	6.5
201	Four Pines Water Supply Corp.	1,320-1,370	Wx	10-16-64	CL	16	0.05		2.2	0.4	122*		6	299	9	6			328	7	478	8.4
201	Four Pines Water Supply Corp.	1,320-1,370	Wx	4-23-68	TSDH		0.04	<0.05	3	1	113		2	294	7	4	0.1	0.5	277*	12	486	8.4
301	City of Palestine No.3	763-793 5/	Cz	12-15-54	CL	17	0.3		16	5	30*		2	68	36	20			177*	61		7.6
301	City of Palestine No.3	2,019-2,040 5/	Wx	12-19-54	CL	17	0.2		3	1	384*		48	878	<1	32			919*	12		8.6
301	City of Palestine No.3	2,115-2,169 5/	Wx	1-7-55	CL	17	0.1		5	2	323*		72	708	2	13			782*	21		8.9
301	City of Palestine No.3	2,284-2,304 5/	Wx	12-21-54	CL	20	0.1		5	2	167*		24	329	6	48			433*	21		8.5

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-38-19-301	City of Palestine No.3	2,305-2,344 5/	Wx	12-29-54	CL	20	0.2		8	2	160*		12	342	<1	52			422*	28		8.2
301	City of Palestine No.3	1,695-2,345	Wx	2-12-55	CL	15	0.2		1.7	0.5	240*		36	512	2	31			577*	6		8.6
301	City of Palestine No.3	1,695-2,345	Wx	2-15-55	TSDH	16	0.13	<0.05	2	1	246*		18	531	13	46	0.4	<0.4	603*	9		
301	City of Palestine No.3	1,695-2,345	Wx	6-22-60	TSDH		0.04	<0.05	4	<1	220*		12	537	1	40	0.4	<0.4	541*	10	964	8.5
301	City of Palestine No.3	1,695-2,345	Wx	4-22-65	TSDH		0.04	<0.05	4		239		7	520	5	52	0.6	<0.4	564*	11	1,000	8.5
301	City of Palestine No.3	1,695-2,345	Wx	5-16-68	TSDH		0.10	<0.05	2	1	240		12	550	5	47	0.6	<0.4	578*	9	1,050	8.6
303	Pleasant Springs Water Supply Corp.	1,614-1,700	Wx	6-23-66	PTL		0.3		1.6	1.0	154		17	351	10	11	1.0	0.7	369*	8	550	8.4
401	Tucker Water Supply Corp.	315	Cz	2-11-42	USGS		0.48		20	6.9	103*			253	64	20		0.5	339*	78	567	
401	Tucker Water Supply Corp.	315	Cz	10-1-66	TSDH		0.56	<0.05	23	8	92			140	134	19	0.3	<0.4	345*	91	642	7.6
401	Tucker Water Supply Corp.	315	Cz	9-29-70	TSDH	12	1.12		27	9	92			142	154	20	0.2	<0.4	385*	103	613	7.4
402	Hunt Oil Co.	522-573	Wx	3-12-40	USGS	16	0.69		6.4	2.1	353*		4	888	2	37	1.0	0.10	858*	25		
402	Hunt Oil Co.	522-573	Wx	4-22-49	USGS	14	0.4		4.2	1.7	340	3.6		861	<1	37	1.2	0	827*	18	1,340	8.2
402	Hunt Oil Co.	522-573	Wx	9-29-70	TSDH	15	0.22		6	2	341			870	<4	36	1.0	<0.4	830*	23	1,270	8.1
503	F. G. Brown	26	Qc	9-15-70	TSDH	56	0.30		17	2	22			63	11	12	0.1	25	175*	50	216	6.8
802	Lakeview Methodist Assembly No.2	356-396	Cz	7-12-60	USGS	12	1.1		5.5	2.0	52*			129	17	8	0.2	0	162	22	252	6.9
803	Lakeview Methodist Assembly No.1	365-385	Cz	10-5-56	TSDH		0.76		4	2	52*			116	15	7			138*	16		8.0
902	Q. N. McCann	412-470	Cz	9-15-70	TSDH	11	1.68		5	3	55			145	15	7	<0.1	<0.4	169*	23	274	7.3
20-103	Vernon Calhoun Packing Co. No.1	665-729	Cz	12-17-56	CL	18	0.8		4.5	1.5	63*			159	11	8			201	17		7.1
104	Walston Springs Water Supply Corp.	2,020-2,218	Wx	9-25-64	MSL	12	0.64		1	0.5	361*		22	730	<1	109			872	5	1,450	8.5
104	Walston Springs Water Supply Corp.	2,020-2,218	Wx	11-2-64	TSDH		0.34	<0.05	2		359		13	740	5	116	0.8	<0.4	860*	6	1,568	8.5

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-38-20-201	Delton Rosson	55	Qc	7-11-60	USGS	60	0.10		28	4.3	20*			78	8.4	28	0.1	23	240	88	283	6.2
203	Vernon Calhoun Packing Co. No.2	635-710	Cz	12-22-64	MSL	9	0.18		3	2	71*			166	20	8			187	14	301	7.3
203	Vernon Calhoun Packing Co. No.2	635-710	Cz	10-15-70	TSDH	11	0.36		4	3	60			146	18	7	0.2	<0.4	175*	22	285	7.3
302	Henry Davenport	40	Qc	9-17-70	TSDH	21	0.10		4	2	5			12	<4	10	<0.1	1	49*	18	60	5.9
402	Beulah Baptist Church	22	Qc	9-17-70	TSDH	47	1.84		9	1	12			31	12	10	<0.1	<0.4	108*	28	114	6.1
502	H. R. Denman	20	Sp	9-18-70	TSDH	22	0.42		6	2	3			15	10	7	<0.1	1.5	59*	24	68	6.1
604	Kimball Production Co.	1,675-1,822	Wx	9-16-70	TSDH	17	0.20		2	2	364		22	830	<4	80	0.9	<0.4	900*	12	1,440	8.7
702	Miss Ivey Payne	829-859	Wx	9-16-70	TSDH	15	0.06		5	3	351			940	<4	33	1.6	<0.4	870*	27	1,360	8.3
801	City of Elkhart No.2	920-1,008	Cz	11-22-57	USGS	13	0.14	0.00	0.2	0	132	1.6		302	23	14	0.1	0.5	376	0	530	7.9
801	City of Elkhart No.2	920-1,008	Cz	6-20-62	TSDH		0.04	<0.05	0.8	0.2	126			290	23	22	0.2	<0.4	314*		630	7.7
801	City of Elkhart No.2	920-1,008	Cz	3-16-66	TSDH		<0.02	<0.05	1		126			293	19	14	0.3	<0.4	294*		546	8.2
801	City of Elkhart No.2	920-1,008	Cz	9-16-70	TSDH	13	0.10		1	2	126			304	20	12	0.3	<0.4	323*	10	524	7.9
904	J. C. Hamby	28	Sp	9-17-70	TSDH	88	0.34		3	3	27			<1	54	18	<0.1	<0.4	193*	21	200	4.8
905	L. J. Wilson	178-193	Qc	9-23-70	TSDH	11	0.20		41	13	13	5		203	<4	20	<0.1	<0.4	203*	158	364	7.5
21-401	D. Clewis	30	Sp	9-23-70	TSDH	20	0.12		2	2	5			5	8	5	<0.1	4	48*	13	52	5.5
506	A. L. Melton	24	Sp	9-23-70	TSDH	34	0.16		24	17	18	12		<1	<4	42	0.7	150	298*	130	470	4.1
703	Shell Oil Co. - B. F. Weaver No.1	1,720-1,840	Wx	9-20-66	MSL	14	0.07		1	1	429*		31	939	<1	83			1,021	6	1,650	8.3
704	Shell Oil Co. - J. B. Parker No.1	1,670-1,790	Wx	3-7-64	MSL	10	0.43		1.5	0.7	436*		16	986	2	84			1,042	7	1,665	8.5
704	Shell Oil Co. - J. B. Parker No.1	1,670-1,790	Wx	9-23-70	TSDH	17	0.16		2	3	413			1,000	<4	80	1.1	<0.4	1,010*	18	1,570	8.3
705	Shell Oil Co. - J. B. Parker No.2	1,695-1,795	Wx	10-20-66	MSL	14	0.20		2	0	432*		19	974	<1	81			1,030	5	1,680	8.2
705	Shell Oil Co. - J. B. Parker No.2	1,695-1,795	Wx	9-23-70	TSDH	17	0.06		2	4	411		7	970	<4	80	1.1	<0.4	1,000*	24	1,580	8.4

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-38-21-706	Slocum Water Supply Corp.	675-720	Cz	5-14-65	PTL	12	0.04		1.2	0.7	142*		17	273	38	17			363*	6		8.4
706	Slocum Water Supply Corp.	675-720	Cz	5-14-65	TSDH		0.46		2	1	140		5	289	32	15	0.8	<0.4	338*	8	603	8.6
706	Slocum Water Supply Corp.	675-720	Cz	10-9-70	TSDH	12	0.18		1	1	141		7	294	36	15	0.5	<0.4	359*	8	561	8.6
802	L. P. Johnston	20	Sp	9-23-70	TSDH	35	0.74		6	4	33			7	39	42	0.1	1.3	164*	34	242	5.6
903	M. B. Gilmore	488-508	Cz	9-23-70	TSDH	11	0.12		1	2	155			336	52	17	0.4	<0.4	403*	12	640	8.0
22-702	Pack Watkins	Spring	Sp	9-24-70	TSDH	19	0.06		2	2	7			<1	12	4	<0.1	9	55*	12	65	5.1
802	Mrs. J. M. Bowman	62	Qc	9-24-70	TSDH	25	0.16		11	4	38			29	29	38	<0.1	40	199*	43	325	6.2
27-201	Emmett Coleman	565	Cz	7-56	TAES				18		112*		36	183	24	28			308*			
301	Jerry Coleman	28	Sp	7-13-60	USGS	60	0.09		38	8.1	50*			82	14	105	0.2	10	396	128	531	5.8
304	Emmett Coleman	278-330	Qc	7-13-61	USGS	37	8.5		35	12	17*			100	59	21	0.1	0	245	137	350	5.9
305	Pilgram Water Supply Corp.	261-281	Qc	5-7-68	PTL		0.02		24.8	7.3	32*			178	10	4	0.4	0.4	167*	92	300	7.9
305	Pilgram Water Supply Corp.	261-281	Qc	12-15-69	TSDH		0.04	<0.05	24	7	36			171	17	10	0.2	<0.4	178*	90	338	7.8
305	Pilgram Water Supply Corp.	261-281	Qc	10-14-70	TSDH	12	0.52		23	7	38			176	16	8	<0.1	<0.4	191*	86	320	7.6
602	Mary Johnson	36	Qc	9-16-70	TSDH	56	1.22		2	2	4	2		<1	20	9	<0.1	<0.4	96*	14	113	3.9
28-101	W. O. Doolittle	265-347	Qc	9-24-70	TSDH	10	0.20		11	4	47			139	17	9	<0.1	<0.4	166*	43	271	7.5
202	City of Elkhart No.1	582-640	Qc	3-11-40	USGS	12	2.10		50	16	23*			152	83	20		0.4	280*	191		
202	City of Elkhart No.1	582-640	Qc	6-14-44	USGS	13	2.4		53	16	13	7.0		146	81	21	0.1	0.8	277*	198	475	7.7
202	City of Elkhart No.1	582-640	Qc	8-3-53	TSDH	12	1.5	<0.05	46	16	34*			159	82	28	0.2	<0.4	287*	181		
204	Earl Seymour	42	Cm	9-18-70	TSDH	29	0.20		7	3	12			12	10	10	<0.1	25	102*	30	126	5.7
303	W. E. Garland	183-208	Sp	9-22-70	TSDH	20	16.4		8	9	9			50	8	23	<0.1	<0.4	118*	59	173	6.3
304	R. H. Alfred	95-115	Sp	9-22-70	TSDH	16	0.06		2	1	4			4	5	5	<0.1	1	36*	9	39	5.6
403	J. R. Simpson	40	Sp	9-22-70	TSDH	51	0.04		6	2	12			16	23	9	<0.1	1	112*	23	113	6.2
502	J. A. Gunnels	49	Sp	9-22-70	TSDH	51	0.10		14	1	6			44	5	6	<0.1	2.7	108*	39	101	6.5
29-105	Texaco, Inc.	1,800-1,910	Wx	7-24-70	EWL	13	0.16		1	1	438		19	991	<1	80			1,035	5	1,670	8.4

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 15.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
AA-38-29-105	Texaco, Inc.	1,800-1,910	Wx	9-23-70	TSDH	18	0.20		2	5	413			1,020	<4	76	1.6	<0.4	1,020*	25	1,590	8.3
107	Slocum Gas Co.	10-31	Sp	9-24-70	TSDH	30	0.74		30	8	40			52	<4	98	0.4	9.5	243*	109	424	6.3
204	J. B. Hutchens	25	Sp	9-24-70	TSDH	30	<0.02		10	4	20			24	5	27	<0.1	27	135*	44	204	5.6
205	Bobby Allen	220	Qc	9-24-70	TSDH	12	0.70		36	13	17			195	15	5	0.1	<0.4	195*	143	327	7.5
303	J. L. Hobson	26	Sp	9-24-70	TSDH	17	0.06		28	6	30			57	5	35	<0.1	70	219*	96	349	6.2
401	Travis Mosely	75-104	Sp	7-13-60	USGS	24	0.32		5.0	1.9	15*			13	<1	14		28	94*	20	137	6.0
30-101	Jerry Sadler	280	Qc	7-13-60	USGS	40	5.9		2.2	2.5	61*			124	26	14	0.2	0.2	216	16	286	6.6
202	Mrs. C. F. Monk	33	Qc	9-24-70	TSDH	35	0.50		5	2	12			11	8	20	<0.1	<0.4	88*	19	104	6.7
39-08-302	Lone Star Gas Co.	327	Wx	8-19-70	TSDH	14	0.13		2	1	260		17	456	<4	126	0.2	<0.4	640*	10	1,070	8.8
602	Lone Star Gas Co.	320	Wx	8-19-70	TSDH	14	0.16		4	2	460			520	<4	433	0.4	<0.4	1,170*	17	1,990	8.3

1/ Initials used to identify water-bearing units are:

Al	-	Alluvium
Cm	-	Cook Mountain Formation
Sp	-	Sparta Sand
Qc	-	Queen City Sand
R	-	Reklaw Formation
Cz	-	Carrizo Sand
Wx	-	Wilcox Group

2/ Initials used to identify laboratories are:

CL	-	Curtis Laboratories
EWL	-	Edna Wood Laboratories
LSG	-	Lone Star Gas Co.
MSL	-	Microbiology Service Laboratories
PTL	-	Pope Testing Laboratories
TAES	-	Texas Agricultural Experiment Station
TSDH	-	Texas State Department of Health
USGS	-	United States Geological Survey
USPH	-	United States Public Health Service

3/ Asterisk (*) indicates sodium and potassium calculated as sodium.

4/ Asterisk (*) indicates value is calculated or estimated.

5/ Sample from test hole at well site.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-34-53-904	Buddy Slover	31	W	3-6-36	WPA				20	18	9*			116	16	21			142*	122		
54-703	J. J. Bailey	23	W	3-10-36	WPA				4	3	15*			24	<5	23			57*	21		
801	J. E. Boyle	1,038-1,092	Wx	3-19-71	TSDH	16	0.06		2	1	258			690	4	9	0.9	3.8	630*	10	968	8.3
61-301	Pure Transportation Co.	55	W	3-9-71	TSDH	35	0.06		9	7	9			2	7	44	<0.4	<0.4	112*	53	183	5.3
302	Herbert Fair	38	W	3-9-36	WPA				12	8	4*			18	<5	39			72*	61		
303	Charles Schulze	32	W	3-6-36	WPA				3	16	29*			80	<5	49			137*	72		
304	Mrs. Archie Miller	30	W	3-6-36	WPA				10	10	8*			12	<5	52			86*	66		
601	C. L. Newberne	745	Cz	7-31-61	USGS	11	0.02		1.5	0.3	55*			126	11	7	0.3	0.0	150	5	246	7.3
603	L. G. Hunley	37	Sp	3-9-36	WPA				18		18*			79	<5	14			89*	46		
902	Southern Blue Catfish Farm, Inc.	622-666	Cz	3-9-71	TSDH	14	<0.02	<0.05	4	2	70			163	14	12	0.2	<0.4	196*	17	315	7.5
903	W. D. Baker	Spring	Qc	3-11-36	WPA				4	5	12*			31	<5	23			59*	31		
904	Quinn Lewis	38	Qc	3-11-36	WPA				3		11*			24	<5	8			34*	8		
62-103	J. E. Biscoe	35	Sp	3-10-71	TSDH	53	<0.02		21	13	45			17	16	38	0.1	143	337*	106	464	5.9
104	W. C. J. Stephens Estate	29	W	3-9-36	WPA				3	32				232	<5	24			209*	224		
105	Mrs. L. C. Wilkinson	47	W	3-9-36	WPA				2	3	9*			18	<5	15			38*	16		
201	J. C. Hall & Jack Tarrant	26	W	3-13-36	WPA				7	3	6*			24	<5	15			43*	29		
202	George D. Huddleston	40	W	3-9-71	TSDH	23	0.06		4	4	9			9	7	12	<0.1	14	77*	25	107	5.8
304	Clyburn Estate	76	Qc	3-18-36	WPA				16		4*			24	<5	18			50*	39		
402	G. W. Buchanan Estate	51	Qc	3-10-36	WPA				3		11*			18	<5	12			35*	8		
403	Mrs. Norene Shaffer	35	Qc	3-10-71	TSDH	28			34	7	6			112	24	7	0.1	<0.4	161*	114	247	6.5
501	H. R. Lewis	31	Sp	3-10-71	TSDH	27	0.04		18	1	5			55	5	4	<0.4	3.5	91*	49	115	6.5
502	Dean Lewis	47	W	3-10-36	WPA				2	5	11*			12	16	17			57*	26		
602	L. J. Spraggins	190	Qc	3-10-71	TSDH	23			3	1	5			9	5	6	<0.1	<0.4	47*	10	49	5.6
603	Roper	34	Qc	3-4-36	WPA				1	3	8*			18	<5	13			34*	15		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-34-62-604	Gladys Downs	23	Qc	3-4-36	WPA					3	7*			18	<5	8			27*	17		
702	T. L. Gary	265-297	Qc	3-10-71	TSDH	18			13	7	7			63	13	7	<0.1	<0.4	96*	61	155	6.4
703	Phillip Roebuck	Spring	Sp	3-10-36	WPA				9					18	<5	6			24*	23		
804	Billy Smith	104	Qc	1-31-61	HL	16	0.1		40	3	5			132	7	7			158	110		7.1
805	Levi Sherman	24	Qc	3-10-36	WPA				10	8				37	<5	14			50*	58		
901	Eunice Sanborn	248-366	Qc	3-23-36	WPA					6	13*			36	<5	16			53*	24		
901	Eunice Sanborn	248-366	Qc	9-7-48	TSDH	28	1.8	0.05	7	4	9*			12	27	11	<0.1	1.1	95*	34		5.5
901	Eunice Sanborn	248-366	Qc	7-29-61	USGS	41	3.0		3.2	5.0	12*			10	31	10	0.1	0.0	119	29	119	4.7
63-101	A. L. Looney	580	Wx	7-31-61	USGS	13	0.15		1.2		300*		10	720	1	32	1.1	0.0	744	3	1,170	8.3
103	A. L. Looney	27	Qc	3-13-36	WPA				23	14	9*			49	<5	64			134*	115		
104	Reading Ranch	27	Qc	3-13-36	WPA				18	18	18*			171	<5	10			149*	117		
105	J. M. Lawson	27	Qc	3-26-36	WPA									49	<5	47			113*			
204	Earl Hendrick	55	Qc	3-8-71	TSDH	46	<0.02		14	1	7			46	6	5	<0.1	3.5	106*	40	110	6.6
205	H. L. Andrews	300	Cz	3-8-71	TSDH	13	0.04		5	2	144			344	36	12	0.7	1.9	384*	23	600	7.7
206	Irene Armstrong	24	Qc	3-26-36	WPA									12	<5	48			85*			
301	L. S. Wilson	263-283	Cz	3-5-71	TSDH	12	0.70		31	15	106			143	216	23	0.1	<0.4	473*	137	712	7.1
405	Sam Stockton	Spring	Qc	3-25-36	WPA						14*			12	<5	14			34*			
406	Clyde Cain	29	Qc	3-25-36	WPA									6	<5	18			33*			
501	J. G. Hefner	300-380	Wx	3-4-71	TSDH	15	0.46		3	1	320			840	<4	20	1.2	<0.4	770*	12	1,171	8.3
502	H. H. Cullom	200	Cz	3-4-71	TSDH	12	0.10		5	2	119			168	117	13	0.2	2	353*	22	559	7.3
602	James Godwin	519-539	Wx	3-1-71	TSDH	14	0.18		2	1	319		6	810	<4	16	1.1	2.5	760*	8	1,141	8.5
603	T. Stovall	34	Qc	3-27-36	WPA				256		1,300*				3,433	385			5,374*	890		
604	Beau Wilson	11	R	3-27-36	WPA									24	<5	56			108*			
702	Rather Duty	28	Qc	3-9-71	TSDH	50	0.10		2	1	10			12	12	5	<0.1	4.5	91*	10	77	5.8
802	V. E. Pierce	200-210	Cz	3-5-71	TSDH	13	0.12		6	6	117			242	80	10	0.3	<0.4	351*	38	546	7.9
803	H. O. Simpson	18	Qc	3-25-36	WPA									634	9	550			1,398*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-34-63-902	H. A. Northcutt	38	R	3-27-36	WPA				43	12	62*			73	79	106			338*	157		
903	Roger Tilman	20	R	3-27-36	WPA									18	8	33			78*			
64-202	Alvin Davis	255-275	Wx	8-1-61	USGS	13	0.18		1.5	0.3	221*		6	550	11	8	0.7	0.0	549	4	873	8.3
203	Virginia Pruitt	234-250	Wx	3-3-71	TSDH	13	0.30		2	2	159			166	185	26	0.2	4.0	473*	12	724	7.2
302	B. A. & M. A. Florence	69-97	Cz	3-4-71	TSDH	14	0.22		2	2	4			6	<4	4	<0.1	6.5	36*	12	45	5.7
303	J. M. Buckalew Estate	53	Cz	3-18-36	WPA									43	<5	57			124*			
304	Allen Childress	26	Cz	3-16-36	WPA				33	13	41*				<5	144			231*	135		
305	Mrs. E. H. Sadler	14	Cz	3-16-36	WPA				2	6	1*			24	<5	8			29*	30		
402	Blackjack Water Supply Corp.	383-425	Wx	4-10-70	PTL		0.3	0.0	1.6	1.0	243*		43	526	8	17	0.4	4.0	577*	8	950	8.7
402	Blackjack Water Supply Corp.	383-425	Wx	3-8-71	TSDH	16	0.06	<0.05	3	1	236		8	610	7	13	0.5	<0.4	590	11	903	8.5
502	New Concord Water Supply Corp.	335-419	Wx	6-30-65	CL	18	0.1		1.3	0.4	300*		30	659	43	13			756	5	1,166	8.7
502	New Concord Water Supply Corp.	335-419	Wx	8-3-65	TSDH		0.24	<0.05	3		295		47	620	48	10	1.0	<0.4	709*	7	1,254	9.0
502	New Concord Water Supply Corp.	335-419	Wx	3-3-71	TSDH	17	0.04	<0.05	3	<1	284		19	680	37	11	0.8	<0.4	710*	8	1,075	8.7
503	Mrs. Ross Martin	53	Cz	3-19-36	WPA									12	24	27			86*			
504	Evans	35	Qc	3-27-36	WPA				4	5	63*			37	108	17			215*	30		
505	Mrs. L. H. Holcomb	16	R	3-19-36	WPA									12	624	39			698*			
603	Hulen Martin	102-118	Cz	3-3-71	TSDH	15	0.24		2	3	4			20	5	2	<0.1	3.5	45*	18	53	6.4
604	Mrs. V. Brown	25	Cz	3-20-36	WPA				8	32	44*				<5	178			262*	149		
605	Mrs. Jess Hamilton	73	Cz	3-20-36	WPA				6	1	9*			18	<5	18			43*	20		
705	Billy Powell	138-205	Cz	3-4-71	TSDH	14	0.29		27	15	100			204	143	21	0.3	2.5	423*	128	652	7.1
706	G. L. Henry	24	R	3-27-36	WPA									24	44	41			147*			
707	Mrs. J. M. Johnson	43	R	3-27-36	WPA										81	20			142*			
803	J. D. Evans	147	R	3-4-71	TSDH	18			63	22	27			88	184	35	0.1	<0.4	392*	247	593	6.3
804	W. R. Murphy	27	R	3-30-36	WPA									128	<5	22			140*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-34-64-902	I. L. Pool	78	Cz	3-4-71	TSDH	53	0.11		53	2	8			148	24	6	0.1	2	221*	140	296	7.0
903	I. L. Pool	73	Cz	3-20-36	WPA									24	<5	15			43*			
35-49-701	H. B. Kelley	38	Cz	3-16-36	WPA				12	16	18*				10	76			132*	94		
57-101	Allen Burton	29	Cz	3-16-36	WPA				2	1	17*			37	<5	12			50*	10		
37-01-401	Texas Power & Light Co. No.1	418-428 5/	Cz	6-11-56	CL	8	0.1		12.8	6.9	129*			159	165	27			455	60		7.3
401	Texas Power & Light Co. No.1	366-442	Cz	7-5-56	SL	12			10.9	8.5	133*			157	176	28			446*	62		8.2
402	Texas Power & Light Co. No.2	378-452	Cz	8-29-56	SL	10			11.2	5.2	169*			142	250	29			544*	49		7.8
402	Texas Power & Light Co. No.2	378-452	Cz	2-18-71	TSDH	12	0.70		11	8	105			142	133	25	0.2	<0.4	364*	61	609	7.2
09-101	Reklaw Water Supply Corp. No.2	86-138	Cz	10-18-65	TSDH		0.5	<0.05	8	4	8			13	33	6	<0.1	<0.4	66*	38	130	6.5
101	Reklaw Water Supply Corp. No.2	86-138	Cz	12-15-70	TSDH	20	0.61	<0.05	3	2	8				22	7	<0.1	<0.4	62*	14	83	5.1
102	Reklaw Water Supply Corp. No.1	530-624	Wx	4-22-65	TSDH		0.08	<0.05	2	1	510		24	990	5	170	2.6	<0.4	1,218*	10	2,189	8.6
103	Looney Estate	22	Cz	4-27-36	WPA				2		30*			12	<5	42			80*	5		
402	S. P. Sessions	19	R	4-27-36	WPA									171	804	370			1,858*			
701	R. W. Sales	22	R	4-23-36	WPA									18		60			109*			
702	R. W. Sales	21	R	12-16-70	TSDH	20	0.10		5	26	6			12	<4	11	<0.1	3.5	54*	19	68	5.8
703	Shine Gulledge	28	R	4-28-36	WPA									24	10	48			109*			
17-401	Rayford Rice	25	Qc	10-19-70	TSDH	22	0.10		22	2	5			78	<4	6	<0.1	<0.4	95*	63	143	6.8
402	James Williams	39	Qc	6-19-36	WPA									24	8	10			47*			
403	R. L. Roberts	19	Qc	6-30-36	WPA									18		8			27*			
702	Mrs. Engledow	130-150	Qc	10-19-70	TSDH	29	1.58		7	4	85			157	77	10	0.2	1.0	290*	36	441	7.2
703	A. G. Geter	32	W	5-15-36	WPA									195	28	83			331*			
704	Mrs. A. J. McCuiston	23	Qc	6-19-36	WPA									12		13			45*			
25-201	Jack Findley	35	W	6-2-36	WPA									18		13			50*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-37-25-401	Bobby Jackson	360	Qc	10-14-70	TSDH	10	0.04		2	1	162		8	273	107	8	0.4	<0.4	432*	10	674	8.7
402	Silvin Hathorn	34	Sp	5-21-36	WPA									6		19			34*			
601	H. C. Warren	21	Al	10-8-70	TSDH	12	0.24		4	1	2			11	<4	3	<0.1	4.5	32*	15	40	6.3
701	W. H. Bailey	39	Cm	5-20-36	WPA				228	2	94*			317	380	91			953*	580		
702	E. S. Crow	175-185	Sp	10-8-70	TSDH	55			3	2	11			22	5	12	0.1	<0.4	99*	17	92	5.8
703	Mrs. Vera Dew	34	Cm	5-15-36	WPA				88	63	115			171	212	261			824*	478		
801	Ralph Betty	50	Cm	10-14-70	TSDH	47	0.30		24	5	23			63	<4	29	<0.1	48	207*	82	282	7.2
802	Stokes	28	Sp	5-18-36	WPA									12		24			47*			
803	Mrs. Merle Wilson	42	Cm	5-18-36	WPA									12	10	10			40*			
804	Mrs. Red	43	Sp	5-18-36	WPA						19*			12	8	17			50*			
902	R. E. Stockin	39	Sp	5-20-36	WPA									49	8	17			78*			
903	Guy Luce	17	Sp	10-14-70	TSDH	12	0.08		9	5	6			7	5	9	<0.1	38	87*	42	135	5.8
33-101	S. W. Mettlen	139-149	Sp	10-6-70	TSDH	12	0.84		55	17	223			211	456	38	0.5	9.5	920*	207	1,300	7.4
102	W. A. Pounds	23	Cm	5-19-36	WPA									12	19	103			198*			
104	Chandler	15	Cm	5-19-36	WPA									18	150	121			417*			
201	City of Wells	301-400	Sp	5-15-36	WPA				15	30	26*			134	62	31			231*	162		
201	City of Wells	301-400	Sp	1-11-37	USGS				20		58*			124	65	26		0.0	236*	80		
201	City of Wells	301-400	Sp	6-40	USGS	38	3.13		15	8.3	61*			116	66	28		0.5	270*	72		6.6
201	City of Wells	301-400	Sp	5-20-44	TSDH	38	2.1	<0.4	13	6	66*			113	65	28	<0.4	<0.4	274*	57		6.6
202	City of Wells	805-920 5/	Cz	5-31-55	CL	18	1.2		1	0.4	153*		12	293	48	18			395*	4		8.6
202	City of Wells	880-950	Cz	6-18-55	CL	14	0.3		3	1	154*		24	278	49	18			400*	12		8.9
202	City of Wells	880-950	Cz	4-6-62	TSDH		0.17	<0.05	1	<1	140			281	53	20	0.6	<0.4	381*	3	635	8.3
202	City of Wells	880-950	Cz	10-6-70	TSDH	16	0.30	<0.05	1	1	154		4	303	55	21	0.7	<0.4	402*	7	630	8.5
38-05-302	Wayne Crews	150	Qc	2-25-71	TSDH	29	8.6		5	5	10			22	18	15	<0.1	<0.4	93*	35	138	5.9
303	Simpson Estate	19	Qc	3-11-36	WPA				8	5	5*			37	<5	16			52*	41		
603	Willie Simpson	Spring	Qc	4-13-36	WPA						13*			18	<5	10			32*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-05-604	Sam Hammonds	49	Qc	4-14-36	WPA				54	8	50=			31	<5	182			309*	173		
605	Christian Estate	32	Qc	4-14-36	WPA									37	15	40			114*			
902	E. A. Simpson	466	Cz	11-1-48	CL	9	0.1		1.4	0.3	61*		145	144	0	8			296*	5		
903	Humble Oil & Refining Co. No.1	250-345	Cz	7-31-61	USGS	11	0.16		8		80*			186	9	10	0.2	0.0	204	2	338	7.6
904	Humble Oil & Refining Co. No.2	255-335	Cz	7-31-61	USGS	10	0.19		0.8		77*			180	8	9	0.2	0.0	198	2	327	7.8
904	Humble Oil & Refining Co. No.2	255-335	Cz	2-25-71	TSDH	11	0.06		1	1	75			176	10	8	0.1	<0.4	193*	7	310	7.4
906	Ewing Estate	41	Qc	4-14-36	WPA						19*			18	8	13			49*			
06-104	J. D. Bearden	48	Qc	3-12-36	WPA				5		5*			18	<5	8			27*	15		
105	J. H. Walker Estate	37	Sp	4-14-36	WPA									18	<5	14			37*			
205	B. D. Hood	36	Qc	3-11-71	TSDH	36	0.12		29	3	12			79	6	23	<0.1	12	160*	87	240	6.5
206	City of Jacksonville	465-495	Cz	1951	CL		0.4		1.3	0.3	252*		43	534	0	16			576*	4		8.6
304	C. S. Merritt	27	W	3-12-36	WPA				1		13*			12	<5	9			29*	5		
402	Sheffield Steel Corp.	538-670	Cz	11-8-48	CL	18	1.0		2.6	1	103*		10	171	37	27			283*	11		
402	Sheffield Steel Corp.	538-670	Cz	3-8-49	USGS	11			2	1	97*		10	150	43	26			264*	9	439	
405	Peyton Lane Estate	28	Qc	4-14-36	WPA									37	<5	13			50*			
406	E. W. Mullinax	67	Qc	4-10-36	WPA				92	72	85*			207	273	182			807*	526		
407	John Christopher Estate	42	Qc	4-14-36	WPA									18	<5	12			34*			
501	City of Jacksonville No.2	652-752	Cz	9-7-54	CL	19	0.1		2	0.5	190*		30	420	4	14			467*	7		8.4
501	City of Jacksonville No.2	652-752	Cz	1-13-55	TSDH	11	0.05	<0.05	2	1	189*		6	421	41	18	0.6	<0.4	476*	9		8.3
501	City of Jacksonville No.2	652-752	Cz	6-9-60	TSDH		0.02	<0.05	2	<1	152			398	6	16	0.5	<0.4	405*	6	675	8.0
501	City of Jacksonville No.2	652-752	Cz	6-24-65	TSDH		<0.02	<0.05	2		157			384	9	14	0.8	<0.4	372*	6	654	8.3
501	City of Jacksonville No.2	652-752	Cz	8-5-69	TSDH		<0.02	<0.05	2	1	147			368	10	14	0.8	<0.4	356*	10	628	8.1

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-06-603	City of Jacksonville No.3	651-676 5/	Cz	3-16-65	MSL	9	0.61		2	1	190*			495	1	11			463	8	730	8.4
603	City of Jacksonville No.3	635-685	Cz	4-2-65	MSL	10	0.05		1.5		190*		14	458		12			447	4	730	8.3
603	City of Jacksonville No.3	635-685	Cz	8-5-69	TSDH		<0.02	<0.05	1	1	180		4	459	5	15	0.9	<0.04	433*	8	765	8.4
604	City of Jacksonville No.1	623-645 5/	Cz	10-31-48	CL	18	0.2		2	0.6	168*		24	383	0	11			411*	8		
604	City of Jacksonville No.1	947-970 5/	Wx	11-5-48	CL	12	0.4		2.5	0.9	363*		55	803	0	32			861*	10		
604	City of Jacksonville No.1	1,116-1,139 5/	Wx	11-8-48	CL	16	0.2		1.8	0.7	409*		58	834	0	88			984*	7		
604	City of Jacksonville No.1	598-703	Cz	4-5-52	TSDH	12	0.05	<0.05	6	3	179*			445	15	25	0.7	0.9	470*	28		8.2
604	City of Jacksonville No.1	598-703	Cz	6-24-65	TSDH		0.04	<0.05	2		188		2	459	7	16	1.0	<0.4	442*	6	780	8.4
604	City of Jacksonville No.1	598-703	Cz	8-5-69	TSDH		<0.02	<0.05	2	<1	177			451	7	18	1.0	<0.4	428*	7	765	8.2
605	T. J. Robberts	35	Qc	2-26-71	TSDH	16	0.13		24	<1	4			73	5	4	<0.1	<0.4	89*	62	137	7.0
606	City of Jacksonville	650±	Cz	1951	CL		0.4		1.1	0	195*		34	425	3	13			456*	3		8.5
607	City of Jacksonville	700±	Cz	1951	CL		0.1		1.6	0.5	162*		2	361	42	10			396*	6		7.7
702	J. N. Miles	45	Qc	3-2-71	TSDH	50	0.06		83	10	29			220	91	26	0.1	4.5	402*	249	577	6.9
802	M. T. Tidwell	36	Qc	3-2-71	TSDH	29	0.06		2	2	6			6	6	8	<0.1	2.5	59*	13	57	5.5
803	Ray Hathorn	27	Sp	4-17-36	WPA									18	<5	21			48*			
804	John Chapman Estate	43	Qc	4-17-36	WPA									12	8	12			40*			
902	Glass Estate	38	Qc	4-20-36	WPA									6	21	11			52*			
903	H. C. Wenglar	40	Qc	3-2-71	TSDH	37	1.04		6	2	16			9	18	22	0.3	<0.4	105*	24	143	5.5
07-102	Jacksonville Country Club	512-548	Cz	8-12-49	CL	15	0.4		2.7	1.3	346*		48	781	2	29			832*	12		8.6
104	Westbrook	77	Qc	3-17-36	WPA					6					<5	16			22*	25		
302	L. J. Gregory	194-206	R	2-17-71	TSDH	10	<0.02		5	1	155			271	123	8	0.8	<0.4	436*	17	700	8.2

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-07-303	Byron Tilly	Spring	Qc	4-13-36	WPA									6	<5	36			61*			
304	Sam Tipton	23	Qc	4-13-36	WPA									18	<5	15			38*			
403	Bill Broadway	52	Qc	2-24-71	TSDH	21	0.62		25	11	8			104	11	13	<0.1	6	146*	105	230	6.7
405	S. N. Meador	60	Qc	2-24-71	TSDH	56	0.22		10	8	13				24	32	0.2	30	178*	57	245	4.7
406	Lawerence Tinsley	22	Qc	4-7-36	WPA									43	<5	44			104*			
407	Willie Morris	24	Qc	4-7-36	WPA									12	<5	28			54*			
503	J. H. Barksdale	975-1,215	Wx	8-26-65	STL								130	650	0	46				4		8.7
503	J. H. Barksdale	995-1,215	Wx	2-18-71	TSDH	15	0.70		2	2	360		17	870	<4	40	1.2	11	880*	12	1,350	8.6
504	J. L. Caveness	Spring	Qc	4-6-36	WPA									31	<5	21			58*			
505	John H. Maloney	38	Qc	3-17-36	WPA				7	11	13*			49	<5	34			89*	62		
506	S. W. Leggett	29	W	4-6-36	WPA									49	<5	24			78*			
507	Meadors Estate	35	Cz	4-7-36	WPA									18	<5	7			27*			
508	Turney School District	36	W	4-6-36	WPA									31	<5	36			81*			
702	C. M. Shell	33	Qc	4-7-36	WPA					1	12*			12	<5	15			34*	5		
703	E. B. Casper	380-400	Cz	3-11-71	TSDH	13	1.00		3	2	132		2	353	<4	13	0.3	<0.4	339*	18	545	8.4
704	Martin	33	Sp	4-20-36	WPA									12		41			74*			
802	F. A. Shinalt & Sons	16	R	2-18-71	TSDH	55	<0.02		7	7	25			21	<4	40	0.1	29	173*	46	241	6.0
803	T. H. Cole	32	R	4-6-36	WPA				26	33	59*				261	39			418*	199		
804	Marshall Pippin	20	R	4-6-36	WPA									24	8	25			70*			
902	Gallatin Water Supply Corp.	310-370	Cz	5-16-65	TSDH		1.44	0.05	17	10	16			9	90	13	0.1	2	153*	82	280	5.5
902	Gallatin Water Supply Corp.	310-370	Cz	2-16-71	TSDH	22	<0.02	0.13	12	8	21			6	79	14	<0.1	1.5	161*	63	250	5.5
903	J. H. Jones	21	R	4-1-36	WPA									43	8	55			132*			
904	Sam Hicks	37	R	4-6-36	WPA									18	10	8			42*			
905	Sam Hicks	Spring	R	4-6-36	WPA				2	1	11*			18		10			33*	10		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-08-104	New Summerfield Water Supply Corp.	505-555	Cz	12-1-62	CL	7	0.45		18.9	9.4	148*			215	208	14			520	86	733	6.1
104	New Summerfield Water Supply Corp.	505-555	Cz	6-20-63	TSDH		7.7	<0.05	20	9	142			179	207	30	0.3	<0.4	504*	88	912	7.1
105	New Summerfield Water Supply Corp.	930-950 5/	Wx	3-15-68	MSL	11	0.36	<0.02	3	0	398*		38	874	0	64	1.4	0.5	943	8	1,560	8.6
105	New Summerfield Water Supply Corp.	906-993	Wx	4-3-68	MSL	12	0.15	<0.02	2.5	0	395*		38	870	0	60	1.5	0.8	940	6	1,510	8.8
105	New Summerfield Water Supply Corp.	906-993	Wx	4-13-70	TSDH		0.16	<0.05	1	2	386		30	870	<4	54	1.7	<0.4	903*	9	1,606	8.7
106	L. J. Limeback	40	Qc	3-23-36	WPA				10	2	18*			49	<5	24			78*	35		
204	J. D. Thompson Estate	39	W	3-23-36	WPA									37	<5	15			53*			
205	R. E. Sample	29	Sp	3-23-36	WPA									37	<5	11			47*			
302	Stryker Lake Water Supply Corp.	282-304	Qc	4-17-66	TSDH		0.24	<0.05	4	1	6	4		6	12	10	0.1	<0.4	40*	13	82	5.5
302	Stryker Lake Water Supply Corp.	282-304	Qc	4-18-66	PTL		0.3		3.2	1.9	8*			10	10	11	0		39*	16		5.5
302	Stryker Lake Water Supply Corp.	282-304	Qc	2-16-71	TSDH	35	<0.02	<0.05	2	2	7			5	11	8	<0.1	<0.4	67*	13	70	5.5
303	Walker	45	Qc	3-23-36	WPA									37	<5	7			41*			
403	Bailey Estate	55	Qc	3-31-36	WPA									37	8	11			58*			
404	J. T. Brown	39	Qc	3-31-36	WPA										62	68			194*			
502	H. M. McCaul	31	Qc	4-2-36	WPA									18	<5	23			51*			
503	Herndon Estate	28	Qc	4-2-36	WPA									12	44	37			130*			
504	O. R. Perkin	Spring	W	4-3-36	WPA									24	<5	8			33*			
505	Neal	38	Qc	4-3-36	WPA									311	46	26			363*			
605	C. C. Byrd	150	Cz	2-17-71	TSDH	28	0.04		1	1	6			5	<4	4	<0.1	5.5	48*	5	41	5.6
606	J. H. Brazier	36	W	4-3-36	WPA					4	17*			24	<5	22			55*	15		
607	C. C. Byrd	33	R	4-1-36	WPA									9	<5	13			27*			
608	Dean Christopher	39	Qc	4-2-36	WPA				6		3*				<5	16			25*	15		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-08-701	A. A. Monmouth	23	Cz	4-1-36	WPA						50*			24	19	48			129*			
702	C. E. Jenkins	38	R	4-1-36	WPA									21	8	82			156*			
803	J. S. Bennett	38	Cz	3-31-36	WPA					2	28*			37	8	23			79*	10		
804	Kyle Estate	37	Cz	1936	WPA					6	103*			17	<5	127			244*	25		
805	Stafford Lake Club	11	Al	4-22-36	WPA					1	36*			61		23			90*	4		
901	Christopher	27	Cz	4-1-36	WPA									21	<5	61			112*			
902	W. H. McCrary	37	R	4-2-36	WPA				4	2	7			6	<5	21			37*	20		
13-302	Hammonds & Ray	46	W	4-15-36	WPA				14		31*			140		26			140*	35		
303	D. C. Tillman	23	Sp	1-13-71	TSDH	26	<0.02		4	2	11			6	<4	15	0.4	15	76*	19	104	5.5
304	W. M. Seeton	627-647	Cz	1-13-71	TSDH	10	<0.02		2	1	78			194	9	11	0.2	<0.4	206*	11	338	7.8
901	Southern Pine Lumber Co.	Spring	Al	4-16-36	WPA									18		15			38*			
14-104	McMahon Estate	49	Qc	4-15-36	WPA									18	67	180			392*			
105	Mrs. Susan Jones	32	Qc	4-16-36	WPA									24	12	17			63*			
201	Mullinax Estate	25	Sp	4-17-36	WPA				8	6				6		16			33*	45		
202	Raymond Grimes	32	Sp	1-12-71	TSDH	16	<0.02		29	2	5			90	<4	7	<0.1	5	108*	79	177	6.9
203	Reuben Gay	17	Sp	4-10-36	WPA									24		12			39*			
204	David B. Parker	31	Sp	4-10-36	WPA				14	7	7*			12		51			85*	66		
304	C. H. Cotton	32	Sp	1-12-71	TSDH	17	<0.02		37	3	6			107	<4	6	0.4	22	144*	104	225	7.2
305	J. B. Brunson	21	Sp	4-20-36	WPA				10	5	13*			49		25			77*	46		
306	Harold Thompson	29	Sp	6-12-36	WPA									18		6			24*			
403	B. L. French		Qc	4-17-36	WPA										156	34			274*			
404	G. W. Allen	32	Qc	4-17-36	WPA				30	6	72				190	52			350*	101		
405	M. M. Croft	500	Wx	1-13-71	TSDH	13	1.36		2	3	276			720	<4	17	0.6	<0.4	670*	15	1,031	8.2
406	Mullinax Estate	Spring	Qc	4-16-36	WPA									12		10			26*			
501	Joseph W. Clark	267	R	4-19-57	USGS						212*			219	373	41	0.6	0	775*	166	1,220	8.0
502	B. L. French	255	Cz	7-31-61	USGS	12	0.35		1.2	0.2	122*			216	40	34	0.2	2.2	320	4	524	7.7

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-14-503	Maydelle Water Supply Corp.	381-448	Cz,Wx	12-31-64	PTL	10	0.08		2.4	1	124*		7	215	37	38	0.3		326*	10		8.4
503	Maydelle Water Supply Corp.	381-448	Cz,Wx	6-22-67	TSDH		0.30	<0.05	1	1	121		1	228	38	33	0.5	<0.4	308*	6	558	8.4
503	Maydelle Water Supply Corp.	381-448	Cz,Wx	1-6-71	TSDH	14	0.40	<0.05	1	2	116			227	36	30	0.3	<0.4	311*	12	506	8.2
504	Adair Acker	22	Qc	4-17-36	WPA										117	13			186*			
505	L. A. Sherman	30	Qc	5-1-36	WPA									24	8	57			120*			
506	Bob Meador	36	Sp	4-17-36	WPA									12		13			30*			
602	C. D. Nolley	22	Qc	6-12-36	WPA									24	8	14			53*			
603	Bob Ezell	14	Qc	1-13-71	TSDH	27	0.04		5	4	12			37	12	12	0.1	3.5	100*	28	139	6.2
604	T. L. Linzy	33	Qc	4-21-36	WPA									18		15			38*			
702	R. L. Ezell	180	Cz	1-8-71	TSDH	11	0.24		10	4	173		1	383	64	24	0.5	<0.4	476*	40	759	8.4
703	Texas State Forest Service	1,420	Wx	5-27-36	WPA						370*			950		19			864*			
802	Roach Estate	27	Qc	5-27-36	WPA									18		110			187*			
904	Sheffield Steel	24	Sp	5-1-36	WPA									12	4	12			34*			
905	Scott Estate	44	Qc	5-6-36	WPA						41*			12		59			107*	4		
906	Ball Estate	Spring	Qc	5-6-36	WPA									43		25			74*			
907	H. E. Ross	34	Qc	5-6-36	WPA									6	24	57			128*			
15-102	Dialville-Oakland Water Supply Corp.	618-654	Cz	2-19-65	MSL	9	0.48		2	0	124*		11	261	22	13			333	6	500	8.6
102	Dialville-Oakland Water Supply Corp.	618-654	Cz	1-6-71	TSDH	17	0.34	<0.05	1	1	115		4	270	17	13	0.1	<0.4	301*	8	477	8.4
103	Moody Glass	19	Sp	4-20-36	WPA									6		12			24*			
104	Miss Nell Grishom	34	Qc	4-21-36	WPA									37		9			44*			
202	Forest Dyess	177	Qc	1-15-71	TSDH	30	1.50		13	8	12	2		37	48	10	0.2	<0.4	141*	65	210	6.0
301	R. C. Blankenship	35	Qc	4-23-36	WPA									6		20			36*			
302	J. M. Blankenship	56	Qc	1-14-71	TSDH	42	<0.02		3	4	16	2			4	18	0.1	37	126*	23	160	4.6

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-15-303	J. E. Johnson	30	Qc	4-3-36	WPA					1	20*			6	8	26			58*	5		
403	Thomas Peters	40	Qc	1-14-71	TSDH	24	0.42		28	2	9			84	16	7	<0.1	2	129*	77	196	6.9
404	Mrs. Belle Lloyd	36	Qc	4-21-36	WPA									24		20			51*			
501	W. R. Nichols	322-423	Cz	2-19-45	CL	8	0.1		2.4	0.6	194*		34	342	59	23			489*	9		8.4
502	W. R. Nichols	325-426	Cz	1-13-71	TSDH	11	0.06		1	2	181			395	56	18	0.5	<0.4	464*	11	732	7.8
504	L. P. Halbert, Jr.	Spring	Qc	6-12-36	WPA									6	10	14			41*			
601	City of Rusk No.1	408-447 5/	Cz	1-12-49	CL	27	0.6		2.6	0.8	201*		24	403	44	21			519*	10		8.6
601	City of Rusk No.1	742-790 5/	Wx	1-24-49	CL	18	0.3		2.8	0.7	447*		62	996	0	43			1,064*	10		8.8
601	City of Rusk No.1	1,134-1,144 5/	Wx	1-26-49	CL	22	0.9		2.2	0.4	530*		72	952	0	165			1,261*	7		8.8
601	City of Rusk No.1	1,292-1,331 5/	Wx	1-15-49	CL	30	0.9		3.2	1.1	550*		43	747	1	370			1,367*	13		8.5
601	City of Rusk No.1	405-465	Cz	2-14-49	TSDH	20	0.24	<0.05	20	3	190*		18	415	66	25	0.4	<0.4	547*	63		8.4
601	City of Rusk No.1	405-465	Cz	2-17-49	CL	11	0.1		2.3	0.6	195*		22	390	44	20			487*	8		8.6
601	City of Rusk No.1	405-465	Cz	8-31-60	TSDH		0.4	<0.05	1	<1	186		12	409	50	16	0.4	<0.4	468*	3	792	8.7
601	City of Rusk No.1	405-465	Cz	4-14-64	TSDH		0.06	<0.1	2		199		18	397	41	19	0.5	<0.4	474*	4	844	8.8
601	City of Rusk No.1	405-465	Cz	10-27-70	TSDH	10	0.04	<0.05	1	1	193			427	28	29	0.5	<0.4	473*	8	760	8.0
602	City of Rusk No.2	550-650	Cz	5-31-55	TSDH	15	0.13	<0.05	1	1	205*		12	390	69	28	0.2	<0.4	523*	7		8.5
602	City of Rusk No.2	550-650	Cz	8-31-60	TSDH		0.08	<0.05	1	<1	179		12	381	61	16	0.4	<0.4	457*	3	780	8.6
602	City of Rusk No.2	550-650	Cz	7-31-61	USGS	11	0.04		0.8	0	190*			399	55	21	0.5	0	483	2	772	8.1
602	City of Rusk No.2	550-650	Cz	4-14-64	TSDH		<0.02	<0.1	2		192		17	371	52	17	0.6	<0.4	464*	5	828	8.8
602	City of Rusk No.2	550-650	Cz	10-27-70	TSDH	11	<0.02	<0.05	2	1	187			407	48	19	0.5	<0.4	469*	8	745	7.7
603	City of Rusk No.3	368-389 5/	Cz	8-25-61	MSL	10	0.2		1	0	193*			434	42	16			500	3	760	8.8
603	City of Rusk No.3	350-440	Cz	9-21-61	CL	10	0.07		1.4	0.3	199*			444	41	20			514	5	777	8.2
603	City of Rusk No.3	350-440	Cz	4-14-64	TSDH		0.54	<0.1	2		192			383	55	31	0.6	<0.4	471*	6	844	8.3
603	City of Rusk No.3	350-440	Cz	10-27-70	TSDH	10	0.06	<0.05	2	1	193			423	42	21	0.5	<0.4	478*	7	758	8.0
604	State of Texas-Department of Mental Health & Mental Retardation	427-522	Cz	6-16-44	USGS	12	0.03		2.9	0.9	190	2.4	25	363	55	20	1.0	0.2	488*	10	800	8.3

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-15-604	State of Texas-Department of Mental Health & Mental Retardation	427-522	Cz	8-2-49	USGS	14	0.08		0.9	0.4	189	2.4	10	382	56	19	0.4	2.2	483*	4	792	8.6
604	State of Texas-Department of Mental Health & Mental Retardation	427-522	Cz	9-14-67	TSDH		0.20	<0.05	2		184		10	376	49	20	0.5	1.5	452*	6	816	8.7
604	State of Texas-Department of Mental Health & Mental Retardation	427-522	Cz	1-15-71	TSDH	12	<0.02	<0.05	1	1	179		5	394	48	18	0.6	<0.4	459*	7	736	8.5
606	J. L. McElroy	489-519	Cz	1-6-71	TSDH	13	0.04		1	1	184		10	384	50	16	0.5	<0.4	465*	7	736	8.6
607	State of Texas-Department of Mental Health & Mental Retardation	565-665	Cz	1-15-71	TSDH	13	0.06	<0.05	1	1	182		7	394	50	18	0.5	<0.4	467*	7	742	8.6
702	Travis Halbert	38	Qc	1-12-71	TSDH	17	<0.02		41	2	6	4		129	7	6	0.3	7	153*	108	248	7.1
802	Arnella Jones	55	Qc	1-14-71	TSDH	40	1.72		2	1	9			12	5	10	<0.1	2.0	75*	11	73	5.6
902	W. T. Brown	50	Qc	5-5-36	WPA				2	4	16*			12	4	29			61*	20		
903	Jim Scott	66	Qc	1-14-71	TSDH	32	<0.02		3	1	11			12	<4	13	0.1	8	74*	14	89	5.8
16-102	B. L. Watson	26	R	3-31-36	WPA									24	121	10			207*			
103	Bob Parsons	13	R	4-29-36	WPA									6	282	19			434*			
104	R. S. Dyess	281-291	Cz	1-11-71	TSDH	12	<0.02		2	2	207			530	6	21	0.4	<0.4	510*	12	814	7.8
202	R. A. Colville	501	Wx	1-11-71	TSDH	13	2.56		3	2	497		8	960	<4	219	2.5	<0.4	1,220*	14	1,920	8.5
203	Jasper Glen	24	R	4-29-36	WPA					4	46*			6	71	25			149*	15		
204	Roy Kennedy	25	R	4-22-36	WPA									12	106	93			305*			
205	W. H. Mannion	32	R	4-22-36	WPA				26	28	85*			24	132	152			435*	179		
302	W. A. White	33	R	12-16-70	TSDH	24	0.10		54	35	22			253	95	11	0.2	<0.4	365*	280	576	8.0
303	J. L. McElroy	190-211	Wx	1-6-71	TSDH	26	2.44		56	8	12			150	53	14	0.4	<0.4	243*	171	377	6.8
304	J. L. McElroy	22	R	4-22-36	WPA									18	<5	11			32*			
305	W. A. White	26	R	4-27-36	WPA									31	2	15			41*			
403	A. L. Roberts	40	Sp	1-11-71	TSDH	21	<0.02		17	1	7			52	4	11	<0.1	3.5	91*	48	136	6.0

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-16-404	Ed Hurt	38	Qc	4-29-36	WPA									67		15			78*			
405	Douglas Parsons	40	Qc	1-11-71	TSDH	45	0.04		17	3	21			32	31	24	0.1	12	169*	55	234	6.2
501	T. O. McCarty	20	Qc	4-23-36	WPA				30	12	33*			37	121	30			244*	127		
502	T. I. Frazier	31	R	4-29-36	WPA									348	276	79			802*			
503	Frazier Estate	Spring	R	4-29-36	WPA					2	24*			37	6	19			69*	10		
504	B. G. Dunn	21	R	4-29-36	WPA									24		37			78*			
505	M. D. & Billy Helm	225-245	Cz	1-12-71	TSDH	12	<0.02		2	1	230			560	9	40	0.5	<0.4	570*	9	916	8.3
603	B. B. Perkins Estate	29	R	4-27-36	WPA									12		10			26*			
604	B. F. Hunter	19	R	4-27-36	WPA					4	16*			31		18			53*	15		
702	Lloyd Collins	40	Sp	1-12-71	TSDH	18	<0.02		4	13	20	6			<4	40	0.6	88	190*	63	334	4.3
703	J. C. Kelley	38	Sp	4-30-36	WPA									12		14			32*			
704	Cindy Kennedy	28	Sp	4-30-36	WPA					4	44*			43	23	37			129*	15		
904	Chesley Richards	135	Wx	12-16-70	TSDH	21	0.46		23	16	57			102	109	33	0.1	<0.4	309*	123	491	6.4
905	David Richards	59	R	4-28-36	WPA				51	900	682*			610	2,475	1,590			6,003*	3,838		
906	J. H. Sessions	29	Qc	4-28-36	WPA									12		18			38*			
22-301	J. B. Barefield Estate	23	Qc	5-12-36	WPA										125	35			232*			
302	Mrs. H. D. Berry	24	Qc	10-29-70	TSDH	72	0.62		12	5	17				77	9	0.2	1.5	194*	53	229	5.1
904	Texas Forest Service	212	Cz	10-28-70	TSDH		3.12		2	1	191			425	53	19	0.4	4	479*	12	770	7.8
23-104	Mrs. Emma Gibard	36	Qc	5-11-36	WPA									12	8	19			51*			
105	Mrs. Alvin Sherman	34	Qc	5-11-36	WPA									18	13	18			62*			
106	G. W. Transvier	294	Cz	10-28-70	TSDH	10	0.06		4	2	188			374	70	23	0.5	<0.4	492*	19	784	7.9
107	Mrs. H. D. Berry	11	Qc	5-11-36	WPA									18		18			43*			
108	Thomas Sparkman	390	Cz	1-14-71	TSDH	12	<0.02		2	2	185			412	53	19	0.6	<0.4	477*	12	759	8.0
202	Carl Wipprecht	320	Qc	10-22-70	TSDH	28	0.30		53	3	12			166	9	19	<0.1	<0.4	206*	143	337	7.0
203	Carl Wipprecht	30	Qc	6-22-36	WPA									12	15	19			61*			
204	Mrs. Troublefield	41	Qc	5-11-36	WPA									12	19	22			71*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-23-303	R. R. Middleton	30	Qc	6-25-36	WPA				14	1	25*			92		13			99*	40		
304	Hudson Estate	34	Qc	5-5-36	WPA									6	8	46			88*			
305	J. W. Thompson	48	Qc	5-5-36	WPA									24	12	31			85*			
306	Earnest Hudnall	328-348	Cz	10-29-70	TSDH	10	0.10		2	1	216		20	453	40	24	0.5	<0.4	540*	9	854	8.8
403	J. O. Huggins	15	Qc	6-22-36	WPA									6	43	34			119*			
404	D. L. Hassell	22	Qc	6-22-36	WPA				4	3	32*			31	34	24			112*	25		
405	James Gilbert	22	Qc	6-25-36	WPA									134	8	12			140*			
406	J. L. Hassell	234-254	Cz	10-29-70	TSDH	11	0.12		2	1	210			520	5	27	0.5	<0.4	510*	9	812	8.2
504	Roy Crump	125	Qc	10-22-70	TSDH	45	0.68		40	4	17			133	18	19	<0.1	1.5	210*	117	309	7.0
505	Walter Beard	35	Qc	5-5-36	WPA					5	11*			18		20			45*	20		
505	Walter Beard	35	Qc	10-22-70	TSDH	27	0.04		2	2	6			1	<4	8	0.2	13	58*	11	64	5.3
506	J. D. Hassell	150	Qc	10-27-70	TSDH	10	0.13		3	1	210			494	21	29	0.8	3.0	520*	13	825	7.7
604	J. Jones	49	Qc	5-5-36	WPA									6		52			86*			
703	Zack Gholston	282-302	Cz	10-28-70	TSDH	10	0.40		2	1	201			420	58	24	0.4	1	500*	8	789	7.8
704	Cerine	31	Qc	6-22-36	WPA					34	34*			12	43	24			141*	15		
705	R. F. Holcomb	Spring	Qc	6-22-36	WPA									12		14			32*			
803	M. L. Reid	330-340	Cz	10-26-70	TSDH	11	<0.02		2	1	198			459	31	21	0.5	<0.4	491*	8	781	7.8
901	J. Rayford Holcomb	450	Cz	7-29-61	USGS	11	0.56		0.8	0	238*			507	47	38	0.5	0	581	2	943	8.0
902	Nellie Singletary	51	Qc	6-17-36	WPA									12	8	32			71*			
24-101	D. W. Hampton	56	Qc	10-22-70	TSDH	38	0.04		42	1	6			136	6	5	<0.1	1.0	165*	111	235	7.3
201	C. E. Ramey	50	Qc	5-8-36	WPA									12	8	27			63*			
202	Moore	500	Cz	10-21-70	TSDH	13	0.13		<1	1	108			253	22	12	0.7	<0.4	281*	6	460	8.3
203	Robert Starling	33	Sp	4-30-36	WPA									18		15			38*			
303	J. W. Lanier, Jr.	27	Qc	4-30-36	WPA									12	54	29			132*			
402	J. G. Tullis	42	Qc	6-17-36	WPA									24	8	14			53*			
403	J. H. Tullis	47	Qc	10-22-70	TSDH	34	0.04		27	1	5			74	10	6	<0.1	2.5	122*	72	169	7.1
404	Jimmy Netters	50	Qc	6-17-36	WPA				3	8	20*			37		38			87*	41		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-24-501	T. M. Ball	31	W	10-20-70	TSDH	30	0.34		9	3	12			13	<4	15	<0.1	36	111*	38	153	5.9
502	Mrs. Edith Rose	34	W	6-29-36	WPA									37		17			57*			
503	H. L. Hill	30	W	6-29-36	WPA									18		36			71*			
504	H. D. Harrison	38	Sp	5-7-36	WPA									12	8	35			76*			
505	W. H. Dickey	37	W	5-8-36	WPA									12	8	9			35*			
506	W. J. Payne	464-510	Cz	10-21-70	TSDH	16	0.04		2	2	262			610	4	65	0.6	<0.4	650*	15	1,044	8.3
601	Carl Yowell	39	W	6-29-36	WPA				7	6				12		21			41*	41		
602	J. D. Kelsay	39	Qc	5-8-36	WPA						15*			12	8	10			39*			
703	M. C. Shuptrine	55	Qc	10-21-70	TSDH	24	0.06		49	3	6			155	9	8	<0.1	<0.4	175*	134	279	7.3
704	Grady C. Singletary	400-420	Cz	10-21-70	TSDH	13	0.20		3	3	296			790	5	13	1.7	<0.4	720*	18	1,125	7.9
705	Grady C. Singletary	87-97	Qc	10-21-70	TSDH	29			23	12	60			142	97	15	0.3	1	307*	106	471	6.6
706	Ollie Henderson	41	W	6-26-36	WPA					2	16*			18		21			48*	10		
801	City of Alto	605	Cz	6-1-36	WPA									513		14			446*			
801	City of Alto	605	Cz	1-11-37	USGS				1		264*		12	566	6	61		0	598*	2		
801	City of Alto	605	Cz	6-16-44	USGS	13	0.02		2.2	0.9	261	5	25	547	3	63	0.6	0	643*	9		8.3
802	City of Alto No.1	491-557	Cz	6-1-36	WPA						260*			617		43			611*			
802	City of Alto No.1	491-557	Cz	8-9-41	TSDH	8	0.02	<0.03	9	1	258*		48	506	7	60	0.9	<0.4	641*	27		8.6
802	City of Alto No.1	491-557	Cz	8-15-53	TSDH	14	0.08	<0.05	5	3	241*		12	573	23	25	0.7	0.4	606*	25		8.4
802	City of Alto No.1	491-557	Cz	7-31-61	USGS	12	0.05		1	0	264*			586	3	64	0.7	0	655	2	1,060	8.1
802	City of Alto No.1	491-557	Cz	6-1-62	TSDH		0.10	<0.05	1	<1	330			593	5	57	0.6	<0.4	686*	4	1,425	8.2
802	City of Alto No.1	491-557	Cz	10-20-70	TSDH	13	0.04	<0.05	2	2	258			590	5	62	0.6	<0.4	630*	14	1,014	8.1
804	City of Alto No.2	504-604	Cz	4-13-65	TSDH		0.04	<0.05	2		270			570	<4	75	0.7	<0.4	628*	5	1,125	8.3
804	City of Alto No.2	504-604	Cz	10-20-70	TSDH	12	0.04	<0.05	2	2	262			590	5	65	0.6	<0.4	640*	11	1,018	8.0
805	Mrs. Hillory Jones	17	Sp	5-21-36	WPA									13	4	15			39*			
901	Wade Covington	16	Sp	5-14-36	WPA									12	8	29			67*			
902	Albert Wilson	25	W	10-20-70	TSDH	13	0.20		46	30	10			272	26	10	0.1	<0.4	269*	238	467	7.5
903	Beard	21	W	6-30-36	WPA									37		7			41*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-31-201	Arthur G. Black	40	Qc	10-16-70	TSDH	47	0.28		1	2	6				10	9	<0.1	<0.4	75*	10	69	4.2
302	W. G. Dominy	168-178	Qc	10-16-70	TSDH	18	0.42		4	3	101			204	54	12	0.2	1.5	294*	24	453	7.6
303	Texas Forest Service	405-425	Cz	10-30-70	TSDH	11	0.20		1	1	244			550	30	46	0.5	<0.4	600*	8	955	7.8
32-101	R. J. Felder, Jr.	Spring	Sp	10-16-70	TSDH	26	0.04		5	2	8			21	6	7	<0.1	3.5	68*	23	82	6.0
102	Riley Felder	16	Sp	6-11-36	WPA									42		38			95*			
103	Lem Felder	29	Sp	6-11-36	WPA				2	1	12*			18		14			38*	10		
201	H. A. Lindsey	245	Qc	7-29-61	USGS	18	1.9		30	10	48*			200	13	30	0.2	0.2	240	116	414	6.7
202	W. M. Wingate	240-270	Qc	10-26-70	TSDH	11	0.40		32	13	55			239	39	17	0.1	<0.4	292*	132	484	7.3
203	B. W. Smith	59	Sp	10-15-70	TSDH	47	1.12		34	3	15			89	24	21	<0.1	<0.4	188*	96	262	6.4
204	Viron Grogan	33	Sp	5-21-36	WPA									43		80			160*			
205	Spears	24	Sp	5-8-36	WPA				120	73	362*			18	567	555			1,686*		559	
206	Tom Niker	19	Sp	5-14-36	WPA									6		199			316*			
301	Alton Hicks	35	Sp	10-15-70	TSDH	39	0.42		68	4	8			183	15	10	0.1	25	259*	187	385	7.4
302	C. M. Harry	24	Sp	5-21-36	WPA									6	13	51						
401	Mrs. Earnest Felder	53	Sp	6-11-36	WPA									36	35	50			157*			
501	P. D. Holloway	42	Sp	5-13-36	WPA				2		15*			18		16			42*	6		
502	Lilly Spears Estate	43	Sp	5-13-36	WPA									12		13			30*			
503	P. D. Holloway	120-140	Sp	10-15-70	TSDH		2.88		4	5	14			15	24	19	<0.1	<0.4	74*	30	152	5.7
504	P. D. Holloway	90-100	Sp	10-15-70	TSDH	19	0.57		4	2	9			7	5	15	<0.1	6	63*	18	92	5.7
505	Ollie Campbell	15	Sp	5-21-36	WPA									12		39			71*			
801	V. J. Ballard	200-220	Sp	10-7-70	TSDH	39	3.45		7	6	12			41	17	14	<0.1	<0.4	115*	45	151	6.1
802	Bert Blalock	28	Sp	5-13-36	WPA									18		22			49*			
901	Mrs. C. A. Odom	298	Sp	7-28-61	USGS	25	0.05		0.5		78*			164	21	10	0.2	0.0	225	1	341	6.7
903	Forest Water Supply Corp.	465	Qc	3-23-67	TSDH		0.34	<0.05	3	2	201		19	379	91	11	1.1	<0.4	514*	16	900	8.9
903	Forest Water Supply Corp.	465	Qc	10-7-70	TSDH	13	0.15	<0.05	2	1	198		13	383	80	9	1.1	<0.4	510*	11	795	8.8

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 16.--Results of Chemical Analyses of Water From Wells and Springs in Anderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
DJ-38-32-904	Grady Dial	15	Cm	5-13-36	WPA				5		21*			12	15	24			71*	14		
905	Louis Latham	49	Sp	5-20-36	WPA				6		13*			12	10	17			52*	16		
906	T. D. Durham	58	Sp	5-13-36	WPA									12		7			21*			
907	Chronister Lumber Co.	50	Sp	5-20-36	WPA									12		20			41*			
40-201	James Thompson	137-147	Sp	10-14-70	TSDH	17	0.16		20	7	45			133	35	25	<0.1	<0.4	214*	78	358	7.6
301	Simpson Estate	22	Cm	5-19-36	WPA				12		18*			12	32	20			88*	31		
302	Mrs. Weatherford	18	Cm	5-19-36	WPA									12	67	46			177*			

1/ Initials used to identify water-bearing units are:

Al	-	Alluvium
Cm	-	Cook Mountain Formation
Sp	-	Sparta Sand
W	-	Weches Formation
Qc	-	Queen City Sand
R	-	Reklaw Formation
Cz	-	Carrizo Sand
Wx	-	Wilcox Group

2/ Initials used to identify laboratories are:

CL	-	Curtis Laboratories
HL	-	Houston Laboratories
MSL	-	Microbiology Service Laboratories
PTL	-	Pope Testing Laboratories
SL	-	Southwestern Laboratories
STL	-	Shilstone Testing Laboratory
TSDH	-	Texas State Department of Health
USGS	-	United States Geological Survey
WPA	-	Works Progress Administration

3/ Asterisk (*) indicates sodium and potassium calculated as sodium.

4/ Asterisk (*) indicates value is calculated or estimated.

5/ Sample from test hole at well site.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-38-09-701	J. A. Hughes	17	Cz	8-7-70	TSDH	25	0.80		35	6	32	17		32	26	67	<0.1	62	286*	113	470	5.9
17-102	Leonard Farms	485	Wx	8-4-70	TSDH	17	4.3		55	9	55			157	131	16	0.2	<0.4	364*	173	540	7.9
202	Leonard Farms	480	Wx	8-4-70	TSDH	34	1.72		58	11	33			226	47	19	0.2	<0.4	315*	189	480	7.3
301	R. L. Lipsey	179-779	Wx	8-26-70	TSDH	17	0.22		7	2	102			257	17	20	0.1	<0.4	291*	28	469	7.5
302	F. E. Hill	650	Wx	8-4-70	TSDH	21	0.06		17	2	87			254	19	13	0.2	<0.4	284*	52	450	8.0
401	Butler Water Supply Corp.	800	Wx	7-13-65	TSDH		0.12	<0.05	10	1	131*			264	35	40	0.2	<0.4	347*	28	633	8.2
401	Butler Water Supply Corp.	800	Wx	7-27-70	TSDH	18	0.04		9	2	121			259	33	39	0.2	<0.4	349*	30	572	8.1
402	Red Lake Club	19	R	6-9-36	WPA				10	9	33*			37	57	31			158*	61		
403	Red Lake Club	20	R	6-9-36	WPA									18	63	102			264*			
501	Sarah Jordan	25	R	8-7-70	TSDH	46			78	47	41			87	319	47	0.3	<0.4	621*	388	859	6.1
601	Ella Jackson	116-145	R	7-31-70	TSDH	12	1.60		153	31	31			189	344	45	0.4	<0.4	710*	510	992	6.8
701	McClinton Malone	20	R	8-4-70	TSDH	53	0.24		21	16	141			0	136	195	0.4	11	573*	117	940	4.4
702	W. F. Wright	480	Wx	8-4-70	TSDH	16	<0.02		20	3	75			234	19	12	0.1	<0.4	260*	61	415	8.3
703	Shiloh Baptist Church	15	R	6-9-36	WPA				11	8				24	16	15			62*	60		
704	Mally Woods	28	R	6-9-36	WPA									110	57	74			286*			
805	Cervance Estate	19	R	6-9-36	WPA									37	16	10			68*			
901	Daniel Memorial Orphanage	836-856	Wx	1-18-61	USGS	16	0.09		1.8	0	122	1.4		243	34	30	0.2	0.0	318	4	531	7.9
902	James Burns	38	Qc	8-3-70	TSDH	35	0.34		10	2	36			32	41	29	0.2	3.5	173*	33	253	6.1
18-401	Boyd Ranch	68	Cz	7-31-70	TSDH	15	0.25		5	2	332			750	<4	98	1.0	<0.4	822*	24	1,300	8.2
402	Boyd Ranch	103-121 5/	Wx	10-56	CL	17	1.0		9.5	3.7	318*			805	0	50			820	40		8.2
402	Boyd Ranch	218-238 5/	Wx	10-8-56	CL	19	0.1		9.1	3.2	313*			793	0	48			819	36		8.2
402	Boyd Ranch	103-404	Wx	10-24-56	CL	19	24.0		64.2	19.5	215*			488	213	60			882	241		7.0
403	W. K. Solomon	90	R	7-31-70	TSDH	23	10.40		36	6	12			111	25	17	0.1	<0.4	174*	117	279	6.5
703	Edell Price	38	Qc	8-3-70	TSDH	37	0.22		29	9	88			22	34	169	0.1	9	386*	107	698	6.0
803	Easter Price	83-95	R	8-7-70	TSDH	18	8.40		610	99	269			309	990	830	0.6	<0.4	2,976*	1,930	3,900	6.9

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-38-25-102	Bradford Manning	15	R	6-9-36	WPA									18	73	37			176*			
103	Abe Jones	22	R	6-9-36	WPA				23	7	2*			92	<10	9			86*	84		
202	Fanny Malone	16	R	6-9-36	WPA									37	<10	23			66*			
203	Fanny Malone	22	R	6-9-36	WPA									6	14	68			131*			
303	Carl Williford	22	R	6-19-36	WPA									6	22	12			55*			
304	Mildred Webb	34	R	6-19-36	WPA				6	39	51*				220	68			384*	174		
305	Greer	10	R	6-19-36	WPA									24	<10	46			92*			
704	L. C. Arndt	530	Wx	8-5-70	TSDH	17	0.04		12	4	79			224	18	12	0.2	1.0	253*	46	400	8.1
705	W. P. Miller	230	R	8-5-70	TSDH	38	0.52		<1	2	94			126	62	33	0.1	<0.4	291*	8	445	6.8
26-101	Arthur L. Anders	26	Qc	8-3-70	TSDH	31	0.04		35	1	14			110	<4	15	<0.1	6.0	156*	92	240	7.3
102	J. D. Guess	26	Qc	6-19-36	WPA				2	2	16*			24	12	10			54*	11		
104	J. D. Guess	30	Qc	6-19-36	WPA									12	8	100			178*			
105	Jesse Lee Estate	26	Qc	6-19-36	WPA									98	73	220			527*			
106	Jack Lipsey	11	Qc	6-19-36	WPA									18	8	36			83*			
39-06-902	Minze	58	Wx	8-27-70	TSDH	22	2.32		58	28	145			323	157	103	0.4	3.5	680*	260	1,064	6.9
07-401	B. J. French	40	Wx	8-27-70	TSDH	40	0.04		98	26	57			73	99	117	0.2	190	663*	351	951	6.7
502	R. P. Pillans	220-230	Wx	7-29-70	TSDH	42	0.15		33	11	26			151	14	30	0.4	<0.4	230*	126	353	6.9
503	W. A. Pillans	222-252	Wx	7-29-70	TSDH	35	0.40		66	9	36			227	30	45	0.2	2.5	336*	203	530	7.5
601	J. & G. V. Williams	28	Wx	8-21-36	WPA									49	12	52			138*			
902	L. G. Daugherty	268-310	Wx	8-12-70	TSDH	14	0.34		13	5	143			321	34	53	0.2	<0.4	420*	54	700	8.1
08-101	Ben H. Carpenter	79	Wx	9-21-36	WPA				121	22	17*			159	222	49			509*	394		
102	L. Granville	35	Wx	9-23-36	WPA									79	<10	10			81*			
103	Ben H. Carpenter	300	Wx	8-27-70	TSDH	24	0.40		5	7	351			540	<4	258	0.6	<0.4	912*	43	1,520	8.2
401	Jake Ward	23	Wx	8-23-36	WPA									238	<10	25			234*			
404	R. P. Pillans	382	Wx	7-29-70	TSDH	12	0.15		48	20	1,290			411	<4	1,930	0.5	<0.4	3,500*	201	5,680	7.5
701	E. M. Watson	15	A1	4-24-36	WPA				44	10	32*			159	11	56			231*	151		
702	E. M. Watson	63	Wx	4-24-36	WPA									165	4	29			186*			
703	E. M. Watson	68	Wx	4-24-36	WPA									110	4	235			463*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-39-08-803	Ben H. Carpenter	380	Wx	8-27-70	TSDH	16	3.24		6	3	141			326	30	29	0.2	<0.4	388*	28	620	7.9
14-302	Getty Oil Co.	86-121	Wx	8-11-70	TSDH	31	6.30		130	34	92			266	285	104	0.3	<0.4	810*	463	1,157	6.9
501	Ruell Lopes	97-123	Wx	8-24-70	TSDH	21	0.22		510	257	317			540	1,590	610	0.9	5.5	3,580*	2,330	4,220	6.8
602	O. C. Pullin	125	Wx	8-27-70	TSDH	23	2.32		100	40	115			410	143	126	0.4	2.5	754*	414	1,174	7.5
603	Mrs. B. C. Whatley	60	Wx	4-6-36	WPA				32	12	2*			76	18	38			139*	131		
701	Ethel Woods	61	Wx	8-24-70	TSDH	34	5.50		126	37	159			376	460	22	0.5	<0.4	1,029*	469	1,390	6.9
802	J. C. Adams	31	Wx	4-9-36	WPA				151	57	113*			320	44	390			915*	612		
803	Harper	24	Wx	4-9-36	WPA				200	67	23*			561	<10	580			1,150*	773		
804	L. C. Coleman	196-208	Wx	8-27-70	TSDH	86	3.12		6	5	30			12	22	36	0.2	18	212*	34	230	5.7
805	L. C. Coleman	26	Wx	4-20-36	WPA				1	4	34*			3	<10	64			101*	18		
806	Buck Carter	32	Wx	4-20-36	WPA				3	3	53*			12	52	51			168*	20		
901	W. J. Tate		Wx	4-16-36	WPA									372	15	108			495*			
901	W. J. Tate		Wx	7-28-70	TSDH	13	0.15		9	5	246			364	18	192	0.5	<0.4	660*	43	1,121	8.1
903	Bruce Teer	117-137	Wx	8-27-70	TSDH	27	7.70		287	98	185			497	580	389	0.6	1.5	1,821*	1,120	2,510	7.0
15-101	Gibson Drilling Co.	80	Wx	8-11-70	TSDH	21	1.60		94	33	223			331	279	219	0.4	<0.4	1,034*	370	1,570	7.7
102	Ovel Kimball	217-247	Wx	8-12-70	TSDH	13	2.08		7	2	121		1	279	30	18	0.2	1.5	333*	27	560	8.4
401	Arthur Bonner	34	Wx	8-11-70	TSDH	28	0.64		180	70	242			240	384	473	0.5	<0.4	1,497*	740	2,350	6.5
402	Guy Coleman	35	Wx	4-6-36	WPA				11	9	35*			73	48	24			1,163*	66		
403	John L. Bonner	74	Wx	4-14-36	WPA				60	60	71*			171	329	49			653*	398		
404	Jim Frazier Estate	48	Wx	4-3-36	WPA									18	129	192			498*			
405	Mrs. K. L. Tinnecal	25	Wx	4-3-36	WPA					5					15	78						
406	Leo Cherry	28	Wx	4-3-36	WPA									317	354	144			987*			
503	Mrs. Marsters	35	Wx	8-11-70	TSDH	50	0.10		44	14	131			82	86	211	0.3	1.0	577*	168	955	6.3
504	Sue B. Thornton	300	Wx	8-12-70	TSDH	16	0.34		11	5	109			278	37	15	0.2	<0.4	330*	48	537	8.1
505	Frank Bragg	19	Wx	4-14-36	WPA									195	215	485			1,223*			
601	Industrial Generating Co.	411-434 5/	Wx	2-70	EWL	12	0.78		4	1	129*			281	36	18			329	13	562	7.8

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) Potassium (K) 3/	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-39-15-601	Industrial Generating Co.	531-554 5/	Wx	2-20-70	EWL	10	0.52		2	0.5	163*	16	338	12	32			404	6	676	8.6
601	Industrial Generating Co.	365-555	Wx	3-20-70	EWL	23	0.06		4	1	137*		300	34	22			352	15	589	8.4
601	Industrial Generating Co.	365-555	Wx	7-20-70	TSDH	15	<0.02		4	1	127		288	30	20	0.1	<0.4	339*	17	547	8.3
602	Tom Willard	24	Wx	6-20-36	WPA				246	86	294*		256	698	475			1,925*	968		
603	Tommie Willard	29	Wx	6-20-36	WPA								49	18	50			144*			
604	Dude Whitaker	20	Wx	6-20-36	WPA								116	103	62			338*			
605	J. F. Aultman Estate	41	Wx	4-13-36	WPA								244	102	68			451*			
702	H. J. Cannon	492-510	Wx	7-28-70	TSDH	16	0.04		3	1	152	7	333	6	39	0.4	<0.4	388*	13	634	8.6
703	Pleasant Grove Water Supply Corp.			7-68	PTL		0.1		3.2	1.5	195*	21	290	7	111	0.5	0.1	483*	14	820	8.7
703	Pleasant Grove Water Supply Corp.	367-397	Wx	3-12-70	TSDH		0.04	<0.05	3	1	182	7	316	7	97	0.6	<0.4	449*	12	834	8.6
703	Pleasant Grove Water Supply Corp.	367-397	Wx	7-28-70	TSDH	13	0.15		3	2	169	2	318	6	82	0.6	<0.4	434*	14	725	8.4
704	Leonard York	29	Wx	4-16-36	WPA				119	55	235*		146	162	530			1,173*	524		
705	Mrs. M. J. Tate	42	Wx	4-3-36	WPA								104	93	565			1,100*			
802	Thomas Cannon	418-496	Wx	7-28-70	TSDH	13	0.15		3	2	163	2	314	16	69	0.4	<0.4	422*	16	697	8.4
803	R. N. Cannon	61	Wx	4-3-36	WPA								171	29	64			281*			
804	Walter Freeman	38	Wx	4-14-36	WPA								128	<10	60			199*			
805	Texas Power and Light	20	Wx	4-13-36	WPA								415	39	190			692*			
806	Texas Power and Light	85	Wx	4-13-36	WPA				104	35	211*		262	57	415			951*	401		
807	J. L. Miller	32	Wx	4-3-36	WPA								214	50	54			330*			
901	C. L. Lambert	177-192	Wx	7-30-70	TSDH	23	0.25		42	8	66		231	53	29	0.3	<0.4	335*	139	528	7.8
902	H. B. Zachry Construction Co.	184-214	Wx	9-9-70	TSDH	17	0.22		13	3	66		166	21	26	0.2	<0.4	228*	46	380	7.8
903	Mrs. B. R. Speed Estate	46	Wx	4-13-36	WPA				137	34	63*		171	313	108			739*	481		
904	Sneed Aultman	80	Wx	4-13-36	WPA				101	34	86*		189	181	166			660*	391		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-39-15-905	Mrs. J. W. Day	115	Wx	6-20-36	WPA				78	20	107*			183	48	220			563*	277		
16-101	L. E. Spencer	30	Wx	4-24-36	WPA									24	7	38			90*			
102	W. T. Cole	105	Wx	4-24-36	WPA				53	18	89*			220	202	76			546*	204		
103	L. Haydon	41	Wx	4-23-36	WPA									134	<10	60			204*			
104	Ed Woodard	130-150	Wx	7-20-70	TSDH	40	11.0		94	29	72			193	121	158	0.2	<0.4	620*	354	971	6.8
202	Roger Young, Jr.	150	Wx	1-20-61	USGS	24	0.07		88	25	82*			191	147	135	0.1	0	618	322	997	6.7
203	Paul Coleman	47	Wx	4-23-36	WPA									67	<10	60			149*			
204	T. F. Young III	330	Wx	7-17-70	TSDH	15	0.34		25	6	83			212	64	21	0.1	1.0	319*	85	500	7.8
301	O. L. Gragg	400	Wx	8-7-70	TSDH	14	0.04		4	4	86		4	207	18	12	0.3	<0.4	244*	27	390	8.6
401	John McCann	65	Wx	6-15-36	WPA									140	<10	38			174*			
402	J. S. Newman	55	Wx	6-15-36	WPA									207	<10	106			336*			
403	Roy Casey	48	Wx	6-15-36	WPA				388	144	181*			73	456	1,010			2,215*	1,564		
404	Brady Gunter	23	Wx	6-15-36	WPA				40	11	45*			159	20	66			260*	147		
405	Mrs. Wallace McGuyer	32	Wx	6-20-36	WPA									24	<10	35			75*			
501	Virgil Keaton	95-110	Wx	7-17-70	TSDH	40	6.60		61	19	52			128	19	149	0.5	1.0	411*	231	695	6.7
502	Industrial Generating Co.	485-505 5/	Wx	9-11-68	CL	18	0.2	<0.02	2.8	0.6	120*		12	256	22	13	0.1	0.1	337	94	473	8.6
502	Industrial Generating Co.	576-596 5/	Wx	9-68	CL	17	0.1	<0.02	2.4	0.4	136*		18	305	14	6	0.1	0.1	365	8	538	8.9
502	Industrial Generating Co.	415-425 5/	Wx	10-68	CL	18	0.1	0.02	8	1.9	94*			213	34	15	0.1	0.1	299	28	433	8.2
502	Industrial Generating Co.	407-597	Wx	12-4-68	CL	16	<0.05	<0.02	2.6	0.6	108*			251	21	12	0.1		302	9	447	8.0
502	Industrial Generating Co.	407-597	Wx	7-20-70	TSDH	16	0.10		3	1	100			239	22	10	0.2	<0.4	270*	10	425	8.1
503	Brown & Root, Inc.	184-224	Wx	1-69	PTL		0.1	0.0	17.6	2.9	104*		55	115	51	30	0.2	1.0	319*	56	480	9.5
503	Brown & Root, Inc.	184-224	Wx	7-20-70	TSDH	15	0.22		19	5	94			223	48	25	0.1	1.0	317*	70	505	8.2
504	Basin Operating Co.	305-345	Wx	7-29-70	TSDH	12	0.25		12	4	88			193	52	20	0.2	<0.4	283*	44	456	7.9
602	L. Tiders	72	Wx	8-7-70	TSDH	17	0.36		283	52	55			298	38	550	0.3	9.0	1,150*	920	2,070	7.2
701	Rick Lee	39	Wx	4-23-36	WPA				11	7	6*			24	<10	33			69*	54		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Anaylses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-39-16-702	Mrs. H. A. Lee	56	Wx	4-23-36	WPA									18	<10	18			43*			
703	E. J. Folk	14	Wx	4-23-36	WPA				2	5	7*			37	4	6			42*	28		
704	Ord Keaton	50	Wx	6-15-36	WPA									85	20	40			161*			
705	Ord Keaton	20	Wx	6-15-36	WPA				4	13	23*			43	6	50			117*	63		
21-301	S. R. Partlow	120	Wx	8-25-70	TSDH	41	0.06		9	3	13			49	6	7	<0.1	7.0	110*	33	125	6.5
501	Clay McKinney	32	Wx	3-5-36	WPA				44	13	165*			119	<10	300			581*	160		
601	Will Barkouskie	65	Wx	3-5-36	WPA				145	67	89*			366	111	295			890*	638		
602	B. L. Alewine	120	Wx	8-20-70	TSDH	50	0.16		7	3	17			54	5	9	0.2	4.0	122*	29	136	6.6
604	Andy Miller		Wx	8-20-70	TSDH	35	0.10		72	8	30			126	<4	50	<0.1	130	387*	216	575	7.1
605	W. T. West	62	Wx	3-10-36	WPA				54	20	47*			195	48	72			338*	217		
606	R. T. Smith	67	Wx	3-10-36	WPA				214	90	91*			293	263	420			1,224*	906		
607	W. W. Crawley	29	Wx	3-5-36	WPA				11	4	50*			140	<10	27			162*	45		
608	New Hope School	34	Md	3-5-36	WPA				19	11	164*			293	40	120			500*	94		
609	Mrs. J. H. Collins	45	Md	3-5-36	WPA				50	16	294*			268	90	365			949*	191		
610	Mrs. Winn	44	Wx	3-5-36	WPA				30	58	302*			265	104	460			1,085*	315		
611	McKinney	29	Wx	3-5-36	WPA				596	28				37	<10	164			806*	264		
612	J. V. Tiner	47	Wx	3-10-36	WPA				42	21	75*			293	56	40			380*	192		
901	McKenzie Jackson	21	Wx	8-20-70	TSDH	59	0.16		27	11	187			331	39	158	1.9	<0.4	646*	113	1,045	7.0
902	Jim Clements Estate	47	Wx	3-6-36	WPA				309	65	121*			88	<10	870			1,409*	1,035		
22-101	J. Trayn Moore	27	Wx	8-25-70	TSDH	28	0.06		86	21	206			418	72	237	0.3	7.0	863*	302	1,440	7.0
102	Ed Collins	32	Wx	3-9-36	WPA				78	47	137*			241	132	258			772*	258		
103	W. T. Moore	56	Wx	3-7-36	WPA				117	38	84*			259	60	254			682*	449		
104	W. T. Moore	53	Wx	3-7-36	WPA				230	98	254*			396	115	770			1,665*	977		
105	W. T. West	37	Wx	3-10-36	WPA				25	13	82*			244	28	46			316*	116		
201	T. L. McGlathery	80	Wx	8-25-70	TSDH	46	0.68		30	5	44			138	11	44	0.4	3.5	252*	94	385	6.9
202	J. N. Vickers	196-260	Wx	8-28-70	TSDH	21	0.04		20	5	68			206	12	29	0.3	<0.4	256*	72	415	7.9
203	H. P. Milligan	23	Wx	3-7-36	WPA				13	9	16*			67	<10	35			106*	71		
204	W. T. Moore	41	Wx	3-7-36	WPA				86	29	263*			445	125	290			1,015*	333		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-39-22-403	Coreta Watson	102-132	Wx	8-24-70	TSDH	36	0.13		89	16	76			376	38	72	0.5	6.0	520*	288	830	7.1
404	R. Alderman	34	Wx	4-3-36	WPA				52	19	54*			98	<10	170			344*	207		
405	Cotton Gin School	22	Wx	4-3-36	WPA				30	5	63*			140	<10	84			252*	95		
406	Withrow Gin Co.	20	Wx	4-3-36	WPA				85	30	358*			323	630	140			1,404*	339		
407	Clifford Boyd	35	Wx	2-20-36	WPA				26	8	108*			177	42	102			374*	99		
408	McKinney	40	Wx	2-20-36	WPA				95	23	94*			368	187	86			669*	332		
409	Winfrey's Service Station	347	Wx	2-20-36	WPA				49	15	73*			274	30	64			368*	187		
410	Tray-Hart Ranch	37	Wx	3-9-36	WPA				357	140	68*			296	108	1,250			2,071*	1,467		
502	Sexton Orms	240-300	Wx	7-10-40	USGS						48*			83	10	130	0.2	0.0	292*	159		
502	Sexton Orms	240-300	Wx	1-17-61	USGS	50	7.0		25	11	44*			94	12	80	0.3	0.0	274	108	441	5.9
502	Sexton Orms	240-300	Wx	8-27-70	TSDH	49	4.60		22	8	34			89	12	58	0.2	<0.4	231*	91	351	6.4
508	Magnolia Pipe Line Co.	58	Wx	4-3-36	WPA				7		40*			67	<10	35			115*	18		
509	Magnolia Pipe Line Co.	150	Wx	4-3-36	WPA				8	18	92*			98	<10	152			318*	95		
510	Wiley	23	Wx	4-3-36	WPA				80	30	257*			403	56	350			974*	324		
511	O. J. Miner	42	Wx	4-3-36	WPA				5		36*			70	<10	25			101*	15		
512	Art Dickerson	319-380	Wx	8-28-70	TSDH	16	0.06		11	5	74			193	9	32	0.2	<0.4	242*	48	403	8.2
602	J. C. Sheffield	460-480	Wx	8-25-70	TSDH	14	<0.02		3	1	114			278	5	20	0.5	2.5	298*	14	472	7.8
702	Emory Ross	156-176	Wx	8-20-70	TSDH	39	1.36		49	19	37			163	33	81	0.2	<0.4	338*	202	560	7.1
703	Richardson Community Center	26	Wx	3-6-36	WPA				820	348	438*			91	1,800	1,760			5,211*	3,483		
704	J. Johnson	49	Wx	3-6-36	WPA				176	70	138*			238	197	445			1,145*	726		
802	Wm. R. Day	408-428	Wx	8-20-70	TSDH	15	0.04		5	2	95			218	<4	37	0.2	<0.4	261*	22	437	7.6
901	City of Teague	260-280 5/	Wx	3-5-65	MSL	10	0.75		18	5	56*			182	17	13			198	64	350	7.2
901	City of Teague	470-490 5/	Wx	3-10-65	MSL	12	0.26		5	1	94*			232	19	8			247	17	395	8.1
901	City of Teague	653-673 5/	Wx	3-13-65	MSL	10	0.65		2	0	180*		13	354	2	58			447	5	720	8.8
901	City of Teague	455-685	Wx	3-9-70	TSDH		<0.02	<0.05	3	1	134		11	304	9	23	0.3	<0.4	331*	9	592	8.7
902	P. R. Hinders	488-508	Wx	8-25-70	TSDH	17	0.04		8	3	82			200	10	22	0.3	2.5	243*	32	384	7.3
904	T. B. Connell	70	Wx	2-13-36	WPA				49	15	180*			73	76	310			666*	185		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-39-22-905	H. J. Vibrock	15	Wx	2-13-36	WPA				208	100	284*			128	115	940			1,711*	933		
906	G. C. Ward	86	Wx	2-13-36	WPA				52	8	68*			146	16	124			341*	163		
23-101	Kirvin Water Supply Corp.	170-200	Wx	2-25-70	TSDH		<0.02	<0.05	32	8	68			210	36	39	0.3	<0.4	298*	111	540	7.8
101	Kirvin Water Supply Corp.	170-200	Wx	8-25-70	TSDH	23	0.20		34	9	70			203	42	50	0.2	<0.4	328*	122	538	7.6
102	Hugh Blakeney	99	Wx	8-25-70	TSDH	34	0.84		132	45	137			444	192	173	0.5	<0.4	930*	510	1,440	6.8
301	City of Fairfield No. 2	405-596	Wx	11-7-49	TSDH	53	2.8	<0.05	14	5	40*			128	12	18	0.1	<0.4	220*	56		7.7
301	City of Fairfield No. 2	405-596	Wx	4-50	TSDH	55	3.8		15	5	30*				8	18	0.1		191*	58		7.2
301	City of Fairfield No. 2	405-596	Wx	1959	TSDH		4.4		15	4	43*			142	11	15	0.1	<0.4	181*	54		7.7
302	City of Fairfield No. 1	366-557	Wx	10-16-41	TSDH	50	0.6	<0.05	21	6	43*			159	9	21	<0.4	<0.4	210*	77		7.5
302	City of Fairfield No. 1	366-557	Wx	4-43	USGS	42	0.44		19	5.2	39	4		149	9	19	0.2	0.5	204*	69		7.8
302	City of Fairfield No. 1	366-557	Wx	7-1-49	TSDH	50	4.5	<0.05	15	3	49*			140	12	21	0.1	<0.4	215*	50		7.1
302	City of Fairfield No. 1	366-557	Wx	4-52	TSDH	42	1.6		19	5	51*				18	18	0.1		246*	68		8.0
303	City of Fairfield No. 3	495-716	Wx	8-28-63	CL	12	<0.05		2.5	0.4	130*			299	22	26			353	8	526	8.3
304	Ward Prairie Water Supply Corp.	570-694	Wx	11-67	PTL		0.1		4.8	1.5	136*		28	278	13	18	0.3	0.3	341*	18	510	8.7
304	Ward Prairie Water Supply Corp.	570-694	Wx	3-20-69	TSDH		0.04	<0.05	8	2	130			317	24	15	0.2	<0.4	335*	27	592	7.8
304	Ward Prairie Water Supply Corp.	570-694	Wx	7-28-70	TSDH	17	0.04		6	2	130		5	318	17	14	0.3	<0.4	347*	22	553	8.5
305	John Kent	20	Wx	4-23-36	WPA									299	7	620			1,219*			
306	Mrs. Misildine	21	Wx	6-15-36	WPA				2	3	41*			110	<10	11			111*	17		
307	Mrs. J. C. Ritter	15	Wx	6-15-36	WPA				14	13	192*			299	61	140			567*	88		
403	Freestone County Country Club	520-560	Wx	8-15-68	TSDH		<0.02	<0.05	15	4	92			267	12	15	<0.1	<0.4	269*	54	492	8.3

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Anaylses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-39-23-403	Freestone County Country Club	520-560	Wx	7-15-70	TSDH	15	0.04		7	2	90			253	9	7	0.2	<0.4	254*	27	405	8.1
404	Freestone County Country Club	260-350	Wx	7-15-70	TSDH	23	2.20		30	8	34			151	24	24	0.3	<0.4	219*	108	356	7.0
407	J. W. Mitchell	410-430	Wx	8-25-70	TSDH	14	<0.02		8	3	99			250	8	29	0.2	<0.4	284*	34	464	7.7
408	Nelson	15	Wx	2-19-36	WPA									171	32	320			686*			
503	Robert Dunlop, Jr.	642-662	Wx	8-26-70	TSDH	14	0.84		5	2	379			499	<4	323	0.5	<0.4	970*	21	1,650	8.0
504	Robert Dunlop, Jr.	45	Wx	4-29-36	WPA									159	48	200			510*			
505	Walter Johnson	25	Wx	4-26-36	WPA				74	4	33*			61	17	22			110*	28		
506	Annie McGee	11	Wx	4-26-36	WPA									98	8	30			138*			
507	Mat McGee Estate	19	Wx	4-26-36	WPA									43	21	48			140*			
601	Athel Ivy	430-460	Wx	8-10-70	TSDH	35	0.94		62	13	39			253	33	41	0.2	5.0	352*	210	550	7.4
603	J. C. Leadbetter	283-368	Wx	8-18-70	TSDH	25	0.40		41	9	46			229	26	20	0.2	<0.4	280*	140	448	7.7
604	Sim Chavers	65	Wx	3-27-36	WPA				75	34	52*			61	127	182			500*	326		
605	F. E. Hill	40	Wx	4-25-36	WPA									61	30	54			177*			
702	D. B. Drennan	275	Wx	8-21-70	TSDH	55	7.80		32	7	28			131	9	39	0.2	<0.4	242*	111	352	6.6
703	P. R. French	46	Wx	3-13-36	WPA				1	2	15*			15	<10	22			47*	10		
704	P. R. French	11	Wx	3-13-36	WPA				8	4	8*			55	<10	5			52*	35		
705	Lake Watson	17	Wx	5-29-36	WPA									134	<10	17			137*			
706	Pyburn School	26	Wx	5-29-36	WPA				6	4	29*			37	44	14			115*	33		
707	A. S. Itchue	420-480	Wx	9-10-70	TSDH	15	0.06		4	2	110	2	10	264	23	8	0.2	<0.4	304*	20	479	8.7
801	V. V. Henderson	28	Wx	8-18-70	TSDH	39	2.16		86	26	82			251	92	138	0.5	<0.4	590*	320	940	6.7
901	H. H. Delavan	32	Wx	8-10-70	TSDH	46	0.20		158	53	235			161	353	440	0.4	<0.4	1,364*	615	2,110	6.6
24-101	Grady Ivy	25	Wx	4-7-36	WPA									55	57	7			137*			
102	Clinton Mullin	33	Wx	4-7-36	WPA									37	<10	9			44*			
202	Will Creel	22	Wx	4-27-36	WPA									24	<10	14			42*			
203	Rankin	30	Wx	4-27-36	WPA				9	14				24	<10	37			72*	79		
401	Leonard Emmons	49	Wx	4-7-36	WPA									67	<10	15			78*			
402	J. F. Emmons	22	Wx	4-7-36	WPA									122	<10	11			117*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-39-24-403	J. S. Ivy	64	Wx	4-7-36	WPA				56	28	67*			61	120	158			459*	252		
501	Mt. Zion Methodist Church	39	Wx	4-7-36	WPA				157	91	77*			195	276	345			1,042*	766		
502	A. F. McAdams	48	Wx	6-9-36	WPA				714	369	503*			498	1,397	1,800			5,028*	3,304		
503	L. V. Jones	25	Wx	6-9-36	WPA				137	75	295*			464	213	490			1,438*	651		
504	J. A. Claridge	31	Wx	4-7-36	WPA									61	321	44			573*			
505	Fred Whiteside	60-72	Wx	7-30-70	TSDH	96	0.74		45	4	30			196	13	12	0.7	<0.4	297*	128	354	7.6
506	Turlington Water Supply Corp.	595-658	Wx	6-19-67	PTL		0.05		36	6.8	63*			259	22	15	0.0	0.1	270*	118	440	7.8
506	Turlington Water Supply Corp.	595-658	Wx	3-20-69	TSDH		0.13	<0.05	36	9	54			259	19	10	0.3	<0.4	255*	129	480	7.9
506	Turlington Water Supply Corp.	595-658	Wx	7-27-70	TSDH	28	0.40		38	9	54			259	21	11	0.3	<0.4	288*	133	448	7.8
702	Edith Johnson	7	Wx	4-25-36	WPA					4	5*			18	<10	9			27*	17		
906	W. D. Morse	310-390	Wx	7-30-70	TSDH	32	0.55		47	9	29			207	18	23	0.2	<0.4	260*	155	406	7.2
30-103	Aycock	>295	Wx	8-20-70	TSDH	38	8.40		73	22	50			143	72	136	0.1	<0.4	469*	272	768	7.0
201	J. A. Dobbins	35	Wx	8-20-70	TSDH	35	0.40		445	171	710			840	640	1,430	1.0	5.5	3,850*	1,820	5,440	7.2
301	W. Myracle	11	Wx	8-21-70	TSDH	40	0.16		9	3	9			33	11	12	<0.1	<0.4	100*	35	130	6.1
302	Tom Blackmon	26	Wx	5-15-36	WPA									73	<10	26			101*			
502	Alton Sartar	145-165	Wx	8-19-70	TSDH	17	8.40		72	22	40			205	60	94	<0.1	<0.4	412*	272	692	6.9
601	B. C. Gilliam	18	Wx	2-10-36	WPA					3	122*			67	8	49			215*	13		
602	Rogers	35	Wx	5-15-36	WPA									134	<10	31			158*			
603	J. B. Sandifer	28	Wx	5-15-36	WPA					7	64*			183	<10	11			172*	27		
604	Weldon Wren	22	Wx	5-15-36	WPA									98	<10	16			105*			
604	Weldon Wren	22	Wx	8-19-70	TSDH	78	0.06		22	6	47			21	<4	15	0.1	180	358*	81	402	6.2
605	Roy Beene	421	Wx	8-19-70	TSDH	24	0.10		28	5	46			171	20	21	0.1	<0.4	228*	93	368	7.8
607	Ed Martin	16	Wx	5-15-36	WPA									262	127	1,810			3,225*			
608	W. C. Miller	12	Wx	5-15-36	WPA									61	39	14			141*			
905	E. Beene	33	Wx	2-24-36	WPA				32	15	29*			73	<10	102			214*	142		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-39-30-906	J. L. Miller	33	Wx	8-19-70	TSDH	67	0.13		4	2	35			78	6	7	0.4	11.0	170*	16	187	6.8
31-101	Jess O. Maddox	27	Wx	8-14-70	TSDH	46	0.04		77	3	16			264	10	14	<0.1	<0.4	296*	206	445	7.1
102	D. W. Curry Estate	50	Wx	5-15-36	WPA									201	<10	64			265*			
103	Reaves Ranch	35	Wx	5-15-36	WPA				22	11	75*			250	<10	43			274*	102		
201	Jasper McAdams	281-322	Wx	8-14-70	TSDH	29	0.16		40	7	42			221	25	16	0.2	<0.4	268*	132	423	7.6
202	L. Peters	48	Wx	3-12-36	WPA				9	3	50*			159	<10	9			151*	35		
203	Smith Johnson	37	Wx	3-24-36	WPA									183	12	162			420*			
204	Bill Moore	35	Wx	3-24-36	WPA				62	21	86*			250	29	138			459*	243		
301	D. D. Hall	609-629	Wx	8-6-70	TSDH	15	0.13		37	6	84			239	29	55	<0.1	<0.4	344*	117	585	7.9
302	D. D. Hall	16	Cz	6-9-36	WPA									67	24	44			158*			
303	Dew School	48	Wx	4-27-36	WPA									183	15	90			312*			
304	Mrs. A. H. White	18	Wx	4-27-36	WPA				11	8	8*			49	8	21			80*	60		
402	Mrs. Earnest Moore	100	Wx	8-14-70	TSDH	60	2.56		17	4	17			93	<4	13	0.2	<0.4	160*	58	190	7.2
404	John Eppes	311-331	Wx	8-14-70	TSDH	20	0.10		31	8	61			223	28	24	<0.1	<0.4	282*	111	468	7.9
405	John Eppes	28	Wx	4-11-36	WPA				34	15	412*			903	60	172			1,144*	147		
406	Homer Cagle	16	Wx	4-11-36	WPA				106	89	259*			256	119	610			1,311*	631		
407	Jack Shelly	32	Wx	4-11-36	WPA				140	86	196*			402	64	520			1,207*	705		
408	Homer Cagle	37	Wx	4-11-36	WPA					3	27*			40	38	34			122*	11		
410	D. W. Curry Estate	55	Wx	5-15-36	WPA									195	<10	290			613*			
501	Joe Philpott	44	Wx	8-13-70	TSDH	31	12.20		186	65	103			486	75	351	0.3	<0.4	1,062*	730	1,770	6.9
601	Roger Tatum	64	Wx	8-13-70	TSDH	48	0.36		331	180	176			217	374	940	0.6	28	2,184*	1,570	3,460	6.5
602	Roger Tatum	27	Wx	4-24-36	WPA									12	12	11			44*			
603	Grady McAdams	260-280	Wx	8-13-70	TSDH	16	0.06		29	5	46			204	14	11	0.1	<0.4	221*	92	357	8.1
701	Jerry Huskey	300-360	Wx	1-18-61	USGS	32	10		94	18	64*			230	30	161	0.3	0.0	542	308	920	6.7
702	W. T. Brumlow	300-320	Wx	8-14-70	TSDH	17	0.04		15	4	71			203	27	12	0.1	<0.4	245*	54	398	8.1
703	P. R. Hinders	362-402	Wx	8-25-70	TSDH	20	0.13		31	7	76			237	48	27	0.1	<0.4	326*	108	520	7.5
801	J. P. Knight	40	Wx	8-13-70	TSDH	100	0.12		20	5	193			178	18	204	0.9	36	665*	70	1,042	6.8
803	Adams Ranch	260-295	Wx	8-28-70	TSDH	23	0.10		37	6	50			183	25	40	0.1	<0.4	271*	119	450	7.9

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
KA-39-31-901	G. W. Stanfield		Wx	8-13-70	TSDH	22	0.13		22	6	60			217	18	12	0.2	<0.4	247*	81	397	7.8
32-101	Wayne Whittington	300-320	Wx	8-6-70	TSDH	36	24.5		64	15	32			248	32	39	0.2	<0.4	364*	221	535	7.3
104	Tackett	35	Wx	6-9-36	WPA				8	11	23*			6	8	74			127*	67		
202	E. P. Dawson	35	Cz	1-20-61	USGS	17	0.07		16	2.1	19*			47	5	17	0.1	29	128*	49	209	5.8
203	Acie Nevills	364-406	Wx	8-6-70	TSDH	28	0.46		39	11	50			231	31	23	0.2	<0.4	296*	144	473	7.8
206	Wood George	26	Wx	6-9-36	WPA									31	8	23			72*			
207	Wood George	31	Wx	6-9-36	WPA									55	75	38			211*			
208	R. C. Thomas	17	Cz	6-9-36	WPA									18	<10	27			57*			
302	L. R. Boyd		Wx	8-5-70	TSDH	17	2.40		42	6	58			209	48	24	0.1	<0.4	300*	130	482	7.7
303	H. L. Adkins	556-586	Wx	8-13-70	TSDH	25	0.10		63	12	53			354	23	13	0.1	1.0	364*	209	587	7.8
402	M. W. Whitlock	390-425	Wx	8-10-70	TSDH	23	0.10		67	11	39			262	38	33	0.1	<0.4	340*	213	551	7.7
502	A. Weaver	19	Qc	4-30-36	WPA				49	31	81*				357	38			556*	249		
503	A. Weaver	17	Qc	4-30-36	WPA									24	19	11			64*			
601			Qc	1-20-61	USGS	12	0.05		48	8.4	20*			172	29	14	0.3	6.3	230	154	385	6.2
604	Vernice Taylor	80-100	R	8-4-70	TSDH	59	17.80		93	23	31			101	166	95	0.2	<0.4	535*	326	765	6.5
605	Dillard Hartley	42	Qc	8-10-70	TSDH	48	0.24		13	2	6			49	4	6	<0.1	<0.4	103*	42	109	6.6
701	R. G. McSwane	532-552	Wx	8-10-70	TSDH	17	0.04		29	5	53			216	13	16	<0.1	<0.4	239*	93	399	7.9
702	Edwin Best	341-560	Wx	8-13-70	TSDH	25	0.70		22	7	66			222	22	20	0.2	<0.4	271*	83	432	7.8
703	G. B. Martin	51	Cz	8-13-70	TSDH	21	0.20		34	5	12			81	9	23	<0.1	29	173*	105	290	6.6
901	Robert Barnes	42	Qc	8-6-70	TSDH	12	0.34		30	7	15	42		102	14	27	0.1	68	265*	104	420	7.1
38-301	W. A. Loomis	450-470	Wx	8-19-70	TSDH	13	0.24		2	1	109		6	264	7	9	<0.1	<0.4	277*	9	435	8.7
302	F. D. Thompson	58	Wx	8-19-70	TSDH	30	0.06		99	39	123			314	35	270	0.5	<0.4	750*	406	1,300	7.2
39-101	Alvis Harris	22	Wx	2-24-36	WPA				22	6	73*			147	<10	82			256*	78		
202	J. A. Fulton	240-260	Wx	8-26-70	TSDH	46	3.08		45	8	53			179	38	58	0.2	<0.4	339*	146	521	7.1
401	Carlie Walker	390-410	Wx	7-14-70	TSDH	17			29	6	77			259	21	21	0.2	<0.4	281*	99	480	7.8
402	B. W. Moore	645-690	Wx	7-14-70	TSDH	12			9	3	102			235	31	26	<0.1	<0.4	299*	34	493	8.1
404	J. B. Lawler	427-447	Wx	8-26-70	TSDH	17	0.04		10	4	51			166	6	6	0.1	<0.4	176*	39	278	8.3
40-101	I. W. Whitaker	254	Wx	8-26-70	TSDH	43	1.44		40	9	41			173	36	36	0.2	<0.4	290*	136	441	6.9

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 17.--Results of Chemical Analyses of Water From Wells in Freestone County--Continued

1/ Initials used to identify water-bearing units are:

Al	-	Alluvium
Qc	-	Queen City Sand
R	-	Reklaw Formation
Cz	-	Carrizo Sand
Wx	-	Wilcox Group
M	-	Midway Group

2/ Initials used to identify laboratories are:

Cl	-	Curtis Laboratories
EWL	-	Edna Wood Laboratories
MSL	-	Microbiology Service Laboratories
PTL	-	Pope Testing Laboratories
TSDH	-	Texas State Department of Health
USGS	-	United States Geological Survey
WPA	-	Works Progress Administration

3/ Asterisk (*) indicates sodium and potassium calculated as sodium.

4/ Asterisk (*) indicates value is calculated or estimated.

5/ Sample from test hole at well site.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-33-46-101	H. D. Dosier	60	A1	8-25-70	TSDH	25	0.04		120	6	107			399	29	143	0.2	8	630*	324	1,050	7.2
102	H. D. Dosier	49	A1	3-9-36	WPA				232	24	196*			440	22	515			1,209*	681		
201	Matty E. Aday	41	A1	2-29-36	WPA				139	14	245*			580	28	310			1,026*	407		
202	George C. Mullen	60	A1	2-29-36	WPA				122	8	125*			513	<5	135			646*	338		
203	Sam Blythe	30	A1	2-29-36	WPA				370	24	670*			482	760	920			2,985*	1,023		
301	H. L. Turner	34	K?	8-25-70	TSDH	37	1.96		740	43	610			630	136	1,950	0.2	<0.4	3,830*	2,040	5,840	6.8
302	H. Prigmore	30	K?	2-24-36	WPA				434	29	434*			457	32	1,240			2,397*	1,204		
303	Tom Williams	114	A1	2-29-36	WPA				25	7	58*			49	<5	55			169*	91		
501	Ralph Lacey	43	A1	8-25-70	TSDH	25	0.10		108	6	21			305	16	40	0.2	19	390*	296	624	7.2
502	S. D. Henson	27	A1	3-9-36	WPA					43				49	<5	66			133*	177		
503	James Haley	57	A1	2-27-36	WPA				56	12	90*			238	<5	134			411*	188		
602	Joe Byers	46	A1	3-9-36	WPA				63	18	145*			342	<5	188			585*	230		
603	Aley High School	22	K?	2-27-36	WPA				90	20	199*			610	32	146			792*	307		
604	Joe Telica	52	A1	2-27-36	WPA				162	17	159*			610	<5	224			867*	472		
47-104	J. A. Johnson	20	M?	2-24-36	WPA				36	8	34*			168	<5	44			226*	126		
402	Woodie Perkins	22	M?	2-25-36	WPA				65	7	22*			165	20	60			256*	192		
405	S. E. Pritchett	25	M?	2-24-36	WPA				713	29	800*			232	191	2,300			4,149*	1,902		
406	T. B. Mayo Heirs	36	M?	2-20-36	WPA				467	24	294*			311	144	1,050			2,134*	1,266		
408	William King	22	M?	2-20-36	WPA				16	7	80*			76	151	16			308*	69		
702	R. L. Tarkington	20	A1	2-16-36	WPA				27	16				24	20	50			125*	134		
805	John Sanders	22	M?	2-20-36	WPA				36	12	219*			134	199	212			745*	139		
806	J. M. Dowdy	24	M?	2-20-36	WPA				78	20	243*			278	111	330			921*	280		
807	M. J. McClinock	34	M?	2-20-36	WPA				23	3	57*			140	<5	53			206*	70		
905	Community Water Co.	50	A1	2-13-36	WPA				41	70	81*			186	96	39			420*	131		
906	W. A. Peavy	51	M?	2-13-36	WPA				165	19	289*			766	102	275			1,233*	492		
907	Ft. Worth Water Works	52	M?	2-13-36	WPA				313	23	400*			183	286	920			2,033*	877		
48-102	B. B. Killian Estate	25	M?	3-18-36	WPA				54	27	60*			354	30	38			386*	248		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-33-48-201	Mrs. Clyde Baker	45	A1	9-4-70	TSDH	28	0.10		94	20	159			283	130	208	0.2	18	800*	320	1,300	7.3
302	Homer Kirkpatrick	45-100	Wx	9-4-70	TSDH	30	0.04		77	14	57			194	132	61	0.2	2.5	469*	251	712	7.6
303	Homer Kirkpatrick	18	Wx	3-18-36	WPA				7	3	2*			24	<5	10			34*	30		
401	Harding	16	M?	3-18-36	WPA				209	305	955*			403	2,043	920			4,633*	1,778		
503	C. B. Tapp	38	Wx	3-18-36	WPA				8	5	60*			67	<5	78			184*	41		
504	C. R. Greenhaw	31	Wx	3-19-36	WPA				18	8	54*			43	20	92			213*	76		
505	C. C. Bonsal	27	Wx	3-4-36	WPA				179	45	295*			195	238	580			1,434*	632		
604	Roy Frazier No.1	110-242	Wx	5-3-61	TSDH	14	0.20		6	1.9	126*			234	31	51	0.2	0.0	350	23	574	7.9
606	Roy Frazier	160-180	Wx	9-10-70	TSDH	16	0.10		8	4	127	2		266	22	57	0.2	<0.4	367*	35	604	8.2
610	J. C. Harris	89	Wx	2-3-36	WPA				21	8	98*			244	39	41			329*	85		
611	Mrs. Julia Holland	82	Wx	3-4-36	WPA				107	50	332*			475	32	540			1,298*	521		
612	J. M. Gardiner	14	Wx	3-6-36	WPA				28	8	105*			262	39	48			359*	101		
613	Lucille Lonon	36	Wx	3-18-36	WPA				14	5	20*			85	<5	20			101*		56	
614	Mary Anthony	22	Wx	1-31-36	WPA				18	84	12*			42		25			48*		48	
701	F. L. Meredith	55	A1	9-8-70	TSDH	37	0.13		49	5	58	2		165	30	39	0.1	58	359*	144	538	7.0
801	C. E. Smith	18	Wx	9-8-70	TSDH	29	0.06		28	10	140			249	122	59	1.2	9	520*	110	799	7.3
802	C. E. Smith	14	Wx	3-4-36	WPA									427	78	90						
803	P. A. Carson	68	Wx	3-4-36	WPA				16	8	31*			134	<5	20			142*	72		
903	Mrs. P. W. Whisenant	89	Wx	3-4-36	WPA				44	20	133*			220	176	80			563*	192		
55-304	Ft. Worth Water Works	50	A1	2-13-36	WPA				135	12	212*			464	302	108			1,001*	386		
305	Robert Tise	17	A1	2-13-36	WPA				95	9	163*			366	292	19			761*	276		
306	Robert Tise	29	A1	2-13-36	WPA				183	18	207*			521	286	186			1,140*	532		
307	John Key	63	A1	2-13-36	WPA				143	11	185*			500	239	315			1,143*	401		
308	Mrs. Dean Jackson	51	A1	2-13-36	WPA				85	8	130*			293	247	22			638*	246		
602	Key Ranch	40	A1	2-13-36	WPA				87	9	208*			504	223	46			825*	256		
603	Key Ranch	29	A1	3-13-36	WPA				34	1	45*			207	<5	12			195*	90		
604	Key Ranch	24	A1	2-10-36	WPA				639	166	2,750*			330	2,112	4,120			9,952*	2,280		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-33-55-605	Marvin Farmer	20	Al	2-7-36	WPA				39	9	17*			140	<5	40			175*	132		
56-201	J. W. Smothers	200	Wx	9-3-70	TSDH	14	0.10		4	2	140		2	234	16	85	<0.1	1.5	380*	20	652	8.4
202	Cedar Creek Enterprises No.1	81	Wx	1-3-68	TSDH		0.04	<0.05	17	0.2	6			61	5	4	0.1	5.5	69*	52	134	7.4
303	Cedar Creek Enterprises	200	Wx	1-30-68	TSDH		<0.02	<0.05	6	2	117			211	14	56	0.2	<0.4	301*	21	560	8.3
403	C. W. Bramlett	40	Wx	9-2-70	TSDH	30	<0.02		92	5	48			331	21	35	0.3	18	412*	251	652	7.3
407	Key Ranch	49	M?	3-12-36	WPA				304	32	292*			524	650	276			1,816*	884		
408	Leonard McClendon	47	Wx	3-13-36	WPA				356	25	234*			238	730	365			1,829*	993		
409	Charles Skills	43	Wx	3-13-36	WPA				301	32	366*			408	214	750			1,867*	884		
502	J. W. Smothers	180	Wx	9-3-70	TSDH	14	0.16		11	4	95			215	10	47	<0.1	1.5	289*	44	478	8.3
503	Cedar Creek Enterprises No.1	188	Wx	2-28-68	PTL		0.1	0.1	60	10	120			281	30	136	0.5	1.2	499*	192	820	7.9
505	Cedar Creek Enterprises No.3	62-74	Wx	7-21-70	PTL		0.05	0.08	92	10	48			254	14	109	0.2	5.0	305*	272	770	7.5
506	St. Paul School	33	Al	4-1-36	WPA				146	112	327*			37	762	505			1,870*	824		
507	A. M. Roberts Estate	16	Wx	3-12-36	WPA				7	3	8*			30	<5	15			48*	30		
601	City of Malakoff No.1	311-361	Wx	8-50	TSDH	17	0.27	<0.05	9	2	158*			281	4	99	<0.1	<0.4	430*	31		8.3
604	City of Malakoff No.3	296-358	Wx	4-17-36	WPA					2	4*			12	<5	6			18*	9		
604	City of Malakoff No.3	296-358	Wx	7-39	TSDH		0.2		42	10	69*				3	83			354*	146		8.5
604	City of Malakoff No.3	296-358	Wx	5-2-49	USGS	14	0.16		2	0.5	128	2.4		245	2	61	0.2	0.0	329*	7	567	8.6
606	Pool	100	Wx	4-1-36	WPA									305	43	32						
703	Texas Power & Light No.10	29	Al	9-2-70	TSDH	27	0.06		100	6	44			303	31	53	0.1	18	428*	274	687	7.2
704	Brison	30	Al	3-10-36	WPA				83	23	113*			360	136	77			612*	300		
705	Trinidad School	30	Al	2-17-36	WPA				66	4	1*			159	29	18			197*	182		
706	Sharp	29	Al	2-7-36	WPA				72					146	<5	39			184*	182		
707	Mary Peoples	30	Al	2-7-36	WPA				60	14	3*			146	<5	68			218*	208		
708	J. P. Nicholson	25	Al	2-7-36	WPA				111	11	188*			500	39	198			797*	321		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-33-56-802	Lone Star Gas Co.No.1	80-100	Wx	3-23-36	WPA				4		170*			330	8	74			421*	10		
802	Lone Star Gas Co.No.1	80-100	Wx	1935	LSG				14.4		98*			33	115	74			680*	38		
804	C. W. Carpenter Estate	15	Al	3-20-36	WPA				17	3	43*			122	<5	32			156*	55		
903	City of Malakoff No.2	360	Wx	7-6-39	TSDH	17	0.2	0.01	42	10	146*		18	226	8	83	0.6	<0.4	438*	17		8.5
903	City of Malakoff No.2	360	Wx	7-28-43	USGS	17	0.04		2.9	0.5	156	3.8	18	230	2	92	1.0	0.2	402*	9		8.4
904	Roy Surls	43	Wx	4-2-36	WPA				57	27	346*			79	70	615			1,154*	253		
905	Wright Edmundson	68	Wx	3-24-36	WPA									30	10	20						
906	Yarrabee Ranch	32	Wx	4-13-36	WPA				272	165	161*			122	1,380	122			2,161*	136		
64-501	J. W. Murchison	235-310	Wx	9-29-70	TSDH	12	0.10		3	1	258		7	429	<4	157	0.3	<0.4	650*	12	1,090	8.5
502	Creslenn Ranch No.19C	225	Wx	10-2-70	TSDH	11	0.06		6	2	302			420	<4	250	0.3	<0.4	780*	25	1,340	8.3
503	Creslenn Ranch No.34	180	Wx	10-2-70	TSDH	15	0.04		88	4	70			399	22	26	<0.1	7.5	429*	236	690	7.3
604	E. A. Boyd Estate	106	Wx	3-27-36	WPA									232	8	21						
902	Joe A. Wortham	503	Wx	3-27-36	WPA				2	1	445*			536	<5	380			1,096*	9		
34-41-104	Gilbert D. Galloway	156-162	Wx	9-9-70	TSDH	14	0.01		5	3	133	<1	2	265	14	58	0.2	<0.4	359*	23	598	8.4
105	W. W. Lewis	240-260	Wx	9-10-70	TSDH	22	0.86		13	4	62			171	21	17	0.1	<0.4	223*	48	354	7.9
107	H. H. Lewis	27	Wx	3-6-36	WPA				4	5	42*			49	35	31			141*	31		
108	Ross Smith	21	Wx	3-6-36	WPA				212	143	194*			73	459	670			1,714*	1,117		
203	Basher	28	Wx	3-6-36	WPA				40	39	136*			159	155	178			627*	260		
302	J. C. Meredith	44	Cz	5-8-36	WPA				4		11*			12	<5	16			37*	10		
406	City of Eustace No.1	180-260	Wx	2-17-70	PTL		0.03	0.07	15.4	3.6	91			210	24	38	0.3	3.0	280*	53	470	7.7
407	Tyler Estate	19	Wx	3-6-36	WPA				10	5	35*			61	30	27			137*	46		
408	J. L. Williams	41	Wx	2-3-36	WPA				223	246	188*			390	763	615			2,230*	1,571		
409	Bruce Allison	39	Wx	3-6-36	WPA				48	25	48*			30	48	216			400*	293		
602	Archie Dennis	33	Wx	3-2-36	WPA				351	252	349*			24	409	1,490			2,863*	1,911		
603	A. F. Beeson, Jr.	Spring	Wx	3-2-36	WPA					6	2*			24	<5	7			27*	25		
703	I. L. Harris	300-410	Wx	9-10-70	TSDH	18			8	3	104			218	14	50	0.1	1	305*	32	504	8.0
704	I. L. Harris	187-227	Wx	9-5-61	TAES				26	65	9			170	120	64			369*	51		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-41-707	Suia Tatum	37	Wx	4-3-36	WPA									67	8	15			90*			
708	I. L. Harris	12	Wx	2-5-36	WPA				55	8	14*			70	91	36			239*	171		
709	I. L. Harris	40	Wx	2-5-36	WPA				39	23	158*			67	25	325			603*	192		
802	Scott Syler	401-485	Wx	10-8-70	TSDH	15	0.94		14	3	72		4	194	15	18	0.1	<0.4	236*	45	380	8.5
803	Paul Clanton	470-490	Wx	9-10-70	TSDH	20	0.10		17	3	44			159	12	9	0.1	<0.4	183*	55	287	8.3
804	George Shuffner	28	Wx	3-2-36	WPA				14	13	19*			78	24	28			137*	88		
805	Wheeler	43	Cz	3-2-36	WPA				24	25	76*			134	77	98			367*	163		
806	Roy Russell	80	Wx	2-5-36	WPA				674	172	438*			156	278	2,080			3,720*	2,391		
807	Pickens	39	Wx	4-6-36	WPA				11	16	39*			98	17	56			188*	92		
904	Archie Dennis	26	Cz	3-2-36	WPA				4	8	2*			30	<5	14			43*	41		
905	W. J. Benge Estate	12	Cz	3-2-36	WPA					5	3*			24	<5	5			25*	22		
42-101	Schultz	70	Cz	5-3-61	TSDH	33	0.06		75	3.4	20*			235	19	10	0.1	22	319	201	477	6.7
104	Fred E. Miller	340-356	Wx	11-3-70	TSDH	13	0.56		17	3	42		2	155	9	7	0.1	<0.4	169*	56	272	8.4
105	E. B. Rowland	27	Cz	5-8-36	WPA									61	<5	15			73*			
106	Meredith Camp Ground	Spring	Wx	5-8-36	WPA									18	6	10			39*			
403	Bethel-Ash Water Supply Corp.	499-577	Wx	9-68	PTL		0.1	0.0	10.4	2.9	60		5	149	14	17	0.3	0.2	184*	38	300	
403	Bethel-Ash Water Supply Corp.	499-577	Wx	9-19-68	TSDH		0.04	<0.05	8	2	58			159	9	12	0.1	<0.4	168*	26	308	8.2
403	Bethel-Ash Water Supply Corp.	499-577	Wx	10-8-70	TSDH	19	0.24		8	2	65			170	11	14	0.1	<0.4	203*	31	317	8.3
406	Mrs. W. K. Coker	32	Wx	5-8-36	WPA									18	<5	11			32*			
407	Jesse Lowry	21	Wx	2-26-36	WPA				161	143	338*			6	586	1,070			2,301*	1,400		
502	Bud Bufford	25	R	2-26-36	WPA				8	5	57*			6	47	74			194*	41		
603	Roy Dodson	435-465	Wx	11-4-70	TSDH	15	0.79		20	3	55			138	49	12	0.1	<0.4	222*	62	355	7.9
605	A. B. Jones Estate	15	R	5-6-36	WPA									18	<5	26			55*			
706	L. M. Morton	417-484	Wx	11-3-70	TSDH	15	0.35		13	3	35		1	126	7	6	0.1	<0.4	142*	44	220	8.4
707	Brown	33	Wx	2-26-36	WPA				38	19	50*			43	104	100			332*	174		
708	R. L. Lee, Sr.	9	Al	2-26-36	WPA				245	77	77*			183	560	258			1,308*	930		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-42-709	E. M. Morgan	24	Cz	5-8-36	WPA									37	<5	15			53			
801	Delmer Smith	750-936	Wx	4-17-70	PTL		0.1	0.03	8	1	124		12	210	0	72	0.0	5.5	328*	24	520	8.4
901	C. H. Dragert	480-500	Wx	11-4-70	TSDH	17	0.16		49	6	38			127	89	28	0.1	<0.4	289*	149	458	7.9
43-103	George Kearney	500-640	Wx	11-10-70	TSDH	12	1.3		6	2	109		6	166	80	20	0.2	<0.4	317*	21	520	8.6
105	Pauline Porter	15	Qc	5-6-36	WPA									43	<5	13			55*			
205	Floyd Cornett	519-539	Wx	11-10-70	TSDH	15	0.34		14	1	102		5	162	68	21	0.1	<0.4	296*	17	464	8.6
404	D. F. Little	227-247	Wx	11-11-70	TSDH	13	0.40		11	3	75			156	53	17	0.1	<0.4	249*	40	401	8.3
501	Lone Star Producing Co. No.4	667-670	Wx	10-26-55	TSDH	20	0.2		1.4	0.3	128*		6	273	8	28			355			8.5
501	Lone Star Producing Co. No.4	667-670	Wx	11-11-70	TSDH	12	0.84		2	1	119		7	266	7	27	0.2	<0.4	306*	12	502	8.6
502	Lone Star Producing Co. No.2	360-530	Wx	5-2-49	USGS	14	0.24		3.1	0.9	116	2.8		180	75	29	0.2	0.0	329*	11	541	8.1
506	J. A. Tullas Estate	24	Qc	4-6-36	WPA									24	8	24			69*			
507	Corley	13	Qc	4-8-36	WPA				63	32	142*				78	365			680*	287		
601	O. R. Ricker	43	Qc	5-1-61	TSDH	57	0.03		33	2.6	21*			83	37	10	0.1	22	234	93	284	6.3
603	Ira Echols	468-500	Wx	11-11-70	TSDH	11	0.32		13	3	60		1	145	23	25	0.1	<0.4	207*	46	348	8.4
605	Horton Kidd	20	Qc	4-6-36	WPA									49	69	140			367*			
606	D. F. Saylors, Jr.	30	Qc	4-7-36	WPA									61	16	33			124*			
607	C. A. Saylors	38	Qc	4-7-36	WPA									24	18	160			296*			
701	Murchison School	30	Qc	5-1-61	TSDH	20	0.03		90	6.4	64*			210	92	85	0.5	0.5	494	251	772	6.5
702	City of Murchison	540-598	Wx	8-19-64	TSDH		0.58	<0.05	23	1	40		4	122	33	7	<0.1	<0.4	169*	63	310	8.5
702	City of Murchison	540-598	Wx	8-26-65	TSDH		<0.02	<0.05	17	2	39		8	94	34	8	0.2	<0.4	155*	52	282	8.9
702	City of Murchison	540-598	Wx	10-1-70	TSDH	18	0.16		23	2	40			129	37	7	0.1	1.0	191*	67	295	8.1
703	N. Lewis	14	Qc	5-6-36	WPA				8	7	212*			18	130	260			626*	51		
704	Willy Shelton	8	Qc	4-8-36	WPA									378	58	182			679*			
705	W. S. Walker	20	Qc	4-8-36	WPA									31	8	38			96*			
706	Methodist Church	14	Qc	5-7-36	WPA				0	7	102*			73	33	102			280*	31		
805	Mrs. W. H. Barron	46	Qc	5-7-36	WPA									24	22	17			78*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-43-902	Leagueville Water Supply Corp.	470-626	Wx	5-19-70	TSDH		0.04	<0.05	6	3	93		5	206	24	24	0.2	<0.4	258*	27	459	8.5
902	Leagueville Water Supply Corp.	470-626	Wx	10-8-70	TSDH	13	0.02		7	2	94			212	22	22	0.2	<0.4	264*	26	422	8.3
903	Mrs. Nell Parker	37	Qc	5-4-36	WPA				119	61	168*			31	574	206			1,143*	548		
44-202	J. W. Breedlove	104	Qc	11-12-70	TSDH	34	<0.02		20	1	4			61	4	5	0.1	3.0	101*	56	121	7.1
204	K. Donoghey	21	Qc	4-24-36	WPA					10	8*				<5	55			73*	40		
401	City of Brownsboro	537-618	Wx	10-18-50	CL	12	0.1		3.1	0.7	112*		14	215	27	16			293*			8.6
401	City of Brownsboro	537-618	Wx	2-11-65	TSDH		0.08	<0.05	3	1	98			209	34	17	0.2	<0.4	257*	14	468	8.3
402	Union Hill Water Supply Corp.	510-600	Cz,Wx	5-6-65	TSDH		0.18	<0.05	6	1	148			294	48	35	0.2	<0.4	383*	21	699	8.2
403	Troy Crumpton	373-393	Cz	11-12-70	TSDH	9	0.52		8	4	37			113	14	8	0.2	<0.4	136*	36	230	8.0
404	T & F Dairy	696-780	Wx	11-12-70	TSDH	15	0.88		4	1	97		10	189	29	21	0.1	<0.4	270*	16	434	8.9
405	H. S. Tompkins	185	Qc	4-24-36	WPA				6		51*			110	12	16			140*	15		
406	Kenneth Porter	320	Cz	4-24-36	WPA				10	15	13*			73	12	29			115*	84		
407	J. E. Tedford	34	Qc	4-21-36	WPA				29	17	66*			12	27	176			321*	142		
501	Cuba English	43	Qc	2-21-36	WPA				6	8	36*			3	34	64			149*	49		
502	Porter	13	Qc	4-24-36	WPA									18	25	70			160*			
503	I. A. Simmons Estate	29	Qc	2-21-36	WPA				11	3	28*			24	<5	54			108*	40		
504	J. B. Sims Estate	25	Qc	2-21-36	WPA				12	8	30*			37	<5	65			133*	61		
601	Three Community Water Supply Corp.	688-730	Wx	9-68	PTL		0.2	0.0	3.2	1.5	116		24	212	21	21	0.2	0.0	293*	14	440	8.7
601	Three Community Water Supply Corp.	688-730	Wx	11-12-70	TSDH	13	0.10		2	<1	116		5	256	20	17	0.2	<0.4	299*	6	475	8.5
602	Alton Cade	480-510	Cz	11-12-70	TSDH	12	0.74		17	5	27			132	10	4	0.1	<0.4	140*	62	233	7.9
603	Terris Bailey	282-300	Qc	11-24-70	TSDH	14	2.80		21	5	10			110	9	5	0.1	<0.4	124*	75	201	7.5
604	State Highway Dept.	7	Al	2-21-36	WPA						20*			18	10	13			52*	2		
702	Travis Wright	190-206	Qc	11-18-70	TSDH		11		6	4	6	4		29	9	12	<0.1	<0.4	55*	29	113	6.0
703	Tergeson Estate	37	Qc	4-23-36	WPA				8		44*			43	39	28			140*	20		
704	Olson Estate	48	Qc	4-21-36	WPA									24	13	26			79*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-44-705	Olson Estate	46	Qc	4-21-36	WPA									6	62	134			301*			
801	Mrs. Selma Hopson	49	Qc	11-18-70	TSDH	23	0.04		53	5	16	23		146	27	29	0.1	33	281*	152	444	7.0
903	Donald Lawrence	415-430	Cz	11-12-70	TSDH	9	0.11		9	4	33			113	10	6	0.1	<0.4	127*	37	210	8.2
905	W. T. Birdwell	14	Qc	4-24-36	WPA									18	8	28			70*			
906	Mayer Davis & Gladys Davis	50	Qc	4-29-36	WPA										22	11						
45-101	Mrs. McMahan	11	Qc	4-25-36	WPA									18	<5	11			35*			
102	Paul Young	23	W	4-25-36	WPA									12	<5	34			63*			
401	Hewitt McKay	273-510	R,Cz	5-1-61	TSDH	11	0.16		8	2.5	46*			132	15	4	0.2	0.2	159	30	257	7.4
403	Henderson County Municipal Water Authority	375-510	R,Cz	7-26-63	CL	15	<0.05		9.4	2.6	51			149	12	7			186	34	274	8.0
403	Henderson County Municipal Water Authority	375-510	R,Cz	7-26-63	TSDH		0.1	<0.05	11	4	41			137	13	4	0.2	<0.4	142*	45	261	8.2
404	S. L. Rumbo	580-600	Wx	11-18-70	TSDH	11	0.10		9	3	51	3		153	18	7	0.1	<0.4	177*	35	287	8.0
405	Scott	29	Qc	4-25-36	WPA									61	35	29			145*			
702	F. O. Burcham	730-770	Wx	11-19-70	TSDH	12	0.04		2	1	145		5	357	<4	20	0.3	<0.4	361*	10	579	8.5
703	F. O. Burcham	42	Qc	4-23-36	WPA				64	61	144*			6	346	254			872*	410		
704	Mrs. J. C. Hicks	500	Wx	4-29-36	WPA									171	<5	10			157*			
49-104	C. J. Holloway	17	Wx	4-4-36	WPA									61	53	28			149*			
201	Ezra Flemming	355-377	Wx	9-9-70	TSDH	18	0.28		9	4	85	<1		193	11	41	<0.1	<0.4	263*	38	434	7.7
203	W. J. Carter	27	Cz	3-16-36	WPA				13		134*			61	<5	185			362*	35		
304	J. R. Gregg	130-150	Wx	9-10-70	TSDH	35	0.68		35	6	14	3		156	5	10	<0.1	<0.4	185*	112	280	7.8
401	Texas Power & Light Old Mine No.3	382	Wx	3-17-36	WPA				8	8	60*			195	<5	15			188*	51		
402	Alfred Williams	36	Wx	2-10-36	WPA				3	3	38*			79	<5	270			110*	21		
504	Grady Till	355-386	Wx	10-2-70	TSDH	17	0.20		10	2	63			179	7	14	<0.1	<0.4	201*	34	321	8.3
505	W. F. Christopher	43	Wx	2-7-36	WPA				46	30				67	37	98			244*	239		
506	Meek	62	Wx	2-7-36	WPA					87	166*			85	257	270			822*	358		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-49-507	J. W. Junell	42	Wx	2-7-36	WPA				58	39	242*			61	95	485			949*	305		
508	Christopher Estate	54	Wx	2-7-36	WPA				69	23	160*			67	31	375			691*	267		
603	W. B. Fields	445-465	Wx	9-11-70	TSDH	13	0.10		5	2	54			143	11	5	0.1	<0.4	160*	20	250	8.1
606	G. W. Green	23	Cz	3-13-36	WPA				19	6	2*			67	<5	14			74*	71		
702	E. McDaniel	380	Wx	10-5-70	TSDH	15	0.10		2	1	91			222	8	14	<0.1	<0.4	240*	11	377	8.3
703	Carson Estate	44	Wx	4-21-36	WPA				600	450	1,090*			274	2,900	1,830			7,007*	3,350		
704	Carson Estate	21	Wx	4-2-36	WPA					6	26*			49	17	16			89*	24		
806	Crescent Heights Water Supply Corp.	395-445	Wx	5-65	PTL	13	0.3		4	0.5	111		24	185	8	38	0.1		292*	12		8.9
806	Crescent Heights Water Supply Corp.	395-445	Wx	5-5-65	TSDH		0.34	<0.05	4	1	105		1	227	7	33	0.2	<0.4	265*	13	472	8.4
807	Crescent Heights Water Supply Corp.	168-350	Wx	10-2-70	TSDH	18	0.04		10	2	38			127	5	6	0.1	<0.4	141*	34	217	8.2
808	Lone Star Gas Co.	209-251	Wx	10-7-70	TSDH	35	3.28		26	7	26			129	5	27	0.3	<0.4	189*	95	292	7.3
809	W. F. Leopard	50	Wx	4-2-36	WPA									440	28	110			576*			
903	C. R. Boyd	40	R	3-5-36	WPA					5	9*			6	<5	25			42*	22		
50-101	City of Athens No.5	470-710	Wx	9-27-50	CL	12	0.1		3.4	0.8	71*		7	161	6	12			193*	12		8.4
101	City of Athens No.5	470-710	Wx	8-25-65	TSDH		<0.02	<0.05	4	2	101			188	5	51	0.2	<0.4	257*	19	483	8.1
102	City of Athens No.3	317-781	Wx	5-2-36	WPA				24	5	24*			134	<5	16			136*	81		
103	City of Athens No.4	180-777	Wx	5-19-49	CL	29	0.8		2.9	0.6	72*		5	159	4	16			210*	10		8.0
104	City of Athens No.6	509-530 5/	Wx	3-17-54	CL	15	0.1		18	3	8*		5	60	4	9			92*	57		8.0
104	City of Athens No.6	822-842 5/	Wx	3-20-54	CL	18	0.3		3	1	118*		7	120	0	112			319*	12		8.3
104	City of Athens No.6	496-851	Wx	5-25-54	CL	16	0.1		9	2	103*		12	183	3	58			293*	27		8.4
104	City of Athens No.6	496-851	Wx	8-25-65	TSDH		<0.02	<0.05	15	1	63			156	10	26	0.2	2.0	195*	44	357	8.2
201	Christian Youth Foundation No.1	550-647	Wx	5-2-49	USGS	15	0.42		15	2.2	52	2.4		132	40	9	0.2	1.2	204*	46	323	7.9
201	Christian Youth Foundation No.1	550-647	Wx	5-1-61	TSDH	15	0.12		14	2.2	54*			133	40	8	0.1	0.2	206	44	321	7.8
202	Christian Youth Foundation No.2	610-650	Wx	5-1-61	TSDH	18	0.13		21	2.7	34*			139	13	7	0.1	0.0	170	64	270	7.8

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-50-304	Athens Fish & Game Club	21	Qc	4-8-36	WPA									12	10	25			63*			
305	W. L. Roby	46	Qc	4-27-36	WPA									18	<5	15			38*			
403	Dan Wolfe	165-205	Wx	11-23-70	TSDH	24	9.4		19	4	8	4		50	5	30	<0.1	<0.4	119*	65	189	6.3
404	Earl Hendry	35	Cz	3-5-36	WPA					5	19*			49	<5	16			64*	20		
503	Leonard Nichols	615-635	Wx	10-28-70	TSDH	15	0.16		11	2	52			149	15	7	0.1	<0.4	175*	35	278	8.2
504	Jimmie Anderson	162-178	Wx	10-30-70	TSDH	27	8.0		42	12	28			92	100	30	0.3	<0.4	284*	156	445	7.0
505	Theo Daniel	20	R	4-8-36	WPA									18	<5	18			43*			
506	Theo Daniel	41	R	4-8-36	WPA				2	5	17*			18	24	17			74*	26		
603	Thomas Franks	22	Qc	10-28-70	TSDH	32	0.04		12	3	21			28	16	34	0.1	3.5	136*	41	210	6.2
604	Annie Bogaty	15	Qc	4-10-36	WPA									49	8	60			145*			
605	Tim Forester	18	R	4-9-36	WPA									37	<5	9			44*			
701	Ira F. Warren	420	Wx	10-21-70	TSDH	15	0.10		22	4	34			170	<4	4	0.1	<0.4	163*	72	265	8.2
702	Joe McNair	560-590	Wx	10-21-70	TSDH	18	0.13		15	2	36			123	14	7	0.1	<0.4	152*	47	236	8.2
801	Virginia Hill Water Supply Corp.	545-595	Wx	10-9-64	TSDH		0.18	0.08	16	4	23			78	8	23	0.2	<0.4	113*	56	230	7.7
802	Virginia Hill Water Supply Corp.	865-905	Wx	7-70	PTL		0.07	0.0	7.2	1	82		14	178	16	10	0.2	1.5	222*	22	340	8.7
802	Virginia Hill Water Supply Corp.	865-905	Wx	10-5-70	TSDH	18	0.20		5	1	72		1	195	9	7	0.1	<0.4	209*	19	325	8.4
803	J. J. Stevens	550-570	Wx	10-22-70	TSDH	13	0.34		10	1	48		2	144	10	6	0.1	<0.4	161*	32	252	8.5
804	Pine Grove School	20	R	4-29-36	WPA				40	39	75*				354	39			547*	260		
902	Earnie Berry	50	R	10-28-70	TSDH	55	0.04		42	2	2			115	12	6	0.1	<0.4	176*	112	226	7.0
903	D. Woodlee	10	R	4-14-36	WPA									24	33	144			292*			
51-105	Colleen Musselwhite	12	Qc	4-27-36	WPA									24	<5	10			36*			
106	J. B. Paroline	15	Qc	5-4-36	WPA									31	8	17			63*			
201	W. H. Rounsaball	47	Qc	5-1-61	TSDH	58	0.12		26	2.7	11	3.7		57	6	15	0.2	39	190*	76	234	6.2
206	Sam Lee	14	Qc	5-4-36	WPA									49	12	35			112*			
207	A. Caddell	35	Qc	5-5-36	WPA									55	<5	15			69*			
302	Kenneth Richardson	616-679	Wx	11-14-70	TSDH	14	0.80		6	2	94			179	38	27	0.1	<0.4	269*	22	434	8.2

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-51-303	State Highway Dept.	37	Qc	5-4-36	WPA									43	20	22			97*			
304	George Curry	31	Qc	5-4-36	WPA									18	49	48			159*			
502	Hugh Reynolds	660-720	Wx	10-30-70	TSDH	13	0.34		5	2	98		6	195	35	22	0.1	<0.4	277*	20	445	8.8
503	Sholars & Holcomb	400-430	Wx	10-30-70	TSDH	12	0.68		8	3	72			134	45	25	0.1	<0.4	231*	31	376	8.2
505	Tom Faulk, Jr.	33	Qc	4-10-36	WPA									49	12	33			109*			
603	Theopa Dingler	60	Qc	11-20-70	TSDH	39	0.10		52	12	16	9		104	6	32	0.1	107	324*	180	474	7.4
605	D. Dingler	33	Qc	5-5-36	WPA									24	<5	12			38*			
606	John McMachin	20	Qc	4-27-36	WPA									49	<5	28			84*			
702	Gilbert Perry	736-756	Wx	10-30-70	TSDH	15	1.88		3	1	106		14	209	11	29	<0.1	<0.4	282*	12	455	9.0
703	Elmer Hargraves	29	Qc	4-16-36	WPA									55	16	60			161*			
704	Elmer Hargraves	66	Qc	5-1-36	WPA				4	5	61*			43	25	72			188*	31		
801	Anlaco Ranch	533-596	Wx	7-24-46	CL	15	0.4		5.4	1.3	115*		4	254	27	18			312*	19		7.6
801	Anlaco Ranch	533-596	Wx	10-29-70	TSDH	13	0.16		5	2	98		1	201	45	15	0.1	1.5	280*	19	439	8.4
803	Jack Garner	585-605	Wx	10-29-70	TSDH	15	0.10		7	2	98			226	37	13	0.2	<0.4	283*	26	446	8.2
804	L. D. Henderson	32	Qc	5-5-36	WPA									31	<5	28			69*			
903	Paul Harden	53	Qc	11-24-70	TSDH	18	0.36		18	3	11			37	<4	29	<0.1	12	109*	59	194	6.5
904	Dennis Sholars	62	Qc	4-10-36	WPA									18	<5	26			56*			
905	V. Meyer Estate	15	Qc	5-5-36	WPA				77	63	99*			18	418	154			820*	453		
52-103	Moores Station Water Supply Corp.	724-779	Wx	4-69	PTL		0.28	0.0	8	1	113		43	127	48	31	0.3	0.4	309*	24	440	9.1
103	Moores Station Water Supply Corp.	724-779	Wx	5-19-70	TSDH		<0.02	<0.05	5	1	107		6	189	48	28	0.2	<0.4	290*	17	520	8.6
103	Moores Station Water Supply Corp.	724-779	Wx	10-8-70	TSDH	16	0.10		5	1	108		6	189	51	27	0.1	<0.4	307*	18	489	8.6
105	E. C. Lewis	40	Qc	5-4-36	WPA				68	49	122*			67	<5	410			681*	371		
203	Charles Mathis	49	Qc	11-19-70	TSDH	35	0.24		15	4	12			56	<4	9	0.1	21	124*	53	171	6.8
204	W. C. Welch	160-176	Qc	11-20-70	TSDH	13	10		3	1	4			16	<4	6	<0.1	<0.4	35*	13	52	5.9
205	Mathis Estate	Spring	Qc	4-21-36	WPA									24	10	13			54*			
303	Texas Pecan Nursery	280-410	Qc,Cz	11-20-70	TSDH	14	0.84		28	7	9	6		111	21	10	0.1	<0.4	150*	99	247	7.7

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-52-304	H. C. Morman	82-102	Qc	11-20-70	TSDH	22	3.10		49	2	5			154	7	6	0.1	<0.4	167*	130	263	7.5
305	Joe Meyer	29	Qc	4-20-36	WPA									55	17	44			138*			
306	Alvin Greer	10	Qc	4-21-36	WPA				466	525	1,535*			122	3,710	1,910			8,207*	3,324		
307	Mrs. Murphy	32	Qc	4-23-36	WPA				194	111	548*			49	914	810			2,601*	940		
403	T. L. Crossley	70	Qc	4-27-36	WPA				25	15	64*			31	<5	168			287*	122		
404	W. N. Crawford	58	Qc	5-5-36	WPA									24	<5	23			56*			
502	Central High School	71	Qc	5-1-61	TSDH	31	0.02		24	9.1	107	12		34	38	189	0.1	15	486	98	815	5.4
504	Central High School	600-640	Wx	11-24-70	TSDH	13	0.13		6	3	93			242	12	11	0.3	<0.4	256*	25	408	8.3
505	Wallace	21	Qc	5-5-36	WPA									24	<5	36			76*			
506	Miller Estate	27	Qc	4-20-36	WPA				114	90	87*				494	238			1,023*	656		
703	Homer Earl	154-162	Qc	11-20-70	TSDH		0.28		7	5	8			15	30	14	<0.1	<0.4	75*	39	152	5.6
704	Thomas Faulk	53	Qc	5-5-36	WPA				24	15	246*			43	51	400			757*	121		
804	Jack Barton	51	Qc	4-20-36	WPA									24	20	26			89*			
57-102	L. J. Fontenat	300-360	Wx	10-7-70	TSDH	12	0.10		6	2	133		2	318	<4	36	0.1	<0.4	347*	23	575	8.4
203	C. C. Miller	325-460	Wx	10-7-70	TSDH	12	0.22		2	1	89		6	218	5	9	<0.1	<0.4	231*	8	367	8.7
204	J. C. Rogers	200-220	Wx	10-20-70	TSDH	15	2.30		3	1	3			10	<4	6	<0.1	<0.4	33*	11	39	5.8
301	Circle 10-Boy Scouts of America	190-210	Cz	10-1-70	TSDH	21	0.70		5	2	14			11	12	17	<0.1	3.5	80*	19	115	5.7
302	Circle 10-Boy Scouts of America	1,016-1,066	Wx	10-1-70	TSDH	15	0.30		1	1	114		4	278	6	8	0.2	1.5	288*	9	444	8.4
303	J. M. Boyd	80	Cz	10-21-70	TSDH	10	0.56		2	1	3				8	6	<0.1	<0.4	30*	10	39	5.1
304	J. M. Boyd	70	Cz	3-5-36	WPA					3	6*			12	<5	10			25*	12		
305	Billings	36	R	3-5-36	WPA									73	10	94						
401	Cross Roads School	180	Wx	5-2-61	TSDH	12	0.84		7.8	1.6	112*			301	1	14	0.2	1.2	312	26	500	8.0
401	Cross Roads School	180	Wx	10-7-70	TSDH	12	0.04		7	2	111		1	298	<4	13	0.2	<0.4	293*	27	470	8.4
403	Mary Thomas	37	Wx	3-26-36	WPA									98	10	61						
504	Mrs. R. P. Cotten	91	Wx	4-29-36	WPA				57	27	44*			24	122	126			388*	228		
505	F. Locke	54	Wx	3-31-36	WPA				569	296	536*			98	375	2,370			4,195*	2,643		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-57-601	J. D. Goodgame Estate	14	R	3-30-36	WPA									37	10	9						
602	Bud Anding	29	R	3-30-36	WPA				28	19	24*			12	78	80			235*	151		
703	H. A. Willingham	48	Wx	3-26-36	WPA				122	46	165*			195	45	460			935*	496		
704	Mrs. C. R. Litchfield	62	Wx	3-26-36	WPA									61	<5	10						
705	Dolphus Pettit Estate	46	Wx	3-11-36	WPA				9		11*			18	<5	22			51*	25		
802	Craig Gartside	306-402	Wx	10-7-70	TSDH	15	0.34		14	4	57			168	24	11	0.2	<0.4	208*	52	338	8.0
58-103	Stella Pace	57	Qc	4-29-36	WPA				22	5	23*			85	8	34			134*	76		
202	Mack Adams	534-555	Wx	11-24-70	TSDH	29			20	3	20	2		110	6	11	0.1	<0.4	145*	62	212	7.8
203	L. B. Teague	30	Qc	2-12-36	WPA				19	6	7*			61	<5	25			87*	71		
204	Percy Harris	19	Qc	4-29-36	WPA									37	39	36			141*			
302	R. A. Lambright	530-550	Wx	10-22-70	TSDH	15			14	2	55			140	37	6	0.2	1.0	199*	43	307	8.2
303	R. A. Lambright	26	Qc	4-30-36	WPA					5	22*			12	16	23			72*	20		
401	Koon Kreek Klub	436-478	Cz	5-23-42	CL	8	2.5		3.4	1.2	5*			15	<5	9			38*	13		5.4
401	Koon Kreek Klub	436-478	Cz	5-1-61	TSDH	11	4.8		3.8	2.1	4	1.7		0	15	10	0.1	0.0	48*	18	66	4.6
401	Koon Kreek Klub	436-478	Cz	12-1-68	TSDH		1.56	<0.05	3	2	4			0	17	5	0.1	<0.4	33*	16	69	5.0
401	Koon Kreek Klub	436-478	Cz	10-21-70	TSDH		2.00		3	2	4			2	15	7	<0.1	<0.4	32*	18	67	5.4
402	Koon Kreek Klub	1,168-1,249	Wx	11-13-64	TSDH		0.34	<0.05	<2	<2	69		11	143	13	5	0.1	<0.4	171*	9	306	8.9
402	Koon Kreek Klub	1,168-1,249	Wx	11-64	PTL	15	0.15		1.6	0.5	74		24	122	17	6			199*	6		9.0
402	Koon Kreek Klub	1,168-1,249	Wx	11-26-64	PTL	15	2.4		1.4	0.6	78		14	146	19	7	0.2		208*	6		8.7
402	Koon Kreek Klub	1,168-1,249	Wx	10-21-70	TSDH	18	0.13		<1	1	70		4	157	13	6	0.2	<0.4	189*	5	289	8.5
503	Hubert Mott	500-520	Wx	10-21-70	TSDH	22	0.16		37	4	25			153	15	18	0.2	<0.4	196*	109	316	8.1
504	John W. Murchison	813-933	Wx	10-22-70	TSDH	16	0.13		3	1	73			196	5	5	0.2	<0.4	199*	13	309	8.3
505	Terra Verde Ranch	470-480	R	11-25-70	TSDH	28	0.40		35	5	46	2		196	23	22	0.1	<0.4	257*	109	396	7.8
506	Terra Verde Ranch	690-720	Wx	10-25-70	TSDH	29	0.30		35	6	46			196	24	22	0.1	<0.4	260*	112	395	7.8
603	Carroll Springs Church	830-850	Wx	10-22-70	TSDH	13	0.22		3	1	102		2	264	5	8	0.1	<0.4	264*	12	416	8.4
604	Lonnie Lambright	20	Qc	4-30-36	WPA									256	12	19			259*			
903	E. L. Giles	26	Qc	2-12-36	WPA				28	20	100*				335	68			551*	152		

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-59-106	Bill Lightfoot		Qc	5-1-36	WPA				8	5	22*			37	8	36			97*	41		
107	W. C. Peavy	55	Qc	5-1-36	WPA									37	<5	42			96*			
203	Mrs. Horton Young	28	Qc	4-16-36	WPA				24	5	90*			146	41	116			349*	81		
204	J. R. Hallmark	43	Qc	4-16-36	WPA				8	2	6*			24	<5	10			38*	30		
205	State Highway Dept.	90	Qc	4-16-36	WPA					2	11*			12	8	11			38*	10		
302	La Poyner School	540-580	Wx	11-24-70	TSDH	13	0.04		3	1	86		4	196	23	7	0.2	<0.4	233*	13	365	8.5
304	Owen Young Estate	44	Qc	4-16-36	WPA				15	6	102*			18	8	184			324*	61		
305	La Poyner School	56	Qc	4-16-36	WPA									55	6	152			291*			
305	La Poyner School	56	Qc	11-25-40	USGS				18	3	21*			58	4	36		0.0	111*	57		
405	Farris Estate	86	Qc	4-30-36	WPA				10	2	130*			293	21	39			348*	35		
406	Palmer Estate	75	Qc	4-30-36	WPA										22	31						
502	Douglas Warren	702-712	Wx	10-29-70	TSDH	12	0.82		7	2	61		1	154	17	9	0.1	1.0	186*	24	296	8.4
503	Williams Estate	114	Qc	4-17-36	WPA				4	2	61*			67	12	60			172*	20		
504	J. M. Miller	54	Qc	4-17-36	WPA				41	27	251*			61	43	475			867*	213		
505	Rodenberg	111	Qc	4-30-36	WPA				4	5	66*			49	10	88			197*	31		
601	Fred Agnich	303	R	11-23-70	TSDH	16	2.30		8	3	5			32	4	11	<0.1	<0.4	63*	34	101	6.2
60-102	Girl Scouts of America	530-570	Cz	11-24-70	TSDH	10	0.13		28	6	25	5		140	26	10	0.1	<0.4	179*	92	290	8.0
202	Hunt Oil Co. No.1	890-1,230	Wx	3-22-66	CL	10	0.7		2.4	0.6	141			277	48	26			388	8	588	7.8
202	Hunt Oil Co. No.1	890-1,230	Wx	10-1-70	TSDH	16	0.20		3	1	132		8	259	42	26	0.2	<0.4	355*	11	572	8.7
203	Hunt Oil Co. No.3	1,066-1,245	Wx	1-14-70	CL	7.4	0.1	<0.02	2.9	1.0	146*			273	54	34	0.1	0.1	404	11	619	8.1
204	Hunt Oil Co. No.4	1,017-1,246	Wx	10-1-70	TSDH	16	0.06		4	1	132		7	237	53	28	0.1	<0.4	358*	16	563	8.6
401	Louis Holliman	12	Qc	5-1-61	TSDH	23	0.05		16	2.3	17*			40	8	24	0.0	13	138	49	191	5.7
402	Louis Holliman	260-490	Qc,Wx	11-24-70	TSDH	18	5.20		9	4	6	6		20	19	15	0.1	<0.4	87*	39	136	5.8
405	Jess Tolly	759-799	Wx	11-24-70	TSDH	16	0.10		4	1	144		5	289	42	29	0.4	2.5	386*	16	619	8.5
406	Wyatt	65	Qc	4-20-36	WPA									24	10	10			50*			
407	Poyner Sawmill and Gin	18	Qc	4-17-36	WPA									61	8	80			186*			
408	T.N.N. & O. R.R.	16	Qc	4-20-36	WPA									37	<5	23			66*			

For footnotes see end of table. Results are expressed in parts per million except for specific conductance and pH.

Table 18.--Results of Chemical Analyses of Water From Wells and Springs in Henderson County--Continued

Well Number	Well Owner	Depth or Screened Interval (feet)	Indicated Water-bearing Unit 1/	Date of Collection	Laboratory 2/	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) 3/	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved Solids 4/	Total Hardness as $CaCO_3$	Specific Conductance Micromhos/cm @ 25° C.	pH
LT-34-60-502	James Fisher	64	Qc	11-24-70	TSDH	30	2.82		46	2	14			142	20	9	<0.1	7	198*	124	290	7.3
61-104	Wes McGuffey, Jr.	622-664	Cz	11-25-70	TSDH	11	0.16		2	1	68		2	170	10	5	0.2	<0.4	183*	10	294	8.4
106	R. B. Atwood	54	Qc	4-18-36	WPA									18	<5	12			34*			
107	Baker	28	Qc	4-18-36	WPA					2	88*			30	31	102			238*	10		
404	Foster Ready Mix	251-272	Qc	11-25-70	TSDH	24	0.58		2	2	4			12	8	5	0.1	<0.4	51*	15	56	5.8
405	Baker	29	Qc	4-18-36	WPA									37	<5	28			74*			

1/ Initials used to identify water-bearing units are:

Al	-	Alluvium
W	-	Weches Formation
Qc	-	Queen City Sand
R	-	Reklaw Formation
Cz	-	Carrizo Sand
Wx	-	Wilcox Group
M	-	Midway Group
K	-	Cretaceous Rocks

2/ Initials used to identify laboratories are:

CL	-	Curtis Laboratories
LSG	-	Lone Star Gas Co.
PTL	-	Pope Testing Laboratories
TAES	-	Texas Agricultrual Experiment Station
TSDH	-	Texas State Department of Health
USGS	-	United States Geological Survey
WPA	-	Works Progress Administration

3/ Asterisk (*) indicates sodium and potassium calculated as sodium.

4/ Asterisk (*) indicates value is calculated or estimated.

5/ Sample from test hole at well site.

EXPLANATION

PUBLIC SUPPLY WELL

INDUSTRIAL WELL

IRRIGATION WELL

DOMESTIC OR LIVESTOCK WELL

UNUSED OR DESTROYED WELL

OIL OR GAS WELL OR TEST

SPRING

SOLID CIRCLE INDICATES FLOWING WELL

301

LAST THREE DIGITS OF WELL NUMBER

Figure 25

Locations of Wells in Anderson County

Base from Texas State Highway Department county map

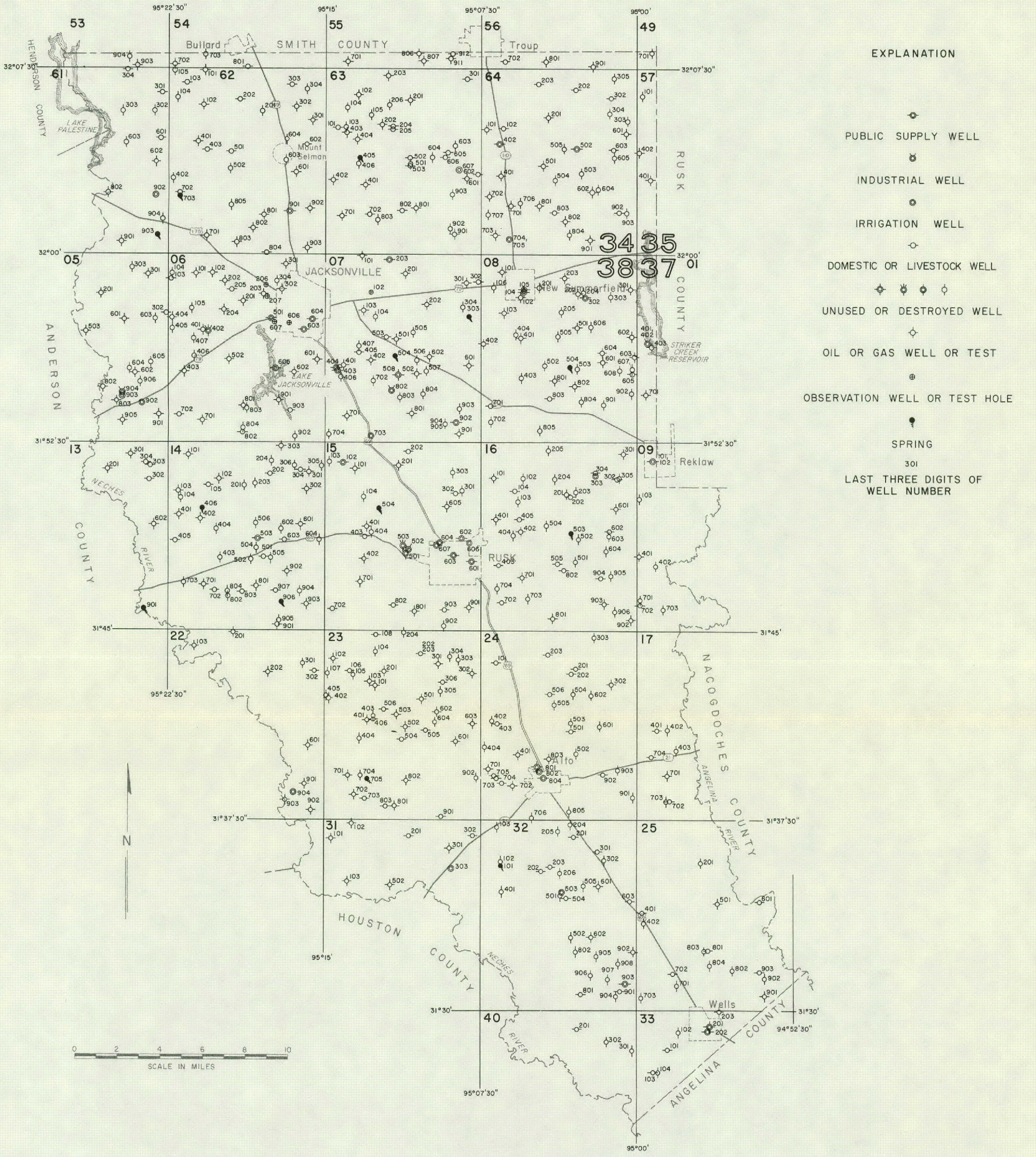


Figure 26

Locations of Wells in Cherokee County

Base from Texas State Highway Department county map

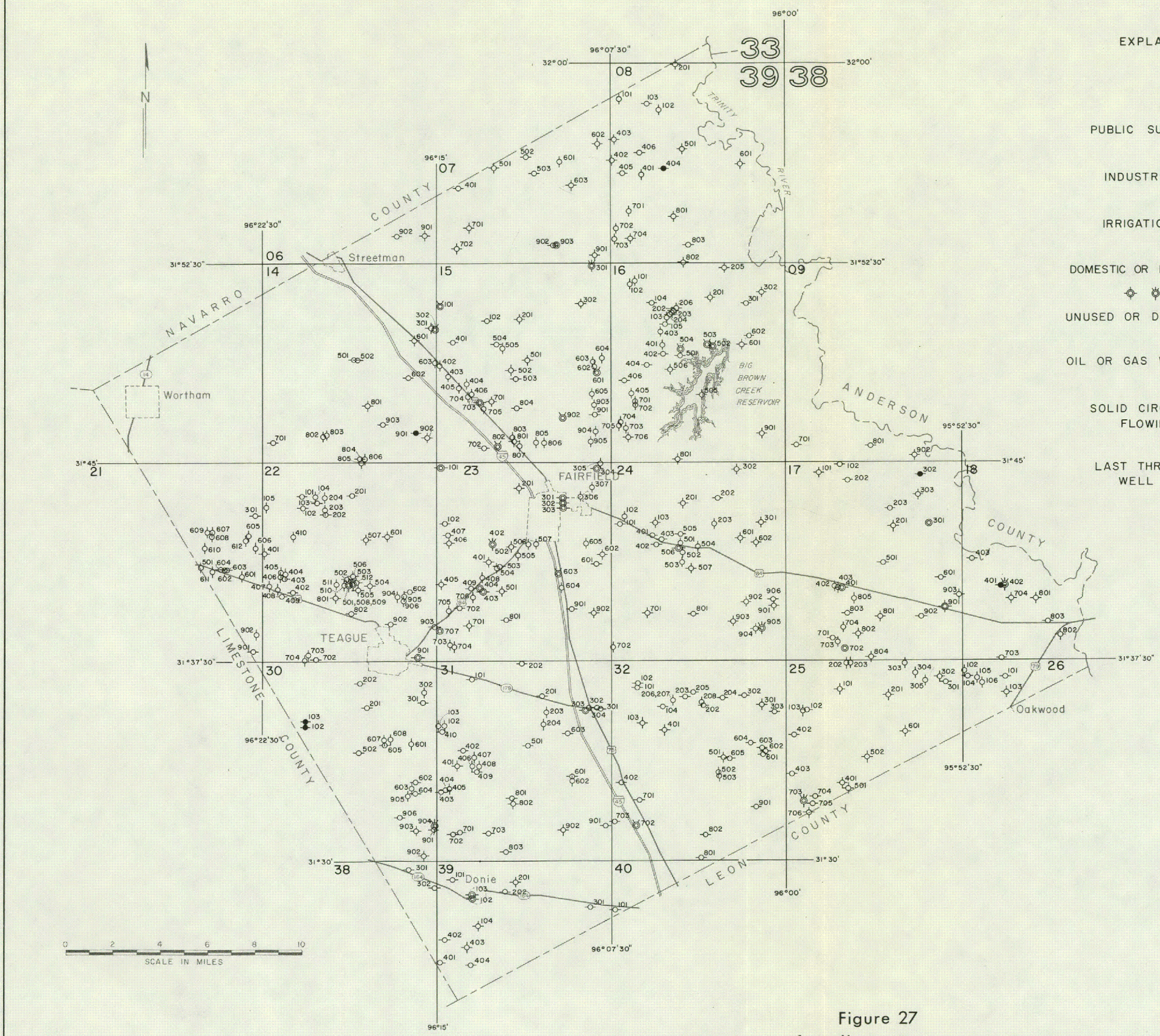


Figure 27
Locations of Wells in Freestone County

Base from Texas State Highway Department county map

EXPLANATION

PUBLIC SUPPLY WELL

INDUSTRIAL WELL

IRRIGATION WELL

DOMESTIC OR LIVESTOCK WELL

UNUSED OR DESTROYED WELL

OIL OR GAS WELL OR TEST

OBSERVATION WELL OR TEST HOLE

SPRING

SOLID CIRCLE INDICATES FLOWING WELL

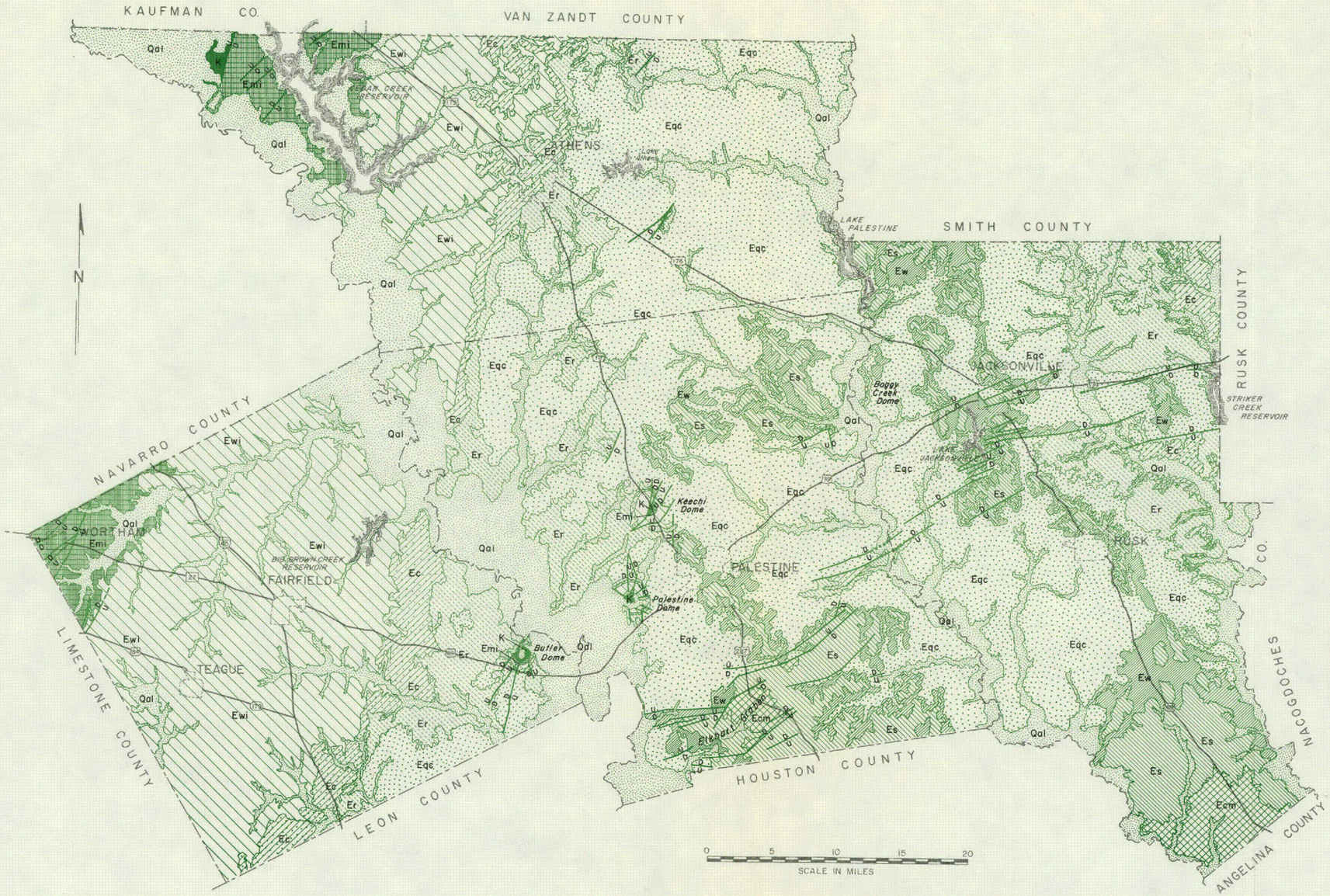
301

LAST THREE DIGITS OF WELL NUMBER

Figure 28

Locations of Wells in Henderson County

Base from Texas State Highway Department county map



EXPLANATION

- Qal — ALLUVIUM
- Ecm — COOK MOUNTAIN FORMATION
- Es — SPARTA SAND
- Ew — WECHES FORMATION
- Eqc — QUEEN CITY SAND
- Er — REKLAW FORMATION
- Ec — CARRIZO SAND
- Ewi — WILCOX GROUP
- Emi — MIDWAY GROUP
- K — CRETACEOUS ROCKS UNDIVIDED
- U / D — FAULT

U - Upthrown side; D - Downthrown side; dotted where concealed

NOTE: Generalized from Geologic Atlas of Texas - Dallas, Palestine, Tyler, and Waco sheets, Bureau of Economic Geology, University of Texas, various dates

Figure 29

Geologic Map

Base from Texas State Highway Department county maps

NOTE: CORRELATIONS BASED ON ELECTRIC LOGS. RESISTIVITY CURVE SHOWN IS SHORT NORMAL.

Figure 30
Geologic Section A-A'

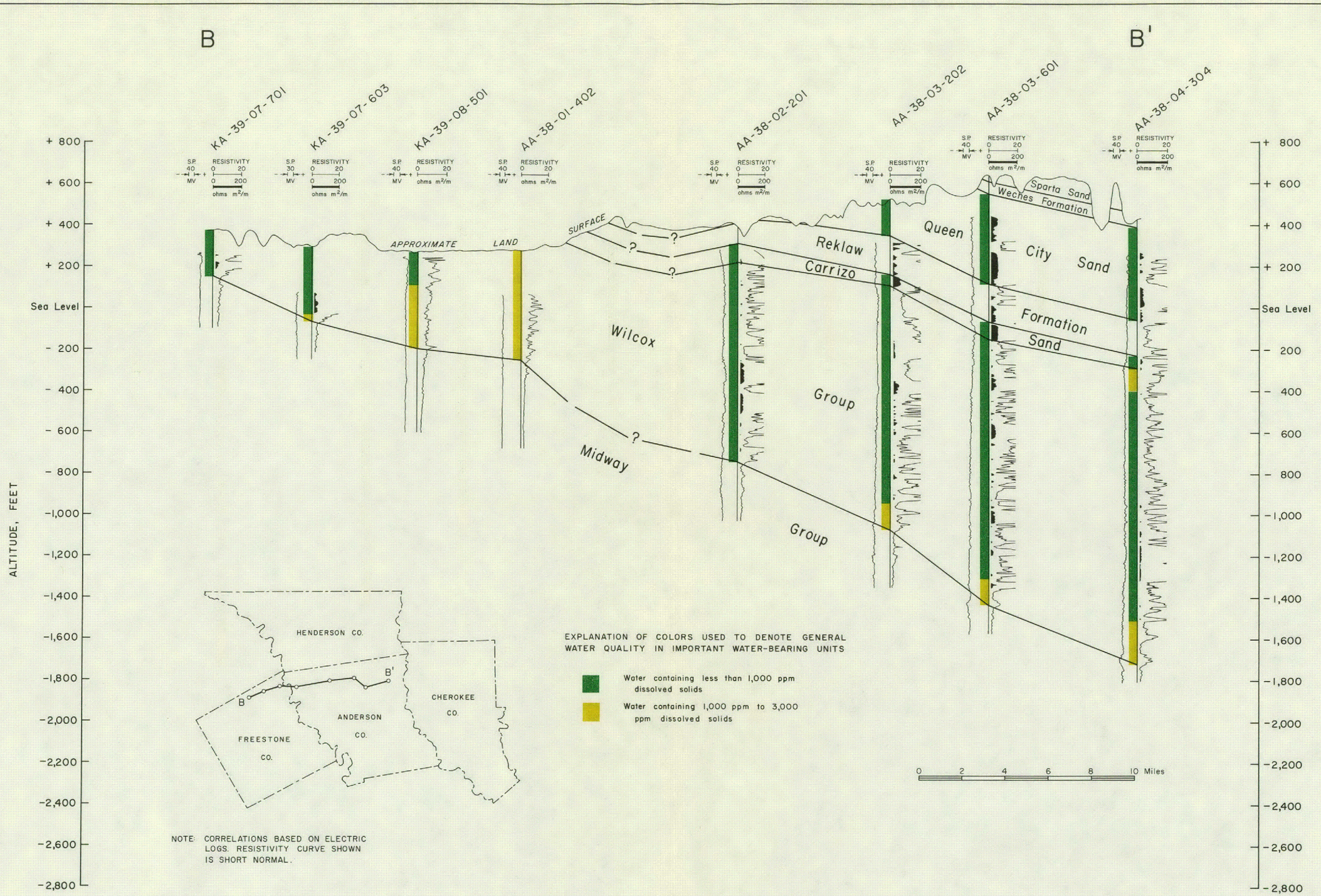
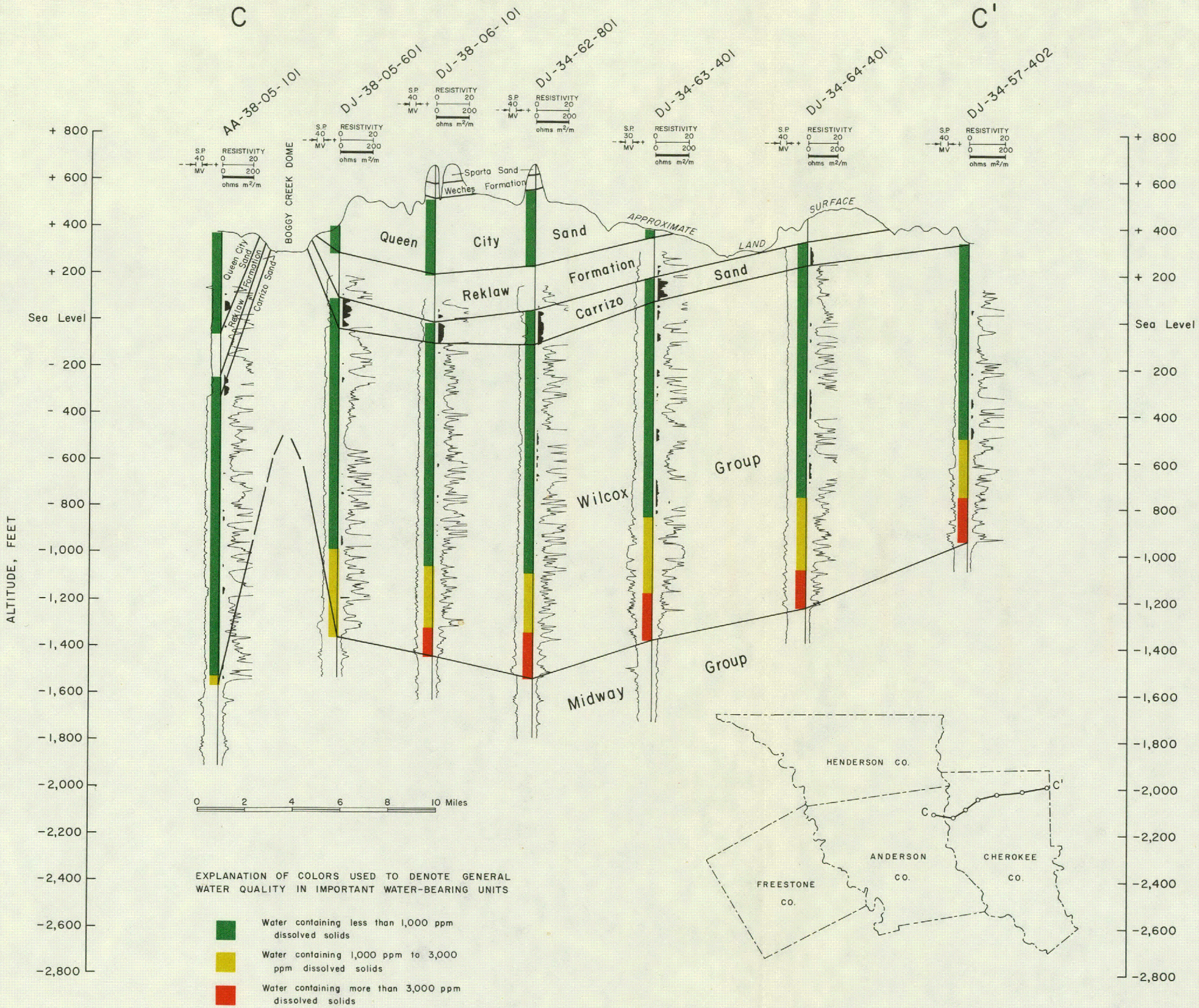


Figure 31

Geologic Section B-B'



NOTE: CORRELATIONS BASED ON ELECTRIC LOGS. RESISTIVITY CURVE SHOWN IS SHORT NORMAL.

Figure 32

Geologic Section C-C'

D

D'

KA-39-22-401 | KA-39-22-504 | KA-39-22-901 | KA-39-23-902 | KA-39-24-901 | KA-38-17-802 | KA-38-18-801 | AA-38-19-702 | AA-38-19-501 | AA-38-20-501 | AA-38-20-301

S.P. MV | RESISTIVITY ohms m²/m

APPROXIMATE LAND SURFACE

Wilcox Group

Midway Group

Carrizo Sand

Reklaw Formation

BUTLER DOME

Cretaceous and older rocks

Sparta Sand

Weches Formation

Queen City Sand

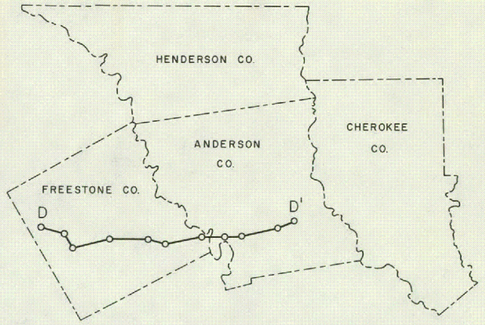
Reklaw Formation

Carrizo Sand

Wilcox Group

ALTITUDE, FEET

+ 800
+ 600
+ 400
+ 200
Sea Level
- 200
- 400
- 600
- 800
-1,000
-1,200
-1,400
-1,600
-1,800
-2,000
-2,200
-2,400
-2,600
-2,800



EXPLANATION OF COLORS USED TO DENOTE GENERAL WATER QUALITY IN IMPORTANT WATER-BEARING UNITS

- Water containing less than 1,000 ppm dissolved solids
- Water containing 1,000 ppm to 3,000 ppm dissolved solids
- Water containing more than 3,000 ppm dissolved solids

0 2 4 6 8 10 Miles

NOTE: CORRELATIONS BASED ON ELECTRIC LOGS. RESISTIVITY CURVE SHOWN IS SHORT NORMAL.

Figure 33
Geologic Section D-D'

E

E'

AA-38-21-101

AA-38-21-301

DJ-38-22-103

DJ-38-22-202

DJ-38-23-201

DJ-38-23-302

DJ-38-24-302

DJ-37-17-701

S.P. 40 MV + RESISTIVITY 0 20 0 200 ohms m^2/m

Sparta Sand

Weches Formation

APPROXIMATE LAND SURFACE

Queen City Formation

Weches Formation Sand

Reklaw Carrizo Sand

Wilcox Group

Midway Group

0 2 4 6 8 10 Miles

ALTITUDE, FEET

+ 800
+ 600
+ 400
+ 200
Sea Level
- 200
- 400
- 600
- 800
-1,000
-1,200
-1,400
-1,600
-1,800
-2,000
-2,200
-2,400
-2,600
-2,800

EXPLANATION OF COLORS USED TO DENOTE GENERAL WATER QUALITY IN IMPORTANT WATER-BEARING UNITS

- Water containing less than 1,000 ppm dissolved solids
- Water containing 1,000 ppm to 3,000 ppm dissolved solids
- Water containing more than 3,000 ppm dissolved solids

NOTE: CORRELATIONS BASED ON ELECTRIC LOGS. RESISTIVITY CURVE SHOWN IS SHORT NORMAL.

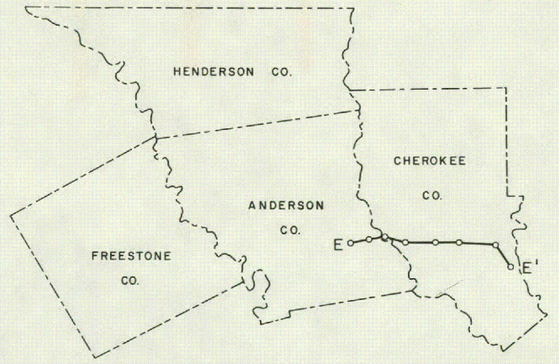
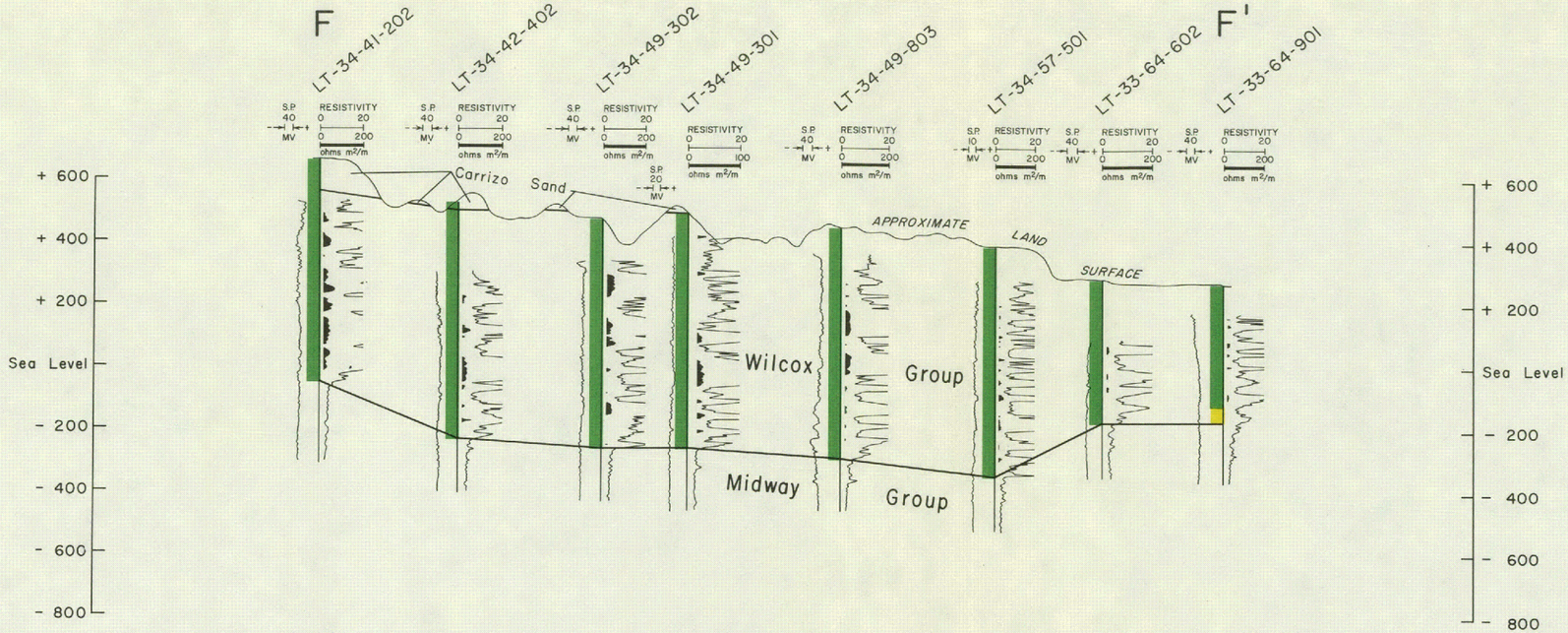
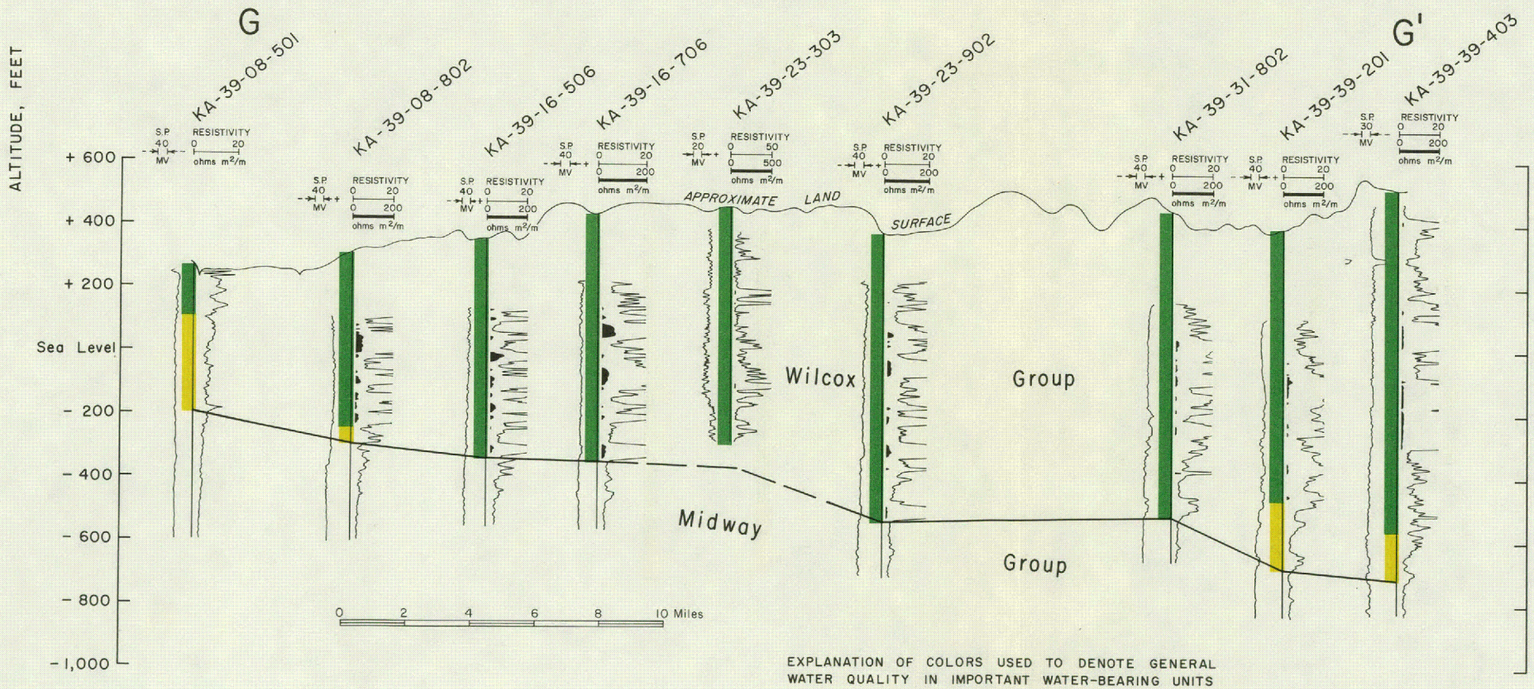


Figure 34
Geologic Section E-E'





NOTE: CORRELATIONS BASED ON ELECTRIC LOGS. RESISTIVITY CURVE SHOWN IS SHORT NORMAL.

EXPLANATION OF COLORS USED TO DENOTE GENERAL WATER QUALITY IN IMPORTANT WATER-BEARING UNITS

- Water containing less than 1,000 ppm dissolved solids
- Water containing 1,000 ppm to 3,000 ppm dissolved solids

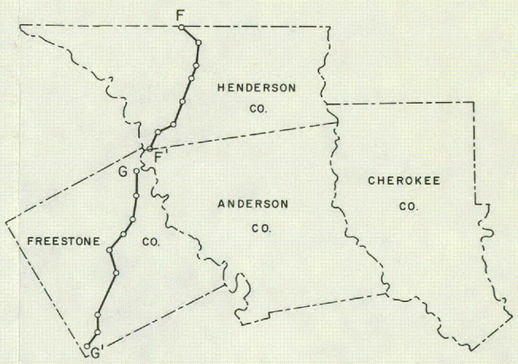


Figure 35
Geologic Sections F-F' and G-G'

H

H'

LT-34-43-303

LT-34-52-102

LT-34-52-701

AA-34-60-404

AA-38-03-601

AA-38-12-103

AA-38-12-401

AA-38-12-902

AA-38-20-301

AA-38-29-104

AA-38-29-405

S.P. 40 0 MV

RESISTIVITY 0 20 0 200 ohms m²/m

RESISTIVITY 0 50 0 500 ohms m²/m

+ 800
+ 600
+ 400
+ 200
Sea Level
- 200
- 400
- 600
- 800
-1,000
-1,200
-1,400
-1,600
-1,800
-2,000
-2,200
-2,400
-2,600
-2,800

ALTITUDE, FEET

APPROXIMATE LAND SURFACE

Queen City Sand

Reklaw Formation

Carrizo Sand

Wilcox Group

Midway Group

Weches Formation

Sparta Sand

Weches

Queen City Sand

Reklaw Formation

Carrizo Sand

Wilcox Group

W
Q C
R
C

Sparta Sand
Weches
Queen City Sand
Reklaw
Carrizo
Group

HENDERSON CO.
ANDERSON CO.
CHEROKEE CO.
FREESTONE CO.

H
H'

EXPLANATION OF COLORS USED TO DENOTE GENERAL WATER QUALITY IN IMPORTANT WATER-BEARING UNITS

Water containing less than 1,000 ppm dissolved solids

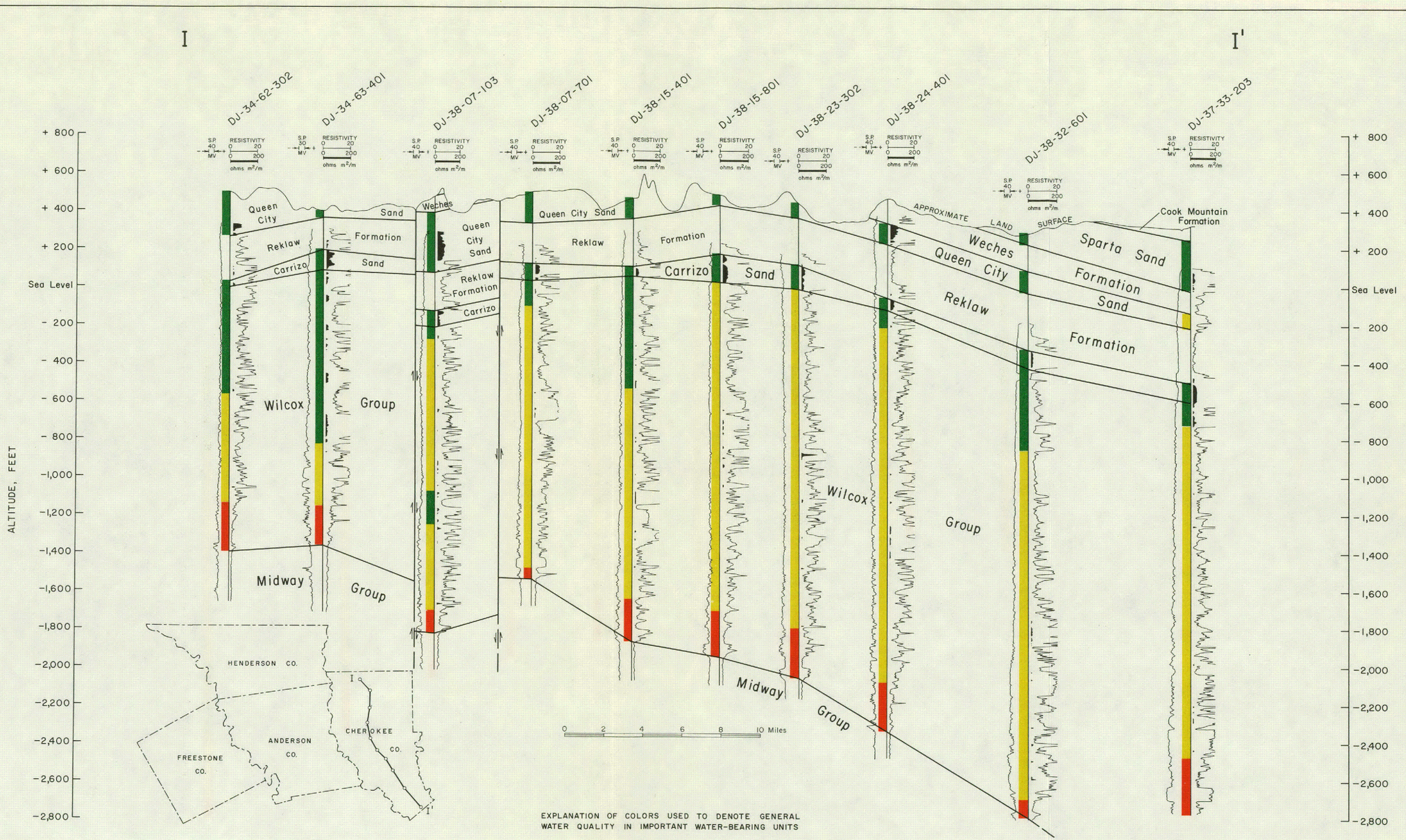
Water containing 1,000 ppm to 3,000 ppm dissolved solids

Water containing more than 3,000 ppm dissolved solids

0 2 4 6 8 10 Miles

NOTE: CORRELATIONS BASED ON ELECTRIC LOGS. RESISTIVITY CURVE SHOWN IS SHORT NORMAL.

Figure 36
Geologic Section H-H'



NOTE: CORRELATIONS BASED ON ELECTRIC LOGS. RESISTIVITY CURVE SHOWN IS SHORT NORMAL.

Figure 37
Geologic Section I-I'

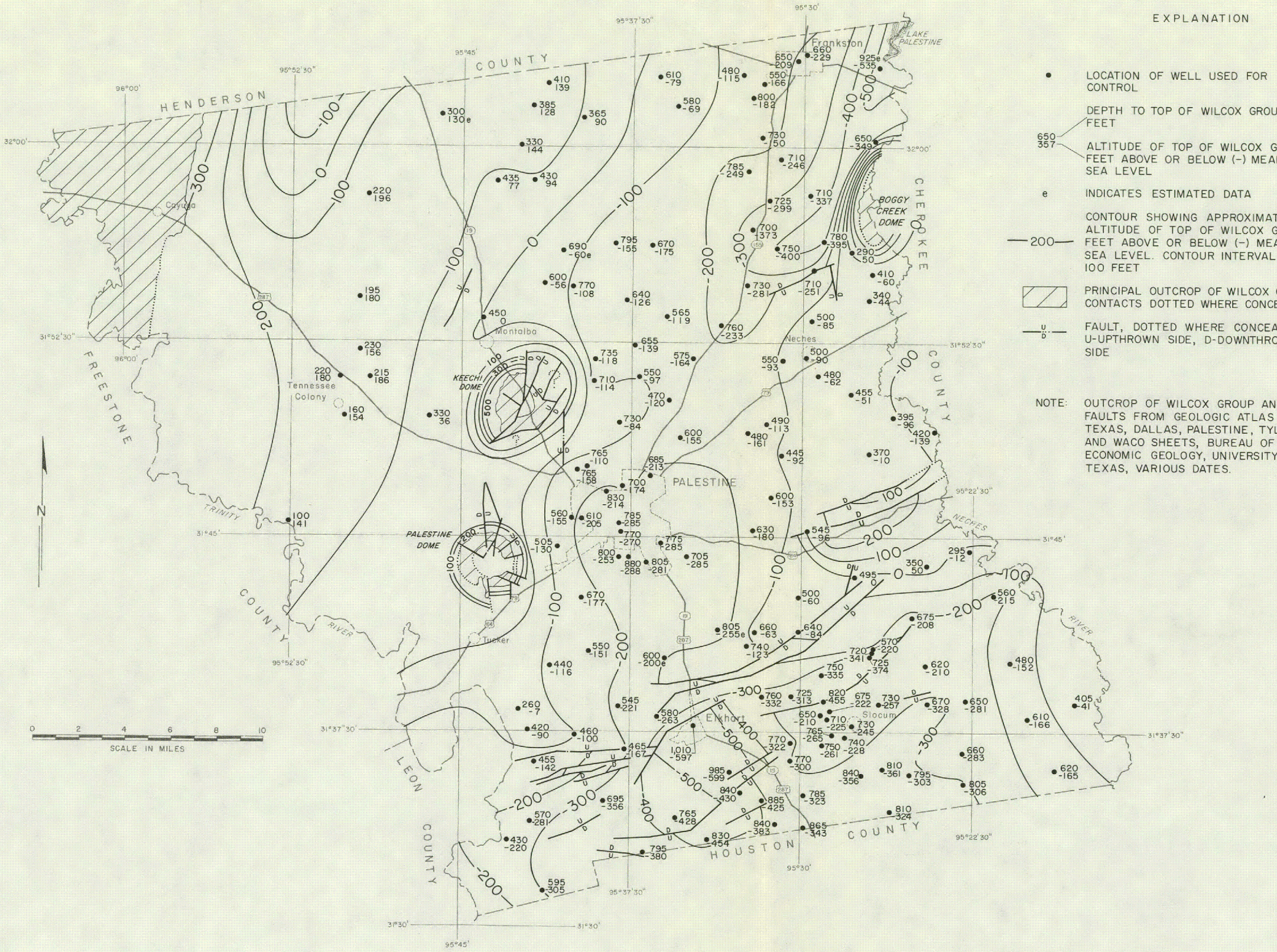


Figure 38

Depth and Altitude of Top of Wilcox Group in Anderson County

Base from Texas State Highway Department county map

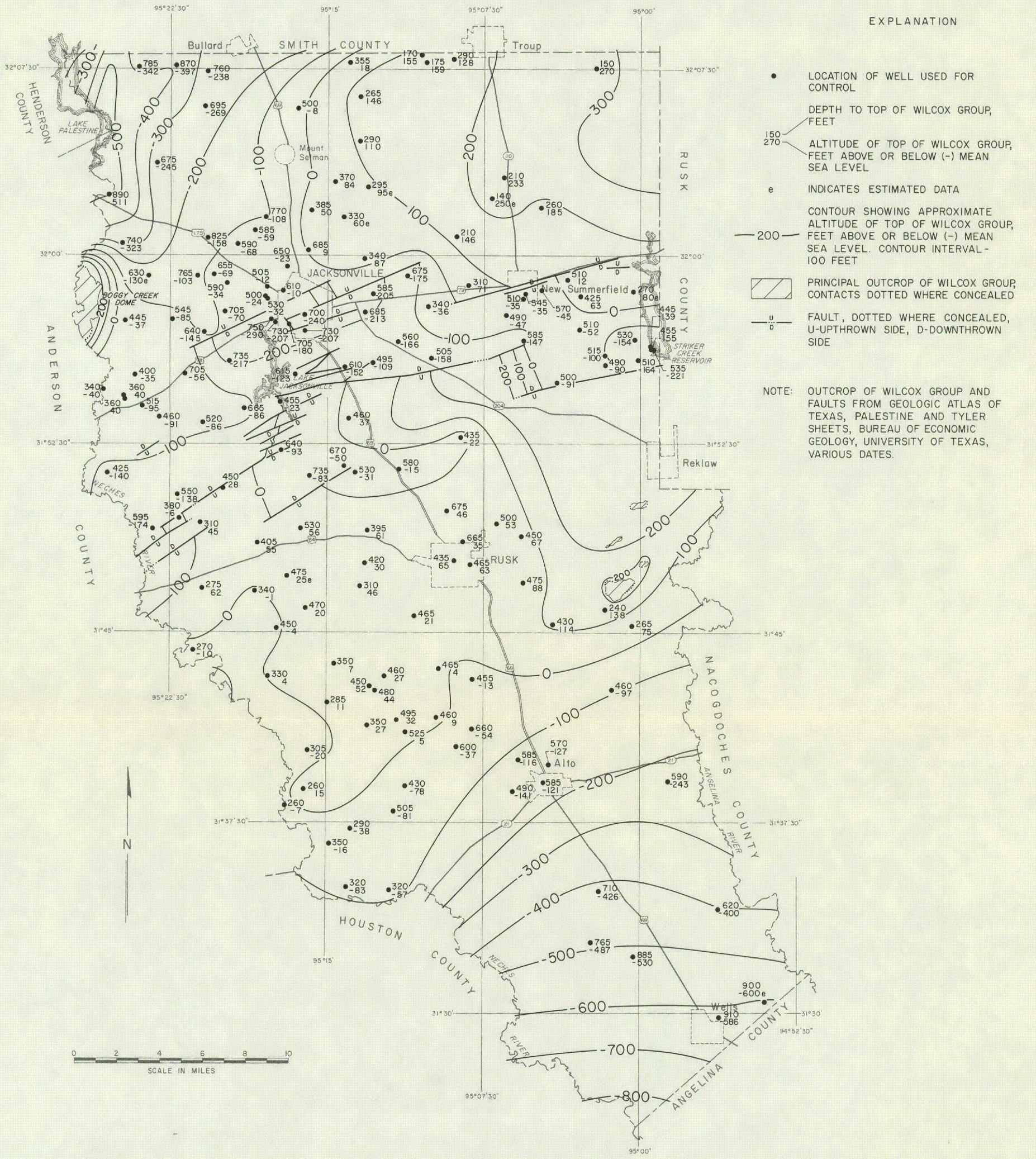


Figure 39

Depth and Altitude of Top of Wilcox Group in Cherokee County

Base from Texas State Highway Department county map

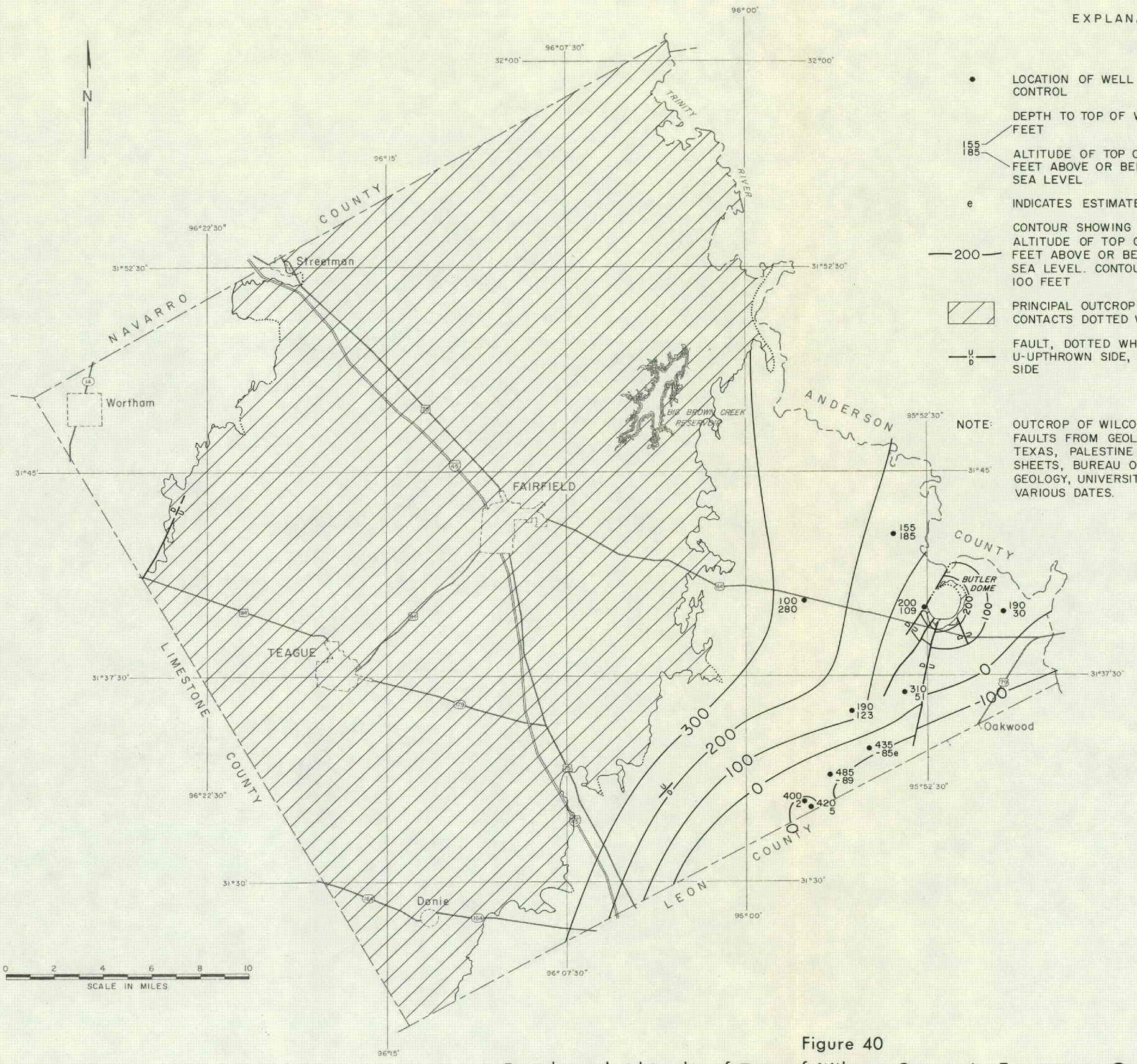


Figure 40

Depth and Altitude of Top of Wilcox Group in Freestone County

Base from Texas State Highway Department county map

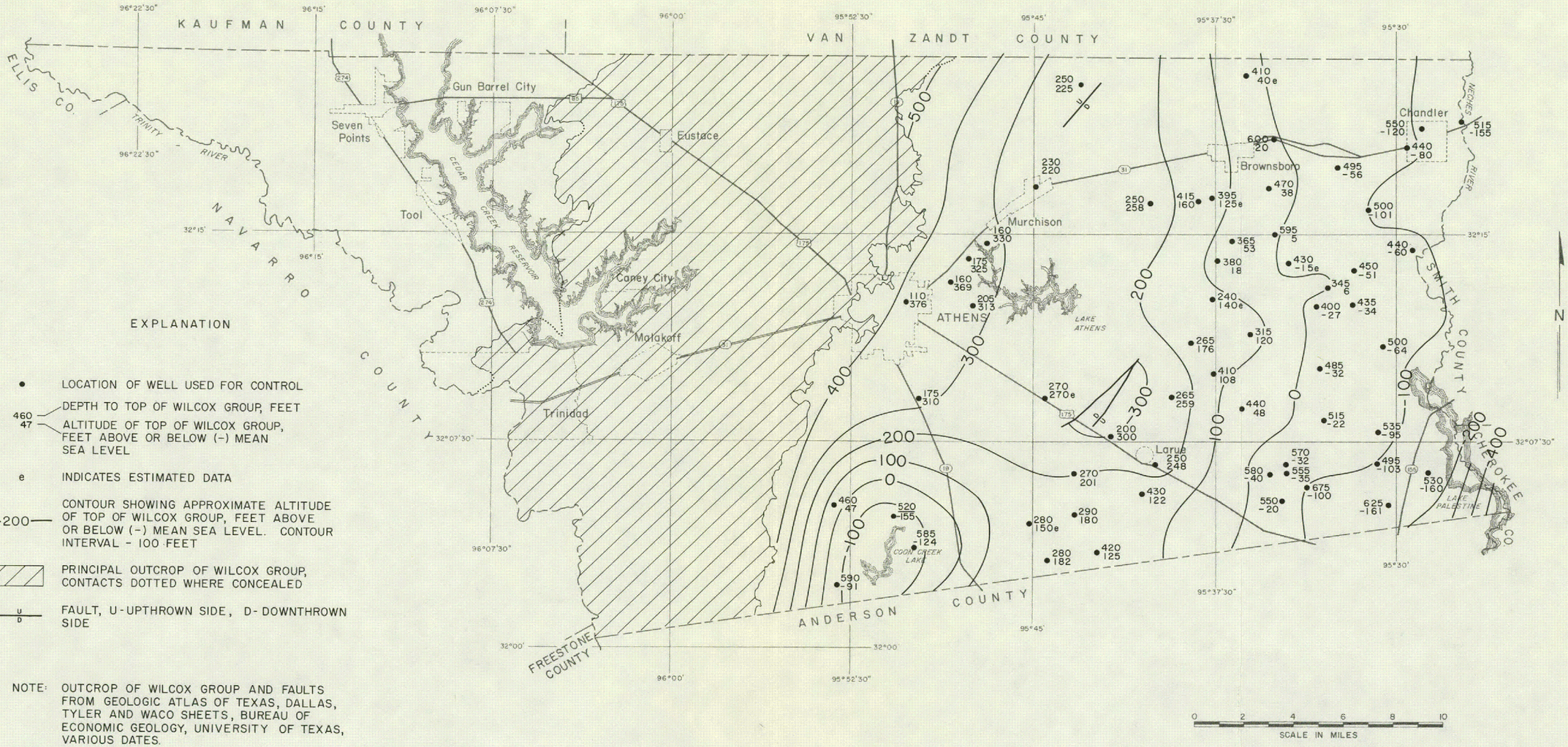


Figure 41

Depth and Altitude of Top of Wilcox Group in Henderson County

Base from Texas State Highway Department county map

EXPLANATION

- LOCATION OF WELL HAVING LOG USED FOR CONTROL

FIRST NUMBER OF SHALLOWEST INTERVAL SHOWN REPRESENTS STARTING DEPTH OF LOG, EXCEPT THAT UNDERLINED VALUE REPRESENTS DEPTH TO TOP OF WILCOX. LAST NUMBER OF DEEPEST INTERVAL SHOWN REPRESENTS DEPTH TO BASE OF WILCOX.

420-1,630/260 — DEPTH INTERVAL WITHIN WILCOX GROUP CONTAINING WATER HAVING ESTIMATED DISSOLVED-SOLIDS CONTENT LESS THAN 1,000 PPM, FEET

NET SAND THICKNESS WITHIN ZONE, FEET

1,630-1,705/40 — DEPTH INTERVAL WITHIN WILCOX GROUP CONTAINING WATER HAVING ESTIMATED DISSOLVED-SOLIDS CONTENT OF 1,000 PPM TO 3,000 PPM, FEET

NET SAND THICKNESS WITHIN ZONE, FEET

(1,705-2,210) — DEPTH INTERVAL WITHIN WILCOX GROUP CONTAINING WATER HAVING ESTIMATED DISSOLVED-SOLIDS CONTENT OF MORE THAN 3,000 PPM, FEET

\+ INDICATES DEPTH OR THICKNESS IS GREATER THAN THAT SHOWN

Figure 42

Sand Thickness in Wilcox Group in Anderson County

Base from Texas State Highway Department county map

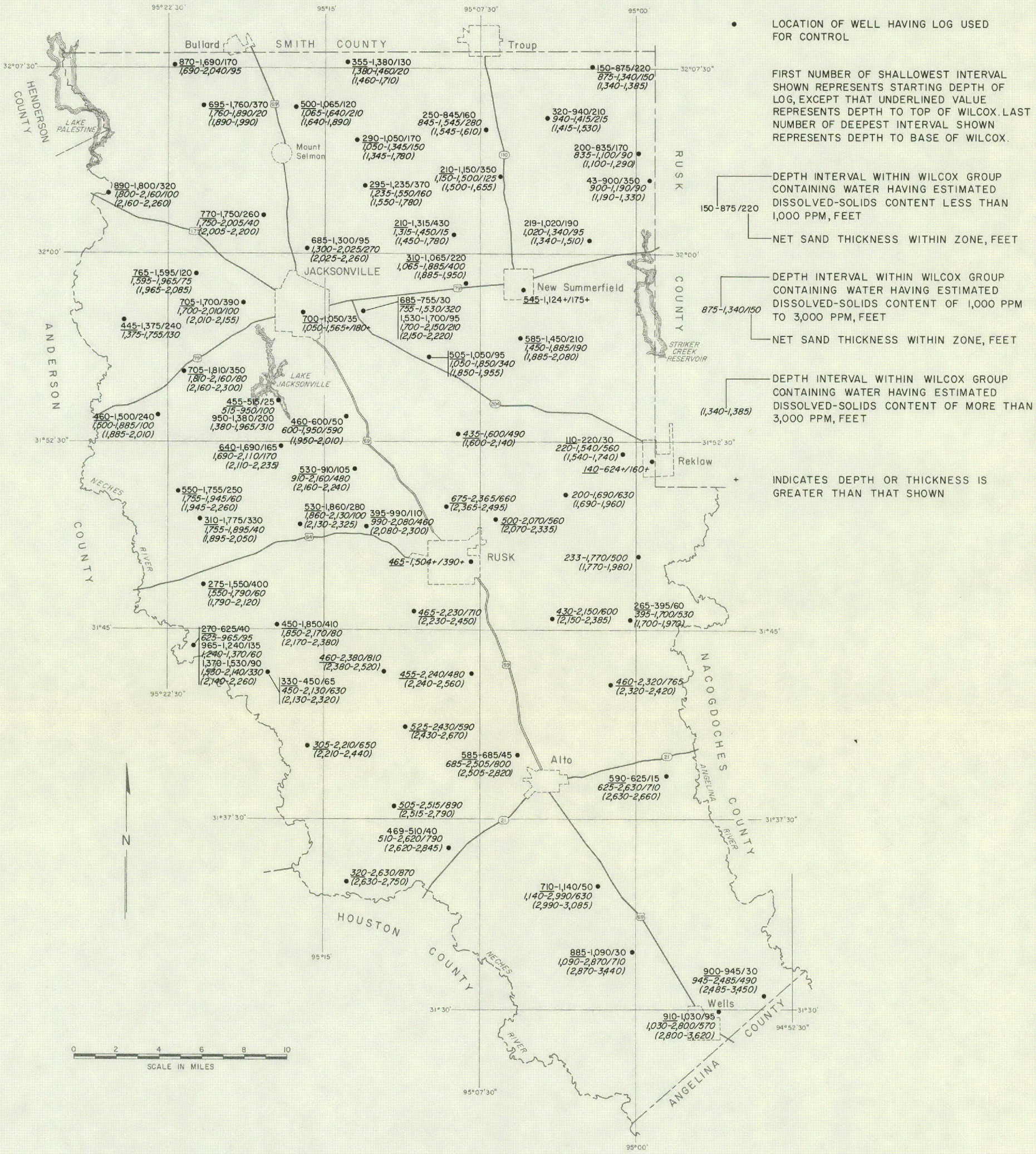


Figure 43

Sand Thickness in Wilcox Group in Cherokee County

Base from Texas State Highway Department county map

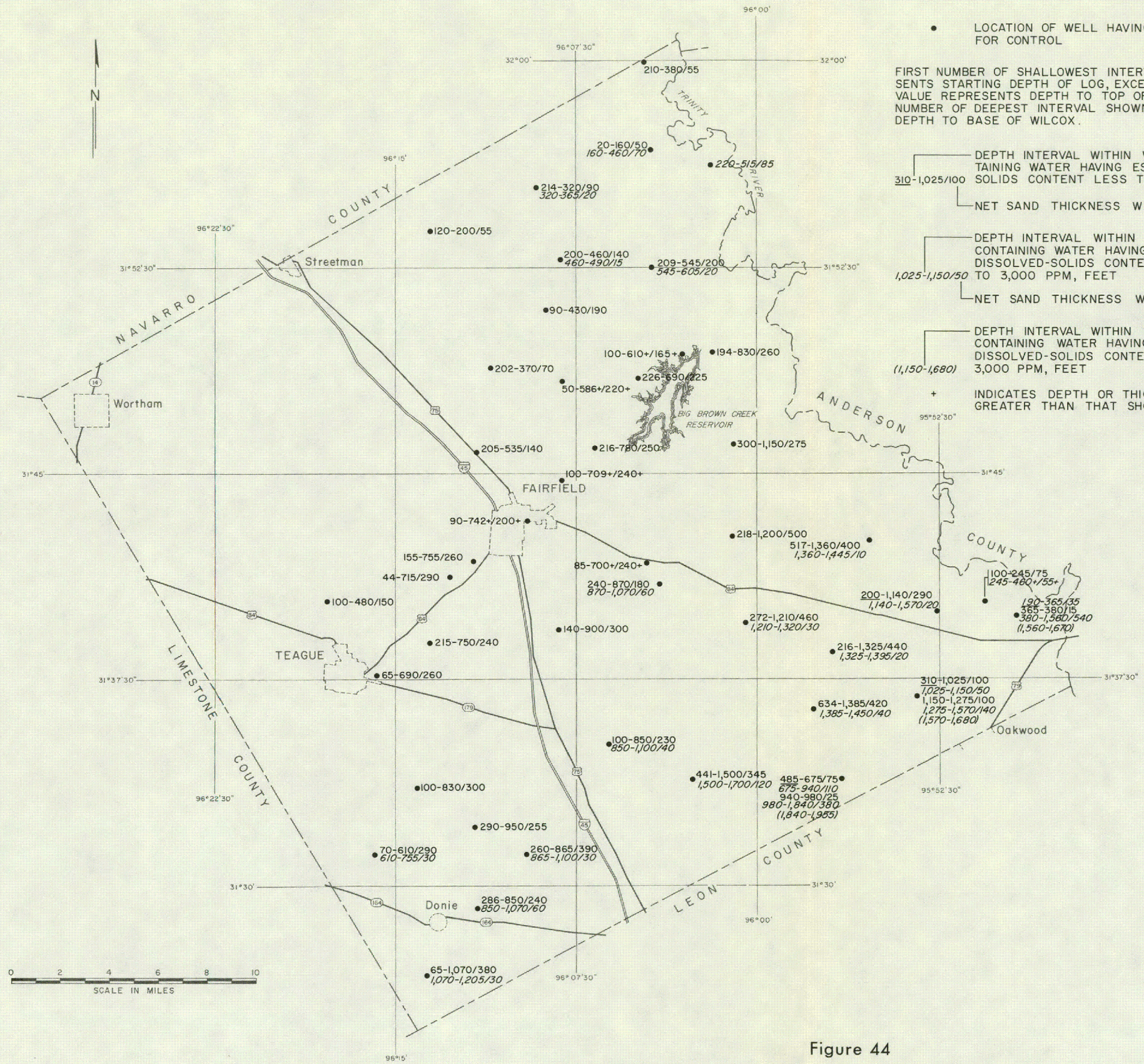
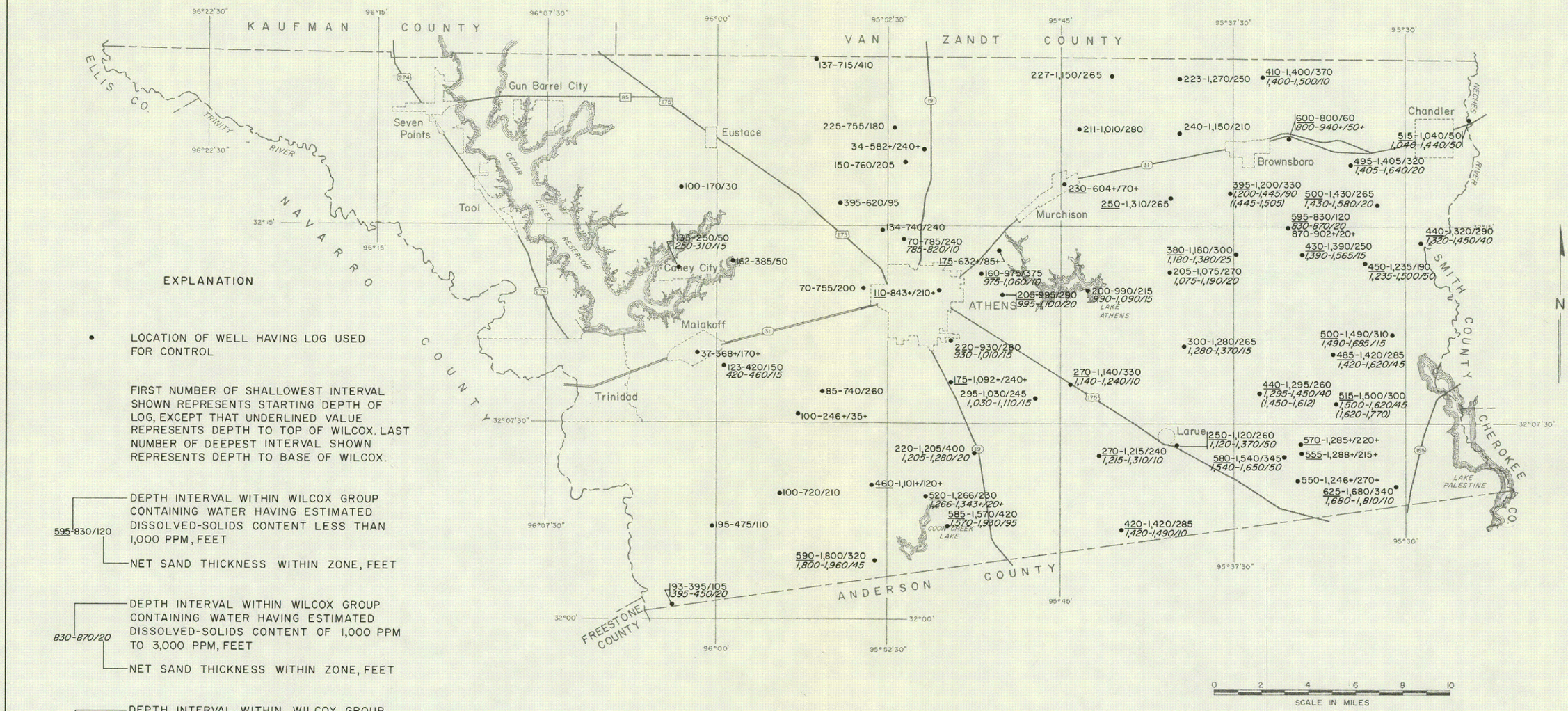


Figure 44

Sand Thickness in Wilcox Group in Freestone County

Base from Texas State Highway Department county map



EXPLANATION

- LOCATION OF WELL HAVING LOG USED FOR CONTROL

FIRST NUMBER OF SHALLOWEST INTERVAL SHOWN REPRESENTS STARTING DEPTH OF LOG, EXCEPT THAT UNDERLINED VALUE REPRESENTS DEPTH TO TOP OF WILCOX. LAST NUMBER OF DEEPEST INTERVAL SHOWN REPRESENTS DEPTH TO BASE OF WILCOX.

595-830/120
- 595: DEPTH INTERVAL WITHIN WILCOX GROUP CONTAINING WATER HAVING ESTIMATED DISSOLVED-SOLIDS CONTENT LESS THAN 1,000 PPM, FEET
- 830/120: NET SAND THICKNESS WITHIN ZONE, FEET

830-870/20
- 830-870: DEPTH INTERVAL WITHIN WILCOX GROUP CONTAINING WATER HAVING ESTIMATED DISSOLVED-SOLIDS CONTENT OF 1,000 PPM TO 3,000 PPM, FEET
- 870/20: NET SAND THICKNESS WITHIN ZONE, FEET

(870-900)
- (870-900): DEPTH INTERVAL WITHIN WILCOX GROUP CONTAINING WATER HAVING ESTIMATED DISSOLVED-SOLIDS CONTENT OF MORE THAN 3,000 PPM, FEET

\+ INDICATES DEPTH OR THICKNESS IS GREATER THAN THAT SHOWN

Figure 45

Sand Thickness in Wilcox Group in Henderson County

Base from Texas State Highway Department county map

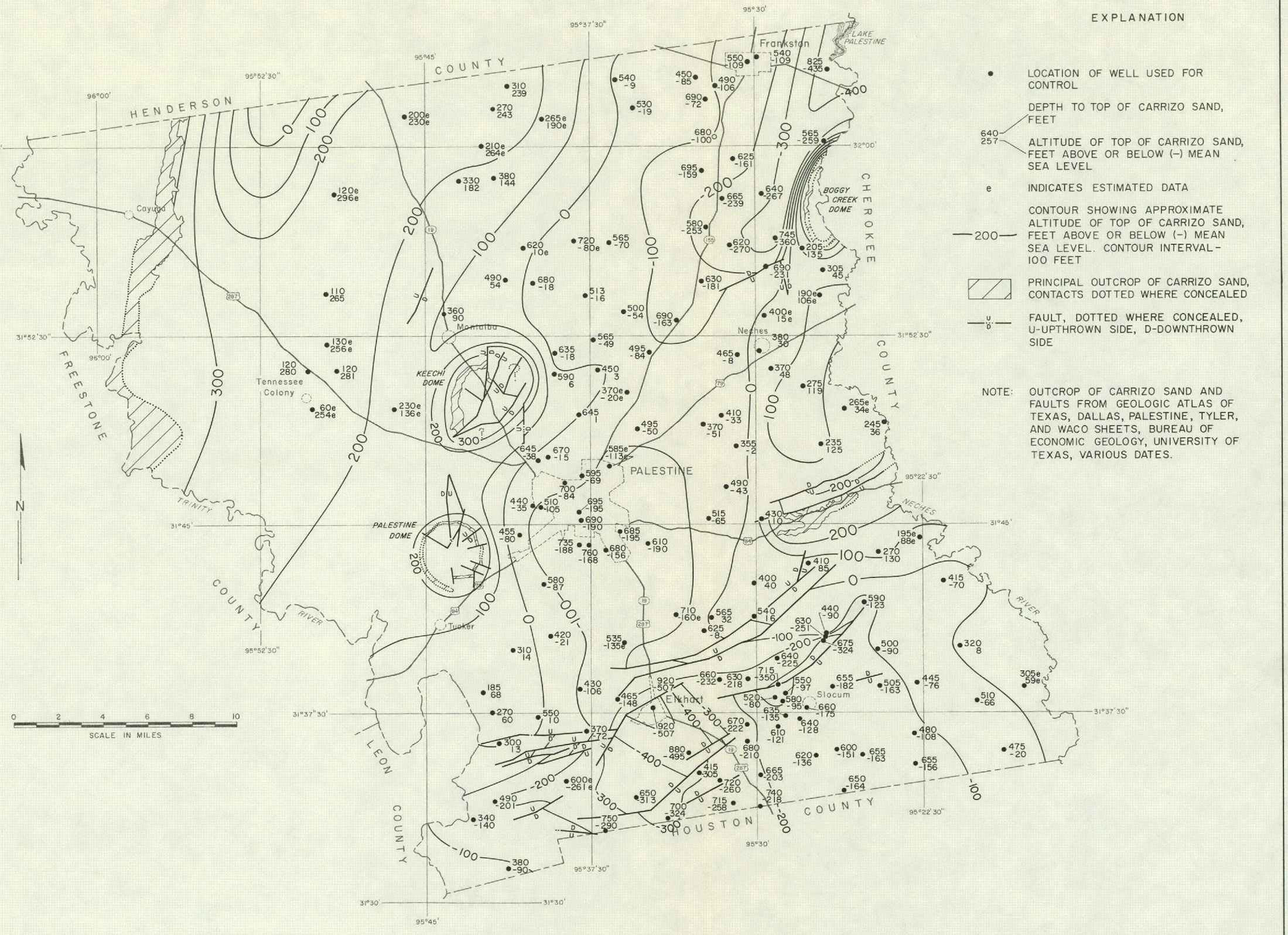


Figure 46

Depth and Altitude of Top of Carrizo Sand in Anderson County

Base from Texas State Highway Department county map

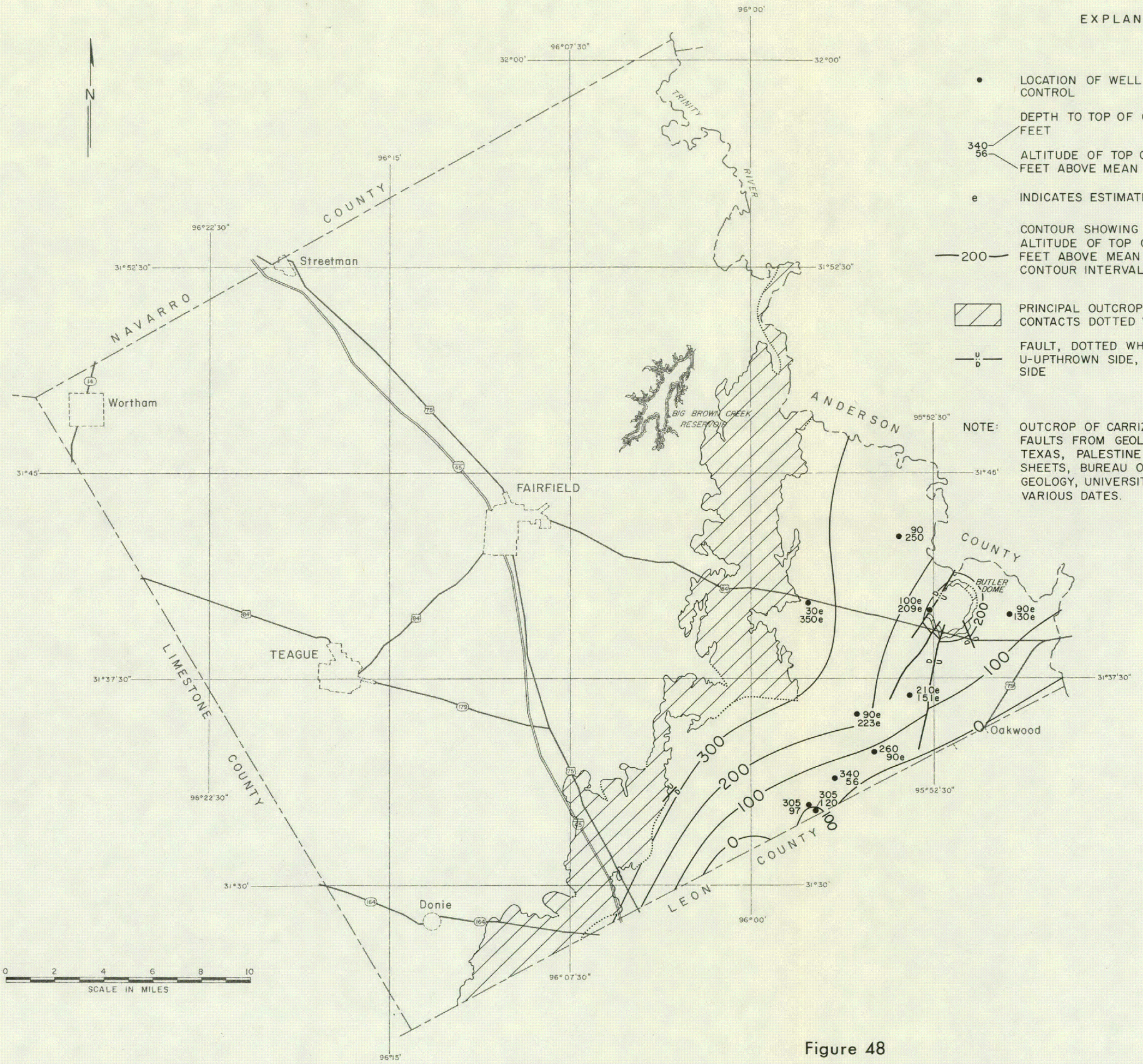


Figure 48

Depth and Altitude of Top of Carrizo Sand in Freestone County

Base from Texas State Highway Department county map

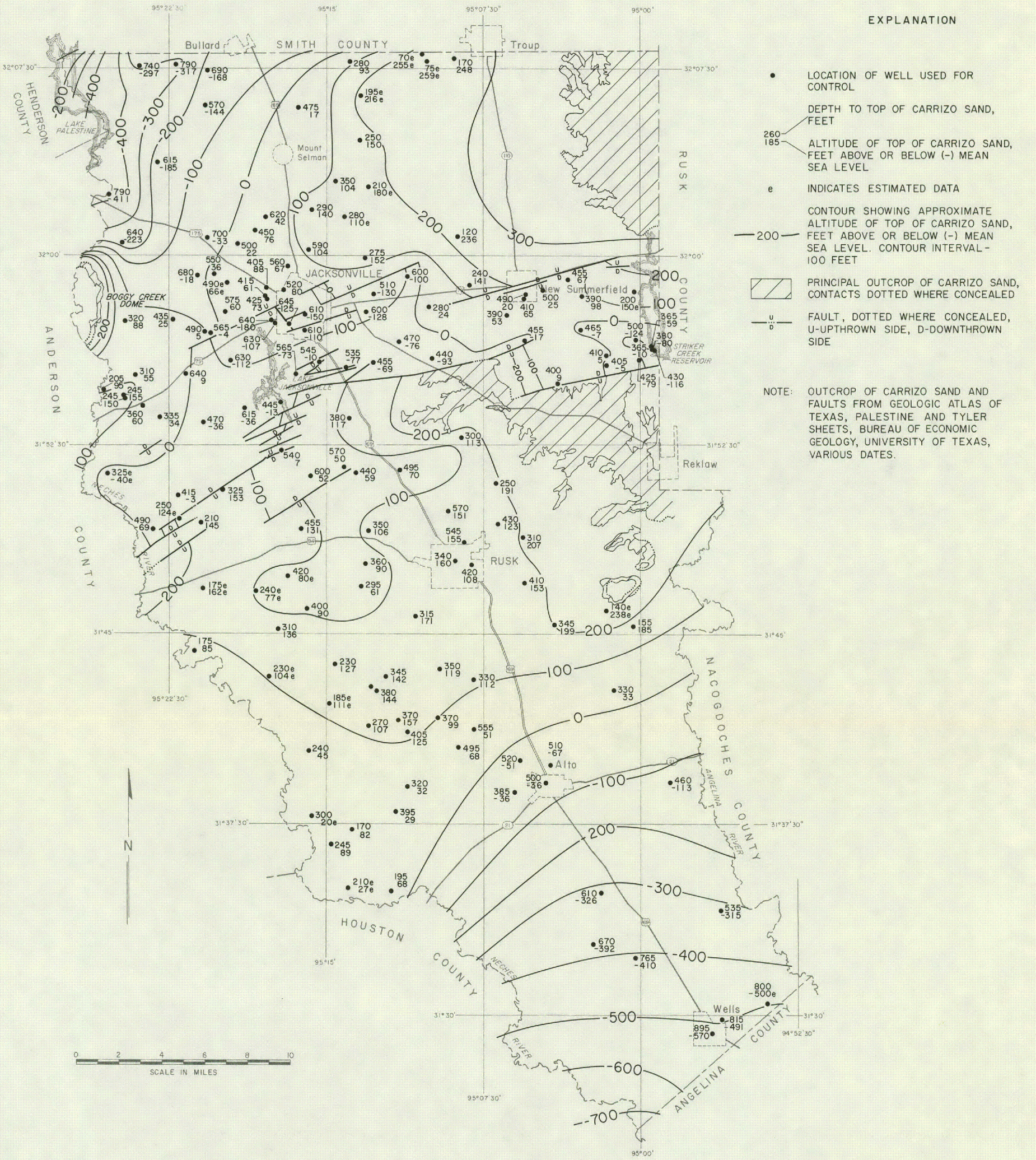


Figure 47

Depth and Altitude of Top of Carrizo Sand in Cherokee County

Base from Texas State Highway Department county map

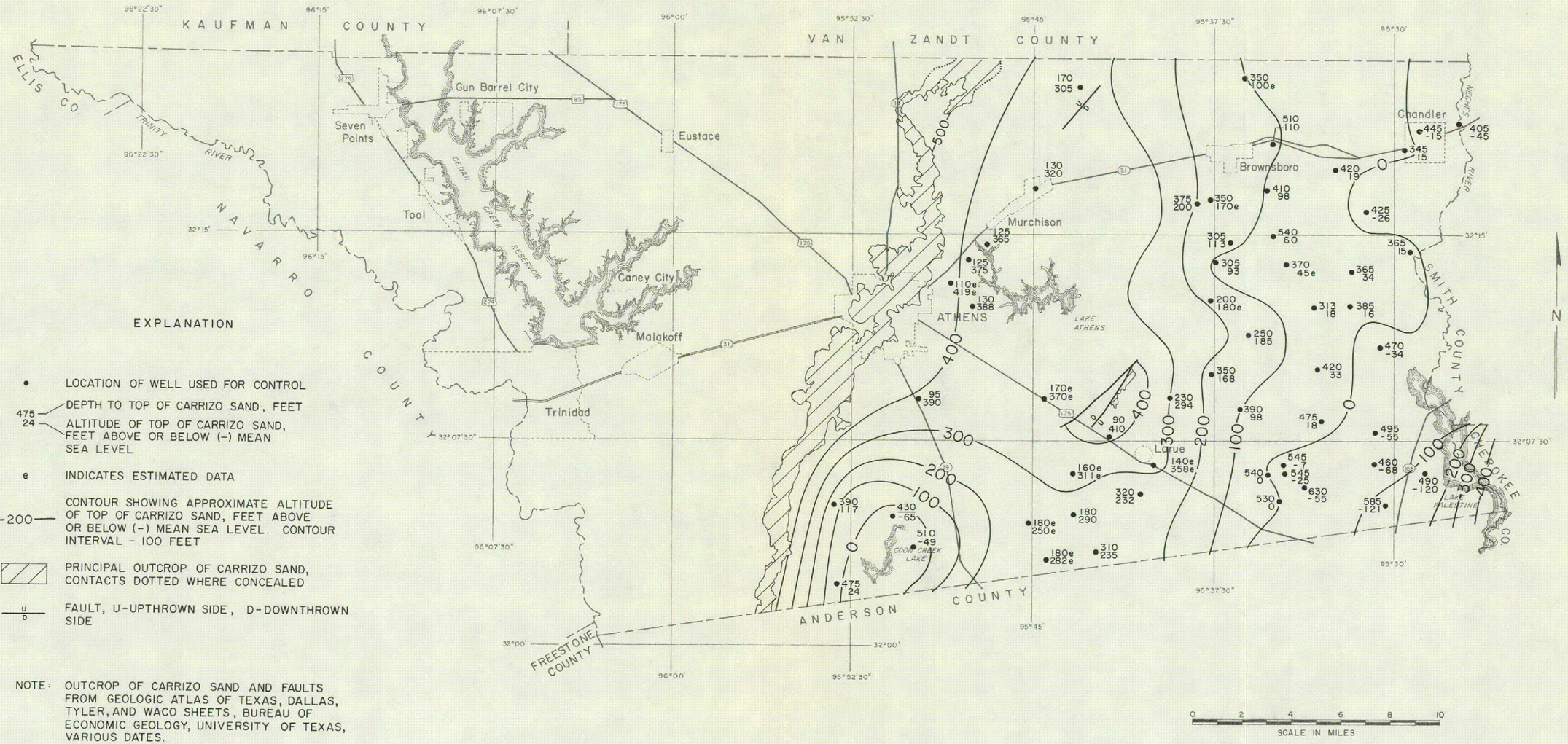


Figure 49

Depth and Altitude of Top of Carrizo Sand in Henderson County

Base from Texas State Highway Department county map

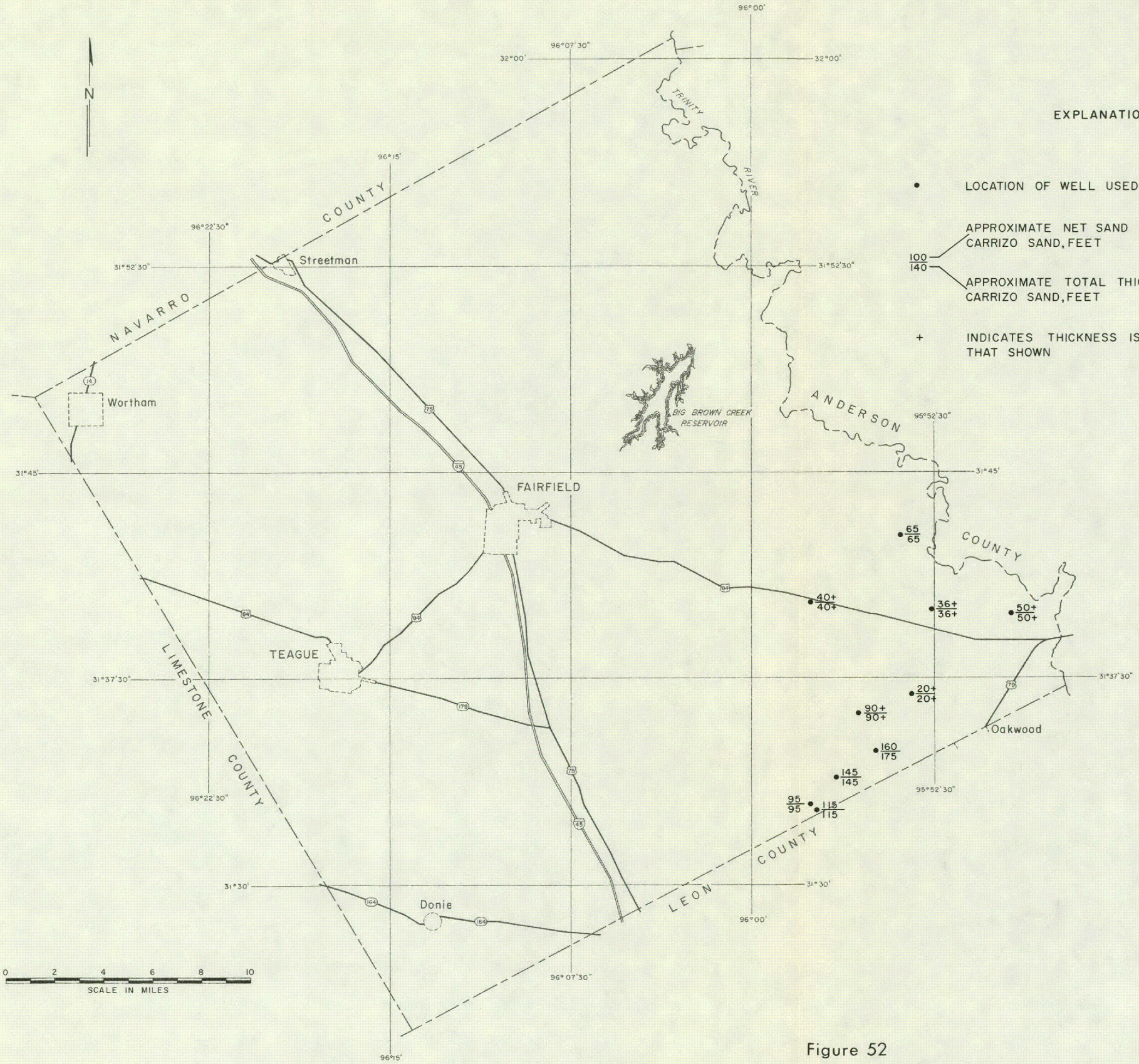


Figure 52

Thickness of Carrizo Sand in Freestone County

Base from Texas State Highway Department county map

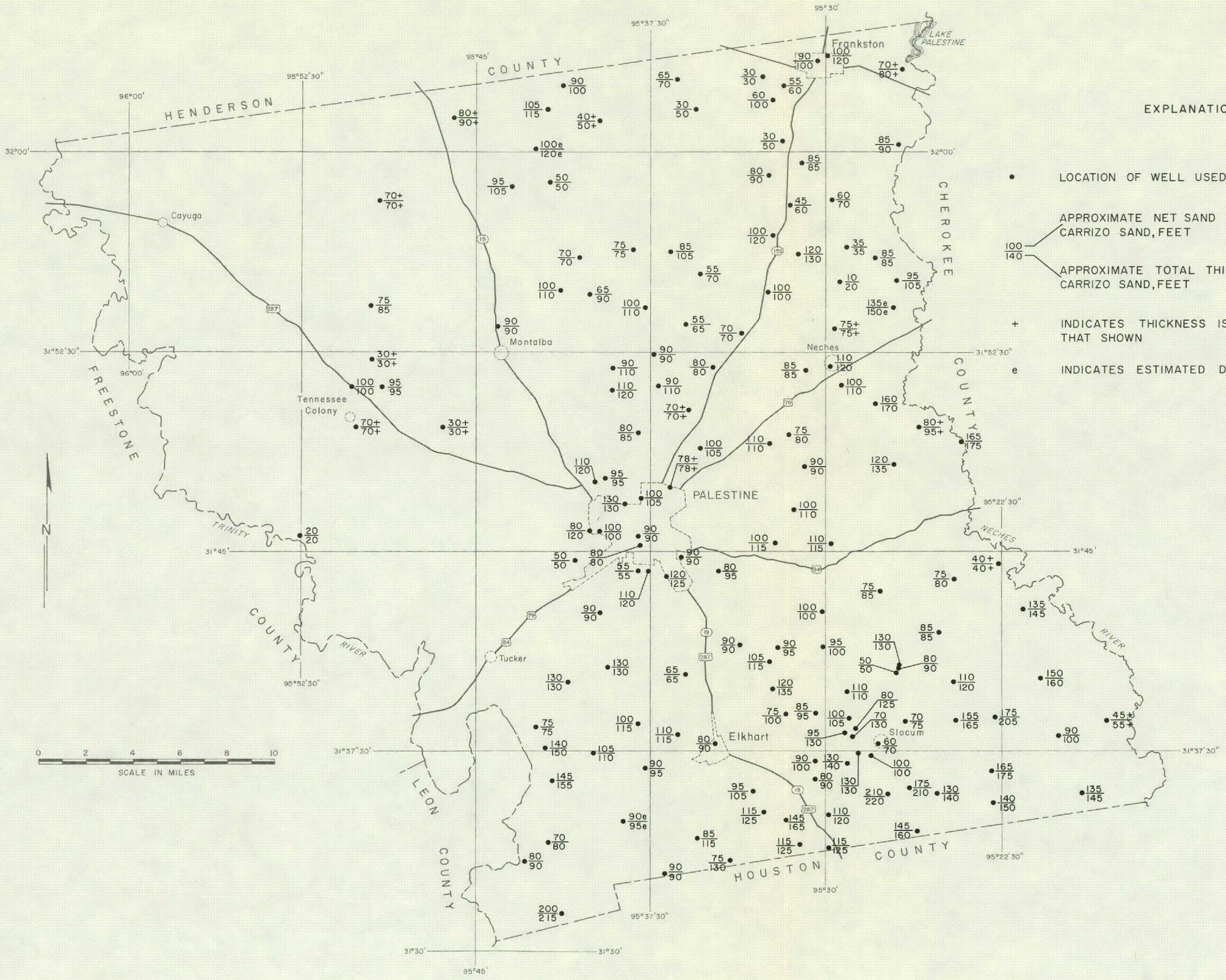


Figure 50

Thickness of Carrizo Sand in Anderson County

Base from Texas State Highway Department county map

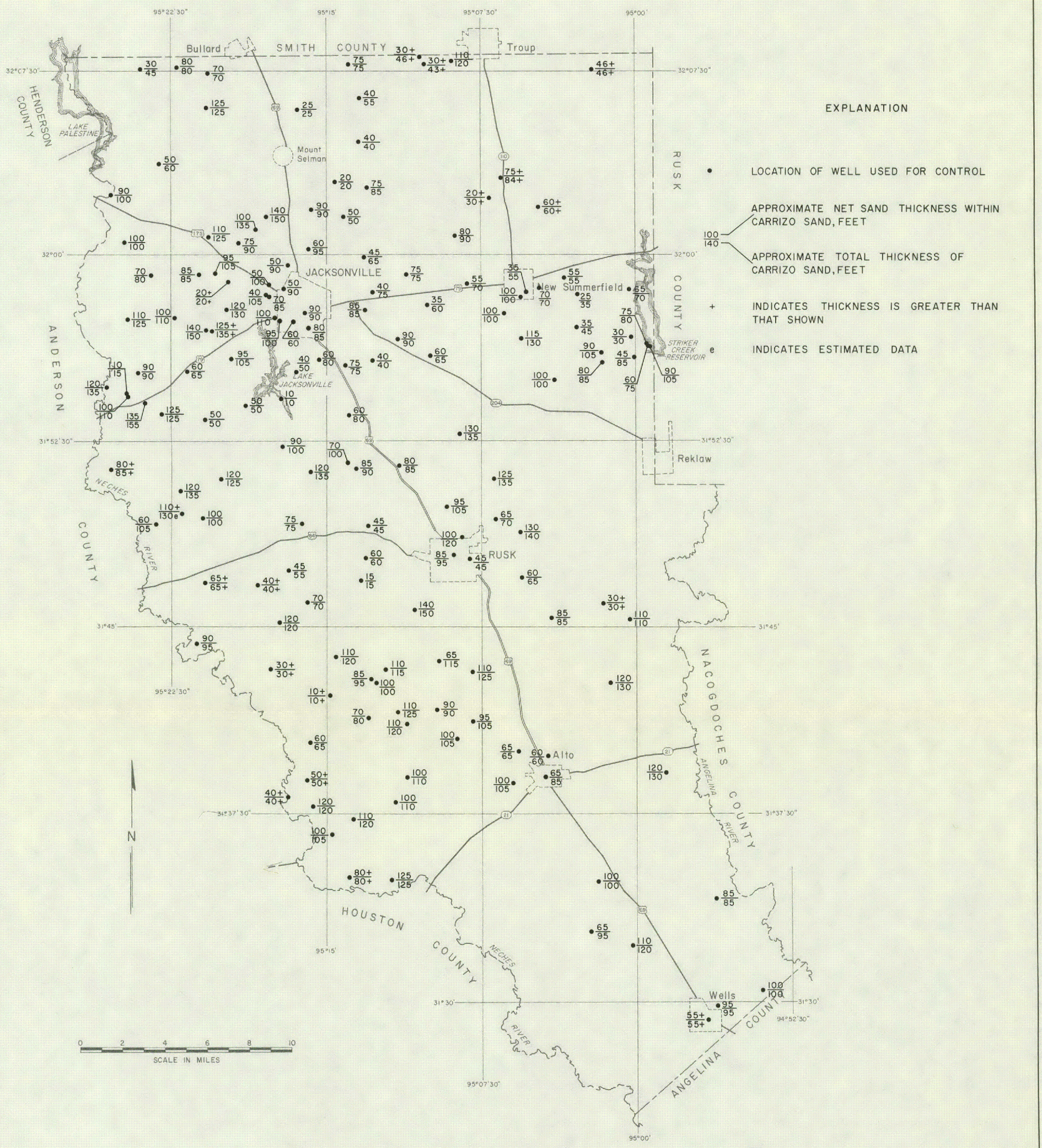


Figure 51

Thickness of Carrizo Sand in Cherokee County

Base from Texas State Highway Department county map

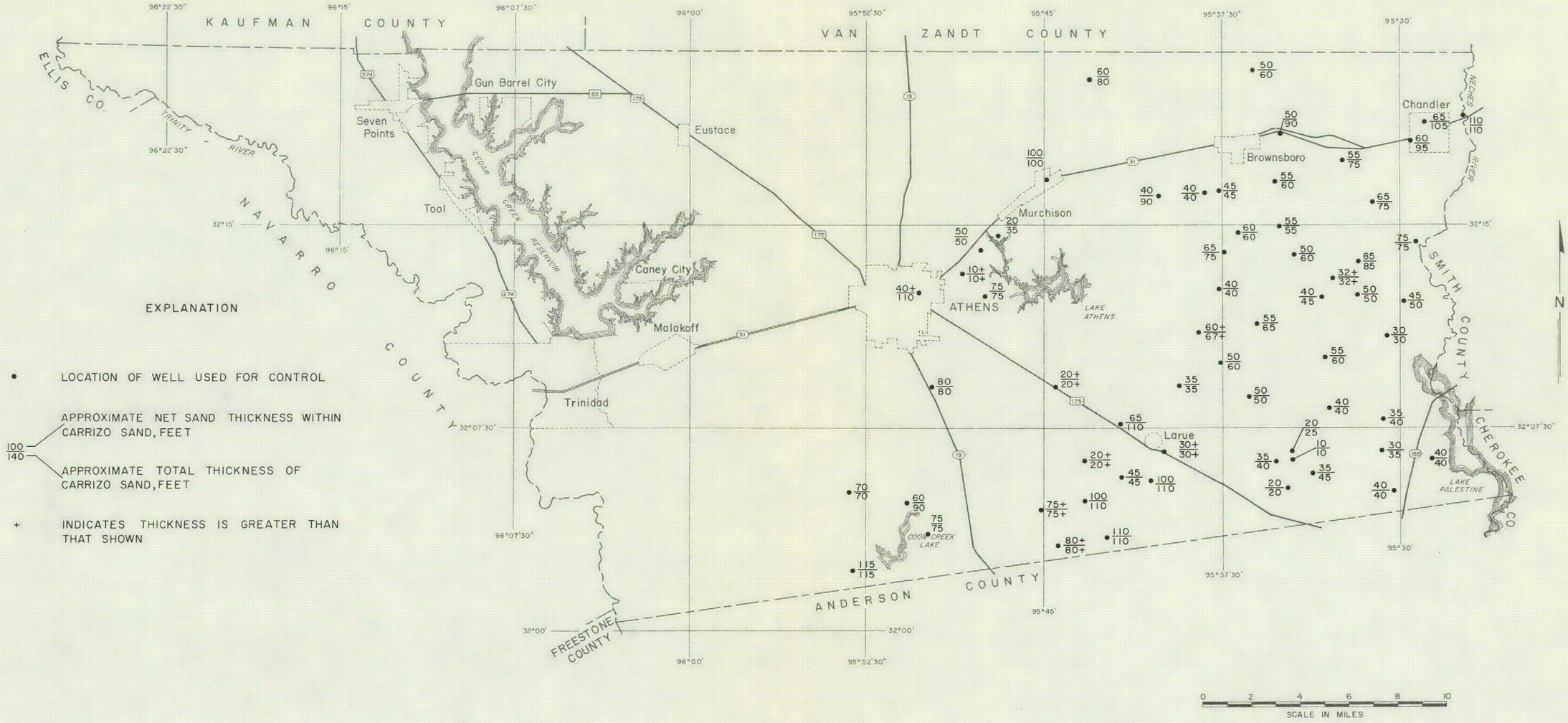


Figure 53

Thickness of Carrizo Sand in Henderson County

Base from Texas State Highway Department county map

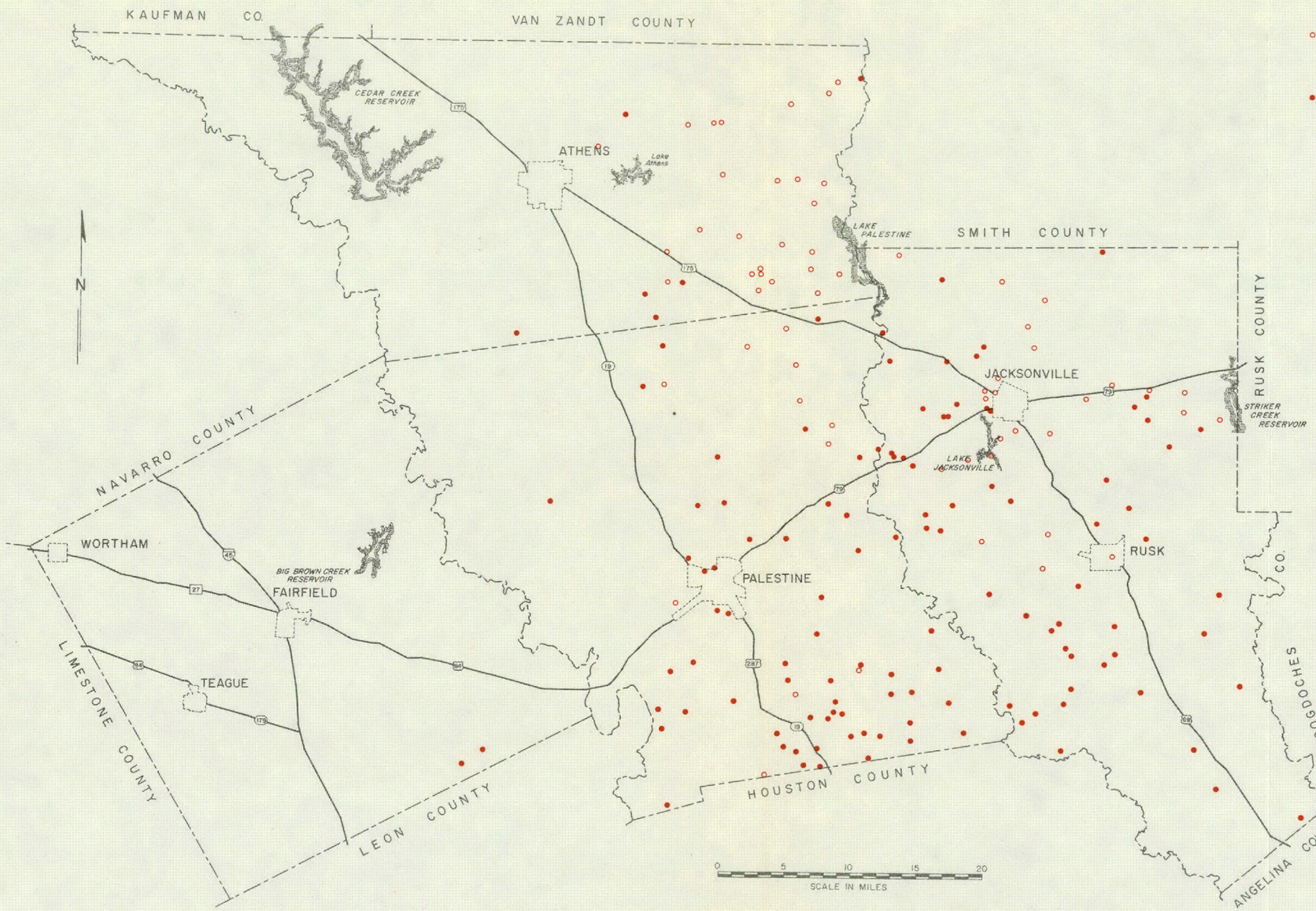


Figure 54

Generalized Character of Carrizo Sand

Base from Texas State Highway Department county maps

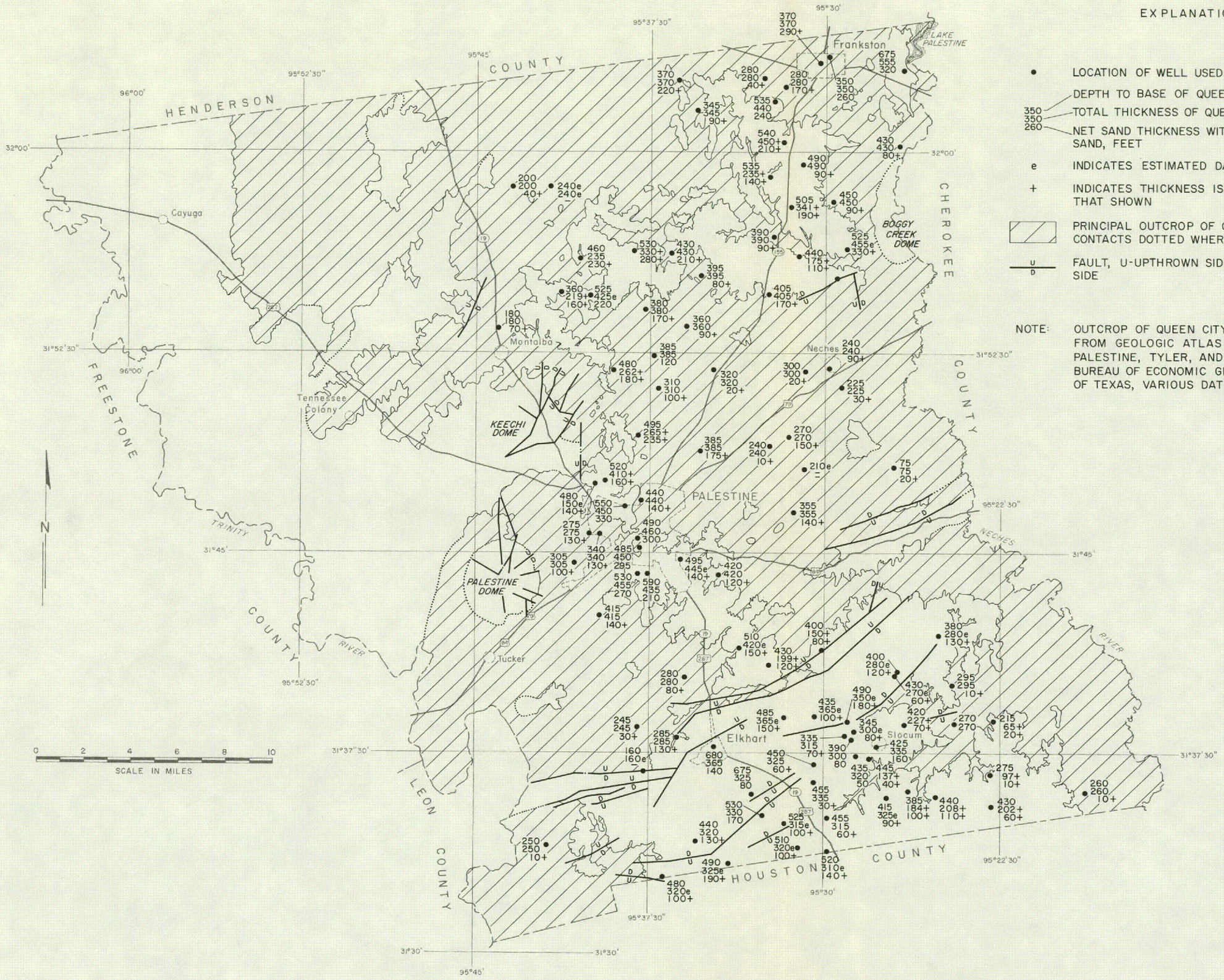


Figure 55

Depth of Base and Thickness of Queen City Sand in Anderson County

Base from Texas State Highway Department county map

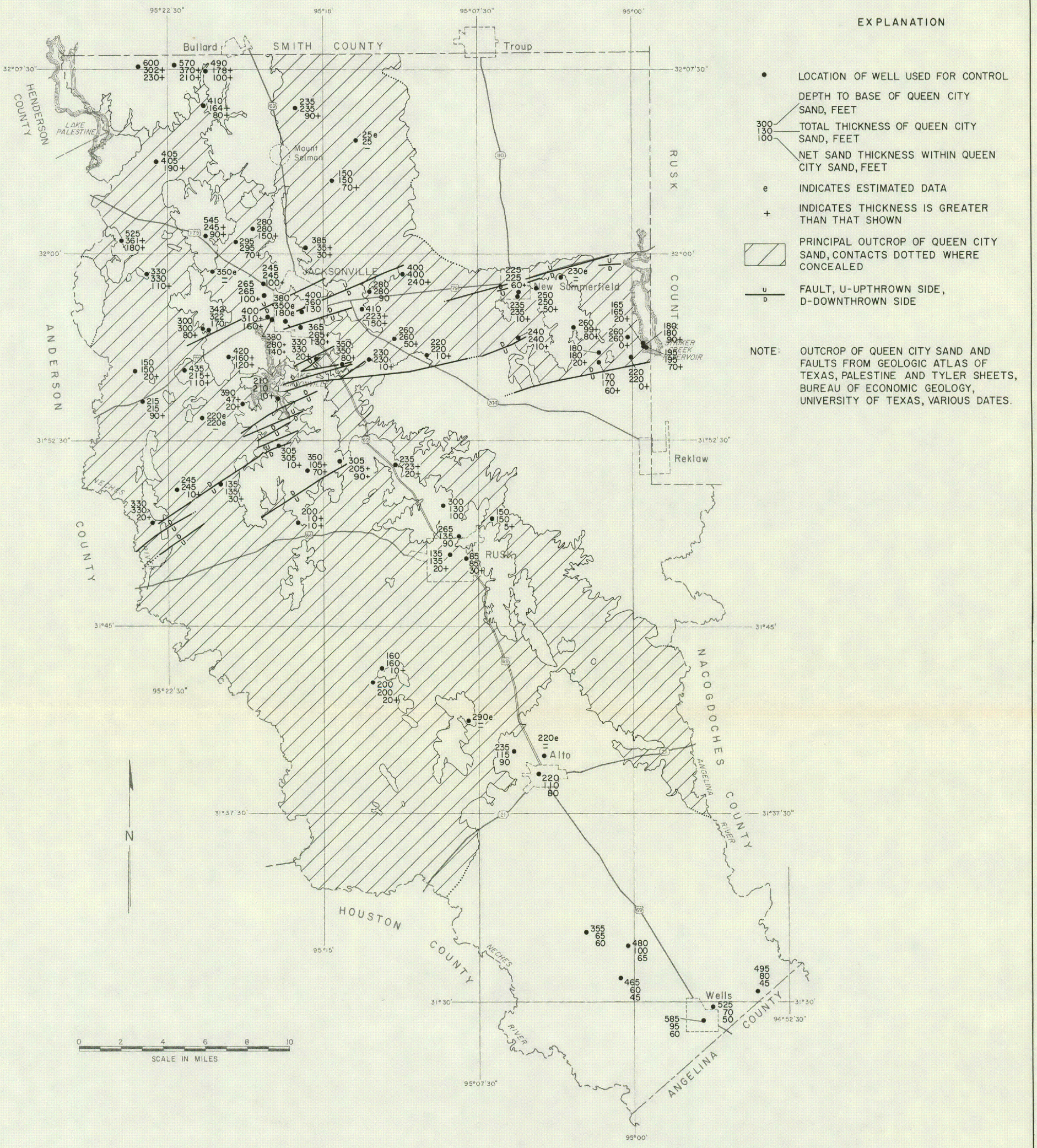


Figure 56

Depth of Base and Thickness of Queen City Sand in Cherokee County

Base from Texas State Highway Department county map

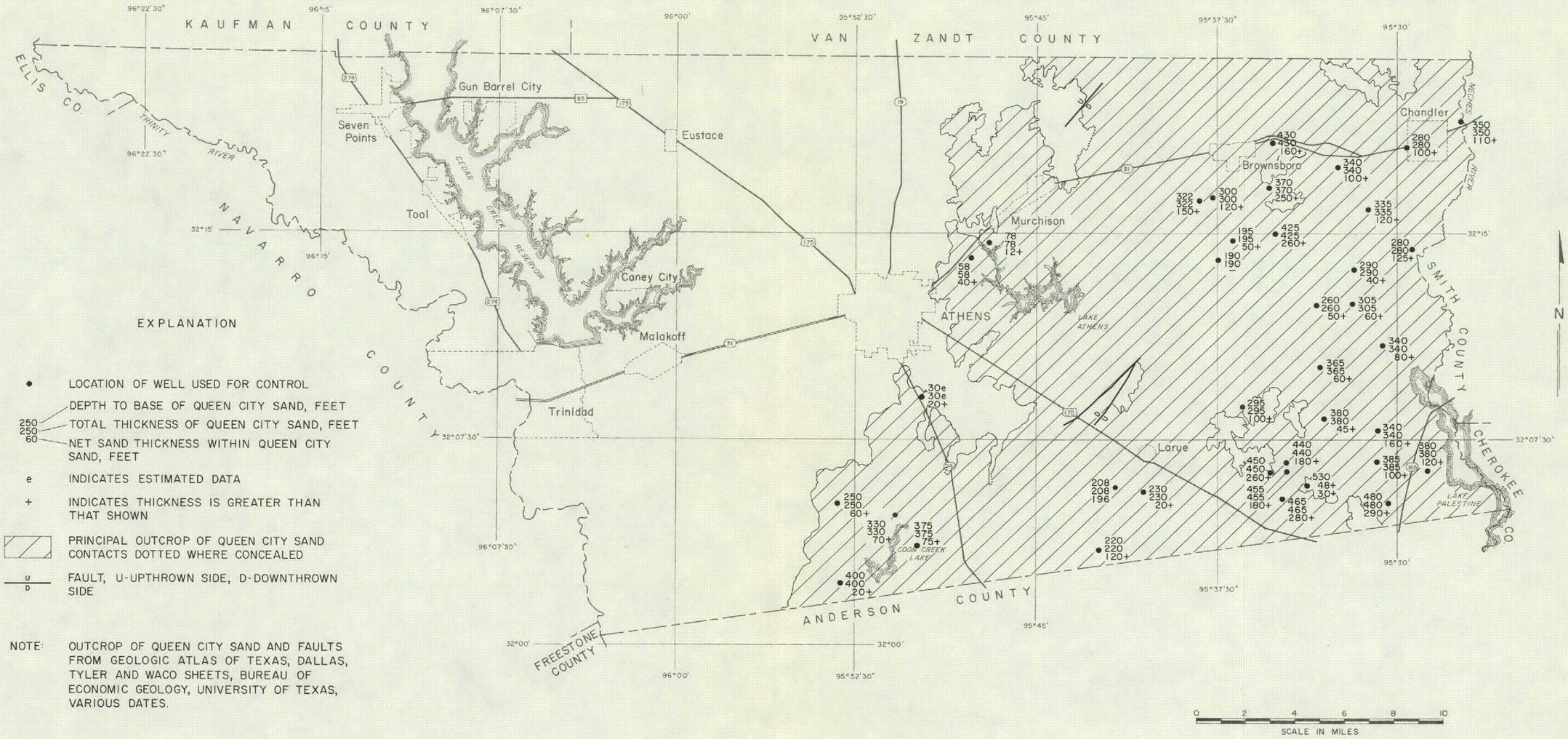


Figure 57

Depth of Base and Thickness of Queen City Sand in Henderson County

Base from Texas State Highway Department county map

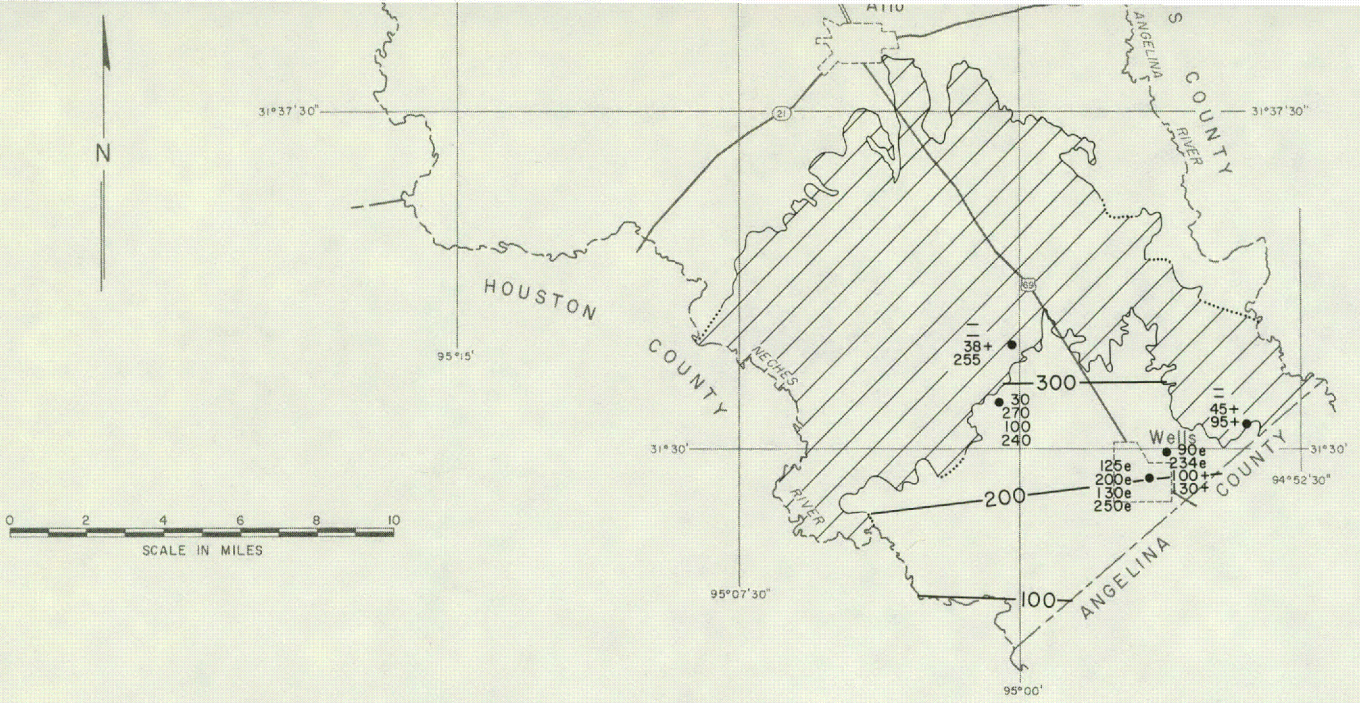
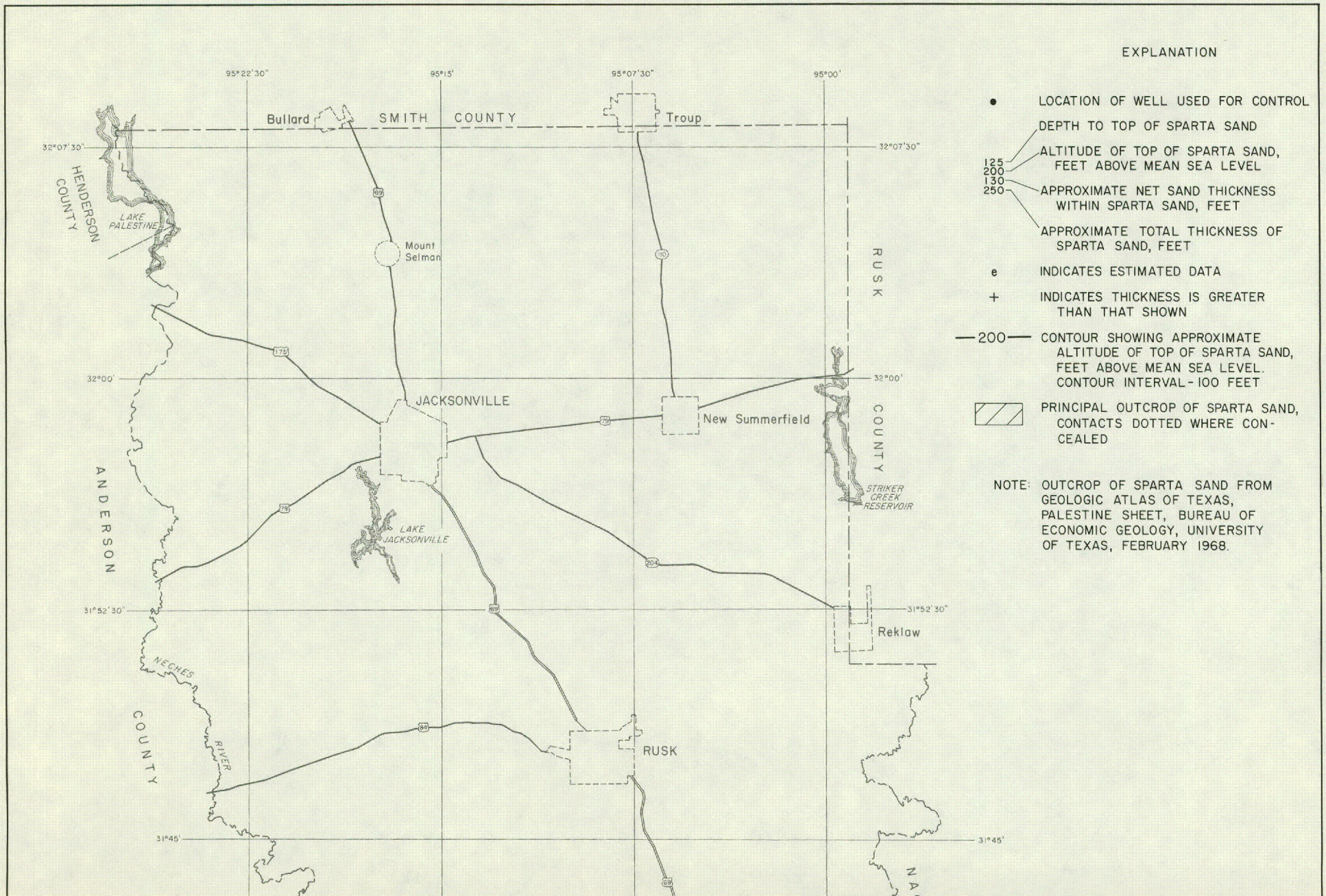
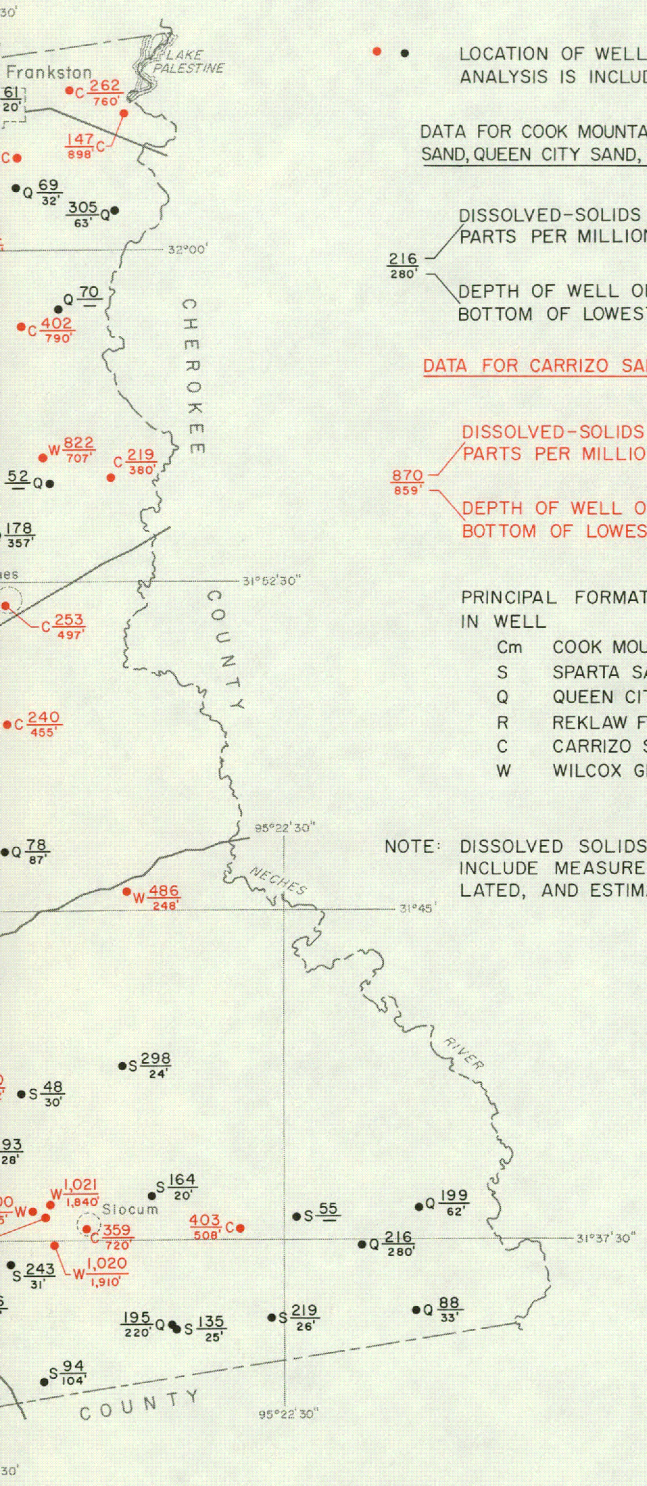


Figure 58

Depth and Altitude of Top of Sparta Sand and Thickness of Sparta Sand in Cherokee County

Base from Texas State Highway Department county map


95°22'30"
95°15'
95°07'30"
95°00'
Bullard
SMITH COUNTY
Troup
32°07'30"
HENDERSON COUNTY
LAKE PALESTINE
Mount Selman
RUSK COUNTY
32°00'
JACKSONVILLE
New Summerfield
ANDERSON COUNTY
STRIKER CREEK RESERVOIR
LAKE JACKSONVILLE
31°52'30"
Reklaw
NECHES RIVER
RUSK
31°45'
NA
EXPLANATION
LOCATION OF WELL USED FOR CONTROL
DEPTH TO TOP OF SPARTA SAND
125
ALTITUDE OF TOP OF SPARTA SAND, FEET ABOVE MEAN SEA LEVEL
200
130
APPROXIMATE NET SAND THICKNESS WITHIN SPARTA SAND, FEET
250
APPROXIMATE TOTAL THICKNESS OF SPARTA SAND, FEET
e
INDICATES ESTIMATED DATA
+
INDICATES THICKNESS IS GREATER THAN THAT SHOWN
200
CONTOUR SHOWING APPROXIMATE ALTITUDE OF TOP OF SPARTA SAND, FEET ABOVE MEAN SEA LEVEL. CONTOUR INTERVAL - 100 FEET
PRINCIPAL OUTCROP OF SPARTA SAND, CONTACTS DOTTED WHERE CONCEALED
NOTE: OUTCROP OF SPARTA SAND FROM GEOLOGIC ATLAS OF TEXAS, PALESTINE SHEET, BUREAU OF ECONOMIC GEOLOGY, UNIVERSITY OF TEXAS, FEBRUARY 1968.



Anderson County

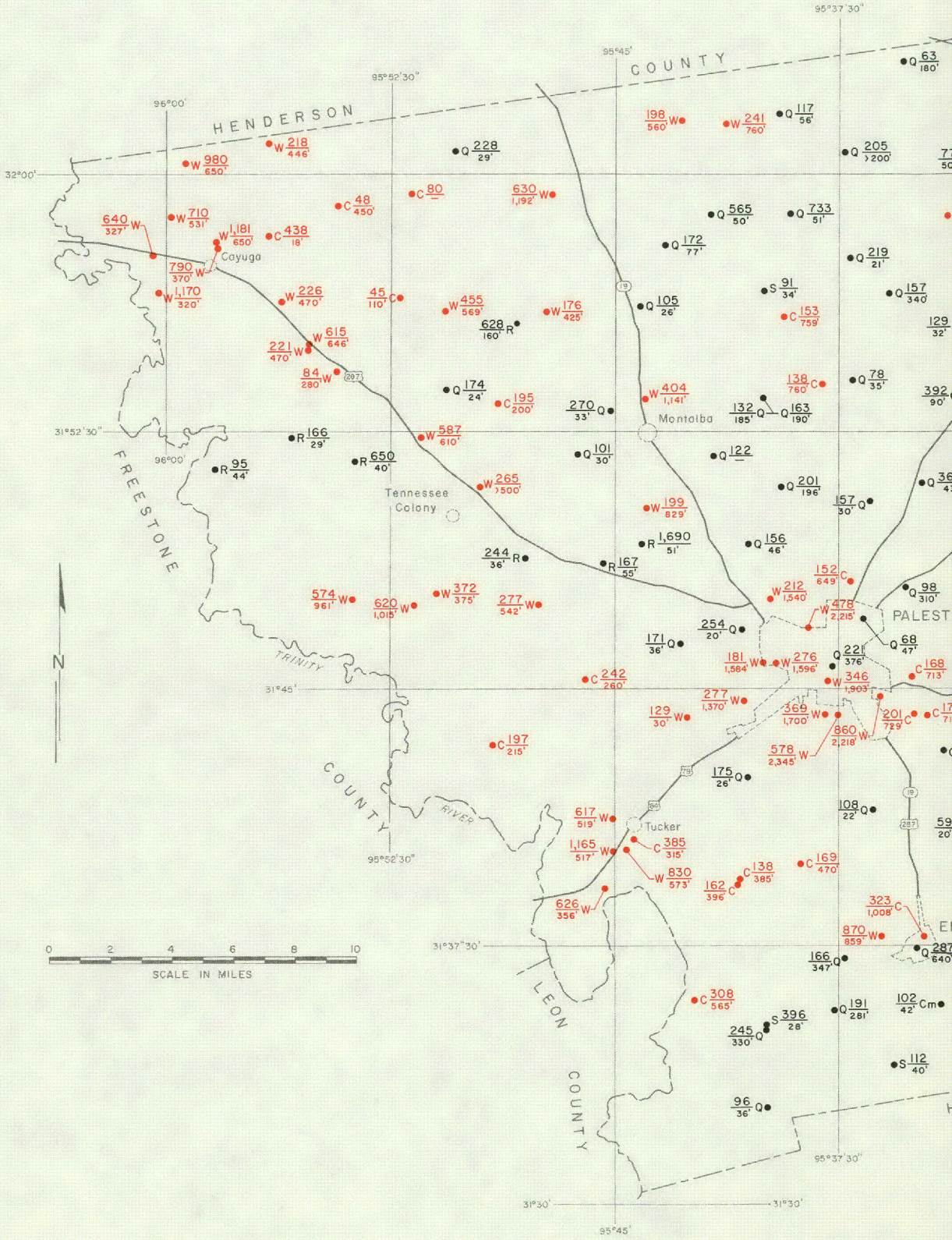


Figure 59

Dissolved-Solids Content of Water From

Base from Texas State Highway Department county map

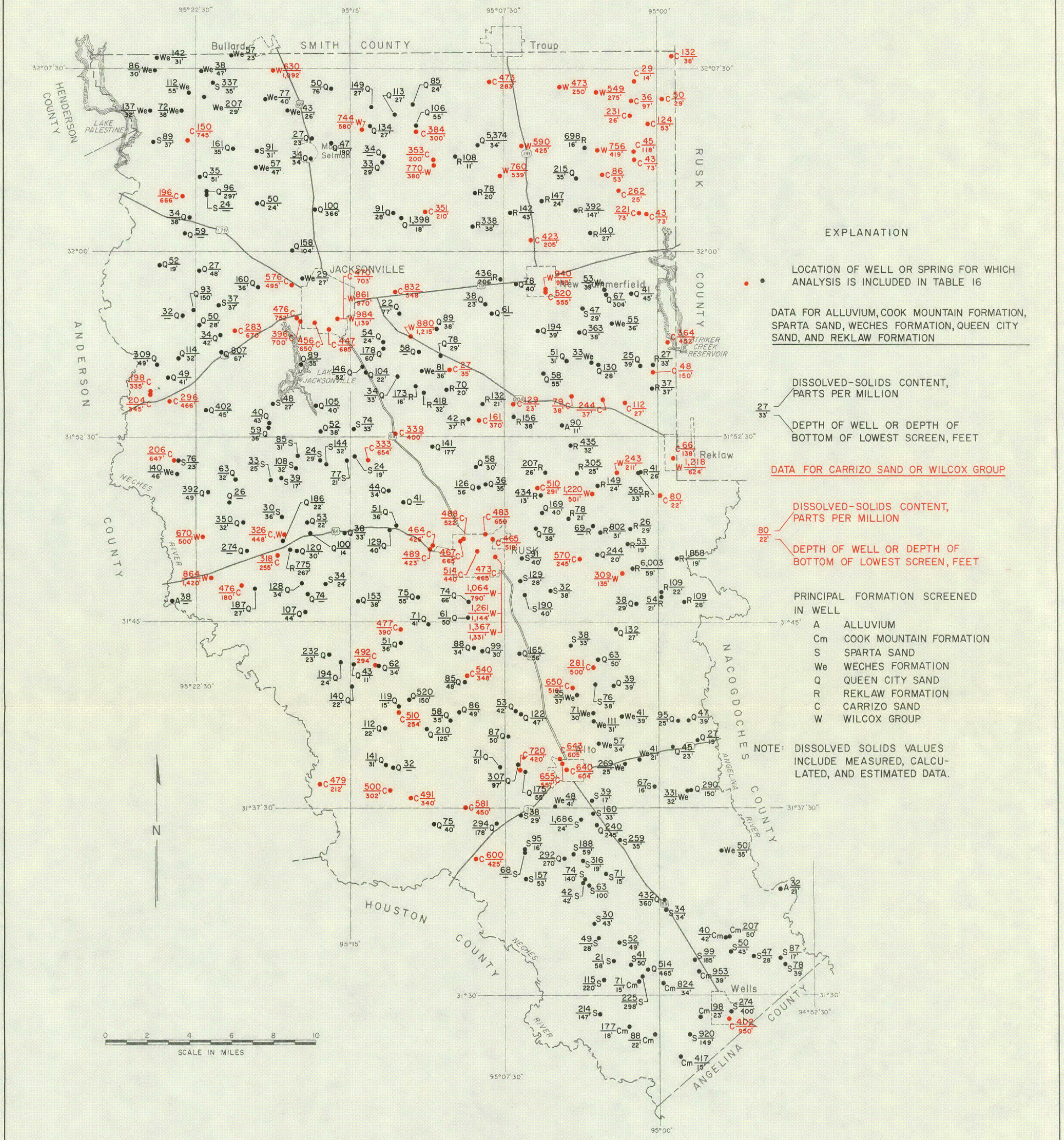


Figure 60

Dissolved-Solids Content of Water From Wells in Cherokee County

Base from Texas State Highway Department county map

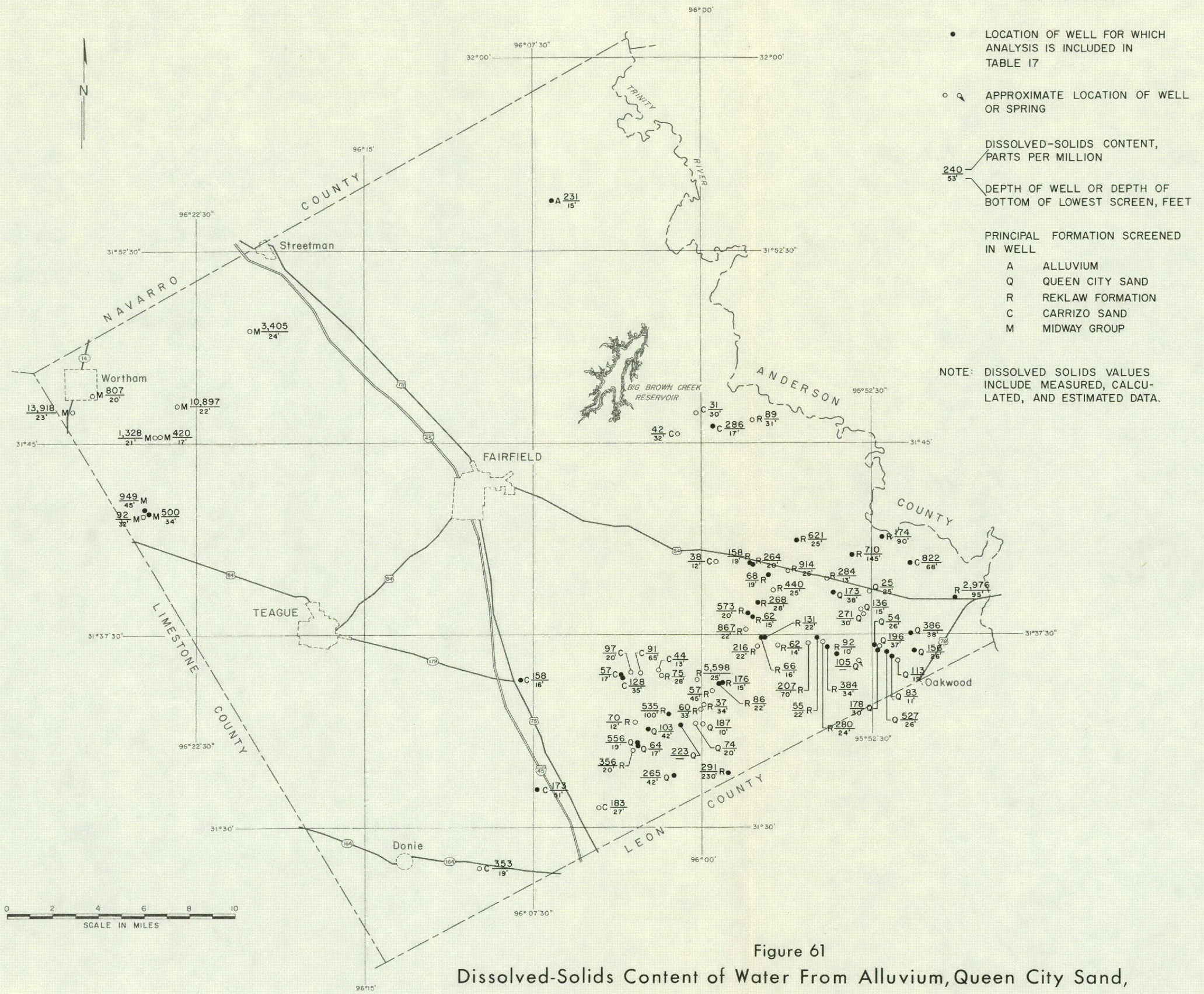


Figure 61

Dissolved-Solids Content of Water From Alluvium, Queen City Sand, Reklaw Formation, Carrizo Sand, and Midway Group in Freestone County

Base from Texas State Highway Department county map

EXPLANATION

● ● LOCATION OF WELL FOR WHICH ANALYSIS IS INCLUDED IN TABLE 17

DATA FOR WELLS 100 FEET OR LESS IN DEPTH

240/53' — 240 = DISSOLVED SOLIDS CONTENT, PARTS PER MILLION; 53' = DEPTH OF WELL OR DEPTH OF BOTTOM OF LOWEST SCREEN, FEET

DATA FOR WELLS GREATER THAN 100 FEET IN DEPTH

250/375' — 250 = DISSOLVED SOLIDS CONTENT, PARTS PER MILLION; 375' = DEPTH OF WELL OR DEPTH OF BOTTOM OF LOWEST SCREEN, FEET

NOTE: DISSOLVED SOLIDS VALUES INCLUDE MEASURED, CALCULATED, AND ESTIMATED DATA.

Figure 62

Dissolved-Solids Content of Water From Wilcox Group in Freestone County

Base from Texas State Highway Department county map

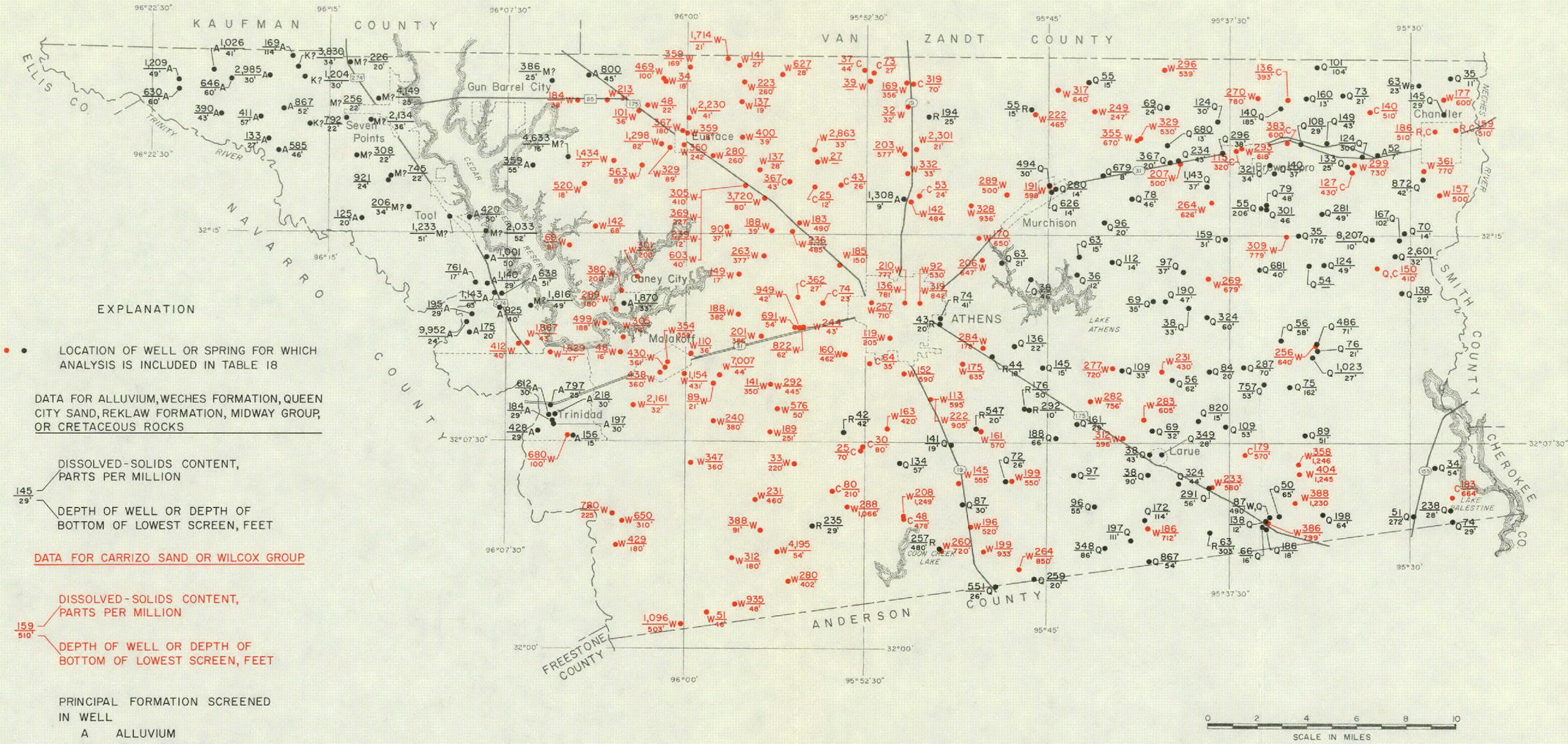


Figure 63

Dissolved-Solids Content of Water From Wells in Henderson County

Base from Texas State Highway Department county map

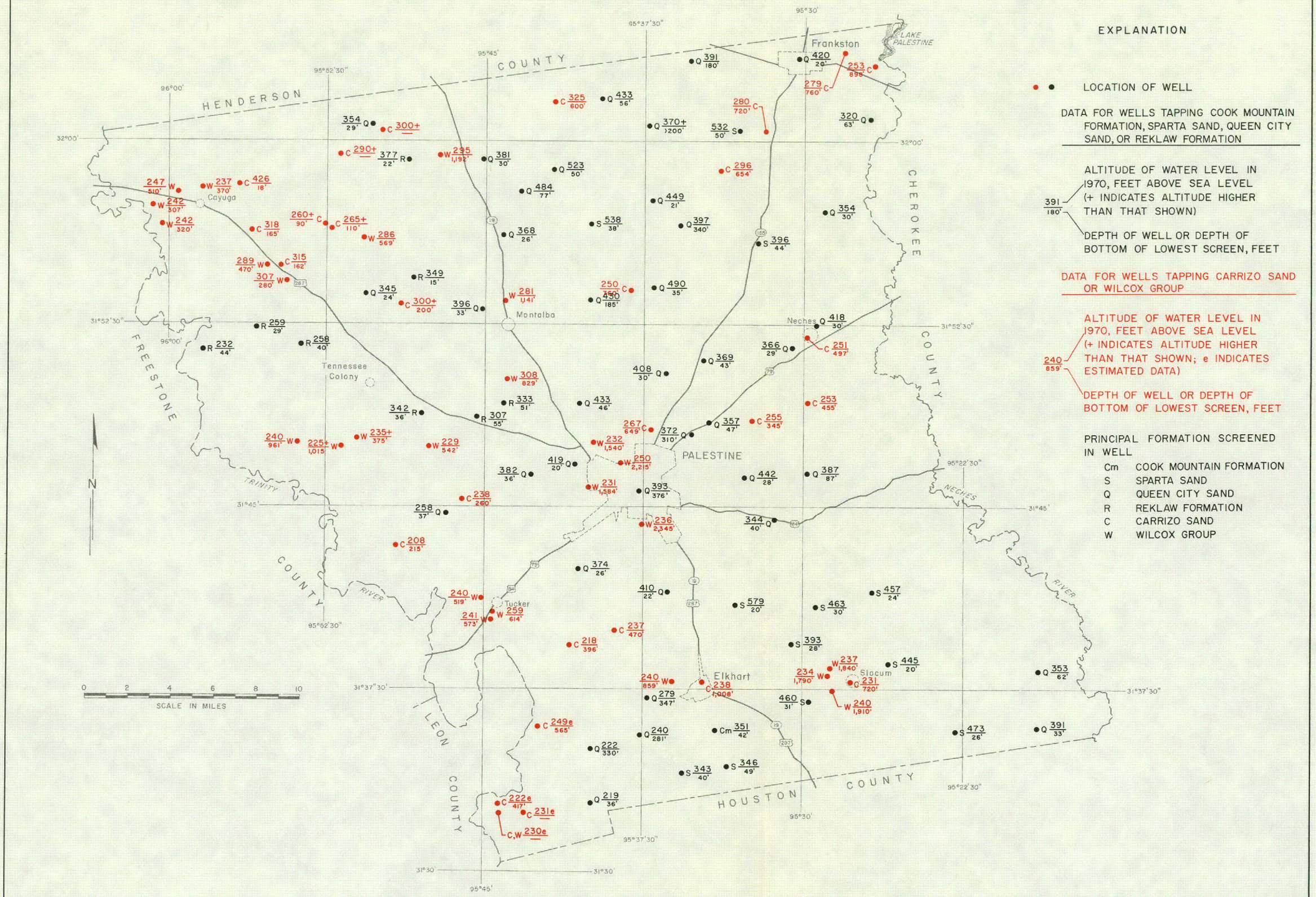
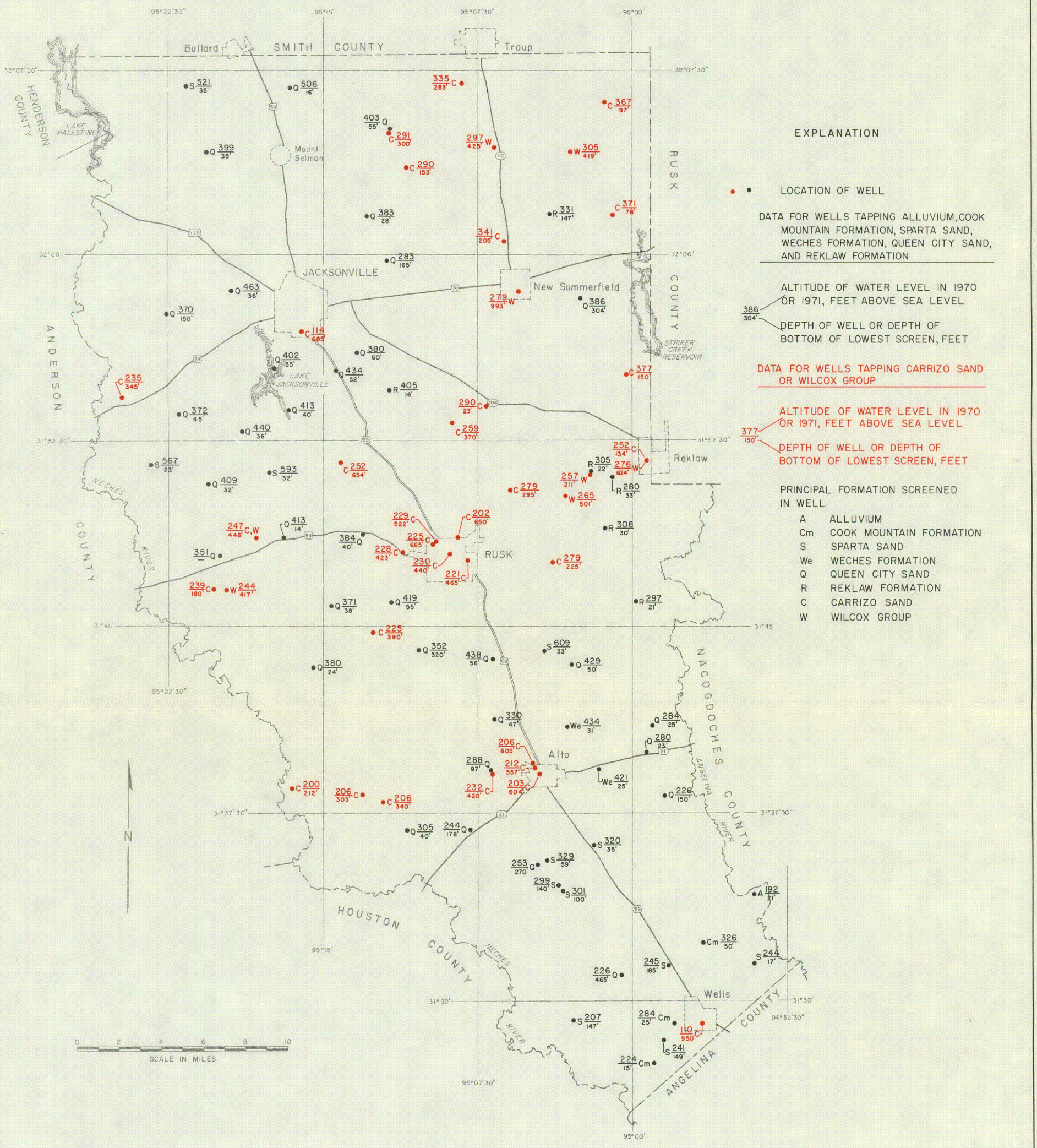


Figure 64

Altitudes of Water Levels in Wells in Anderson County, 1970

Base from Texas State Highway Department county map



EXPLANATION

• • LOCATION OF WELL

DATA FOR WELLS TAPPING ALLUVIUM, COOK MOUNTAIN FORMATION, SPARTA SAND, WECHES FORMATION, QUEEN CITY SAND, AND REKLAW FORMATION

386/304 — ALTITUDE OF WATER LEVEL IN 1970 OR 1971, FEET ABOVE SEA LEVEL; DEPTH OF WELL OR DEPTH OF BOTTOM OF LOWEST SCREEN, FEET

DATA FOR WELLS TAPPING CARRIZO SAND OR WILCOX GROUP

377/150 — ALTITUDE OF WATER LEVEL IN 1970 OR 1971, FEET ABOVE SEA LEVEL; DEPTH OF WELL OR DEPTH OF BOTTOM OF LOWEST SCREEN, FEET

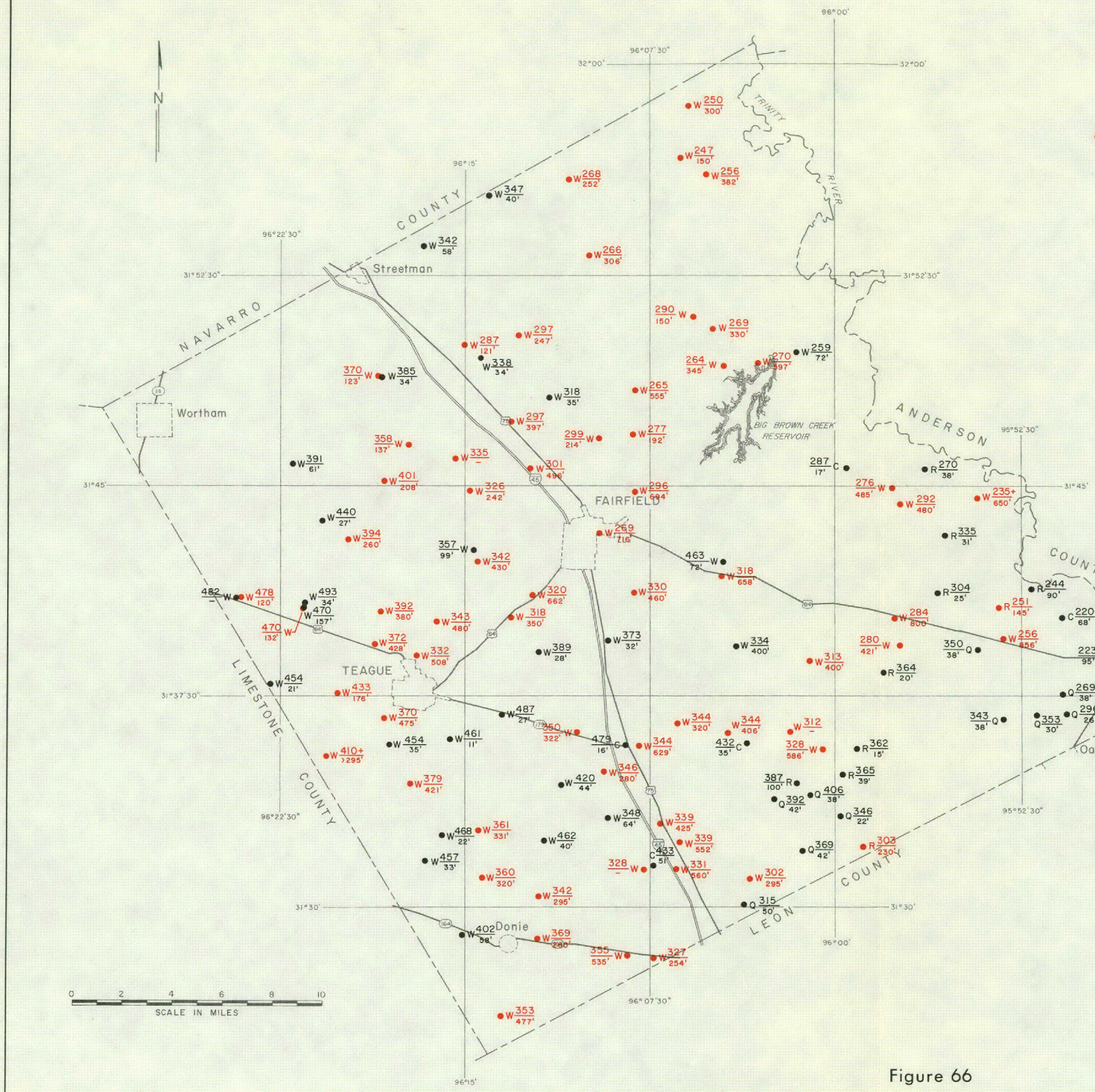
PRINCIPAL FORMATION SCREENED IN WELL

A	ALLUVIUM
Cm	COOK MOUNTAIN FORMATION
S	SPARTA SAND
We	WECHES FORMATION
Q	QUEEN CITY SAND
R	REKLAW FORMATION
C	CARRIZO SAND
W	WILCOX GROUP

Figure 65

Altitudes of Water Levels in Wells in Cherokee County, 1970-1971

Base from Texas State Highway Department county map



EXPLANATION

● ● LOCATION OF WELL

DATA FOR WELLS 100 FEET OR LESS IN DEPTH

348/64' — ALTITUDE OF WATER LEVEL IN 1970, FEET ABOVE SEA LEVEL (+ INDICATES ALTITUDE HIGHER THAN THAT SHOWN); DEPTH OF WELL OR DEPTH OF BOTTOM OF LOWEST SCREEN, FEET

DATA FOR WELLS GREATER THAN 100 FEET IN DEPTH

330/460' — ALTITUDE OF WATER LEVEL IN 1970, FEET ABOVE SEA LEVEL (+ INDICATES ALTITUDE HIGHER THAN THAT SHOWN); DEPTH OF WELL OR DEPTH OF BOTTOM OF LOWEST SCREEN, FEET

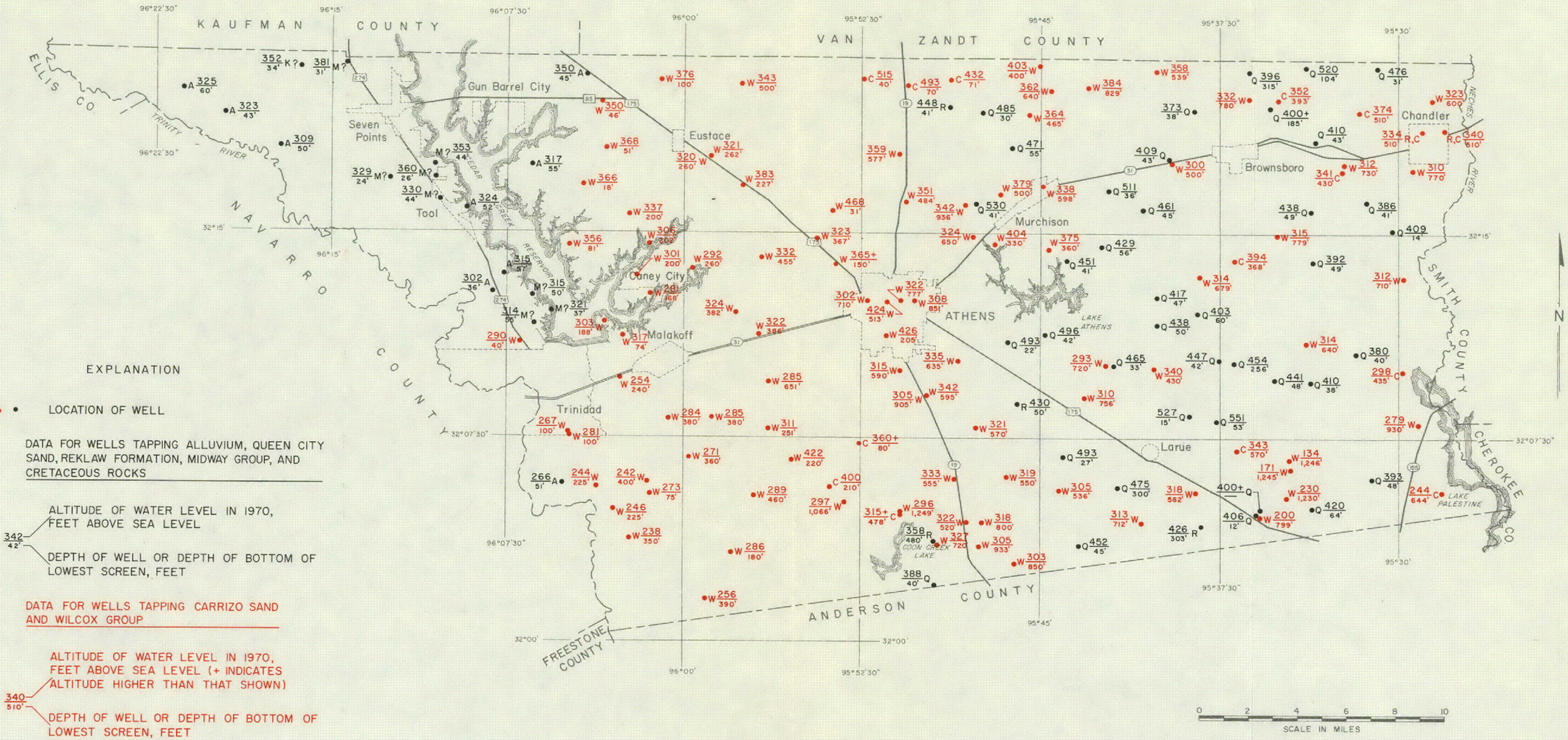
PRINCIPAL FORMATION SCREENED IN WELL

Q	QUEEN CITY SAND
R	REKLAW FORMATION
C	CARRIZO SAND
W	WILCOX GROUP

Figure 66

Altitudes of Water Levels in Wells in Freestone County, 1970

Base from Texas State Highway Department county map



EXPLANATION

• • LOCATION OF WELL

DATA FOR WELLS TAPPING ALLUVIUM, QUEEN CITY SAND, REKLAW FORMATION, MIDWAY GROUP, AND CRETACEOUS ROCKS

342 / 42' — ALTITUDE OF WATER LEVEL IN 1970, FEET ABOVE SEA LEVEL; DEPTH OF WELL OR DEPTH OF BOTTOM OF LOWEST SCREEN, FEET

DATA FOR WELLS TAPPING CARRIZO SAND AND WILCOX GROUP

340+ / 510' — ALTITUDE OF WATER LEVEL IN 1970, FEET ABOVE SEA LEVEL (+ INDICATES ALTITUDE HIGHER THAN THAT SHOWN); DEPTH OF WELL OR DEPTH OF BOTTOM OF LOWEST SCREEN, FEET

PRINCIPAL FORMATION SCREENED IN WELL

A	ALLUVIUM
Q	QUEEN CITY SAND
R	REKLAW FORMATION
C	CARRIZO SAND
W	WILCOX GROUP
M	MIDWAY GROUP
K	CRETACEOUS ROCKS

Figure 67

Altitudes of Water Levels in Wells in Henderson County, 1970

Base from Texas State Highway Department county map

(6)
17162
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