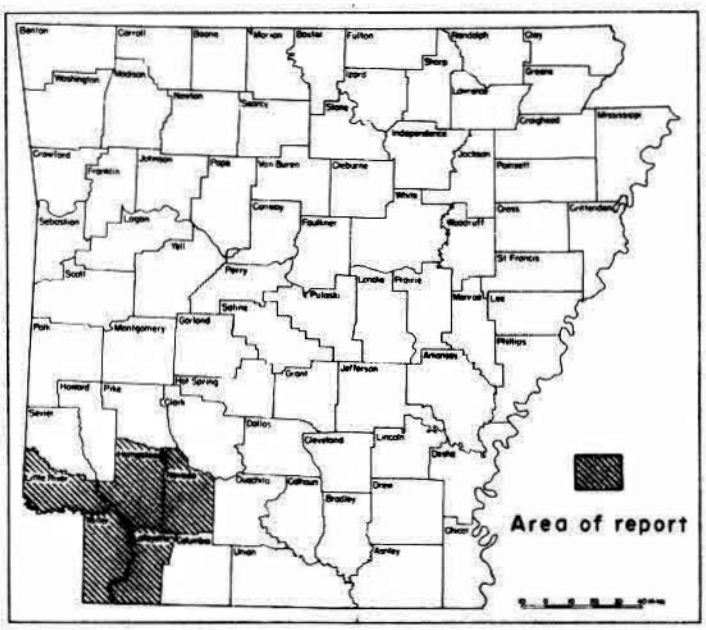
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

WELL RECORDS, DEPTH-TO-WATER MEASUREMENTS, CHEMICAL ANALYSES OF GROUND WATER, DRILLERS LOGS, AND ELECTRIC-LOG INFORMATION IN HEMPSTEAD, LAFAYETTE, LITTLE RIVER, MILLER, AND NEVADA COUNTIES, ARKANSAS

By

J. W. Stephens



Prepared by the U.S. Geological Survey in cooperation with the Arkansas Geological Commission

1970

CONTENTS

ILLUSTRATIONS

TABLES

TABLES

TABLES

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Introduction

This report is a compilation of hydrogeologic data collected during a water-resources investigation of Hempstead, Lafayette, Little River, Miller, and Nevada Counties, Arkansas. The location of the area is shown on the frontispiece. The study was made by the U.S. Geological Survey in cooperation with the Arkansas Geological Commission. The data have been prepared for use in planning water-resources development in the area. Most of data were collected between January 1967 and October 1968, and includes records of 479 wells and test holes (tables 1, 6, 11, 16, and 21); results of chemical analyses of water samples from 197 wells (tables 2, 7, 12, 17, and 22); electric-log information from 131 locations (tables 3, 8, 13, 18, and 23); lithologic logs of 126 wells and test holes (tables 4, 9, 14, 19, and 24); and measurement of water levels in 149 wells (tables 5, 10, 15, 20, and 25). All altitudes given in tables are reference to mean sea level.

Location-numbering system

In this report, all wells and points of interest are numbered by a location system based on the Federal land-survey system used in Arkansas. The component parts of a well or location number are the township number, the range number, the section number, and three letters that indicate, respectively, the quarter section, the quarter-quarter section, and the quarter-quarter-quarter section in which the well or point of interest is located. The letters are assigned in counterclockwise order beginning with "A" in the northeast quarter. Serial numbers are appended where more than one well is located in a quarter-quarter-quarter section. The location system is illustrated in figure 1.

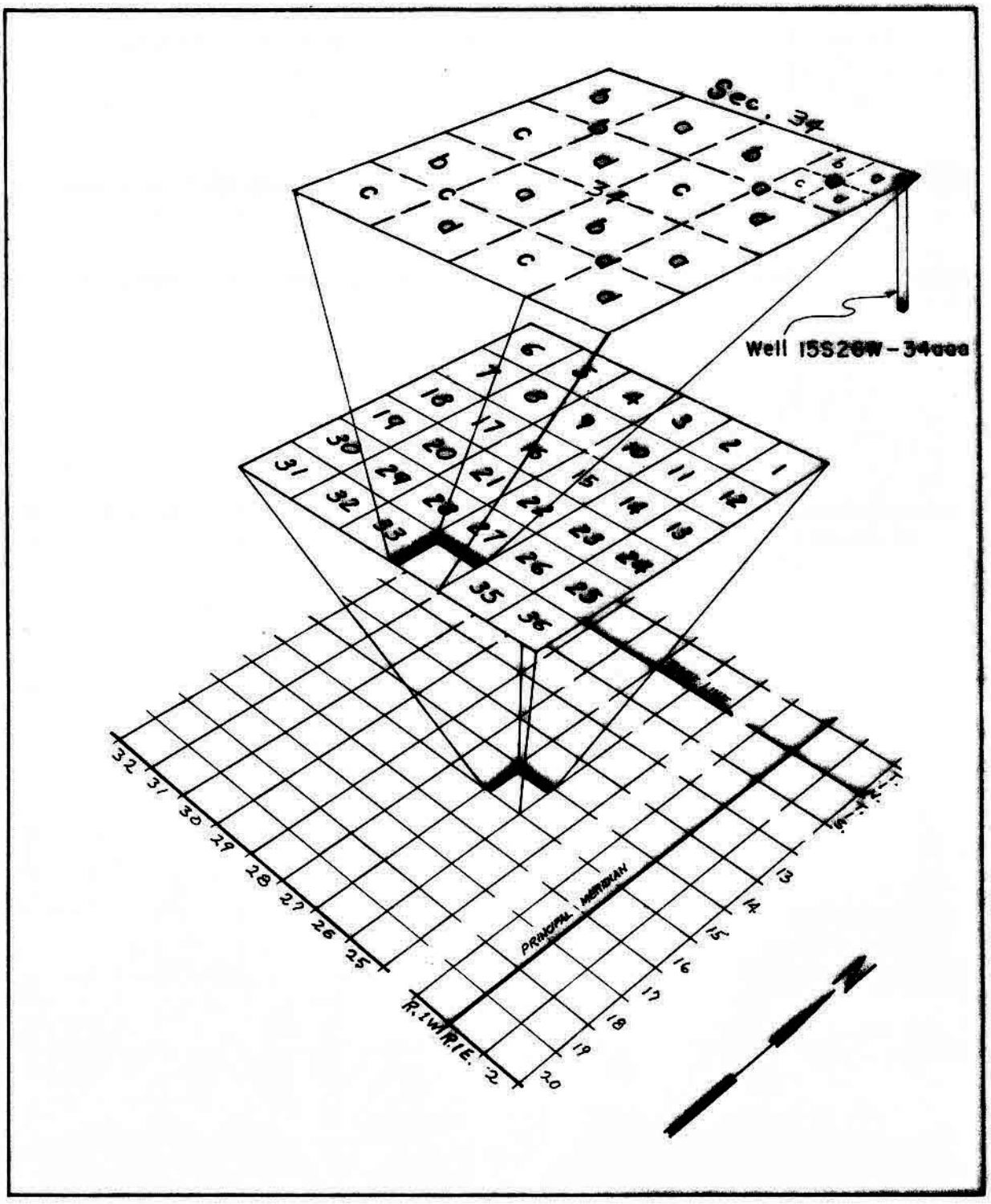

Figure 1.—Location numbering system.

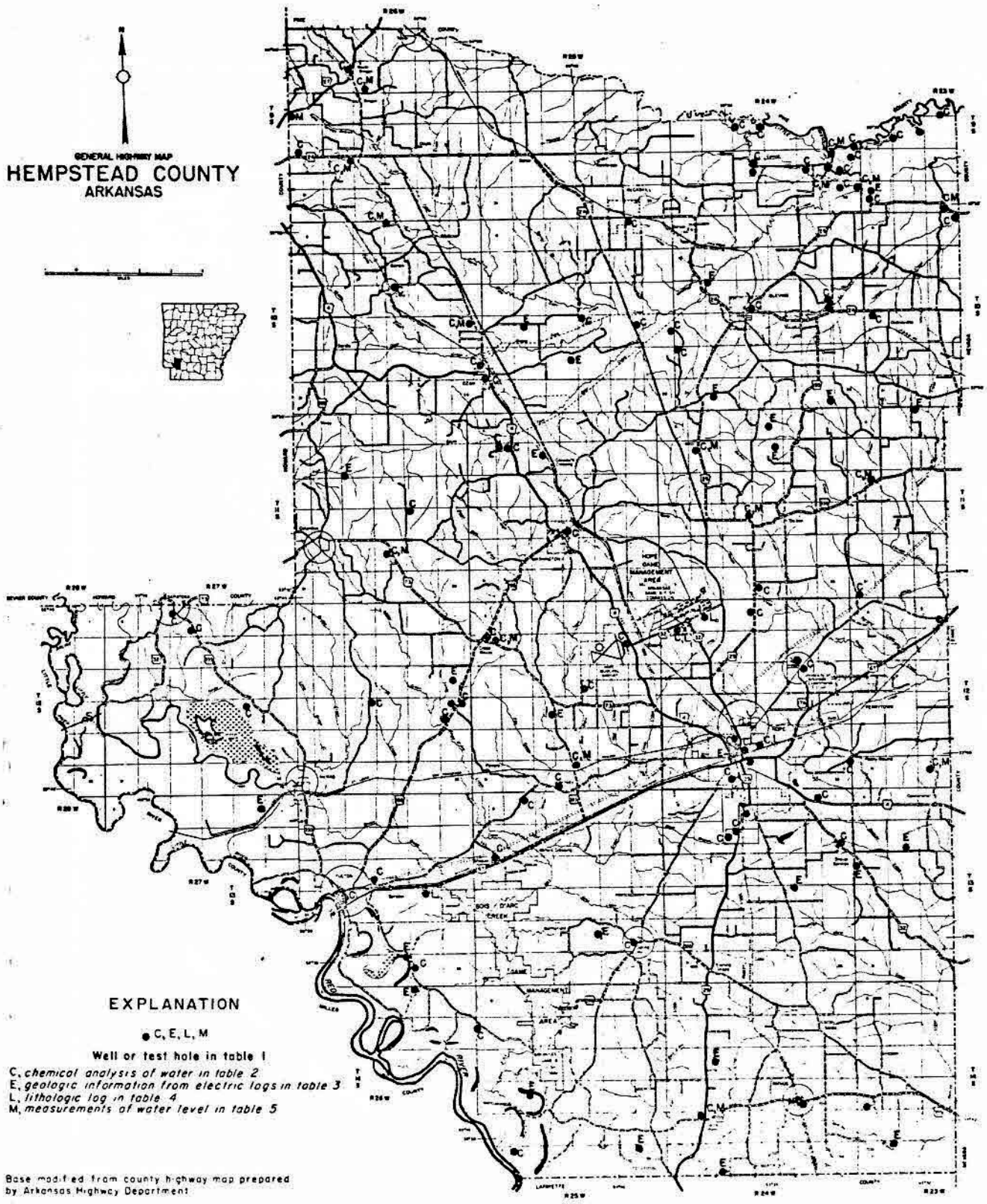

Figure 2.—Map showing locations of wells listed in tables 1, 2, 3, 4, and 5, Hempstead County, Arkansas.

Table 1.--Record of wells in Hempstead County, Ark.

Depth to water below land surface: + preceding water level measurement indicates that the water level is above land surface.

Use of water: Co., commercial, D., domestic, Ind., industrial, Ins., institutional, Irr., irrigation, P.S., Public Supply, R., recreation, S., stock, U., Unused.

Remarks: C., Chemical analysis of water included in report, see Table 3., L., Log of well included in report, see Table 4., M., water level measurements included in report, see Table 5.

Local well number	Date Drilled	Altitude above mean sea level (feet)	Well depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface (feet)	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
					Tokio Formation					
9S-23W-16CDD1	----	250	230	3	---	Flowing	5-1-51	--	D	C
19DAD1	----	250	244	3	---	Flowing	5-1-51	90	S	C
20ADD1	----	250	200	4	---	Flowing	5-1-51	40	D	
31CAC1	----	292	412	2	---	---	---	5	D	C
33DCC1	1936	310	467	2	---	9.6	3-7-58	--	D	C, M
9S-24W-21AAC1	----	280	200	2	---	Flowing	4-17-51	8	D	C
21BCB1	----	280	200	-	---	Flowing	4-17-51	--	D	C
24DCD1	----	265	185	4	---	Flowing	4-17-51	14	D	C
25ACB1	----	265	287	4	---	Flowing	4-17-51	16	D	
25BBB1	1935	268	270	3	---	14.5	6-5-58	--	D	C, M
25CBB1	----	264	280	4	---	15.4	3-7-58	2	D	C, M
25CBD1	----	263	290	4	---	Flowing	4-17-51	30	D	C
26CAB1	1937	268	240	2	---	9.67	12-7-67	38	D	C
28ACC1	1938	258	200	2	---	Flowing	4-17-51	3	D	C
28DBB1	1955	278	220	4	---	17.1	11-21-62	--	S	
36ADA1	----	260	300	2	---	23.90	12-5-67	11	S	C, M
36BAC1	----	260	200	2	---	Flowing	4-17-51	22	D	C
9S-26W- 8ADD1	1931	435	25	24	---	Flowing	3-28-51	1	D	C
9CDA1	----	425	16	30	---	11.80	12-7-67	5	U	C, M
18CBB1	1892	425	30	5	---	27.98	1-25-57	--	U	M
19CCD1	1949	485	120	2	---	---	---	--	D	C
29AAA1	----	420	---	-	---	17.17	12-7-67	--	D	C, M
10S-23W- 4AAA1	1944	290	459	2	---	Flowing	4-5-51	10	D	C
19BAB1	1941	400	684	3	---	---	---	5	D	C
10S-24W-14DDD1	1937	395	643	2	---	---	---	5	D	C
16CDD1	1949	422	670	4	---	---	---	15	Ins.	C
30BBB1	1933	324	693	2	---	---	---	5	S	C
10S-25W- 2ABB1	1936	446	375	2	---	---	---	5	S	C
22BBB1	1930	312	350	2	---	Flowing	3-28-51	1	S	C
23ACD1	----	300	300	2	---	Flowing	3-28-51	5	D	C
24DAA1	----	310	300	2	---	3.92	12-7-67	5	S	C
30CCC1	1919	390	555	4	---	---	---	--	P.S.	C
10S-26W- 3BBB1	1918	384	162	3	---	9.02	12-7-67	5	S	C, M
15BBA1	1940	427	375	3	---	---	---	5	Ins.	C
25DAD1	1880	398	485	2	---	---	---	5	D	C
11S-25W- 8BAC1	1940	---	665	2	---	---	---	5	D	C
11S-26W- 8BBB1	1950	365	550	3	---	---	---	15	D	C
23BBB1	1951	419	820	4	---	104.40	4-16-51	5	D	C
12S-24W- 5BDD1	----	358	1,143	-	1,094	72.40	12-28-49	--	P.S.	L
6CDD1	----	350	1,202	-	---	68.35	12-28-49	200	U	C, L
28CDC2	1918	353	1,480	8	1,430	100	1947	--	P.S.	
28CDD1	1950	353	1,500	12	1,380	---	---	240	P.S.	C
12S-27W- 4BBC1	1950	395	870	4	---	---	---	6	Ins.	C
					Ozan Formation					
10S-26W-24ABC1	1941	363	27	18	---	9.63	12-7-57	--	D	C, M
					Nacatoch Sand					
11S-23W-18ACD1	----	325	60	4	---	16.59	12-7-67	5	D	C, M
31CCD1	1950	322	185	2	---	---	---	--	D	C
11S-24W- 8BDB1	----	470	30	-	---	25.63	12-7-67	5	D	C, M
21ADD1	----	401	50	-	---	20.37	12-7-67	5	D	C, M
34CBC1	1941	312	51	2	---	---	---	5	D	C
11S-25W-32CCB1	1911	442	105	2	---	---	---	--	D	C
11S-26W-27BDD1	1943	430	32	24	---	19.55	3-29-51	5	Ins.	C, M
12S-23W- 4DDB1	1958	[illegible]	350	6	---	---	---	20	D, Irr.	
12S-24W- 1ADD1	1942	[illegible]	160	2	---	---	---	5	D	C
14BAC1	----	[illegible]	350	2	---	101.90	3-22-51	5	P.S.	
14BAC2	----	[illegible]	[illegible]	[illegible]	---	---	---	10	P.S.	C
27CBC1	1950	[illegible]	[illegible]	6	---	---	---	60	Ind.	C, L
28CDC1	1943	353	620	10	---	119	1943	300	P.S.	
28CDC3	1949	357	620	12	---	207.79	3-15-51	290	P.S.	
28DCA1	----	[illegible]	[illegible]	4	---	---	---	--	Ind.	C
[illegible]	[illegible]	[illegible]	[illegible]	10	543	155	9-26-42	[illegible]	P.S.	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	---	---	---	12	Ind.	[illegible]
34AAA1	1946	[illegible]	[illegible]	2	---	---	---	5	D	C

Table 1.--Record of wells in Hempstead County, Ark.--Continued

Local well number	Date drilled	Altitude above mean sea level (feet)	Well depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
Nacatoch Sand--Continued										
12S-25W- 7ABB1	1942	435	100	2	---	---	---	5	D	C
7ABD1	----	418	42	24	---	39.65	12-13-67	10	D	C, M
11ADD1	1946	350	207	-	---	---	---	--	P.S.	C
15DBC1	1947	315	202	2	---	---	---	--	D	C
33DDC1	1928	280	300	2	---	---	---	8	Ins.	C
34BAC1	1900	320	300	2	---	61.09	12-13-67	--	D	C, M
12S-26W-21AAC1	----	395	60	-	---	---	---	--	D	C
24ABC1	1920	315	108	2	---	Flowing	3-29-51	10	D	C
24BDA1	1928	312	104	2	---	Flowing	3-29-51	5	D	
24CCA1	1933	310	125	2	---	---	---	--	D	C
12S-27W- 4DDC1	1930	395	55	18	---	54.24	3-29-51	10	D	C
23BDA1	1940	395	800	4	---	---	---	5	D	
13S-24W- 2ADA1	1947	440	635	2	---	---	---	5	D	C
4DCB1	1948	360	709	6	628	---	---	--	Ind.	
9BDA1	1942	355	637	4	---	---	---	5	Ind.	C
9BDC1	1943	350	400	6	---	---	---	5	Ind.	C
12DCB1	1910	370	450	3	---	---	---	10	D	C
13S-25W- 5ABD1	----	420	300	3	---	---	---	5	D	C
18AAB1	1951	283	335	2	298	---	---	--	D	C
25CCB1	1948	350	850	4	---	---	---	10	Ins.	C
13S-26W-16DDA1	1942	280	225	2	---	---	---	--	Ins.	C
20ADD1	1947	260	465	8	---	---	---	--	Ind.	C
23ABB1	1951	270	265	2	199	22	4-4-51	--	S	L
35BCC1	1942	285	384	3	---	---	---	--	D	C
14S-25W- 7BBC1	1930	285	700	4	---	---	---	--	D	C
32BBC1	1918	240	160	2	---	---	---	--	S	C
Wilcox Group										
12S-23W-33BDD1	1929	290	60	-	---	17.87	12-13-67	5	D	C, M
14S-23W-19CDC1	1949	385	400	4	---	---	---	--	D	
Cane River Formation										
14S-24W-23CCB1	1920	375	200	1	---	10	4-11-51	--	Co.	
29BCB1	----	345	40	48	---	33.19	12-14-67	--	D	C, M
Deposits of Quaternary Age										
10S-24W-14DDD2	----	395	18	-	---	---	---	--	S	C

Table 2.--Selected chemical analyses of ground water in Hempstead County, Ark.

[Results in milligrams per liter unless otherwise indicated]

Local Well Number	Depth of well (feet)	Date of collection	Temperature (°C)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Flouride (F)	Nitrate (NO_3)	Dissolved solids: Calculated	Dissolved solids: Residue at 180°C	Hardness as $CaCO_3$: Carbonate	Hardness as $CaCO_3$: Noncarbonate	Alkalinity as $CaCO_3$	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
Tokio Formation																							
9S-23W-16CDD1	----	5- 1-51	18	----	0.76	----	----	----	----	51	0	19	5.2	----	0.6	----	----	9	0	42	----	150	7.9
19AAD1	----	5- 1-51	19	----	.33	----	----	----	----	32	0	18	4.8	----	.4	----	----	16	0	26	----	113	8.0
31CAC1	412	4-19-51	17	----	.11	----	----	----	----	201	0	48	12	----	.8	----	----	12	0	165	----	421	8.6
33DCC1	----	4- 4-51	--	----	.10	----	----	----	----	220	22	54	25	----	.3	----	----	7	0	217	----	593	8.9
9S-24W-21AAC1	----	4-17-51	19	----	.45	----	----	----	----	48	0	11	4.5	----	.5	----	----	13	0	39	----	127	7.3
21BCB1	----	4-17-51	19	----	.83	----	----	----	----	36	0	24	3.5	----	.1	----	----	16	0	30	----	106	7.2
24DCD1	----	4-17-51	18	----	.99	----	----	----	----	182	0	56	6.5	----	.3	----	----	24	0	149	----	378	8.2
25BBB1	----	4- 5-51	18	----	1.5	----	----	----	----	137	0	49	6.8	----	.5	----	----	47	0	112	----	300	8.2
25CBB1	----	4-17-51	19	----	1.6	----	----	----	----	147	0	54	7.2	----	.5	----	----	21	0	121	----	330	8.1
25CBD1	----	4-17-51	19	----	.47	----	----	----	----	167	0	68	6.2	----	.3	----	----	36	0	137	----	346	8.3
26CAB1	----	4- 5-51	18	----	1.4	----	----	----	----	99	0	23	5.0	----	.3	----	----	17	0	81	----	224	7.9
28ACC1	----	4-17-51	19	----	1.4	----	----	----	----	86	0	12	3.8	----	.1	----	----	19	0	71	----	177	7.5
36ADA1	300	4-16-51	19	----	.16	----	----	----	----	212	0	64	8.2	----	.3	----	----	29	0	174	----	429	8.1
36ADA1	300	2-28-68	19	9.6	.06	10	0.4	87	1.3	208	0	42	7.0	0.4	.1	260	278	26	0	171	7.35	434	7.8
36BAC1	----	4-17-51	20	----	.26	----	----	----	----	205	0	23	7.0	----	.2	----	----	42	0	168	----	418	8.0
9S-26W-8ADD1	----	3-23-51	18	----	.76	----	----	----	----	220	8	95	9.2	----	8.6	----	----	196	2	194	----	560	8.4
9CDA1	----	3-29-51	--	----	.51	----	----	----	----	13	0	3.0	8.2	----	18	----	----	31	20	11	----	97	7.1
19CCD1	----	3-29-51	--	----	3.3	----	----	----	----	32	0	1.0	3.5	----	7.0	----	----	21	0	26	----	68	7.3
29AAA1	----	3-29-51	14	----	.30	----	----	----	----	13	0	1.0	3.8	----	1.0	----	----	9	0	11	----	41	7.6
10S-23W-4AAA1	----	4- 5-51	22	----	.21	----	----	----	----	230	17	72	21	----	.5	----	----	23	0	217	----	572	8.9
19BAB1	----	4- 5-51	--	----	.22	----	----	----	----	229	9	90	45	----	1.1	----	----	25	0	203	----	673	8.5
10S-24W-14DDD1	643	4- 5-51	--	----	.29	----	----	----	----	187	0	58	18	----	.5	----	----	20	0	153	----	435	8.5
16CDD1	----	4- 5-51	--	----	.27	----	----	----	----	169	0	47	10	----	.9	----	----	23	0	139	----	352	7.9
30BBB1	----	3-30-51	18	----	2.5	----	----	----	----	192	0	115	43	----	.3	----	----	106	0	157	----	621	7.9
10S-25W-2ABB1	----	6-26-51	19	10	31	4.4	.6	9.0	.8	23	0	11	3.2	.0	.3	----	54	13	0	19	1.08	50	5.9
22BBB1	----	3-29-51	20	----	4.0	----	----	----	----	79	0	2.4	6.0	----	.7	----	----	26	0	65	----	173	8.2
23ACD1	----	3-25-51	18	----	9.4	----	----	----	----	104	0	7.0	5.8	----	.3	----	----	3	0	85	----	211	7.3
24DAA1	----	3-30-51	20	----	24	----	----	----	----	107	0	29	6.5	----	.7	----	----	6	0	88	----	235	8.0
30CCC1	----	3-25-51	18	----	3.9	----	----	----	----	139	6	1.0	16	----	1.1	----	----	19	0	124	----	277	8.5
10S-26W-3BBB1	----	3-29-51	17	----	54	----	----	----	----	3	0	33	4.8	----	.0	----	----	26	24	2	----	90	6.1
15BBA1	----	4-10-51	--	----	1.9	----	----	----	----	64	0	22	5.2	----	.2	----	----	52	0	52	----	152	7.4
25DAD1	----	3-23-51	16	----	.08	----	----	----	----	370	31	5.0	61	----	1.1	----	----	21	0	355	----	510	8.9
11S-25W-35AC1	665	3-29-51	--	----	10	----	----	----	----	123	0	23	8.0	----	.1	----	----	4	0	101	----	277	7.9
11S-26W-8BBB1	550	3-21-51	--	----	.37	----	----	----	----	186	0	35	6.8	----	.3	----	----	41	0	153	----	346	8.1
11S-26W-23BBB1	520	6-26-51	21	----	.61	----	----	----	----	133	0	59	14	----	1.9	----	----	3	0	109	----	316	8.6
12S-24W-6CDD1	1,202	12-28-49	31	15	.14	5.0	1.3	204	4.8	263	11	54	114	.8	1.6	----	525	18	0	238	21.02	375	8.5
28CDD1	----	3-27-51	37	9.[illegible]	.07	.8	1.9	444	16	5[illegible]4	10	44	320	2.2	3.6	----	1,150	10	0	467	61.63	1,920	8.4
12S-27W-4B2C1	----	3-[illegible]-51	21	----	.07	----	----	----	----	[illegible]	60	37	36	----	.9	----	----	12	0	622	----	1,21[illegible]	9.0
Ozan Formation																							
10S-26W-2-ABC1	----	3-2[illegible]-51	14	----	0.1[illegible]	----	----	----	----	203	0	99	159	----	4.0	----	----	336	170	166	----	997	[illegible]
Nacatoch Sand																							
11S-23W-15A[illegible]1	[illegible]	3-2[illegible]-51	--	----	0.24	----	----	----	----	[illegible]	0	22	3.0	----	3.1	----	----	172	17	154	----	33[illegible]	[illegible]
[illegible]	----	3-2[illegible]-51	--	----	.12	----	----	----	----	[illegible]	0	24	[illegible]	----	.3	----	----	195	0	20[illegible]	----	[illegible]	7.[illegible]
11S-24W-8BCB1	3[illegible]	3-3[illegible]-51	--	----	.21	----	----	----	----	[illegible]	0	1.0	18	----	26	----	----	22	20	2	----	[illegible]	[illegible]
21ADD1	[illegible]	3-30-51	--	----	[illegible]	----	----	----	----	13	0	1.0	[illegible]	----	15	----	----	18	7	11	----	[illegible]	7.[illegible]
34[illegible]1	3[illegible]	3-30-51	--	----	.72	----	----	----	----	[illegible]	[illegible]	[illegible]	3[illegible]	----	[illegible]	----	----	2[illegible]	6[illegible]	2[illegible]	----	[illegible]	[illegible]
11S-25W-[illegible]B1	----	3-25-51	--	----	2.5	----	----	----	----	[illegible]	14	[illegible]	3.7	----	3.1	----	----	[illegible]	0	205	----	[illegible]	8.7
11S-26W-27[illegible]1	3[illegible]	[illegible]	--	----	.44	----	----	----	----	17[illegible]	[illegible]	37	2[illegible]	----	.[illegible]	----	----	136	0	147	----	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	--	----	[illegible]	----	----	----	----	[illegible]	[illegible]	[illegible]	[illegible]	----	1.1	----	----	[illegible]	3[illegible]	2[illegible]	----	[illegible]	[illegible]
1[illegible]BA[illegible]	[illegible]	[illegible]	--	----	[illegible]	----	----	----	----	[illegible]	[illegible]	[illegible]	22	----	[illegible]	----	----	[illegible]	0	14[illegible]	----	[illegible]	[illegible]

Table 2.--Selected chemical analyses of ground water in Hempstead County, Ark.--Continued

(Results in milligrams per liter unless otherwise indicated)

Local Well Number	Depth of well (feet)	Date of collection	Temperature (°C)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids: Calculated	Dissolved solids: Residue at 180°C	Hardness as $CaCO_3$: Carbonate	Hardness as $CaCO_3$: Noncarbonate	Alkalinity as $CaCO_3$	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
Nacatoch Sand--Continued																							
12S-24W-27CBC1	597	3-22-51	--	----	0.10	----	----	----	----	256	0	46	30	----	1.4	----	----	47	0	210	----	546	7.9
28CDA1	----	3-22-51	--	----	.37	----	----	----	----	54	0	44	31	----	.2	----	----	50	6	44	----	563	8.2
33CBD1	----	3-22-51	--	----	.29	----	----	----	----	239	10	51	44	----	1.7	----	----	55	0	212	----	607	8.6
36AAA1	----	3-22-51	--	----	.21	----	----	----	----	212	16	49	36	----	1.7	----	----	15	0	201	----	565	8.9
12S-25W-7ABB1	----	3-29-51	--	----	1.5	----	----	----	----	10	0	1.0	4.5	----	4.9	----	----	7	0	8	----	38	7.1
7ABD1	----	3-29-51	14	----	.08	----	----	----	----	39	0	1.0	7.0	----	4.4	----	----	28	0	32	----	100	7.6
11ADD1	----	12-28-49	--	32	.19	70	5.6	14	1.4	267	0	18	5.5	0.0	1.0	----	276	198	0	219	0.43	448	8.1
15DBC1	202	3-21-51	--	----	1.1	----	----	----	----	204	5	12	5.8	----	2.8	----	----	140	0	176	----	373	8.4
15DBC1	202	2-28-68	18	19	.03	37	6.2	37	2.4	200	0	31	6.0	.3	1.1	238	244	118	0	164	1.48	384	7.8
33DDC1	----	3-20-51	--	----	1.1	----	----	----	----	208	6	46	18	----	2.0	----	----	30	0	180	----	489	8.4
34BAC1	----	3-20-51	--	----	.62	----	----	----	----	222	0	119	17	----	2.2	----	----	50	0	182	----	648	8.2
12S-26W-21AAC1	----	3-29-51	--	----	.22	----	----	----	----	17	0	1.0	5.8	----	21	----	----	21	7	14	----	90	7.4
24ABC1	----	3-29-51	--	----	.31	----	----	----	----	227	0	5.0	4.0	----	.7	----	----	155	0	186	----	348	8.4
24CCA1	----	3-21-51	--	----	.23	----	----	----	----	230	6	5.0	7.8	----	1.0	----	----	108	0	198	----	382	8.4
12S-27W-4DDC1	----	3-29-51	--	----	.21	----	----	----	----	19	0	1.0	3.8	----	9.6	----	----	20	4	16	----	76	7.3
13S-24W-2ADA1	----	3-22-51	--	----	.16	----	----	----	----	234	11	65	40	----	3.1	----	----	10	0	210	----	634	8.6
9BDA1	----	3-21-51	--	----	.54	----	----	----	----	251	18	48	46	----	.4	----	----	8	0	236	----	690	8.9
9BDC1	----	3-21-51	--	----	.09	----	----	----	----	255	16	42	47	----	2.0	----	----	10	0	236	----	701	8.8
12DCB1	----	3-22-51	--	----	3.5	----	----	----	----	196	0	2.0	10	----	.2	----	----	91	0	161	----	326	8.2
13S-25W-5ABD1	----	3-20-51	--	----	.30	----	----	----	----	222	13	31	18	----	2.8	----	----	15	0	203	----	476	8.6
18ABB1	----	3-22-51	--	----	.09	----	----	----	----	260	24	15	16	----	2.1	----	----	28	0	253	----	528	9.0
25CCB1	----	3-21-51	--	----	.05	----	----	----	----	297	12	35	225	----	.7	----	----	10	0	263	----	1,240	8.7
13S-26W-16DAA1	----	3-21-51	--	----	.16	----	----	----	----	250	0	18	6.0	----	1.4	----	----	93	0	205	----	417	8.2
20ADD1	----	3-21-51	--	----	.54	----	----	----	----	245	9	16	5.5	----	1.7	----	----	38	0	216	----	431	8.6
35BCC1	----	3-19-51	13	----	.13	----	----	----	----	283	22	24	78	----	1.7	----	----	8	0	269	----	800	8.9
14S-25W-7BBC1	----	3-19-51	--	----	.36	----	----	----	----	288	21	32	210	----	1.0	----	----	0	0	271	----	1,220	8.8
32BBC1	----	4-11-51	--	----	3.0	----	----	----	----	321	14	40	340	----	2.7	----	----	14	1	286	----	1,680	8.6
Wilcox Group																							
12S-23W-33BDD1	60	3-22-51	--	----	0.17	----	----	----	----	33	0	1.0	5.8	----	3.7	----	----	26	0	27	----	90	7.4
Cane River Formation																							
14S-24W-29BCB1	40	4- 4-51	--	----	0.14	----	----	----	----	3	0	6.0	22	----	9.0	----	----	18	16	2	----	113	5.3
29BCB1	40	2-28-68	14	25	.00	1.3	2.0	13	2.0	0	0	7.0	24	0.1	6.5	81	91	11	11	0	----	127	4.5
Alluvial deposits of Quaternary age																							
10S-24W-14DDD2	----	4- 5-51	--	----	0.13	----	----	----	----	37	0	5.0	7.0	----	6.6	----	----	38	13	25	----	124	7.7

Table 3.--Aquifers as determined from electrical logs of oil tests in Hempstead County, Ark.

[Information is recorded in this table only for aquifers that occur within the logged interval]

Driller, lease and well number	Location	Year drilled	Land surface altitude (feet above mean sea level)	Logged interval (feet below land surface)	Aquifer	Depth to top of aquifer (feet below land surface)	Thickness of aquifer (feet)	Percentage of sand in aquifer	Remarks
John A. Kennedy Phillip Ward No. 1	9S-23W-31BD	1947	270	34-1,076	Tokio Formation	345	80	81	
Phillip & Lance J. M. Walker et al. No. 1	10S-24W-17BBB	1947	420	170-1,865	do	522	111	63	
Freedman & Meyer Lealey No. 1	10S-24W-32CAB	1949	370	100-2,205	do	646	134	52	
Sam Ekiar Jack Evans No. 1	10S-24W-35DD	1949	402	100-1,833	do	746	90	50	
Mellie B. Mining Co. Andy Pickens No. 1	10S-25W-20BDA	1950	331	120-1,380	do	316	159	82	
J. H. Buchanan H. E. King No. 1	10S-25W-28ADC	1949	347	120-2,511	do	447	155	65	
C. H. Bigsby Avery No. 1	11S-23W-4BBB	1950	370	113-2,204	Nacatoch Sand Tokio Formation	(1) 801	------- 131	2/ 68 57	Bottom of Nacatoch Sand at depth of 132 feet.
C. M. Bagley Berry No. 1	11S-24W-3DBB	1949	420	100-2,111	Tokio Formation	783	127	55	
John A. Kennedy A. L. Coffee No. 1	11S-24W-10ACA	1949	418	100-2,508	Nacatoch Sand Tokio Formation	(1) 863	------- 100	2/ 50 40	Bottom of Nacatoch Sand at depth of 128 feet.
H. J. Heartwell Bessie C. Thomas et al. No. 1	11S-25W-9BDD	1954	417	107-2,509	Tokio Formation	652	120	58	
Tom Ray E. L. Cox No. 1	11S-26W-9CCC	1960	370	120-5,115	do	466	159	44	
Butler-Johnson Service Co. City of Hope Water Well No. 1	12S-24W-28CDD	1950	353	100-1,494	Nacatoch Sand Tokio Formation	390 1,330	205 155	70 65	
John R. Black Caraway No. 1	12S-25W-21DB	1950	330	225-3,177	Nacatoch Sand Tokio Formation	(1) 1,088	------- 157	2/ 90 70	Bottom of Nacatoch Sand at depth of 340 feet.
Ryan and Wight et al. Shearer No. 1	12S-26W-13	1947	360	218-3,214	Nacatoch Sand Tokio Formation	(1) 934	------- 160	2/ 100 81	Bottom of Nacatoch Sand at depth of 274 feet.
Arkoma Oil and Burnett Production Mathews No. 1	13S-23W-8DC	1950	375	104-1,993	Nacatoch Sand Tokio Formation	579 1,584	190 120	66 33	
Carter Oil Co. Nova Carrigan No. 1	13S-23W-18BC	1948	360	419-3,800	Nacatoch Sand Tokio Formation	552 1,547	190 115	70 60	
Royal Oil & Gas Corp. McWilliams-Samford Unit No. 1	13S-24W-23BB	1944	370	350-4,524	Nacatoch Sand Tokio Formation	591 1,551	200 110	70 63	
Lee & Burnett Ollar No. A-1	13S-25W-27ADD	1948	325	100-5,439	Nacatoch Sand Tokio Formation	584 1,584	120 140	58 50	
Barnsdall Oil Co. Brooks Shults No. 1	13S-26W-34AA	1943	250	452-4,935	Nacatoch Sand Tokio Formation	(1) 1,335	------- 120	2/ 60 50	Bottom of Nacatoch Sand at depth of 500 feet.
M. E. Davis Harry Ezell No. 1	13S-27W-2ADD	1944	255	269-4,507	Tokio Formation	941	140	60	
Hy-Grade Production Co. E. A. Copeland No. 1	14S-23W-32BB	1942	270	575-6,388	Nacatoch Sand Tokio Formation	1,004 2,014	190 113	40 62	
F. W. Martin and Co. A. J. Lafferty No. 1	14S-24W-17	1934	330	103-2,760	Wilcox Group Nacatoch Sand	(1) 870	------- 210	2/ 81 57	Bottom of Wilcox Group at depth of 340 feet.
Gene Goff et al. Amos Powell No. A-1	14S-24W-32DDC	1954	312	425-6,751	Wilcox Group Nacatoch Sand	(1) 1,067	------- 180	2/ 100 50	Bottom of Wilcox Group at depth of 455 feet.
Barnsdall Oil Co. Shults No. 1	14S-25W-20AC	1942	255	490-6,099	Nacatoch Sand	755	97	41	
Barnsdall Oil Co. Brunson No. 1	14S-25W-36BB	1944	330	617-6,546	do	1,053	100	60	
Placid Oil Co. Munday No. 1	14S-26W-33B	1947	260	496-5,193	do	(1)	-------	2/ 45	Bottom of Nacatoch Sand at depth of 552 feet.

1 Logged interval starts below top of formation.
2 Percentage of sand is for that part of aquifer actually logged.

Table 4.--Logs of test holes and wells

Hempstead County

12S-24W-5BDD1. Log of Hope Light and Water Co. well by driller.

Surface altitude, 340 ft.

	Thickness (feet)	Depth (feet)
Yellow clay	35	35
Blue shale	72	107
Fine sand	5	112
Rock	4	116
Rock, not so hard	6	122
Break	3	125
Fine sand	6	131
Rock	6	137
Fine sand	12	149
Hard rock	5	154
Fine hard sand	6	160
Hard spot	2	162
Fine sand	2	164
Sand with hard spot	2	166
Sandy shale	4	170
Rock	1	171
Fine sand	20	191
Rock	1	192
Break	1	193

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

12S-24W-5BDD1.--Continued

	Thickness (feet)	Depth (feet)
Rock	1	194
Fine sand	22	216
Finer sand	18	234
Rock	2	236
Breaks with rock	6	242
Rock	3	245
Fine black sand	18	263
Rock	2	265
Fine black sand	5	270
Rock	1	271
Sandy shale	4	275
Rock	1	276
Sand shale with hard spots	14	290
Rock	1	291
Sandy shale	4	295
Rock	1	296
Sandy shale	11	307
Rock	1	308
Hard shale	142	450
Tough clay or shale	113	563

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

12S-24W-5BDD1.--Continued

	Thickness (feet)	Depth (feet)
Hard spot	8	571
Hard tough shale	192	763
Hard spot	6	769
Soft shale	14	783
Hard spot	3	786
Hard shale	27	813
Soft shale	13	826
Hard spot	3	829
Hard shale	64	893
Shale and boulders	8	901
Tough shale	1	902
Boulders	1	903
Tough shale	1	904
Soft gummy shale	51	955
Rock	1	956
Hard shale	95	1,051
Rock	1	1,052
Sandy shale	8	1,060
Rock	1	1,061
Soft shale	13	1,074

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

12S24W-5BDD1.--Continued

	Thickness (feet)	Depth (feet)
Hard spot	1	1,075
Soft shale	10	1,085
Hard spot	2	1,087
Soft shale	22	1,109
Shale	6	1,115
Sand	7	1,122
Sand (last 5 ft. not so good)	33	1,155
Sandy shale	16	1,171
Hard rock	1	1,172
Sand	15	1,187
Rock	2	1,189
Tough shale	14	1,203

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

12S-24W-6CDD1. Log of Hope Light and Water Co. well by driller.

Surface altitude, 340 ft.

	Thickness (feet)	Depth (feet)
Soft yellow clay	10	10
Blue clay	14	24
Hard clay	16	40
Shale	46	86
Hard spot	2	88
Soft sandy shale	7	95
Hard rock	4	99
Soft sandy shale	3	102
Rocks with soft spots	7	109
Shale	7	116
Rock	2	118
Shale	3	121
Rock	1	122
Sandy shale	7	129
Rock	3	132
Soft sandy shale	8	140
Rock	2	142
Sandy shale	8	150
Hard rock	3	153

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

12S-24W-6CDD1.--Continued

	Thickness (feet)	Depth (feet)
Hard shale	8	161
Hard spot	2	163
Shale	3	166
Sandy shale	10	176
Hard spot	1	177
Soft sandy shale	37	214
Hard spot	1	215
Fine black sand	15	230
Rock	4	234
Sandy shale	11	245
Rock	1	246
Blue shale	10	256
Rock	1	257
Blue shale	19	276
Rock	1	277
Shale with hard spot	5	282
Hard spot	1	283
Shale	13	296

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

12S-24W-6CDD1.--Continued

	Thickness (feet)	Depth (feet)
Tough clay	26	322
Clay, some softer	10	332
Tough shale	60	392
Boulders	4	396
Shale	18	414
Hard shale	2	416
Shale and boulders	9	425
Gumbo	18	443
Hard shale	173	616
Shale (not so hard)	22	638
Hard shale	22	660
Hard gumbo	3	663
Sandy shale	19	682
Soft shale	11	693
Fine sand	2	695
Soft shale	35	730
Tough shale	15	745
Sandy shale	15	760
Tough shale	10	770
Sandy shale	4	774

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

12S-24W-6CDD1.--Continued

	Thickness (feet)	Depth (feet)
Shale	71	845
Hard shale	30	875
Sandy shale	7	882
Hard tough shale	5	887
Sandy shale	3	900
Soft shale	25	925
Hard tough shale	7	932
Soft shale	12	944
Shale	16	960
Sandy shale	19	979
Boulders	1	980
Sandy shale	3	983
Tough clay	2	985
Soft sandy shale	11	996
Hard shale	7	1,003
Soft shale	1	1,004
Hard shale	5	1,009
Tough shale	34	1,043
Boulders	1	1,044
Sandy shale	23	1,067

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

12S-24W-6CDD1.--Continued

	Thickness (feet)	Depth (feet)
Lignite	2	1,069
Sandy shale	8	1,077
Tough shale	17	1,094
Water bearing sand	49	1,143

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

12S-24W-27CBC1. Log of Hope Brick Company well, by driller.

Surface altitude, 350 ft.

	Thickness (feet)	Depth (feet)
Surface clay	30	30
Shale	48	78
Boulders	0'2"	78'2"
Shale	261'10"	340
Sand--fair	24	364
Rock	2'6"	366'6"
Sandy	1'6"	368
Rock	2	370
Sand	2	372
Rock	1	373
Sandy	2	375
Rock	1	376
Sandy	8	384
Rock	5	389
Sandy	21	410
Rock	4	414
Sandy	11	425
Rock	0'4"	425'4"
Sandy	1'8"	427

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

12S-24W-27CBC1.--Continued

	Thickness (feet)	Depth (feet)
Sandy shale	7	434
Rock	0'8"	434'8"
Shale and shell	5'4"	440
Rock	3	443
Sandy shale	22	465
Shale and boulders	15	480
Shale	117	597

Table 4.--Logs of test holes and wells--Continued

Hempstead County--Continued

13S-26W-23ABB1. Log of well, owned by Henry Mack, by driller.

Surface altitude, 270 ft.

	Thickness (feet)	Depth (feet)
River dirt	64	64
Gravels	1	65
Blue dirt	165	230
Rock	4	234
Sand	31	265
Rock--below 265		

Table 5.--Measurement of water levels in wells, Hempstead County, Arkansas

[Datum, land surface, water levels above land surface are preceded with a +]

Date	Water level
Tokio Formation	
9S-23W-33DCC1	
Mar. 7, 1958	+11.60
Apr. 7	+12.10
June 4	+ 9.40
July 16	+10.80
Aug. 5	+10.70
Sept. 10	+10.10
Oct. 7	+10.30
Dec. 1	+10.70
May 4, 1959	+ 9.60
June 1	+10.20
July 8	+10.00
Aug. 10	+ 9.90
Apr. 20, 1960	+ 8.70
Oct. 4	+ 9.80
Mar. 7, 1961	+ 9.40
Aug. 29	+ 9.00
9S-24W-25BBB1	
June 5, 1958	+17.50
Aug. 5	+23.20
Sept. 10	+19.50
Dec. 1	+20.20
May 4, 1959	+23.60
June 1	+23.40
July 8	+23.20
Aug. 19	+19.30
Oct. 4, 1960	+18.90
Aug. 30, 1961	+20.30

Date	Water level
Tokio Formation--Continued	
9S-24W-25CBB1	
Mar. 7, 1958	+17.40
Apr. 7	+17.90
June 5	+17.90
July 16	+18.30
Aug. 5	+18.10
Sept. 10	+16.90
Oct. 7	+17.30
Dec. 1	+17.80
May 4, 1959	+19.30
June 1	+19.00
July 8	+19.10
Aug. 19	+18.80
Oct. 4, 1960	+18.40
Mar. 7, 1961	+16.60
Aug. 30	+16.40
9S-24W-36ADA1	
Dec. 5, 1967	+29.30
Mar. 28, 1969	+25.40
9S-26W-9CDA1	
Dec. 7, 1967	10.80
Mar. 27, 1968	9.56

Table 5.--Measurement of water levels in wells, Hempstead County, Ark.--Continued

Date	Water level
Tokio Formation--Continued	
9S-26W-18CBB1	
Jan. 26, 1957	25.98
Mar. 5	25.65
Mar. 25	22.99
Apr. 25	20.57
May 23	19.92
June 25	15.48
July 23	16.13
Aug. 21	18.57
Sept. 25	19.98
Oct. 30	20.06
Nov. 26	17.95
Dec. 13	17.42
Feb. 5, 1958	16.99
Mar. 6	16.72
Apr. 8	17.98
May 6	15.90
June 5	15.56
July 16	17.23
Aug. 5	17.29
Sept. 10	19.18
Oct. 7	19.46
Nov. 4	19.33
Dec. 2	19.18
Jan. 13, 1959	19.83
Feb. 3	20.06
Mar. 31	18.84
May 5	19.64
June 2	20.08
July 8	19.32
Aug. 19	20.17
Sept. 10	20.79
Oct. 6	21.39
Nov. 3	21.02
Dec. 1	23.42
Jan. 11, 1960	20.32
Feb. 10	17.60
Mar. 1	17.03
Apr. 11	16.95
May 9	17.73

Date	Water level
Tokio Formation--Continued	
9S-26W-18CBB1--Continued	
June 7, 1960	16.92
Aug. 8	17.60
Sept. 9	17.90
Oct. 3	21.10
Nov. 2	20.86
Dec. 6	20.49
Jan. 12, 1961	19.63
Mar. 7	21.28
Aug. 29	20.35
Nov. 13	19.57
Mar. 27, 1962	15.80
May 22	16.98
July 18	17.85
Oct. 1	17.69
Dec. 4	15.86
Feb. 12, 1963	16.95
Apr. 16	19.80
June 7	20.31
Aug. 6	21.75
Sept. 30	23.48
Dec. 3	24.64
Jan. 9, 1964	25.20
Mar. 4	25.41
Apr. 14	23.86
May 20	24.23
Mar. 2, 1965	16.40
Dec. 7, 1967	23.07
Mar. 27, 1968	19.44
Oct. 24	18.87
9S-26W-29AAA1	
Dec. 7, 1967	16.17
Mar. 27, 1968	14.06

Table 5.--Measurement of water levels in wells, Hempstead County, Ark.--Continued

Date	Water level
Tokio Formation--Continued	
10S-26W-3BBB1	
Dec. 7, 1967	6.02
Mar. 27, 1968	1.27
Oct. 24	4.68
Ozan Formation	
10S-26W-24ABC1	
Dec. 7, 1967	7.13
Mar. 27, 1968	1.76
Oct. 24	8.14
Nacatoch Sand	
11S-23W-18ACD1	
Dec. 7, 1967	13.59
Mar. 26, 1968	11.89
Oct 25	14.34
11S-24W-8BDB1	
Dec. 7, 1967	22.63
Mar. 26, 1968	21.53
Oct. 24	20.54

Date	Water level
Nacatoch Sand--Continued	
11S-24W-21ADD1	
Dec. 7, 1967	17.87
Mar. 26, 1968	16.43
Oct. 24	16.34
11S-26W-27BDD1	
Mar. 29, 1951	17.05
Dec. 13, 1967	6.90
12S-25W-7ABD1	
Dec. 13, 1967	36.65
Mar. 26, 1968	38.76
12S-25W-34BAC1	
Dec. 13, 1967	60.59
Mar. 26, 1968	59.59
Oct. 24	64.47

Table 5.--Measurement of water levels in wells, Hempstead County, Ark.--Continued

Date	Water level
Wilcox Group	
12S-23W-33BDD1	
Dec. 13, 1967	14.87
Mar. 26, 1968	12.57
Cane River Formation	
14S-24W-29BCB1	
Dec. 14, 1967	30.19
Mar. 26, 1968	5.16
Oct. 24	32.13

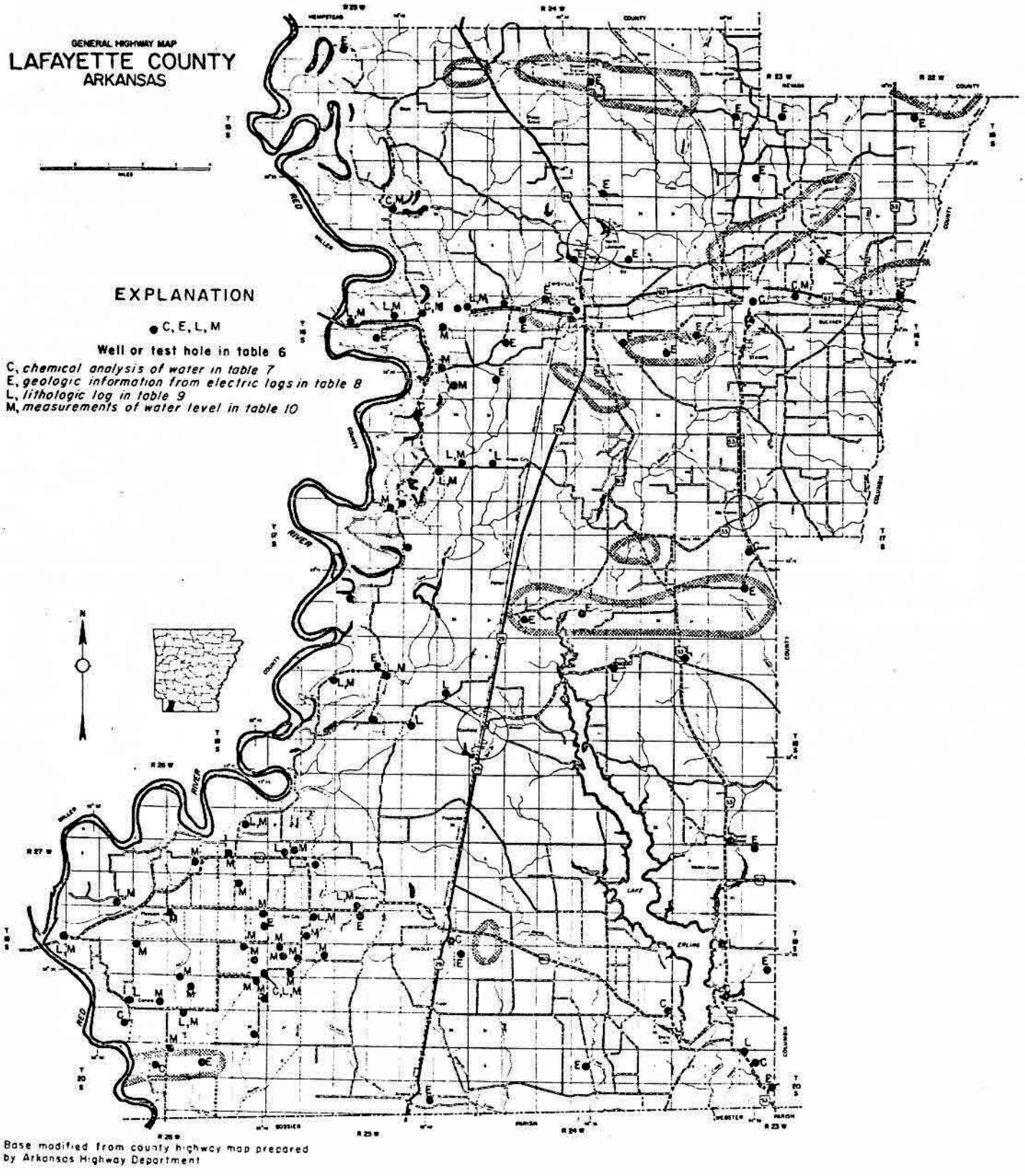

Figure 3.—Map showing locations of wells listed in tables 6, 7, 8, 9, and 10, Lafayette County, Arkansas.

Table 6.--Record of wells in Lafayette County, Ark.

Depth to water below land surface: + preceding water level measurement indicates that the water level is above land surface.

Use of water: D., domestic, Ind., industrial, Irr., irrigation, P.S., Public Supply, R., recreation, S., stock, U., unused., Rp., Repressure.

Remarks: C., Chemical analysis of water included in report, see Table 7., L., Log of well included in report, see Table 9., M., Water level measurements included in report, see Table 10.

Local well number	Date drilled	Altitude above mean sea level (feet)	Well depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface (feet)	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
Wilcox Group										
15S-25W-35BCD1	----	232	700	4	---	10.50	7-15-64	--	D	C, M
Cane River Formation										
16S-23W-10DCA1	----	295	300	12	---	34.75	3-31-53	--	Ind.	C, M
16BCB2	----	290	378	-	---	---	---	--	P.S.	C
16DAA1	1968	270	400	16	380	---	---	--	P.S.	
16S-25W-14DBB1	1946	227	300	4	---	4.00	7-15-64	--	D	C, M
35BDC1	1953	230	350	4	---	---	---	--	D	C
17S-23W-21BCB1	----	295	400	-	---	---	---	--	Ind.	C
17S-25W-15AAA1	1953	225	420	3	---	10.15	7-13-64	--	D	
19S-25W-13CDD1	----	258	460	-	---	---	---	--	P.S.	C
19S-26W- 2ADC1	1950	208	400	4	---	14.19	7-13-64	--	D	M
25DAA1	----	208	400	4	---	25.74	7-13-64	--	D	M
32ADC1	----	205	370	8	285	---	---	--	Rp.	C
20S-26W- 3BBC1	----	200	350	4	---	14.10	6-5-63	--	S	M
4DBD1	----	203	300	8	270	---	---	--	Rp.	C
Sparta Sand										
16S-24W-15BCB1	1935	320	388	12	---	---	---	--	P.S.	C
19S-23W-29ACC1	1960	240	283	2	---	---	---	--	D	C
Deposits of Quaternary Age										
16S-25W-13ACD1	----	225	60	2	---	---	---	--	Irr.	
13ADC1	1963	225	48	1¼	46	9.99	6-19-63	--	U	L, M, well destroyed
13CCC1	1951	225	70	18	---	18.02	4-19-55	--	Irr.	M
15DDB1	1963	230	29	1¼	27	15.32	6-19-63	--	U	L, M
16CDC1	1963	230	29	1¼	27	21.58	6-19-63	--	U	L, M
25BBC1	1950	228	70	18	55	14.78	4-19-55	850	Irr.	M
25CAC1	1951	226	70	16	---	7.49	5-24-55	--	Irr.	M
17S-25W- 1DDC1	1963	220	26	1¼	24	4.05	6-19-63	--	U	L, M
11AAA1	1963	225	50	1¼	48	12.46	6-19-63	--	D	L, M
15ADB1	1963	225	40	1¼	38	14.95	6-19-63	--	U	L, M
23CEB1	----	221	---	18	---	12.89	11-7-67	--	Irr.	
25CDA1	----	220	25	1¼	---	18.40	6-6-63	--	D	
18S-23W- 6CED1	1968	257	95	-	---	---	---	--	U	L
32DCC1	1968	242	93	-	---	---	---	--	U	L
18S-24W- 2CCA1	1968	255	53	-	---	---	---	--	U	L
18S-25W- 5AAD1	1963	218	41	1¼	39	18.77	6-19-63	--	U	L, M
10BAA1	1963	218	50	1¼	48	12.35	6-19-63	--	U	L, M
12CAC1	1968	224	126	-	---	---	---	--	U	L
15BCC1	----	225	52	2	---	41.95	6-6-63	--	D	
18S-26W-36BCA1	1961	215	29	1¼	27	22.23	6-19-63	--	U	L, M
19S-23W-17CDD1	1968	245	68	-	---	---	---	--	U	L
19S-24W-25DDD1	----	242	90	2	---	---	---	--	D	C

Table 6.--Record of wells in Lafayette County, Ark.--Continued

Local well number	Date drilled	Altitude above mean sea level (feet)	Well depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface (feet)	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
Deposits of Quaternary Age--Continued										
19S-25W- 5CAD1	1952	205	60	8	---	10.71	3-23-55	--	Irr.	
6ABD1	1955	215	63	12	43	12.58	3-23-55	--	Irr.	M
6ACD1	1963	215	51	1¼	49	19.97	6-19-63	--	U	L, M
9DCD1	1963	253	52	1¼	50	39.73	6-19-63	--	U	L, M
17BAC1	1963	211	39	1¼	37	17.98	6-19-63	--	U	L, M
17CCB1	----	210	45	12	---	15.03	6-5-63	--	Irr.	M
19ADD1	1949	210	65	18	45	6.32	3-23-55	700	Irr.	M
19BAA1	1952	206	68	18	48	7.84	3-23-55	900	Irr.	M
19BDA1	1955	204	63	18	43	7.24	3-23-55	850	Irr.	M
19DCA1	1954	206	75	16	55	15.12	3-23-55	1,000	Irr.	M
20ACD1	----	204	24	1¼	---	3.08	6-6-63	--	S	M
19S-26W- 3DAB1	----	210	---	14	---	17.60	6-6-63	--	Irr.	M
8DCB1	1963	207	18	1¼	16	15.73	6-19-63	--	U	L, M
12BCB1	1956	205	60	12	---	15.30	6-6-63	--	Irr.	M
13AAA1	----	206	26	2	---	16.95	6-6-63	--	U	M
15BBB1	----	204	55	1¼	---	12.37	6-5-63	--	U	M
21BBB1	----	205	56	1¼	---	14.58	6-5-63	--	U	M
24BAB1	1949	204	68	20	---	4.80	4-19-55	--	Irr.	M
24DBA1	1949	204	70	20	---	6.12	4-19-55	--	Irr.	M
24DDD1	1963	206	51	1¼	49	24.59	6-19-63	--	U	C, L, M
25ABD1	----	205	---	12	---	19.03	6-5-63	--	Irr.	M
27ACA1	1951	201	60	18	---	9.85	4-19-55	--	U	M
27BAA1	1951	201	59	18	---	9.81	4-19-55	--	Irr.	M
27DDB1	1951	202	58	20	---	12.51	4-19-55	--	Irr.	M
34BAA1	1963	202	39	1¼	37	19.50	6-19-63	--	U	L, M
36DCA1	----	206	32	1¼	---	15.92	6-5-63	--	U	
19S-27W-13DDD1	1963	210	29	1¼	27	19.63	6-19-63	--	U	L, M
20S-23W- 4BBB1	1968	242	68	-	---	---	---	--	D	L
4BDA1	1966	240	66	4	60	---	---	--	D	C

Table 7.--Selected chemical analyses of ground water in Lafayette County, Ark.

(Results in milligrams per liter unless otherwise indicated)

Local Well Number	Depth of well (feet)	Date of collection	Temperature (°C)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids: Calculated	Dissolved solids: Residue at 180°C	Hardness as $CaCO_3$: Carbonate	Hardness as $CaCO_3$: Noncarbonate	Alkalinity as $CaCO_3$	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
Wilcox Group																							
15S-25W-35BCD1	700	3- 7-68	18	9.9	0.04	11	1.9	35	2.1	124	0	6.8	3.0	0.3	0.0	131	131	36	0	102	----	225	7.5
Cane River Formation																							
16S-23W-10DCA1	300	7- 7-52	---	----	0.92	----	----	----	----	70	0	6.0	4.2	----	.5	----	----	23	0	57	----	129	7.4
16BCB2	378	1-17-46	---	11	1.92	11	2.9	26	4.7	105	0	6.5	6.5	0.0	1.5	----	121	39	0	86	1.80	20	7.9
16BCB2	378	3- 7-68	---	13	.39	15	2.0	28	3.8	104	0	7.4	12	.3	.0	133	132	45	0	85	1.80	218	7.5
16S-25W-14DBB1	300	2-29-68	16	11	.09	3.4	.6	106	1.9	244	0	1.6	34	.4	.7	280	288	11	0	200	13.93	480	7.6
35BDC1	350	10- 6-64	---	13	.07	5.9	1.5	135	3.1	275	0	.2	63	.4	1.0	358	391	20	0	226	12.86	682	7.8
17S-23W-21BCB1	---	6-19-50	21	20	.65	11	4.0	11	1.6	64	0	3.5	9.5	.1	.2	----	87	44	0	52	.72	134	7.1
19S-25W-13CDD1	460	10- 6-64	22	11	.16	5.7	1.6	264	3.4	428	34	.0	137	1.0	.2	668	676	20	0	408	25.19	1,190	8.8
13CDD1	460	2-29-68	20	9.2	.00	7.1	1.1	269	2.7	492	4	.6	142	1.1	.2	679	676	22	0	410	24.81	1,150	8.3
19S-26W-32ADC1	370	10-25-65	---	9.7	.00	5.0	.9	68	1.3	164	4	17	6.3	.3	1.6	195	214	16	0	141	7.35	386	8.5
20S-26W-4DBD1	---	10-25-68	---	9.7	.00	6.0	1.2	86	1.4	204	8	21	7.8	.2	1.9	244	260	20	0	180	8.40	399	8.6
Sparta Sand																							
16S-24W-15BCB1	388	1-24-46	21	8.5	2.76	21	4.1	24	5.0	144	0	3.4	3.5	0.0	1.8	----	141	69	0	118	1.25	24	8.4
19S-23W-29ACC1	283	2-29-68	---	14	.32	9.6	1.8	4.1	2.2	145	0	3.6	5.0	.3	.2	149	139	32	0	119	3.20	240	7.4
Terrace deposits of Quaternary Age																							
19S-24W-25DDD1	90	2-29-68	---	19	0.38	94	28	19	0.7	344	20	23	32	0.4	0.1	406	367	370	38	316	0.44	567	8.6
20S-23W-4BDA1	66	2-29-68	15	35	5.8	17	7.0	15	1.2	88	0	3.0	18	.3	.0	146	138	72	0	72	.77	200	7.1
Alluvial Deposits of Quaternary Age																							
19S-26W-24DDD1	51	3- 7-68	18	2.3	1.1	6.7	15	17	1.2	132	0	0.0	8.0	0.5	0.0	117	128	78	0	108	0.85	286	8.1

Table 8.--Aquifers as determined from electrical logs of oil tests in Lafayette County, Ark.

[Information is recorded in this table only for aquifers that occur within the logged interval]

Driller, lease, and well number	Location	Year drilled	Land surface altitude (feet above mean sea level)	Logged interval (feet below land surface)	Aquifer	Depth to top of aquifer (feet below land surface)	Thickness of aquifer (feet)	Percentage of sand in aquifer	Remarks
J. E. Adams et al. L. L. Pelt No. 1	15S-22W-17DBB	1949	314	51,3,200	Cane River Formation Carrizo Sand Wilcox Group	399 663 754	264 91 312	42 100 32	
C. G. Davis Copeland No. 1	15S-23W-15DB	1963	340	100-2,612	Carrizo Sand Wilcox Group	236 333	97 293	100 60	
A. M. Shirey, Jr. Rogers No. 1	15S-23W-16CAC	1963	262	107-2,637	Carrizo Sand Wilcox Group	157 227	70 300	100 50	
L & N Drilling Co. Kazar No. 1	15S-23W-28ADD	1958	315	100-3,258	Cane River Formation Carrizo Sand Wilcox Group	114 434 524	320 90 238	50 100 42	
Barnsdall Oil Co. Bond No. S-1	15S-24W-11CB	1949	262	115-2,419	Carrizo Sand Wilcox Group	110 202	92 278	87 34	
W. H. Oberthier et al. Mordica Brown Estate No. 1	15S-24W-26CDD	1947	362	203-3,900	Carrizo Sand Wilcox Group	310 435	125 305	100 33	
Tidewater Assoc. & Seaboard Oil Co. J. H. Landis No. 1	15S-25W-4DAC	1944	230	130-6,634	do	(1)	--------	2/90	Bottom of Wilcox Group at depth of 390 feet.
Carter Oil Co. J. T. McKean No. 8	16S-22W-7DCC	1948	273	100-6,256	Cane River Formation Carrizo Sand Wilcox Group	133 413 506	280 93 317	54 90 50	
W. C. Gibson J. W. McDaniels No. 2	16S-23W-2DCD	1959	302	100-2,923	Carrizo Sand Wilcox Group	354 469	115 360	100 42	
East Texas Refining Co.	16S-23W-19ABB	1940	245	98-3,379	Cane River Formation Carrizo Sand Wilcox Group	292 592 682	300 90 386	43 90 30	
McAlester Fuel Co. McDaniel No. A-1	16S-24W-2DCC	1948	320	295-4,569	Carrizo Sand Wilcox Group	375 485	110 375	90 40	
J & J Oil Co. J. E. Gaines No. 1	16S-24W-4DDD	1949	325	212-2,156	Carrizo Sand Wilcox Group	420 515	95 380	100 34	
McAlester Fuel Co. Adams Estate No. A-1	16S-24W-16BB	1946	210	156-4,356	Cane River Formation Carrizo Sand Wilcox Group	284 554 664	270 110 450	38 90 22	
Burnett Production Co. Rook No. 1-C	16S-24W-17CAD	1953	265	80-2,479	Cane River Formation Carrizo Sand Wilcox Group	265 550 675	285 125 395	50 95 35	
Burnett Production Co. Patton Estate No. A-1	16S-24W-19ADA	1949	257	117-2,346	Cane River Formation Carrizo Sand Wilcox Group	289 554 674	265 120 411	53 95 36	
East Texas Refining Co. F. Harleston No. 1	16S-24W-23BD	1939	265	108-2,762	Cane River Formation Carrizo Sand Wilcox Group	195 570 670	375 100 325	42 100 31	
East Texas Refining Co. Wright Estate No. 1	16S-24W-24DB	1939	260	115-2,688	Carrizo Sand Wilcox Group	260 348	88 445	100 36	
N. H. Wheless Drilling Co. Coleman No. 1	16S-24W-30AC	1943	230	326-5,216	do	346	480	33	
Herbert Herff et al. Velvin No. 1	16S-25W-22BCA	1952	225	100-3,940	Cane River Formation Carrizo Sand Wilcox Group	242 542 622	300 80 444	40 87 34	
Barnsdall Oil Co. R. R. Cornelius No. 1	17S-23W-28BC	1941	270	135-4,233	Cane River Formation Carrizo Sand Wilcox Group	276 616 720	340 104 286	40 49 38	
Barnsdall Oil Co. Williams No. 1	17S-24W-32	1947	245	195-9,302	Cane River Formation Carrizo Sand Wilcox Group	241 594 664	353 70 360	40 56 36	
Barnsdall Oil Co. Colonel Moore No. 1	17S-24W-34BDB	1946	250	160-9,312	Cane River Formation Carrizo Sand Wilcox Group	314 594 664	380 70 340	36 86 37	

1 Logged interval starts below top of formation.
2 Percentage of sand is for that part of aquifer actually logged.

Table 8.--Aquifers as determined from electrical logs of oil tests in Lafayette County, Ark.--Continued

Driller, lease, and well number	Location	Year drilled	Land surface altitude (feet above mean sea level)	Logged interval (feet below land surface)	Aquifer	Depth to top of aquifer (feet below land surface)	Thickness of aquifer (feet)	Percentage of sand in aquifer	Remarks
Smead Stuart and J. B. Warnack F. G. Keith No. 1	18S-25W-3CDC	1955	216	100-3,299	Cane River Formation Carrizo Sand Wilcox Group	244 599 684	355 85 350	45 100 34	
McAlester Fuel Co. Cora Jeffus No. 1	19S-23W-4BA	1942	250	157-3,895	Cane River Formation Carrizo Sand Wilcox Group	450 750 810	300 60 320	37 75 36	
Olin Gas Transmission Corp. Olin-Ipco No. 4	19S-24W-21DAC	1955	235	102-2,846	Cane River Formation Carrizo Sand Wilcox Group	269 679 759	310 80 306	28 100 35	
David Crow et al. Marymac No. 1	19S-25W-16AAB	1957	260	420-5,853	Cane River Formation Carrizo Sand Wilcox Group	420 730 810	310 80 280	32 56 32	
Caddo Oil Co. Smith No. 1	19S-25W-24ADB	1955	256	105-2,837	Cane River Formation Carrizo Sand Wilcox Group	344 664 714	320 50 316	28 80 32	
Sam Sklar et al. Hardy No. A-1	19S-26W-13DAA	1956	203	281-3,261	Cane River Formation Carrizo Sand Wilcox Group	373 663 733	290 70 276	38 50 35	
Crow-Greyhound Drilling Co., Inc. R. B. Keoun et al. No. 1	20S-23W-9AAA	1958	240	320-3,308	Cane River Formation Carrizo Sand Wilcox Group	426 747 780	321 33 390	23 100 26	
W. G. Ray Drilling Co. Warnock-Lecroy No. 1	20S-24W-3	1943	245	463-6,327	Carrizo Sand Wilcox Group	662 712	50 354	70 28	
Carroll-Reynolds Inc. H. P. Lester No. 1	20S-25W-11DAA	1962	247	167-3,253	Cane River Formation Carrizo Sand Wilcox Group	258 586 666	328 80 357	30 62 33	
Lyons, McCord & Logan Olivia S. Moore	20S-26W-2CBB	1955	195	495-6,070	Carrizo Sand Wilcox Group	601 681	80 304	50 31	

Table 9.--Logs of test holes and wells

Lafayette County

16S-25W-13ADC1. Log of observation well by U.S. Geological Survey.

Surface altitude, 230 ft. Depth to water, 5.9 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Clay, dark-brown	5	5
Clay, red-brown	15	20
Clay, silty, red-brown	2	22
Clay, red-brown	4	26
Clay, red-brown; contains layers of gray clay	2	28
Clay, silty, brown	7	35
Silt and clay, brown	2	37
Clay, silty, gray-brown	6	43
Clay, sandy, gray	7	50
Sand, very fine to medium, and gravel; contains much coarse to very coarse sand	16	66
Sand, very fine, clayey, light-gray	9	75

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

16S-25W-15DDB1. Log of observation well by U.S. Geological Survey. Surface altitude, 225 ft. Depth to water 12.1 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Sand, fine, silty, red-brown	7	7
Clay, red-brown	5	12
Clay, silty, red-brown	2	14
Clay, gray	1	15
Clay, silty, red-brown to brown	9	24
Sand, very fine, clayey, red-brown to brown	6	30
Sand, very fine to fine, clayey, brown	5	35
Sand, fine to medium, brown	15	50
Sand, very fine to medium; contains some coarse to very coarse sand and some gravel	10	60
Sand, very fine to medium; and gravel; contains some coarse to very coarse sand	17	77
Sand, very fine, clayey, gray-black	3	80

Table 9. --Logs of test holes and wells--Continued

Lafayette County--Continued

16S-25W-16CDC1. Log of observation well by U.S. Geological Survey. Surface altitude, 225 ft. Depth to water 18.6 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Topsoil	0.5	0.5
Sand, very fine to fine, silty, light red-brown-	5.5	6.0
Sand, very fine to fine, silty, red-brown	14	20
Sand, very fine to fine, red-brown	5	25
Sand, very fine to fine, brown	5	30
Sand, very fine to medium, brown	3	33
Sand, very fine to medium, brown; contains some gravel	25	58
Sand, very fine to medium, and gravel; contains some coarse to very coarse sand	22	80
Sand, clayey, gray-black	2	82

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

17S-25W-1DDC1. Log of observation well by U.S. Geological Survey. Surface altitude, 218 ft. Depth to water, 0.6 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Topsoil	1	1
Clay, brown	16	17
Sand, very fine to medium, silty, brown	3	20
Sand, fine to medium, brown; contains some gravel in lower part of section	30	50
Clay, gray-brown	12	62

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

17S-25W-11AAA1. Log of observation well by U.S. Geological Survey. Surface altitude, 226 ft. Depth to water 9.4 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Sand, silty, contains organic material----------	1	1
Clay, red-brown----------	2	3
Clay, silty, red-brown----------	2	5
Sand, fine, silty, red-brown----------	15	20
Sand, very fine, silty, brown----------	30	50
Sand, very fine to medium, gray-brown----------	14	64
Gravel----------	1	65
Sand, poorly cemented; contains blue-green material below 65 feet----------	20	85

Table 9--Logs of test holes and wells--Continued

Lafayette County--Continued

17S-25W-15ADB1. Log of observation well by U.S. Geological Survey. Surface altitude, 225 ft. Depth to water, 11.9 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Sand, clayey; contains organic material	1	1
Clay, brown	4	5
Clay, red-brown	18	23
Gravel	1	24
Clay, red-brown	3	27
Sand, very fine to fine, and gravel	30	57
Sand, very fine to medium, and gravel; contains some coarse to very coarse sand	15	72

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

18S-23W-6CBD1. Log of test hole by U.S. Geological Survey. Surface altitude, 257 ft.

	Thickness (feet)	Depth (feet)
Clay, light brown	10	10
Silt, red-brown, sandy	2	12
Sand, red-brown	18	30
Sand, very fine to medium, brown, clayey	5	35
Sand, fine to coarse	30	65
Sand and gravel	10	75
Clay, blue	20	95

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

18S-23W-32DCC1. Log of test hole by U.S. Geological Survey. Surface altitude, 242 ft.

	Thickness (feet)	Depth (feet)
Clay, red-brown	5	5
Clay, sandy, red-brown	5	10
Sand, silty	10	20
Sand, fine to medium	30	50
Sand and gravel	30	80
Gravel, fine to very coarse	10	90
Sand, golden, and gravel	7	97
Clay, blue	1	98

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

18S-24W-2CCA1. Log of test hole by U.S. Geological Survey. Surface altitude, 255 ft.

	Thickness (feet)	Depth (feet)
Clay, silty, light brown----------	8	8
Silt, sandy, red-brown----------	7	15
Sand, silty----------	5	20
Sand and gravel, medium----------	20	40
Clay, brown, dense----------	13	53

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

18S-25W-8AAD1. Log of observation well by U.S. Geological Survey. Surface altitude, 217 ft. Depth to water, 16.4 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, black	1	1
Sand, very fine, silty, red-brown	8	9
Sand, very fine, silty, red-brown to brown	16	25
Sand, very fine to fine, silty, red-brown to brown	14	39
Sand, very fine to medium, brown; contains some coarse to very coarse sand and some gravel	6	45
Sand, very fine to medium, and gravel; contains some coarse to very coarse sand	6	51
Gravel	16	67
Clay, blue-gray	10	77

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

18S-25W-10BAA1. Log of observation well by U.S. Geological Survey.

Surface altitude, 218 ft. Depth to water 9.4 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Topsoil	1	1
Clay, red-brown	3	4
Clay, silty, red-brown	1	5
Sand, fine, silty, light-yellow-brown	5	10
Clay, red-brown	1	11
Sand, fine, silty, red-brown	3	14
Sand, very fine, clayey, red-brown	11	25
Clay, brown	22	47
Sand, very fine	8	55
Sand, very fine, and gravel	9	64
Sand, fine, silty, blue-gray	8	72

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

18S-25W-12CAC1. Log of test hole by U.S. Geological Survey. Surface altitude, 264 ft.

	Thickness (feet)	Depth (feet)
Clay, brown	5	5
Clay, red-brown	3	8
Sand, very fine to medium	32	40
Clay	3	43
Sand and gravel	83	126

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

18S-26W-36BCA1. Log of observation well by U.S. Geological Survey. Surface altitude, 205 ft. Depth to water, 19.0 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Sand, fine, silty, red-brown	4	4
Sand, very fine, clayey, black	2	6
Clay, red-brown to brown	4	10
Clay, red-brown	4	14
Clay, sandy, red-brown	2	16
Sand, very fine, silty, red-brown	4	20
Sand, very fine to fine, yellow-brown	5	25
Sand, very fine to medium, yellow-brown	25	50
Sand, fine to coarse, and gravel	11	61
Clay, gray-black	6	67

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

19S-23W-17CDD1. Log of test hole by U.S. Geological Survey. Surface altitude, 245 ft.

	Thickness (feet)	Depth (feet)
Clay, mottled red-brown----------	8	8
Clay, mottled red-brown, dense----------	5	13
Sand, silty, red-brown, dry to wet----------	12	25
Sand, very fine to medium, red-brown----------	27	52
Clay, blue, and sand----------	16	68

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

19S-25W-6ACD1. Log of observation well by U.S. Geological Survey. Surface altitude, 212 ft. Depth to water 18.1 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, black	2	2
Sand, silty, light-red-brown	3	5
Sand, very fine, clayey, light-red-brown	5	10
Sand, very fine, silty, red-brown	3	13
Clay, red-brown; contains concretions	2	15
Sand, very fine, clayey, red-brown	5	20
Clay, brown	15	35
Sand, very fine, clayey, brown	17	52
Sand and gravel	21	73
Clay, blue-green	10	83

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

19S-25W-9DCD1. Log of observation well by U.S. Geological Survey. Surface altitude, 250 ft. Depth to water 37.4 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Sand, very fine, silty, red-brown----------	2	2
Sand, very fine to fine, red-brown; contains stringers of clay----------	14	16
Sand, very fine to fine, light, red-brown; contains some medium sand----------	21	37
Sand, very fine to fine, light-red-brown to brown----------	18	55
Sand, very fine to fine, silty, light-brown----	10	65
Clay, red-brown----------	10	75
Sand, fine, clayey, brown----------	2	77

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

19S-25W-17BAC1. Log of observation well by U.S. Geological Survey. Surface altitude, 212 ft. Depth to water 14.7 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Sand, silty, black----------	2	2
Sand, very fine, silty, red-brown----------	10	12
Sand, very fine, clayey, red-brown----------	7	19
Clay, red-brown----------	1	20
Sand, very fine to fine, clayey, brown---------	9	29
Sand, very fine to medium, silty, brown--------	6	35
Sand, very fine to medium; contains some coarse to very coarse sand and some gravel---------	10	45
Sand and gravel, blue-gray----------	7	52
Clay, blue-gray----------	10	62
Sand, silty, brown-black----------	5	67

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

19S-26W-8DCB1. Log of observation well by U.S. Geological Survey. Surface altitude, 205 ft. Depth to water, 12.0 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Clay, brown----------	5	5
Sand, fine to medium, light-red-brown----------	5	10
Sand, fine to medium, brown----------	10	20
Sand, fine to medium; contains some gravel-----	30	50
Sand, fine to medium, and gravel; contains some coarse to very coarse sand----------	8	58
Sand, very fine, clayey, blue-gray----------	15	73

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

19S-26W-24DDD1. Log of observation well by U.S. Geological Survey. Surface altitude, 206 ft. Depth to water, 22.5 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Sand, very fine, silty, gray-black----------	3	3
Sand, very fine, silty, yellow-brown----------	1	4
Sand, very fine to medium, silty, red-brown----	2	6
Sand, fine, clayey, red-brown----------	4	10
Sand, fine, clayey, brown----------	6	16
Sand, very fine, clayey, brown----------	4	20
Clay, brown----------	7	27
Clay, red-brown----------	1	28
Clay, blue; contains some layers of gray-brown clay----------	7	35
Gravel, gray-green, and clay, blue----------	25	60
Clay, blue-gray to gray----------	4	64

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

19S-26W-34BAA1. Log of observation well by U.S. Geological Survey. Surface altitude, 202 ft. Depth to water, 16.5 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, black	1	1
Sand, very fine to fine, yellow-brown	2	3
Clay, brown	2	5
Clay, red-brown	15	20
Clay, sandy, brown	7	27
Sand, very fine to fine, silty, brown	8	35
Sand, fine to medium	5	40
Sand, very fine to medium, and gravel; contains some coarse to very coarse sand	17	57
Gravel	4	61
Clay, blue-gray	4	65

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

19S-27W-13DDD1. Log of observation well by U.S. Geological Survey. Surface altitude, 205 ft. Depth to water, 16.5 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Clay, red-brown to brown	2	2
Clay, red-brown	4	6
Clay, brown	6	12
Clay, silty, brown	2	14
Sand, very fine, silty, brown	6	20
Sand, very fine, brown	15	35
Sand, very fine to fine	20	55
Sand, very fine to medium, and gravel; contains much coarse to very coarse sand	16	71
Clay, blue-gray	6	77

Table 9.--Logs of test holes and wells--Continued

Lafayette County--Continued

20S-23W-4BBB1. Log of test hole by U.S. Geological Survey. Surface altitude, 242 ft.

	Thickness (feet)	Depth (feet)
Clay, red-brown	13	13
Clay, sandy, red-brown	7	20
Sand, fine to medium	40	60
Sand and gravel	5	65
Sand and gravel, clayey, black	3	68

Table 10.--Measurement of water levels in wells, Lafayette County, Ark.

(In feet below land surface)

Date	Water level
Wilcox Group	
15S-25W-35BCD1	
July 15, 1964	7.80
Nov. 8, 1967	12.91
Mar. 22, 1968	15.45
Oct. 23	5.60
Cane River Formation	
16S-23W-10DCA1	
Mar. 31, 1953	34.75
Apr. 29	40.19
May 28	41.30
June 30	a/45.70
May 26, 1954	a/46.05
June 29	46.58
July 29	a/67.84
Aug. 25	a/68.52
Sept. 29	a/70.82
Oct. 27	70.20
Nov. 22	a/81.52
Dec. 29	a/81.91
Jan. 26, 1955	a/70.40
Feb. 23	a/80.51
Mar. 23	85.75
Apr. 19	a/85.77
May 24	56.37
June 29	a/86.03
July 26	a/74.64
Aug. 30	81.66
Sept. 28	a/82.10
Oct. 26	72.08
Nov. 29	71.59
Dec. 29	64.31

Date	Water level
Cane River Formation--Continued	
16S-23W-10DCA1--Continued	
Jan. 26, 1956	74.37
Feb. 26	79.48
Apr. 10	68.89
Apr. 25	58.18
May 24	64.83
June 27	74.32
July 25	75.37
Aug. 28	58.85
Sept. 26	70.50
Oct. 16	64.79
Nov. 20	64.08
Dec. 18	66.17
Jan. 24, 1957	57.37
Mar. 4	68.08
Mar. 25	a/78.18
Apr. 25	69.13
May 21	57.37
June 24	63.88
July 23	79.37
Aug. 20	79.51
Sept. 25	77.40
Oct. 30	53.98
Nov. 26	55.09
Dec. 13	55.39
Feb. 4, 1958	52.11
Mar. 5	52.73
Apr. 8	47.36
May 5	46.98
June 4	54.90
July 15	47.94
Aug. 5	53.87
Sept. 9	57.03
Oct. 8	59.45
Nov. 5	57.45
Dec. 2	63.06

a/ Nearby well pumping

Table 10.--Measurement of water levels in wells, Lafayette County, Ark.--Continued

Date	Water level
Cane River Formation--Continued	
16S-23W-10DCA1--Continued	
Jan. 13, 1959	57.21
Feb. 3	51.90
Apr. 1	65.23
June 1	57.90
July 8	59.60
Aug. 18	62.88
Sept. 9	63.92
Oct. 5	67.59
Nov. 4	60.18
Jan. 12, 1960	66.50
Feb. 9	59.60
Mar. 2	57.91
Apr. 12	55.80
May 10	56.49
June 8	57.90
Aug. 9	64.85
Sept. 8	67.25
Oct. 5	65.60
Nov. 3	62.40
Jan. 11, 1961	61.45
Mar. 8	68.24
Aug. 31	65.41
Nov. 14	68.65
Mar. 29, 1962	62.30
May 24	66.73
July 17	72.25
Oct. 2	69.30
Dec. 12	67.43
Feb. 6, 1963	64.10
Apr. 10	63.98
June 6	67.30
Aug. 7	85.93
Oct. 1	88.90
Dec. 4	69.98
Jan. 10, 1964	67.79
Mar. 5	65.57
May 19	65.72
July 7	76.68
Sept. 2	81.07
Nov. 5	79.29
Cane River Formation--Continued	
16S-23W-10DCA1--Continued	
Jan. 6, 1965	68.64
Mar. 3	62.69
May 5	66.53
July 7	61.80
Aug. 31	67.27
Nov. 3	71.20
Jan. 5, 1966	67.43
Mar. 30	68.61
May 12	66.19
July 13	73.23
Sept. 14	74.56
Nov. 16	71.55
Jan. 18, 1967	75.25
Apr. 11	74.77
Nov. 9	70.64
Mar. 22, 1968	65.38
16S-25W-14DBB1	
July 15, 1964	2.50
Nov. 7, 1967	4.20
Mar. 22, 1968	5.30
19S-26W-2ADC1	
July 13, 1964	13.69
Nov. 18, 1967	17.33
Mar. 25, 1968	14.67
Oct. 22	17.49

Table 10.--Measurement of water levels in wells, Lafayette County, Ark.--Continued

Date	Water level
Cane River Formation--Continued	
19S-26W-25DAA1	
July 13, 1964	25.24
Nov. 9, 1967	26.80
Mar. 26, 1968	26.46
Oct. 22	26.92
20S-26W-3BBC1	
June 5, 1963	13.10
Nov. 8, 1967	16.00
Mar. 26, 1968	11.69
Oct. 22	10.23
Deposits of Quaternary age	
16S-25W-13ADC1	
June 19, 1963	4.88
July 16	4.70
16S-25W-13CCC1	
Apr. 19, 1955	6.02
Apr. 25, 1956	7.32
Apr. 30, 1957	8.13

Date	Water level
Deposits of Quaternary age--Continued	
16S-25W-15DDB1	
June 19, 1963	12.12
July 16	11.82
Nov. 8, 1967	14.46
Mar. 22, 1968	9.32
Oct. 23	10.36
16S-25W-16CDC1	
June 19, 1963	18.58
July 16	18.67
Nov. 8, 1967	20.88
Mar. 22, 1968	17.98
Oct. 23	15.97
16S-25W-25BBC1	
Apr. 19, 1955	6.78
Apr. 30, 1957	7.05
Apr. 8, 1958	4.95
Apr. 12, 1960	5.11
Mar. 8, 1961	8.25
Nov. 7, 1967	12.96
Mar. 21, 1968	7.87

Table 10.--Measurement of water levels in wells, Lafayette County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
16S-25W-25CAC1	
June 30, 1955	6.80
July 26	7.58
Aug. 30	9.55
Sept. 28	9.87
Oct. 26	9.40
Nov. 29	9.96
Jan. 26, 1956	8.69
Feb. 24	8.33
Apr. 25	7.95
May 24	7.67
June 27	9.52
July 25	11.93
Aug. 28	12.10
Sept. 26	14.28
Oct. 16	13.40
Nov. 20	13.65
Dec. 18	11.99
Jan. 24, 1957	12.70
Mar. 4	10.10
Mar. 25	8.83
Apr. 30	6.75
May 21	7.63
June 24	6.93
July 23	7.77
Aug. 20	8.99
Sept. 25	8.19
Oct. 30	7.81
Nov. 26	6.67
Dec. 13	5.83
Feb. 4, 1958	5.33
Mar. 5	5.07
Apr. 8	4.61
May 6	3.56
June 6	6.32

Date	Water level
Deposits of Quaternary age--Continued	
16S-25W-25CAC1--Continued	
July 15, 1958	6.28
Oct. 8	7.52
Nov. 5	7.67
Dec. 2	7.60
Jan. 13, 1959	7.33
Feb. 3	6.01
Apr. 1	6.16
May 6	6.96
June 1	7.12
Oct. 6	8.96
Nov. 4	8.53
Dec. 2	7.82
Jan. 12, 1960	6.36
Feb. 9	6.11
Apr. 12	5.89
May 10	5.74
Oct. 4	9.21
Nov. 3	8.97
Jan. 11, 1961	8.78
Mar. 8	7.27
Aug. 31	9.39
Nov. 14	8.35
Mar. 29, 1962	5.36
Oct. 2	8.57
Dec. 12	8.11
Apr. 17, 1963	6.69
Apr. 13, 1964	8.67
Mar. 3, 1965	7.89
Mar. 23, 1966	11.12
Apr. 12, 1967	10.28
Nov. 7	11.90
Mar. 21, 1968	7.50
Oct. 23	10.28

Table 10.--Measurement of water levels in wells, Lafayette County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
17S-25W-1DDC1	
June 19, 1963	0.55
July 16	.97
Nov. 7, 1967	2.46
Mar. 21, 1968	1.49
Oct. 23	7.24
17S-25W-11AAA1	
June 19, 1963	9.36
July 16	8.79
Nov. 7, 1967	11.94
Mar. 21, 1968	9.05
Oct. 23	11.66
17S-25W-15ADB1	
June 19, 1963	11.95
July 16	11.74
Nov. 7, 1967	13.47
Mar. 21, 1968	10.28
18S-25W-8AAD1	
June 19, 1963	16.37
July 16	13.96
Nov. 8, 1967	17.32
Mar. 25, 1968	12.69
Oct. 23	15.30
18S-25W-10BAA1	
June 19, 1963	9.35
July 17	7.43
Nov. 8, 1967	11.09
Mar. 21, 1968	9.70
Oct. 23	11.42

Date	Water level
Deposits of Quaternary age--Continued	
18S-26W-36BCA1	
June 19, 1963	19.03
July 17	17.64
Mar. 21, 1968	11.46
Oct. 23	15.54
19S-25W-6ABD1	
Mar. 23, 1955	12.58
Apr. 19	12.49
May 24	12.22
June 30	12.81
July 26	13.94
Aug. 30	14.20
Sept. 28	14.32
Oct. 26	14.12
Nov. 29	13.96
Oct. 16, 1956	17.18
Nov. 20	16.93
Dec. 18	16.23
Jan. 24, 1957	17.54
Mar. 4	16.79
Mar. 25	15.49
Apr. 20	11.90
May 21	10.57
June 24	9.89
July 23	13.06
Sept. 25	14.09
Oct. 30	13.42
Nov. 26	12.33
Dec. 13	10.63
Feb. 4, 1958	8.35
Mar. 5	8.21
Apr. 8	6.41
June 6	7.21
July 15	7.10
Oct. 8	9.70
Nov. 5	9.23
Dec. 2	7.02

Table 10.--Measurement of water levels in wells, Lafayette County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
19S-25W-6ABD1--Continued	
Jan. 13, 1959	6.70
Feb. 3	4.67
Apr. 1	4.53
May 6	7.52
June 3	7.98
Nov. 4	7.67
Jan. 12, 1960	8.45
Feb. 9	8.19
Apr. 12	7.97
May 10	7.89
Oct. 4	8.75
Nov. 3	8.13
Jan. 11, 1961	8.13
Mar. 8	10.73
Aug. 31	12.97
Nov. 14	9.99
Mar. 29, 1962	8.12
Oct. 2	10.22
Dec. 12	9.77
Feb. 12, 1963	9.02
Apr. 17	8.71
June 6	13.11
Aug. 7	14.50
Oct. 1	17.47
Dec. 4	16.32
Jan. 10, 1964	16.07
Mar. 5	14.89
May 19	13.58
Nov. 5	17.19
Jan. 6, 1965	16.13
Mar. 3	11.85
May 5	11.67
Aug. 31	14.60
Nov. 4	14.31
Jan. 6, 1966	14.05
Mar. 23	14.92
May 12	11.83
Sept. 14	16.29
Nov. 16	15.42
Jan. 19, 1967	15.47
Apr. 12	14.98
Mar. 21, 1968	11.08

Date	Water level
Deposits of Quaternary age--Continued	
19S-25W-6ACD1	
June 19, 1963	18.07
July 17	13.24
Nov. 8, 1967	15.25
Oct. 23, 1968	10.47
19S-25W-9DCD1	
June 19, 1963	37.43
July 17	37.65
Nov. 9, 1967	39.83
Mar. 26, 1968	39.20
19S-25W-17BAC1	
June 19, 1963	14.68
July 17	11.37
Nov. 8, 1967	12.35
Mar. 26, 1968	6.02
Oct. 23	7.98
19S-25W-17CCB1	
June 5, 1963	11.53
Nov. 9, 1967	7.95
Mar. 26, 1968	5.59
Oct. 22	6.80
19S-25W-19ADD1	
Mar. 23, 1955	5.32
Apr. 25, 1956	13.01
Apr. 30, 1957	12.75
Apr. 8, 1958	10.11
Apr. 12, 1960	10.39
Nov. 9, 1967	14.72
Mar. 26, 1968	9.56

Table 10.--Measurement of water levels in wells, Lafayette County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
19S-25W-19BAA1	
Mar. 23, 1955	7.84
Apr. 25, 1956	10.92
Apr. 30, 1957	9.87
Apr. 8, 1958	7.69
Apr. 12, 1960	7.93
Mar. 8, 1961	7.02
Mar. 29, 1962	5.02
Apr. 17, 1963	4.93
Apr. 13, 1964	8.35
19S-25W-19BDA1	
Mar. 23, 1955	6.24
Apr. 25, 1956	10.98
Apr. 30, 1957	9.91
Apr. 8, 1958	6.77
Apr. 12, 1960	6.99
Mar. 8, 1961	6.12
Nov. 8, 1967	12.70
Mar. 26, 1968	11.76
Oct. 22	9.08
19S-25W-19DCA1	
Mar. 23, 1955	14.12
Apr. 19	13.43
May 23	15.82
June 30	16.02
July 26	17.76
Aug. 30	20.99
Sept. 28	21.20
Oct. 26	20.95
Nov. 29	20.60
Apr. 25, 1956	15.02
Oct. 16	23.95
Nov. 20	22.85
Dec. 18	20.91

Date	Water level
Deposits of Quaternary age--Continued	
19S-25W-19DCA1--Continued	
Jan. 25, 1957	19.34
Mar. 4	16.84
Mar. 25	15.13
May 21	13.08
June 24	12.58
July 23	16.03
Sept. 25	15.81
Oct. 30	a/17.35
Nov. 26	15.05
Dec. 13	13.99
Feb. 4, 1958	12.04
Mar. 5	11.89
Apr. 8	9.96
June 6	13.71
July 15	13.84
Oct. 8	11.95
Nov. 5	11.39
Dec. 2	9.26
Jan. 13, 1959	8.79
Feb. 3	7.09
Apr. 1	6.99
May 6	9.98
June 3	10.20
Nov. 4	9.69
19S-25W-20ACD1	
June 6, 1963	0.58
Nov. 9, 1967	3.11
Mar. 26, 1968	1.29

a/ Nearby well pumping.

Table 10.--Measurement of water levels in wells, Lafayette County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
19S-26W-3DAB1	
June 6, 1963	17.10
Nov. 8, 1967	16.64
Mar. 26, 1968	9.24
Oct. 22	10.74
19S-26W-8DCB1	
June 19, 1963	12.03
July 17	10.97
Nov. 8, 1967	13.32
Mar. 26, 1968	7.79
Oct. 23	6.72
19S-26W-12BCB1	
June 6, 1963	12.30
Nov. 8, 1967	8.75
Mar. 26, 1968	6.74
Oct. 22	2.85
19S-26W-13AAA1	
June 6, 1963	15.95
Nov. 9, 1967	7.72
Mar. 26, 1968	0.95
Oct. 22	2.83
19S-26W-15BBB1	
June 5, 1963	9.37
Nov. 8, 1967	9.23
Mar. 26, 1968	1.95

Date	Water level
Deposits of Quaternary age--Continued	
19S-26W-21BBB1	
June 5, 1963	12.58
Nov. 8, 1967	14.43
Mar. 26, 1968	8.48
19S-26W-24BAB1	
Apr. 19, 1955	3.80
Apr. 26, 1956	7.74
Apr. 30, 1957	4.63
Apr. 8, 1958	3.27
Apr. 12, 1960	3.51
19S-26W-24DBA1	
Apr. 19, 1955	6.12
Apr. 30, 1957	3.36
Apr. 8, 1958	3.88
Apr. 12, 1960	4.17
Nov. 9, 1967	12.30
Oct. 22, 1968	8.20
19S-26W-24DDD1	
June 19, 1963	22.49
July 17	12.07
Nov. 8, 1967	14.91
Mar. 26, 1968	9.41
19S-26W-25ABD1	
June 5, 1963	19.03
Nov. 9, 1967	13.68
Mar. 26, 1968	8.99

Table 10.--Measurement of water levels in wells, Lafayette County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
19S-26W-27ACA1	
Apr. 19, 1955	8.85
July 26	9.43
Aug. 30	22.50
Sept. 28	21.95
Oct. 26	15.50
Nov. 29	15.20
Apr. 25, 1956	7.82
19S-26W-27BAA1	
Apr. 19, 1955	8.81
Apr. 25, 1956	7.76
Apr. 30, 1957	5.89
Nov. 9, 1967	12.19
Mar. 26, 1968	10.31
Oct. 22	5.59
19S-26W-27DDB1	
Apr. 19, 1955	12.51
Apr. 25, 1956	11.12
Apr. 3, 1957	9.82
Apr. 8, 1958	8.09
Apr. 12, 1960	8.43
Mar. 8, 1961	7.79
Mar. 29, 1962	4.36
Apr. 17, 1963	4.18
Apr. 13, 1964	7.29
Nov. 8, 1967	15.78
Mar. 26, 1968	12.17
Oct. 22	10.33

Date	Water level
Deposits of Quaternary age--Continued	
19S-26W-34BAA1	
June 19, 1963	16.50
July 17	10.23
Nov. 9, 1967	13.23
Mar. 26, 1968	8.18
Oct. 22	6.87
19S-27W-13DDD1	
June 19, 1963	16.53
July 17	15.61
Nov. 8, 1967	18.80
Mar. 25, 1968	16.08
Oct. 23	14.39

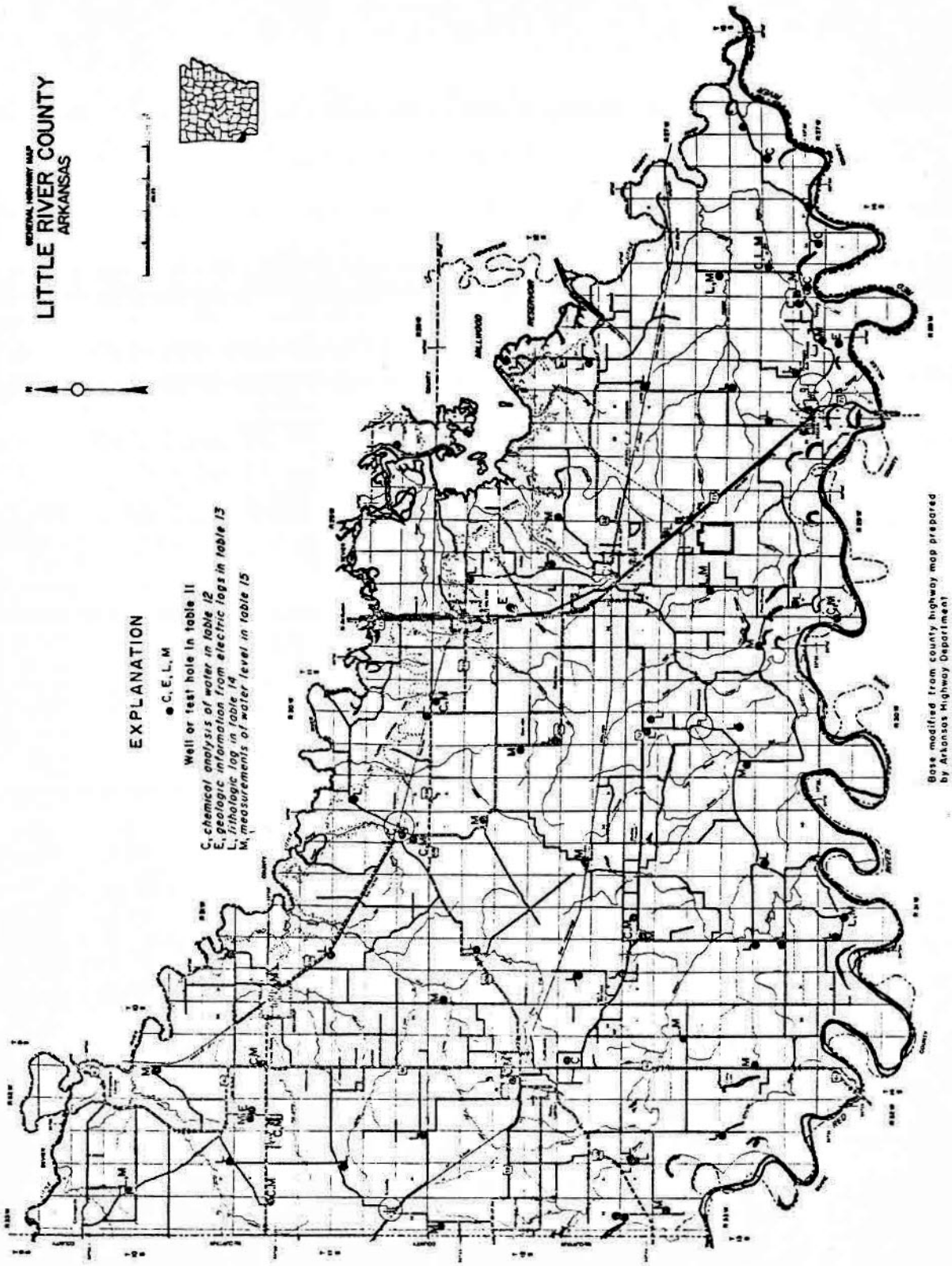

Figure 4.—Map showing locations of wells listed in tables 11, 12, 13, 14, and 15, Little River County, Arkansas.

Table 11.--Records of wells and test holes in Little River County, Ark.

Use of water: D., domestic, Ind., industrial, Irr., irrigation, P.S., Public Supply, R., Recreation, S., Stock., U., Unused

Remarks: C., Chemical analysis of water included in report, see Table 12., L., Log of well included in report, see Table 14., M., Water level measurements included in report, see Table 15.

Local well number	Date drilled	Altitude above mean sea level (feet)	Well depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface (feet)	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
Trinity Group										
11S-31W-36BAC1	----	335	2,200	8	---	Flowing	7-25-51	--	S	C
Woodbine Formation										
11S-29W-25CCA1	----	365	720	2	---	---	---	--	U	
Nacatoch Sand										
13S-27W-22CAB1	----	265	100	2	---	---	---	--	[illegible]	
28BBD1	----	260	165	2	---	---	---	--	D	C
13S-28W-31CDB1	----	---	270	3	---	---	---	--	P.S.	C
34ABD1	----	260	165	2	---	---	---	5	D	C
35CBA1	----	260	100	2	---	---	---	--	D	C
36DCA1	----	265	110	-	---	---	---	5	D	C
13S-29W-36ADD1	1967	312	260	-	---	51.97	12-14-67	120	P.S.	
14S-30W- 1DAA1	----	282	375	3	---	29.95	11-16-67	--	D	C, M
Deposits of Quaternary age										
10S-31W-32CDD1	1963	321	60	-	---	---	---	--	U	L
10S-32W-18CCD1	----	275	17	48	---	13.75	9-20-67	--	D	L, M
22DAA1	----	322	77	6	---	34.46	9-22-67	--	D	M
32CCC1	1963	377	52	-	---	---	---	--	U	L
11S-3[illegible]W-19CAB1	1963	305	52	-	---	---	---	--	U	L
33DDD1	1963	310	47	-	---	---	---	--	U	L
11S-31W- 7BDD1	----	315	17	40	---	11.76	9-22-67	--	D	M
17DCC1	1963	310	72	-	---	---	---	--	U	L
36BCC1	----	342	60	8	---	10	7-25-51	--	D	C, M
11S-32W- 2CCC1	----	373	30	36	---	15	7-25-51	--	D	C, M
4CAA1	1915	420	28	48	---	16.15	9-20-67	--	D	M
9BAB1	----	422	[illegible]	36	---	8.24	1-25-57	--	U	C, M
19AAD1	1963	440	37	-	---	---	---	--	U	L
32DDD1	1963	430	27	-	---	---	---	--	U	L
11S-33W-12AAA1	----	4[illegible]0	22	36	---	18.95	11-16-67	--	D	C, M
12S-28W-17AAA1	1963	280	53	-	---	---	---	--	U	L
29DDA1	1963	300	37	-	---	---	---	--	U	L
1[illegible]S-2[illegible]W- 6C[illegible]C1	----	312	35	-	---	---	---	--	D	C
8BBA1	1963	302	67	-	---	---	---	--	U	L
20DBB1	1963	324	87	-	---	---	---	--	U	L
22CCC1	----	320	[illegible]	1¼	---	29.1[illegible]	[illegible]-6-67	--	D	M
32CAB1	1950	330	[illegible]	8	70	---	---	--	P.S.	C, [illegible]
1[illegible]S-30W-[illegible]	----	312	[illegible]	2	---	35.48	11-16-67	--	D	C, M
17DAD1	1955	352	[illegible]	8	---	37.50	9-19-67	--	[illegible]	M
[illegible]	1963	[illegible]	[illegible]	-	---	---	---	--	U	L
1[illegible]S-31W- 6BCC1	----	341	[illegible]	30	---	13.4[illegible]	9-22-67	--	D	M
[illegible]BB1	1963	351	[illegible]	-	---	---	---	--	U	L
13DAC1	----	350	[illegible]	8	---	[illegible]	9-19-67	--	D	M
26CDB1	----	[illegible]	32	36	---	[illegible].45	9-20-67	--	P.S.	M
30DAA1	1963	[illegible]	37	-	---	---	---	--	U	L
1[illegible]S-32W-15[illegible]	----	[illegible]	24	20	---	20.33	11-16-67	38	P.S.	C, M
26[illegible]A1	----	[illegible]	[illegible]	-	---	---	---	--	Ind.	C
1[illegible]S-33W-13[illegible]D1	----	44[illegible]	22	36	---	9.72	9-2[illegible]-67	--	D	M
36[illegible]D1	1954	316	52	6	---	13.63	12-11-56	400	Irr.	
1[illegible]S-27W-31A[illegible]D1	----	260	22	1½	---	21.75	9-6-67	--	U	C
1[illegible]S-28W- 5[illegible]C1	----	31[illegible]	77	-	---	---	---	--	U	L
14[illegible]A1	1963	[illegible]	27	1½	54	14.18	6-18-63	--	[illegible]	L, [illegible]
[illegible]	1963	[illegible]	[illegible]	-	---	---	---	--	[illegible]	L
[illegible]	1963	[illegible]	[illegible]	1½	---	[illegible]	6-18-63	--	[illegible]	[illegible], L,
[illegible]	1963	[illegible]	[illegible]	-	---	---	---	--		L
32AB[illegible]1	1963	[illegible]	[illegible]	-	---	---	---	--	[illegible]	L
[illegible]	----	[illegible]	[illegible]	1½	---	11.[illegible]	9-6-67	--	[illegible]	M
[illegible]	1963	[illegible]	[illegible]	1½	[illegible]	14.[illegible]	6-18-63	--	[illegible]	L,
1[illegible]S-2[illegible]W-[illegible]	1954	[illegible]	[illegible]	13	[illegible]	[illegible]	1-24-57	30[illegible]	Irr.	[illegible]

Table 1.--Records of wells and test holes in Little River County, Ark.--Continued

Local well number	Date drilled	Altitude above mean sea level (feet)	Total depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface (feet)	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
Deposits of Quaternary Age--Continued										
13S-29W- 9ABB1	1967	325	45	1¼	43	---	---	--	U	L
18DAA1	----	290	15	1¼	---	11.65	9-7-67	--	D	L, M
31BAD1	1967	280	40	1¼	38	15.00	11-16-67	--	U	L
13S-30W- 4CAA1	1967	332	85	-	---	---	---	--	U	L
4DBD1	1963	332	57	-	---	---	---	--	U	L
20CAD1	----	291	24	1¼	---	20.69	9-7-67	--	D	M
21DBB1	1963	293	37	-	---	---	---	--	U	L
25EBB1	----	290	29	1¼	---	12.00	9-7-67	--	D	M
13S-31W- 4ACD1	1959	330	90	6	70	33	10-7-59	95	P.S.	C, M
4CBE1	----	317	30	1¼	---	23.05	9-25-57	--	D	M
6AAA1	1963	365	22	-	---	---	---	--	U	L
26BAC1	1967	300	21	1¼	19	17.25	11-16-67	--	U	L
29AAA1	1967	300	45	-	---	---	---	--	U	L
29DDD1	1967	298	39	1¼	37	---	---	--	U	L
13S-32W- 5BCB2	1967	310	43	-	---	---	---	--	U	L
5BCB3	1967	310	44	-	---	---	---	--	U	L
5BCB4	1967	263	44	-	---	---	---	--	U	L
11DDD1	1967	303	39	1¼	37	12.30	11-16-67	--	U	L, M
20AAA1	1967	310	39	1¼	37	20.42	11-16-67	--	U	L
26BBB1	----	307	37	1¼	---	9.83	9-25-57	--	U	M
13S-33W- 1BAA1	----	316	45	1¼	---	12.78	11-16-67	--	D	
12ACC1	----	321	38	1¼	---	21.42	9-7-67	--	D	M
14S-31W- 4CBC1	1963	300	49	-	---	---	---	--	U	L
4DBD1	1967	303	42	1¼	40	24.70	11-16-67	--	U	L, M

Table 12.--Selected chemical analyses of ground water in Little River County, Ark.

(Results in milligrams per liter unless otherwise indicated)

Local Well Number	Depth of well (feet)	Date of collection	Temperature (°C)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids: Calculated	Dissolved solids: Residue at 180°C	Hardness as $CaCO_3$: Carbonate	Hardness as $CaCO_3$: Noncarbonate	Alkalinity as $CaCO_3$	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
Trinity Group																							
11S-31W-36BAC1	2,200	7-23-51	25	14	2.7	14	3.9	798	6.8	773	0	560	365	3.2	2.8	----	2,200	41	0	654	52.12	3,340	7.8
36BAC1	2,200	2-27-68	21	11	3.0	12	2.1	744	4.1	793	0	496	370	3.0	1.8	2,040	2,200	38	0	610	54.22	3,400	8.2
Nacatoch Sand																							
13S-27W-28BBD1	----	8-10-51	19	----	.25	----	----	----	----	241	15	1.0	117	---	1.5	----	----	48	0	222	----	755	8.6
13S-28W-31CDB1	270	7-27-51	--	----	1.4	----	----	----	----	404	5	8.0	13	---	.6	----	----	316	0	339	----	621	8.3
34ADB1	165	8-10-51	21	29	.09	33	8.1	77	2.5	273	0	7.4	41	.0	.9	----	326	---	0	224	3.11	----	7.6
35CBA1	----	8-10-51	--	----	.19	----	----	----	----	251	21	5.0	64	---	.9	----	----	51	0	240	----	628	8.8
36DCA1	110	8-10-51	--	----	.36	----	----	----	----	228	0	1.0	395	---	6.5	----	----	66	0	187	----	1,560	8.2
14S-30W-1DAA1	375	8- 8-51	20	24	1.5	102	24	95	3.0	566	0	14	57	.0	1.7	----	600	353	0	464	2.21	----	7.4
Terrace deposits of Quaternary age																							
11S-31W-36BCC1	----	7-22-51	--	----	0.02	----	----	----	----	134	0	2.0	124	---	212	----	----	---	---	110	----	1,020	7.0
11S-32W-2CCC1	----	7-24-51	--	----	.09	----	----	----	----	11	0	17	136	---	560	----	----	---	---	9	----	1,540	5.5
9BAB1	26	2-27-68	17	30	.00	27	.7	6.4	2.8	85	0	8.2	6.5	.3	4.1	128	135	70	1	70	.12	175	7.1
11S-33W-12AAA1	----	7-24-51	--	----	.17	----	----	----	----	75	0	23	102	---	130	----	----	92	30	62	----	675	7.4
12S-29W-6CCC1	----	7-26-51	--	----	.02	----	----	----	----	316	7	7.0	167	---	3.9	----	----	455	185	271	----	1,270	8.1
32CAB4	90	8- 7-51	19	33	.06	60	14	24	1.4	234	0	13	34	---	7.7	----	310	207	15	192	.74	477	7.1
12S-30W-3BAB1	50	7-25-51	--	----	11	----	----	----	----	578	0	13	610	---	1.0	----	----	790	316	474	----	2,680	7.4
12S-32W-15DBB1	----	7-11-46	18	26	.03	18	5.1	35	1.6	4	0	3.3	59	---	66	----	----	---	---	3	1.89	----	5.1
26BCA1	22	7-25-51	--	----	.02	----	----	----	----	276	0	5.0	33	---	38	----	----	243	17	226	----	550	7.8
13S-28W-26AAC1	30	3- 6-68	18	30	1.1	24	6.5	30	.6	97	0	17	38	.4	2.4	198	194	94	14	80	1.40	298	7.1
13S-31W-4ACD1	90	10- 7-59	19	20	.09	3.3	.6	6.9	.6	22	0	.4	4.5	.0	.8	----	51	10	0	18	.93	54	6.2
4ACD1	90	2-27-68	18	27	.00	12	1.6	14	.9	28	0	1.6	28	.1	4.3	103	119	36	14	23	1.02	140	6.5
Alluvial deposits of Quaternary age																							
13S-27W-31ACD1	----	7-20-51	19	----	.06	----	----	----	----	248	18	2.0	151	---	1.2	----	----	55	0	233	----	902	8.6

Table 13.--Aquifers as determined from electrical logs of oil tests in Little River County, Ark.

[Information is recorded in this table only for aquifers that occur within the logged interval]

Driller, lease, and well number	Location	Year drilled	Land surface altitude (feet above mean sea level)	Logged interval (feet below land surface)	Aquifer	Depth to top of aquifer (feet below land surface)	Thickness of aquifer (feet)	Percentage of sand in aquifer	Remarks
Burns Oil Co. Dierks No. 1	11S-32W-4DBB	1957	415	109-2,097	Woodbine Formation(?)	525	62	56	
A. Gutousky Ada Mills No. 1	12S-29W-18BDC	1941	320	85-3,325	Ozan Formation	92	90	78	
Lee & Burnett	14S-28W-4DBB	1948	250	100-4,273	Nacatoch Sand	195	134	75	

Table 14.--Logs of test holes and wells

Little River County

10S-31W-32CDD1. Log of test hole by U.S. Geological Survey. Surface altitude, 321 ft.

	Thickness (feet)	Depth (feet)
Sand, very fine to fine, silty, yellow----------	8	8
Sand, fine, clayey, brown----------	9	17
Clay, dense, red----------	18	35
Sand, fine to medium, silty----------	2	37
Sand, fine to medium----------	4	41
Sand and gravel, clayey----------	14	55
Clay, blue----------	5	60

Table 14--Logs of test holes and wells--Continued

Little River County--Continued

10S-32W-18CCD1. Log of test hole by U.S. Geological Survey. Surface altitude, 388 ft.

	Thickness (feet)	Depth (feet)
Sand, silty, brown----------	4	4
Sand, fine to medium, clayey, red----------	3	7
Sand, medium, red, cemented----------	8	15
Sand, clayey, with very fine gravel----------	4	19
Sand and gravel----------	6	25
Sand, very coarse, brown----------	8	33
Clay, blue----------	9	42

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

10S-32W-32CCC1. Log of observation well by U.S. Geological Survey. Surface altitude, 377 ft.

	Thickness (feet)	Depth (feet)
Sand, clayey, red----------	2	2
Sand, fine to medium, cemented, dense, red------	2	4
Clay, dense, mottled, red and gray----------	13	17
Clay, dense, brown and gray----------	11	28
Clay, brown, with coarse to very coarse gravel--	7	35
Clay, brown----------	8	43
Clay, blue----------	9	52

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

11S-30W-19CAB1. Log of test hole by U.S. Geological Survey. Surface altitude, 305 ft.

	Thickness (feet)	Depth (feet)
Sand, silty, brown	3	3
Clay, dense, red	4	7
Sand, fine to medium, clayey, red	5	12
Clay, dense, red	5	17
Clay, silty, brown	8	25
Clay, red-brown	14	39
Sand, medium, silty	9	48
Clay, blue	4	52

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

11S-30W-33DDD1. Log of test hole by U.S. Geological Survey. Surface altitude, 310 ft.

	Thickness (feet)	Depth (feet)
Clay, dense, red	25	25
Clay, sandy, red	12	37
Clay, mixed with coarse gravel	8	45
Limestone, gray	2	47

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

11S-31W-17DCC1. Log of test hole by U.S. Geological Survey. Surface altitude, 310 ft.

	Thickness (feet)	Depth (feet)
Clay, silty, brown----------	10	10
Clay, mottled gray and yellow----------	3	13
Clay, sandy----------	9	22
Clay, red----------	10	32
Clay, sandy, brown----------	34	66
Clay, blue----------	6	72

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

11S-32W-19AAD1. Log of test hole by U.S. Geological Survey. Surface altitude, 440 ft.

	Thickness (feet)	Depth (feet)
Clay, sandy, with gravel, brown----------	5	5
Clay, with gravel, brown----------	8	13
Clay, brown and gray----------	10	23
Clay, brown----------	8	31
Clay, blue----------	6	37

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

11S-32W-32DDD1. Log of test hole by U.S. Geological Survey. Surface altitude, 430 ft.

	Thickness (feet)	Depth (feet)
Clay, red and gray----------	4	4
Clay, brown and gray with medium to coarse gravel----------	8	12
Clay, brown----------	11	23
Clay, blue----------	4	27

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

12S-28W-17AAA1. Log of test hole by U.S. Geological Survey. Surface altitude, 280 ft.

	Thickness (feet)	Depth (feet)
Clay, sandy, red	4	4
Clay, red	11	15
Silt, sandy	13	28
Clay, red	14	42
Clay, sandy	8	50
Sand, very fine to fine, silty	19	69
Sand and gravel, fine to medium	12	81
Clay, blue	2	83

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

12S-28W-29DDA1. Log of test hole by U.S. Geological Survey. Surface altitude, 300 ft.

	Thickness (feet)	Depth (feet)
Sand, clayey, brown----------	6	6
Sand, clayey, light brown----------	9	15
Sand, fine to medium, silty, red----------	72	87

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

12S-29W-8BBA1. Log of test hole by U.S. Geological Survey. Surface altitude, 302 ft.

	Thickness (feet)	Depth (feet)
Clay, red	8	8
Clay, sandy, gray	7	15
Sand, clayey, brown	20	35
Clay, red	28	63
Clay, dense, red	4	67

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

12S-29W-20DBB1. Log of test hole by U.S. Geological Survey. Surface altitude, 324 ft.

	Thickness (feet)	Depth (feet)
Sand, clayey, red----------	10	10
Sand, very fine to fine, red----------	58	68
Sand, fine, red----------	19	87

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

12S-29W-32CAB4. Log of Ashdown Public Supply well by driller.

Surface altitude, 330 ft.

	Thickness (feet)	Depth (feet)
Clay	8	8
Sand	30	38
"Joint clay"	9	47
Sand	18	65
Clay	11	76
Sand	14	90
Shale	--	below 90

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

12S-30W-21CCC1. Log of test hole by U.S. Geological Survey. Surface altitude, 335 ft.

	Thickness (feet)	Depth (feet)
Clay, sandy	2	2
Clay, dense, gray	5	7
Clay, dense, red	10	17
Sand, clayey	3	20
Clay, sandy	4	24
Silt, sandy	31	55
Clay, blue	13	68

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

12S-31W-8DBB1. Log of test hole by U.S.Geological Survey. Surface altitude, 351 ft.

	Thickness (feet)	Depth (feet)
Silt, clayey, yellow-brown----------	7	7
Clay, silty----------	7	14
Sand, very fine to medium, clayey; some very coarse gravel below 20 ft.----------	20	34
Sand, silty----------	5	39
Clay, blue----------	3	42

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

12S-31W-30DAA1. Log of test hole by U.S. Geological Survey. Surface altitude, 386 ft.

	Thickness (feet)	Depth (feet)
Sand, clayey, brown----------	3	3
Clay, sandy, red----------	5	8
Clay, red----------	7	15
Sand, fine to medium, clayey, red----------	4	19
Sand, clayey----------	8	27
Gravel----------	1	28
Sand, medium to very coarse, silty----------	6	34
Clay, blue----------	3	37

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-28W-5BDC1. Log of test hole by U.S. Geological Survey. Surface altitude, 312 ft.

	Thickness (feet)	Depth (feet)
Clay, red-gray	4	4
Clay, dense, red	11	15
Silt, clayey, red	7	22
Silt, red	8	30
Sand, silty, very fine to fine	25	55
Sand, coarse; contains some gravel	15	70
Clay, sandy, blue-gray	7	77

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-28W-14DCA1. Log of observation well by U.S. Geological Survey. Surface altitude, 270 ft. Depth to water, 10.9 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Silt and very fine sand----------	1	1
Sand, very fine, clayey, yellow-brown--------	2	3
Clay, light-red-brown----------	5	8
Clay, red-brown; contains stringers of gray clay----------	6	14
Sand, very fine to fine; contains some medium to very coarse sand and some gravel--------	36	50
Sand, very fine to medium, and gravel; contains some coarse to very coarse sand----------	4	54
Sand, very fine to fine, clayey, blue-gray---	3	57

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-28W-20BBB1. Log of test hole by U.S. Geological Survey. Surface altitude, 290 ft.

	Thickness (feet)	Depth (feet)
Clay, red	37	37
Clay, dense, red	18	55
Clay, gravely, brown; contains coarse to very coarse sand	23	78
Gravel, fine to medium	3	81
Sand, very fine, clayey, blue	3	84

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-28W-26AAC1. Log of observation well by U.S. Geological Survey. Surface altitude, 259 ft. Depth to water 15.8 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, black	1	1
Sand, silty, yellow-brown	2	3
Clay, red and brown	2	5
Sand, very fine, clayey, light-red-brown	11	16
Sand, very fine to fine, yellow-brown, streaked with gray	2	18
Sand, very fine to fine	7	25
Sand, very fine to fine, and gravel; contains some medium sand	33	58
Gravel	3	61
Sand, fine, clayey, blue-gray	6	67

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-28W-30BCB1. Log of test hole by U.S. Geological Survey. Surface altitude, 295 ft.

	Thickness (feet)	Depth (feet)
Sand, clayey, brown----------	3	3
Clay, light-red-brown----------	6	9
Clay, red-brown; contains some concretions-----	13	22
Sand, very fine to fine; contains some medium sand----------	28	50
Sand, very fine to medium and gravel----------	15	65
Clay, yellow-green----------	5	70
Sand, very fine, silty, blue-gray----------	2	72

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-28W-32ABC1. Log of test hole by U.S. Geological Survey. Surface altitude, 307 ft.

	Thickness (feet)	Depth (feet)
Sand, clayey, brown----------	2	2
Clay, mottled----------	3	5
Clay, red----------	2	7
Clay, sandy----------	3	10
Sand, very fine to fine, silty----------	9	19
Clay, red----------	1	20
Clay, red and Sand, clayey----------	11	31
Sand, very fine to medium, silty----------	7	38
Sand, fine and gravel----------	3	41
Sand, medium to coarse----------	42	83
Sand and gravel----------	3	86
Clay, silty, blue----------	1	87

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-28W-35BCB1. Log of observation well by U.S. Geological Survey.

Surface altitude, 263 ft. Depth to water, 11.7 ft., June 18, 1963

	Thickness (feet)	Depth (feet)
Clay, black	4	4
Clay, red-brown to brown	10	14
Clay, sandy, brown	2	16
Sand, very fine, clayey, gray-green	2	18
Sand, very fine to fine, yellow-brown; contains some medium to very coarse sand and some gravel	22	40
Sand, very fine to fine, gravel and cobbles	14	54
Clay, blue-gray	6	60

Table 14--Logs of test holes and wells--Continued

Little River County--Continued

13S-29W-9ABB1. Log of observation well by U.S. Geological Survey. Surface altitude, 325 ft.

	Thickness (feet)	Depth (feet)
Clay, sandy, mottled----------	3	3
Clay, sandy, red----------	4	7
Sand, silty----------	8	15
Sand, fine to medium----------	72	87

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-29W-18DAA1. Log of test hole by U.S. Geological Survey. Surface altitude, 290 ft.

	Thickness (feet)	Depth (feet)
Clay, red	10	10
Sand, very fine to medium	15	25
Sand, fine to coarse; contains some very fine gravel	27	52
Clay, sandy, blue-green	8	60

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-29W-31BAD1. Log of observation well by U.S. Geological Survey. Surface altitude, 280 ft.

	Thickness (feet)	Depth (feet)
Sand, very fine, silty----------	5	5
Clay, red----------	2	7
Sand, clayey----------	15	22
Sand, medium to coarse----------	18	40
Sand, very coarse and gravel, very fine---------	6	46
Sand, clayey, blue----------	4	50

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-30W-4CAA1. Log of test hole by U.S. Geological Survey. Surface altitude, 332 ft.

	Thickness (feet)	Depth (feet)
Clay, tan	5	5
Clay, red; contains calcareous concretions	5	10
Clay, silty, red	2	12
Sand, very fine, silty	5	17
Sand, fine to medium, silty	67	84
Clay, blue	1	85

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-30W-4DBD1. Log of test hole by U.S. Geological Survey. Surface altitude, 332 ft.

	Thickness (feet)	Depth (feet)
Clay, red	4	4
Clay, silty	16	20
Clay, brown	15	35
Sand, fine to medium	17	52
Sand, clayey, blue	5	57

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-30W-21DBB1. Log of test hole by U.S. Geological Survey. Surface altitude, 293 ft.

	Thickness (feet)	Depth (feet)
Sand, very fine to medium, clayey, red----------	5	5
Sand, silty, yellow----------	5	10
Sand, medium, clean----------	21	31
Clay, blue----------	6	37

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-31W-6AAA1. Log of test hole by U.S. Geological Survey. Surface altitude, 365 ft.

	Thickness (feet)	Depth (feet)
Sand, clayey, red-yellow----------	5	5
Sand, medium, clayey, tan----------	3	8
Gravel, medium; contains some clay, white-------	4	12
Clay, yellow----------	6	18
Clay, blue----------	4	22

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-31W-26BAC1. Log of observation well by U.S. Geological Survey. Surface altitude, 300 ft.

	Thickness (feet)	Depth (feet)
Clay, brown	2	2
Clay, red	8	10
Clay, sandy	4	14
Sand, clayey, red	2	16
Sand, fine to medium, silty	9	25
Sand, medium to very coarse, gray; contains very fine gravel	4	29
Clay, blue	3	32

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-31W-29AAA1. Log of test hole by U.S. Geological Survey. Surface altitude, 300 ft.

	Thickness (feet)	Depth (feet)
Clay, red	20	20
Clay, red, wet	24	44
Clay, black	1	45

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-31W-29DDD1. Log of observation well by U.S. Geological Survey. Surface altitude, 298 ft.

	Thickness (feet)	Depth (feet)
Clay, red	12	12
Sand, very fine to fine, brown	10	22
Sand, fine to medium, brown	23	45
Clay, blue	2	47

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-32W-5BCB2. Log of observation well by U.S. Geological Survey. Surface altitude, 310 ft.

	Thickness (feet)	Depth (feet)
Clay, brownish black----------	7	7
Clay, Brown----------	5	12
Clay, mottled brown, mottled yellow brown and olive gray----------	4	16
Clay, brown----------	2	18
Sand, fine to medium coarse, gray----------	25	43

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-32W-5BCB3. Log of observation well by U. S. Geological Survey. Surface altitude, 310 ft.

	Thickness (feet)	Depth (feet)
Clay, brownish black----------	2	2
Clay, brown----------	16.5	18.5
Sand, medium to coarse----------	25.5	44

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-32W-5BCB4. Log of observation well by U.S. Geological Survey. Surface altitude 263 ft.

	Thickness (feet)	Depth (feet)
Clay, grayish black----------	6	6
Clay, brown----------	11	17
Sand, grades from fine with very coarse grains to coarse with pebbles to $\frac{1}{2}$ inch----------	27	44

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-32W-11DDD1. Log of observation well by U.S. Geological Survey. Surface altitude, 303 ft.

	Thickness (feet)	Depth (feet)
Clay, dark brown----------	4	4
Clay, silty, red----------	18	22
Clay, red; contains fine to very fine gravels---	5	27
Sand, fine to coarse, red; contains some very fine gravel----------	14	41
Sand; contains some gravel----------	2	43
Clay, blue----------	1	44

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

13S-32W-20AAA1. Log of Observation well by U.S. Geological Survey. Surface altitude, 310 ft.

	Thickness (feet)	Depth (feet)
Silt, sandy, light brown----------	4	4
Clay, silty----------	8	12
Sand, silty----------	20	32
Sand, fine to medium----------	3	35
Sand, fine to coarse; contains some very fine gravels----------	14	49
Clay, blue-gray----------	1	50

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

14S-31W-4CBC1. Log of test hole by U.S. Geological Survey. Surface altitude, 300 ft.

	Thickness (feet)	Depth (feet)
Clay, red-brown	17	17
Sand, very fine, silty, red-brown	23	40
Clay, sandy	8	48
Clay, dark red	1	49

Table 14.--Logs of test holes and wells--Continued

Little River County--Continued

14S-31W-4DBD1. Log of observation well by U.S. Geological Survey. Surface altitude, 303 ft.

	Thickness (feet)	Depth (feet)
Clay, red	15	15
Sand, silty, red	5	20
Sand, silty, red, wet	10	30
Sand, very fine to fine	15	45
Sand, fine to very coarse	5	50
Clay, sandy, blue-green	1	51

Table 15.--Measurement of water levels in wells, Little River County, Ark.

[In feet below land surface]

Date	Water level
Nacatoch Sand	
14S-30W-1DAA1	
Nov. 16, 1967	29.45
Mar. 19, 1968	29.86
Oct. 23	32.59
Deposits of Quaternary age	
10S-32W-18CCD1	
Sept. 20, 1967	10.75
Nov. 16	10.83
Mar. 18, 1968	10.65
Oct. 21	10.70
10S-32W-22DAA1	
Sept. 22, 1967	32.46
Nov. 16	32.40
Mar. 18, 1968	30.57
Oct. 21	31.32
11S-31W-7BDD1	
Sept. 22, 1967	7.26
Nov. 16	7.10
Mar. 18, 1968	5.51
Oct. 21	6.86
11S-31W-36BCC1	
Nov. 16, 1967	47.42
Mar. 18, 1968	43.84

Date	Water level
Deposits of Quaternary age--Continued	
11S-32W-2CCC1	
Nov. 17, 1967	16.33
Mar. 18, 1968	13.33
Oct. 21	14.49
11S-32W-4CAA1	
Sept. 20, 1967	12.65
Nov. 16	12.08
Mar. 18, 1968	9.44
Oct. 21	11.67
11S-32W-9BAB1	
Jan. 25, 1967	8.24
Mar. 4	6.69
Mar. 25	4.96
Apr. 25	3.64
May 22	3.43
June 25	5.81
July 23	7.33
Aug. 21	8.87
Sept. 25	8.06
Oct. 30	7.45
Nov. 26	5.33
Dec. 13	7.25
Feb. 4, 1958	6.85
Mar. 6	6.93
Apr. 8	7.31
May 6	6.65
June 6	8.25
July 15	10.16
Aug. 5	10.29
Sept. 1	14.08
Oct. 7	14.13

Table 15.--Measurement of water levels in wells, Little River County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
11S-32W-9BAB1--Continued	
Nov. 5, 1958	8.17
Dec. 2	7.94
Jan 13, 1959	9.78
Feb. 3	9.49
Mar. 31	9.41
May 5	8.18
June 2	9.39
July 9	11.12
Aug. 18	12.98
Sept. 10	8.15
Oct. 6	7.44
Nov. 3	7.21
Dec. 1	9.11
Jan. 11, 1960	7.45
Feb. 9	6.95
Mar. 1	7.15
May 9	7.86
June 7	8.09
Aug. 9	11.05
Sept. 8	13.19
Oct. 3	14.89
Nov. 2	14.30
Jan. 12, 1961	11.63
Nov. 16, 1967	17.14
Mar. 18, 1968	7.18
Oct. 21	9.94
11S-33W-12AAA1	
Nov. 16, 1967	17.45
Mar. 18, 1968	5.28
Oct. 21	5.36

Date	Water level
Deposits of Quaternary age--Continued	
12S-29W-22CCC1	
Sept. 6, 1967	25.66
Dec. 14	25.75
Mar. 18, 1968	25.90
12S-30W-3BAB1	
Nov. 16, 1967	34.48
Mar. 18, 1968	33.35
Oct. 23	34.29
12S-30W-17DAD1	
Sept. 19, 1967	34.50
Nov. 16	35.43
Mar. 18, 1968	32.56
Oct. 23	33.36
12S-31W-6BCC1	
Sept. 22, 1967	9.49
Nov. 16	11.18
Mar. 18, 1968	4.80
Oct. 21	10.09

Table 15.--Measurement of water levels in wells, Little River County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
12S-31W-12DAC1	
Sept. 19, 1967	33.88
Nov. 16	34.36
Mar. 18, 1968	27.30
Oct. 23	33.38
12S-31W-26CDB1	
Sept. 20, 1967	23.45
Nov. 16	24.15
Mar. 18, 1968	18.08
Oct. 23	21.58
12S-32W-15DBB1	
Nov. 16, 1967	20.33
Mar. 19, 1968	15.33
12S-33W-1BCD1	
Sept. 22, 1967	6.22
Nov. 16	6.73
Mar. 19, 1968	1.81
Oct. 21	3.83
13S-28W-14DCA1	
June 18, 1963	10.88
July 15	10.93

Date	Water level
Deposits of Quaternary age--Continued	
13S-28W-26AAC1	
June 18, 1963	15.79
July 15	14.94
Dec. 14, 1967	17.96
Mar. 19, 1968	16.94
Oct. 23	16.67
13S-28W-33DCC1	
Sept. 6, 1967	8.66
Dec. 14	8.67
Mar. 19, 1968	2.83
Oct. 23	7.45
13S-28W-35BCB1	
June 18, 1963	11.74
July 15	10.13
13S-29W-5ABD1	
Jan. 24, 1957	20.80
Mar. 4	7.72
Mar. 25	1.30
Apr. 22	1.25
June 25	2.02
July 23	20.34
Aug. 21	21.17
Sept. 25	20.58
Oct. 30	20.51
Nov. 26	19.12
Dec. 13	8.25

Table 15.--Measurement of water levels in wells, Little River County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
13S-29W-5ABD1--Continued	
Feb. 4, 1958	7.75
Mar. 5	7.47
Apr. 8	1.74
May 6	.99
June 6	14.75
July 6	14.75
July 15	19.26
Oct. 7	20.40
Nov. 5	13.10
Jan. 13, 1959	.95
Feb. 3	.83
Mar. 31	5.85
May 5	21.04
June 2	22.19
July 8	23.10
Sept. 10	23.60
Oct. 6	23.25
Nov. 3	22.79
Dec. 1	23.05
Jan. 11, 1960	21.36
Feb. 9	21.40
Mar. 1	21.18
Apr. 11	20.52
May 9	21.46
Oct. 3	23.80
Nov. 3	23.12
Jan. 12, 1961	21.11
Mar. 7	21.90
Nov. 13	22.15
Mar. 27, 1962	20.44
Oct. 1	23.19
Dec. 12	20.50
Feb. 12, 1963	20.01
Apr. 16	28.02
June 6	22.40
Oct. 1	30.69
Dec. 3	21.64
Deposits of Quaternary age--Continued	
13S-29W-5ABD1--Continued	
Jan. 9, 1964	21.05
Mar. 4	18.73
Nov. 6	24.79
Jan. 5, 1965	22.91
Mar. 2	1.65
May 4	9.13
Nov. 4	23.10
Jan. 6, 1966	22.80
Mar. 23	20.80
May 12	25.33
Sept. 15	26.66
Jan. 19, 1967	20.65
Nov. 17	21.90
Mar. 19, 1968	25.04
Oct. 23	28.85
13S-29W-18DAA1	
Sept. 7, 1967	8.65
Dec. 14	8.01
Mar. 19, 1968	5.45
Oct. 23	8.31
13S-30W-20CAD1	
Sept. 7, 1967	17.69
Nov. 16	18.16
Mar. 19, 1968	16.86
Oct. 23	17.51

Table 15.--Measurement of water levels in wells, Little River County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
13S-30W-25BBB1	
Sept. 7, 1967	9.00
Nov. 16	10.30
Mar. 19, 1968	7.80
Oct. 23	8.39
13S-31W-4ACD1	
Nov. 16, 1967	35.78
Mar. 19, 1968	33.58
Oct. 23	31.83
13S-31W-4CBB1	
Sept. 25, 1957	20.55
Nov. 26	19.38
Dec. 13	18.96
Feb. 4, 1958	17.51
Mar. 6	17.43
Apr. 8	15.92
May 6	14.29
June 6	16.06
July 15	16.13
Aug. 5	16.60
Sept. 9	19.83
Oct. 7	20.60
Nov. 5	19.98
Dec. 2	16.38
Jan. 13, 1959	16.01
Feb. 3	15.73
Mar. 31	15.58
May 5	14.39
June 2	14.65
July 9	15.33
Aug. 15	16.67
Sept. 10	17.10

Date	Water level
Deposits of Quaternary age--Continued	
13S-32W-11DDD1	
Nov. 17, 1967	9.30
Mar. 19, 1968	1.15
13S-32W-26BBB1	
Sept. 25, 1957	8.33
Oct. 30	8.19
Nov. 26	6.77
Dec. 13	1.88
Feb. 4, 1958	1.48
Mar. 6	1.29
Apr. 8	2.65
July 15	4.89
Aug. 5	5.05
Sept. 9	6.43
Oct. 7	7.98
Nov. 5	5.33
13S-33W-12ACC1	
Sept. 7, 1967	17.92
Nov. 16	15.60
Mar. 19, 1968	8.84
Oct. 23	11.29
14S-31W-4DBD1	
Nov. 16, 1967	21.70
Mar. 19, 1968	20.54

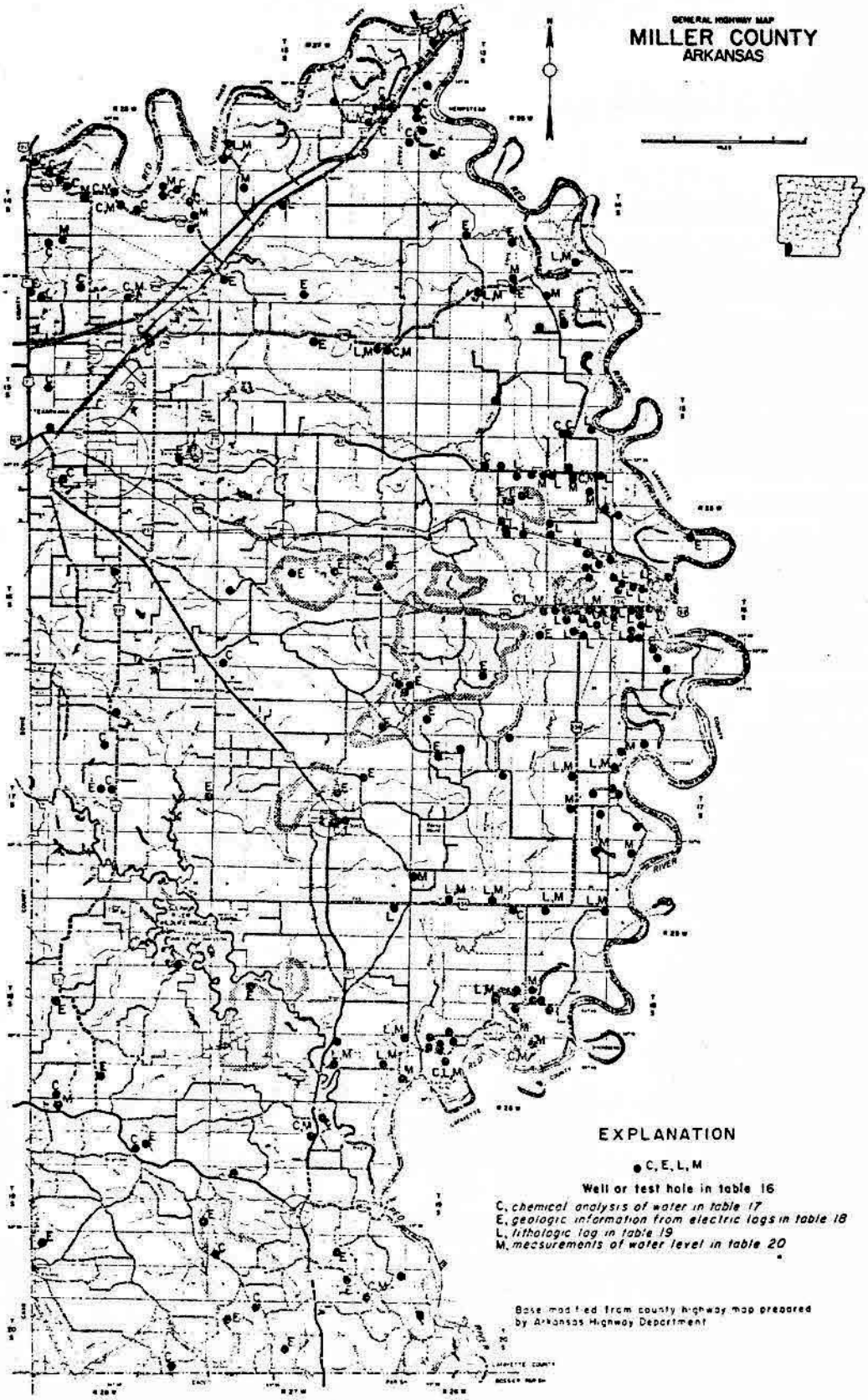

Figure 5.—Map showing locations of wells listed in tables 16, 17, 18, 19, and 20, Miller County, Arkansas.

Table 16.--Records of wells and test holes in Miller County, Ark.

Depth to water below land surface: + preceding water level measurement indicates that the water level is above land surface.

Use of water: Co., commercial, D., domestic, Ind., industrial, Ins., institutional, Irr., irrigation, P.S., Public Supply, R., recreation, S., stock, U., unused.

Remarks: C., Chemical analysis of water included in report, see Table 17., L., Log of well included in report, see Table 19., M., Water level measurements included in report, see Table 20.

Local well number	Date drilled	Altitude above mean sea level (feet)	Well depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface (feet)	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
Nacatoch Sand										
13S-27W-35DDD1	----	260	450	2	---	---	---	--	D	C
14S-26W- 7CAA1	----	250	390	2	---	---	---	--	D	C
14S-27W- 1AAA1	----	250	390	2	---	---	---	--	D	C
1AAD1	----	255	350	2	---	---	---	--	D	C
1BBB1	----	260	400	2	---	---	---	5	D	C
2AAA1	----	260	425	2	---	---	---	5	D	C
2AAB1	----	255	390	2	---	---	---	--	D	C
2ADD1	----	255	450	2	---	---	---	--	D	C
7CBC1	----	255	364	3	---	---	---	5	D	C
12AAB1	----	255	375	-	---	---	---	--	D	C
14S-28W- 7CCA1	----	265	426	-	---	---	---	5	D	C
13CCC1	----	270	400	-	---	---	---	--	D	C
14CBA1	----	265	400	4	---	17.04	6-4-63	--	D	M
14CBD1	----	263	400	-	---	---	---	5	D	C
16DAC1	----	270	400	-	---	19.30	11-1-67	5	D	C, M
17BBC1	----	270	360	-	---	---	---	5	D	C
17CBA1	----	270	350	-	---	---	---	5	D	C
18AAC1	----	270	500	-	---	---	---	5	D	C
21AAA1	----	270	450	-	---	18.73	11-1-67	5	D	C, M
22BDA1	----	270	600	-	---	---	---	--	D	C
30ACA1	----	270	500	3	---	---	---	5	D	C
32DAB1	----	300	600	4	---	---	---	5	D	C
34CDC1	----	305	500	3	---	70.00	7-10-64	--	U	C, M
15S-28W-10AAB1	----	310	800	3	---	---	---	5	Co.	C
18ACC1	----	355	950	6	---	---	---	20	Irr.	C
Wilcox Group										
15S-26W-23DCC1	1944	240	530	4	---	---	---	4	D	C
23DCC2	1939	250	240	4	---	---	---	--	D	C
28CCC1	----	234	400	4	---	Flowing	7-14-64	--	S	C
15S-28W-10ABB2	----	310	30	-	---	---	---	--	Co.	C
32CAB1	----	350	300	3	---	---	---	--	D	C
16S-28W-16AAC1	1956	347	250	-	---	---	---	--	D	
17S-26W- 8DDD1	----	292	630	4	---	---	---	--	S	
17S-28W- 4DAA1	1964	252	230	2	---	90	---	--	D	
9ACC1	----	219	---	3	---	Flowing	5-16-63	--	U	C
19S-27W-30CAC1	1964	275	852	5	---	---	---	--	U	C
20S-26W- 6BDD1	1962	---	---	6	---	---	---	--	U	
20S-27W- 5ABB1	1964	262	872	7	800	---	---	--	U	C
Claiborne Group										
17S-25W-18CDB1	----	220	100	4	---	8.22	5-10-63	--	D	
Carrizo Sand										
15S-26W-26DCC1	----	252	400	4	---	---	---	--	D	
16S-25W-17ACB1	----	246	700	4	---	18	1964	--	D	
16S-27W-16DBD1	----	285	400	10	---	62.21	10-24-68	--	U	C
17S-27W-22DBB1	1965	320	600	-	566	115.77	1966	100	P.S.	C, L
Cane River Formation										
16S-26W-24ABA1	----	223	300	4	---	---	---	--	D	C
16S-27W-1-AD01	----	370	30	36	---	19.75	6-26-68	--	D	
15CDA1	----	295	37	8	---	28.59	6-26-68	--	D	
30CCD1	1951	310	66	2	55	---	---	--	U	C
36DBB1	----	280	100	5	---	---	---	--	Ind.	C
17S-27W-22DBB2	----	320	150	4	---	54.90	10-22-68	--	U	
17S-28W-16CDA1	----	233	252	4	---	10	7-7-64	--	D	C

Table 16.--Records of wells and test holes in Miller County, Ark.--Continued

Local well number	Date drilled	Altitude above mean sea level (feet)	Well depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface (feet)	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
				Cane River Formation--Continued						
18S-26W- 35BB1	----	214	350	4	---	Flowing	7-16-64	--	D	C
15DDC1	1950	210	465	4	---	---	---	--	D	
22BAB1	----	211	350	4	---	---	---	--	D	
27BBA1	----	202	483	4	---	9.44	5-8-63	--	D	C, M
30ACD1	----	209	400	3	---	20.00	5-7-63	--	D	
30ADD1	----	210	300	3	---	12.66	5-8-63	--	U	
18S-27W-27ACA1	1955	225	400	4	---	---	---	--	D	
36ADC1	1940	210	405	2	---	18.50	10-31-67	--	D	M
19S-27W-11DDD1	----	200	300	2	---	9.00	5-7-63	--	D	
32CDD1	1964	255	390	5	354	130	10-18-64	3	U	C
19S-28W-10ADC1	----	365	500	6	---	---	---	--	Ins.	C
20S-28W-14AAA1	----	292	800	9	---	---	---	--	U	C
				Sparta Sand						
17S-27W-22DAB1	1961	318	110	2	---	---	---	--	D	Well destroyed
19S-27W-10EBA1	----	320	27	36	---	16.63	9-21-67	--	D	C, M
18ABD1	1935	350	31	48	---	26.68	9-21-67	--	D	M, Well destroyed
35DDA1	1920	230	13	36	---	9.47	9-21-67	--	D	C, M
19S-28W- 52DA1	----	320	20	36	---	19.43	9-21-67	--	D	M
				Deposits of Quaternary Age						
13S-26W-30CDA1	1963	266	57	$1\frac{1}{4}$	55	17.95	6-18-63	--	U	L, M
31BCD1	----	250	---	3	---	15.40	5-24-63	--	U	
13S-27W-34DCC1	----	260	37	$1\frac{1}{4}$	---	16.79	6-4-63	--	U	
14S-26W- 6CBC1	----	250	---	12	---	13.75	6-7-63	--	Irr.	
26DAC1	1963	245	62	$1\frac{1}{4}$	60	16.53	6-18-63	--	U	L, M
32ADD1	1963	246	63	$1\frac{1}{4}$	60	16.35	6-18-63	--	U	L, M
33ADA1	----	245	38	$1\frac{1}{4}$	---	14.09	5-17-63	--	U	
34DAD1	----	249	36	$1\frac{1}{4}$	---	15.02	5-17-63	--	D	M
14S-27W- 2DBC1	1963	260	59	$1\frac{1}{4}$	56	56.33	5-15-63	--	U	L, M
7BBB1	1963	277	42	$1\frac{1}{4}$	40	20.84	6-18-63	--	U	L, M
17DDD1	1963	262	57	-	---	---	---	--	U	L
18DBA1	----	262	44	$1\frac{1}{4}$	---	18.95	6-4-63	--	U	M
14S-28W-14CBD2	----	263	40	-	---	---	---	--	D	C
17DDA1	----	271	28	24	---	8.83	5-23-63	--	Irr.	M
24BCA1	1959	269	65	4	---	16.32	6-4-63	--	D	M
24CCB1	----	265	21	$1\frac{1}{4}$	---	14.83	6-4-63	--	U	
29BBA1	----	270	28	$1\frac{1}{4}$	---	10.87	6-4-63	--	D	M
31CDD1	----	352	57	-	---	---	---	--	U	L
15S-26W- 3CBD1	----	245	28	$1\frac{1}{4}$	---	14.47	5-17-63	--	U	
16CDD1	----	239	24	$1\frac{1}{4}$	---	14.57	5-21-63	--	U	
24CDA1	----	237	54	-	---	---	---	--	U	L
26DCC1	----	232	80	-	---	---	---	--	U	C
33DDD1	----	226	39	-	---	---	---	--	U	L
34AAA1	----	230	41	10	---	10.04	9-24-65	--	U	M
34ABB1	----	230	---	$1\frac{1}{4}$	---	---	---	--	S	
34CBB1	----	232	44	-	---	---	---	--	U	L
34CDB1	----	226	49	-	---	---	---	--	U	L
35AAB1	----	230	55	18	---	13.74	1-24-57	--	Irr.	C, M
35AAB2	----	230	---	-	---	8.93	5-16-63	--	Irr.	M
35BBB1	----	232	39	-	---	---	---	--	U	L
36BAA1	----	232	49	-	---	---	---	--	U	L
36CAB1	----	230	45	12	---	16.25	5-16-63	--	Irr.	M
15S-27W-11AAD1	1963	240	57	$1\frac{1}{4}$	55	16.06	6-18-63	--	U	L, M
11CCB1	----	233	30	$1\frac{1}{4}$	---	13.65	5-17-63	--	D	C, M
15S-2[illegible]W-1[illegible]DDD1	----	300	50	6	---	26.95	7-25-51	--	P.S.	
16S-25W- 6BBC1	----	234	---	2	---	---	---	--	S	
17BCA1	----	233	53	-	---	---	---	--	U	L
18ACB1	----	231	59	-	---	---	---	--	U	L
18ADB1	1955	231	57	12	---	20.15	5-16-63	--	Irr.	M
18BBC1	1963	229	57	12	---	15.23	5-15-63	--	Irr.	
18BCD1	1959	229	56	10	---	16.00	5-15-63	--	Irr.	
[illegible]	----	231	[illegible]	-	---	---	---	--	U	L
19AAA1	1963	[illegible]	[illegible]	$1\frac{1}{4}$	52	-9.70	5-17-63	--	U	L, M
19AAA2	----	230	54	-	---	18.38	5-15-63	500	Irr.	
[illegible]	----	[illegible]	[illegible]	-	---	---	---	--	U	L
[illegible]	1968	226	[illegible]	-	---	---	---	--	U	L
[illegible]	----	225	[illegible]	-	---	---	---	--	U	L
[illegible]	----	[illegible]	[illegible]	12	---	---	---	--	Irr.	
[illegible]	----	[illegible]	59	-	---	---	---	--	U	L
[illegible]	1963	[illegible]	[illegible]	-	---	18.00	5-15-63	--	Irr.	
[illegible]	----	[illegible]	[illegible]	-	---	---	---	--	U	L
[illegible]	----	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	--	Irr.	
[illegible]	----	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	--	Irr.	
[illegible]	----	[illegible]	[illegible]	[illegible]	---	[illegible]	[illegible]	[illegible]	Irr.	

Table 10.--Records of wells and test holes in Miller County, Ark.--Continued

Local well number	Date drilled	Altitude above mean sea level (feet)	Well depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface (feet)	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
Deposits of Quaternary Age--Continued										
16S-26W- 1ABC1	1968	232	58	-	---	---	---	--	U	L
2CEE1	----	227	34	-	---	---	---	--	U	L
2CCC1	----	239	39	-	---	---	---	--	U	L
3CDA1	----	235	44	-	---	---	---	--	U	L
4ACC1	----	230	42	10	---	11.92	5-16-63	600	Irr.	
4DAC1	----	233	54	-	---	---	---	--	U	L
4DAC2	----	232	49	-	---	---	---	--	U	L
11AAD1	1950	227	60	14	---	---	---	--	Irr.	
12BCD1	1968	225	63	-	---	---	---	--	U	L
12CCD1	1968	226	60	-	---	---	---	--	U	L
12CDC1	1960	225	60	14	---	---	---	500	Irr.	
12DAA1	1968	230	59	-	---	---	---	--	U	L
13BAB1	1954	226	60	18	40	---	---	250	Irr.	
22AAA1	1963	220	28	1¼	26	11.0	5-20-63	--	U	C, L, M
23AAA1	1963	223	32	1¼	30	12.29	6-18-63	--	U	L, M
23AAB1	----	223	49	-	---	---	---	--	U	L
23ABA1	----	223	39	-	---	---	---	--	U	L
23ABB1	----	222	39	-	---	---	---	--	U	L
23BAB1	----	222	49	-	---	---	---	--	U	L
23DAD1	1968	222	43	-	---	---	---	--	U	L
24ABA1	----	223	59	-	---	---	---	--	U	L
24ABB1	----	224	45	20	---	9.62	4-15-63	--	Irr.	
24ABB2	1968	223	48	-	---	---	---	--	U	L
24ACC1	1968	223	36	-	---	---	---	--	U	L
24BCB1	1968	222	53	-	---	---	---	--	U	L
24CCC1	1968	221	55	-	---	---	---	--	U	L
17S-25W- 7BDD1	----	221	27	1¼	---	13.25	5-14-63	--	U	M
7CDC1	1963	221	38	1¼	36	17.67	6-18-63	--	U	L, M
8BBB1	1953	223	50	8	---	15.15	5-14-63	--	Irr.	
18CBC1	1959	220	80	3	---	17.95	5-10-63	--	U	Well destroyed.
19DAA1	----	222	25	1¼	---	15.40	5-10-63	--	D	
30ADC1	----	220	70	1¼	---	17.69	5-9-63	--	S	M
17S-26W- 4DDC1	----	220	22	6	---	12.80	5-16-63	--	U	
15DEB1	----	219	---	1¼	---	10.66	5-10-63	--	U	
14AAA1	1963	219	27	1¼	25	13.69	6-18-63	--	U	L, M
16AAB1	----	217	23	1¼	---	10.90	5-16-63	--	U	
23AAA1	----	219	54	6	---	10.17	5-16-63	--	Irr.	M
24ABD1	----	215	48	12	---	11.36	5-10-63	--	Irr.	
25ACA1	1959	218	60	10	---	13.68	5-8-63	--	Irr.	M
31BCB1	----	252	25	36	---	15.66	9-21-67	--	D	M
32CCD1	1963	210	42	1¼	40	17.72	6-18-63	--	U	L, M
33DCC1	1963	210	27	1¼	25	11.34	6-19-63	--	U	L, M
18S-25W- 1AAA1	1963	217	49	1¼	47	19.30	6-19-63	--	U	L, M
2BBB1	1963	215	39	1¼	37	12.75	6-19-63	--	U	L, M
15CAA1	----	214	19	-	---	+ 2.00	5-8-63	--	D	
15DBD1	----	210	50	1¼	---	10.99	10-31-67	--	S	M
15DDD1	----	212	40	1¼	---	14.27	5-9-63	--	S	
16DBC1	1963	212	40	1¼	38	16.51	6-19-63	--	U	L, M
20CCD1	1945	211	26	1¼	---	18.50	5-8-63	--	U	Well destroyed.
23BAB1	----	210	18	-	---	15.85	5-9-63	--	U	
27ACA1	----	210	35	1¼	---	22.90	5-8-63	--	U	M
27BAA1	1963	212	39	1¼	37	20.92	6-19-63	--	U	L, M
29BAD1	1958	215	78	10	---	22.40	5-8-63	--	Irr.	
29CBC1	1963	212	49	1¼	47	32.29	6-19-63	--	U	C, L, M
30ABA1	1957	212	56	10	---	21.76	5-8-63	500	Irr.	
30ADD2	----	212	---	4	---	19.22	5-8-63	--	D	
18S-27W- 1ABB1	----	259	38	-	---	---	---	--	U	L
25AAA1	1963	230	19	1¼	17	17.38	6-19-63	--	U	L, M
25CDC1	1963	205	32	1¼	30	21.20	6-19-63	--	U	L, M
27DDC1	1963	205	53	1¼	51	23.28	6-19-63	--	U	L, M
19S-27W- 3DEE1	1960	220	23	36	---	7.69	4-7-63	--	D	M
35AAD1	----	---	15	36	---	---	---	--	D	

Table 17.--Selected chemical analyses of ground water in Miller County, Ark.

[Results in milligrams per liter unless otherwise indicated]

Local well number	Depth of well (feet)	Date of collection	Temperature (°C)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Flouride (F)	Nitrate (NO_3)	Dissolved solids: Calculated	Dissolved solids: Residue at 180°C	Hardness as $CaCO_3$: Carbonate	Hardness as $CaCO_3$: Noncarbonate	Alkalinity as $CaCO_3$	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
Nacatoch Sand																							
13S-27W-35DDD1	450	8-15-51	---	----	0.23	-----	----	------	----	289	---	30	116	----	1.1	-----	-----	20	0	237	-----	835	8.6
14S-26W-7CAA1	390	8-15-51	---	----	.33	-----	----	------	----	312	---	46	158	----	1.3	-----	-----	32	0	256	-----	1,070	8.5
14S-27W-1AAA1	390	8-15-51	---	----	.36	-----	----	------	----	326	---	34	67	----	----	-----	-----	40	0	267	-----	747	8.7
1AAD1	350	8-15-51	---	----	.09	-----	----	------	----	303	---	30	62	----	----	-----	-----	13	0	248	-----	711	8.7
1BBB1	400	8-15-51	---	----	.06	-----	----	------	----	260	16	40	76	----	----	-----	-----	16	0	240	-----	718	8.8
2AAA1	425	8- 9-15	---	----	.08	-----	----	------	----	342	---	34	76	----	----	-----	-----	27	0	280	-----	785	8.7
2AAB1	390	8-15-51	---	----	.27	-----	----	------	----	278	---	45	85	----	3.6	-----	-----	25	0	228	-----	776	8.3
2AAB1	390	2-27-68	20	12	.34	3.0	0.3	160	1.1	288	0	31	70	0.6	1.1	421	445	8	0	236	23.57	782	8.0
2ADD1	450	8-15-51	---	----	.16	-----	----	------	----	273	11	40	109	----	2.0	-----	-----	42	0	242	-----	821	8.5
7CBC1	364	8- 9-51	22	----	.20	-----	----	------	----	224	---	1.0	452	----	3.6	-----	-----	28	0	184	-----	1,740	8.6
12AAB1	375	8-15-51	---	----	2.1	-----	----	------	----	439	---	2.0	59	----	2.0	-----	-----	203	0	360	-----	805	8.7
14S-28W-7CCA1	426	8- 8-51	---	----	.09	-----	----	------	----	347	---	4.7	205	----	2.3	-----	-----	8	0	285	-----	1,140	8.8
13CCC1	400	8- 8-51	---	----	.10	-----	----	------	----	216	0	2.9	------	----	.6	-----	-----	61	0	177	-----	3,750	7.7
14CBD1	400	8- 9-51	---	----	3.9	-----	----	------	----	156	0	3.0	1,410	----	.3	-----	-----	78	0	128	-----	4,490	8.4
16DAC1	400	8- 9-51	21	----	.13	-----	----	------	----	399	30	3.0	355	----	8.6	-----	-----	13	0	376	-----	1,680	8.8
17BBC1	360	8- 9-51	---	----	.10	-----	----	------	----	351	25	2.0	186	----	2.1	-----	-----	12	0	330	-----	1,080	8.9
17CBA1	350	8- 9-51	---	----	.04	-----	----	------	----	460	---	1.0	128	----	2.1	-----	-----	12	0	377	-----	1,040	8.8
17CBA1	350	2-27-68	17	13	.00	1.6	.2	240	.8	455	0	.6	125	.1	.2	605	631	5	0	373	47.58	1,050	7.9
18AAC1	500	8- 8-51	---	----	.10	-----	----	------	----	338	25	3.0	2.8	----	4.8	-----	-----	12	0	319	-----	1,190	8.8
21AAA1	450	8- 9-51	---	----	.27	-----	----	------	----	344	14	2.0	565	----	1.9	-----	-----	22	0	305	-----	2,210	8.5
22BDA1	600	8- 8-51	---	----	.17	-----	----	------	----	218	0	2.0	1,670	----	2.0	-----	-----	100	0	179	-----	5,320	7.7
30ACA1	500	8- 8-51	---	----	.19	-----	----	------	----	432	30	2.0	602	----	1.9	-----	-----	24	0	405	-----	2,400	8.8
32DAB1	600	7-26-51	23	----	.12	-----	----	------	----	273	14	2.0	1,480	----	1.0	-----	-----	79	0	247	-----	4,900	8.6
34CDC1	500	2-27-68	15	11	.04	46	9.9	1,470	6.7	316	0	26	2,220	.4	.1	3,940	4,050	156	0	259	51.28	7,160	7.7
15S-28W-10AAB1	500	7-21-51	23	----	.04	-----	----	------	----	170	8	1.0	3,850	----	1.7	-----	-----	306	153	153	-----	11,200	8.2
18ACC1	950	7-26-51	22	----	1.9	-----	1.9	------	----	469	12	2.0	955	----	1.2	-----	-----	46	0	406	-----	3,650	8.5
Wilcox Group																							
15S-26W-23DCC1	530	10-23-68	22	11	0.00	3.0	0.5	184	1.3	336	8	0.4	81	0.4	1.0	456	473	10	0	289	25.91	835	8.3
23DCC2	240	10-23-68	23	10	.00	11	2.6	167	3.2	312	4	1.2	105	.2	1.1	459	476	35	0	262	11.76	791	8.3
28CCC1	402	10- 7-64	---	14	.06	2.6	.6	153	2.3	344	7	.0	34	.2	.1	383	403	10	0	294	21.30	692	8.4
15S-28W-10AAB2	30	7-26-51	---	----	1.8	-----	----	------	----	8	0	2.0	45	----	86	-----	-----	32	25	7	-----	274	6.6
32CAB1	300	7-25-51	---	----	7.5	-----	----	------	----	95	0	2.0	5.5	----	.8	-----	-----	39	0	78	-----	152	7.4
17S-26W-9ACC1	----	3- 6-68	18	11	.27	33	6.5	14	3.3	124	0	7.4	11	.1	.2	149	139	109	8	102	.58	244	7.8
19S-27W-30CAC1	552	10-23-68	25	14	.00	5.5	1.1	500	2.5	512	30	.4	432	1.3	.3	1,240	1,270	18	0	473	50.93	2,170	8.7
20S-27W-5ABB1	[illegible]	10-29-68	---	14	.00	3.0	.7	455	2.3	504	44	.8	345	1.9	1.7	1,120	1,140	---	---	487	61.45	1,960	8.9
Carrizo Sand																							
16S-27W-36DBB1	110	10-24-68	---	12	0.00	15	3.3	26	4.3	120	4	1.6	7.1	1.8	0.1	133	148	51	0	105	1.59	234	8.4
17S-27W-22DBB1	600	10-23-68	22	10	.00	1.	.2	76	.7	184	4	.3	7.1	.4	.2	195	207	4	0	164	15.15	326	8.6
Cane River Formation																							
16S-26W-24ABA1	----	10-23-68	23	9.2	0.07	15	3.6	35	3.7	144	0	11	9.9	0.2	1.0	160	177	52	0	118	2.34	280	7.8
16S-27W-30CCC1	45	7-26-51	18	----	3.9	-----	3.9	------	----	25	0	7.0	8.2	----	5.0	-----	-----	24	0	21	-----	76	7.1
17S-25W-16CCA1	252	10- 7-68	---	11	.05	.9	.4	56	1.4	164	2	3.0	7.7	[illegible]	.2	169	175	4	0	140	14.57	291	8.3
16DDA1	252	2-29-68	---	8.9	.20	1.1	.3	65	1.1	176	0	3.4	4.0	[illegible]	.7	171	182	4	0	144	14.19	290	7.6
18S-26W-3BBB1	----	10- 6-68	[illegible]	11	.05	1.3	.4	54	1.4	145	0	.2	3.7	.3	.6	144	150	4	0	119	10.30	246	7.9
18S-26W-27BBA1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	24.07	655	7.6
19S-27W-32CCD1	[illegible]	10-23-68	[illegible]	[illegible]	.00	3.0	2.0	65	2.4	196	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	161	[illegible]	[illegible]	7.3
19S-28W-10ADD1	50	[illegible]	---	[illegible]	1.5	[illegible]	4.5	35	5.5	[illegible]	0	37	[illegible]	.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	274	7.4
10ALC1	[illegible]	[illegible]	[illegible]	[illegible]	2.5	[illegible]	3.5	36	5.2	[illegible]	[illegible]	37	[illegible]	[illegible]	[illegible]	174	[illegible]	53	0	89	[illegible]	275	8.0
20S-28W-14AAA1	[illegible]	10-23-68	[illegible]	[illegible]	.00	3.0	[illegible]	53	1.4	[illegible]	5	[illegible]	11	[illegible]	1.4	[illegible]	[illegible]	11	[illegible]	187	11.46	379	8.6

Table 17.--Selected chemical analyses of ground water in Miller County, Ark.--Continued

(Results in milligrams per liter unless otherwise indicated)

Local Well Number	Depth of well (feet)	Date of collection	Temperature (°C)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids: Calculated	Dissolved solids: Residue at 180°C	Hardness as $CaCO_3$: Carbonate	Hardness as $CaCO_3$: Noncarbonate	Alkalinity as $CaCO_3$	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
Sparta Sand																							
19S-27W-10BBA1	27	2-29-68	12	16	0.24	7.7	0.3	2.6	0.4	20	0	0.6	8.0	0.2	0.1	46	54	20	4	16	0.25	54	6.5
35DDA1	13	2-29-68	13	12	.33	2.5	10	12	13	4	0	7.0	37	.3	32	128	158	47	44	3	0.77	200	6.2
Alluvial deposits of Quaternary age																							
14S-28W-14CBD2	40	8- 9-51	--	----	0.30	----	----	----	----	328	--	30	7.2	---	9.6	----	----	349	---	269	----	714	8.1
15S-26W-26DCC1	80	6-16-53	18	----	3.1	----	----	----	----	418	0	328	226	---	.0	----	----	654	---	343	----	1,840	7.9
35AAB1	55	6-16-53	--	----	4.0	----	----	----	----	480	0	387	300	---	.0	----	----	787	393	394	----	2,130	7.9
15S-27W-12BCB1	30	2-27-69	18	22	4.2	97	33	16	1.1	448	0	34	11	0.4	.4	440	441	378	10	367	0.37	600	7.7
16S-26W-22AAA1	28	3-14-68	18	21	109	232	69	202	9.4	0	0	446	625	.1	1.4	1,610	1,660	864	864	0	2.99	2,660	4.2
18S-26W-29CBC1	49	3- 8-68	18	9.6	.14	24	4.7	55	2.2	206	0	.6	19	.4	.4	217	211	80	0	169	2.70	374	7.9

Table 18.--Aquifers as determined from electrical logs of oil tests in Miller County, Ark.

[Information is recorded in this table only for aquifers that occur within the logged interval]

Driller, lease, and well number	Location	Year drilled	Land surface altitude (feet above mean sea level)	Logged interval (feet below land surface)	Aquifer	Depth to top of aquifer (feet below land surface)	Thickness of aquifer (feet)	Percentage of sand in aquifer	Remarks
Thompson and Earles General American Life Ins. Co. No. 1	14S-26W-20CDD	1938	250	226-3,183	Nacatoch Sand	636	210	38	
Sneed Brothers C. M. Hervy No. 1	14S-26W-28AAA	1950	260	400-6,067	do	689	205	24	
A. L. Willis C. M. Hervy No. 1	14S-26W-33ADA	1953	245	100-4,223	Wilcox Group Nacatoch Sand	(1) 775	-------- 205	[2]/100 17	Bottom of Wilcox Group at depth of 170 feet.
R. P. Seay G. E. Cox No. 1	14S-27W-31BBC	1949	258	267-3,415	do	506	225	18	
Plains Production Co. Bolin Stricklin No. 1	14S-27W-33DCB	1949	267	240-5,998	do	597	160	19	
C. A. Lee Fawcett No. 1	14S-28W-31CBC	1950	290	100-3,602	do	505	175	23	
Tidewater Associated Seaboard L. L. Sutton No. 1	15S-26W-2	1942	190	706-6,682	do	905	200	20	
Garland, Anthony, and Murray Beck No. 1	15S-26W-33DDD	1946	225	100-2,960	Carrizo Sand Wilcox Group	125 195	70 325	86 32	
Waldo Lumber Co. Grace No. 1	15S-27W-9AA	1944	260	609-5,021	Nacatoch Sand	708	155	19	
Deep Rock Oil Corp. McClouth No. 1	15S-28W-26D	1945	480	255-5,095	Wilcox Group	(1)	--------	[2]/57	Bottom of Wilcox Group at depth of 512 feet.
Samedan Oil Corp. Persons No. 2	16S-25W-4CDD	1956	234	134-5,683	Carrizo Sand Wilcox Group	305 375	70 356	95 34	
R. E. Williams Crank No. 1	16S-25W-19B2B	1961	230	322-4,724	Carrizo Sand Wilcox Group	572 642	70 350	90 30	
Garland Anthony Jessie T. Smith No. 1	16S-25W-29BD	1949	230	193-4,100	Cane River Formation Carrizo Sand Wilcox Group	190 550 620	360 70 470	47 57 30	
Lee and Morgan et al. Gentry and Murdock No. 1	16S-26W-22DDC	1957	216	100-4,085	Cane River Formation Carrizo Sand Wilcox Group	203 513 613	310 100 340	55 50 48	
Carter Oil Co. H. B. Carrol No. 3	16S-26W-33BBC	1953	305	160-3,700	Cane River Formation Carrizo Sand Wilcox Group	310 633 727	323 94 316	50 53 38	
Southwestern Oil and Gas Co. Eva Shelton No. 1	16S-27W-12CDC	1963	310	176-5,500	Carrizo Sand Wilcox Group	244 321	77 323	90 75	
C. C. Ritchey Reeds No. 1	16S-27W-15ABB	1958	327	110-3,404	Carrizo Sand Wilcox Group	206 286	80 346	100 55	
G. B. Christmas et al. Eldridge No. 1	16S-27W-16BAD	1959	353	100-3,403	Carrizo Sand Wilcox Group	201 291	90 330	100 42	
Carter Oil Co. Silverberg No. 1	16S-27W-36DA	1947	280	375-4,956	Carrizo Sand Wilcox Group	592 672	80 445	100 45	
Gray and Wolfe D. L. Friday No. 1	17S-26W-6CAA	1940	325	135-3,752	Carrizo Sand Wilcox Group	373 535	162 333	100 34	
Red Iron et al. Philyaw No. 1	17S-26W-7DAB	1940	300	255-4,018	Carrizo Sand Wilcox Group	473 573	100 335	100 45	

1 Logged interval starts below top of formation.
2 Percentage of sand is for that part of aquifer actually logged.

Table 18.--Aquifers as determined from electrical logs of oil tests in Miller County, Ark.--Continued

Driller, lease, and well number	Location	Year drilled	Land surface altitude (feet above mean sea level)	Logged interval (feet below land surface)	Aquifer	Depth to top of aquifer (feet below land surface)	Thickness of aquifer (feet)	Percentage of sand in aquifer	Remarks
Carter Oil Co. Sturgis No. 1	17S-27W-1CCB	1941	300	303-3,706	Carrizo Sand Wilcox Group	503 620	117 458	100 40	
Gulf Refining Co. R. F. Eaton No. 1	17S-27W-14ACB	1940	296	218-3,886	Carrizo Sand Wilcox Group	431 564	133 372	100 44	
Murray Petroleum Co. Roberts et al. No. 1	17S-27W-15DAB	1954	296	160-4,502	Carrizo Sand Wilcox Group	313 533	120 350	90 48	
Tom Palmer Watts No. 1	17S-28W-13DDD	1953	217	101-5,011	Carrizo Sand Wilcox Group	427 522	95 360	50 40	
Don Fitzwater Montana Realty Co. No. 1	17S-28W-16DA	1954	235	165-5,719	Carrizo Sand Wilcox Group	349 388	76 368	40 42	
McAlester Fuel Co. Miller Land and Lumber Co. No. 1	18S-27W-17CB	1953	205	100-7,315	Cane River Formation Carrizo Sand Wilcox Group	271 671 751	400 80 360	55 50 36	
Barnsdall Oil Co. Nichols No. 1	18S-28W-20BA	1945	275	176-8,454	Carrizo Sand Wilcox Group	503 583	80 430	50 36	
K. E. Jennings & J. J. Oil Corp. H. T. Wood No. 1	18S-28W-33AC	1940	315	238-4,563	Cane River Formation Carrizo Sand Wilcox Group	272 672 712	400 40 390	50 100 31	
Louark Production Co. Hedrick et al. No. 1	19S-27W-27AD	1941	290	247-6,505	Carrizo Sand Wilcox Group	544 624	80 385	90 30	
Sun Oil Co. and M. B. Ruhtan L. Butler No. 1	19S-27W-35BCD	1966	314	97-11,122	Cane River Formation Carrizo Sand Wilcox Group	122 582 662	460 80 392	50 100 40	
Arkla Oil Co. R. T. Dodd No. 1	19S-28W-11BC	1944	352	123-6,808	Cane River Formation Carrizo Sand Wilcox Group	390 790 850	400 60 347	35 80 37	
Sunray DX Oil Co. Mary O. Ahern No. C-1	19S-28W-24DDA	1963	291	513-6,308	Carrizo Sand Wilcox Group	560 640	80 405	50 32	
Estabrook, Hill and Crider Sherman No. 1	19S-28W-29BC	1938	240	172-6,326	Carrizo Sand Wilcox Group	496 591	95 390	53 29	
Shobio Petroleum Co. et al. E. L. Endsley No. 1	20S-27W-6DB	1956	258	945-6,270	do	(1)	--------	2/50	Bottom of Wilcox Group at depth of 956 feet
Brooks Oil Co. Wisinger-Dial Unit No. 1	20S-27W-9BD	1963	222	525-6,161	do	(1)	--------	2/10	Bottom of Wilcox Group at depth of 890 feet

1 Logged interval starts below top of formation.
2 Percentage of sand is for that part of aquifer actually logged.

Table 19.--Logs of test holes and wells

Miller County

13S-26W-30BDA1. Log of observation well by U.S. Geological Survey. Surface altitude, 266 ft. Depth to water 13.7 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Clay, silty, red-brown	8	8
Sand, very fine, clayey, red-brown	7	15
Silt, very fine to fine, sandy	7	22
Sand, very fine to fine, silty, brown	22	44
Sand, very fine, silty	10	54
Sand, very fine to medium; contains some coarse to very coarse sand and some gravel	1	55
Clay, dark-gray	2	57

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

14S-26W-26DAC1. Log of observation well by U.S. Geological Survey. Surface altitude, 245 ft. Depth to water, 13.2 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Sand, very fine, silty----------	8	8
Silt, very fine, sandy, red-brown----------	4	12
Clay, silty----------	5	17
Sand, very fine, silty----------	18	35
Gravel----------	0.5	35.5
Sand, very fine to fine, silty----------	17.5	53
Sand, very fine to fine, and gravel----------	11	64
Clay, black; contains lignite----------	3	67

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

14S-26W-32ADD1. Log of observation well by U.S. Geological Survey. Surface altitude, 246 ft. Depth to water, 12.7 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, black	4	4
Clay, silty, red-brown	8	12
Clay, silty, very fine, sandy	2	14
Clay, silty, red-brown	2	16
Clay, red-brown	1	17
Clay, silty, red-brown	1	18
Clay, red-brown	27	45
Gravel	0.5	45.5
Clay, silty, brown	11.5	57
Gravel	0.5	57.5
Silt and clay, brown	6.5	64
Clay, light-gray-green	3	67

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

14S-27W-2DBC1. Log of observation well by U.S. Geological Survey. Surface altitude, 258 ft. Depth to water, 11.6 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Sand, very fine to coarse, silty----------	1	1
Silt, sandy, red----------	9	10
Clay, red----------	4	14
Clay, red; contains some very fine gravel------	4	18
Clay, red-brown to brown----------	10	28
Silt, sandy----------	6	34
Gravel----------	0.5	34.5
Silt and very fine to fine sand----------	12.5	47
Sand, very fine to fine, silty----------	10	57
Sand, very fine to fine; contains some gravel--	1	58
Clay, black----------	4	62

Table 19--Logs of test holes and wells--Continued

Miller County--Continued

14S-27W-7CBB1. Log of observation well by U.S. Geological Survey.

Surface altitude, 265 ft. Depth to water, 17.0 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Sand, very fine, and silt	2	2
Clay, silty	1	3
Sand, very fine, silty	6	9
Clay	1	10
Sand, very fine to fine	1	11
Sand, very fine, clayey, brown	3	14
Sand, very fine, silty	11	25
Sand, very fine to fine	5	30
Sand, very fine to medium; contains some coarse sand	17	47
Sand, very fine, silty; contains some fine to coarse sand	8	55
Sand, very fine, clayey	4	59
Gravel	1	60
Clay	2	62

Table 19--Logs of test holes and wells--Continued

Miller County--Continued

14S-27W-17DDD1. Log of test hole by U.S. Geological Survey. Surface altitude, 262 ft.

	Thickness (feet)	Depth (feet)
Topsoil, black	0.5	0.5
Clay, red-brown	16.5	17
Clay, red-brown; contains scattered very fine gravel	4	21
Clay, red-brown	11	32
Clay, gray	1	33
Clay, very fine, sandy	4	37
Sand, very fine, silty	12	49
Clay, black	8	57

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

14S-28W-31CDD1. Log of test hole by U.S. Geological Survey. Surface altitude, 352 ft.

	Thickness (feet)	Depth (feet)
Sand, very fine to fine, silty, and gravel, red-brown	3	3
Sand, very fine to fine, clayey, brown and gray	3	6
Clay, brown and gray; contains some coarse gravel	2	8
Clay, yellow-brown	8	16
Clay, blue-gray	2	18
Clay, gray-green	9	27
Clay, blue-gray	8	35
Clay-gray-green	15	50
Clay, blue-gray	7	57

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

15S-26W-24CDA1. Log of test hole by Arkansas Geological Commission. Surface altitude, 237 ft. Depth to water, 14.0 ft.

	Thickness (feet)	Depth (feet)
Sand, red	9	9
Clay, sandy	5	14
Clay, red	5	19
Clay, buff	5	24
Sand, fine grain, wet	15	39
Sand, coarse grain, wet	13	52
Shale, clay	2	54

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

15S-26W-33DDD1. Log of test hole by Arkansas Geological Commission. Surface altitude, 226 ft. Depth to water, 10.0 ft.

	Thickness (feet)	Depth (feet)
Clay, gray, (gumbo)----------	4	4
Clay, brown----------	8	12
Sand, fine grain, wet----------	7	19
Sand, coarse grain, wet----------	18	37
Shale, clay----------	2	39

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

15S-26W-34BBB1. Log of test hole by Arkansas Geological Commission. Surface altitude, 232 ft. Depth to water, 10.0 ft.

	Thickness (feet)	Depth (feet)
Clay, red to brown----------	13	13
Sand, fine grain, wet----------	1	14
Sand, fine to medium grain, wet----------	10	24
Sand, coarse grain, pea gravel, wet----------	18	42
Shale, clay----------	2	44

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

15S-26W-34CDB1. Log of test hole by Arkansas Geological Commission. Surface altitude, 226 ft. Depth to water, 10.0 ft.

	Thickness (feet)	Depth (feet)
Clay, sandy, (gumbo)----------	4	4
Clay, gray----------	11	15
Sand, fine grain, wet----------	9	24
Sand, medium to coarse grain, wet----------	5	29
Sand, coarse grain, wet----------	19	48
Shale, clay----------	1	49

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

15S-26W-35BBB1. Log of test hole by Arkansas Geological Commission. Surface altitude, 232 ft. Depth to water, 10.0 ft.

	Thickness (feet)	Depth (feet)
Clay, brown	12	12
Clay, sandy	3	15
Sand, fine grain, wet	4	19
Sand, medium grain, wet	10	29
Sand, medium to coarse, wet	6	35
Shale, clay	4	39

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

15S-26W-36BAA1. Log of test hole by Arkansas Geological Commission. Surface altitude, 232 ft. Depth to water, 10.0 ft.

	Thickness (feet)	Depth (feet)
Clay, gray, (gumbo)----------	4	4
Clay, red----------	19	23
Sand, medium to coarse grain, wet----------	16	39
Sand, coarse grain----------	7	46
Shale, clay----------	3	49

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

15S-27W-11AAD1. Log of observation well by U.S. Geological Survey. Surface altitude, 250 ft. Depth to water, 13.1 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Clay, silty, red-brown----------	5	5
Clay, red----------	3	8
Sand, very fine to fine, silty, red-brown------	19	27
Sand, very fine to fine, silty, brown----------	26	53
Gravel----------	2	55
Lignite, black----------	1	56
Clay----------	1	57

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-25W-17BCA1. Log of test hole by Arkansas Geological Commission. Surface altitude, 233 ft. Depth to water, 11.0 ft.

	Thickness (feet)	Depth (feet)
Sandy soil	4	4
Clay, blue	3	7
Clay, red	4	11
Sand, fine grain, wet	2	13
Clay and silt, red, wet	7	20
Sand, fine to medium grain, wet	13	33
Sand, medium grain, wet	10	43
Sand, coarse grain, wet	10	53

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-25W-18ACB1. Log of test hole by Arkansas Geological Commission. Surface altitude, 231 ft. Depth to water, 10.0 ft.

	Thickness (feet)	Depth (feet)
Topsoil and fine silty clay----------	4	4
Clay, red to brown----------	23	27
Sand, fine grain, wet----------	12	39
Sand, medium grain, wet----------	5	44
Sand, coarse grain, wet----------	15	59

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-25W-18BDB1. Log of test hole by Arkansas Geological Commission. Surface altitude, 231 ft. Depth to water, 10.0 ft.

	Thickness (feet)	Depth (feet)
Sandy clay topsoil----------	4	4
Clay, silty, red, wet----------	16	20
Sand, fine grain, wet----------	4	24
Sand, medium grain, wet----------	10	34
Sand, medium to coarse grain, wet----------	10	44
Sand, coarse grain with pea gravel, wet---------	13	57
Shale, clay----------	2	59

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-25W-19AAA1. Log of Observation well by U.S. Geological Survey. Surface altitude, 230 ft. Depth to water, 19.6 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, black	3	3
Clay, red-brown	5	8
Sand, very fine to medium, silty	5	13
Clay, sandy	7	20
Clay, red-brown	3	23
Clay, sandy	5	28
Sand, very fine to medium, silty	3	31
Sand, very fine, clayey	10	41
Sand, very fine to medium, silty	4	45
Sand, very fine to medium, silty; contains some coarse to very coarse sand ans some very fine g gravel	5	50
Gravel, very fine to medium, sandy; contains some coarse to very coarse sand	18	68
Clay	4	72

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-25W-19ABA1. Log of test hole by Arkansas Geological Commission

Surface altitude, 230 ft. Depth to water, 9.0 ft.

	Thickness (feet)	Depth (feet)
Topsoil	4	4
Clay, fine silty	5	9
Clay, fine silty, wet	15	24
Sand, fine grain, more clay present than normal, wet at 26 ft.	15	39
Sand, coarse grain, pea gravel	18	57
Shale, clay	2	59

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-25W-19ADD1. Log of test hole by U.S. Geological Survey. Surface altitude, 226 ft.

	Thickness (feet)	Depth (feet)
Clay, silty	30	30
Sand	30	60
Gravel, coarse	5	65
Clay, blue	2	67

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-25W-19BBB1. Log of test hole by Arkansas Geological Commission. Surface altitude, 225 ft. Depth to water, 10.0 ft.

	Thickness (feet)	Depth (feet)
Topsoil	4	4
Clay, brown	5	9
Clay, silty, brown	7	16
Sand, fine grain, wet	8	24
Sand, medium to coarse grain, wet	10	34
Sand, coarse grain, wet	19	53
Shale, clay	1	54

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-25W-19DCC1. Log of test hole by Arkansas Geological Commission. Surface altitude, 233 ft. Depth to water, 19.0 ft.

	Thickness (feet)	Depth (feet)
Clay, gray, (gumbo)----------	4	4
Clay, red----------	5	9
Clay, fine sandy----------	5	14
Sand, medium grain, damp----------	5	19
Sand, medium to coarse grain, damp----------	10	29
Sand, coarse grain, wet----------	10	39
Sand, coarse grain, pea gravel, wet----------	20	59

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-25W-20BAA1. Log of test hole by Arkansas Geological Commission. Surface altitude, 232 ft. Depth to water, 11.0 ft.

	Thickness (feet)	Depth (feet)
Clay, (gumbo)----------	11	11
Clay, fine silty, wet----------	7	19
Clay, fine grain sandy, wet----------	5	24
Sand, fine grain, clay, wet----------	10	34
Sand, fine grain, wet----------	15	49
Sand, fine grain, clay----------	8	57
Shale, clay----------	2	59

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-1ABC1. Log of test hole by U.S. Geological Survey. Surface altitude, 232 ft.

	Thickness (feet)	Depth (feet)
Clay, red-brown	15	15
Clay, silty	3	18
Sand, coarser with depth	30	48
Gravel	6	54
Clay, black, sandy	4	58

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-2CBB1. Log of test hole by Arkansas Geological Commission. Surface altitude, 227 ft. Depth to water, 9.0 ft.

	Thickness (feet)	Depth (feet)
Clay, gray	4	4
Clay, red	5	9
Sand, fine to medium grain, wet	5	14
Sand, medium grain, wet	5	19
Sand, medium to coarse grain, wet	5	24
Sand, coarse grain, wet	8	32
Shale, clay	2	34

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-2CCC1. Log of test hole by Arkansas Geological Commission. Surface altitude, 239 ft. Depth to water, 14.0 ft.

	Thickness (feet)	Depth (feet)
Clay, red	9	9
Clay, sandy, buff	5	14
Sand, fine grain, wet	10	24
Sand, fine to medium grain, wet	5	29
Sand, coarse grain, wet	7	36
Shale, clay	3	39

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-3CDA1. Log of test hole by Arkansas Geological Commission. Surface altitude, 235 ft. Depth to water, 12.0 ft.

	Thickness (feet)	Depth (feet)
Clay, brown to tan----------	9	9
Clay, gray----------	3	12
Sand, fine grain, wet----------	7	19
Sand, coarse grain, wet----------	22	41
Shale, clay----------	3	44

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-4DAC1. Log of test hole by Arkansas Geological Commission. Surface altitude, 233 ft. Depth to water, 9.0 ft.

	Thickness (feet)	Depth (feet)
Clay, gray, (gumbo)----------	4	4
Clay, red----------	5	9
Sand, fine grain, wet----------	10	19
Sand, medium grain, wet----------	10	29
Sand, coarse grain, wet----------	22	51
Shale, clay----------	3	54

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-4DAC2. Log of test hole by Arkansas Geological Commission. Surface altitude, 232 ft. Depth to water, 16.0 ft.

	Thickness (feet)	Depth (feet)
Clay, red	16	16
Sand, fine grain, wet	13	29
Sand, medium to coarse grain, wet	5	34
Sand, coarse grain, wet	13	47
Shale, clay	2	49

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-12BDC1. Log of test hole by U.S. Geological Survey. Surface altitude, 225 ft.

	Thickness (feet)	Depth (feet)
Clay, brown----------	18	18
Sand----------	27	45
Gravel----------	14	59
Clay, black----------	4	63

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-12CCD1. Log of test hole by U.S. Geological Survey. Surface altitude, 225 ft.

	Thickness (feet)	Depth (feet)
Clay, brown	18	18
Clay, silty	7	25
Sand, medium	31	56
Gravel, coarse	2	58
Clay, black	2	60

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-12DAA1. Log of test hole by U.S. Geological Survey. Surface altitude, 230 ft.

	Thickness (feet)	Depth (feet)
Clay, red-brown	18	18
Clay, silty	4	22
Sand and gravel	25	47
Clay, blue	3	50

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-22AAA1. Log of test hole by Arkansas Geological Commission. Surface altitude, 223 ft. Depth to water, 14.0 ft.

	Thickness (feet)	Depth (feet)
Road fill	4	4
Clay, gray	10	14
Sand, fine grain, wet	10	24
Sand, coarse grain with pea gravel, wet	14	38
Shale, clay	1	39

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-23AAA1. Log of test hole by Arkansas Geological Commission. Surface altitude, 223 ft.

	Thickness (feet)	Depth (feet)
Road fill	4	4
Clay, brown	13	17
Sand, fine grain, wet	2	19
Sand, medium grain, wet	10	29
Sand, coarse grain, wet	18	47
Shale, clay	2	49

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-23AAB1. Log of test hole by Arkansas Geological Commission. Surface altitude, 223 ft. Depth to water 10.0 ft.

	Thickness (feet)	Depth (feet)
Clay, gray (gumbo)----------	4	4
Clay, brown----------	11	15
Sand, fine grain, wet----------	9	24
Sand, coarse grain, wet, salty taste----------	21	45
Shale, clay----------	4	49

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-23ABA1. Log of test hole by Arkansas Geological Commission. Surface altitude, 223 ft. Depth to water, 10.0 ft.

	Thickness (feet)	Depth (feet)
Clay, gray (gumbo)----------	4	4
Clay, red silty----------	12	16
Sand, fine grain, wet----------	8	24
Sand, medium to coarse grain, wet----------	5	29
Sand, coarse grain with pea gravel, wet, lignite or wood fragments----------	7	36
Shale, clay----------	3	39

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-23ABB1. Log of test hole by Arkansas Geological Commission. Surface altitude, 222 ft. Depth to water, 9.0 ft.

	Thickness (feet)	Depth (feet)
Clay, gray (gumbo)----------	4	4
Clay, sandy, brown----------	5	9
Sand, fine grain, wet----------	10	19
Sand, fine to medium grain, wet----------	5	24
Sand, medium grain, wet, salty taste----------	5	29
Sand, medium to coarse grain, wet----------	6	35
Shale, clay----------	4	39

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-23BAB1. Log of test hole by Arkansas Geological Commission. Surface altitude, 222 ft. Depth to water, 12.0 ft.

	Thickness (feet)	Depth (feet)
Clay, gray (gumbo)----------	4	4
Clay, silty----------	8	12
Sand, fine grain, wet----------	2	14
Sand, medium grain, wet----------	5	19
Sand, medium to coarse grain, wet----------	5	24
Sand, coarse grain, wet----------	10	34
Sand, coarse grain with pea gravel, wet---------	11	45
Shale, clay----------	4	49

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-23DAD1. Log of test hole by U.S. Geological Survey. Surface altitude, 222 ft.

	Thickness (feet)	Depth (feet)
Clay, mottled----------	16	16
Sand, watery----------	9	25
Sand and gravel----------	13	38
Clay----------	4	43

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-24ABA1. Log of test hole by Arkansas Geological Commission. Surface altitude, 223 ft. Depth to water, 9.0 ft.

	Thickness (feet)	Depth (feet)
Clay, gray (gumbo)----------	4	4
Sand, fine grain, damp----------	5	9
Sand, fine grain, wet----------	10	19
Sand, fine to medium grain, wet----------	15	34
Sand, medium grain, wet----------	5	39
Sand, coarse grain, wet----------	16	55
Shale, clay----------	4	59

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

10S-20W-24ABB2. Log of test hole by U.S. Geological Survey. Surface altitude, 224 ft.

	Thickness (feet)	Depth (feet)
Clay, brown----------	15	15
Sand----------	25	40
Sand and gravel----------	7	47
Clay, black----------	1	48

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-24ACC1. Log of test hole by U.S. Geological Survey. Surface altitude, 233 ft.

	Thickness (feet)	Depth (feet)
Clay, brown----------	15	15
Sand, clayey----------	5	20
Sand and gravel----------	16	36
Clay, sandy, black----------	2	38

Table 19--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-24BCB1. Log of test hole by U.S. Geological Survey. Surface altitude, 222 ft.

	Thickness (feet)	Depth (feet)
Clay, red-brown	12	12
Clay, sandy	8	20
Sand	25	45
Gravel	5	50
Clay, blue-black	3	53

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

16S-26W-24CCC1. Log of test hole by U.S. Geological Survey. Surface altitude, 221 ft.

	Thickness (feet)	Depth (feet)
Clay, brown----------	18	18
Clay and sand----------	22	40
Gravel, coarse----------	15	55

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

17S-25W-7CDC1. Log of observation well by U.S. Geological Survey. Surface altitude, 222 ft. Depth to water, 14.2 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, clayey, black	3	3
Clay, red-brown	2	5
Clay, silty, red-brown	3	8
Silt, sandy	1	9
Clay, red-brown	3	12
Clay, silty, and sand, very fine	7	19
Sand, very fine, clayey, silty	16	35
Sand, very fine to medium, silty	3	38
Sand, very fine to medium, brown	2	40
Sand, very fine to medium, brown; contains some gravel	10	50
Gravel, very fine to medium, sandy; contains some coarse to very coarse sand	5	55
Sand, very fine, silty, gray	7	62

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

17S-26W-14AAA1. Log of observation well by U.S. Geological Survey. Surface altitude, 219 ft. Depth to water, 10.3 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, black	2	2
Clay, red-brown	3	5
Clay, silty, red-brown	2	7
Clay, sandy, red-brown	6	13
Sand, very fine to fine, clayey	1	14
Sand, fine, clayey, brown	10	24
Sand, fine, silty	2	26
Sand, very fine to medium	6	32
Sand, very fine to medium, silty, brown	1	33
Sand, fine to medium	7	40
Sand, fine to medium; contains some coarse to very coarse sand and some gravel	3	43
Clay, silty, light-gray to gray	4	47

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

17S-26W-32CCD1. Log of observation well by U.S. Geological Survey. Surface altitude, 210 ft. Depth to water, 14.4 ft., June 18, 1963.

	Thickness (feet)	Depth (feet)
Sand, very fine, silty----------	5	5
Sand, very fine, silty; contains some gravel and stringers of cemented fine sand----------	5	10
Sand, very fine, red-brown----------	2	12
Sand, very fine, light-red-brown----------	3	15
Sand, very fine to medium, light-red-brown-----	4	19
Gravel----------	0.5	19.5
Sand, very fine to fine, light-brown----------	1.5	21
Sand, very fine to fine, silty, brown----------	3	24
Sand, very fine to medium; contains a slight amount of very fine gravel----------	6	30
Sand, very fine to medium, and gravel----------	20	50
Clay, dark-gray----------	7	57

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

17S-26W-33DCC1. Log of observation well by U.S. Geological Survey. Surface altitude, 210 ft. Depth to water, 8.0 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, clayey, black----------	3	3
Clay, sandy, yellow-brown----------	2	5
Sand, very fine, clayey, yellow-brown----------	3	8
Sand, very fine, silty, light-brown----------	2	10
Sand, very fine to fine, silty, light-brown----	1	11
Sand, very fine to medium----------	3	14
Sand, very fine to medium, silty, brown--------	11	25
Sand, very fine to medium----------	11	36
Sand, very fine, clayey, dark-gray----------	4	40

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

17S-27W-22DBB1. Log of well by Edington Drilling Co. Surface altitude, 320 ft.

	Thickness (feet)	Depth (feet)
Surface	25	25
Silt	15	40
Clay	45	85
Gravel	20	105
Shale	62	167
Shale and sand streaks	15	182
Sand	71	253
Shale and sand streaks	37	290
Shale	41	331
Rock	1	332
Shale and sand streaks	19	351
Shale	5	356
Sand	32	388
Rock	1	389
Shale	7	396
Hard rock	1	397
Shale	3	400
Shale and sandy shale streaks	17	417
Sand	2	419

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

17S-27W-22DBB1--Continued

	Thickness (feet)	Depth (feet)
Rock	1	420
Sand	9	429
Shale	4	433
Shale and sand streaks	21	454
Sand and sandy shale	15	469
Sand and shale breaks	5	474
Sand	17	491
Shale	24	515
Sand	4	519
Shale and sand streaks	16	535
Sand	5	540
Shale	21	561
Sand	45	606
Shale total depth	24	630

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

18S-26W-1AAA1. Log of observation well by U.S. Geological Survey. Surface altitude, 217 ft. Depth to water, 16.0 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Silt, sandy, red-brown	4	4
Clay, silty, red-brown	2	6
Clay, dark-red-brown	4	10
Clay, red-brown; contains concretions	6	16
Clay, silty, light-red-brown	1	17
Clay, red-brown	15	32
Clay, brown	5	37
Sand, very fine, and silt, brown	5	42
Sand, very fine to medium, silty, brown	5	47
Sand, very fine to medium, and gravel; contains some coarse to very coarse sand	9	56
Sand, very fine, silty, gray	7	63

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

18S-26W-2BBB1. Log of observation well by U.S. Geological Survey.

Surface altitude, 215 ft. Depth to water, 10.0 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Clay, brown----------	10	10
Clay, tan-gray----------	8	18
Clay, red-brown----------	2	20
Clay, sandy----------	5	25
Sand, very fine, clayey----------	7	32
Sand, very fine to fine, clayey----------	6	38
Gravel and very fine to medium sand----------	1	39
Clay, gray----------	8	47

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

18S-26W-16DBC1. Log of observation well by U.S. Geological Survey. Surface altitude, 212 ft. Depth to water, 14.2 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Sand, very fine, silty, red-brown	5	5
Clay, silty, red-brown	2	7
Clay, red-brown	3	10
Clay, blue-gray	6	16
Clay and very fine to fine sand, blue-gray	1	17
Clay and very fine to fine sand, gray-brown	8	25
Sand, very fine to medium, clayey	10	35
Sand, very fine to medium	5	40
Sand, very fine to medium; contains some gravel	4	44
Clay, gray-black	2	46

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

18S-26W-27BAA1. Log of observation well by U.S. Geological Survey. Surface altitude, 213 ft. Depth to water, 17.6 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, clayey, black----------	2	2
Sand, very fine, silty, yellow-brown----------	3	5
Clay, red-brown----------	19	24
Sand, very fine to medium, clayey, brown------	11	35
Sand, very fine to medium, brown----------	5	40
Sand, very fine to medium; contains some gravel----------	5	45
Sand, very fine to medium, and gravel----------	5	50
Gravel----------	1	51
Sand, very fine to fine, clayey, dark-gray-----	6	57

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

18S-26W-29CBC1. Log of observation well by U.S. Geological Survey. Surface altitude, 213 ft. Depth to water, 29.0 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Sand, very fine, silty, yellow-brown----------	3	3
Silt, clayey, yellow-brown----------	4	7
Clay and silt----------	2	9
Clay, brown; contains concretions----------	10	19
Clay, red-brown----------	6	25
Sand, very fine, clayey----------	2	27
Sand, fine to medium, light-brown----------	13	40
Sand, fine to medium, tan-brown----------	19	59
Sand, fine to medium; contains some gravel-----	20	79
Gravel----------	4	83
Clay, gray----------	4	87

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

18S-27W-1ABB1. Log of test hole by U.S. Geological Survey. Surface altitude, 259 ft.

	Thickness (feet)	Depth (feet)
Sand, very fine, silty, and gravel----------	1	1
Sand, very fine, clayey, light-gray; contains streaks of rust-colored sand----------	5	6
Sand, very fine to fine, silty, light-red-brown-	8	14
Sand, very fine, silty, light-red-brown---------	13	27
Clay, red-brown; color changes to brown with streaks of gray near the bottom----------	11	38

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

18S-27W-25AAA1. Log of observation well by U.S. Geological Survey. Surface altitude, 230 ft. Depth to water, 14.4 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Sand, very fine, silty, light-brown----------	1	1
Clay, red-brown----------	6	7
Sand, very fine, clayey, red-brown----------	2	9
Sand, very fine to fine, light-red----------	7	16
Sand, fine, red-brown to brown----------	1	17
Clay, red-brown----------	1	18
Sand, very fine to fine----------	2	20
Sand, very fine to fine, silty----------	15	35
Clay, gray changing to red-brown----------	5	40
Sand, very fine, gray; contains thin layers of clay----------	20	60
Sand, medium, black----------	5	65
Sand, very fine to medium, clayey, blue--------	10	75
Clay, blue----------	12	87

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

18S-27W-25CDC1. Log of observation well by U.S. Geological Survey. Surface altitude, 206 ft. Depth to water, 17.9 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Clay, brown-black----------	5	5
Clay, red-brown----------	9	14
Sand, very fine, and clay, light-brown---------	6	20
Sand, fine, silty----------	5	25
Sand, very fine to fine, yellow-brown----------	7	32
Sand, very fine to fine, gray-brown----------	17	49
Sand, fine, and gravel----------	11	60
Sand, very fine to fine, silty, and gravel-----	4	64
Clay, gray----------	3	67

Table 19.--Logs of test holes and wells--Continued

Miller County--Continued

18S-27W-27DDC1. Log of observation well by U.S. Geological Survey. Surface altitude, 205 ft. Depth to water, 20.0 ft., June 19, 1963.

	Thickness (feet)	Depth (feet)
Topsoil, clayey, dark-brown	3	3
Clay, red-brown; contains concretions	8	11
Clay, red-brown	19	30
Clay, sandy, brown	2	32
Clay, sandy, light-brown	2	34
Silt and clay, brown	4	38
Clay, yellow-gray	1	39
Sand, very fine to fine, silty, blue-gray	6	45
Sand, very fine to fine, blue-gray	10	55
Sand, very fine to medium; contains some gravel	4	59
Clay, sandy, blue-gray	3	62

Table 20.--Measurement of water levels in wells, Miller County, Ark.

/In feet below land surface/

Date	Water level
Nacatoch Sand	
14S-28W-14CBA1	
June 4, 1963	17.04
14S-28W-16DAC1	
Nov. 1, 1967	17.80
Mar. 19, 1968	17.61
Oct. 23	16.94
14S-28W-21AAA1	
Nov. 1, 1967	18.23
Mar. 19, 1968	17.39
14S-28W-34CDC1	
July 10, 1964	67.00
Nov. 1, 1967	64.20
Mar. 19, 1968	66.66
Oct. 23	62.84
Cane River Formation	
18S-26W-27BBA1	
May 8, 1963	7.94
Oct. 31, 1967	23.12
Oct. 22, 1968	13.70

Date	Water level
Cane River Formation--Continued	
18S-27W-36ADC1	
Oct. 31, 1967	15.50
Mar. 21, 1968	13.19
Sparta Sand	
19S-27W-10BBA1	
Sept. 21, 1967	15.13
Oct. 31	15.90
Mar. 21, 1968	1.41
Oct. 22	13.80
19S-27W-18ABD1	
Sept. 21, 1967	23.68
Oct. 31	23.52
19S-27W-35DDA1	
Sept. 21, 1967	5.97
Oct. 31	6.59
Mar. 21, 1968	4.81
Oct. 22	11.80
19S-28W-5BDA1	
Sept. 21, 1967	13.43
Oct. 31	12.94
Mar. 21, 1968	6.59
Oct. 22	5.25

Table 20.--Measurement of water levels in wells, Miller County, Ark.--Continued

Date	Water level
Deposits of Quaternary age	
13S-26W-30BDA1	
June 18, 1963	13.65
July 15	13.88
Oct. 25, 1967	13.06
Mar. 19, 1968	7.01
Oct. 23	9.49
14S-26W-26DAC1	
June 18, 1963	13.23
July 16	12.80
Oct. 26, 1967	14.90
Mar. 20, 1968	7.23
Oct. 22	8.01
14S-26W-32ADD1	
June 18, 1963	12.65
July 16	12.79
Oct. 26, 1967	14.07
Mar. 20, 1968	11.26
Oct. 22	12.13

Date	Water level
Deposits of Quaternary age--Continued	
14S-26W-34DAD1	
May 17, 1963	13.02
Oct. 26, 1967	14.57
14S-27W-2DBC1	
June 18, 1963	11.60
July 15	11.66
Nov. 1, 1967	13.80
Mar. 19, 1968	8.43
Oct. 22	10.79
14S-27W-7CBB1	
June 18, 1963	17.04
July 15	17.10
Oct. 25, 1967	17.92
Mar. 19, 1968	12.03
Oct. 22	13.50

Table 20.--Measurement of water levels in wells, Miller County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
14S-27W-18DBA1	
June 4, 1963	17.95
Oct. 25, 1967	20.38
Mar. 19, 1968	15.39
Oct. 22	18.30
14S-28W-17DDA1	
May 23, 1963	8.33
Oct. 25, 1967	13.32
May 19, 1968	10.48
Oct. 22	11.39
14S-28W-24BCA1	
June 4, 1963	15.82
Oct. 25, 1967	17.62
Mar. 19, 1968	14.84
Oct. 22	18.39
14S-28W-29BBA1	
June 4, 1963	8.57
Oct. 26, 1967	9.71
Mar. 19, 1968	8.40
Oct. 22	8.74
15S-26W-34AAA1	
Dec. 5, 1966	9.30
Dec. 10	9.20
Dec. 15	9.40
Dec. 20	8.90
Dec. 25	9.00
Dec. 31	8.40

Date	Water level
Deposits of Quaternary age--Continued	
15S-26W-34AAA1--Continued	
Jan. 5, 1967	8.60
Jan. 10	8.70
Jan. 15	8.60
Jan. 20	8.80
Jan. 25	8.70
Jan. 31	8.50
Feb. 5	8.40
Feb. 10	8.40
Feb. 15	8.50
Feb. 20	8.40
Feb. 25	8.40
Feb. 28	8.30
Mar. 5	8.20
Mar. 10	8.20
Mar. 15	8.10
Mar. 20	8.20
Mar. 25	8.20
Mar. 31	8.20
Apr. 5	8.30
Apr. 10	8.30
Apr. 15	8.30
Apr. 20	8.20
Apr. 25	8.00
Apr. 30	7.90
May 5	7.40
May 10	7.20
May 15	7.30
May 20	7.20
May 25	7.00
May 31	6.80
June 5	6.70
June 10	6.80
June 15	6.90
June 20	7.10
June 25	7.30
June 30	7.50
July 5	7.40
July 10	7.20
July 15	7.20

Table 20.--Measurement of water levels in wells, Miller County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
15S-26W-34AAA1--Continued	
July 20, 1967	7.20
July 25	7.20
July 31	7.50
Aug. 5	7.70
Aug. 10	8.00
Aug. 15	8.20
Aug. 20	8.40
Aug. 25	8.60
Aug. 31	8.80
Sept. 5	8.90
Sept. 10	9.00
Sept. 15	9.20
Sept. 20	9.10
Sept. 25	9.10
Sept. 30	9.20
Oct. 5	9.40
Oct. 10	9.40
Oct. 15	9.50
Oct. 20	9.60
Oct. 25	9.60
Oct. 31	9.60
Nov. 5	9.80
Nov. 10	9.80
Nov. 15	9.80
Nov. 20	9.90
Nov. 25	9.80
Nov. 30	9.90
Dec. 5	9.80
Dec. 10	9.60
Dec. 15	9.20
Dec. 20	8.90
Dec. 25	8.90
Dec. 31	8.90
Jan. 5, 1968	8.60
Jan. 10	8.40
Jan. 15	8.40
Jan. 20	8.50
Jan. 25	8.20
Jan. 31	8.00
Feb. 5	7.80

Date	Water level
Deposits of Quaternary age--Continued	
15S-26W-34AAA1--Continued	
Feb. 10, 1958	7.70
Feb. 15	7.80
Feb. 20	7.60
Feb. 25	7.70
Feb. 29	7.70
Mar. 5	7.80
Mar. 10	7.50
Mar. 15	7.30
Mar. 20	6.50
Mar. 25	6.70
Mar. 31	6.50
Apr. 5	6.30
Apr. 10	6.40
Apr. 15	6.30
Apr. 20	6.20
Apr. 25	6.30
Apr. 30	6.40
May 5	6.40
May 10	3.00
May 15	5.70
May 20	5.40
May 25	5.20
May 31	5.10
June 5	5.20
June 10	5.20
June 15	5.40
June 20	5.60
June 25	5.80
June 30	5.80
July 5	6.00
July 10	6.10
July 15	6.30
July 20	6.30
July 25	6.30
July 31	6.30
Aug. 5	6.30
Aug. 10	6.30
Aug. 15	6.30
Aug. 20	6.30
Aug. 25	6.30

Table 20.--Measurement of water levels in wells, Miller County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
15S-26W-34AAA1--Continued	
Aug. 31, 1968	6.40
Sept. 5	6.40
Sept. 10	6.40
Sept. 15	8.00
Sept. 20	8.00
Sept. 25	8.10
Sept. 30	8.30
Oct. 5	8.40
Oct. 10	8.20
Oct. 15	8.20
Oct. 20	8.30
15S-26W-35AAB1	
Jan. 24, 1957	12.74
Nov. 5, 1964	14.63
Jan. 6, 1965	10.64
Mar. 3	9.78
May 5	9.61
July 7	9.46
Aug. 31	9.67
Nov. 3	10.19
Oct. 22, 1968	10.37
15S-26W-35AAB2	
May 16, 1963	8.13
Oct. 26, 1967	9.43
15S-26W-36CAB1	
May 16, 1963	10.25
Oct. 26, 1967	13.27
Oct. 22, 1968	11.69

Date	Water level
Deposits of Quaternary age--Continued	
15S-27W-11AAD1	
June 18, 1963	13.06
July 16	13.09
15S-27W-12BCB1	
May 17, 1963	12.15
Oct. 26, 1967	14.82
Mar. 20, 1968	12.61
Oct. 22	12.37
16S-25W-18ADB1	
May 15, 1963	20.15
Oct. 26, 1967	23.13
Mar. 20, 1968	19.05
Oct. 22	19.71
16S-25W-19AAA1	
June 18, 1963	19.58
July 16	20.05
Oct. 26, 1967	20.30
Mar. 20, 1968	13.58
Oct. 22	17.27
16S-26W-22AAA1	
June 18, 1963	7.97
July 16	6.38
Oct. 26, 1967	9.76
Mar. 20, 1968	5.13
Oct. 22	8.50

Table 20.--Measurement of water levels in wells, Miller County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
16S-26W-23AAA1	
June 18, 1963	9.19
July 16	9.10
Oct. 26, 1967	10.94
Mar. 20, 1968	7.99
Oct. 22	8.66
17S-25W-7BDD1	
May 14, 1963	12.75
Oct. 26, 1967	15.66
Mar. 20, 1968	7.87
Oct. 22	13.78
17S-25W-7CDC1	
June 18, 1963	14.17
July 16	10.02
Mar. 21, 1968	5.90
17S-25W-30ADC1	
May 9, 1963	16.19
Oct. 30, 1967	8.80
Mar. 21, 1968	15.82
Oct. 22	15.63
17S-26W-14AAA1	
June 18, 1963	10.29
July 16	9.54
Oct. 26, 1967	10.15
Mar. 20, 1968	5.19
Oct. 22	7.75

Date	Water level
Deposits of Quaternary age--Continued	
17S-26W-23AAA1	
May 16, 1963	7.67
Oct. 30, 1967	6.65
Mar. 20, 1968	1.95
Oct. 22	4.83
17S-26W-25ACA1	
May 9, 1963	12.43
Oct. 30, 1967	11.11
17S-26W-31BCB1	
Sept. 21, 1967	11.66
Oct. 31	11.53
Mar. 20, 1968	6.99
Oct. 22	7.98
17S-26W-32CCD1	
June 18, 1963	14.42
July 16	14.24
17S-26W-33DCC1	
June 19, 1963	8.04
July 16	7.79
Oct. 26, 1967	8.72
Mar. 20, 1968	4.64
Oct. 22	7.31

Table 20.--Measurement of water levels in wells, Miller County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
18S-26W-1AAA1	
June 19, 1963	16.00
July 16	14.77
Oct. 31, 1967	13.47
Mar. 21, 1968	11.78
Oct. 22	13.01
18S-26W-2BBB1	
June 19, 1963	9.95
July 16	9.20
18S-26W-15DBD1	
Oct. 31, 1967	8.49
Mar. 21, 1968	7.41
Oct. 22	19.09
18S-26W-16DBC1	
June 19, 1963	14.21
July 16	14.14
Oct. 31, 1967	12.73
Mar. 21, 1968	10.89
Oct. 22	11.26
18S-26W-27ACA1	
May 8, 1963	20.90
Oct. 31, 1967	21.51
Mar. 21, 1968	18.29
Oct. 22	19.60

Date	Water level
Deposits of Quaternary age--Continued	
18S-26W-27BAA1	
June 19, 1963	17.62
July 16	17.56
Oct. 31, 1967	16.32
Mar. 21, 1968	14.32
18S-26W-29CBC1	
June 19, 1963	28.99
July 16	29.59
18S-27W-25AAA1	
June 19, 1963	14.38
July 16	14.40
Oct. 31, 1967	14.80
Mar. 21, 1968	13.70
Oct. 22	13.81
18S-27W-25CDC1	
June 19, 1963	17.90
July 16	17.90
Oct. 31, 1967	18.94
Mar. 21, 1968	15.94
Oct. 22	16.68

Table 20.--Measurement of water levels in wells, Miller County, Ark.--Continued

Date	Water level
Deposits of Quaternary age--Continued	
18S-27W-27DDC1	
June 19, 1963	19.98
July 16	19.83
Nov. 7, 1967	19.98
Mar. 21, 1968	16.75
Oct. 22	17.75
19S-27W-3DBB1	
Apr. 7, 1963	6.99
Oct. 31, 1967	13.00
Mar. 21, 1968	7.64

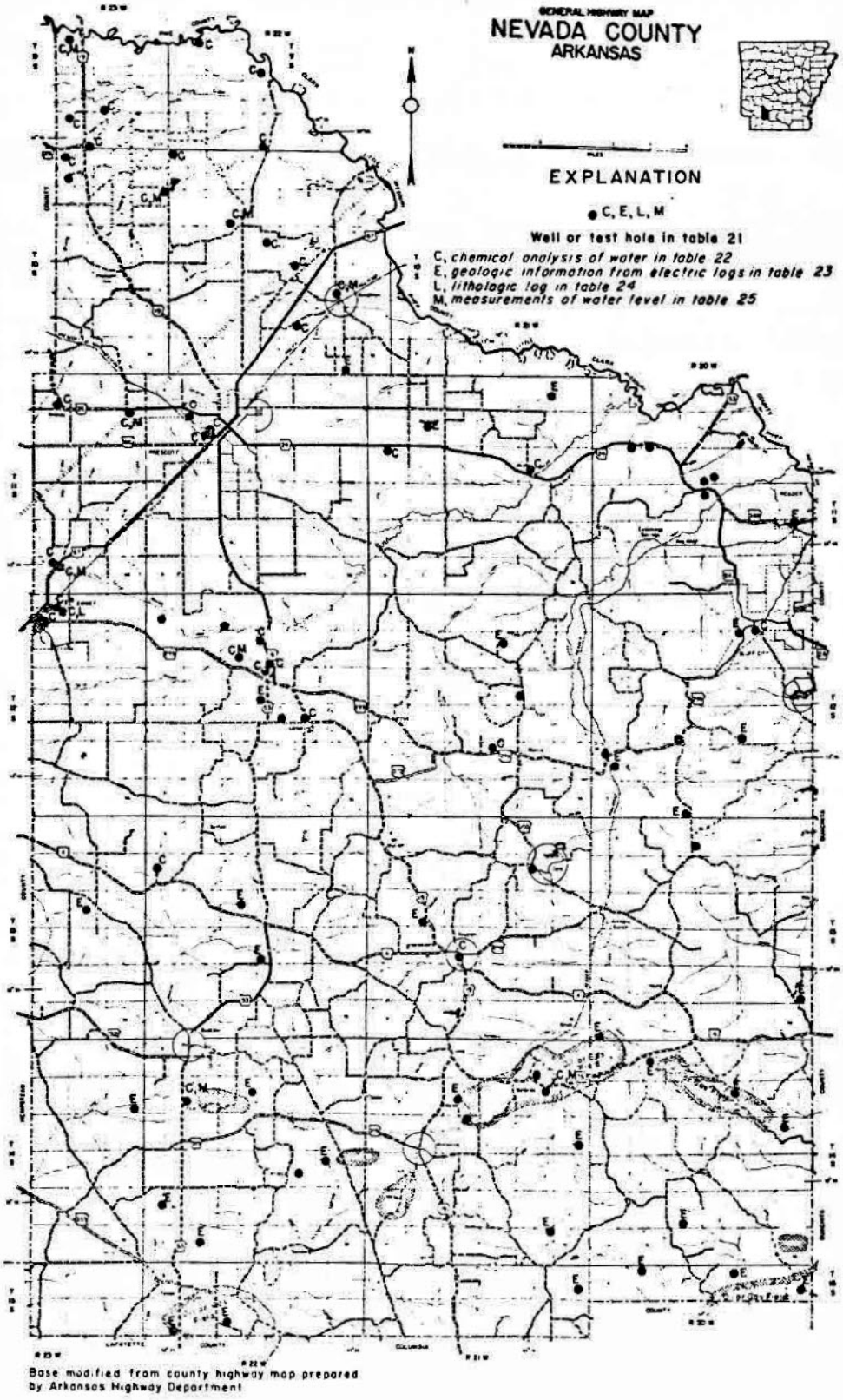

Figure 6.—Map showing locations of wells listed in tables 21, 22, 23, 24, and 25, Nevada County, Arkansas.

Table 21.--Records of wells in Nevada County, Ark.

Depth to water below land surface: + preceding water level measurement indicates that the water level is above land surface.

Use of Water: D., domestic, Ind., industrial, Irr., irrigation, P.S., Public Supply, R., recreation, S., stock, U., unused.

Remarks: C., Chemical analysis of water included in report, see Table 22., L., Log of well included in report, see Table 24., M., Water level measurements included in report, see Table 25.

Local well number	Date drilled	Altitude above mean sea level (feet)	Well depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface (feet)	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
Tokio Formation										
9S-22W-19AAB1	----	200	---	3	---	Flowing	4-18-51	--	U	C
21DCC1	----	200	400	3	---	Flowing	4-18-51	--	D	C
33DCC1	----	225	677	3	---	Flowing	4-18-51	--	D	C
9S-23W-22BAA1	----	250	225	3	---	+ 32.2	4-8-58	8	S	C, M
26CDC1	----	250	300	-	---	+ 5.95	12-5-67	--	S	C
34BAC1	----	240	300	-	---	Flowing	4-18-51	--	S	C
34DDC1	----	275	460	3	---	Flowing	9-7-50	--	D	C
10S-22W- 6BB51	----	250	600	-	---	Flowing	4-18-51	5	R	C
8DCD1	----	200	525	-	---	55.56	12-5-67	--	D	C
16ACD1	1919	170	565	3	---	Flowing	4-18-51	--	D	C
22BAA1	1925	170	565	-	---	Flowing	4-18-51	2	D	C
10S-23W- 3BAC1	1920	305	435	2	---	Flowing	9-7-50	--	D	C
3CDB1	1932	290	540	2	---	---	---	--	D	
12AAA1	----	250	600	4	---	9.15	12-5-67	--	R	C, M
11S-22W- 8DDB1	1912	300	1,070	8	---	---	---	307	P.S.	C
12S-23W- 3ACD3	1926	300	1,217	10	---	---	---	--	Ind.	C, L
Nacatoch Sand										
10S-22W-23DCB1	----	250	45	3	---	4.91	4-19-51	--	D	C, M
27CAA1	----	300	65	2	---	---	---	--	D	C
11S-23W- 8CCC1	----	200	530	-	---	---	---	--	D	
8DCC1	1930	200	525	-	---	---	---	--	D	
15CDC1	1926	180	565	1¼	---	2.0	1964	--	D	
22BBB1	----	175	550	3	---	Flowing	4-18-51	--	D	
22BCB1	----	175	550	3	---	Flowing	4-18-51	1	D	
11S-21W-14CAC1	----	200	---	-	---	5.00	12-5-67	1	D	C
18BAA1	----	255	---	-	---	---	---	--	D	C
11S-22W- 8EBD1	----	320	200	8	---	---	---	--	Ind.	C
8DDB3	1948	300	325	-	---	---	---	150	P.S.	C
8DDB4	1941	325	350	10	180	77.40	10-27-67	55	P.S.	
11S-23W- 3DCD1	1920	350	135	2	---	---	---	--	D	C
12ABB1	1925	350	300	2	000	78.45	12-6-67	--	D	C, M
34ABC1	----	250	240	-	---	Flowing	4-19-51	1	D	C
34ABD1	----	250	240	2	---	16.82	12-6-67	1	D	C, M
12S-21W-27BAC1	1960	200	890	2	---	150	10-5-64	--	D	C
12S-22W- 4CCC1	----	250	250	2	---	---	---	--	D	
6CAD1	----	255	265	2	---	Flowing	9-6-50	--	S	
9CDA1	1962	255	442	4	---	19.23	10-6-64	--	D	C, M
10BCB1	----	250	265	-	---	Flowing	9-6-50	--	S	C
10CDD1	1939	250	500	3	---	---	---	--	D	C
15BAB1	1904	250	500	2	---	---	---	--	D	C
23ACC1	1948	310	600	6	---	46.46	12-6-67	--	P.S.	
23BDA1	1954	300	621	6	---	---	---	--	D	C
12S-23W- 3ADD1	1926	300	501	10	---	---	---	--	Ind.	C, L
3CBC1	----	293	390	2	---	---	---	--	P.S.	
3CBD1	1912	300	366	2	---	---	---	--	D	C
3CBD2	----	300	370	2	---	---	---	--	D	
3CDB1	----	295	400	3	---	---	---	--	P.S.	
13S-22W- 7BD1	1955	350	671	4	---	---	---	--	D	C
Wilcox Group										
11S-21W-31CCC1	1935	350	700	3	---	11.01	10-5-64	--	D	
35BDB1	1941	200	400	4	---	13.78	10-6-64	--	U	
12S-21W-1AACC1	1960	275	423	2	---	---	---	--	D	
12S-22W- 4CCC1	1954	305	197	2	---	60	1954	--	D	
12S-22W-11BCD1	1941	305	363	8	200	54	1954	--	P.S.	
21CDA1	1923	300	470	6	---	125	1945	--	P.S.	C

Table 21.--Records of wells in Nevada County, Ark.--Continued

Local well number	Date drilled	Altitude above mean sea level (feet)	Well depth (feet)	Casing diameter (inches)	Casing depth (feet)	Depth to water below land surface (feet)	Date of water level measurement	Well yield (gpm)	Use of water	Remarks
Cane River Formation										
14S-21W- 2DCC1	1955	310	200	4	---	82.45	10-8-64	--	D	
11ADB1	1955	300	210	4	---	77.68	10-8-64	--	D	C, M
20ABA1	----	370	189	6	---	134	1959	--	P.S.	
14S-22W- 8CBC1	----	330	111	4	---	29.33	10-7-64	--	D	C, M
23CBD1	1957	345	112	5	---	52.70	10-7-64	--	S	
Carrizo Sand										
12S-20W- 2CDD1	----	350	196	2	---	---	---	--	D	C

Table 22.--Selected chemical analyses of ground water in Nevada County, Ark.

[Results in milligrams per liter unless otherwise indicated]

Local Well Number	Depth of well (feet)	Date of collection	Temperature (°C)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Flouride (F)	Nitrate (NO_3)	Dissolved solids: Calculated	Dissolved solids: Residue at 180°C	Hardness as $CaCO_3$: Carbonate	Hardness as $CaCO_3$: Noncarbonate	Alkalinity as $CaCO_3$	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
Tokio Formation																							
9S-22W-19AAB1	----	4-18-51	20	----	0.22	----	----	----	----	271	---	46	13	----	0.3	----	----	9	0	222	----	549	8.7
21DCC1	400	4-18-51	21	----	.12	----	----	----	----	456	---	187	920	----	.4	----	----	81	0	374	----	3,820	8.4
33DCC1	677	4-18-51	23	----	.23	----	----	----	----	406	---	110	193	----	.3	----	----	20	0	333	----	1,390	8.8
9S-23W-22BAA1	225	9- 7-50	19	----	.65	----	----	----	----	185	0	50	12	----	.9	----	----	12	0	152	----	399	8.3
22BAA1	225	2-26-68	19	8.9	1.6	7.8	0.4	80	1.2	174	2	37	10	0.4	.4	239	234	21	0	146	----	380	8.4
26CDC1	300	4-18-51	21	----	.15	----	----	----	----	255	---	57	10	----	.2	----	----	18	0	209	----	523	8.3
34BAC1	300	4-18-51	21	----	.17	----	----	----	----	228	---	64	21	----	.4	----	----	5	0	187	----	527	7.9
34DDC1	460	4-18-51	--	----	.11	----	----	----	----	284	---	69	24	----	.2	----	----	10	0	233	----	592	8.6
10S-22W-6BB21	600	4-18-51	23	----	.15	----	----	----	----	353	---	85	97	----	.3	----	----	12	0	289	----	982	8.8
8DCD1	525	4-18-51	--	----	.17	----	----	----	----	356	15	8.0	372	----	.5	----	----	14	0	317	----	1,750	8.6
16ACD1	565	4-18-51	22	----	.17	----	----	----	----	353	0	9.0	680	----	1.0	----	----	24	0	289	----	2,630	8.3
22BAA1	565	4-18-51	24	9.4	.05	.8	1.4	586	29	361	9	4.9	680	2.8	.4	----	----	8	0	311	91.56	2,680	8.4
10S-23W-3BAC1	435	9- 7-50	22	----	.14	----	----	----	----	242	16	50	22	----	.3	----	----	6	0	226	----	506	8.6
12AAA1	600	4-18-51	23	----	.08	----	----	----	----	298	25	83	82	----	.2	----	----	14	0	286	----	932	8.8
11S-22W-8DDB1	1,070	8-25-52	32	15	.11	15	1.3	474	5.0	434	0	149	373	2.8	.3	----	1,280	43	0	356	31.54	2,140	8.0
12S-23W-3ADC3	1,217	8-30-50	32	----	.25	----	----	----	----	369	18	189	335	----	.8	----	----	17	0	333	----	2,040	8.6
3ACD3	1,217	3- 7-68	21	17	.00	5.8	.7	108	1.8	212	0	26	40	.2	.4	302	304	18	0	174	11.29	517	7.7
Nacatoch Sand																							
10S-22W-23DCB1	45	4-19-51	17	----	1.9	----	----	----	----	202	0	6.0	5.5	----	0.7	----	----	148	0	166	----	340	7.5
23DCB1	45	3- 1-68	16	7.8	14	67	4.1	14	2.6	190	0	51	7.0	0.4	.0	261	253	184	28	156	0.46	330	7.4
27CAA1	65	4-19-51	16	----	7.8	----	----	----	----	207	0	7.0	9.0	----	.5	----	----	156	0	170	----	351	8.0
11S-21W-14CAC1	500	6-17-53	23	----	.07	----	----	----	----	294	13	28	222	----	1.4	----	----	10	0	262	----	1,210	8.6
18BAA1	300	4-17-51	--	----	.19	----	----	----	----	271	14	37	38	----	1.9	----	----	10	0	245	----	629	8.7
11S-22W-8BBD1	200	8-30-50	20	58	.53	64	6.8	30	2.0	262	0	18	12	.0	.5	----	320	188	0	215	0.95	461	7.5
8DDB3	325	8-30-50	21	53	.17	48	6.0	49	5.2	265	0	26	14	.0	.7	----	321	144	0	217	1.77	456	8.3
11S-23W-3DCD1	135	4-17-51	--	----	.46	----	----	----	----	259	0	7.0	7.5	----	.8	----	----	212	0	212	----	435	7.5
12ABB1	300	4-17-51	--	----	1.7	----	----	----	----	240	0	7.0	7.2	----	.7	----	----	196	0	197	----	446	7.9
34ABC1	240	4-19-51	19	----	.13	----	----	----	----	211	0	33	41	----	1.5	----	----	18	0	173	----	521	8.5
34ABD1	240	4-19-51	19	----	.11	----	----	----	----	211	0	35	44	----	.7	----	----	16	0	173	----	541	8.2
12S-21W-27BAC1	890	10- 5-64	18	14	.01	2.1	1.5	377	2.7	300	0	36	393	1.4	.4	976	997	11	0	246	48.57	1,840	8.1
12S-22W-9CDA1	442	10- 6-64	22	13	.02	1.0	.4	180	1.1	282	0	30	95	.4	.6	460	472	4	0	231	38.48	828	8.2
10BCB1	265	6-17-53	22	----	.08	----	----	----	----	265	22	32	93	----	.0	----	----	8	0	254	----	816	8.9
10CDD1	500	6-17-53	--	----	.14	----	----	----	----	266	16	28	126	----	.0	----	----	6	0	245	----	927	8.7
15BAB1	530	6-17-53	--	----	.06	----	----	----	----	264	16	30	128	----	1.6	----	----	6	0	244	----	909	8.8
23BDC1	621	10- 6-64	22	14	.00	.6	.7	231	1.4	292	0	26	167	.6	.6	585	600	4	0	239	48.05	1,080	8.2
23BDC1	621	2-29-68	15	13	.00	1.5	.2	243	1.1	294	6	29	175	.7	1.0	611	618	4	0	251	49.47	1,070	8.5
12S-23W-3ACD1	301	8-30-50	21	----	.63	----	----	----	----	214	---	34	43	----	.3	----	----	18	0	175	----	532	8.0
3CBD1	268	9- 5-50	--	----	.69	----	----	----	----	208	0	40	31	----	1.6	----	----	21	0	171	----	440	8.3
13S-23W-7BDC1	671	10- 7-64	21	15	.03	1.2	.3	217	1.5	294	16	37	124	.6	1.2	554	567	4	0	260	67.06	994	8.6
7BDC1	671	2-28-68	14	14	.17	2.7	.3	231	1.1	323	7	37	141	.7	1.1	585	598	8	0	360	35.59	1,030	8.5
Wilcox Group																							
13S-21W-21CDA1	420	1-24-46	--	11	0.06	32	8.6	18	5.0	14[illegible]	0	26	4.8	0.0	1.2	----	174	110	---	171	0.76	[illegible]	8.1
21CDA1	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	8.7	14	[illegible]	144	[illegible]	[illegible]	5.0	[illegible]	[illegible]	156	179	[illegible]	[illegible]	121	[illegible]	301	[illegible]
Cane River Formation																							
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	131	129	[illegible]	0	[illegible]	----	[illegible]	[illegible]
11ACB1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11	.9	41	[illegible]	[illegible]	[illegible]	[illegible]	3.4	.3	[illegible]	143	144	31	0	115	[illegible]	[illegible]	7.3
14S-22W-8CBC1	111	10- 7-64	[illegible]	[illegible]	[illegible]	[illegible]	1.6	[illegible]	[illegible]	4	0	[illegible]	3.0	[illegible]	[illegible]	34	30	11	8	3	[illegible]	[illegible]	[illegible]
[illegible] Sand																							
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	153	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table 23.--Aquifers as determined from electrical logs of oil tests in Nevada County, Ark.

[Information is recorded in this table only for aquifers that occur within the logged interval]

Driller, lease, and well number	Location	Year drilled	Land surface altitude (feet above mean sea level)	Logged interval (feet below land surface)	Aquifer	Depth to top of aquifer (feet below land surface)	Thickness of aquifer (feet)	Percentage of sand in aquifer	Remarks
Coker & Grieves Thompson No. 1	10S-22W-35DDC	1941	310	81-1,207	Nacatoch Sand	194	170	88	
M. C. Burnham et al. Turner No. 1	11S-20W-25AEB	1966	198	96-2,267	do	726	152	56	
J. E. Coker Oil Corp. B. Jones No. 1	11S-21W-2DA	1940	195	74-1,296	do	335	159	66	
Barnwell Drilling Co. Sandusty No. 1	11S-21W-8	1949	310	100-1,942	do	354	177	62	
Fred Wood Pearl Conner No. 1	12S-20W-11BBB	1957	355	100-2,617	Wilcox Group	144	300	40	
McAlester Fuel Co. Olive Harvey No. A-1	12S-20W-23CCC	1963	347	165-2,197	do	228	280	38	
F. Weaver et al. Gurdon Lumber Co.	12S-20W-30	1947	210	100-2,406	do	(1)	-------	2/42	Bottom of Wilcox Group at depth of 267 feet.
Hunt-Arkansas Kirk No. 1	12S-20W-33DC	1942	340	288-4,035	do	(1)	-------	2/50	Bottom of Wilcox Group at depth of 465 feet.
Carter Oil Co.	12S-21W-10ABC	1949	288	104-2,925	do	(1)	-------	2/40	Bottom of Wilcox Group at depth of 167 feet.
McAlester Fuel Co. Kizer No. A-1	12S-22W-15CC	1945	300	158-3,615	Nacatoch Sand	487	198	50	
McAlester Fuel Co. K. G. Johnson No. A-1	13S-20W-25DC	1963	340	158-2,515	Cane River Formation Carrizo Sand Wilcox Group	207 397 447	190 50 230	40 90 40	
Jones-O'Brien Inc. Jackson No. 1	13S-20W-31CCD	1954	275	200-3,303	Cane River Formation Carrizo Sand Wilcox Group	290 555 637	265 82 268	42 85 50	
Barney Dunlap Ervin Hart No. 1	13S-21W-17CD	1944	315	107-4,463	Wilcox Group	182	217	46	
W. L. Pickens et al. Almond No. 1	13S-22W-16AC	1948	330	100-4,138	do	(1)	-------	2/42	Bottom of Wilcox Group at depth of 222 feet.
E. C. Bolton McAteer No. 1	13S-22W-22CCC	1963	339	101-2,993	do	(1)	-------	2/57	Bottom of Wilcox Group at depth of 336 feet.
Lyons et al. H. S. Herring No. 1	13S-23W-14CAA	1950	362	116-3,009	do	(1)	-------	2/65	Bottom of Wilcox Group at depth of 155 feet.
Berry Asphalt Co. Berry Asphalt Co. Fee No. 1	14S-20W-5ACC	1942	260	50-1,170	Cane River Formation Carrizo Sand Wilcox Group	51 271 351	210 80 166	38 95 30	
Benedum Trees Oil Co. C. C. Fincher No. 8	14S-20W-10ADD	1941	330	69-2,151	Cane River Formation Carrizo Sand Wilcox Group	350 670 750	320 80 235	52 90 34	
Berry Asphalt Co. H. L. Arrington No. 1	14S-20W-13BCA	1944	330	100-1,348	Cane River Formation Carrizo Sand Wilcox Group	133 353 433	220 80 274	50 75 35	
Crow Drilling Co. Rhinehart No. 1	14S-20W-28CD	1943	340	100-3,500	Cane River Formation Carrizo Sand Wilcox Group	144 434 514	290 80 290	55 90 35	
Berry Asphalt Co. D. M. Atkins No. 1	14S-21W-9CA	1943	370	100-1,257	Carrizo Sand Wilcox Group	334 424	90 230	95 35	
B. A. Young Grove Land & Timber Co. No. 1	14S-21W-13DCA	1946	290	100-3,386	Carrizo Sand Wilcox Group	373 339	50 237	95 30	

1 Logged interval starts below top of formation.
2 Percentage of sand is for that part of aquifer actually logged.

Table 23.--Aquifers as determined from electrical logs of oil tests in Nevada County, Ark.--Continued

Driller, lease, and well number	Location	Year drilled	Land surface altitude (feet above mean sea level)	Logged interval (feet below land surface)	Aquifer	Depth to top of aquifer (feet below land surface)	Thickness of aquifer (feet)	Percentage of sand in aquifer	Remarks
(Driller not known) Bass et al. No. 1	14S-21W-35AA	1944	350	210-4,306	Carrizo Sand Wilcox Group	450 530	80 255	75 24	
J. B. Warmack J. K. May No. 1	14S-22W-9ADD	1952	330	93-2,852	Carrizo Sand Wilcox Group	345 420	75 215	80 28	
Ranney Exploration et al. H. C. & H. H. Cabe	14S-22W-23ADA	1963	291	178-3,507	Carrizo Sand Wilcox Group	294 274	80 215	95 23	
J. K. Wadley Harvey G. Nichols No. 1	14S-22W-30BDD	1963	367	107-2,786	Carrizo Sand Wilcox Group	193 280	87 243	75 36	
C. G. Davis Snider No. 1	14S-22W-32	1961	253	101-3,214	Carrizo Sand Wilcox Group	163 244	81 293	88 31	
Keru Drilling Co. Cabe No. 1	14S-23W-12DCD	1963	287	114-3,105	do	(1)	--------	2/30	Bottom of Wilcox Group at depth of 379 feet.
T. W. Lee Grayson No. A-3	15S-20W-1DBD	1945	302	100-3,752	Cane River Formation Carrizo Sand Wilcox Group	380 590 640	210 50 270	29 80 30	
Crow Drilling Co. Drake No. 1	15S-20W-3AAD	1943	245	100-3,541	Cane River Formation Carrizo Sand Wilcox Group	324 530 594	206 64 226	39 86 31	
Crow Drilling Co. Grove No. 1	15S-20W-5BAA	1947	325	158-4,021	Cane River Formation Carrizo Sand Wilcox Group	321 531 591	210 60 230	31 50 30	
E. L. Pinkston et al. J. L. Beasley No. 1	15S-21W-1DCA	1949	390	135-4,004	Cane River Formation Carrizo Sand Wilcox Group	372 552 612	180 60 250	42 84 30	
C. G. Davis Drilling Co. Lovie Pelt No. A-1	15S-22W-9CBD	1954	337	100-3,473	Cane River Formation Carrizo Sand Wilcox Group	385 705 795	320 90 250	34 80 28	
C. G. Davis Drilling Co. Lovie Pelt No. 1	15S-23W-12DDD	1954	300	100-3,011	Cane River Formation Carrizo Sand Wilcox Group	237 513 609	276 96 234	52 100 32	

1 Logged interval starts below top of formation.
2 Percentage of sand is for that part of aquifer actually logged.

Table 24.--Logs of test holes and wells

Nevada County

12S-23W-3ACD1. Log of Arkansas Louisiana Gas Company well by driller. Surface altitude, 301 ft.

	Thickness (feet)	Depth (feet)
Surface clay	40	40
Shale	80	120
Broken sand rock	5	125
Sticky shale	100	225
Sand and rock	3	228
Sandrock	6	234
Sand	11	245
Sandrock	3	248
Sand	8	256
Sandrock	6	262
Sand and gravel	10	272
Sandrock	3	275
Sand and gravels (hard shells)	9	284
Sand and gravels (hard shell rock)	17	301

Table 24.--Logs of test holes and wells--Continued

Nevada County--Continued

12S-23W-3ACD3. Log of Arkansas Louisiana Gas Co. well by driller. Surface altitude, 320 ft.

	Thickness (feet)	Depth (feet)
Surface clay	40	40
Shale	183	223
Sand rock	8	231
Sand	17	248
Sand and gravels	57	305
Sand and gravels (shell and rocks)	20	325
Shale	10	335
Broken sand rock	15	350
Sand	100	450
Gummy shale	290	740
Sand	25	765
Gummy shale	85	850
Shale and boulders	50	900
Gumbo	30	930
Shale and boulders	30	960
Shale	40	1,000
Gummy shale	29	1,029
Sand	6	1,035
Shale	10	1,045

Table 24.--Logs of test holes and wells--Continued

Nevada County--Continued

12S-23W-3ACD3.--Continued

	Thickness (feet)	Depth (feet)
Sand	6	1,051
Gummy shale	19	1,070
Sand	15	1,085
Gumbo	35	1,120
Shale	20	1,140
Gumbo	18	1,158
Sand	14	1,172
Gumbo	39	1,217

Table 25.--Measurement of water levels in wells, Nevada County, Ark.

(Datum, land surface, water levels above land surface are preceded with a +)

Date	Water level
Tokio Formation	
9S-23W-22BAAI	
Apr. 8, 1958	+33.2
June 4	+32.8
July 16	+33.6
Aug. 5	+33.7
Sept. 10	+31.8
Oct. 7	+33.2
Dec. 1	+33.5
May 4, 1959	+34.0
June 1	+33.7
July 8	+33.5
Aug. 19	+33.2
Aug, 8, 1960	+32.9
Oct. 4	+33.0
Apr. 19, 1961	+32.7
Aug. 29	+32.4
Oct. 18	+34.1
Mar. 28, 1962	+34.9
May 23	+35.0
Oct. 1	+35.3
Feb. 28, 1963	+34.3
May 22	+33.8
Apr. 15, 1964	+34.2
Apr. 21, 1965	+33.9
10S-23W-12AAA1	
Dec. 5, 1967	7.65
Mar. 28, 1968	7.40
Oct. 21	9.18

Date	Water level
Nacatoch Sand	
10S-22W-23DCB1	
Apr. 19, 1951	1.91
Oct. 27, 1967	5.10
Mar. 28, 1968	1.72
Oct. 21	4.28
11S-23W-12ABB1	
Dec. 6, 1967	77.95
Mar. 28, 1968	76.68
Oct. 21	77.17
11S-23W-34ABD1	
Dec. 6, 1967	12.82
Mar. 28, 1968	12.08
Oct. 21	12.63
12S-22W-9CDA1	
Oct. 6, 1964	18.23
Dec. 6, 1967	21.29

Table 25.--Measurement of water levels in wells, Nevada County, Ark.--Continued

Date	Water level
Cane River Formation	
14S-21W-11ADB1	
Oct. 8, 1964	77.68
Dec. 12, 1967	88.36
14S-22W-8CBC1	
Oct. 7, 1964	28.83
Dec. 12, 1967	30.44
Mar. 22, 1968	27.11