

**RECORDS OF WELLS, DRILLERS' LOGS, WATER-LEVEL
MEASUREMENTS, AND CHEMICAL ANALYSES OF GROUND WATER
IN CHAMBERS, LIBERTY, AND MONTGOMERY
COUNTIES, TEXAS, 1980-84**

By James F. Williams III, L.S. Coplin, C.E. Ranzau, Jr., and W.B. Lind

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ABSTRACT

Information on major new water wells in Chambers, Liberty, and Montgomery Counties was compiled by the U.S. Geological Survey from 1980 through 1984. This report presents the results of the hydrologic data collection on new large-capacity and other selected wells, including well location and completion data, drillers' logs of the strata penetrated, water levels, and chemical quality of the produced water. These water-well data are supplementary to similar data on older wells in these counties and descriptive evaluations of the ground-water resources which have been published previously.

INTRODUCTION

Hydrologic data from Chambers, Liberty, and Montgomery Counties, Texas, are being collected in cooperation with the Harris-Galveston Coastal Subsidence District and the City of Houston to evaluate the ground-water resources of the greater Houston-Galveston region. The data-collection program consists of an inventory of new large-capacity and other selected wells, water-level measurements in observation wells, and a compilation of information on land-surface subsidence.

The hydrologic data are published every 5 years. The first report (Naftel, Fleming, and Vaught, 1976) presents data collected from 1966 through 1974 while the second report (Ratzlaff, Lind, and Ranzau, 1983) presents data collected from 1975 through 1979. This report presents records of wells, drillers' logs, water-level measurements, and chemical analyses of ground water collected during 1980-84 (tables 1-11). The records of wells and drillers' logs are for wells completed during 1980-84, but the water-level measurements and chemical analyses are new data on the newly drilled wells or additional data (1980-84) on previously published wells. All the wells listed in tables 1-11 are shown in figures 1-3. Additional information on the geology and hydrology of the area may be found in publications listed in "Selected References."

Most of the chemical analyses presented in this report were determined in the laboratories of the U.S. Geological Survey, but some data were obtained from commercial analyses. Dissolved solids (sum of constituents) and hardness (Ca, Mg) were recalculated to correspond to the Geological Survey reporting methods.

WELL-NUMBERING SYSTEM

The well-numbering system used in this report was devised by the Texas Department of Water Resources for use throughout the State. Under this system, each 1-degree quadrangle is given a number consisting of two digits. These are the first two digits in the well number. Each 1-degree quadrangle is divided into 7-1/2-minute quadrangles which are given two-digit numbers from 01 to 64. These are the third and fourth digits of the well number. Each 7-1/2-minute quadrangle is divided into 2-1/2-minute quadrangles which are given a single-digit number from 1 to 9. This is the fifth digit of the well number. Finally, each well within a 2-1/2-minute quadrangle is given a two-digit number in the order in which it was inventoried, starting with 01. These are the last two digits of the well number.

On the well-location maps (figs. 1-3), only the last three digits of the well number are shown at each well location; the second two digits are shown in the northwest corner of each 7-1/2-minute quadrangle; and the first two digits are shown by the large block numerals 60, 61, 64, and 65.

In addition to the seven-digit well number, a two-letter prefix is used to identify the county. The prefix for Chambers County is DH; for Liberty County, SB; and for Montgomery County, TS.

SELECTED REFERENCES

- Anders, R. B., McAdoo, G. D., and Alexander, W. H., Jr., 1968, Ground-water resources of Liberty County, Texas: Texas Water Development Board Report 72, 147 p., 20 figs.
- Naftel, W. L., Fleming, Bobbie, and Vaught, Kenneth, 1976, Records of wells, drillers' logs, water-level measurements, and chemical analyses of ground water in Chambers, Liberty, and Montgomery Counties, Texas, 1966-74: Texas Water Development Board Report 202, 63 p., 3 figs.
- Popkin, B. P., 1971, Ground-water resources of Montgomery County, Texas: Texas Water Development Board Report 136, 149 p., 29 figs.
- Ratzlaff, K. W., 1982, Land-surface subsidence in the Texas coastal region: Texas Department of Water Resources Report 278, 30 p., 8 figs.
- Ratzlaff, K. W., Lind, W. B., and Ranzau, C. E., 1983, Records of wells, drillers' logs, water-level measurements, and chemical analyses of ground water in Chambers, Liberty, and Montgomery Counties, Texas, 1975-79: Texas Department of Water Resources Report 280, 39 p., 3 figs.
- Wesselman, J. B., 1971, Ground-water resources of Chambers and Jefferson Counties, Texas, with a section on Quaternary geology, by Saul Aronow: Texas Water Development Board Report 133, 183 p., 28 figs.

Table 1.--Records of wells in Chambers County

Water levels and drawdown: Reported water levels and drawdown given in feet.
 Use of water : N, Industrial; P, public supply; U, unused.
 Water-bearing unit : CHCT, Chicot aquifer.
 Type of data available : D, drillers' log (see table 2); W, water-level measurements (see table 3).

WELL	OWNER	DRILLER	DATE COMPLETED	DEPTH OF WELL (feet)	DIAMETER OF WELL (inches)	SCREEN LENGTH (feet)	DEPTH INTERVAL (feet)	WATER-BEARING UNIT	ALTITUDE OF LAND SURFACE (feet)	WATER LEVEL		DISCHARGE (gallons per minute)	DRAWDOWN (feet)	TYPE OF DATA AVAILABLE
										BELOW LAND SURFACE DATUM (feet)	DATE OF MEASUREMENT			
DH-64-09-338	XRAL STORAGE AND TERMINALING CO.	RAYMOND WATER WELLS	1983	170	5.2	20	150 - 170	CHCT	70	--	--	25	20	D
DH-64-09-925	SHELL OIL CO.	RUSSELL AND SON, INC.	1983	410	8.6	40	370 - 410	CHCT	26	104	06/12/1983	--	--	D
DH-64-11-817	CITY OF ANAHUAC, WELL NO. 4	O'DAY DRILG CO., INC.	1983	125	8	40	80 - 120	CHCT	22	18	08/11/1983	200	--	D
DH-64-17-213	HOLSCH TUBULAR PRODUCTS	O'DAY DRILG CO., INC.	1982	572	8.4	40	532 - 572	CHCT	16	152	07/16/1982	210	--	D
DH-64-26-401	EXXON CO., WELL NO. 151	--	--	600	4	--	--	CHCT	0	105	02/17/1982	--	--	W

Table 2.--Drillers' logs of wells in Chambers County

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well DH-64-09-338 Owner: XRAL Storage and Terminaling Co. Driller: Raymond Water Wells			Well DH-64-17-213 Owner: Holsch Tubular Products Driller: O'Day Drilling Co., Inc.		
Clay, red and gray	20	20	Topsoil	2	2
Sand	20	40	Clay	14	16
Clay, red and gray	40	80	Sand	16	32
Clay, red and blue	45	125	Clay	28	60
Sand	10	135	Sand, gray	55	115
Clay, red and blue	5	140	Clay	257	372
Sand	30	170	Sand, gray	19	391
			Clay	33	424
Well DH-64-09-925 Owner: Shell Oil Company Driller: Busse11 and Son, Inc.			Sand	12	436
			Clay	47	483
Clay	15	15	Sand	11	494
Sand	20	35	Clay	23	517
Clay	300	335	Sand	55	572
Sand	75	410			
Well DH-64-11-817 Owner: City of Anahuac, Well No. 4 Driller: O'Day Drilling Co., Inc.					
Topsoil	3	3			
Clay	50	53			
Sand	67	120			
Clay	5	125			

Table 3.--Water levels in wells in Chambers County--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
WELL DH-64-11-816 OWNER: CITY OF ANAHUAC, WELL NO. 3 SCREEN: 80-100 FEET ELEVATION: 22 FEET		WELL DH-64-13-602 OWNER: TRINITY BAY CONSERVATION DIST., WELL NO. 2 SCREEN: 117-147 FEET ELEVATION: 26 FEET		WELL DH-64-21-205 OWNER: SUN OIL CO. DEPTH: 150 FEET ELEVATION: 16 FEET	
03/06/1980	30	03/06/1980	89	03/06/1980	33
10/31/1980	28	02/02/1981	91	11/05/1980	32.05
02/02/1981	33	10/16/1981	95	02/02/1981	33.47
10/16/1981	28	03/09/1982	93	10/16/1981	33.26
03/09/1982	30	10/26/1982	95	03/09/1982	33.35
10/26/1982	28.40	02/10/1983	69.70	10/26/1982	32.02
02/10/1983	27.95	03/08/1984	74.18	02/10/1983	33.66
03/08/1984	28.94			03/08/1984	32.30
WELL DH-64-11-901 OWNER: BARRINGER SCREEN: 340-350 FEET ELEVATION: 22 FEET		WELL DH-64-13-701 OWNER: HARVEY HAYNES DEPTH: 195 FEET ELEVATION: 23 FEET		WELL DH-64-26-401 OWNER: EXXON CO., WELL NO. 151 DEPTH: UNKNOWN ELEVATION: SEA LEVEL	
03/06/1980	33.37	03/06/1980	26.15	02/17/1982	105.15
10/16/1981	33.55	10/31/1980	26.32	09/02/1982	97.64
03/09/1982	33.64	02/02/1981	25.99	02/24/1983	94.73
10/26/1982	33.34	10/16/1981	27.66	08/08/1984	92.22
02/10/1983	33.37	03/09/1982	31.18		
03/08/1984	33.40	10/26/1982	30.42	WELL DH-64-26-701 OWNER: EXXON CO., WELL NO. A-1 DEPTH: 610-671 ELEVATION: SEA LEVEL	
		02/10/1983	27.74	03/10/1980	108.80
		03/08/1984	28.83	02/09/1981	110.39
WELL DH-64-13-306 OWNER: TRINITY BAY CONSERVATION DIST., WELL NO. 3 SCREEN: 130-199 FEET ELEVATION: 27 FEET		WELL DH-64-17-311 OWNER: WILBURN BROS. SCREEN: 78-105 FEET ELEVATION: 23 FEET		10/29/1981	110.79
03/06/1980	58	03/03/1980	19.93	02/17/1982	110.55
02/02/1981	63	11/05/1980	19.81	09/02/1982	95.58
03/09/1982	58	01/30/1981	20.24	02/24/1983	112.53
02/10/1983	63	10/15/1981	20.32	08/08/1984	91.83
03/08/1984	61	03/05/1982	20.11		
		10/25/1982	20.74	WELL DH-64-26-710 OWNER: EXXON CO., WELL NO. A-145 DEPTH: UNKNOWN ELEVATION: SEA LEVEL	
		02/09/1983	19.98	03/10/1980	92.69
		01/11/1984	20.70		
WELL DH-64-13-601 OWNER: TRINITY BAY CONSERVATION DIST., WELL NO. 1 SCREEN: 116-146 FEET ELEVATION: 26 FEET		WELL DH-64-17-901 OWNER: SEACREST PARK SCREEN: 666-687 FEET ELEVATION: 25 FEET			
03/06/1980	88	03/03/1980	134.50	WELL DH-64-26-809 OWNER: EXXON CO., WELL NO. A-94 DEPTH: UNKNOWN ELEVATION: SEA LEVEL	
10/31/1980	79	11/05/1980	132.88	03/10/1980	93.17
02/02/1981	90	01/30/1981	135.67	10/29/1981	88.22
10/16/1981	83	10/15/1981	136.49	02/17/1982	82.50
03/09/1982	85	03/05/1982	63.45	09/02/1982	72.24
10/26/1982	87.40	10/25/1982	64.65	02/24/1983	31.70
02/10/1983	69.20	02/09/1983	63.47		
03/08/1984	73.50	01/11/1984	62.34		

Table 4.--Records of wells in Liberty County

Water levels and drawdown: Reported water levels and drawdown given in feet; measured water levels and drawdown given in feet and tenths or feet and hundredths.
 Use of water : H, domestic; I, irrigation; N, industrial; P, public supply.
 Water-bearing unit : CHCT, Chicot aquifer; EVGL, Evangeline aquifer.
 Type of data available : D, drillers' log (see table 5); E, electric log; Q, chemical analysis (see table 6); W, water-level measurements (see table 6).

WELL	OWNER	DRILLER	DATE COMPLETED	DEPTH OF WELL (feet)	DIAMETER OF WELL (inches)	SCREEN LENGTH (feet)	DEPTH INTERVAL (feet)	WATER-BEARING UNIT	ALTITUDE OF LAND SURFACE (feet)	WATER LEVEL BELOW LAND SURFACE DATUM (feet)	DATE OF MEASUREMENT	USE OF WATER	DISCHARGE (gallons per minute)	DRAWDOWN (feet)	TYPE OF DATA AVAILABLE
SB-61-33-804	KIRBY FOREST INDUSTRIES	MILLER'S PUMP AND SUPPLY CO., INC.	1979	287	10,6	40	247 - 287	EVGL	155	40	11/01/1979	N	--	--	D
SB-61-33-805	KIRBY FOREST INDUSTRIES	MILLER'S PUMP AND SUPPLY CO., INC.	1979	365	10,6	40	329 - 365	EVGL	155	84	--	N	--	--	D
SB-61-33-806	KIRBY FOREST INDUSTRIES	MILLER'S PUMP AND SUPPLY CO., INC.	1980	370	10,6	40	320 - 360	EVGL	155	64	09/01/1980	N	--	--	D
SB-61-34-202	SIX LAKES SUB-DIVISION	MILLER'S PUMP AND SUPPLY CO., INC.	1980	160	6,4	20	138 - 158	EVGL	75	--	--	P	--	--	D
SB-61-34-512	BAR-D-RANCHETTE	MILLER'S PUMP AND SUPPLY CO., INC.	1979	220	6,4	20	200 - 220	EVGL	80	--	--	H	--	--	D
SB-61-57-611	CITY OF DAYTON, WELL NO. 5	ALSAY-PIPPIN CORP.	1980	1319	16,10	189	1044 - 1314	EVGL	82	113.20	04/10/1980	P	1012	63.5	D, E, Q, W
SB-61-58-305	CITY OF LIBERTY, WELL NO. 5	LAYNE-WESTERN CO., INC.	1980	1645	16,10	200	1300 - 1638	EVGL	70	75	10/ /1980	P	1585	130	D
SB-61-58-306	SYNERGY FLUIDS, INC.	SAM GORE WATER WELL SERVICE	1984	440	6	30	410 - 440	EVGL	25	40	03/23/1984	N	250	--	D
SB-61-59-106	GRAVES AND PARTLOW	KATY DRLG CO.	1972	485	20,12	--	--	EVGL	72	43.69	03/21/1980	I	--	--	W
SB-64-02-401	THE LAND OFFICE, WELL NO. 1	RAYMOND WATER WELLS	1983	293	6,4	30	245 - 284	CHCT	49	78	01/17/1983	P	235	28	U

Table 5.--Drillers' logs of wells in Liberty County

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well SB-61-33-804			Well SB-61-33-806--Continued		
Owner: Kirby Forest Industries			Gravel, coarse		
Driller: Miller's Pump and Supply Co., Inc.				6	92
Clay	25	25	Rock	3	95
Sand	57	82	Sand	13	113
Clay	35	117	Clay	8	121
Gravel	8	125	Rock	4	125
Rock	4	129	Sand and rock strips	17	142
Sand	11	140	Sand	50	192
Rock	2	142	Sandstone	6	198
Sand and rock strips	86	228	Sand, hard and rock strips	25	223
Clay	12	240	Sand	30	253
Sand	37	277	Clay	17	270
Rock and clay	10	287	Sandstone	10	280
Well SB-61-33-805			Clay	39	319
Owner: Kirby Forest Industries			Rock	1	320
Driller: Miller's Pump and Supply Co., Inc.			Sand	15	335
Sand and clay	95	95	Rock	1	336
Clay and gravel	30	125	Sand	14	350
Rock	5	130	Rock	1	351
Rock and sand strips	16	146	Sand	9	360
Sand	50	196	Sand strips	10	370
Rock and sand strips	29	225	Well SB-61-34-202		
Rock and gravel	29	254	Owner: Six Lakes Subdivision		
Clay	66	320	Driller: Miller's Pump and Supply Co., Inc.		
Rock	3	323	Clay	20	20
Sand strips	7	330	Sand	18	38
Sand	35	365	Clay	22	60
Well SB-61-33-806			Sand	34	94
Owner: Kirby Forest Industries			Sand and gravel	16	110
Driller: Miller's Pump and Supply Co., Inc.			Clay	8	118
Topsoil	20	20	Sand	40	158
Sand and gravel	58	78	Clay	2	160
Clay, white	8	86			

Table 5.--Drillers' logs of wells in Liberty County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well SB-61-34-512			Well SB-61-57-611--Continued		
Owner: Bar-D-Ranchette					
Driller: Miller's Pump and Supply Co., Inc.					
			Clay, sandy	25	840
Sand and clay	25	25	Clay and sandy gravel	50	890
Sand	100	125	Clay	10	900
Clay	18	143	Sand	43	943
Sand	10	153	Clay, sandy	5	948
Sand and rock strips	18	171	Gravel and sandy rock	2	950
Sand	50	221	Clay and sand	40	990
Rock	1	222	Clay and gravel	15	1005
			Clay, sandy	12	1017
Well SB-61-57-611			Rock, hard, sandy	28	1045
Owner: City of Dayton, Well No. 5			Clay and gravel	23	1058
Driller: Alsay-Pippin Corporation			Clay, sandy	30	1098
Gravel and clay	76	76	Clay, hard	22	1120
Clay	112	188	Sand	10	1130
Clay, sandy and gravel	27	215	Clay, blue and gravel	20	1150
Clay, sandy and sand	40	255	Sand	40	1190
Clay, sandy	28	283	Clay and gravel	27	1217
Clay, sandy, blue	35	418	Clay, sandy	8	1225
Clay, sandy and gravel	12	430	Sand	54	1279
Clay, red and blue	10	440	Sand and gravel	61	1340
Clay and gravel	30	470			
Sand	40	510	Well SB-61-58-305		
Clay	40	550	Owner: City of Liberty, Well No. 5		
Sand	10	560	Driller: Layne-Western Co., Inc.		
Clay, sandy	15	575	Clay	70	70
Clay and gravel	20	595	Sand	20	90
Sand	40	635	Clay	5	95
Clay, sandy and sand	24	659	Clay and sand streaks	5	100
Clay, sandy, blue	32	691	Clay	5	105
Clay	27	718	Clay and sand streaks	12	117
Clay, sandy	34	752	Clay, sandy	3	120
Clay	13	765	Clay and sand streaks	23	143
Sand	50	815	Sand	14	157

Table 5.--Drillers' logs of wells in Liberty County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well SB-61-58-305--Continued			Well SB-61-58-306		
Clay and sand streaks	15	172	Owner: Synergy Fluids, Inc.		
Clay	30	202	Topsoil	26	26
Sand and clay streaks	12	214	Sand	17	43
Clay	14	228	Clay	35	78
Sand	11	239	Sand	36	114
Clay	2	241	Clay	96	210
Sand	5	246	Sand	15	225
Clay	32	278	Clay	48	275
Sand and clay streaks	2	280	Shale	105	380
Sand, coarse	32	312	Sand	60	440
Clay and sand streaks	30	342	Well SB-64-02-401		
Sand and clay	16	358	Owner: The Land Office, Well No. 1		
Clay	18	376	Driller: Raymond Water Wells		
Sand	20	396	Clay	20	20
Clay and sand	15	411	Sand	20	40
Sand and clay streaks	49	460	Clay, red and gray	20	60
Clay	10	470	Sand	20	80
Sand and clay	31	501	Clay, red and gray	60	140
Clay	10	511	Clay, blue	110	250
Sand and clay streaks	12	523	Sand	15	265
Sand	65	588	Clay	9	274
Clay and sand streaks	11	599	Sand	9	283
Sand and clay streaks	39	638	Clay	10	293
Clay and sand streaks	62	700			
Sand	8	708			
Clay streaks and sand	45	753			
Sand	7	760			
Clay	5	765			
Sand	17	782			
Clay	9	791			

Table 6.--Water levels in wells in Liberty County

(feet below land surface)

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
WELL SB-60-48-102 OWNER: CITY OF CLEVELAND, WELL NO. 1 SCREEN: 619-833 FEET ELEVATION: 157 FEET		WELL SB-60-64-301 OWNER: E.J. STOESSER, WELL NO. 2 DEPTH: 1,006 FEET ELEVATION: 82 FEET		WELL SB-61-33-701 OWNER: ROY ELLEDGE DEPTH: 835 FEET ELEVATION: 157 FEET	
03/24/1980	50.03	03/11/1980	84.07	03/24/1980	35.34
09/03/1980	71.05	02/03/1981	78.26	02/02/1981	44.06
02/02/1981	64.37	09/14/1983	80.78	09/24/1981	45.76
09/24/1981	70.43	02/03/1984	78.25	03/03/1982	44.40
03/03/1982	66.17			10/14/1982	37.87
02/16/1983	68.65	WELL SB-60-64-303 OWNER: E.J. STOESSER, WELL NO. 6 SCREEN: 203-580 FEET ELEVATION: 85 FEET		02/16/1983	33.43
09/13/1983	62.83			08/14/1983	31.84
03/07/1984	64.41			03/06/1984	33.81
WELL SB-60-48-302 OWNER: VERNON ELLEDGE, WELL NO. 2 DEPTH: 452 FEET ELEVATION: 153 FEET		03/11/1980	68.50	WELL SB-61-33-708 OWNER: ROY A. MORTON AND SONS DEPTH: 693 FEET ELEVATION: 161 FEET	
03/24/1980	18.66	02/03/1981	73.51	03/24/1980	34.46
09/03/1980	22.18	09/22/1981	82.00	02/02/1981	44.06
02/02/1981	23.12	02/23/1982	77.36	09/24/1981	39.51
09/22/1981	21.44	10/21/1982	92.19	03/03/1982	36.79
10/14/1982	25.45	02/07/1983	74.36	10/14/1982	34.10
02/08/1983	18.22	02/03/1984	76.41	09/14/1983	30.59
09/14/1983	16.08			03/06/1984	33.97
03/07/1984	12.86	WELL SB-60-64-602 OWNER: E.J. STOESSER, WELL NO. 4 DEPTH: 1,017 FEET ELEVATION: 83 FEET			
WELL SB-60-56-901 OWNER: E.J. STOESSER, WELL NO. 3 DEPTH: 1,015 FEET ELEVATION: 86 FEET		03/11/1980	119.58	WELL SB-61-41-101 OWNER: VERNON ELLEDGE DEPTH: 502 FEET ELEVATION: 153 FEET	
03/11/1980	66.95	02/03/1981	109.72	03/24/1980	30.72
02/03/1981	71.59	09/22/1981	123.52	09/03/1980	32.48
09/22/1981	87.08	02/23/1982	112.06	02/02/1981	33.62
02/23/1982	71.11	10/21/1982	127.45	09/24/1981	33.91
10/22/1982	94.16	02/07/1983	113.29	03/04/1982	31.20
02/07/1983	72.51	02/04/1984	116.93	10/14/1982	34.64
09/14/1983	77.73	WELL SB-60-64-901 OWNER: M.F. ZALESKY DEPTH: 912 FEET ELEVATION: 70 FEET		02/08/1983	30.62
02/04/1984	68.06			09/14/1983	32.98
WELL SB-60-56-902 OWNER: E.J. STOESSER, WELL NO. 5 DEPTH: 1,040 FEET ELEVATION: 85 FEET		03/11/1980	105.17	03/07/1984	29.02
03/11/1980	98.20	WELL SB-61-33-601 OWNER: C. DIE SCREEN: 130-140 FEET ELEVATION: 126 FEET		WELL SB-61-41-701 OWNER: M.A. SCOTT DEPTH: 625 FEET ELEVATION: 128 FEET	
02/03/1981	93.11	03/24/1980	54.34	03/24/1980	44.85
09/14/1983	90.62	09/03/1980	57.49	09/03/1980	49.35
02/04/1984	92.88	02/02/1981	57.36	02/02/1981	51.09
		09/24/1981	57.54	09/24/1981	53.94
		03/01/1982	57.10	03/03/1982	50.83
		10/14/1982	57.65	02/16/1983	44.44
		02/08/1983	56.24	09/14/1983	43.77
		09/13/1983	55.23	03/07/1984	45.39
		03/07/1984	54.07		

Table 6.--Water levels in wells in Liberty County--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
WELL SB-61-43-P01 OWNER: A.L. FRICKSON DEPTH: 100 FEET ELEVATION: 93 FEET		WELL SB-61-51-102--Cont.		WELL SB-61-57-702 OWNER: J.M. FROST, JR., WELL NO. 1 DEPTH: 800 FEET ELEVATION: 67 FEET	
03/21/1980	41.40	02/16/1983	43.02	03/21/1980	105.74
09/03/1980	43.95	09/13/1983	42.53	02/03/1981	115.44
02/18/1981	42.39	03/07/1984	42.22	09/04/1981	111.76
09/24/1981	44.87	WELL SB-61-51-806 OWNER: MORGAN TIPPETT DEPTH: 624 FEET ELEVATION: 68 FEET		02/25/1982	102.24
03/01/1982	43.17			10/22/1982	109.42
02/16/1983	46.49			02/08/1984	100.05
03/07/1984	44.31			WELL SB-61-57-703 OWNER: J.M.FROST, JR., WELL NO. 2 SCREEN: 240-837 FEET ELEVATION: 67 FEET	
WELL SB-61-49-802 OWNER: W.A. CONNERS DEPTH: 760 FEET ELEVATION: 97 FEET		03/20/1980	36.88	03/20/1980	128.75
03/11/1980	66.21	09/03/1980	53.95	09/29/1980	122.13
		02/18/1981	34.34	02/03/1981	108.74
		09/23/1981	51.37	09/04/1981	126.32
		02/25/1982	31.30	02/25/1982	115.62
		02/14/1983	31.60	10/13/1982	115.26
		09/13/1983	31.58	02/14/1983	118.49
		02/08/1984	31.15	09/15/1983	105.75
		WELL SB-61-57-405 OWNER: LEO MOREAU SCREEN: 240-870 FEET ELEVATION: 78 FEET		02/08/1984	112.97
WELL SB-61-49-807 OWNER: BOLLINGER BROS. SCREEN: 65-396 FEET ELEVATION: 97 FEET		03/11/1980	119.35	WELL SB-61-58-505 OWNER: CHARLES W. FISHER DEPTH: 651 FEET ELEVATION: 30 FEET	
03/11/1980	80.05	WELL 61-57-506 OWNER: W.M. MOREAU DEPTH: 940 FEET ELEVATION: 78 FEET		03/20/1980	58.32
09/29/1980	93.12	03/11/1980	118.42	09/03/1980	65.53
02/03/1981	79.82	09/29/1980	125.00	02/18/1981	56.27
09/04/1981	96.31	02/03/1981	113.63	09/04/1981	60.03
02/24/1982	85.12	09/04/1981	126.21	02/25/1982	47.42
10/22/1982	85.78	02/25/1982	106.10	10/13/1982	45.90
02/14/1983	91.83	10/22/1982	128.43	09/06/1983	46.20
09/06/1983	82.14	02/07/1983	116.11	02/08/1984	42.84
02/08/1984	95.80	09/14/1983	106.82	WELL SB-61-59-106 OWNER: GRAVES AND PARTLOW DEPTH: 485 FEET ELEVATION: 72 FEET	
WELL SB-61-51-101 OWNER: DENNISON DEPTH: 1,150 FEET ELEVATION: 95 FEET		02/08/1984	107.90	03/21/1980	43.69
03/21/1980	45.05	WELL SB-61-57-611 OWNER: CITY OF DAYTON, WELL NO. 5 SCREEN: 1,044-1,314 FEET ELEVATION: 82 FEET		02/18/1981	45.07
09/03/1980	49.88	04/10/1980	113.20	09/23/1981	49.81
02/18/1981	47.49	10/21/1980	100.67	02/24/1982	44.10
09/24/1981	49.21	02/03/1981	107.42	09/14/1983	40.89
03/03/1982	48.40	02/25/1982	102.80	02/08/1984	42.75
10/13/1982	50.24	10/13/1982	105.68		
02/16/1983	55.04	09/06/1983	101.91		
09/13/1983	46.29	02/08/1984	104.32		
03/06/1984	48.10	WELL SB-61-51-102 OWNER: FRANK DUKE DEPTH: 660 FEET ELEVATION: 87 FEET			
WELL SB-61-51-102 OWNER: FRANK DUKE DEPTH: 660 FEET ELEVATION: 87 FEET		03/21/1980	44.48		
03/21/1980	44.48	09/03/1980	45.31		
09/03/1980	45.31	02/18/1981	43.47		
02/18/1981	43.47	09/24/1981	46.36		
09/24/1981	46.36	03/03/1982	44.31		
03/03/1982	44.31	10/13/1982	51.53		
10/13/1982	51.53				

Table 6.--Water levels in wells in Liberty County--Continued

DATE	WATER LEVEL
WELL SB-61-59-501	
OWNER: C.F. KALLINA	
DEPTH: 1,180 FEET	
ELEVATION: 66 FEET	
03/20/1980	53.05
09/03/1980	63.54
02/18/1981	55.24
09/04/1981	56.50
02/25/1982	52.79
10/13/1982	55.65
02/14/1983	51.73
09/13/1983	51.10
02/08/1984	49.04
WELL SB-61-60-902	
OWNER: WILLIS ESTATE	
SCREEN: 429-492 FEET	
ELEVATION: 53 FEET	
03/20/1980	32.15
09/29/1980	33.18
02/18/1981	32.44
02/24/1982	33.93
10/13/1982	32.17
02/14/1983	33.10

Table 7.--Chemical analyses of water from wells in Liberty County

Water-bearing unit: EYGL, Evangeline aquifer

[mg/L, milligram per liter; µg/L, microgram per liter; micromhos, micromhos per centimeter at 25 degrees Celsius; deg C = degrees Celsius]

WELL	OWNER	DEPTH OR PRODUCING INTERVAL (feet)	WATER-BEARING UNIT	DATE OF SAMPLE	SILICA, DIS-SOLVED (mg/L) as SiO2	IRON, DIS-SOLVED (µg/L) as Fe	MANGANESE, DIS-SOLVED (µg/L) as Mn	CALCIUM, DIS-SOLVED (mg/L) as Ca	MAGNESIUM, DIS-SOLVED (mg/L) as Mg	SODIUM, DIS-SOLVED (mg/L) as Na	BICARBONATE, DIS-SOLVED (mg/L) as HCO3	CARBONATE, DIS-SOLVED (mg/L) as CO3	SULFATE, DIS-SOLVED (mg/L) as SO4	CHLORIDE, DIS-SOLVED (mg/L) as Cl	FLUORIDE, DIS-SOLVED (mg/L) as F	DISSOLVED SOLIDS, SUPT OF COMSTITUENTS (mg/L)	HARDNESS (mg/L as CaCO3)	SPECIFIC CONDUCTANCE (micro-mhos)	PH (standard and units)	TEMPERATURE (deg C)
1/ SB-61-57-511	CITY OF DAYTON, 1044 WELLS #10. 5	1314	EYGL	80-04-14	25	100	50	22	4	63	200	0	0	33	0.20	310	71	343	7.2	--

1/ Analyzed by Curtis Laboratories.

Table 8.-- Records of wells in Montgomery County

Water levels and drawdown: Reported water levels or drawdown given in feet; measured water levels or drawdown given in feet and hundredths.

Use of water : H, domestic; I, irrigation; M, industrial; P, public supply.
 Water-bearing unit : CHCT, Chicot aquifer; EVGL, Evangeline aquifer; JSPR, Jasper aquifer.
 Type of data available : D, drillers' log (see table 9); E, electric log; I, induction log; Q, chemical analysis (see Table 11).

WELL	OWNER	DRILLER	DATE COMPLETED	DEPTH OF WELL (feet)	DIAMETER OF WELL (inches)	LENGTH (feet)	SCREEN DEPTH INTERVAL (feet)	WATER-BEARING UNIT	ALTITUDE OF LAND SURFACE (feet)	BELOW LAND SURFACE DATUM (feet)	DATE OF MEASUREMENT	USE DF WATER	DISCHARGE (gallons per minute)	DRAWDOWN (feet)	TYPE OF DATA AVAILABLE
TS-60-35-703	DOBBS - PLAM- TERTSVILLE WATER SUPPLY CORP., WELL NO. 2	LANFORD DRLG CO., INC.	1983	763	10.6	63	697 - 760	EVGL	290	105	01/24/1983	P	151	27	D,E,Q
TS-60-35-810	MONTGOMERY I.-S.-D.	LORANCE WATER WELLS	1972	580	4,2	20	560 - 580	EVGL	303	78	10/12/1972	P	70	30	D
TS-60-35-811	WEISINGER, RAYMOND	CON-TEX WATER WELL CO.	1966	582	6,4	20	556 - 576	EVGL	310	85	--	P	300	--	D
TS-60-35-906	MONTGOMERY CO. H.U.-D. 9	ALSAY-PIPPIN CORP.	1980	735	16,10	164	480 - 730	EVGL	195	67.42	04/22/1980	P	1200	46.26	D,E
TS-60-35-907	LAKE CONROE INTERESTS	BUSSELL AND SON, INC.	1982	490	6,4	20	470 - 490	EVGL	238	47	05/14/1982	P	--	--	D
TS-60-36-606	GULF STATES UTILITIES, LEWIS CREEK, WELL NO. 1A	CON-TEX WATER WELL CO.	1973	309	4,2	15	272 - 293	EVGL	265	76	11/26/1973	N	125	--	D
TS-60-36-607	GULF STATES UTILITIES LEWIS CREEK, WELL NO. 2B	CON-TEX WATER WELL CO.	1973	308	4,2	15	271 - 286	EVGL	265	75	11/29/1973	N	125	--	D
TS-60-36-608	HULON, JOHNNY	M AND M WELL SERV.	1973	414	4,2	20	394 - 414	EVGL	345	157	08/21/1973	P	60	--	D
TS-60-36-707	LUNDES, MILTON	CON-TEX WATER WELL CO.	1977	276	4,2	20	253 - 273	EVGL	212	32	03/16/1977	P	200	--	D
TS-60-36-906	GODFREY, DALE	COASTAL WATER WELLS	1982	400	6,4	40	360 - 400	EVGL	265	110	11/16/1982	H	95	--	D
TS-60-43-512	GERLOFF, O.A.	SIEGERT WATER WELL, INC.	1981	43	16	12	31 - 43	CHCT	305	12	12/03/1981	I	--	--	D
TS-60-44-408	MOCK, CLIFF	CON-TEX WATER WELL CO.	1982	920	6,4	45	855 - 907	JSPR	255	95	03/08/1982	N	600	--	D
TS-60-45-112	WOODGATE PLACE WELLS	RAYMOND WATER WELLS	1983	880	6,4,2	35	535 - 570	EVGL	257	100	03/21/1983	P	--	--	D

Table 8.--Records of wells in Montgomery County--Continued

WELL	OWNER	DRILLER	DATE COMPLETED	DEPTH OF WELL (feet)	DIAMETER OF WELL (inches)	SCREEN LENGTH (feet)	DEPTH INTERVAL (feet)	WATER-BEARING UNIT	ALTITUDE OF LAND SURFACE (feet)	WATER LEVEL		DISCHARGE (gallons per minute)	DRAWDOWN (feet)	TYPE OF DATA AVAILABLE	
										BELOW LAND SURFACE DATUM (feet)	DATE OF MEASUREMENT				
TS-60-45-612	FT. WORTH PIPE AND SUPPLY	RAYMOND WATER WELLS	1982	735	6,4	60	633 - 735	EVGL	207	125	09/20/1982	N	245	100	D
TS-60-45-809	EAST PLANTATION M.U.D. WELL NO. 2	LAYNE-TEXAS CO.	1981	1265	14,8	210	700 - 1250	EVGL, JS,R	140	88	06/02/1981	P	785	69	D,E,Q
TS-60-46-712	EXXON CO.	WEISINGER WATER WELL, INC.	1980	200	8,6	20	171 - 191	EVGL	162	38	02/04/1980	N	500	--	D
TS-60-50-609	WOODLAND LAKES CIVIC CLUB	WEISINGER WATER WELL, INC.	1980	532	6,4	40	492 - 532	EVGL	255	156	09/09/1980	P	250	--	D
TS-60-53-315	EXXON CO.	CON-TEX WATER WELL CO.	1979	266	6,4	31	165 - 196	EVGL	152	44	08/21/1979	N	200	--	D
TS-60-53-406	WOODLANDS DEVELOPMENT CORP., WELL NO. 5	LAYNE-TEXAS CO.	1982	1620	16,10	240	1110 - 1605	JSPR	155	70	10/06/1982	P	1266	60	D,E,Q
TS-60-53-712	WOODLANDS M.U.D., WELL NO. 6	ALSAY-PIPPIN CORP.	1979	1548	16,10	140	1168 - 1538	JSPR	110	--	--	P	920	--	D,E
TS-60-53-713	WOODLANDS DEVELOPMENT CORP., WELL NO. 2	LAYNE-WESTERN CO., INC.	1981	1710	16,10	205	1150 - 1690	JSPR	136	78	01/20/1982	P	1230	57	D,E,Q
TS-60-53-714	WOODLANDS DEVELOPMENT CORP., WELL NO. 4	TEXAS WATER WELLS, INC.	1974	1052	24,16,10	222	482 - 1032	EVGL	125	117	09/04/1974	P	--	--	D
TS-60-53-715	MONTGOMERY CO. M.C.I.D. 1, WELL NO. 2	LAYNE-TEXAS CO.	1982	870	16,10	135	710 - 850	EVGL	125	237	08/27/1982	P	1000	77	D,E,Q
TS-60-53-716	WOODLANDS GOLF COURSE, WELL NO. 1	WEISINGER WATER WELL, INC.	1981	500	6,4	30	470 - 500	EVGL	127	110	12/04/1981	P	200	--	D
TS-60-53-717	WOODLANDS GOLF COURSE, WELL NO. 2	WEISINGER WATER WELL, INC.	1981	370	6,4	40	330 - 370	EVGL	114	78	12/10/1981	P	400	--	D
TS-60-53-821	MONTGOMERY CO. M.U.D. 19, WELL NO. 1	ALSAY-PIPPIN CORP.	1979	1017	16,10	181	620 - 1012	EVGL	125	190	09/14/1979	P	1001	98	D,E
TS-60-53-902	MONTGOMERY CO. M.U.D., IMPERIAL OAKS, WELL NO. 1	WATER RESOURCES OF TEXAS	1980	425	20,12	124	291 - 415	EVGL	111	90	06/26/1980	P	1000	54	D,E,Q

Table 8.--Records of wells in Montgomery County--Continued

WELL	OWNER	DRILLER	DATE COMPLETED	DEPTH OF WELL (feet)	DIAMETER OF WELL (inches)	SCREEN LENGTH (feet)	DEPTH INTERVAL (feet)	WATER-BEARING UNIT	ALTITUDE OF LAND SURFACE (feet)	WATER LEVEL			DISCHARGE (gallons per minute)	DRAWDOWN (feet)	TYPE OF DATA AVAILABLE
										BELOW LAND SURFACE DATUM (feet)	DATE OF MEASUREMENT	USE OF WATER			
TS-60-54-701	METRO GRAVEL CO.	CON-TEX WATER WELL CO.	1980	307	6,4	40	260 - 301	EVGL	87	38	01/24/1980	N	600	--	D
TS-60-55-313	CITY OF SPLENDORA	KEY DRUG CO.	1983	1375	10,6	75	1290 - 1365	JSPR	124	2	03/07/1983	P	308	39	D
TS-60-62-604	MONTGOMERY CO. M.U.D. 48, KINGWOOD PLACE, WELL NO. 1	LAYNE-TEXAS CO.	1982	1465	18,12	96	1164 - 1450	EVGL	85	151	12/04/1982	P	1016	29	D,I,Q
TS-60-63-108	PORTER WATER SUPPLY CORP., WELL NO. 3	LANFORD DRUG CO., INC.	1980	850	12,6	130	670 - 840	EVGL	97	103	1980	P	402	43	D,E,Q

Table 9.--Drillers' logs of wells in Montgomery County

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-35-703 Owner: Dobbin - Plantersville Water Supply Corporation, Well No. 2 Driller: Lanford Drilling Co., Inc.			Well TS-60-35-811 Owner: Raymond Weisinger Driller: Con-TEX Water Well Co.		
Sand	4	4	Clay	27	27
Clay	8	12	Rock	1	28
Shale	68	80	Clay	48	76
Sand with shale streaks	105	185	Sand and clay	14	90
Shale	23	208	Sand	7	97
Sand	44	252	Clay	121	218
Shale	168	420	Sand	16	234
Shale, sandy	15	435	Clay	60	294
Shale	120	555	Sand	31	325
Sand	23	578	Clay	135	460
Shale	24	602	Clay with sand streaks	57	517
Rock	4	606	Sand, hard	5	522
Shale and sandy shale	48	654	Clay	17	539
Sand	14	668	Sand	37	576
Shale, sandy	29	697	Clay	6	582
Sand	63	760	Well TS-60-35-906 Owner: Montgomery County Municipal Utility District 9 Driller: Alsay-Pippin Corp.		
Shale	13	773	Topsoil	3	3
Well TS-60-35-810 Owner: Montgomery Independent School District Driller: Lorange Water Wells			Clay, sandy red	14	17
Clay	60	60	Sand, tan	5	22
Clay and lime	100	160	Clay red	18	40
Sand	20	180	Sand, tan and white	95	135
Sand streaks	20	200	Shale, gray	17	152
Clay	140	340	Sand, white and brown	24	174
Shale, hard	60	400	Shale, gray	14	188
Shale and sand	30	430	Sand with shale breaks	72	260
Shale	130	560	Shale, gray	32	292
Sand	21	581	Sand, tan	34	326
			Shale, gray	94	420
			Sand, tan	32	452

Table 9.--Drillers' logs of wells in Montgomery County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-35-906--Continued			Well TS-60-36-607--Continued		
Shale, gray	30	482	Sand and clay	10	240
Sand with shale breaks	132	614	Clay	11	251
Shale	70	684	Sand	39	290
Sand	46	730	Sand and clay	10	300
Shale	370	1100	Sand	6	306
			Clay and sand	5	311
			Rock	1	312
Well TS-60-36-606 Owner: Gulf States Utilities Co., Lewis Creek, Well No. 1A Driller: Con-Tex Water Wells			Well TS-60-36-608 Owner: Johnny Hulon Driller: M and M Well Service		
Clay	125	125	Topsoil	2	2
Sand	11	136	Sand and gravel	29	31
Clay	47	183	Clay, red	77	108
Sand	33	216	Shale	66	174
Shale	4	220	Clay and rock	128	302
Sand	12	232	Clay, gray	77	379
Shale	16	248	Sand	35	414
Sand	29	277			
Shale	2	279	Well TS-60-36-707 Owner: Milton Lundes Driller: Con-Tex Water Well Co.		
Sand	14	293	Sand and red clay	14	14
Sand and shale	15	308	Clay, white	6	20
Rock	1	309	Sand	8	28
Well TS-60-36-607 Owner: Gulf States Utilities Co., Lewis Creek, Well No. 2B Driller: Con-Tex Water Wells			Clay and lime	93	121
Clay	80	80	Sand	14	135
Rock	2	82	Clay	11	146
Clay	44	126	Sand	16	162
Rock	1	127	Clay	12	174
Clay	3	130	Sand	12	186
Sand	16	146	Shale	18	204
Clay	35	181	Sand	5	209
Sand	40	221	Rock	1	210
Clay	9	230	Sand	5	215

Table 9.--Drillers' logs of wells in Montgomery County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-45-612--Continued			Well TS-60-45-809--Continued		
Sand	100	195	Shale and sand	65	1050
Sand and shale	20	215	Shale	12	1062
Shale, red-to-gray	20	235	Shale, sandy	29	1091
Rock	60	295	Sand	47	1138
Clay and shale	20	315	Shale and sand streaks	12	1150
Sand, clay and rock	20	335	Sand, clay and shale	73	1223
Sand and clay	20	355	Sand	52	1275
Shale	140	495	Shale	21	1296
Sand and shale	20	515	Shale and clay	12	1308
			Shale, sandy	94	1402
Well TS-60-45-809 Owner: East Plantation Municipal Utility District, Well No. 2 Driller: Layne-Texas Co.			Well TS-60-50-609 Owner: Woodland Lakes Civic Club Driller: Weisinger Water Well, Inc.		
Topsoil	3	3	Clay	15	15
Clay and sand	65	68	Sand	25	40
Sand and clay	17	85	Clay	12	52
Clay	26	111	Sand	8	60
Clay and sand streaks	20	131	Clay	30	90
Sand, gravel and clay	26	157	Sand	10	100
Sand and clay streaks	35	192	Clay	60	160
Clay	13	205	Rock	2	162
Sand and clay	18	223	Sand	18	180
Clay and sand	31	254	Rock	1	181
Clay	92	346	Clay	25	206
Sand and clay streaks	19	367	Sand	6	212
Clay	38	405	Clay	18	230
Clay and soft shale	122	527	Sand	5	235
Shale	75	602	Rock	10	245
Clay and soft shale	81	683	Sand	15	260
Sand and shale	70	753	Clay	8	268
Shale and clay	36	789	Sand and rock	32	300
Shale and sand	172	961	Sand	4	304
Sand	24	985			

Table 9.--Drillers' logs of wells in Montgomery County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-50-609--Continued			Well TS-60-53-406 Owner: Woodlands Development Corp., Well No. 5 Driller: Layne-Texas Co.		
Sand and rock	15	319			
Clay	26	345	Sand	4	4
Rock	4	349	Clay	7	11
Clay	21	370	Sand and clay	18	29
Rock	2	372	Sand	7	36
Clay and rock	50	422	Gravel	15	51
Clay	26	448	Clay	3	54
Sand	7	455	Sand and gravel	26	80
Clay	4	459	Clay	22	102
Sand	10	469	Sand and clay	13	115
Clay	21	490	Clay	16	131
Sand	42	532	Sand and clay	7	138
			Clay	8	146
			Sand and clay	11	157
			Clay	13	170
			Sand	7	177
			Clay and sand	4	181
			Sand	23	204
			Clay	8	212
			Sand	48	260
			Shale and sand	29	289
			Sand	47	336
			Shale	40	376
			Sand	12	388
			Shale and sand	29	417
			Shale	30	447
			Sand and shale	57	504
			Shale	48	552
			Shale and sand	298	850
			Sand	29	879
			Shale and sand	86	965
			Sand and shale	15	980
Well TS-60-53-315 Owner: Exxon Co. Driller: Con-Tex Water Well Co.					
Clay	20	20			
Sand	10	30			
Clay	10	40			
Sand	15	55			
Clay	6	61			
Sand	24	85			
Clay	10	95			
Sand and clay	10	105			
Sand and broken clay	89	194			
Clay	4	198			
Sand	3	201			
Shale	25	226			
Sand	6	232			
Shale, blue	34	266			

Table 9.--Drillers' logs of wells in Montgomery County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-53-713--Continued			Well TS-60-53-713--Continued		
Clay	19	150	Shale and sand streaks	5	1165
Sand	20	170	Shale	16	1181
Clay	12	182	Sand	31	1212
Sand	34	216	Sand and shale	7	1219
Shale	52	268	Shale	10	1229
Sand	3	271	Sand	68	1297
Shale	22	293	Shale	22	1319
Sand	12	305	Sandstone	38	1357
Shale	45	350	Shale	17	1374
Sand	25	375	Sand	41	1415
Shale	39	414	Shale	15	1430
Sand	13	427	Sand	18	1448
Rock and sand	110	537	Shale	66	1514
Shale	13	550	Sand	5	1519
Sandstone	32	582	Shale	48	1567
Shale	8	590	Sand	88	1655
Sand	37	627	Shale	33	1688
Shale	15	642	Sand	10	1698
Sand	24	666	Shale	102	1800
Shale	15	681			
Sand	17	698			
Shale	16	714			
Sand	26	740			
Shale	40	780			
Sand	18	798			
Shale	5	803			
Sand	3	806			
Shale	86	892			
Sand	26	918			
Shale	20	938			
Sand	32	970			
Shale	190	1160			
			Well TS-60-53-714 Owner: Woodlands Development Corp., Well No. 4 Driller: Texas Water Wells, Inc.		
			Clay	5	5
			Clay and sand	20	25
			Sand and shale	10	35
			Shale and sand	35	70
			Clay and shale	10	80
			Sand	15	95
			Clay and shale	10	105
			Shale, sandy	9	114
			Clay, sandy	10	124
			Sand with shale streaks	21	145

Table 9.--Drillers' logs of wells in Montgomery County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-53-714--Continued			Well TS-60-53-714--Continued		
Shale	20	165	Sand and sandy shale	32	1141
Clay	15	180	Sand	9	1150
Shale, sandy	35	215	Shale, sandy	22	1172
Rock	25	240	Shale	8	1180
Sand	60	300	Sand	15	1195
Shale	35	335	Sand with shale streaks	9	1204
Sand	10	345	Sand	31	1235
Shale	10	355	Shale, sandy	32	1267
Sand	15	370	Shale	83	1350
Shale with sand streaks	60	430	Sand	20	1370
Shale, sandy	15	445	Shale	40	1410
Sand	50	495	Sand and shale	49	1459
Clay	42	537	Shale, sandy	27	1486
Clay and shale	18	555	Clay and shale	14	1500
Sand	5	560	Sand streaks and shale	17	1517
Shale, sandy	30	590	Sand	15	1532
Sand	36	626	Shale	48	1580
Shale, sandy	10	636	Sand	104	1684
Sand	14	650	Shale	114	1798
Shale, sandy	65	715	Shale with sandy shale	102	1900
Sand	40	755			
Shale, sandy	45	800	Well TS-60-53-715 Owner: Montgomery County Water Control and Improvement District 1, Well No. 2 Driller: Layne-Texas Co.		
Sand	47	847			
Shale	3	850	Topsoil	1	1
Sand with shale streaks	50	900	Clay	12	13
Sand	26	926	Sand, gravel and clay	44	57
Shale, sandy	9	935	Sand and clay	14	71
Shale	65	1000	Sand	13	84
Sand	30	1030	Sand streaks, clay and gravel	23	107
Shale	10	1040	Clay	2	109
Sand	10	1050	Sand	3	112
Shale and sandy shale	59	1109	Clay	38	150

Table 9.--Drillers' logs of wells in Montgomery County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-53-715--Continued			Well TS-60-53-715--Continued		
Clay and lime streaks	8	158	Clay	3	503
Clay	14	172	Sand with clay streaks	3	506
Clay and sand streaks	20	192	Lime and clay	26	532
Sand	12	204	Clay with lime streaks	73	605
Sand, gravel and clay streaks	5	209	Clay and shale	83	688
Clay	11	220	Shale, clay and lime streaks	27	715
Sand and clay streaks	10	230	Sand and shale	5	720
Clay and lime streaks	2	232	Shale and clay	5	725
Sand	20	252	Sand	2	727
Clay	17	269	Clay	40	767
Sand and clay streaks	13	282	Shale	13	780
Clay	39	321	Clay and sand streaks	5	785
Clay with lime streaks	13	334	Shale	1	786
Clay and shale	5	339	Sand and hard streaks	24	810
Sand	6	345	Shale	9	819
Clay	8	353	Clay	31	850
Clay with sand streaks	5	358	Clay and sand	21	871
Clay	7	365	Clay	7	878
Clay and sand	15	380	Clay and sand streaks	21	899
Clay	13	393	Clay	14	913
Sand and clay	3	396	Clay and sand streaks	24	937
Clay	30	426	Shale and sand streaks	8	945
Sand with clay streaks	10	436	Clay	86	1031
Clay	10	446	Clay and lime	4	1035
Clay and lime	3	449	Sand and clay streaks	9	1044
Sand and gravel	3	452	Lime and clay	26	1070
Lime and sand streaks	10	462	Clay	57	1127
Clay and lime	20	482	Clay and shale	73	1210
Clay, sandy	3	485	Clay and sandstone	13	1223
Lime and sand streaks	2	487	Clay and shale	5	1228
Clay and sand	7	494	Clay, sandy	25	1253
Sand	6	500	Clay	57	1310

Table 9.--Drillers' logs of wells in Montgomery County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-53-715--Continued			Well TS-60-53-716 Owner: Woodlands Golf Course, Well No. 1 Driller: Weisinger Water Well, Inc.		
Sand, clay and lime streaks	38	1348			
Clay	35	1383	Sand	26	26
Lime	2	1385	Clay	29	55
Sand with clay streaks	9	1394	Sand	10	65
Lime and clay	2	1396	Clay	121	186
Sand	3	1399	Sand	17	203
Lime	3	1401	Clay	7	210
Clay, lime and sand streaks	33	1434	Sand	1	211
Lime, hard	2	1436	Rock	4	215
Lime, clay and sand	5	1441	Sand	30	245
Sand and clay	26	1467	Clay	55	300
Clay and sand streaks	4	1471	Sand	25	325
Sand	22	1493	Clay	18	343
Clay	18	1511	Clay and rock	20	363
Sand, lignite and clay streaks	3	1514	Clay	17	380
Clay and sand	2	1516	Sand	9	389
Clay and shale	44	1560	Clay	76	465
Shale, clay and lime streaks	40	1600	Sand	35	500
Clay, soft	50	1650			
Sand	26	1676	Well TS-60-53-717 Owner: Woodlands Golf Course, Well No. 2 Driller: Weisinger Water Well, Inc.		
Lime, hard	2	1678			
Sand	38	1716	Sand	80	80
Clay and shale	8	1724	Clay	12	92
Clay and sand streaks	8	1732	Sand	23	115
Sand	9	1741	Clay	77	192
Clay, sand	46	1787	Rock	2	194
Clay and lime	4	1791	Sand	30	224
Clay and lignite	5	1796	Rock	1	225
Clay and lime streaks	7	1803	Sand	20	245
			Clay	10	255
			Sand	30	285
			Clay	30	315
			Sand	55	370

Table 9.--Drillers' logs of wells in Montgomery County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-53-821			Well TS-60-53-821--Continued		
Owner: Montgomery County Municipal Utility District 19, Well No. 1 Driller: Alsay-Pippin Corp.			Shale, gray	8	622
Topsoil	6	6	Sand	38	660
Sand	138	144	Shale	8	668
Shale	7	151	Sand	23	691
Gravel and sand	25	186	Shale	7	698
Shale and gravel	18	204	Sand	20	718
Shale	6	210	Shale	15	733
Sand	25	235	Sand	4	737
Gravel	5	240	Shale	9	746
Shale, sandy	30	270	Sand	22	768
Clay, red and brown	9	279	Shale	12	780
Shale, sandy	19	298	Sand	60	840
Shale	25	323	Shale	95	935
Shale, sandy	45	368	Sand	35	970
Sand	36	404	Shale	9	979
Shale	28	432	Sand	4	983
Sand	5	437	Shale	25	1008
Shale	71	508	Well TS-60-53-902		
Sand	22	530	Owner: Montgomery County Municipal Utility District, Imperial Oaks, Well No. 1 Driller: Water Resources of Texas		
Shale	9	539	Unrecorded	290	290
Sand	1	540	Sand	60	350
Shale	1	541	Sand with shale	6	356
Sand	2	543	Sand	56	412
Shale, gray	3	546	Sand and shale	12	424
Sand	20	566	Shale	1	425
Shale, gray	14	580	Well TS-60-54-701		
Sand	4	584	Owner: Metro Gravel Company Driller: Con-Tex Water Well Co.		
Shale, gray	10	594	Sand	60	60
Sand	9	603	Clay	125	185
Shale, gray	5	608	Sand	10	195
Sand	6	614			

Table 9.--Drillers' logs of wells in Montgomery County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-54-701--Continued			Well TS-60-55-313--Continued		
Sand and clay	20	215	Shale	94	1604
Shale	30	245	Sand	22	1626
Rock	4	249	Shale	13	1639
Sand, broken with clay	3	252			
Sand	7	259	Well TS-60-62-604 Owner: Montgomery County Municipal Utility District 48, Kingwood Place, Well No. 1 Driller: Layne-Texas Co.		
Rock	1	260			
Sand	6	266	Topsoil	3	3
Rock	6	272	Clay	13	16
Sand	5	277	Sand	4	20
Rock	1	278	Clay	4	24
Sand	8	286	Sand	12	36
Clay streaks	4	290	Sand and clay streaks	33	69
Sand	6	296	Sand	29	98
Clay streaks	1	297	Clay	40	138
Sand	4	301	Sand and gravel	25	163
Clay	5	306	Sand and shale streaks	9	172
Shale	1	307	Sand	93	265
			Shale	10	275
			Sand	20	295
			Shale	30	331
			Gravel and sand	74	405
			Shale	35	440
			Sand and gravel	38	478
			Shale	85	563
			Sand and shale streaks	77	640
			Shale	38	678
			Sand	51	729
			Shale, sandy	8	737
			Sand and shale streaks	105	842
			Shale	48	890
			Shale and sand streaks	6	896
			Shale	51	947
Well TS-60-55-313 Owner: City of Splendora Driller: Key Drilling Co.					
Sand	158	158			
Shale	32	190			
Sand	30	220			
Shale	34	254			
Sand	166	420			
Shale	30	450			
Sand	30	480			
Sand and shale	520	1000			
Shale, sandy	124	1124			
Shale	156	1280			
Sand	90	1370			
Sand and shale	140	1510			

Table 9.--Drillers' logs of wells in Montgomery County--Continued

	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Well TS-60-62-604--Continued			Well TS-60-63-108		
			Owner: Porter Water Supply Corp., Well No. 3		
			Driller: Lanford Drilling Co., Inc.		
Sand	44	991	Sand	3	3
Shale and sand streaks	355	1346	Clay	8	11
Shale	24	1370	Sand	29	40
Sand and shale streaks	60	1430	Clay	10	50
Shale	12	1442	Sand	190	240
Shale and sand streaks	38	1480	Shale	90	330
Shale	20	1500	Sand and sandy shale	190	520
			Shale	110	630
			Sand	70	700
			Shale	20	720
			Sand	20	740
			Shale, sandy	20	760
			Sand	90	850
			Shale, sandy	30	880
			Shale	30	910
			Shale, sandy	12	922
			Shale	38	960

Table 10.--Water levels in wells in Montgomery County

(feet below land surface)

DATE	WATER LEVEL	DATE	WATER LEVEL
WELL TS-60-35-202 OWNER: MISS FLOWER FOLLETT DEPTH: 107 FEET ELEVATION: 327 FEET		WELL TS-60-45-507 OWNER: CITY OF CONROE, WELL NO. 3 SCREEN: 1,050-1,238 FEET ELEVATION: 205 FEET	
01/28/1980	49.75	01/28/1980	88.97
06/11/1980	49.80	06/11/1980	86.87
10/16/1980	50.03	10/16/1980	89.21
01/21/1981	49.91	01/21/1981	91.39
06/29/1981	50.12	06/29/1981	92.08
09/10/1981	50.06	01/25/1982	89.85
01/25/1982	49.56	09/02/1982	118.69
09/27/1982	49.41	01/13/1983	117.25
01/13/1983	49.66	08/10/1983	120.34
08/10/1983	49.80	02/08/1984	119.07
WELL TS-60-45-501 OWNER: CITY OF CONROE, WELL NO. 5 SCREEN: 910-1,270 FEET ELEVATION: 215 FEET		WELL TS-60-45-803 OWNER: BROWN ESTATE DEPTH: 26 FEET ELEVATION: 178 FEET	
10/16/1980	101.80	01/28/1980	12.75
		06/11/1980	13.33
		10/16/1980	14.49
		01/21/1981	19.53
		06/29/1981	15.63
		09/10/1981	16.48
		01/25/1982	16.69
		09/27/1982	18.23
		01/13/1983	15.34
		08/10/1983	17.06
		02/08/1984	16.91
WELL TS-60-45-503 OWNER: CITY OF CONROE, WELL NO. 4 SCREEN: 950-1,320 FEET ELEVATION: 212 FEET			
06/11/1980	112.00		
10/16/1980	114.00		
01/21/1981	110.00		
06/29/1981	113.00		
01/25/1982	114.00		
WELL TS-60-45-504 OWNER: CITY OF CONROE, WELL NO. 2 SCREEN: 1,099-1,221 FEET ELEVATION: 214 FEET			
01/28/1980	92.07		
06/11/1980	97.56		
10/16/1980	98.92		
01/21/1981	94.88		
06/29/1981	95.70		
09/10/1981	113.29		
01/25/1982	100.67		
09/02/1982	121.25		
01/13/1983	110.20		
08/10/1983	118.38		
02/08/1984	112.84		

Table 11.--Chemical analyses of water from wells in Montgomery County

Water-bearing unit: EVGL, Evangeline aquifer; JSRP, Jasper aquifer

[mg/L, milligram per liter; µg/L, microgram per liter; micromhos, micromhos per centimeter at 25 degrees Celsius; deg C, degrees Celsius]

WELL	OWNER	DEPTH OR PRODUCING INTERVAL (feet)	WATER-BEARING UNIT	DATE OF SAMPLE	SILICA, DIS-SOLVED (mg/L as SiO2)	IRON, DIS-SOLVED (µg/L as Fe)	MANGANESE, DIS-SOLVED (µg/L as Mn)	CALCIUM, DIS-SOLVED (mg/L as Ca)	MAGNESIUM, DIS-SOLVED (mg/L as Mg)	SODIUM, DIS-SOLVED (mg/L as Na)	BICARBONATE (mg/L as HCO3)	CARBONATE (mg/L as CO3)	SULFATE (mg/L as SO4)	CHLORIDE, DIS-SOLVED (mg/L as Cl)	FLUORIDE, DIS-SOLVED (mg/L as F)	DISSOLVED SOLIDS, SUM OF CONSTITUENTS (mg/L)	HARDNESS (mg/L as CaCO3)	SPECIFIC CONDUCTANCE (micro-mhos)	PH (standard units)	TEMPERATURE (deg C)
1/ TS-60-35-703	DOBRIN - PLANTERSVILLE WATER SUPPLY CORP., WELL NO. 2	697 - 760	EVGL	83-01-27	--	440	30	66	3	58	290	0	16	36	0.20	--	180	550	7.2	--
2/ TS-60-45-809	EAST PLANTATION M.U.D., WELL NO. 2	700 - 1250	EVGL	81-06-03	19	110 4/	<50 5/	17	2	107	270	0	15	37	.30 6/	420	51	658	7.6	--
2/ TS-60-53-406	WOODLANDS DEVELOPMENT CORP., WELL NO. 5	1110 - 1605	JSRP	82-10-11	18	80 4/	<50 5/	5	1	147	320	0	18	41	.40 6/	490	17	663	7.7	--
1/ 3/ TS-60-53-713	WOODLANDS DEVELOPMENT CORP., WELL NO. 2	1150 - 1690	JSRP	91-10-22	5	100	10	5	1	157	290	14	21	54	.60	490	17	583	8.3	--
2/ TS-60-53-715	MONTGOMERY COUNTY M.C. I.D. 1, WELL NO. 2	710 - 850	EVGL	82-08-30	14	130 4/	<50 5/	11	3	146	310	0	17	64	.70 6/	510	40	723	8.0	--
3/ TS-60-53-902	MONTGOMERY COUNTY M.U.D., WELL NO. 1	291 - 415	EVGL	80-03-31	18	150	50	56	5	41	190	0	2	49	.10	330	160	452	6.8	--
2/ TS-60-62-604	MONTGOMERY COUNTY M.U.D. 48, KINGHOOD PLACE, WELL NO. 1	1164 - 1450	EVGL	82-12-06	15	140	<50 5/	8	2	146	320	0	2	56	.80 6/	490	28	697	7.8	--
1/ TS-60-63-10R	PORTER WATER SUPPLY CORP., WELL NO. 3	670 - 840	EVGL	80-05-02	--	120	20	47	4	20	160	0	20	19	.10	--	130	360	7.7	--

1/ Analyzed by Pope Testing Laboratories.
 2/ Analyzed by Edna Wood Laboratories.
 3/ Analyzed by Curtis Laboratories.
 4/ Total iron (Fe).
 5/ Total manganese (Mn).
 6/ Total fluoride (F).