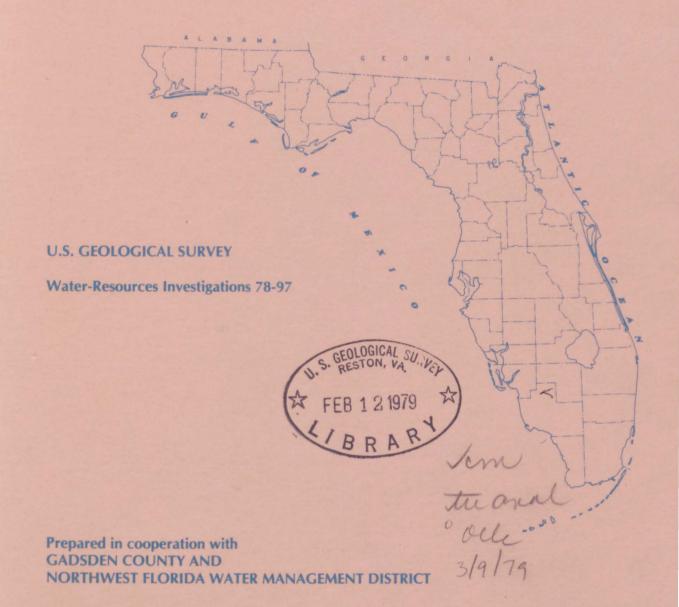
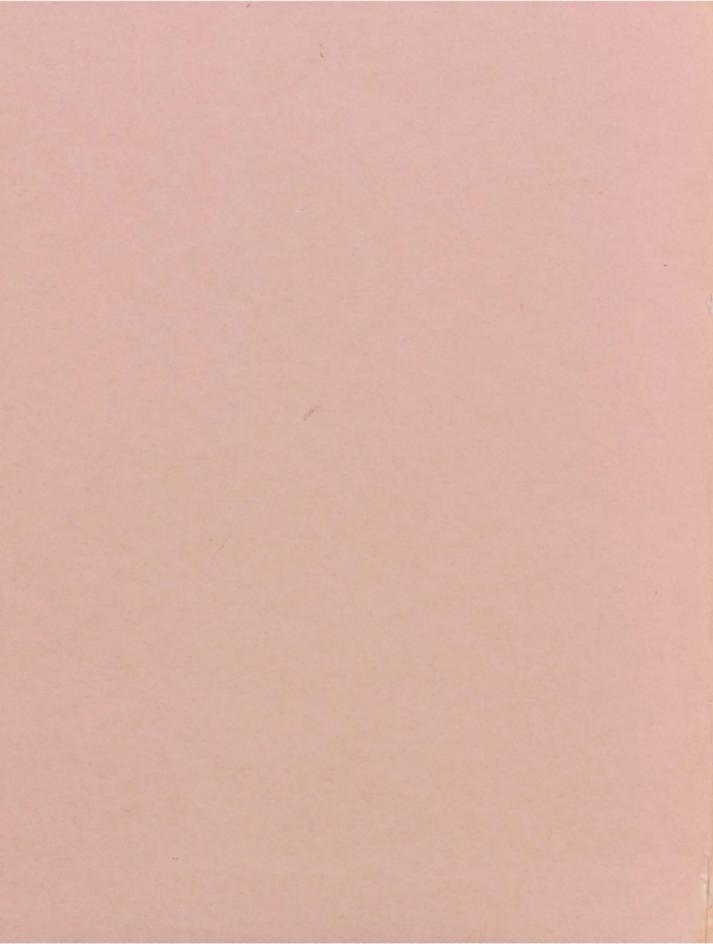
WO. 78-97 HYDROLOGIC, GEOLOGIC, AND WATER-QUALITY DATA, OCHLOCKONEE RIVER BASIN AREA, **FLORIDA** 

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# UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director



Open-File Report

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U.S. Geological Survey 325 John Knox Road, Suite F-240 Tallahassee, Florida 32303 HYDROLOGIC, GEOLOGIC, AND WATER-QUALITY DATA, OCHLOCKONEE RIVER BASIN AREA,

FLORIDA

By Charles A. Pascale, Jeffry R. Wagner, and James E. Sohm

U.S. GEOLOGICAL SURVEY

Water-Resources Investigation 78-97

Prepared in cooperation with

GADSDEN COUNTY AND

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

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For use of those readers who may prefer to use metric units rather than U.S. customary units, the conversion factors for the terms used in this report are listed below:

Multiply U.S. Customary unit	<u>By</u>	To obtain metric unit
inch (in)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
square mile (mi <sup>2</sup> )	2.590	square kilometer (km <sup>2</sup> )
million gallon (Mgal)	3785	cubic meter (m <sup>3</sup> )
cubic feet per second (ft <sup>3</sup> /s), (cfs)	0.0283	cubic meter per second (m <sup>3</sup> /s)
gallon per minute (gal/min)	.06309	liter per second (L/s)
<pre>gallon per minute per foot   [(gal/min)/ft]</pre>	.207	<pre>liter per second per     meter [(L/s)/m]</pre>

VI

# HYDROLOGIC, GEOLOGIC, AND WATER-QUALITY DATA, OCHLOCKONEE RIVER BASIN AREA, FLORIDA

By

Charles A. Pascale, Jeffry R. Wagner, and James E. Sohm

#### ABSTRACT

This report presents hydrologic, geologic, and water-quality data collected within the Ochlockonee River basin area, in the panhandle of northwest Florida. The data are presented in graphs and tables. Surface-water data include streamflow measurements and analyses of water collected at 58 sites; ground-water data include descriptions of 360 wells and core holes, analyses of water and hydrographs of selected wells, lithologic logs of 131 wells and test borings, and natural-gamma logs of selected wells ranging in depth from 110 to 1,346 feet. Rainfall and municipal pumpage data are also compiled. Maps of the area show the location of the data-collection sites within the area.

#### INTRODUCTION

The Ochlockonee River basin area is located in the panhandle of northwest Florida and extends from Georgia to the Gulf of Mexico. It comprises about 1,450 mi<sup>2</sup> (square miles) and includes all of Gadsden County and parts of Liberty, Wakulla, Leon, and Franklin Counties (fig 1.)

# Purpose and Scope

The purpose of this report is to present the hydrologic, geologic, and water-quality data collected by the U.S. Geological Survey as a part of an investigation to evaluate the water resources of the Ochlockonee River basin area. The 4-year investigation began in October 1974 at the request of the Gadsden County Board of Commissioners and the city of Quincy and in cooperation with the Northwest Florida Water Management District and Gadsden County.

The data are presented in graphs and tables and include the following: discharge data and field and laboratory analyses of water samples collected at 58 surface-water sites; descriptions of 360 wells and core holes; field and laboratory analyses and hydrographs of selected wells; lithologic logs of 131 wells and test borings ranging in depth from 41 to 2,685 ft (feet); and natural-gamma logs of selected wells ranging in depth from 110 to 1,346 ft.

#### ACKNOWLEDGMENTS

Appreciation is extended to the many individuals who furnished information on their wells and gave access to their land and equipment for measurements and tests. Special acknowledgment is made to the Cities of Quincy and Havana and to Talquin Electric Cooperative, Incorporated and Coastal Lumber Company for the use of their wells for geophysical logging and ground-water-level measurements and also for the use of their pumping equipment during pumping tests. Talquin Electric Cooperative, Incorporated and Rowe Drilling Company also supplied results of chemical analyses of water from wells.

Special thanks are in order for the Florida Department of Natural Resources, Bureau of Geology and Northwest Florida Water Management District. Their excellent lithologic descriptions of cores and cuttings from 58 wells in the Ochlockonee River basin area are included in this report.

The courtesies extended by the following persons are most appreciated: Raymond Hurst and Carl Ferguson, City of Quincy; Cecil Tripp and Oliver Hunt, City of Havana; Lamar Rowe, Richard Rowe, and Edith Rowe, Rowe Drilling Company; Robert Cooper, Talquin Electric Cooperative, Incorporated; and members of the Board of Commissioners, Gadsden County: Ben S. Duncan, Lamar Massey, Jim Henry Slappey, Murray Spooner, Earl W. Lodge and Joe M. Butler.

Moore Electric and Drilling Company and Rowe Drilling Company furnished much of the well-construction data and permitted the collection of rock cuttings, water samples, and geophysical logs during their drilling operations.

## WELL-NUMBERING SYSTEM

Two numbering systems are used to identify wells in this report. A 1-digit to 3-digit well number has been used to facilitate identification of well sites and core holes on illustrations and in tables. The same numbers are used in the interpretative report now (1978) in preparation.

A site-identification system of the U.S. Geological Survey is also used. This system is based on the grid system of latitude and longitude and provides the approximate geographic location and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits is a sequential number for sites within a 1-second grid. Once assigned, a site-identification number is not changed even though the latitude or longitude may be corrected later. The site-identification number is used in computer storage and retrieval of data.

### HYDROLOGIC AND GEOLOGIC DATA

Hydrologic and geologic information are presented in tables and figures that group the data according to type. Maps (figs. 1 and 2) show the locations of the data-collection stations within the area.

Data pertaining to surface water are found in tables 1-6. The surface-water data-collection sites in the tables are listed in downstream order; table 1 indicates the type and frequency. The station number indentifies the station in figure 1. Table 2 contains miscellaneous streamflow measurements, temperature, and specific conductance of surface water. Results of standard complete analyses of surface water are tabulated in table 3; nutrient and bacteriological analyses in table 4; pesticide analyses of water in table 5; and pesticide analyses of bottom sediments in table 6. Rainfall records are compiled in table 7; locations of the rain gages are shown in figure 1. Pumpage by municipalities is tabulated in table 8. Table 9 gives a record of wells inventoried in the Ochlockonee River basin area whose locations are shown in figure 2. Chemical analyses of major constituents of ground water for some wells are tabulated in table 10; of nutrients and related constituents in table 11; of trace metals in tables 12 and 13; and of pesticides in table 14. Lithologic logs of selected wells and core holes are presented in table 15. Hydrographs showing ground-water levels and natural gamma logs for selected wells are shown in figures 3 and 4, respectively.

TABLE 1.--Surface-water data-collection sites.

Type of record: A, Standard chemical analysis; B, Bacteriological; D, Discharge and stage; K, conductivity; N, nutrient analysis; P, pesticide analysis; S, stage.

Frequency of record: d, Daily; i, Intermittent; p, Periodic; r, Continuous; (25), Total number of analyses of samples or measurements of streamflow.

Station no. on fig. 1	Station name	Drainage area (mi <sup>2</sup> )	Type and frequency of record	Period of record (water years)
1	Sopchoppy River near Arran	48.2	Di(10),A(3), K(4)	1965-67 1969-71 1975-76
2	Sopchoppy River near Sopchoppy	102	Dr,A(146), B(21),N(33) P(8)	1961-77
3	Ochlockonee River near Concord	1,002	Di(6),A(1), K(5),N(2)	1921 1975–77
4	Shaw Creek near Concord	11.4	Di(1),K(1)	1976
5	Lake Iamonia	101	Sr,A(1),N(1)	1976-77
6	Lewis Creek near Havana	2.65	Di(3),K(2)	1976
7	Ochlockonee River near Havana	1,140	Dr,A(108), B(20),N(33), P(10)	1926-77
8	Lake Jackson near Tallahassee	43.2	Sr,A(21) N(9)	1926-29 1958-77
9	Ochlockonee River at Ochlockonee	1,390	Di(4),K(1) N(1)	1958-59, 1975
10	Attapulgus Creek at Jamieson	95.6	Dp(23),A(3), B(4),K(9), N(8)	1969 1975-77
11	Swamp Creek at Jamieson	53.0	Di(2),K(2), N(1)	1975-76
12	Willacoochee Creek near Dogtown	36.5	Di(3),K(3) N(1)	1975-76
13	Willacoochee Creek near Quincy	64.9	Dp(24),A(3), B(4),N(8)	1975-77

TABLE 1.--Surface-water data-collection sites--Continued

Station no. on fig. 1	Station name	Drainage area (mi <sup>2</sup> )	Type and frequency of record	Period of record (water years)
14	Little River near Quincy	237	Dr,A(5),N(2)	1950-77
15	Quincy Creek at S-267 at Quincy	16.8	Dr,A(5), B(4),K(17), N(8),P(3)	1975–77
16	Holman Branch near Quincy	3.09	Dp(36),A(3), B(4),K(17), N(8)	1969 1975-77
17	Quincy Creek at Quincy	21.9	Dr,A(5),B(4) K(15),N(8)	1956,1965-67 1973,1975-77
18	Tanyard Branch near Quincy	4.91	Dp(31),A(3), B(4),K(14), N(8)	1969, 1975-77
19	Hubbert Branch near Quincy	4.68	Dp(36),A(3), B(4),K(17), N(8)	1969 1975–77
20	Winkley Branch near Quincy	1.64	Di(3),K(2), N(1)	1969,1975-76
21	Little River near Littman	279	Di(10),A(2), B(2),K(7), N(4),P(3)	1926,1939, 1969,1975-77
22	Hurricane Creek near Havana	8.31	Dp(37),A(3), B(4),K(16), N(7)	1969 1975-77
23	Little River near Midway	305	Di(14),A(7), B(4),K(14) N(8)	1965-71, 1975,1977
24	Monroe Creek near Midway	6.80	Di(4),K(1)	1958-59, 1976
25	Richlander Creek near Quincy	5.80	Di(5),K(1), N(1)	1958–59 1975–76
26	Polk Creek near Bloxham	3.64	Di(3),K(1)	1958,1976
27	Rocky Comfort Creek near Quincy	9.46	Dr,A(5), N(1)	1956, 1965-77
28	Vote Creek near Quincy	1.06	Di(1),K(1)	1976

TABLE 1.--Surface-water data-collection sites--Continued

Station no. on fig. 1	Station name	Drainage area (míi <sup>2</sup> )	Type and frequency of record	Period of record (water years)
29	Rocky Comfort Creek near Wetumpka	34.1	Di(6),K(3), N(1)	1958-59 1975-76
30	Turkey Creek near Quincy	4.78	Di(4),K(1)	1958-59, 1976
31	Bear Creek near Wetumpka	10.2	Di(4),K(1), N(1)	1958-59 1975
32	Harvey Creek near Bloxham	8.11	Di(3),K(1)	1958,1976
33	Ocklawaha Creek near Greensboro	11.1	Di(3),K(1)	1966-67 1976
34	Ocklawaha Creek near Wetumpka	28.8	Dp(34),A(4), B(4),K(12), N(8),P(3)	1958-59, 1975-77
35	Hammock Creek near Wetumpka	a 6.82	Di(4),K(1)	1958-59,1976
36	Lake Talquin near Bloxham	1,720	Sp,A(5),N(1)	1930-77
37	Ochlockonee River near Bloxham	1,720	Dr,A(7),N(3)	1926-77
38	Blue Creek near Hosford	11.6	Di(1),K(1)	1976
39	Black Creek near Ward	18.2	Di(2),K(2)	1976-77
40	Sweetwater Creek near Ward	2.59	Di(1),K(1)	1976
41	Telogia Creek near Gretna	6.42	Di(1),K(1)	1976
42	Telogia Creek near Greensboro	28.1	Dp(34),A(6), B(4),K(12), N(8)	1964,1966-69 1975-77
43	Juniper Creek near Greensboro	8.50	Di(2),K(2), N(1)	1975-76
44	Mule Creek near Greensboro	7.05	Di(1),K(1)	1976
45	Telogia Creek near Bristol	126	Dr,A(7),B(4), N(7)	1950-71, 1975-77

TABLE 1.--Surface-water data-collection sites--Continued

Station no. on fig. 1	Station name	Drainage area (mi <sup>2</sup> )	Type and frequency of record	Period of record (water years)
46	Mill Branch near Bristol	4.74	Di(1),K(1) N(1)	1976
47	Telogia Creek at Hosford	181	Di(3),K(1), N(1)	1938,1975-76
48	Big Creek near Hosford	22.1	Di(2),K(1), N(1)	1975-76
49	Yellow Creek near Ward	23.9	Di(3),K(2), N(1)	1975–77
50	Mill Creek near Smith Creek	x 7.29	Di(2),K(1), N(1)	1975-76
51	Indian Creek near Smith Creek	7.93	Di(2),K(1), N(1)	1975-76
52	Ochlockonee River near Smith Creek	2,080	Di(3),A(3), K(5),N(2)	1969-71, 1975-77
53	Tiger Creek near Smith Creek	9.38	Di(1),K(1)	1976
54	Crooked River at Lewis Bluff near McIntyre	24	Di(1),K(1)	1975
55	Ochlockonee River near McIntyre	2,230	Dr,A(1), N(3)	1975
56	North Mosquito Creek near Chattahoochee	57.9	Dr,Di(5) K(3),N(1))	1936-42, 1966-67, 1975-77
57	Mosquito Creek at Chattahoochee	86.2	Di(2),K(2), N(1)	1975-76
58	Flat Creek near Chattahoochee	24.9	Di(9),Dp(38), A(6),B(4), N(8),K(17)	1961, 1964-69, 1975-77

TABLE 2.--Miscellaneous surface-water data.

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
1	Sopchoppy River	Ochlockonee Bay	03-02-65	1,060		
-	sopenoppy navez	confidencial Edy	01-20-66	261		
			06-07-66	11.6		
			09-20-66	584		
			06-06-69	0.50	23.0	35
			07-28-69	484		32
			09-22-69	1,730		
			05-06-70	0.26	27.0	
			10-09-75	456		
			09-22-76	1.16	23.0	41
3	Ochlockonee River	Ochlockonee Bay	11-12-20	176		4-1
		And the second second	06-10-75	2,790	23.0	39
			09-22-76	102	23.0	145
			09-24-76	114	23.0	140
			05-23-77	78.9	24.5	205
			06-16-77	74.8	27.0	200
4	Shaw Creek	Ochlockonee River	09-22-76	0.97	20.0	54
6	Lewis Creek	Ochlockonee River	10-20-75	1.98		
			01-15-76	2.96	10.0	110
			09-22-76	0.32	21.0	600

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
9	Ochlockonee River	Ochlockonee Bay	09-09-58	266		
,	ochiockonee kivei	ochrockonee bay	09-10-58	261		
			11-13-58	172		
			06-12-75	3,010	23.5	40
10	Attapulgus Creek	Little River	09-21-69	22,200		
			10-17-74	32.6	16.5	
			11-19-74	21.4	14.5	116
			12-17-74	38.1	9.5	
			01-13-75	3,150	7.5	
			01-14-75	1,210		
			01-15-75	505		
			02 - 28 - 75	94.9		
			04-11-75	2,810	17.5	<del></del> -
			05-21-75	90.2	20.5	50
			07-16-75	74.4		
			08-21-75	119	<del></del>	
			09-17-75	52.9	22.0	36
			12-11-75	62.7	9.0	44
			04-20-76	44.5	21.0	58
			07-13-76	65.3	27.0	
			08-17-76	89.6	24.5	
			09-16-76	29.8		55
			04-19-77	39.6	20.0	65
			05-18-77	19.7	20.0	75
			06-15-77	11.3	25.0	90
			07-25-77	40.9	26.0	
			08-17-77	53.6	24.5	

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
11	Swamp Creek	Attonulous Cossis	06-10-75	1 //0	22.5	27
TI	Swamp Creek	Attapulgus Creek	09-22-76	1,440 6.24	22.0	27 57
12	Willacoochee	Little River	06-10-75	142	23.0	28
	Creek		09-22-76	18.1	21.0	22
	oreen		05-23-77	19.4	21.0	65
13	Willacoochee	Little River	10-17-74	34.3	17.0	
7-37	Creek		11-19-74	23.6	17.0	38
	02.000		12-17-74	31.5	9.5	
			01-13-75	2,120	13.0	
			01-14-75	379		
			01-15-75	154		
			02-28-75	66.1	17.0	40
			03-25-75	78.7		
			04-11-75	1,530		
			05-21-75	66.0	21.0	40
			06-10-75	135	24.0	35
			07-16-75	69.7	<u></u>	22
			09-18-75	131	21.5	30
			10-21-75	96.8		
			12-11-75	59.7	9.0	28
			04-20-76	39.0	20.0	35
			07-14-76	45.4	24.5	
			08-17-76	42.6		
			09-16-76	26.5	23.0	30
			04-19-77	37.1	20.0	34
			05-18-77	19.5	20.5	29
			06-15-77	14.3	25.0	30
			07-25-77	23.6	24.0	
			08-17-77	32.3	24.0	

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C
15	Quincy Creek	Little River	10-17-74	14.1	19.5	
13	Quincy Greek	niccie Rivei	11-20-74	12.9	19.0	50
			12-17-74	13.1	10.5	
			01-13-75	215		
			01-13-75	160		1
			01-14-75	51.0		
			02-19-75	34.7	17.5	45
			03-25-75	22.1		
			04-11-75	453		
			05-20-75	32.2	21.5	53
			06-10-75	18.0	24.5	63
			07-16-75	16.0		
			07-30-75	520		
			08-21-75	42.3		
			09-18-75	41.1	24.5	36
			10-21-75	28.6	18.0	40
			12-11-75	18.8	12.0	34
			01-15-76	22.2	10.5	38
			02-23-76	32.2	11.0	38
			03-25-76	20.9	14.0	
			05-06-76	13.3		
			05-17-76	99.4	22.0	32
			06-15-76	14.6	24.0	49
			07-14-76	21.9	26.0	
			08-17-76	19.2	27.0	
	•		09-16-76	12.6	25.0	48
			10-21-76	20.7	15.5	
			11-19-76	26.6		
			12-20-76	33.0	12.0	

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
15	Quincy Creek	Little River	01-25-77	32.4	8.0	44
	(continued)	DICTIO MIVEL	02-23-77	23.8	12.0	37
	(companied)		03-16-77	33.0	20.0	54
			04-20-77	14.0	22.0	47
			05-18-77	5.92	23.5	47
			06-15-77	6.46	28.0	50
			07-25-77	13.4		
			08-17-77	16.1	26.0	122
			09-19-77	32.3	24.0	
16	Holman Branch	Quincy Creek	09-21-69	1,050		
			10-17-74	.74	17.5	
			11-20-74	.82	18.0	42
			12-17-74	.97	9.0	
			01-13-75	17.1		
			01-14-75	5.90		
			02-19-75	4.45	17.5	38
			03-25-75	3.10		
			04-11-75	70.8	17.0	
			05-20-75	4.14	19.5	38
			06-10-75	1.76	25.0	50
			07-16-75	1.97		
			07-30-75	94.0		
			08-21-75	4.05		
			09-25-75	1.29	17.5	38
			10-20-75	6.91	20.0	50
			10-21-75	3.38	15.0	
			12-11-75	1.75	9.0	30

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
16	Holman Branch	Quincy Creek	01-15-76	2.94	11.0	ene dan
	(continued)		02-23-76	3.28	7.0	Stock spills
	24.00.000.0000.000		03-25-76	2.61	16.0	
			04-21-76	1.14	20.0	35
			05-17-76	7.53	20.0	-
			06-15-76	1.64	22.0	39
			07-14-76	2.18	23.5	
			08-17-76	1.36	24.5	****
			09-16-76	.80	24.0	35
			10-21-76	1.90	12.5	*****
			01-25-77	4.25	9.0	78
			03-18-77	4.86	17.0	35
			04-20-77	1.54	18.0	70
			05-18-77	.56	21.0	35
			06-15-77	. 37	22.0	40
			07-25-77	.77	24.0	title con-
			08-17-77	1.65	24.5	
			09-19-77	4.59	24.0	
17	Quincy Creek	Little River	04-26-56	11.8	10.3	64
			05-26-65	27.5		46
			06-06-66	19.6		
			05-11-67	10.4		
			01-22-73	70.1		
			10-17-74	15.1	17.5	
			11-20-74	9.74	18.0	55
			12-17-74	12.6	10.5	
			01-13-75	277	area man	
			01-14-75	62.1		

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
17	Quincy Creek	Little River	02-19-75	42.4	16.0	55
	(continued)	HICELO RIVEL	03-25-75	25.2		
	(concernace)		04-11-75	704	17.5	
			05-20-75	36.0	20.0	58
			06-10-75	20.6	25.0	66
			07-16-75	17.6		
			08-21-75	50.1		
			09-18-75	43.5	24.0	38
			10-21-75	31.4	14.0	42
			12-11-75	21.5	11.0	38
			01-15-76	27.8	11.0	45
			02-23-76	37.6	9.0	42
			03-25-76	24.4	14.0	
			04-21-76	15.2	20.5	50
			05-06-76	16.5		22
			05-17-76	105	22.0	51
			06-15-76	17.4	22.0	60
			07-14-76	25.9	25.0	44
			08-17-76	14.4	26.0	
			09-16-76	13.7		
			10-21-76	25.0		
			11-19-76	34.2	12.0	
			12-20-76	38.9		
			01-25-77	40.0	9.0	42
			02-23-77	27.5	12.0	48
			03-16-77	43.3	19.0	70
			04-20-77	16.3	20.0	53
			05-18-77	8.70	21.0	50
			06-15-77	6.15	21.0	
			07-25-77	14.9	22.0	
			08-17-77	16.1	26.5	
			09-19-77	40.2	24.0	

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
18	Tanyard Branch	Quincy Creek	09-21-69	2,430		
10	1011,011 11011	quancy or one	10-17-74	2.19	18.5	
			11-20-74	19.1	19.0	111
			12-17-74	2.16	10.5	
			02-19-75	6.79	18.0	90
			03-25-75	4.26		
			04-11-75	158	22	<u></u>
			05-21-75	4.51	22.0	95
			06-10-75	3.38	25.0	105
			07-16-75	5.86		
			07-30-75	204		
			08-21-75	4.81		
			09-25-75	3.04	19.5	90
			10-21-75	4.48	16.0	85
			01-15-76	4.59	10.5	81
			02-23-76	5.01	9.0	115
			03-25-76	5.03	16.0	<u></u>
			04-21-76	2.64	20.0	92
			05-18-76	8.53	20.5	75
			06-15-76	3.14	23.0	102
			07-14-76	3.48	26.0	
			08-17-76	3.30	24.5	
			09-17-76	3.00		
			10-21-76	3.53	14.5	
			01-26-77	5.52	5.0	120
			03-18-77	6.17	18.0	90
			05-19-77	2.10	20.5	125
			06-15-77	1.08	26.0	
			07-26-77	1.89	25.0	
			08-17-77	3.10	26.0	
			09-19-77	7.49	24.0	

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
19	Hubbert Branch	Quincy Creek	09-21-69	2,360		
19	nubbert branch	Quincy Creek	10-17-74	1.96	17.5	
			11-19-74	1.48	18.5	54
			12-17-74	2.13	9.5	J4 
			01-13-75	32.7	12.0	<u> </u>
			01-15-75	8.24		<u> </u>
			02-18-75	12.4	18.0	48
			03-25-75	6.10		40
			04-11-75	199		
			05-21-75	6.76	20.5	43
			06-10-75	4.61	25.0	48
			07-16-75	4.10		
			07-30-75	87.3	22	22
			08-21-75	8.46	ana ana	
			09-18-75	6.63	22.0	39
			10-21-75	4.09	13.0	25
			12-11-75	3.43	8.0	35
			01-15-76	5.00	9.0	37
			02-23-76	5.91	4.0	35
			03-25-76	3.93	14.5	
			04-21-76	2.31	19.0	42
			05-17-76	13.9	21.0	46
			06-14-76	2.83	24.0	54
			07-14-76	3.00	24.0	
			08-17-76	2.30		
			09-16-76	1.71		44
			10-21-76	3.77	13.5	
			12-20-76	7.98	12.0	

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
19	Hubbert Branch	Quincy Creek	01-25-77	7.12	10.0	32
17	(continued)	quincy creek	03-16-77	9.31	18.0	55
	(concinaca)		04-19-77	2.25	21.5	48
			05-18-77	1.30	21.5	50
			06-15-77	.75	25.0	60
			07-25-77	2.11	24.0	
			08-17-77	2.43	24.0	
			09-19-77	9.04	23.0	
20	Winkley Branch	Quincy Creek	09-21-69	1,000		
			06-10-75	2.05	25.0	35
			09-22-76	0.89	21.0	32
21	Little River	Lake Talquin	07-02-26	172		
			11-03-38	75.6		
			09-23-69	14,030		
			05-23-75	269	22.5	51
			06-12-75	1,680	23.0	45
			04-23-76	119	20.0	82
			06-16-76	149	24.0	56
			09-09-76	144	23.5	54
			05-19-77	56.8	21.0	200
			06-16-77	125	25.0	80

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specificonductance (micromhos at 25°C
22	Hurricane Creek	Little River	09-21-69	7,450		
	marticane of cen	Directo River	11-21-69	4.15	8.0	
			10-17-74	.18	15.5	
			11-19-74	.04	16.0	142
			12-17-74	1.80	8.5	
			01-13-75	43.2	15.0	
			01-14-75	29.6		
			02-18-75	14	17.0	50
			03-25-75	9.52		
			04-11-75	187	19.5	
			05-20-75	11.4	26.5	46
			06-10-75	2.73	24.5	62
			07-16-75	6.39		
			08-21-75	9.39		
			09-17-75	.98	22.0	65
			10-20-75	6.91		
			12-11-75	4.38	10.0	35
			01-15-76	8.26	10.0	36
			02-23-76	8.01	7.0	37
			03-25-76	7.27		
			04-20-76	2.42	20.5	54
			05-17-76	61.4	24.0	42
			06-14-76	5.28	26.0	54
			07-13-76	8.82	27.5	
			08-17-76	1.49	24.5	
			09-16-76	.14		
			10-21-76	6.63	16.0	
			12-20-76	13.3		

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
22	Hurricane Creek	Little River	01-24-77	11.0	8.0	31
	(continued)		02-23-77	5.44	14.0	39
	Section and a section		03-16-77	22.5	18.0	40
			04-19-77	1.40	21.0	56
			05-18-77	.13	21.0	100
			06-15-77	.029	24.0	
			07-25-77	.07		
			08-17-77	1.52	24.0	
			09-19-77	11.7	25.0	
23	Little River	Lake Talquin	10-05-64	2,430		
			10-16-64	8,900		
			12-06-64	5,980		
			02-15-65	4,490		
			05-26-65	196		
			06-06-66	195		
			05-11-67	91.0	21.0	63
			05-22-68	52.3	23.0	90
			06-12-69	240	26.0	102
			05-05-70	200	19.0	75
			06-01-71	151	21.0	50
			01-16-75	1,400		
			06-12-75	1,390	23.5	35
			10-23-76	310		
24	Monroe Creek	Little River	09-09-58	7.41		<del></del> /
			09-10-58	3.89		
			11-13-58	3.94		
			09-23-76	2.23	18.5	55

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
25	Richlander	Little River	09-09-58	4.63		
185	Creek	Dietro Hiver	09-10-58	3.80		<u>- 1</u>
	02.001		11-13-58	4.65		
			06-11-75	5.87	24.0	40
			09-23-76	2.40	18.5	50
			09-23-70	2.40	10.5	50
26	Polk Creek	Lake Talquin	09-09-58	0		
			09-10-58	0		
			09-22-76	1.06	20.0	29
28	Vote Creek	Rocky Comfort Creek	09-23-76	0.16	27.0	60
29	Rocky Comfort	Lake Talquin	09-09-58	20.7		
	Creek	•	09-10-58	15.5		
			11-13-58	19.6		
			06-11-75	22.6	24.0	40
			09-22-76	18.6	20.0	40
			09-23-76	15.4	19.5	41
30	Turkey Creek	Rocky Comfort	09-09-58	2.82		
	•	Creek	09-10-58	2.51		
			11-13-58	3.12		
			09-23-76	1.34	18.5	34
31	Bear Creek	Rocky Comfort	09-09-58	10.5		
		Creek	09-10-58	9.63		
		7	10-13-58	8.94		<u>- 1</u>
			06-11-75	9.55	23.0	20
32	Harvey Creek	Lake Talquin	09-09-58	5.43		
	•	1-1	09-10-58	5.20		42
			09-22-76	5.08	20.0	21

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
33	Ocklawaha Creek	Lake Talquin	06-06-66	7.93		
		1	05-11-67	7.93	16.0	
			09-22-76	9.01	20.0	12
34	Ocklawaha Creek	Lake Talquin	09-07-58	39.3		
			09-10-58	35.6		
			11-13-58	42.1		
			10-18-74	36.0	15.0	
			11-21-74	47.3	14.5	16
			12-18-74	30.7	7.5	
			01-13-75	198		
			01-16-75	72.6		
			01-20-75	139		
			02-20-75	52.1	16.0	21
			03-26-75	46.0		
			04-11-75	299	<del></del> -	
			05-22-75	56.1	21.0	21
			06-11-75	43.1	22.0	14
			07-17-75	68.1		
			07-30-75	664	<del></del>	
			08-22-75	64.1		
			09-25-75	71.9	18.0	22
			10-23-75	61.7	16.0	17
			01-16-76	55.3	10.0	13
			02-24-76	58.8	4.0	
			03-26-76	44.4	16.0	
			06-16-76	45.8	21.0	14
			07-14-76	45.8	24.0	
			08-18-76	79.4	22.0	
			09-17-76	34.1	<u></u>	
			09-22-76	38.9		

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
34	Ocklawaha Creek	Lake Talquin	03-17-77	69.6	15.5	18
	(continued)		04-22-77	42.0	20.0	12
	(00.110-110-00)		05-19-77	33.3	22.0	11
			06-16-77	36.9	22.0	13
			07-26-77	28.5	25.0	
			08-16-77	58.3	23.0	
			09-15-77	82.5	23.5	
35	Hammock Creek	Lake Talquin	09-09-58	3.46		
			09-10-58	3.12		
			11-13-58	2.44	1	
			09-22-76	14.5	20.0	18
38	Blue Creek	Ochlockonee River	09-22-76	0.44	22.0	110
39	Black Creek	Ochlockonee	09-22-76	2.70	20.0	90
		River	05-25-77	2.01	21.0	90
40	Sweetwater Creek	Ochlockonee River	09-22-76	1.16	20.0	41
41	Telogia Creek	Ochlockonee River	09-23-76	1.27	25.0	60
42	Telogia Creek	Ochlockonee	07-15-64	40.6		
		River	10-04-65	1,520		
			05-25-66	30.5		
			06-06-67	30.7		
			05-08-68	5.15		

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specificonductance (micromhos at 25°C
42	Telogia Creek	Ochlockonee	06-03-69	5.71	24.0	
42	(continued)	River	06-03-69	9.65	27.0	38
	(continued)	Kiver			27.0	30 
			09-21-69	12,000	15.0	
			10-18-74	5.57		
			11-21-74	20.6	15.0	46
			12-18-74	4.15	7.5	36
			01-16-75	39.7	7.5	
			02-20-75	21.7	16.0	
			03-26-75	29.0		
			04-11-75	1,100		
			05-22-75	32.8	23.0	42
			06-11-75	15.9	24.0	47
			07-17-75	10.2		
			08-22-75	46.7		
			09-29-75	20.2	19.5	41
			10-23-75	42.5		
			01-16-76	37.4	10.0	30
			02-24-76	39.3	9.0	35
			03-26-76	20.3	15.0	
			04-22-76	9.84	21.0	38
			08-18-76	30.7	24.5	
			09-17-76	29.7		
			03-17-77	34.3	20.0	45
			04-20-77	23.1	21.0	90
			05-17-77	1.48	24.0	50
			06-16-77	2.17	25.5	52
			07-26-77	5.38	25.0	
			08-16-77	35.6	26.0	
			09-15-77	45.5	25.5	

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TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
43	Juniper Creek	Telogia Creek	06-11-75 09-23-76	3.76 1.35	24.0 20.0	30 22
44	Mule Creek	Telogia Creek	09-23-76	11.4	21.0	29
46	Mill Branch	Telogia Creek	09-23-76	3.39	21.0	19
47	Telogia Creek	Ochlockonee River	11-08-37 06-10-75 09-23-76	70.4 198 105	23.5 21.5	24 17
48	Big Creek	Telogia Creek	06-10-75 09-22-76	18.2 12.3	22.0 22.0	 13
49	Yellow Creek	Telogia Creek	06-11-75 09-23-76 05-25-77	9.88 2.03 0.03	23.0 23.0 27.0	 39 60
50	Mill Creek	Ocklockonee River	06-12-75 09-22-76	5.04 1.11	23.0 20.0	 85
51	Indian Creek	Ochlockonee River	06-11-75 09-23-76	20.1	25.0 26.0	 18
52	Ochlockonee River	Ochlockonee Bay	06-12-75 09-24-76 05-25-77	2,580 392 234	27.0 25.0 26.0	59 49 60

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)	
53	Tiger Creek	Ochlockonee River	09-23-76	0.29	26.0	21	
54	Crooked River	Ochlockonee River	04-17-75	1,170	20.0	40	
56	North Mosquito	Apalachicola	06-06-66	34.3	23.0	42	
	Creek	River	05-16-67	9.84	22.0		
			06-11-75	49.4	25.0	40	
			09-23-76	19.6	25.0	30	
			05-23-76	14.6	24.0	78	
57	Mosquito Creek	Apalachicola	06-11-75	116	25.0	65	
	3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	River	09-23-76	45.1	22.5	60	
58	Flat Creek	Apalachicola	08-31-61	148			
		River	01-19-64	293			
			03-02-65	692	t <del></del> :		
			05-25-65	38.2			
			06-06-66	27.8			
			09-19-66	611		<del></del>	
			05-08-67	25.0	21.0	39	
			06-03-68	28.9	22.0	44	
			09-21-69	8,450			
			10-18-74	19.1	14.5		
			11-21-74	22.3	15.0	43	
			12-18-74	19.4	6.0	22	

TABLE 2.--Miscellaneous surface-water data--Continued

Station no. on fig. 1	Stream	Tributary to	Date measured	Dis- charge (ft <sup>3</sup> /s)	Tem- per- ature °C	Specific conduct- ance (micro- mhos at 25°C)
58	Flat Creek	Apalachicola	01-16-75	48.8	8.0	
	(continued)	River	02-20-75	41.0	14.5	35
	***************************************	100000000000000000000000000000000000000	03-26-75	42.2		
			04-29-75	42.4		
			05-22-75	39.5	20.0	43
			06-11-75	38.1	24.0	45
			07-17-75	46.1		
			07-30-75	1,220		
			08-22-75	55.8		
			09-29-75	52.8	19.5	43
			10-23-75	49.9	19.0	35
			01-16-76	45.0	7.5	30
			02-24-76	40.1	5.0	34
			03-26-76	39.2	16.0	
			04-22-76	27.2	20.0	40
			05-18-76	68.7	20.5	38
			08-18-76	56.9	22.0	
			09-17-76	26.2		
			01-25-77	55.9	9.0	43
			03-17-77	56.6	16.0	42
			04-21-77	31.3	18.0	48
			05-18-77	21.3	22.0	45
			06-16-77	42.9	23.0	56
			07-26-77	16.2		
			08-16-77	32.9	24.5	
			09-14-77	43.5	24.0	

TABLE 3.--Standard complete analyses and field parameters of surface water.

DATE	INSTAN- TANEOUS OIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPF- CIFIC CON- DUCT- ANCE (MICRU- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATI	ON 1		02327050	- SOPCHOP	PY RIVER	NR ARRAN.	FLA. (LAT	30 13 50	LONG 08	4 32 20)		
MAY .			100									
11 JUN •	1969	21.7	5.3	35	5.7	7	9	3.4	4.2	24	38	.01
06		23.0	5.6	35	4.5	Û	0	1.9	4.0	11	59	
06 JUN •	.26	27.0	4.5	32	4.5	0	0	1.5	4.8	15	80	
03	.04	28.0	4.2	36								
STATI	ON 2	02	327100 -	SOPCHOPPY	RIVER NR	SOPCHOPPY	, FLA. (L	AT 30 07	45 LONG	084 29 40)		
APR .	1964				1.2.02		0	.4	4.0	122	32	
28				25	4.4	0						
14 OCT				29	4.3	0	0	.6	7.2	22		
23	177			54	5.1	2	2	.8	4.5			
JAN . 20	58			36	7.2	15	18		12			
APR 21	42			35	6.2	10	12	6.4	4.0	30		3.40
JUN 08	4.1			215	7.5	104	127	35	3.5	118		1.31
JUL 27	156			27	4.7	0	0	1.4	3.0	10		4.21
AUG 31	19			56	6.3	22	27	10	3.5	41		2.10
OCT				39	6.1	6	7	4.6	3.8	30		3.32
19 DEC						21	25	9.4	4.2	43		.14
03 JAN .	1.2			58	6.9							27.6
20 MAR	445			39	4.3	0	0	1.1	3.8	23		
10	515			30	4.5	0	0	.8	2.8	8		11.1
APR 21	4.5			158	7.4	72	88	26	3.5	89		1.08
12	5.5			188	1.3	н9	109	32	3.5	107		1.59
JUL 06	10			75	6.5	30	37	14	10	61		1.65
AUG 24			- 22	29	4.8	2	2	2.7	3.5	20		4.81
OCT 03		20.6		31	4.2	122		1.2	2.8	24		24.9
NOV		12.8		27	5.5	3	4	3.5	3.5	29		7.36
03 DEC		100	- 2	34	b.0	7	9	4.7	4.0	30		3.08
19	38	3.3		.54	13.17							

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	OIS- SOLVED FLUO- PIDE (F) (MG/L)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- HONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MGZL)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATION	N 1											
MAY • 1 11 JUN • 1	.2	13	6	460	1.1	•2	2.9	1.8	•2	23	40	4.4
06	.2	6	6		.3	.2	2.5	1.9	.3	40		.4
MAY , 1	.1	5	5		.4	.5	3.6	2.8	.5	50		1.6
JUN • 1	971				122		2.1			- 2-		
STATION	1 2											
400	1022											
APR • 1 28	.1	S	2		.2	.6	1.6	1.4	.5	54		3.2
14.00	• 5	4	4		.6		3.5	9.0	2.0			.4
23		Я	6									
JAN • 1	1965	25	7									
21	• 1	16	6	250	.0	.2	3.1	1.8	.2	19		.0
08	.2	109	5	70	5.2	• 0	5.8	2.1	•1			2.4
JUL 27	• 1	4	4	500	.3	.2	2.8	1.1	•2	32		.0
AUG 31	.3	30	8	240	1.1	.0	6.1	1.9	•2			4.4
19	5.	14	8	100	.6	.2	6.5	1.6	.2	20		9.2
DEC 03	.3	30	4	130	1.4	.2	7.0	1.9	.2	12	**	6.0
JAN • 1	1400	4	4	220	• 3	.3	3.9	5.0	1.1	71		8.0
10	•1	3	.3	160	.2	•1	2.2	1.1	.3	45		.0
21	.2	76	4	210	2.7	.4	7.0	2.2	.1	6		3.2
MAY 12	3	14	4	120	3.3	.4	5.4	2.4	.1	5		
JUL												4.4
05 AUG	. ?	41	10	470	1.5	• 0	5.8	5.0	• 3			6.4
24 OCT	. 2	0	. 6	160	• 4	.1	5.7	1.5	• 2	28		4.8
03	• 2	8		430	1.5	.2	5.2	1.3	• 2	26		11
03 DEC	.2	14	11	40	1.4	• 3	6.3	1.4	.2	17		10
19	.2	14	7	150	.7	•1	7.4	1.6	.2	19		6.4

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATIO	ON 2	02.	327100 -	50РСНОРРҮ	RIVER NR	SOPCHOPPY	, FLA. (	LAT 30 07	45 LONG	084 29 40)		
JAN , 1												
26 MAR	93	13.9		27	4.8	2	2	2.2	4.2	24	67	16.8
10 APR	27	16.7		36	6.3	11	13	5.4	4.0	28	48	3.50
17 JUN	7.6	25.0		86	6.9	34	42	14	4.2	51	70	1.44
JUL JUL	3.4	26.1	9.0	158	7.0	71	86	26	4.0	83	106	.97
13 AUG	262	28.9		47	4.0	0	0	1.4	4.5	19	100	70.7
SEP	734	22.8	7.5	43	3.9	0	0	.8	3.5	12	73	145
13 OCT	82	22.8	6.8	29	4.9	2	2	3.2	4.0	20	77	17.0
25 NOV	5.0	19.0		239	7.5	119	145	43	6.0	140	143	1.93
DEC SS	7.8	10.0		182	7.1	89	108	32	5.0	111	122	
14 JAN , 1	968	15.0		47	4.6	2	2	3.4	4.5	22	73	16.6
FEB	179	14.0		43	4.2	0	0	1.6	4.5	17	75	36.2
07 MAR	97	8.0		38	4.5	0	0	2.2	4.5	16	67	17.5
14	138	10.0		41	4.3	0	0	1.6	5.0	20	70	26.1
11 MAY	27	21.0		37	6.0	8	10	5.2	4.8	27	72	5.25
29	1.5 2.8	26.0	5.9 7.0	278 217	7.9 7.3	141 107	172 131	49 37	5.0 4.5	153 119	164 131	.66
JUN 21	1.5	26.0	5.3	262	7.5	130	158	46	5.0	144	153	.62
JUL 25	7.3	25.0	7.3	38	5.6	7	8	6.1	4.0	24	98	1.93
16	6.1	25.0	6.1	50	6.1	15	18	9.2	4.8	36	88	1.45
SEP 26	79	23.0		41	4.5	0	0	3.0	4.8	18	97	20.7
OCT • 1 23	968 232	18.0	6.4	43	4.3	0	0	2.0	4.8	17	27	16.9
NOV 26	18	9.0	11.0	47	6.2	14	17	7.5	5.8	34	75	3.67
DEC 11	257	6.0	11.0	48	4.2	0	0	1.5	5.5	17	80	55.5
JAN , 1	20	11.0	10.0	47	5.8	4	5	6.3	5.2	31	37	2.03
FEB 12	77	10.0	10.0	36	4.7	0	0	1.0	5.2	16	27	5.61
MAR 26	563	14.0	8.8	40	4.2	0	0	2.3	3.8	11	33	50.2
17	20	20.0	8.3	51	6.4	13	16	6.3	4.5	28	36	2.01
YAM 29	22	21.0	6.7	67	6.0	7	8	6.1	4.5			
JUN 06	5.4	29.5	7.9	120	6.7	46	56	19	6.2	42	105	1.55
JUL 09	1.4	26.0	8.4	278	7.6	141	172	50	4.0	153	162	.61
23 SEP 09	24	25.0	6.4	55 49	4.0 6.1	13	0 16	7.8	5.0 5.5	15 34	27 88	59.1 5.70
OCT 13	46	21.2	7.5	36		5	6	5.2				
NOV 12	3.0	17.0	7.4	192	7.5	89	108	34	5.0	23	177	9.60
DEC 17	33	9.2	9.5	42		6	7		4.0	107	122	.99
JAN , 1	970				5.7			5.4	5.5	27	84	7.48
15 FEH	365	6.8	12.0	42	4.3	0	0	1.1	4.2	14	59	58.1
18	264	12.5	9.3	41	4.3	0	0	1.2	4.2	13	54	38.5
15 MAY	331	18.0	7.6	40	4.2	0	0	1.2	3.5	11	58	51.8
13	2.7	21.5 13.5	7.1 10.1	192 38	7.9 4.3	0	115	34 1.2	5.0 3.5	105 11	132 54	.97 .31

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- HONATE HARD- NESS (MG/L)	DIS- SULVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATIO	ON 2											
JAN • 1	.2	7	6	130	.4	•1	4.8	3.5	•6	51		7.2
MAR 10	.2	16	6	190	.7	.1	4.9	1.6	•2	17		3.6
APR 17	•1	42	7	30	1.6	•2	4.9	1.9	.1	9		2.8
JUN 01	•2	76	6	160	2.7	.2	4.6	2.3	.1	6	130	.4
JUL 13	•6	5	5	440	.4	•2	4.5	1.8	.3	42		4.8
AUG 14	•2	3	3	480	.2	.1	3.7	1.4	.4	51		1.6
SEP 13	.2	10	8	510	.4	.1	5.0	1.5	.2	25		3.2
OCT 25	.2	124	5	500	4.0	.4	9.6	2.7	.1	5		2.8
NON	• 2	93	4	40	3.2	.4	9.6	2.5	.1	5		4.8
DEC 14		12	10	290	.8	.1	6.5	2.4	.3	30		.8
JAN , 1		6	6	270	.5	.1	6.8	2.2	.4	44		.8
FEB 07		8	8	260	.5	•1	5.7	2.1	.3	37		.0
MAR 14	• 4	7	7	230						37	80	
APR	. 2				.7	• 0	4.7	1.9	•3			4.8
11 MAY	.3	16	8	280	.7	•1	5.3	1.8	•2	20		3.6
29	.5	142 109	5	100	4.8 3.9	• 4	4.3	2.9	•1	5	120 80	.6
21	.3	134	4	80	4.6	.4	5.3	2.7	• 1	4	120	.8
JUL 25	.2	18	12	370	.8	.2	5.3	1.8	.2	17		.8
16 SEP	.2	28	13	320	1.2	.1	5.9	1.8	•1	12		.3
26	.7	10	10	490	.5	.1	5.7	1.9	.3	30		.4
OCT • 1	. 968	6	6	410	.3	.3	6.4	1.8	.3	37		.0
NOV 26	• 2	27	В	190	.9	.2	8.2	2.0	•2	16		.4
DEC 11	• 3	5	5	300	.4	.2	5.7	2.2	.4	46		.4
JAN , 1	.2	19	15	160	.8	.2	7.4	2.0	.2	18		3.2
12	•2	5	5	220	.5	.2	6.8	2.1	.4	49		.0
26	• 1	0	7	300	.3	•2	3.3	.9	.1	21		.0
17	.2	19	6	240	.9	.3	5.4	2.0	.2	18		.0
29	.3	19	12	300	.8	.2	5.3	2.0	.2	19		3.2
06	.2	55	9		1.7		6.8	2.2	•1			.0
JUL 09	• 3	145	4	20	4.7	.6	5.2	2.8	•1	4		.0
23	• 4	8	8	510	•3	.3	3.9	1.7	.3	31		.0
09 OCT	.2	2.4	11	370	1.0	•1	8.6	1.9	•2	15	75	.0
13 NOV	.2	16	11	230	.7	•2	6.2	1.8	•2	20		.8
12 DEC	• 1	99	11	190	3.4	.3	9.6	2.2	• 1	5		• 4
17 JAN • 1	.3	18	12	250	1.0	•1	8.2	2.1	•2	20		.8
15 FEB	• 2	4	4		• 4	• 0	4.5	2.0	• 4	50		1.2
18	.2	4	4	250	.3	• 0	4.8	1.9	.4	49		• 0
15 MAY	• 4	4	4		.3	• 0	2.5	1.8	.4	48		.8
13	0.2	100	6	320	3.5 .3	.4	2.8	3.0 1.8	•1 •4	6 48	150	.0 .8

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCI- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATIO	DN 2	0.23	327100 -	SOPCHUPPY	RIVER NR	SOPCHOPPY	• FLA. (	LAT 30 07	45 LONG	084 29 40)		
JUN , 1		67 E		2.02								
21 JUL 15	6.0	26.5	6.7	175	7.3	84	102	30	4.0	96	113	1.85
AUG 26	853	24.0	5.3	42	5.9	7	9	6.4	4.5		94	6.42
SEP 16	37	25.0	6.3	48	5.5	4	5	1.1	5.5	12	51	117
OCT 09	106	22.5		51	4.5	0	0	2.5	5.0	17	81 57	8.14
22	178	19.0	8.0	52	4.2	0	0	1.6	6.0	18	70	16.3 33.6
19 DEC	115	10.5	9.9	39	4.3	0	0	1.8	4.5	15	65	20.2
22 JAN , 1	971	14.5	8.3	17	6.8	26	32	12	5.0	45	77	2.39
19 FEB	99	9.5	11.4	37	4.5	0	0	2.2	5.2	16	52	13,9
17	295	8.5		44	4.2	0	0	1.3	4.8	13	60	47.8
17 APR	101	16.0	7.8	44	4.4	0	U	2.1	5.8	15	70	19.1
28	19	23.0	7.4	70 70	6.5	16	19	11	4.2 5.5	33 37	69 51	3.65 2.70
MAY 09	3.1	20.5	5.7	200	6.7	95	116	31	5.0	107	114	.97
16	4.2	25.0	4.5	265	7.5	1 3 1	160	46	5.0	142	153	1.74
JUL 16	62	25.0	7.9	50	5.0	0	0	3.8	5.2	20	38	6.45
AUG 25	26	25.0	7.6	42	5.7	7	8	6.0	5.5	26	96	6.74
15	47	23.0	7.5	36	5.6	1	1	4.0	5.4	20	98	12.5
20	19	20.5	8.1	43	5.8	8	10	6.8	5.5	21	46	2.33
17 DEC , 1	3.4	15.0	8.5	190	7.7	90	110	31	5.0	107	124	1.17
15 JAN + 1	23	18.5	7.0	43	6.1	7	8	5.6	6.0	29	42	2.61
19 FEB	223	8.0	10.2	55	4.1	0	0	1.4	6.0	18	57	
17 MAR	340	12.0	8.5	48	4.5	0	0	1.2	4.8	14	46	42.2
22	32	16.5	8.1	39	6.2	6	7	5.0	6.5	30	75	6.50
19 MAY	17	21.5		60	6.5	18	55	8.5	4.2	36	87	4.06
10 JUN	48	55.0		45	6.5	10	12	5.3	4.5	26		3.42
14	3.0	25.0	6.5	190	7.8	89	108	30	4.0	102	132	1.07
12 AUG	97	25.5	6.1	42	4.5	0	0	3.2	7.5	20	90	23.7
09 SFP	9.8	27.0	6.2	75	7.1	25	30	13	8.0	52	91	2.41
001	4.3	25.0	6.0	150	8.0	74	90	26	7.0	93	148	1.72
18 NOV	1.6	22.0	7.5	293	8.1	147	179	50	6.0	161	174	.79
15 DEC	13	17.5		115	7.5	44	54	18	5.0	68	100	3.51
13 JAN • 1		18.0	6.7	59	4.0	0	0	2.9	6.0	10	94	44.7
17 FEB	162	9.0	10.4	45	4.1	0	0	2.2	5.5	18	65 65	28.4
22 MAR 15	400	21.0	6.8	37 45	4.0	0	0	1.5	4.0	14	81	87.5
APR 03	3470		5.0					1.5			01	
19 MAY	114	18.0	7.3	28	4.5	0	0	2.7	4.2	13	80	24.6
17 JUN	40	19.0	7.2	33	5.4	2	3	5.0	5.5	23	85	9.20
20	81	27.5	5.4	33	4.7	0	0	3.4	4.5	21	91	20.1

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MGZL)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATIO	DN 2											
JUN • 1	970	88	5		3.2	.3	4.6	2.4	•1	6		.8
JUL 15	. 4	19	12		.7		5.2	2.0	•2			.8
AUG	• 3	4	4	630	• 3	•1	4.0	2.0	.4	51	20	.0
SFP 16	.3	16	12		.7	•2	6.0	2.0	•2	22		1.6
0CT 09	.2	8	8		.5	.1	5.3	1.7	.3	31		1.6
22	.2	5	5		• 3	• 1	5.8	1.8	• 3	42		1.6
19 DEC	.2	7	7		.5	•1	5.4	1.9	•3	38		.8
22 JAN • 1	971	36	10	7-	1.4	•5	7.3	2.2	•2	12		.8
19 FER	•1	7	7		• 4	• 1	5.5	2.1	.3	39	***	• 0
17	• 1	4	4		• 3	• 1	4.1	1.9	• 4	47		.4
17 APR	• 1	7	7		• 4	• 1	4.2	2.2	• 4	41		•2
28	.2	33 31	18	200	1.3	.2	4.0	2.3	.2	13 13	50	.0
MAY 09	•1	93	0		3.7	.3	5.8	2.5	•1	6	130	1.0
JUN 16	.2	130	3		4.5	.5	4.1	2.7	•1	4		.0
JUL 16	. 2	12	12		.6	.1	6.8	2.2	.3	28	70	.8
AUG 25	.2	19	12		.8	.0	6.6	2.0	.2	- 12	70	2.0
SEP 15	.2	12	11	750	.5	.2	6.6	2.0	.3	26	60	.5
OCT 20	.2	21	13		. 9	• 0	7.3	1.8	.2		80	.8
17	. 7	97	2		3.4	•2	9.8	2.6	.1	6	100	.6
DEC + 1		18	11	24	.9	.0	7.6	2.2	•2		30	2.5
JAN • 1		5	5		.4	• 0	6.0	2.4	•5		0	.8
FEB 17	.2	4	4		. 3	•1	4.2	2.0	.4	50	20	1.0
MAR 22	.2	16	10		.8	.1	5.0	2.1	•2	22	20	6.8
19	•н	26	я	360	1.2	• 1	5.0	2.3	•2	16	30	3.2
MAY 10	.2	17	6		•8	.2	3.7	2.0	.2	21	80	3.2
JUN 14	.2	88	0		3.1	• 3	7.9	3.1	•1	7	140	.6
JUL 12	.2	5	5		.5	.4	5.0	2.4	.3	33	80	.8
09	.2	39	14	44	1.4	.3	5.0	2.5	.2	12	140	6.4
SEP 21	.2	77	3	380	2.8	.4	7.5	3.0	• 1	8	160	1.6
18	.2	150	3	22	4.8	•6	6.0	3.4	.1	5	200	1.6
15		54	10		2.2	•3	4.8	2.3	.1	8	100	8.0
DEC 13	.4	10	10		.6	.1	5.9	2.6	.4	37	40	
JAN • 1	.3	7	7		•5	.2	5.0	2.8	.5	47	20	1.6
22	.2	7	7		.4	.1	3.5	1.9	.3	36	20	.8
MAR 15	.3	5	5		. 3	.1	3.0	2.7	•5	53	60	2.4
03												
19 MAY	- 1	А	Я		•4	• 1	2.1	1.7	.3	30	20	1.6
17 JUN		15	13	400	• 7	•1	3.7	1.8	•2	20	40	3.8
20	.3	11	11		•5	.2	4.5	2.0	.3	29	0	6.0

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATIO	N 2	02.	327100 -	SOPCHOPPY	RIVER NR	SOPCHOPPY	, FLA. (	LAT 30 07	45 LONG	084 29 40)		
JUL • 1	973 653	25.5		44	4.0	0	0	2.0	8.5	19	70	123
18 SEP 19	487	23.5	5.2	46	3.7	0	0				77	101
OCT 18	12	19.0	J. C	69	7.7	28	34	1.1	3.0 7.4	12 53	88	3.02
NOV 13	3.7	15.5		219	7.4	17	127	38	3.9	131	131	1.31
DEC 19	176	8.0	8.3	55	4.1	0	0	2.3	5.3	22	79	37.5
JAN , 1		18.5	5.9	60	4.2	2	2	4.3	6.2	28	74	15.6
FEB 21	190	14.0	10.3	41	4.2	0	0	2.2	5.4	23	. 69	35.4
MAR 22	10	18.0	8.1	105	7.3	43	52	17	5.0	63	87	2.35
MAY 03	3.3	22.0	7.0	181	7.4	85	104	32	4.4	105	124	1.09
JUN 11	17	25.5	6.9	100	6.3	14	17	9.4	6.0	41	100	4.64
JUL 25	8.3	24.0	7.4	146	6.8	62	76	22	3.7	78	113	2.53
AUG 14	152	24.0	6.6	60		2	2	3.3	4.4	25	92	37.8
SEP 26	41	22.0	7.4	40	5.4	7	8	8.0	4.5	35	96	10.9
OCT 31	4.1	19.0	7.6	169	7.1	75	92	29	4.2	97	107	1.18
NOV 20	4.5	19.0	7.9	202	7.2	107	131	42	4.3	130	130	1.58
DEC 11	4.6	10.5	10.2	160	7.2	68	83	29	3.7	90	99	1.23
JAN • 1 23		11.0	9.4	33	4.2	0	. 0	2.0	4.0		38	79.8
MAR 05	82	9.0	10.6	29	4.9	0	0	3.4	3.8	19	44	9.74
APR 29	34	24.0	7.1	37	6.0	4	5	8.4	5.2	31	82	7.68
MAY + 1		22.0	7.8	35	4.5	0	0	3.0	3.7	21	62	18.9
JUN 25	46	24.5		36	5.3	0	0	3.7	4.8	22	92	11.4
JUL 23	580	23.5	6.5	47	4.0	0	0	1.5	3.1	14		254
AUG 27	96	25.5	6.5	35	4.2	0	0	4.1	3.2	21	86	22.3
SEP 18	145	22.0	7.2	36	4.3	0	0	2.0	4.6	14	98	38.4
OCT 10	612	23.0	6.2	44	3.7	0	0	1.1	4.1	12	66	109
NOV 18	38	11.5		29	5.3	1	1	3.7	. 4.3	28	76	7.80
DEC 29	33	9.0	9.0	46	6.3	5	6	4.9	5.2	32	102	9.09
JAN • 1	976 212	11.5	9.7	34	4.5	0	0	1.5	4.0	14	52	29.8
FER 18	40	16.5	8.6	39	5.9	2	2	3.4	4.9	23	66	7.15
MAR 24	86	15.5		35	4.9	0	0	1.8	4.4	17	62	14.4
APR 21	5.2	24.0	7.3	138	7.2	45	55	18	4.6	65	86	1.21
JUN 01	285	22.5	7.1	46	4.5	0	0	1.7	4.9	23	88	67.7
16 JUL	75	23.5	7.2	53	5.4	0	0	3.3	4.9	25	76	15.5
22 AUG	66	26.5	7.0	34	4.2	6	7	4.6	4.5	27	78	13.9
19 SEP	86	24.0	5.4	37	3.7	0	0	1.5	3.7	22	98	22.8
09 OCT	334	23.5	6.8	42	3.2	0	0	• 1	3.0	20	84	75.8
12 NOV	620	16.0	8.0	27	3.6			1.3	2.6		62	104
02 DEC	97	13.0	9.3	35	4.2	1	1	8.5	4.0	23	71	18.6
14	404	13.0	9.4	37	3.7	0	0	1.0	4.2	18	51	55.6

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATIO	N 2											
JUL • 1	.973	6	6		.3	.3	3.0	2.9	.5	49	50	1.6
SEP 19	•2	4	4	580	.2	.2	4.3	1.3	.3	43	90	.8
ост 18	•1	37	9		1.7	.4	6.1	1.8	•1	9		6.7
NOV 13	.2	120	16		5.0	.7	8.1	5.1	.2	9	0	7.5
DEC 19	.2	9	9		.7	.2	6.0	2.1	.3	34	0	4.5
JAN • 1 25	.1	13	12		.6	.1	5.4	2.8	.3	31		7.7
FEB 21	•1	7	7		.4	.2	4.2	2.6	.4	43	30	6.8
22	•1	50	7		1.8	• 1	5.5	3.2	.2	12	20	4.4
MAY 03	.2	93	8		3.2	.2	7.0	2.4	.1	5	100	4.3
JUN 11	194	27	13		.8	• 1	5.3	2.1	•2	15	0	7.0
JUL 25	.2	66	3	440	2.6	.2	4.5	2.0	•1	6	60	5.7
14 SEP	•5	10	8		•5	.2	4.4	2.3	.3	32	30	8.6
26	•5	24	18		1.0	• 1	5.4	2.1	.2	16	60	9.4
31	.2	33	83		2.6	.2	8.9	1.8	• 1	4	90	4.5
20 DEC	•2	120	16		4.4	.4	8.3	2.5	.1	4	150	3.2
11 JAN , 1	.2	88	20		3.8	.2	7.3	1.2	. 1	3	100	4.0
23	•6	5	5	55	• 0	• 1	3.3				0	3.3
05 APR	•2	11	11		•5	•1	4.7	1.5	.2	23	310	4.3
29	1975	25	21		.9	• 1	3.7	1.8	•2	14	30	8.5
13	•5	9	9		. 3	•1	3.4	2.1	•3	34	70	8.0
25 JUL	.4	15	12	550	. 7	•2	4.1	2.0	•2	26	10	5.2
23 AUG	.3	5	5	610	•3	•2	2.9	1.6	•3	40	0	3.4
27 SEP	.2	12	12	620	•4	•1	3.5	1.7	• 2	23	10	6.8
18 OCT	•2	7	7		.4	• 0	4.0	1.5	• 3	33	10	1.1
10 NOV	.2	4	4		• 3	•1	3.4	2.2	•5	54	0	1.0
18 DEC	• 5	13	12	320	.8	• 2	5.6	2.7	•3	31	20	9.3
JAN ,		16	11		•9	•2	6.3	4.0	•4	35	0	7.8
15 FEB	•1	5	5		• 4	•1	4.1	2.2	•4	46	40	2.0
18	.2		9		.4	.0	4.2	1.9	.3	29	50	6.8
24 APR	.2	5	5		.1	.1	2.9	2.0	.4	46 8	60	5.8
JUN	• 1	52	7		1.8	•2	6.0	2.2	•1	46	120	10
16	.3	5 9	5		•1	.1 .1	2.8 3.6	1.9	.3	30	60	11
22	• 0	19	13		1.7	.1	4.1	2.0	•2	19	70	6.3
19 SEP	• 3	4	4		.1	• 1	4.3	1.7	-4	46	60	10
09	•3	2	2	++	.3	• 1	4.0	1.7	.6	70	30	9.6
12	•3	5	5		.3	• 1	3.6	1.8	.4	46	40	9.6
02	.2	10	9		•6	.1	4.6	2.1	•3	32	40	8.0
14	•2	3	3	++	• 0	.1	3.0	1.5	.4	55	30	7.9

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	INSTAN TANEOU DIS- CHARG (CFS)	S TEN E A	TURE (	DIS- SOLVED DXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATION	N 2		0232	7100 -	SOPCHOPPY	RIVER NR	SOPCHOPPY	• FLA. (L	AT 30 07	45 LONG	084 29 40)		
JAN . 1	977												ž.
21 FEB	312		3.5	10.6	32	4.2	0	0	1.5	3.9	18	57	48.0
15 MAR	96		10.0	10.2	30	4.4	3	4	2.4	3.8	20	52	13.5
07	880		15.5	7.8	36	3.7	0	0	3.7	2.0	15	47	112
14	9.7		19.5	R.4	95	6.9	44	54	21	4.0	69	89	2,33
MAY 09	5.2		24.0	7.6	130	7.0	75	92	32	4.3	99	114	1.60
JUN 06	4.4		27.5	8.6	255	7.6	110	140	39	3.9	128	137	1.63
JUL 12	4.0		29.0	8.0	250	7.6	110	130	40	3.4	122	130	1.40
AUG 03	49		26.0	6.8	55	5.3	8	10	6.4	4.4	41	96	12.7
15	22						9	11	7.3	6.0	42	102	6.06
STATION	975		0232	28500 <b>-</b>	OCHLOCKON	NEE RIVER	NR CONCOR	D FLA (LA	T 30 40 0	8 LONG 0	84 18 19)		
JUN . 1	977									22		105	21 5
05	76		25.5		175	6.6	33	40	11	22	94	105	21.5
DA	V A	ELE- ATION BOVE MEAN SEA EVEL (FT)	SPE- CIFIC CON- DUCT- ANCE (MICKO- MHOS)		ALKA LINI H AS CACO TS) (MG/	TY BIC BON 3 (HC	ATE CIU	ED SOLV - CHLO M RIDE ) (CL)	(ED SOLI CONST TUENT	ED SOL DS SOL OF (RE: I- DUE S) 180	VED DIS- IDS SOLVE SI- SOLID AT (TONS C) PER	D SOL	VED O- DE )
ST	ATION 5		02326	1799 -	LAKE IAMON	NIA NR BR	ADFORDVILL	F• FLA. (	LAT 30 39	04 LONG	084 12 30)		
	. 1977	99.27	St	)	5.0	3	4 1	• 0 4	• 0	11	19 .6	3	• 1

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	HARD- NESS (CA·MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE)	MAG- NE- SIUM (MG)	SIUM S	SILICA S	DIS- SOLVED SODIUM (NA)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4)
DATE	(MG/L)	(MOZE)	(MO/L)	(00/L)	(MOZE)	MOZE	(MO/L)	(MG/L)			(UG/L)	(MG/L)
STATION 2												
JAN , 197	7											
21 FER	- 1	4	4		•1	• 1	2.3	1.3	.3	40	40	7.9
15	• ()	7	4		. 3	• 1	2.9	1.6	.3	32	40	6.6
07	• 0	10	10		•1	.2	1.6	2.1	• 3	32	90	5.0
14 MAY	• 0	65	20		2.9	•2	6.4	2.3	.1	7	120	5.1
09	.1	93	18		3.2	• 4	7.2	2.0	. 1	4	140	3.9
06	.1	110	0		4.0	. 4	5.4	2.6	- 1	5	130	3.7
12 AUG	• 1	120	10		4.0	•5	3.6	2.6	• 1	5	190	3.8
03 SEP	• 0	20	12		1.0	.2	6.3	2.4	.2	20	100	15
15	• 0	22	13		. 9	.3	7.3	2.4	.2	19	50	12
												0
STATION 3												
JUN , 197												42
JUN • 197	.3	45	12	230	4.2	2.7	6.2	17	1.1	43	60	11
DATE	HARE NESS (CA+M	HARI	R- DIS- ATE SOLVE D- IRON S (FE)	D NE- SIUM (MG)	TAS- SIUM (K)	SILICA SILICA DIS-	SOLVED SODIUM (NA)	TION RATIO	PERCE		D DI SOL SULF (SO	4)
STAT	TION 5									(00/2	, 1110	,,,,
JUN .	1977	5	2 20	0 .6	. 4	4	3 2.0	) .	4	44 1	0	•5

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATIO	ON 7	0.	2329000 -	OCHLOCKO	NEE RIVER	NR HAVANA	, FLA. (	LAT 30 33	14 LONG	084 23 03)		
AUG . 1												
26	168	25.6		84	6.7	21	25	6.8	11	55	67	
07	4860	20.0		42	6.2	8	10	1.8	12	35	57	
25 JAN , ]		15.6		63	6.1	11	14	2.6	9.5	37	70	
23	1230	9.4		57	6.0	9	11	2.8	8.5	36	49	
19	3690	13.9		42	6.0	8	10	2.0	6.0	26	50	
15 JUL	866	22.2		73	6.3	11	14	3.4	12	45	61	44
09 AUG	1130	26.1		48	6.1	8	10	2.2	6.8	31	59	
28	1030	24.4		87	6.1	11	13	4.4	15	51	75	142
22	148	26.1	:==:	138	7.1	23	28	9.2	20	81	90	
DEC 11	93	11.1		155	6.8	26	32	8.8	22	93	109	
FEB • 1	1690	12.8		42	6.7	7	8	2.4	5.8	24	55	
02	3210	17.8		42	6.0	7	9	2.0	5.8	25	57	
MAY 27	1270	23.3	22	47	5.9	8	10	3.0	6.0	28	66	
JUL 23	1890	25.6		41	5.8	6	7	2.8	6.5	27	53	
SEP 15	686	23.3		72	6.3	15	18	3.6	11	47	81	
NOV 11				52		14	17	2.8	7.2			
JAN , 1	960				6.4					40	56	169
FEB				49	6.7	11	14	3.6	7.0	28	52	195
29	3110			49	5.9	7	8	2.0	7.0	25	52	437
20 JUN , 1				42.	6.4	9	11	3.2	5.0	24	37	176
15 AUG	155		::	98	7.1	28	34	7.6	9.5	58	57	23.9
10 OCT	549			68	6.5	15	18	4.2	9.5	44	49	72.6
09 DEC	1750	4.2		43	6.3	7	9	2.4	6.8	28	52	246
01 JAN , 1	327	12.2		89	6.9	20	24	5.2	13	56	80	
19	525	75		72	6.8	11	14	3.8	12	46	63	89.3
16	609			62	6.6	15	18	4.6	8.5	40	53	87.1
APR 20	13900			24	5.9	5	6	1.2	3.0	15	51	1910
MAY 10	978			56	6.6	11	14	3.2	8.2	36	60	158
JUN 29	984			70	7.9	8	10	2.8	14	41	72	191
AUG 24	308			73	7.0	18	22	5.2	8.2	44	46	38.3
OCT 20	62			159	7.3	42	51	11	18		96	16.1
OEC 08	77			150	7.4	28	34	8.8	22		94	19.5
FEB • 1				69	6.4	13		4.2			48	65.8
MAR							16		8.8			
30	725		-	70	6.7	11	14	3.8	11		40	78.3
25 JUL	94		10.5	125	6.9	30	36	10	16		81	20.6
23 SEP	156			179	6.6	26	32	6.4	33		101	42.5
14 APR , 1	125 965			201	7.5	28	34	6.4	35		123	41.5
19 JUL	845			55	6.3	13	16	4.2	8.0	38		86.7
29	702			62						77		

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

STATION 7  AUG • 1957 26 •1 23 2 1.5 1.0 9.9 6.7 •6 37 OCT 07 •2 12 4 1.8 •9 8.6 3.1 •4 34 NOV 25 •2 12 1 1.5 1.4 7.8 5.9 •7 47	4.0 1.2 1.0 • 2.0 1.5 2.2 1.5 3.2 9.6 8.8
261 23 2 1.5 1.0 9.9 6.7 .6 37 0CT 072 12 4 1.8 .9 8.6 3.1 .4 34 NOV	1.2 1.0 2.0 1.5 2.2 1.5 3.2 9.6
OCT 072 12 4 1.8 .9 8.6 3.1 .4 34 NOV	1.2 1.0 2.0 1.5 2.2 1.5 3.2 9.6
NOV	1.0 2.0 1.5 2.2 1.5 3.2 9.6
	· 2.0 1.5 2.2 1.5 3.2 9.6
JAN • 1958	1.5 2.2 1.5 3.2 9.6
MAR	2.2 1.5 3.2 9.6
191 10 2 1.3 .7 5.1 4.1 .6 44 MAY	1.5 3.2 9.6
151 16 4 1.8 1.2 7.3 9.0 1.0 53 JUL	3.2 9.6
091 10 2 1.0 .8 8.0 5.1 .7 51 AUG	9.6
281 14 47 .8 8.8 11 1.3 62 OCT	
222 34 11 2.7 .9 23 13 1.0 45 DEC	8.8
111 41 15 4.6 .8 11 19 1.3 50 FEB + 1959	
051 10 4 1.1 .7 1.6 3.9 .5 43	4.4
022 8 19 .0 5.6 3.9 .6 49 MAY	1.4
271 12 4 1.0 .1 6.6 3.6 .5 40 JUL	1.6
231 10 47 .9 7.4 3.8 .5 43 SEP	•4
151 17 2 1.9 .8 9.9 7.2 .8 47 NOV	3.2
113 14 0 140 1.7 .7 11 4.6 .5 40 JAN + 1960	2.0
062 12 0 80 .7 .8 1.3 3.5 .4 37 FER	3.2
290 9 2 110 1.0 .7 3.9 4.5 .6 49	1.2
202 10 2 20 .6 .7 4.0 3.4 .5 39 JUN • 1960	1.2
152 33 5 0 3.4 .9 6.8 6.8 .5 30	5.2
102 16 2 40 1.5 1.1 8.3 6.4 .7 44 OCT	3.6
092 10 2 0 1.0 .8 8.1 3.6 .5 41 DEC	.8
011 22 2 2.2 .8 9.5 8.4 .8 44 JAN • 1961	4.0
191 14 2 0 1.1 .8 9.6 8.0 .9 54	2.8
162 16 2 0 1.2 .6 8.3 5.3 .6 40	1.6
201 5 0 0 .5 .9 2.5 1.8 .3 39	1.6
102 14 2 0 1.3 1.0 7.2 4.9 .6 42	1.6
JUN 292 13 5 0 1.5 1.0 6.7 8.3 1.0 56 AUG	.8
241 25 7 0 2.9 1.2 4.4 5.8 .5 32	4.8
OCT 201 48 6 0 5.0 1.2 7.2 13 .8 36	7.2
DEC 081 38 10 0 3.9 1.5 8.9 16 1.1 47	7.2
FEB • 1962 01	4.0
MAR 301 14 2 0 1.1 1.1 1.8 6.8 .8 49	2.4
MAY 252 32 2 0 1.7 .5 5.5 13 1.0 46	4.8
JUL 232 24 0 0 1.9 1.7 6.0 25 2.2 68	6.0
SEP 142 32 4 0 3.9 2.0 8.8 28 2.2 64	8.4
APR • 1965 19••• •2 18 5 580 1.8 •9 6.3 4.8 •5 35	2.4
JUL 29	

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
DATE	(0, 3,	1020 07	1110727	111037	10/11/37	1110727	11107 27	11107 27	11107 27	11107 27	11107 27	5417
STATIO	N 7	0	2329000 -	осньоско	NEE RIVER	NR HAVANA	, FLA.	(LAT 30 33	14 LONG	084 23 03)		
MAY . 1	966			120		14	1.7		20	70		214
18 MAY , 1	967		••	130	6.5	14	17	5.1	28	72		
SEP	175	25.6	6.2	107	6.7	23	28	6.9	13	62	70	33.1
01-05 06-14	219 146			107 125	6.8	21 26	26 32	5.6 6.6	15 18	63 72	79 80	46.7 31.5
15-30 OCT	83			155	7.0	35	43	8.5	22	84	94	21.1
02	56	23.0		140						40.00		-
13 FEB , 1	968	20.0		161	6.6	31	38	8.5	22	89	102	21.4
05 MAR	207	10.0		110	6.4	21	25	5.5	15	62	70	39.1
27	458	16.0		88	6.2	11	14	3.6	15	54	64	79.1
31 APR	304	17.0		95	6.9							
30	246	21.0		105	7.1					***		-
31	95 236	22.0	7.6	145 110	6.9	33	40	6.5	19	79	77	19.8
JUL 18	402	27.0		85	5.2	4	6	2.6	14	46	67	72.7
31 AUG	94	27.0		145	7.0							
30	262 286	24.0		170 521	7.5 7.1							
SEP												
30	92 35	26.0		140	6.5 7.5	26	32	7.2	18	78	86	
OCT 30	26	13.0		222	7.2							
31	23	14.0	••	228	7.3	46	56	11	36	119	130	
30 DEC	64	14.0		248	7.1							
19	205 660	9.0 11.0		270 126	7.7 7.0	75	92	19	32	153	187	104
JAN , 1		14.0		122								
FEB												07.4
28	306 790	14.0		165 92	6.5	16	20	5.1	36	90	101	83.4
MAR 31	2480	16.0		56	6.3				••			
APR 10	635	20.0		80	6.2	11	14	4.2	13	48	62	106
30	346			95	6.3							
31 JUN	427	24.0		148	6.6							
05 30	571 60	25.0 28.0	6.7	63 170	6.0 7.1	6	7	2.8	10	38	66	105
JUL 31	434	25.0		139								
AUG									10			
31	526 152	25.0 25.0	6.2	84 117	6.2	13	16	5.1	10	48	84	119
SEP 30	1910	22.0		70	6.2							
NOV 18	161	12.0	8.7	165	6.8	23	28	7.1	26	86	103	44.8
JAN , 1		4.5	9.9	88	6.1	8	10	3.1	17	58	89	377
MAR 09	2080	15.0	7.0	45	6.3	7	8	2.9	7.0	25	40	225
MAY 04	371	23.5		50		11	13	6.4	15	54	83	83.1
JUN			7.2		6.8							
SEP	321	25.0	6.5	195	7.0	14	17	4.8	43	108	112	101
02	1480	26.0	5.0	57	6.5	10	12	3.0	8.5	35	47	188
15 NOV	142	25.0	••	178	7.1	26	32	7.3	30	92	114	43.7
12	126	17.5		-		***				en eg		

DATE	SOL FLU RI (F (MG	VED O- DE )	HARD- NESS (CA:MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATIO	N 7												
MAY . I			120		2	2.5		4.0	12.1	10.2			Escasi
18		• 3	19	5	240	1.6	1.2	6.1	17	1.7	64		3.2
31 SEP		•3	27	4	180	2.4	1.5	6.2	9.5	.8	42	20	6.0
01-05 06-14		.1	24 28	3 2	30 20	2.5	.8	9.6 8.3	9.8	1.1	46		5.6
15-30 OCT		•3	36	1	30	3.6	1.0	5.4	16	1.2	48		6.4
02 NOV													
13 FEB , 1	1968	•2	36	5	20	3.6	1.6	6.7	16	1.2	48		11
05	. ,	.2	24	3	70	2.4	1.2	7.0	11	1.0	49		7.2
27		.2	17	6	570	1.9	1.2	8.5	8.9	.9	51		5.6
APR													
30													
31		.3	31	0	30	3.7	1.6	4.6	15	1.2	49	0	7.8
JUL 18		.2	12	7	210	1.3	1.5	6.6	9.5	1.2	60		6.4
31													
30											::		
SEP 11		.4	32	6	150	3.3	2.0	5.3	14	1.1	47		11
30			32						1	1.1			
30													
31		• 3	48	2	30	4.9	2.0	1.4	27	1.7	54		8.4
30													
19		.3	93	17	30	11	2.0	11	20	• 9	31		11
JAN , 1 31	1969												
FEB 12		.2	23	7	40	2.5	1.6	7.3	23	2.1	67		4.0
28										••			
31 APR													
10		•3	19	7	50	1.9	1.6	8.6	6.3	.6	40		4.8
MAY 31													
JUN				7	340		2.2	6.5			47	•••	
30		.2	12			1.2			6.1	.8			4.4
JUL 31													
04		.2	21	8		1.9	1.5	6.4	7.4	.7	42		7.6
31 SEP													
30									••			••	
18 JAN , 1	1970	•5	31	80		3.2	1.5	5.4	19	1.5	56		9.0
10 MAR		•1	14	6		1.4	1.2	14	11	1.3	61		4.8
09 MAY		•1	12	6		1.2	1.3	.3	4.3	•5	40		3.2
04 JUN		.2	27	16	1400	2.6	1.6	8.6	2.7	•2	17	0	4.8
30		.2	22	8		2.1	1.7	7.0	28	2.7	73		10
02		.3	13	3	1100	1.2	1.6	7.9	5.6	.7	46	30	.0
15		.2	31	5		3.0	1.7	9.8	20	1.6	57		.4
NOV 12													

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATIO	ON 7	0	2329000 -	осньоско	NEE RIVER	NR HAVAN	A, FLA. (	LAT 30 33	14 LONG	084 23 03)		
DEC . 1		11.5		175	7.5	20	26	7.0	25	07	100	20.7
15 FEB , 1	971	11.5		175	7.5	28	34	7.9	25	97	100	29.7
APR	1410	9.0		133	6.3	7	8	3.3	31	73	100	381
27	2530 460	12.0 21.5	6.8	52 120	6.6	14	7 17	2.7	7.5	29 69	42 81	287 101
JUN 01	66	22.0	7.0	88	6.7	15	18	5.8	12	53	62	11.1
JUL 22	980	25.0		67	6.6	13	16	4.4	9.0	42	52	138
SEP 30	116	25.5	8.0	148	7.2	28	34	8.6	15	82	90	28.2
NOV 16	101	16.0		240	7.1	30	37	8.8	41	136	160	43.6
JAN , 1	4310	11.5		50	6.1	5	6	2.5	6.8	29	68	791
MAR 13	1710	14.5		85	6.2	9	11	3.4	16	45	70	323
APR 28	288	20.0	7.7	117	7.2	25	31	7.1	13	64	96	74.6
JUL 11	1200	24.0	5.4	68	6.6	11	14					
SEP 20	99	24.0	6.8	150	7.5	26	32	9.2	20	86	96	
NOV 22	312	12.0	9.7	280	7.2	16	19					
JAN , 1			9.7	89	6.7	7	9					
MAR		12.0					10	-				
JUN	2270	16.0	7.2	52	6.3	8	7			27	44	265
27 JUL	2232	25.0	6.0	44	6.3	6		2.8	5.5			203
31	719	27.0		63	6.2	7	8					
03 NOV	220	23.0	6.7	135	6.7	21	25	7.2	16	71	89	52.9
30 FEB • 1		15.0	7.6	257	6.9	23	28					
APR	1720	18.0	7.0	65	6.2							
03 MAY	1760	19.5		50	6.4	5	6					
09 JUL	240	23.0	6.9	130	6.8	24	29	8.8	16	72	86	55.7
25	198 380	26.0	6.7	320	6.8	13	16					
NOV 01	119	20.0	8.6	178	7.0	30	37	11	32	110	131	42.1
DEC 04	152	9.0	11.2	178	6.9	21	26	7.8	31	97	128	52.5
FEB , 1		15.5	7.4	46		7	8	2.5	10	35	50	390
MAY 02	1350	23.0	5.7	58	6.5	12	15	4.2	8.0	37	55	200
20 JUN	2620	22.0	6.0	71	6.2	8	10	3.0	9.6	35	76	538
10	1835 664	24.5 25.0	4.5	41 87	6.2	16	20	3.7	10	45	66	118
JUL 25	3340	25.0		69		7	8			38	50	
SEP			6.0		6.3			3.5	12			451
0CT	385	26.5	6.2	120	6.8	18	22	6.3	13	58	73	75.9
13	827	23.5	7.0	73	6.5	14	17	3.7	8.6	41	56	125
13	290 393	19.5	7.5 7.8	96 92	6.8	25 20	30 24	8.8 5.8	15 14	67	83 58	65.0 61.5
JAN , 1	976 1930	9.5	8.6	64	6.9	8	10	3.4	15	46	42	219
FEB 27	985	13.5	8.9	122	6.8	11	13	3.2	22	58	80	213
MAR 31	1840	20.0	6.8	60	6.8	8	10	4.9	8.3	34	54	268
APR 30	219	21.5	7.9	130	6.8	25	30	7.8	15	67	62	36.7

DATE	FLU FLU RI	DE	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATION	N 7												
DEC + 1	970	.2	35	7		3.6	1.7	6.5	19	1.4	53		11
FEB , 1	971	•2	14	8		1.5	1.6	6.6	19	2.2	72		4.3
APR 07		.2	11	6		1.1	1.5	5.3	4.7	.6	44		2.0
27 JUN		.2	21	7	280	2.2	1.5	7.8	14	1.3	57	60	5.8
JUL		.2	24	9		2.2	1.5	8.2	7.2	.6	38	60	4.8
SEP		•1	18	5		1.6	1.6	7.3	5.1	•5	36	40	3.6
30		.2	36	8	410	3.4	1.6	11	12	.9	41	80	9.0
16 JAN + 1	972	•2	41	11		4.5	2.6	9,3	30	2.1	60 41	30	.4
19 MAR		•2	11	6		1.2	1.4	6.0 4.6	4.1 9.8	1.1	56	40	2.8
13 APR 28		.1	30	5	320	3.0	1.4	8.4	10	.8	41	230	6.0
JUL.					320			7.5					
SEP 20		.3	37	11	50	3.3	2.5	7.1	14	1.0	43	130	11
NOV 22		•••						9.7					
JAN • 1 23	973							8.3			-		
MAR 22							•••	5.0					
JUN 27		.3	12	6	320	1.2	1.3	6.0	3.9	.5	38	0	2.4
JUL 31								6.7		-			
OCT 03		.1	30	9	230	2.9	1.8	8.6	12	1.0	45	60	8.0
NOV 30													
FEB , 1	974					-							
APR 03													
MAY 09		.2	34	10	200	3.0	1.6	9.9	12	.9	42	100	5.8
JUL 25													
29									**		••	••	
01 DEC		•2	44	14	180	4.0	2.2	9.6	55	1.4	51	80	10
04 FEB , 1	975	•2	32	11		3.0	2.4	8.7	21	1.6	57	50	9.8
03 MAY		•1	10	3		•9	1.8	6.8	6.2	.9	52	50	3.1
20		.3	18 12	6	300	1.9	1.4	5.7	6.4	.5 .8	34 50	70 80	3.1 2.4
JUN 10													
JUL		.3	16	0		1.7	1.3	8.1	6.6	.7	45	40	3.7
SEP		•3	13	6		1.0	1.6	5.2	7.0	.9	51	40	3.4
0CT		.0	24	6	850	2.1	1.7	8.8	9.2	.8	43	40	4.9
13 NOV		•1	13	0	~~	.8	2.0	8.8	5.5	.7	44	80	3.5
13	071	.5	32 24	7 4	600	2.4	1.7	9.2	10 9.7	.9	39 45	150 100	4.1
JAN , 1	916	•1	14	6		1.3	1.8	7.1	8.6	1.0	54	40	4.1
FEB 27		•2	13	2	770	1.1	1.5	5.7	14	1.7	68	120	3.2
MAR 31		.2	16	8		.9	1.5	5.7	4.9	.5	37	50	2.6
APR 30		•1	31	6		2.7	1.5	9.3	10	.8	40	100	5.3

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATIO	ON 7	0	2329000 -	осньоско	NEE RIVER	NR HAVANA	, FLA. (	LAT 30 33	14 LONG	084 23 03)		
MAY , 1	1976 5460	20.5	6.1	38	6.6	4	5	1.5	5.2	23	18	265
JUN 18	485	25.5	6.9	91	6.1	16	20	5.6	11	51	60	78.6
JUL 23	676	26.5	5.5	74	6.7	14	17	6.5	7.8	43	74	135
AUG 17	611	26.5	6.5	90	5.9	11	13	3.6	11	44	62	102
OCT 05	157	21.0	7.5	310		26	32	7.9	69	159	185	78.4
NOV					6.6							
30	587 5290	13.0	9.5 8.5	195 37	6.7	17	21	2.0	5.2	107 26	122 45	193 643
DEC 28	2060	9.0	9.6	65	6.5	8	10	3.7	9.4	38	47	261
JAN , 1		7.0	9.4	60	6.5	7	9	2.6	7.5	32	38	359
FEB 15	1180	10.0	10.2	68	6.6	14	17	3.5	9.3	38	44	140
MAR 07	2870	14.0	8.0	59	6.4	10	12	3.6	8.5	33	62	480
APR 12	710	20.0	6.8	88	6.6	17	21	5.7	9.9	47	61	117
MAY	205			148				8.5	15		78	
JUN		26.0	5.2		6.9	26	32			72		43.2
JUL	108	27.0	6.5	185	6.9	38	46	10	17	85	96	28.0
12 AUG	72	27.5	6.7	280	7.1	36	44	11	48	140	153	29.7
03 SEP	120	27.0	6.1	600	7.1	30	36	12	140	296	331	107
14	306	25.5	6.7	210	7.0	18	55	5.7	40	107	123	102
DATE	ELE- VATION ABOVE MEAN SEA LEVEL (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	
STATIO	N 8	02329	200 <b>–</b> LAKE	JACKSON	NR TALLAH	HASSEE, FL	A. (LAT	30 31 43 L	.ONG 084	21 30)		
AUG • 1	965											
03 MAR , 1	94.97	21	6.3	6	7	2.0	2.5	10	21		.0	
01	96.20	26	6.4	7	9	1.1	2.8	12	24		. 1	
JUN 02	96.20	27	6.3	7	9	1.6	2.8	13	144		.1	
MAY • 1	94.84	28	5.5	7	8	2.0	3.2	15	13		.1	
12	94.49		7.3			1.7	2.1		18		.1	
APR , 1 28	88.68	27	5.6	3	4	1.9	4.8	14	24		.1	
MAY , 1 22		25	6.6	4	5	1.8	4.0	14	18		.2	
SEP 03	89.42	22	6.1	3	4	1.4	3.0	9	17		.1	
APR . 1	971			3	4			15				
26 SEP	87.79	26	6.1			1.7	3.8		18		•2	
30 APR • 1		28	5.8	5	3	1.2	3.2	10	18		.1	
28 SEP	85.44	29	6.5	3	4	2.2	8.5	17	21		.2	
19 MAY , 1	84.10 973	32	6.8	3	4	2.6	6.0	17	21		.2	
30	86.70	26	6.0	2	2	1.7	3.0	16	14		.2	
07	87.37	25							(44)			
NOV 29	86.29	27	7.4	4	5	2.7	3.8	14	24		.2	
MAY . 1 20	974 86.20	32	6.6	3	4	2.0	3.7	13	18		.1	
AUG 09	85.48	39	6.5									
OCT 31												
21000	84.60	27	6.2	4	5	3.3	3.5	14	23		. 1	

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATIO	DN 7											
MAY , 1	976	5	1	700	.2	1 , 4	4.2	2.5	.5	46	50	4.5
JUN 18,	,2	21	5	79.00	1.7	1.4	8.3	6.7	.6	39	90	5.7
JUL 23	.1	25	11	eto eto	2.0	1.8	7.3	5.3	.5	30	100	3.7
AUG 17	.2	16	5	350	1.6	1.9	7.3	6.8	.8	45	80	5.1
OCT 05	.2	30	3		2.4	2.7	8.2	44	3.5	74	100	8.3
NOV 02	.2	25	7		2.2	2.0	9.0	27	2.4	68	70	5.6
30 DEC	.4	8	1	260	.8	1.3	4.0	3.2	.5	41	80	4.6
28	•1	15	7		1.4	1.6	7.0	5.4	.6	41	110	4.1
JAN , 1	.1	11	3		1.0	1.5	5.0	5.8	.8	50	70	4.0
FEB 15	.1	15	1	80	1.5	1.4	5.2	5.5	.6	42	40	3.2
MAR 07	.1	12	2	-	.7	1.4	4.2	5.6	.7	47	90	3.2
APR 12	.1	23	6	490	2.1	2.0	6.4	6.7	.6	36	140	2.8
MAY 09	.1	35	9	190	3.4	1.9	7.3	11	.8	39	110	8.4
JUN 06	.1	42	4		4.0	2.7	5.7	13	.9	39	100	10
JUL. 12	.2	48	12		5.0	2.9	5.5	33	2.1	58	170	13
AUG 03	+1	54	24	270	5.8	4.8	5.1	90	5.3	77	150	20
SEP 14	.0	25	7	910	2.7	2.5	9.0	27	2.3	67	40	8.4
DATE	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	
STATION												
AUG • 1	6	0	70	.2	.3	.0	1.2	.2	30		.8	
MAR • 1	4	0		.5	.7	.0	1.7	.3	39		. 0	
NUL NUL	6	0	10	.6	1.0	.1	1.9	.3	35		.4	
MAY • 1	8	2	70	.7	1.1	1.0	2.0	.3	32	20	.0	
SEP 12	7			.6	.8		1.8	.3	34		. 0	
APR + 1	7	4	10	.6	1.2	. 0	2.3	.4	36		.8	
1 + YAM	8	4	40	1.0	1.2	• 4	1.8	.3	28	0	.8	
03	6	2	60	.5	.3	.2	1.8	.3	40	10	.0	
APR • 1 26	7	3	30	.6	.7	.2	2.0	.3	36	40	4.0	
SEP 30	6	3	60	. 6	.3	.6	2.1	.4	44	60	.3	
APR • 1 28	972	4	20	.6	.7	.2	2.7	.4	40	200	.0	
SEP 19	10	6	80	.6	.5	.1	2.8	.4	39	600	1.6	
MAY , 1	973	5	0	.6	.6	6.0	1.8	.3	34	10	.8	
07	-		10 50	-		.0						
NOV 29	10	6	130	.7	.6	.1	1.7	.2	26		2.0	
1 . YAM		3	20	.4	.6	.2	1.5	.3	31	30	2.1	
AUG 09			-				19.99	or ex				
OCT 31	11	7	0	.6	.4	. 0	2.0	.3	28	50	2.0	
MAY . 1 14		2	0	.5	.4	•1	1.7	.3	37	70	2.0	

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

	ABC ME	TION COVE CO	PE- IFIC DN- UCT- UCE ICRO-	PH L I	AS BO	ICAR- ONATE HCO3)	DIS- SOLVED CAL- CIUM (CA)	DIS- SOLVED CHLO- RIDE (CL)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER	DIS SOLV FLUO RID (F)	ED - E
DAT						MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	DAY)	(MG/	L)
STA	ATION 8		02329200	- LAKE JA	CKSON NR	TALLAH	ASSEE, FL	A. (LAT	30 31 43	LONG 084	21 30)		
AUG	• 1975												
25. OCT	85	5.46	36	7.0					-				
16.	, 1976	5.29	28	6.3	1	1	1.6	3.9	12	22			•1
03.		4.83	37	6.8	7	8	1.6	3.5	15	19			.1
18.	84	4.81	28	6.0									
DEC 15.		4.98	24	6.6									
19.		5.72	25	6.4	2	2	1.8	3.4	11	27			.1
SEP 14.		4.02	29	6.4	2	3	1.6	4.0	13	20			.1
	INSTAN- TANEOUS DIS- CHARGE	TEMPER ATURE	DIS- - SOLVEI OXYGE		РН	ALK LIN A CAC	ITY BIG	CAR- C	DLVED S CAL- C CIUM R	DIS- SO OLVED SO HLO- (SU IDE COM	DLVED SO DLIDS SO JM OF (F	DIS- DLVED DLIDS RESI- JE AT	DIS- SOLVED SOLIDS (TONS PER
DATE	(CFS)	(DEG C	(MG/L)	MHOS)	(UNITS	) (MG	/L) (M	3/L) (1	4G/L) (	MG/L) (N	4G/L) (N	4G/L)	DAY)
STATIO	975	23.					OCKONEE,	FLA. (L/	AT 30 28	25 LONG 06	34 24 25)		
	3010	-5.	3.			•							
STATIO	N 10		02329352	- ATTAPUL	GUS CREE	K AT JA	MISON, FI	LA. (LAT	30 39 46	LONG 084	27 48)		
NOV + 19	974 21	14.	5 8.4	116	6.5	5	2	2	9.8	5.6	55	66	3.81
FEB . 19		16.					3	4	3.5	3.3	30	62	77.8
MAY 21	90	20.											
JUN 10	265	23.											
SEP	52										42		
17 APR , 19	976	22.						-			1000		
20 JUN	44	21.											-
SEP	56	23.	5.9	54	7.	0	2	3	2.9	4.1	26	48	
08 MAR , 19	48 977	23.	6.5	5 54	6.:	3							
16	206	19.	5.6	46	6.0	6							
STATIO	N 11		0232940	4 - SWAME	CREEK A	T JAMIE	SON+ FLA	(LAT 30	39 44 L	ONG 084 26	55)		
JUN , 19													
10	144	55.	5 5.1	21	6.	0							

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

	HAH NES	S F	NON- CAR- BONATE HARD- HESS	DIS- SOLVE IRON (FE)	D NE	VED SO G- P - T UM S	IS- LVED O- AS- IUM K)	DIS SOLV SILI	ED S	DIS- DLVED DDIUM (NA)	SOD SOR TI	D- P- ON PER	CENT	DIS SOLV STRO TIL	VED D ON- SO JM SUL	IS- LVED FATE 04)
DATE	(MG	(/L)	(MG/L)	(UG/L	_) (MG	/L) (M	G/L)	(MG/	'L) (I	MG/L)				(UG/	'L) (M	G/L)
STATIO	N 8															
AUG . 1	1975															
25 OCT				•	-	**										
16 MAY , 1	076	6	5	ž	20	.6	.3		.0	2.2		•4	41		0	2.4
03	1970	6	0	1	10	.6	.3		.0	2.2		.4	41		20	2.5
AUG 18					-											
DEC 15					_											
APR . 1	977	7	,													
19 SEP		,	6		30	. 7	.3		. 0	2.3		• 4	39		20	1.8
14		6	4	1	10	.6	• 3		• 1	2.0		.3	39		0	2.3
SO FI	DIS- DLVED LUO- RIDE (F) MG/L)	HARD- NESS (CA+MC	BON HAR HAR		DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SOL PO TA SI	S- UM	DIS- SOLVE SILIC (SIO2 (MG/L	D 50 A 50	IS- LVED DIUM NA)	SODIUM AD- SORP- TION RATIO	PER	CENT	DIS- SOLVED STRON- TIUM (SR) (UG/L)	SOLVED SULFATE (SO4)
STATION	Э															
JUN , 1975 12			_						-							
STATION 10	)															
NOV • 1974				551	5.				4							
19 FEB , 1975	•1	3	31	29	20	1.6		.6	9.	6	6.7	• 5	,	31	50	20
18 MAY	.3	1	15	12	280	1.4		.7	7.	1	4.6	. 5	5	39	40	6.7
21				••					-	-			•			
JUN 10									-	-						
SEP 17									_	-						
APR , 1976 20									_	_						
JUN						, ,			7	0	E 0				30	2.4
SEP	•1		12	10		1.2		.6	7.	8	5.0	• (	,	46	30	2.4
08 MAR , 1977			-						-	-			•			
16			-						•	•		-		••		
STATION 11																
JUN , 1975												-				

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL+ CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATIO	ON 13	02:	329490 -	WILLACOOC	HEE CREEK	NR QUINC	Y, FLA. (	LAT 30 38	13 LONG	084 30 02	)	
	074											
NOV , 1	23	17.0	8.7	38	7.3	12	15	4.0	4.6	28	33	2.10
FEB • 1	187	17.0	7.9	40	6.7	11	14	7.6	4.3	33	39	19.7
MAY 21 JUN	66	21.0	7.3	40	6.6							
10 SEP	135	24.0	5.3	35	6.5			- 60-60	-	0.0		
18	131	21.5	7.5	30	6.4						49.60	no en
APR , 1 20	39	20.0	7.7	35	6.5					80 68	- 00 00	
JUN 14	47	23.0	6.9	39	5.8	7	8	2.3	3.8	22	25	3.21
SEP 08	41	22.5	6.7	40	6.5					-		
MAR , 1	977 110	18.0	5.8	39	7.0		-			10.49		
STATIO	N 14		02329500	- LITTLE	RIVER NR	QUINCY,	FLA. (LAT	30 35 14	LONG 084	29 48)		
MAY , 1	966											
18 MAY , 1	304			40	6.1	8	10	3.1	3.5	22		18.1
31 MAY , 1	54	22.8	7.5	53	6.1	9	11	5.6	3.8	33	40	5.86
22	25	19.0	6.8	128	4.5	0	0	10	4.5	72	106	7.27
JUN + 1	23	23.0	7.6	186	5.6	8	10	19	4.0	114	124	7.90
MAY , 1 23	172	22.0	7.0	48	6.0	10	12	3.8	4.6	29	54	25.1
JUN 10	336	25.0		48	5.7						***	NO 448
STATIO	N 15	02329534	- QUINC	CREEK A	T STATE H	WY 267 AT	QUINCY, F	FLA. (LAT	30 36 00	LONG 084	34 50)	
NOV • 1	974 12	19.0	7.8	50	6.7	14	17	5.9	5.3	33	33	1.15
FEB • 1	975 34	17.5	8.7	45	7.0	15	18	4.7	4.9	32	42	3,93
MAY 20	32	21.5	8.1	53	5.8	14	17	4.9	4.5	29	44	3.83
JUN 10	18	24.5		63	6.7							
SEP 18	41	24.0	7.6	36	6.8							
APR . 1	976			120	7.4							
70N 23	11	20.0	8.3							29	28	1.10
AUG	14	24.0	7.9	49	5.6	13	16	4.0	4.0			
SEP	17	28.0		55	6.6	11	13	3.7	4.8	26	44	2.02
08 MAR , 1	23 977	24.5	7.3	44	6.5							
16 MAY	33	20.0	6.6	54	7.1		-	40.40				
18	5.9	23.5		47	***		••	**		-	••	

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATION	1 13											
NOV , 19	974	15	3	60	1.3	.4	6.2	2.4	.3	25	50	1.8
FEB • 19		24	13	210	1.3	.4	6.5	2.8	.2	20	50	3.2
MAY 21												
JUN												
10 SEP											••	
18 APR + 19	976		:==:									
20												
14 SEP	•1	9	2		.8	.3	5.5	3.0	.4	41	30	1.9
08 MAR , 19	977											
16		-									••	
STATION	14											
MAY . 19	966											
18 MAY , 19	967	12	4	210	1.0	.7	5.6	2.2	.3	27		.4
31 MAY , 19	.2	18	8	80	.9	.5	6.0	2.4	.2	22	0	7.2
22 JUN , 19	.2	31	31	480	1.4	.5	6.6	3.5	.3	20	0	16
08	.1	55	47		1.7	.7	8.1	8.7	.5	25		62
MAY , 19	.2	15	5	330	1.3	.9	7.0	3.5	.4	32	85	1.6
JUN 10												
STATION	15											
NOV , 19	.3	20	6		1.2	1.7	4.8	3.0	.3	23	50	2.1
FEB , 19	975	18	3	290	1.5	.5	5.6	3.7	.4	30	70	2.3
MAY											20	.9
20 JUN	•2	18	4	120	1.4	.8	4.5	2.8	.3	24		
10 SEP												
18 APR , 19	976											
23												
15	•1	15	2		1.3	.4	5.4	3.5	.4	32	30	.5
11	•1	14	3		1.1	.8	5.6	3.7	.4	35	50	.0
SEP 08												
MAR , 19	977				122							
MAY 18												
	117											

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATI	ON 16		02329538	- HOLMAN	BRANCH NR	QUINCY,	FLA. (LAT	30 36 34	LONG 08	4 34 57)		
NOV »	1974											
20 FEB ,	.82	18.0	7.5	42	7.0	13	16	3.8	5.2	32	27	.06
19	4.4	17.5	8.2	38	6.8	11	13	4.4	4.5	31	38	.46
20	4.1	19.5	8.1	38	5.8			••				
JUN 10	1.7	25.0		50	6.5		••					
25	1.2	17.5	8.7	38	6.7							
APR , 1	1.4	20.0	6.6	35	7.4							
JUN 15	1.6	22.0	5.7	39	5.5	7	9	2.7	4.8	24	29	.13
SEP 08	2.0	22.0	7.2	38	6.5							
MAR , 1	4.8	17.0	7.6	35	6.9							
STATIO	N 17		02329542	- QUINCY	CREEK AT	QUINCY.	FLA. (LAT	30 35 32	LONG 084	33 49)		
MAY	28			46	6.4	15	18	3.7	3.5	26		1.97
20 FEB +	9.7	18.0	7.8	55	6.4	16	20	4.5	6.0	33	34	.89
19	42	16.0	8.6	55	7.3	19	23	7.8	6.6	41	44	5.04
20 JUN	36	20.0	7.3	58	6.4							
10	20	24.5		66	6.2						••	
SEP 18	43	24.0	6.6	38	6.8							
APR , 1	15	20.5	7.4	50	6.7							
JUN 15	17	22.0	7.1	60	5.7	16	20	4.8	5.0	34	38	1.79
08	18	24.0	6.8	50	6.7							
MAR ,	43	19.0	7.7	70	7.1							

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATION	16											
NOV , 19	74											
20 FEB : 19	.2	15	2	90	1.2	.9	8.0	2.5	.3	26	60	2.5
19 MAY	.1	15	4	250	1.0	•2	7.6	3.0	.3	30	60	3.2
20												∞ •
10												
SEP 25											140 40	
APR , 19 21				44								
JUN 15	.2	11	4		1.0	.4	7.3	3.1	.4	37	30	.5
SEP 08					sab esh				••			
MAR , 19 18						••	••					
STATION	17											
MAY , 19		20	02		100							
26 NOV , 19		14	0	0	1.1	.4	4.8	2.7	.3	29		.8
20 FEB , 19	75	17	1	30	1.5	•5	6.5	3.3	.3	28	50	.4
19 MAY	• 0	28	9	210	2.0	.6	6.1	3.6	.3	22	70	2.4
20							<b>40</b> 40					
10 SEP			••					-				
18 APR , 19	76											
21 JUN											••	
15 SEP	•1	19	2		1.6	.6	5.6	4.1	.4	32	30	1.9
08 MAR , 19	77											
16											**	

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATI	ON 18		02329548	- TANYARD	BRANCH NR	QUINCY,	FLA. (LAT	30 34 4	LONG 08	4 33 30)		
NOV	19	19.0	6.9	111	6.9	31	38	9.5	10	60	67	3.46
FEB . 1	6.7	18.0	9.0	90	7.1	34	41	11	8.3	59	74	1.36
MAY 21	4.5	22.0	7.6	95	6.8							
JUN 10	3.3	25.0		105	6.8							
25	3.0	19.5	8.0	90	7.1							
APR , 1	2.6	20.0	7.0	92	7.3							
JUN 15	3.1	23.0	7.0	102	6.1	27	33	9.2	10	56	61	.52
08	3.8	22.5	7.7	90	6.8							
MAR . 1	6.1	18.0	7.6	90	6.8							
STATIO	ON 19		02329553	- HUBBERT	BRANCH NR	QUINCY,	FLA. (LAT	30 35 39	LONG 08	4 32 48)		
NOV , 1	974				100 m						0.	1022
19 FEB , 1	1.4	18.5	7.7	54	7.0	18	22	4.8	5.8	34	58	.23
18	12	18.0	8.1	48	6.6	8	10	2.8	4.8	27	42	1.41
21 JUN	6.7	20.5	8.0	43	6.1							
10	4.6	25.0		48	6.2							
18 APR , 1	976	22.0	7.6	39	6.6							
21 JUN	2.3	19.0	8.8	42	6.8					-		
14 SEP	2.8	24.0	6.1	54	5.7	12	15	4.0	4.8	29	32	.24
08	2.8	22.5	6.5	50	6.6							
16	9.3	18.0	6.2	55	7.2				•••		••	
STATIO	ON 20		02329556	- WINKLEY	BRANCH NR	QUINCY,	FLA. (LAT	30 36 03	LONG 08	4 32 02)		
JUN • 1	2.0	25.0		35	5.5					- 22		
STATIO	N 21		02329565	- LITTLE	RIVER NR I	_ITTMAN+	FLA. (LAT	30 33 12	LONG 08	4 30 54)		
MAY , 1		22.5	7.0	51	6.4	11	13	4.2	4.4	35	56	40.7
JUN 12		23.0	5.7	45	5.3				•••			
APR , 1		20.0	7.9	82	6.5							
JUN 16	149	24.0	6.0	56	6.2	10	12	4.0	4.2	29	35	14.1
SEP 09	144	23.5	6.6	54	6.4							
MAY , 1	977 56	21.0		200								
STATIO	N 22		02329582	- HURRICAN	E CREEK NE	R HAVANA	FLA. (LA	T 30 34 5	7 LONG 0	84 28 44)		
NOV . 1	.04	14.0	5.5	142	6.9	65	79	21	5.2	87	77	.01
19 FEB • 1	975	16.0		50	7.1	8	10	3.9	5.5	33	44	1.66
18 MAY	14	17.0 26.5	7.3	46	7.0			3.9	3.3	33		1.00
20 JUN	2.7		7.3	62	6.6							
SEP		24.5		65	7.1					-		
17 APR , 1		22.0	7.8	54								
20 JUN	2.4	20.5	7.8		6.3					27		
SEP	5.2	26.0	7.5	54	5.7	10	12	3.6	5.0		40	.57
08 MAR , 1	977	22.0	6.8	68	6.8							
16	55	18.0	8.6	40	6.8							

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATION	18											
NOV + 1	.1	31	0	30	1.7	3.1	5.3	7.3	.6	31	-50	4.3
FEB + 19	975	37	3	150	2.3	.9	7.3	4.1	.3	19	90	4.0
MAY 21												
JUN 10 SEP						•••	••					
25 APR , 19	976		-		-							-
21 JUN		40 40										
15 SEP	•2	31	4		2.0	.9	6.9	7.9	.6	35	40	2.3
08 MAR , 19	977											••
18	40.00											-00-
STATION	19											
NOV + 1		17	0	130	1.3	1.0	6.7	3.5		29	50	.0
19 FEB : 1'	975 .2	12	4	160	1.1	.9	5.5	3.4	.4	37	30	3.4
MAY 21			-									
JUN 10				-								
SEP 18	-											
APR , 19	976											
JUN 14	.1	15	3		1.3	.5	6.7	3.8	.4	34	30	.0
SEP 08						-						
MAR + 1	977		••									
STATION	20											
JUN , 1	975											-10.00
STATION	1 21											
MAY , 1	975	16	6	250	1.4	.9	7.0	3.8	.4	32	60	2.3
JUN 12								3.0		36		2.3
APR , 1												
JUN 16	.3	15	6		1.3	.6	7.3	4.2	.5	36	30	1.5
SEP 09												
MAY • 1	977									••		
STATION	1 22											
NOV , 1	974	65	0	90	3.0	.9	14	2.6	.1	8	70	1.1
FEB . 1	975 .2	15	7	190	1.3	2.4	4.6	4.2	.5	33	80	5.4
MAY 20												
JUN 10								-				
SEP 17												
APR , 1	976											
JUN 14	•2	13	3		1.0	1.1	4.2	3.5	.4	34	40	2.3
SEP 08	077			- 07 40 -					•••			
MAR . 1	977	- 0.00		-								•••

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HC03) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATION	23		02329600	- LITTLE	RIVER NR	MIDWAY,	FLA. (LAT	30 30 44	LONG 084	31 25)		
MAY , 19	967	21.1	7.5	63	6.0	10	12	5.4	5.0	36	30	*
MAY , 19		23.0	6.1	90	6.2	14	17	7.6	8.0	55	60	7.37 8.47
JUN , 19		26.0	5.5	102	6.0	7	9	10	5.2	59	72	46.7
MAY + 19	970 200	19.0	7.6	75	6.7	11	13	7.4	4.8	48	67	36.2
JUN , 19		21.0	5.3	50								30.2
NOV , 19		14.5	9.0	80	6.7	10	12	8.2	6.0	45	53	22.2
FEB + 19	975 918	17.5	7.6	47	6.6	11	14	5.2	3.9	34	46	114
MAY 23	199	23.0	7.0	53	6.4							
JUN 12	1390	23.5	5.9	35	6.1							
SEP 25	171	20.5	7.8	54	6.5							
APR , 19	976 128	21.0	7.5	68	6.4							
JUN 16	165	24.0	5.5	55	6.0	11	13	4.0	4.5	34	42	18.7
SEP 08	128	23.0	7.7	60	6.6							
MAR , 19	516	18.5	7.2	48	6.9							
STATION	25		02329646 -	- RICHLAND	DER CREEK	NR QUINC	Y FLA (LA	T 30 31 18	S LONG 08	4 33 15)		
JUN , 19	5.9	24.0	5.9	40	6.8							
STATION	27	02	329700 - F	OCKY COMP	ORT CREEK	NR QUIN	CY, FLA.	(LAT 30 32	2 44 LONG	084 38 09	))	
MAY , 19				- 21	72	172			- 7.2			
18 MAY , 19				31	6.2	8	10	2.0	4.0	55		.63
31 MAY , 19		22.8	7.9	31	6.3	7	9	2.3	4.2	21	26	.46
JUN , 19		22.0	6.9	35	6.2	7	9	2.6	4.5	25	19	.15
10 MAY , 19		24.0	6.5	38	6.1	8	10	2.7	6.8	30	31	.27
05 MAY , 19	71	17.5	8.4	36	6.8	8	10	2.1	4.5	32	31	9.49
25 JUN , 19		21.0	8.5	35								
11	22	24.0	6.0	40	6.9							
STATION	29	023	29777 - RO	CKY COMFO	RT CREEK	NR WETUM	KA, FLA.	(LAT 30 2	9 05 LONG	G 084 35 3	15)	
JUN , 19 11	22 22	24.0	5.8	40	6.9						•	••
STATION			02329815	- BEAR CF	REEK NR WE	TUMPKA, F	LA. (LAT	30 28 14	LONG 084	35 30)		
JUN , 19	9.6	20.0	5.8	20	6.2					-		
STATION	34	02	2329877 -	OCKLAWAHA	CREEK NR	WETUMPKA	. FLA. (L	AT 30 27	00 LONG	084 38 36)		
NOV , 19 21	74	14.5	10.0	16	5.3	1	1	1.0	3.0	**	4.5	E 24
FEB , 19	75							1.0	2.9	14	42	5.36
20 MAY 22	52 56	21.0	9.1	21	4.6	0	0	.9	3.1	13	27	3.80
JUN		21.0	8.2	21	4.4 = 0	0	0	.7	2.6	9	24	3.64
SEP	43	22.0	5.0	14	5.0			-				
25 APR , 19		18.0	8.4	22	4.5							
23 JUN	37	18.0	8.9	40	5.2							
SEP	45	21.0	8.0	14	4.0	0	0	.6	2.0	8	13	1.61
09 MAR , 19		21.0	7.7	19	4.3							
17 MAY	69	15.5	7.8	18	4.2					-		
19	33	22.0		11					•••			

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATION	23											
MAY . 19	967	18	8	100	1.1		4.1	3.7		30	20	
MAY , 19	968	26	12	340	1.6	.6	6.1	6.0	.5	33	0	7.4
JUN • 19	969 .2	31	24		1.4	.9	6.8	4.8	.4	25		25
MAY , 19		25	14		1.5	.6	6.9	4.1	.4	26		13
JUN , 19	971						6.7					
NOV , 19	.2	28	18	50	1.8	.9	7.1	5.3	.4	28	50	9.6
FEB . 19	975	19	8	210	1.4	.8	6.6	3.6	.4	28	70	5.1
MAY 23												
JUN 12												
SEP 25												
APR • 19	976											
JUN 16	.2	15	4		1.2	.6	7.4	4.0	.5	36	30	1.1
SEP 08												
MAR , 19	977											
STATION	25											
JUN , 19	975					-	,			-		
MAY . 19	266											
18 MAY , 19	.3	. 8	5	110	.8	•2	6.4	2.5	.4	39		.0
31 MAY , 19	.2	8	1	110	.7	.2	6.0	2.5	.4	38	0	.0
22 JUN , 19	• 2	10	3	150	1.0	•2	6.8	2.6	.3	34	0	•2
10 MAY , 19	.2	11	3	40	1.1	.6	9.9	2.6	•3	32		•2
05 MAY , 19	.1	9	1		1.0	.6	5.8	3.1	.4	40		8.0
25 JUN , 19		-	••				6.0					
11		•••				-						•••
STATION	27											
JUN • 19	975											
STATION	31		02329815	- BEAR CE	REEK NR WI	ETUMPKA, I	FLA. (LAT	30 28 14	LONG 084	35 30)		
JUN + 19	975		-							-	-	
STATION	34											
NOV , 19	.1	4	3	70	.4	.2	3.7	1.2	.3	37	40	3.7
FEB . 19	975	3	3	140	.2	.1	3.6	1.3	.3	47	60	3.7
MAY 22	•2	3	3	80	.2	.2	3.4	1.3	.4	50	290	.4
JUN 11								•••		••		
SEP 25												
APR , 19												
JUN 16	.1	2	2		.2	.1	3.2	1.6	.5	59	30	.0
SEP 09			-									
MAR . 19		-										
MAY 19												

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DATE	ELE- VATION ABOVE MEAN SEA LEVEL (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	
STATIO	ON 36	023	29900 <b>-</b> L	AKE TALQU	IN NR BLO	XHAM. FLA	. (LAT 30	23 15 L0	NG 084 38	35)		
AUG , 1	1965											
	68.30	47	6.6	10	12	2.4	8.0	32	83		.2	
01 SEP • 1	68.40	40	6.2	6	7	2.1	5.8	23	54		. 1	
12	68.35		6.4			3.3	7.0		42	,	. 1	
MAY , 1	68.50	48	6.6	7	9	3.3	5.6	24	56		. 1	
JUN , 1		56										
SEP + 1		75	6.6	6	7	1.7	11	34	50		.2	
15.00				SPE-			1.1	34	30	DIS-	DIS-	
DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (ČA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
								4				-
STATIO	ON 37	02:	330000 -	OCHLOCKON	EE RIVER	NR BLOXHA	M. FLA. (	LAT 30 22	59 LONG	084 39 18	)	
MAY . 1				56	6.5	13	16	3.7	8.2	30		356
JUN , 1	1967	28.3	7.0	56	6.4	12	15	3.7	7.8	29	35	4.52
01 MAY , 1	1968									41	42	
28 JUN , 1	1969	24.0	6.1	83	6.4	16	19	4.7	8.5			5.41
10 MAY , 1		29.0	3.2	74	6.2	13	16	4.7	10	40	52	8.66
06 JUN , 1		23.5	5.0	57	6.6	12	15	4.1	6.5	30	56	18.3
15 MAY , 1	378	26.0	3.4	56	-	-00	40.00				19 40	-0.0
28	2790	26.5	6.3	59	6.4	8	10	3.4	7.0	32	66	497
JUN 10	1990	26.0	6.0	61	6.4				***	-		
JUN , 1		26.0		68	6.2	11	14	3.9	8.0	32	44	51.0
STATIO	ON 42	0	2330050 -	TELOGIA	CREEK NR	GREENSBOR	0, FLA. (	LAT 30 33	34 LONG	084 43 36	)	
MAY , :		23.3	6.1	34	6.0	7	8	1.8	4.2	19	24	.33
JUN 9	1968					7	8				28	
03 JUN ,	1969	24.0	6.0	35	6.1			1.7	5.2	20		.43
12	1974	27.0	5.0	38	6.2	3	4	1.9	5.0	19	31	.81
21 FEB ,		15.0	7.5	46	6.3	9	11	2.0	7.1	28	27	1.50
20 MAY		16.0	8.0	36	6.2	8	10	2.4	6.1	29	41	2.40
22	32	23.0	6.5	42	5.7			**	49.49			
11	15	24.0		47	5.8	***						
SEP 29	20	19.5	6.8	41	6.4		- 600 600				10 00	
APR , 1		21.0	5.9	38	6.3							***
JUN 16	11	25.0	4.2	42	4.9	9	11	2.3	4.5	23	31	.92
SEP 09	17	22.5	6.8	41	5.8				ob es			
MAR , 1		20.0	7.5	45	6.7	-	-					

TABLE 3.--Standard complete analyses and field parameters of surface water--Continued

DAT	NE (CA	ARD- ISS I-MG) MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	
STA	TION 36												
AUG	• 1965												
03.		15	5	490	2.2	.5	6.7	5.2	.6	42		.4	
01.		8	3	220	. 9	.6	4.5	3.3	•5	43		2.4	
12.		14			1.1	.8		4.9	.6	44		.4	
05.		14	6		1.3	1.2	2.4	4.1	.5	37		.8	
01.							5.0						
SEP 15.	• 1977	10	5		1.5	1.1	3.4	7.4	1.0	58	30	4.6	
DAT	FL FL	DIS- DLVED LUO- RIDE (F)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STA	ATION 37												
MAY 27.	, 1966	.2	14	2	130	1.3	1.2	1.6	4.3	.5	37		1.6
JUN	, 1967	.2	14	1	30	1.1	.7	2.8	4.6	.5	41	0	.8
	, 1968				60	1.8	1.0	3.0	7.7	.8	45	0	3.5
	, 1969	.2	19	3							40		4.0
	, 1970	•2	19	6	120	1.7	1.4	2.9	6.4	.6			
JUN	1971	•2	16	3		1.3	1.4	3.4	4.5	.5	36		.6
15.								5.2				•••	
28. JUN		.2	14	6	620	1.3	1.3	5.0	5.1	.6	42	0	2.8
10.	1977				**								
06.		•2	16	5	680	1.6	1.6	1.6	5.7	.6	40	25	1.8
STA	ATION 42												
MAY 08	1967	.1	8	2	130	.8	.6	3.4	2.9	•5	42	20	.0
	, 1968	.0	8	1	150	1.0	.5	3.6	3.1	.5	43	0	.2
	, 1969	•1	8	5		.9	.6	4.8	3.4	•5	45		.0
NOV	, 1974								100		43	50	
FEB.	, 1975	•2	11	2	130	1.4		4.1	4.3	.6			2.3
MAY		• 2	11	3	370	1.2	1.6	4.4	4.1	.5	41	60	3.2
JUN	•••									-			
SEP.	•••				44								
APR	, 1976							••		•••			
JUN 22	•••					••				••			
16. SEP	•••	•2	11	2		1.2	1.4	3.6	3.5	.5	38	30	.5
09.	, 1977					••							
17													

DATE	DIS- SOLVE FLUO- RIDE (F) (MG/L	D	MARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
STATION	45												
MAY . 19	966	.2	8	3	250	.7	.4	3,6	1.8	.3	32		.8
26 MAY , 19	967	.1	6	2	80	.6	.6	4.3	1.7	.3	36	0	.4
JUN + 19	968	2	14	6	100	.5	.2	4.2	1.4	•2	18	0	.2
JUN , 19	969		4	2		.4	.0	1.6	1.2	.3	42		.4
12 MAY , 19	970	.1	3	2		.4	1.1	3.6	1.9	.4	46		.8
JUN , 19	971	.1						3.9					
02 FEB , 19	975	-							2.9		27	60	4.2
20 MAY		.2	16	12	300	.8	.6	4.5		.3			
22		-											
SEP													
29 APR , 19	976	-											
22		-											
SEP		. 1	4	3		.4	.5	3.8	2.1	.5	52	30	1.1
09 MAR . 19	977												
17		••				••				•••		-	
STATION	47												
JUN . 19	975	-			-	••	-	-	••			••	
STATIO	N 52												
JUN . 1	969	. 1	22	6	220	1.3	1.2	5.4	4.2	.4	29		2.4
MAY , 1	970	.2	12	6		1.0	.9	3.6	3.5	.4	36		.8
JUN + 1	971							5.1					
JUN , 1				-									
JUN , 1	977	.2	14	6	540	1.4	1.3	2.0	5.1	.6	41	25	2.0
STATION	1 55												
NOV + 1	974	.2	22	7	360	1.5	1.1	5.5	7.9	.7	43	50	4.8
26 APR , 1	975												
JUN 17													
STATION													
JUN + 1													
STATION													
MAY , 1		.1	12	0	20	1.3	.3	6.5	2.2	.3	28	20	.4
JUN + 1		٠2	16	3	100	1.6	.4	7.4	2.2	•2	23	0	.0
JUN • 1		. 1	14	1		1.3	.0	7.8	2.2	•3	26		.0
NOV , 1		.2	15	4	80	1.6	.5	7.1	2.5	.3	26	50	2.5
FEB , 1	975	.2	18	5	150	1.8	.2	7.0	2.6	.3	24	20	2.5
22													
JUN 11													
SEP 29													
22	976												
JUN 16		٠2	15	3		1.5	.5	6.5	2.7	.3	27	40	.5
SEP 09													
MAR . 1	977					••							

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	BICAR- BONATE (HC03) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
STATIO	N 45		02330100	- TELOGIA	CREEK NR	BRISTOL.	FLA. (LA	T 30 25 3	5 LONG 08	4 55 40)	si,	
MAY , 1	966 323			25	6.0	5	6	2.0	3.0	16		14.0
MAY . 1	967	22.2	7.2	24	5.7	3	4	1.3	3.0	15	27	.24
JUN , 1	968	24.0	7.7	34	6.3	8	10	4.8	3.2	21	32	5.09
JUN • 1	969	24.0	5.7	16	5.9	2	2	.8	1.5	7	14	2.28
MAY , 1		19.0	6.8	20	6.2	2	2	.7	3.0	13	32	10.3
JUN + 1	971	21.0	7.2	17								
FEB • 1		16.5	8.2	24	4.9	4	5	52	5.7	27	39	23.0
MAY 22	164	21.0	7.1	24				3,02				23.0
JUN		23.0	6.9	33	5.0			-				
10 SEP 29	162	19.0		20	5.1							
APR . 1	976 78	19.5	7.5	18	5.5							
JUN	94	22.0	6.5	18	4.2	1	2		2.7	12	20	5.10
16 SEP 09	184	22.0		25	4.4			.8		16		3.10
MAR , 1		17.5	8.2	22	5.0							
		17.5										
STATIO			02330120	- TELOGI	A CREEK A	T HOSFORD	FLA (LAT	30 22 25	LONG 084	48 22)		
JUN , 1	975 198	23.5	7.1	24	5.6							
STATIO	ON 52	023	30150 - 00	HLOCKONEE	RIVER NR	SMITH CR	EEK, FLA.	(LAT 30	10 35 LON	IG 084 40	05)	
JUN + 1	969											
09 MAY , 1	970	29.0	4.2	67	6.2	16	19	6.4	7.0	38	49	
JUN . 1	971	23.0	5.3	44	6.6	7	8	3.3	5.6	53	49	
JUN , 1	975	27.0	5.3	57					- 50 40			
JUN , 1	977	27.0	5.2	59	6.4							
06	750	27.5		72	6.4	8	10	3.4	7.0	28	42	85.0
STATIO		0;	2330166 -	OCHLOCKON	EE RIVER	NR MCINTY	RE, FLA.	(LAT 29 5	9 19 LONG	084 30 0	9)	
NOV , 1	-	15.5	8.1	83	7.0	15	18	6.2	13	49	70	
APR • 1	20600			45					6.0			
JUN 17	3850	27.0	5.2	52	6.2							
STATIO	ON 56		0235850	0 - N. MOSQ	UITO CREEK	AT CHATTAHO	OCHEE, FLA.	(LAT 30 42	2 08 LONG 0	84 49 35)		
JUN , 1		25.0		40	5.9						.00	
STATIO	N 58		02358600 -	FLAT CR	EEK NR CH	ATTAHOOCH	EE FLA (L	AT 30 37	43 LONG 0	84 50 06)		
MAY , 1	967	21.1	8.4	39	6.3	11	14	2.6	3.2	25	24	1.61
JUN , 1						13	16	3.7	3.8	28	36	2.81
03 JUN , 1		22.0	7.2	41	6.7	13	16	3.3	2.8	25	38	1.23
12 NOV • 1	974 22	15.0	9.0	43	6.7	11	14	3.3	5.5	30	31	1.87
FEB , 1		14.5		35	7.5	13	16	4.3	3.3	30	46	.60
20 YAM	39	20.0	8.3	43	6.4				3.3			
JUN	38	24.0		45	5.9							
11 SEP 29	52	19.5		43	7.1	-						-00-00
APR , 1		20.0		40	6.7							
JUN		22.0		41	5.3	12	15	3.6	3.0	26	30	1.94
SEP	24	21.0		46	6.6			3.0				
09 MAR • 1				42	7.0	-						
17	56	16.0	8.2	42	1.0							

TABLE 4.--Nutrient and bacteriological analyses of surface water.

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL IN- ORGANIC CARBON (C) (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
STATIO	N 2	02	327100 -	SOPCHOPPY	RIVER NR	SOPCHOPPY	, FLA. (	LAT 30 07	45 LONG	084 29 40	)	
OCT . 1	974	.02	00	.02	•33	.29	.06	.06	12	18	836	B40
31			.00									
20	4.5	.00	.00	.03	.16	.13	.07	.06	6.0	28		40
11 JAN , 1	975	.00	.01	.02	•21	.18	•05	.04				
23 MAR	778	.00	.02	.03	.54	.49	.02	•02		•••	0	28
05 APR	82	.00	.02	.03	.58	•53	.10	.10				B30
29 MAY	34	.03	.03	.03	.64	•55	.05	.05			B10	116
13	113	.00	.03	.03	.69	.63	.02	.02	30	1.0	B20	50
JUN 25	46	.00	.02	.03	.73	.68	.03	.03			7	50
23	580	.00	.02	.05	.71	.64	.02	.02				
AUG 27	96	.03	.02	.06	.79	.68	.04	.04		- 22	>3	>16
SEP 18	145	.01	.02	.05	.79	.71	.04	.03	39	1.0	260	150
OCT 10	612										107	B52
NOV 18	38	.01	.02	.06	.66	•57	.04	.04	33	2.0	120	B36
DEC 29	33	.00	.02	.03	.47	.42	.04	.03				
JAN , 1		.03	.03	.04	.53	.43	.03	.03			87	816
FEB 18	40			.04	.58	.53	.04	.04			>1	B16
MAR		.00	.01									
24 APR	86	.00	.01	.04	.59	•54	.04	.03			>1	B14
21	5.2	•00	.01	.02	.39	.36	.06	.05			>3	B20
01 JUN ,	285 976	.00	.02	.04	.50	.44	.02	•02	36	1.0	>10	B24
16	75	.00	.02	.04	.60	.54	.06	.04			>3	B24
22 AUG	66	.01	.03	.07	.69	.58	.03	.03			853	108
19 SEP	86	.00	.02	.04	.69	.63	.04	.04		•••		
09	334	.01	.01	.04	.69	.63	.03	.02		••	53	38
12	620	.00	.02	.05	.75	.68	.03	.03	39	1.0	50	20
02	97	.00	.02	.04	.55	.49	.03	.03			80	16
DEC 14	404	.00	.01	.04	.49	.44	.02	.02				,
JAN ,	1977 312	.00	.02	.03	.36	.31	.02	.02				
FEB 15	96	.01	.02		.53	.46	.03	.03				
MAR 07	880	.00	.02		.49	.44	.02	.02				
APR	9.7	.01	.01		.45	.38	.06	.06	22	13		
MAY					.40	.35	.07	.06	11	18		
09 JUN	5.2	.00	.01					.05	**			
JUL	4.4	.00	.00	.01	.17	.16	.08					
12 AUG	4.0	.01	•00		.30	.27	.09	.06				
03 SEP	49	.00	.01	.06	.87	.80	.05	.04	44			
15	22								43	2.0		

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL IN- ORGANIC CARBON (C) (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
STATIO	ON 3		2328500 -	OCHLOCKO	NEE RIVER	NR CONCO	RD FLA (L	AT 30 40	08 LONG 0	84 18 19)		
JUN , 1				0.7		90	16	16	15	2.0		
10 JUN , 1		.08	.05	.07	1.0	.80	.15	.15	15	2.0		
06	76	.75	.03	.23	1.4	•40	.40	.35			9.0	-
STATIO	N 5 02	328799 -	LAKE IAMO	NIA NR BRA	ADFORDVIL	LE, FLA.	(LAT 30 39	9 04 LONG	084 12 3	0)		
JUN + 1			0.0	0.1	, -			0.1				
03	99.27	.00	.00	.01	•45 ·	.44	•02	•01				
STATIO	ON 7	0	2329000 -	OCHLOCKON	EE RIVER	NR HAVANA	A. FLA. (L	LAT 30 33	14 LONG	084 23 03	)	
10V , 1	974 119	.87	.01	.04	1.2	.33	•31	.30	8.0	6.0	0	10
04	152	.91	.01	.02	1.2	.33	.41	.35				
EB , 1		.10	.02	.07	.62							830
1AY 02	1350					.43	.10	.07			850	B52
20	2620	.15	.06	.06	.85 .95	.54 .68	.16	.12	14	2.0	30 130	140 70
10 30	1835 664	.13	.05	.07	.99	.74 .43	.17	.15	9.0	2.0	40	120
25	3340	.11	.01	.04	.81	.65	+10	.09			67	210
11 CT	385	.60	.01	.05	1.1	.48	.17	.16	8.0	4.0	40	220
13	827	.38	.02	.04	1.0	•59	.19	.16	6.0	3.0	97	102
04	290 393	.44	.02	•11 •11	.79	.22	.20	.19			813	40
AN . 19		.23	.04	.05	.71	.39	.32	.08	9.0	6.0	530	B450
EB 27	985	.25	.01	.04	.74	.44	.14	.11	10	3.0	290 B43	1020 B24
AR 31	1840	.22	.03	.09	1.1	.77	.13	.11		3.0	240	160
PR 30	219	.79	.02	•02	1.2	.46	.26	•22			B33	B10
AY 21	5460	.01	.02	.04	.70	.63	.15	.11	14	.0	123	160
UN 18	485	.25	.02	.08	.87	•52	.21	.14			B10	88
UL 23	676	.30	.01	.07	.64	.26	.12	•11			200	268
UG 17	611	.47	.02	.08	1.0	.47	.15	.13	9.0	2.0		
CT , 19	976 157	.51	.03	.07	.97	.36	.25	.21			52	60
0V 02 30	587 5290	.40	.02	.07	.92	.43	.19	.09	12		47	36
EC 28		.23	.02	.05	.61	.52	.12	.09	13	3,0		-
AN , 19	977 3500	.23					.08	.07	46 00			
EB	1180	.32	.05	.06	.64	.33	.09	.07				
AR 07			.02	.13	.79	.32	.11	.08	5.0	4.0		
PR 12	710	.18	.02	.11	.82	.51	.12	80.				••
AY		.42	.02	.13	1.1	.60	•22	.18	10	6.0		••
09 UN	205	.62	.01	.06	1.0	. 36	.18	.16	7.3	6.0		
06 UL	108	.74	•02	.06	1.1	•29	•32	.28		-	-00	
12 UG	72	.34	.01	.08	.84	.41	.31	.25	-80	-	••	
03 EP	120	1.1	.04	.15	1.8	•54	.30	.28	13	-		
14	306	.52	.03	.06	1.1	.53	.34	.31	12	3.0		

DATE	ELE- VATION ABOVE MEAN SEA LEVEL (FT)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL IN- ORGANIC CARBON (C) (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
STATION	8 02	2329200 -	LAKE JACKS	SON NR TAL	LAHASSEE	FLA. (LA	T 30 31 4	3 LONG 08	34 21 30)			
OCT • 197						122						
31 MAY , 197		.02	.00	.03	.63	•58	.02	•01	4.0	1.0		
AUG	85.23	.00	• 01	• 01	.71	•69	.02	•00	6.0	1.0		
25 OCT	85.46	.01	.00	.02	.49	•46	.01	.01	3.0	2.0		
16 MAY , 197	85.29	.00	.00	•01	•54	•53	.02	.00	4.0	.0		
03 AUG	84.83	.00	.00	.01	•46	.45	.02	.00	2.0	1.0		
18	84.81	.00	.00	.01	.42	•41	.02	.01	5.0	.0		
DEC 15	84.98	.01	.00	.01	.38	.36	.01	.00	6.0	1.0		
19	77 85.72	.00	.00	.01	.36	.35	.02	.00	6.0	.0		
14	84.02	•00	.00	.01	•49	.48	.03					
17	04.02.	• 0.0	.00	• 01	• 47	•40	.03	.01	6.0	• 0		
DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL IN- ORGANIC CARBON (C) (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
JUN , 19	975	.08	.04	.04	.82	.66	.13	.12	13	2.0		
STATION	N 10	0	2329352 -	ATTAPULGU	S CREEK	AT JAMISON	, FLA. (L	AT 30 39	46 LONG	084 27 48	)	
NOV , 1	974 21	.49	.09	.63	1.7	.54	.04	.02	4.0	1.0		
19 FEB , 1	975	1.9	.06	.72	3.3	.67	.10	.06	15	1.0		
18 MAY	465			.04	2.0	.69	.09	.07	10	2.0		
21	90	1.3	.03		1.6	.82	.13	.10	12	3.0		
SEP	265	.71	.06	.07			.09	.07	8.0	2.0	143	600
17 APR , 1	52 976	2.0	.02	.04	2.6	.61		.09			270	252
20	44	3.4	.03	30	4.5	.78	.10					
JUN 14	56					••			-			268
SEP 08	48	1.9	.03	.07	2.5	.50	.09	.08			B150	
MAR , 1	977 206	.68	.03	.05	1.6	.87	.36	.32			200	430
STATIO	N 11		02329404	- SWAMP	CREEK AT	JAMIESON,	FLA. (LA	т 30 39 4	4 LONG 08	34 26 55)		
	0.75									2.0		
JUN + 1	144	.00	.07	.11	1.0	.86	.25	.22	13	2.0	Ţ	
STATI	QN 12	WI	LLACH00CH	EE CREEK N	R DOGTOW	N FLA (LAT	30 40 57	LONG 084	33 08)			
JUN • 10	1975 142	.06	.04	.05	.89	.74	.09	.07	13	2.0		*

DATE	INSTAN- TANEOUS DIS- CHARGE	TOTAL NITRATE (N)	TOTAL NITRITE (N)	TOTAL AMMONIA NITRO- GEN (N)	TOTAL NITRO- GEN (N)	TOTAL ORGANIC NITRO- GEN (N)	TOTAL PHOS- PHORUS (P)	TOTAL ORTHO PHOS- PHORUS (P)	TOTAL ORGANIC CARBON (C)	TOTAL IN- ORGANIC CARBON (C)	FECAL COLI- FORM (COL. PER	STREP- TOCOCCI (COL- ONIES PER
DATE	(CFS)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	100 ML)	100 ML)
STATIO	N 13	02	2329490 -	WILLACOOC	HEE CREEK	NR QUINC	Y, FLA. (	LAT 30 38	13 LONG	084 30 02	2)	
NOV . 1												
19 FEB , 1	975	.11	.01	.02	.40	.26	.04	.03	5.0	1.0		
18	187	• 05	.03	.05	•57	.44	.29	.28	10	2.0		
21 JUN	66	.17	.02	.02	.61	.40	.13	.10	1.0	2.0		••
10	135	.09	.05	.06	.91	.71	.11	.10	10	2.0		
18	131	.15	.01	.03	.76	.57	.07	.05	9.0	3.0	3200	8000
APR , 1 20	39	.26	.01	.03	.68	.38	.06	.05			270	252
JUN 14	47											
SEP 08	41	.26	.01	.02	.58	.29	.07	.06			8533	680
MAR , 1	977									••		
16	110	.20	•02	.04	.57	.31	.08	.06		-	180	1365
STATION	N 14		02329500	- LITTLE	RIVER NR	QUINCY,	FLA. (LAT	30 35 14	LONG 084	29 48)		
MAY . 1		- 22-	- 12		- 32.00	92		120	4.4	100		
23	172	.75	•02	•02	1.4	•66	•09	.09	9.0	2.0		
10	336	•50	.04	.04	1.4	.86	.12	.11	14	1.0		
STATIO	N 15	0232953	4 - QUINC	Y CREEK A	T STATE H	WY 267 AT	QUINCY,	FLA. (LAT	30 36 00	LONG 084	34 50)	
NOV , 1												
20 FEB , 1		•25	.02	.02	2.0	1.8	•20	.05	7.0	1.0		
19	34	.26	.03	.07	.78	.42	.11	.06	6.0	3.0		
20 JUN	32	.27	.02	.04	.88	•55	.11	.08	5.0	3.0		
10 SEP	18	.32	.01	.02	.87	•52	.11	.10	6.0	3.0		
18	41	.20	.01	.08	.85	.56	.05	.03	4.0	3.0	767	1720
APR , 1 23	11	.37	.01	.07	.94	.49	.17	.13			220	224
JUN 15	14											
AUG 11	17	.37	.01									
SEP 08	23	.35	.01	.04	.74	.34	.06	.04	••		250	500
MAR + 1	977											
16 MAY	33	•39	.01	•02	•96	.54	.20	.13	-		8140	700
18	5.9											
STATION	N 16		02329538	- HOLMAN	BRANCH N	R QUINCY,	FLA. (LA	r 30 36 34	LONG 08	4 34 57)		
NOV , 1	974					-624				2.0		
20 FEB , 1	.82	.04	.01	.01	.41	.35	.20	.11	6.0	2.0		
19	4.4	•22	.01	.03	.51	.25	.09	.05	4.0	2.0		
20	4.1	.26	.01	.01	.52	.24	.17	.16	1.0	2.0		
JUN 10	1.7	.30	.01	.02	.58	.25	.21	.21	2.0	2.0		
SEP 25	1.2	.32	.01	.02	.56	.21	.08	.06	3.0	2.0	1020	1720
APR , 1		.34	.01	.02	.64	.27	-10	.08			1030	1120
JUN	1.6											
SEP						.17	.07	.06			1070	4400
08 MAR , 1	2.0 977	.29	.01	.01	.48						280	B1660
18	4.8	.34	.01	.00	.54	.19	.21	.19			200	2.500

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL: IN- ORGANIC CARBON (C) (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
STATIO	N 17		02329542	- QUINCY	CREEK AT	QUINCY,	FLA. (LA	T 30 35 32	LONG 084	33 49)		
NOV , 1												
FEB + 1		.31	.01	.07	.58	.19	.09	.03	4.0	3.0		
19 MAY	42	.23	.03	.09	.76	.41	.13	.07	6.0	4.0		
20 JUN	36	.28	.01	.03	.80	.48	.12	.09	12	3.0		
10 SEP	20	.32	.01	.03	.81	.45	.07	.06	3.0	4.0		
18 APR , 1	43	.21	.01	.12	.84	.50	.07	.05	5.0	4.0	833	B1680
21 JUN	15	.39	.01	.06	.88	.42	.07	.04			190	308
15	17											
SEP 08	18	.34	.01	.04	.66	.27	.07	.04			440	780
MAR , 1	43	.39	.01	.06	.79	.33	.06	.04			230	730
STATIO	N 18		02329548	- TANYARD	BRANCH NI	R QUINCY	, FLA. (L	AT 30 34 4	2 LONG 08	4 33 30)		
NOV . 1	974	.51	.04	.03	1.5	1.0	.17	.14	14	7.0		
FEB , 1	975											
19 MAY	6.7	.41	.04	.11	.97	.41	.13	.07	7.0	8.0		
21	4.5	.72	.02	.05	1.0	•25	.30	.28	3.0	8.0		
SEP	3.3	.47	.02	•02	.88	.37	.16	.16	4.0	4.0		
25 APR + 1	3.0 976	.60	.02	.06	.92	.24	.07	.06	4.0	6.0	B140	440
21 JUN	2.6	.86	•02	.08	1.3	.34	.21	.15			83970	680
15 SEP	3.1											
08 MAR , 1	3.8	.74	.02	.04	1.0	.26	•11	.08		••	966	660
18	6.1	.80	.03	.06	1.1	.25	.10	.06			B2760	1520
STATIO	N 19		02329553	- HUBBERT	BRANCH N	R QUINCY	• FLA. (L	AT 30 35 3	9 LONG 08	4 32 48)		
NOV , 1		21	.01	.03	40	16	.05	.03	6.0	2.0		
19 FEB • 1		•21			.40	.15				2.0		
18		.29	.04	.12	1.0				8.0			
21	6.7	.31	.01	.05	.77	.40		.09	.0	2.0		-
SEP	4.6	.29	.02	.03	.70	.36		•21	5.0	2.0		
18 APR , 1	976	.24	.01	.06	.79	.48	.09		9.0	3.0	1070	3000
21 JUN	2.3	.29	.01	.04	.70	.36	.09	.07			420	960
14 SEP	2.8											
08 MAR , 1	2.8	.28	.01	•02	.50	•19	.08	.07			240	B1840
16	9.3	.38	.02	.11	.82	.31	-11	.09			440	1070
STATIO	N 20		02329556	- WINKLEY	BRANCH N	R QUINCY	• FLA. (L	AT 30 36 0	3 LONG 08	4 32 02)		
JUN , 1	975	.61	.01	.02	• 95	.31	.40	.40	6.0	1.0		

TABLE 4.--Nutrient and bacteriological analyses of surface water--Continued

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL IN- ORGANIC CARBON (C) (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
STATIO	N 21		02329565	- LITTLE	RIVER NR	LITTMAN.	FLA. (LAT	30 33 1	2 LONG 084	30 54)		
MAY , 1	975											
23 JUN	269	.72	.02	.04	1.3	.57	.28	.26	7.0	3.0		
12 APR , 1		.10	.05	.07	.98	.76	.21	.19	13	2.0		
23 JUN	119	1.9	.03	.10	2.6	.60	.14	.14			B120	B56
16 SEP	149											
09 MAY , 1	144	.08	.02	.02	.45	.33	.12	.11	**		200	364
19	56											
STATION	22		02329582	- HURRICANE	E CREEK N	R HAVANA	FLA. (LA	T 30 34	57 LONG 08	34 28 44)		
NOV , 1	974											
19 FEB , 1	.04	.11	.00	.02	.44	•31	.06	.03	4.0	18		
18 MAY	14	.09	.02	.14	1.1	.85	.32	.22	12	1.0	••	
20 JUN	11	.06	.01	.03	.84	.74	.09	.03	1.0	3.0		
10 SEP	2.7	.14	.01	.03	.81	.63	.39	.36	22	2.0	••	
17 APR , 1	.98	.29	.02	.09	1.0	.65	.15	.11	10	5.0	>800	>1600
20	2.4	.12	.01	.08	.72	.51	.05	.03			1000	1360
JUN 14	5.2											
08 MAR , 1	.49	.27	.01	.04	.71	.39	.25	.20			732	880
16	22				.64						B190	1200

TABLE 4.--Nutrient and bacteriological analyses of surface water--Continued

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL IN- ORGANIC CARBON (C) (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
STATIO	ON 23		02329600	- LITTLE	RIVER NR	MIDWAY.	FLA. (LAT	30 30 44	LONG 084	31 25)		
NOV ,	1974											
21 FEB ,	155	2.0	.03	.04	2.5	.48	.19	.14	9.0	2.0		
19		.62	.06	.15	1.4	.64	.16	.10	14	2.0		-
23	199	.62	.02	.04	1.2	.54	.13	.11	12	3.0		
12 SEP	1390	.12	.05	.07	1.0	.76	.15	.13	12	4.0		
25		.97	.03	.04	1.6	.57	.12	.10	10	2.0	410	208
APR . 23		1.6	.02	.04	2.1	.44	.11	.09		-	B170	856
JUN 16	165							••				
SEP 08		1.0	.02	.03	1.3	.25	.12	.10			8130	204
MAR , 18		.47	.02	.04	.92	.39	.24	.22	••		B110	188
STATI	ON 25		02329646	- RICHLAN	DER CREEK	NR QUINC	Y FLA (LA	T 30 31 1	8 LONG 08	4 33 15)		
JUN .		.14	.07	.13	2.4	2.1	.25	.19	12	2.0		
11	3.7	•14	• • • •	•15	2.4	2.1	.23	***	16	2.00		
STATI	ON 27	02	329700 - 1	ROCKY COMP	ORT CREE	K NR QUIN	CY+ FLA.	(LAT 30 3	2 44 LONG	084 38 0	9)	
JUN ,		.39	.02	.03	.85	•41	.13	•11	3.0	3.0		••
STATI	ON 29	023	29777 - R	OCKY COMF	ORT CREEK	NR WETUM	PKA, FLA.	(LAT 30	29 05 LON	G 084 35	35)	
JUN , 11		.34	.02	•02	.74	.36	•12	•11	3.0	2.0		•
STATI	ON 31		02329815	- BEAR C	REEK NR W	ETUMPKA.	FLA. (LAT	30 28 14	LONG 084	35 30)		
JUN , 11		.02	.01	.01	.36	.32	.08	.08	5.0	.0		
STATI	ON 34	0	2329877 -	OCKLAWAH	A CREEK N	R WETUMPK	A, FLA. (	LAT 30 27	00 LONG	084 38 36	)	
NOV ,		- 220				22		0.1	,,	.0		
21 FEB ,	1975	.00	.01	.01	.24	•22	.01	.01	11			
20	52	.00	.02	.03	.33	.28	.02	.01	11	.0		
22	56	.00	.01	.01	.32	.30	.02	.02	3.0	.0		
11 SEP	43	.00	.01	.01	.20	.18	.02	.02	3.0	1.0		
25 APR ,	71 1976	.03	.01	.02	.40	. 34	•02	.02	15	.0	220	124
23 JUN		.01	.00	•02	.27	.24	.01	.00			370	800
16 SEP	45							-				
09	50	.01	.01	.01	.27	.24	.01	.01			250	••
MAR , 17		.00	.01	.00	.24	.23	.28	.27			210	188
19	33								-			

TABLE 4.--Nutrient and bacteriological analyses of surface water--Continued

DATE	ELE- VATION ABOVE MEAN SEA LEVEL (FT)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)		FECAL COLI- FORM (COL. PER 100 ML)	STR TOCO (CC ONI PE 100
STATION	36	02329900	- LAKE T	ALQUIN NR	BLOXHAM.	FLA. (LAT	30 23 15	LONG 084	38 35)			
SEP , 19 15	68.25	.11	.01	.08	.67	.47	•22	•21				
STATION	١ 37	02:	330000 - (	OCHLOCKONE	E RIVER	NR BLOXHAM	FLA. (L	AT 30 22	59 LONG	084 39 18)		
MAY , 19 28		.09	.02	.07	.74	•56	•12	.11	11	3.0		
10 JUN , 19		.04	.02	.11	.78	.61	.13	.10	8.0	4.0		
06	429	.03	.01	.24	.64	.36	.08	.05		••		
STATION	N 42	0	2330050 -	TELOGIA (	CREEK NR	GREENSBORO	FLA. (L	AT 30 33	34 LONG	084 43 36)		
NOV , 19 21 FEB , 19	20	.44	.01	.03	.82	.34	.06	.04	7.0	1.0	•••	
20 MAY	21	.19	.02	.10	.92	.61	.13	.10	16	1.0		
22 JUN	32	.19	.01	.07	1.1	.88	.16	•11	9.0	3.0		
11	15	.14	.02	.05	.96	.75	.16	.13	12	1.0		
29 APR , 19	20	.13	.01	.02	.70	•54	.08	.07	10	3.0	90	2
22 JUN	9.8	.11	.01	.10	.72	.50	.09	.05			120	
16 SEP	11											
09	17	.10	.01	.06	.67	.50	.12	.10		-	90	2
MAR , 19 17	34	.36	.01	.07	.95	•51	.36	.33			B60	1
STATION	4 4 3	JUL	NIPER CREE	EK NR GREE	NSBORO FI	LA (LAT 30	31 50 LON	NG 084 44	16)			
JUN , 19	75 3.7	.26	.01	.03	.85	•55	.11	.11	11	1.0		

TABLE 4.--Nutrient and bacteriological analyses of surface water--Continued

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL IN- ORGANIC CARBON (C) (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
STATI	ON 45		02330100	- TELOGIA	CREEK NR	BRISTOL,	FLA. (LAT	30 25 3	5 LONG 08	4 55 40)		
FEB ,	1975											
20		.00	.02	.03	•56	.51	.07	.05	15	.0		
22 UN	164	.13	.01	.02	.68	•52	.08	.08	11	.0		
10	162	.12	.01	.02	.70	•55	.06	.06	11	1.0		
29 APR , ]		.14	.01	.01	•55	.39	.06	.05	9.0	.0	8130	312
22		.17	.01	.04	.58	.36	.05	.03			107	256
JUN 16 SEP	94					••						
09	184	.09	.01	.02	.48	.36	.05	.04			127	B60
MAR . 1		.17	.01	.03	.67	.46	.56	.56			B130	200
STATI	1975						FLA (LAT		7.70			
10	198	.10	.01	.02	.64	.51	.05	.05	8.0	1.0		
STATIO	ON 48		BIG CRE	EK NR HOSE	ORD FLA	(LAT 30 2:	3 20 LONG	084 47 2	4)			
JUN • 1	18	.00	.01	.02		.44	.02	•02	12	1.0		
STATIO	ON 49		YELLOW	CREEK NR W	ARD FLA	(LAT 30 16	5 58 LONG	084 45 0	8)			
	9.9	•00	•02	.03	•70	.65	•02	•02	23	1.0		
STATIO	N 50	М	ILL CREEK	NR SMITH	CREEK FLA	(LAT 30	12 31 LONG	084 40	07)			
JUN • 1	9 <b>7</b> 5 5.0	• 0 0	•02	.06	•52	.44	.03	.03	21	1.0		
STATIO	N 51	IN	DIAN CREFK	NR SMITH	CREEK FL	A (LAT 30	11 54 LON	IG 084 43	3 42)			
JUN + 19		-00	.03	.04	.82	•75	.02	.02	29	1.0		
	44	• 0.0	•03	• 07	•	• 1.3	• 02	.02	67	1.0		

TABLE 4.--Nutrient and bacteriological analyses of surface water--Continued

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL IN- ORGANIC CARBON (C) (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
STATION	52	023301	50 - OCHL	OCKONEE R	IVER NR S	MITH CREE	K. FLA. (I	LAT 30 10	35 LONG	084 40 05	)	
JUN , 197 12 2 JUN , 197	2580	•09	.02	.04	•71	•56	•11	.09	10	2.0		••
06	750	.10	.01	.09	.59	.39	.07	.04				
3444								77.7				
STATION	55	0233	0166 - OC	HLOCKONEE	RIVER NR	MCINTYRE	, FLA. (L	AT 29 59	19 LONG 0	184 30 091		
NOV , 197	74	.10	.01	.03	.43	.29	.04	.03	7.0	4.0		
APR , 197		.20	.03	.07	.80	.50	.11	.07				
17 20 JUN									12	2.0		
17	3850	.05	.04	.02	.62	.51	.10	.08	12	2.0		
STATION	56	023	358500 - N	MOSQUITO	C AT CHA	ATTAHOOCHE	FLA (LAT	30 42 08	LONG 084	49 35)		
JUN , 19		12	1.00				0.0	.06	4.0	2.0		
11	49	.11	.02	.02	.57	.42	.06	.00	4.0	2.0		
STATION	57	MOSQU	ITO CREEK	AT CHATTA	HOOCHEE F	FLA (LAT 3	00 41 19 L	ONG 084 5	50 30)			
JUN • 19		12	0.3			1. 2	22		0.0	2.0		
11	110	.17	.03	•14	1.5	1.2	.23	.17	9.0	3.0		
STATION	58	02	358600 -	FLAT CREE	K NR CHA	TTAHOOCHEE	FLA (LAT	30 37 4	3 LONG 08	4 50 06)		
NOV , 19	74									2.5		
21 FEB , 19	55	.51	.01	.01	.75	.22	.16	.13	7.0	1.0		
20	41	.18	.02	.05	.43	.18	.32	.25	3.0	2.0		
22	39	.49	.01	.02	.82	.30	.48	.45	.0	3.0		
JUN 11	38	.43	.02	.03	.94	.46	.15	.15	5.0	2.0		
SEP					.89	.40	.12	.12	4.0	3.0	690	>1600
29 APR , 19	52 76	.45	.02	•02								
22 JUN	27	.60	.01	.04	1.0	.38	.12	.09	-		967	144
16	24											
SEP 09	31	.67	.01	.01	.97	.28	.13	.10			1360	1320
MAR . 19	56	.49	.01	.01	.73	•22	.36	.32			1365	2600
17	30	• 77						107				

TABLE 5.--Pesticide analyses of streams.

	TOTAL	N DANE	- TOTA			AL		TOTAL ENDRIN	TOTAL HEPTA- CHLOR	TOTAL HEPTA- CHLOR EPOXIDE	TOTAL LINDANE	TOTAL TOX- APHENE
DATE	(UG/L	) (UG/L	.) (UG/	L) (UG/	<b>(L)</b> (UG	/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
STATION	2	0232	27100 - S	ОРСНОРРУ	RIVER NR	SOPCH	OPPY, FLA	. (LAT :	30 07 45	LONG 084	29 40)	
FEB , 19	.0	0 -		00 .	.00	.00	.00	.00	.00		.00	
JUN 21	.0	0 -		00 .	.00	.00	.00	.00	.00		.00	
MAR , 19 26	.0	0 -		00	.00	.00	.00	.00	.00	-	.00	-
OCT 13	.0	0 -		00	.00							
OCT , 19	.0	0 .		00 .	.00	.00	.00	.00	.00	.00	.00	
SEP , 19 26	.0	0 .		00 .	.00	.00	.00	.00	.00	.00	.00	0
JUN • 19	.0	0		00 .	.00	.00	.00	.00	.00	.00	.00	0
APR + 19	.0	0 .		00 .	.00	.00	.00	.00	.00	.00	.00	0
STATION	7	023	329000 -	OCHLOCKON	NEE RIVER	NR HA	VANA, FLA	. (LAT	30 33 14	LONG 084	23 03)	
MAY , 19		D 1	4D	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEP 11				ND	ND	ND	ND	ND	ND	ND	ND	ND
NOV 13	N	D N	ID.	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB , 19	76			ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 21	N	D N	ND .	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 17	N	D N	ID	ND	ND	ND	ND	ND	ND	ND	ND	ND
NOV 02	N	D N	ID I	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB , 19		D N	ID I	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 09	N	D 1	1D	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 03	N	D N	ND .	ND	ND	ND	ND	ND	ND	ND	ND	ND
STATION	15	02329534	- QUINCY	CREEK AT	STATE H	WY 267	AT QUINC	Y, FLA.	(LAT 30	36 00 LON	IG 084 34	50)
MAY , 19	.0	0 .	.0 .	00 .	.00	.00	<.01	.00	.00	.00	.00	0
AUG , 19	.0	0	.0 .	00	.00	.00	.00	.00	.00	.00	.00	0

TABLE 5.--Pesticide analyses of streams--Continued

DATE	TOTAL PCB (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)	TOTAL DI- AZINON (UG/L)	TOTAL	TOTAL MALA- THION (UG/L)	TOTAL METHYL PARA- THION (UG/L)	TOTAL METHYL TRI- THION (UG/L)	TOTAL PARA- THION (UG/L)	TOTAL TRI- THION (UG/L)
STATION	2	023271	00 - SOPCHO	PPY RIVER	NR SOPC	HOPPY, FLA	. (LAT	30 07 45 L	ONG 084 2	9 40)	
FEB • 196 07	58			•••				••			
21		.00	.00	.00							
MAR , 19	59	.00	.00	.00	-				-		
13								-			
OCT + 19	71	.00	.00	.00	.00		.00	.00		.00	
SEP , 19		.00	.00	.00	.00		.00	.00			-
JUN , 19	76									.00	
01 APR , 19		.00	.00	.00							
14	•0	.00	.00	.00						- 60-60	
STATION	7	02329	000 - OCHLO	CKONEE RI	VER NR HA	AVANA, FLA	. (LAT	30 33 14 L	ONG 084 2	3 03)	
MAY . 197	5				ND	ND	ND	ND	ND	ND	ND
SEP 11					ND	ND	ND	ND	ND	ND	ND
NOV 13		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB , 197	76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY									100		ND
21 AUG		ND	ND	ND	ND	ND	ND	ND	ND	ND	
17 NOV		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
02 FEB • 197	77	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
15 MAY		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
09		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 03					ND	ND	ND	ND	ND	ND	ND
STATION	15 02:	329534 -	QUINCY CREE	K AT STAT	E HWY 26	7 AT QUINC	Y, FLA.	(LAT 30 3	6 00 LONG	084 34 50	)
MAY . 197	75										
20 AUG , 197	.0	.00	.00	.00	<.01	.00	.00	.00	.00	.00	.00
11	.0	.00	.00	.00							

TABLE 6.--Pesticides analyses of bottom sediments of streams.

	ALDRIN IN BOTTOM MA- TERIAL UG/KG)	CHLOR- DANE IN BOTTOM MA- TERIAL (UG/KG)	DDD IN BOTTOM MA- TERIAL (UG/KG)	DDE IN BOTTOM MA- TERIAL (UG/KG)	DDT IN BOTTOM MA- TERIAL (UG/KG)	DI- ELDRIN IN BOTTOM MA- TERIAL (UG/KG)	ENDRIN IN BOTTOM MA- TERIAL (UG/KG)	HEPTA- CHLOR IN BOTTOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE IN BOT- TOM MA- TERIAL (UG/KG)	LINDANE IN BOTTOM MA- TERIAL (UG/KG)	TOX- APHENE IN BOTTOM MA- TERIAL (UG/KG)	PCB IN BOTTOM MA- TERIAL (UG/KG)
STATION 2	6	02:	327100 -	SOPCHOPPY	RIVER NR	SOPCHOPP	Y, FLA. (	LAT 30 07	45 LONG	084 29 40		
OCT , 196	.0		.0	.0	.0	.0	.0	.0		.0		
27.00	.0		.0	.0	.0	.0	.0	.0	.0	.0		
OCT , 197 20 OCT , 197	<.2	<1	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2		
18 SEP , 197	<.2	<1	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2		0
26 JUN , 197	.0	0	.0	.0	.0	.0	.0	.0	.0	.0	0	0
01	.0	0	.0	.0	.0	.0	.0	.0	.0	.0	0	0
APR , 197	.0	0	.0	.0	.0	.0	.0	.0	.0	.0	0	0
STATION 7	,	0	2329000 -	осньоско	NEE RIVER	NR HAVAN	A, FLA. (	LAT 30 33	14 LONG	084 23 03		
MAY , 197	5 ND	22	ND	ND	ND	ND	ND	ND	ND	ND	ND	••
13 NOV , 197	ND	ND	ND	ND	ND	.0	ND	ND	ND	ND	ND	
02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MAY . 197	ND	3		-		.4	ND	ND	ND	ND	ND	
STATION 1	5	02329534	4 - QUINC	Y CREEK A	T STATE H	WY 267 AT	QUINCY.	FLA. (LAT	30 36 00	LONG 084	34 50)	
MAY , 197			_									
20 APR , 197		3	.7	.7	.0	•0	.0	•0	•0	.0	0	1
23 MAY , 197	7 .0	0	.0	.0	.0	.0	.0	.0	.0	.0	0	0
18	• 0	2	1.0	• 0	•3	.0	•0	.0	•0	•0	0	0
STATION 2	1		02329565	- LITTLE	RIVER NR	LITTMAN.	FLA. (LA	T 30 33 1	LONG 08	4 30 54)		
MAY , 1975 23	.0	0	<.1	.0	.0	.0	.0	.0	•0	.0	0	0
APR , 1976	.0	0	.0	.0	.0	.0	.0	.0	.0	.0	0	0
MAY , 1977	.0	0	.6	.0	.0	.0	.0	.0	.0	.0		0
STATION 3	4	02	2329877 -	OCKLAWAHA	CREEK NE	R WETUMPKA	, FLA. (	LAT 30 27	00 LONG	084 38 36)		
MAY , 1975							- 120					
22 APR , 1976		0	.0	.0	.0	0	.0	.0	.0	.0	0	,0
23 MAY , 1977	. 0	0	• 0	.0	.0	•0	.0	.0	•0	.0	0	0
19	.0	2	1.0	.0	.3	.0	.0	.0	•0	.0	. 0	0

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TABLE 7.--Records of rainfall.

(NOTE: Rainfall, in inches. M.R. indicates missing record. FFS, State of Florida, Division of Forestry; NOAA, National Oceanographic and Atmospheric Administration; and USGS, U.S. Geological Survey)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
			<u>59</u>	FFS statio		James 1957'N. 84		ar Sopcho	ppy, Fla.			
1974	3.39	3.62	7.80	5.74	5.37	2.97	8.95	7.42	27.80	0.35	1.33	6.11
1975	8.10	4.00	5.00	6.35	4.70	7.72	27.80	6.17	7.69	6.20	5.38	6.44
1976	4.03	1.30	7.32	0.40	8.85	7.75	1.76	4.02	5.08	5.99	5.87	6.40
1977	5.45	3.97	4.45	1.30	0.30	0.70	9.40	11.40	3.30			
		60	O FFS	station at		dville 1		ar Crawfo	rdville,	Fla.		
1974	1.90	3.30	5.30	3.10	4.90	3.90	7.90	12.00	16.90	0.60	1.30	3.60
1975	M.R.	4.80	6.40	5.90	6.10	6.90	M.R.	M.R.	M.R.	M.R.	M.R.	M.R.
1976	M.R.	M.R.	M.R.	1.20	8.30	8.90	7.10	7.00	4.50	13.50	8.40	6.00
1977	5.60	3.80	4.40	1.80	1.10	2.70	6.60	10.70	5.40			
				<u>61</u> N		ion at 9 12'N. 8		eek, Fla.				
1974	3.36	2.80	3.39	2.99	6.07	1.77	8.58	6.98	9.87	0.75	1.43	4.02
1975	10.52	4.20	7.48	5.18	7.05	5.59	18.42	5.19	4.17	6.84	1.46	7.00
1976	5.52	1.01	5.36	1.22	9.87	6.05	5.83	3.25	2.01	6.18	8.57	5.34
1977	6.17	3.14	4.72	3.05	2.41	7.38	6.69	5.40	4.77			

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TABLE 7.--Records of rainfall--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
				62	NOAA stat	ion at	Tallahas:	see, Fla.				
					(30°	23'N. 84	4°22'W.)					
1974	3.36	2.87	3.00	3.99	8.59	3.84	7.60	9.38	10.43	0.93	1.64	3.80
1975	11.68	2.85	6.18	7.17	10.34	4.77	17.52	6.80	4.88	4.41	1.50	7.83
1976	5.53	1.21	5.30	1.65	11.66	11.02	4.19	7.35	2.79	11.79	10.44	4.09
1977	6.40	3.10	6.07	2.73	3.41	2.09	3.19	15.73	5.27			
			63	FFS st	ation at H			ar Hosfor	d, Fla.			
					(30°	23'N. 8	4°43'W.)					
1974	1.28	1.82	3.69	2.12	2.61	7.29	5.75	M.R.	7.47	1.00	1.46	2.34
1975	8.23	2.68	2.43	2.34	6.89	4.03	17.58	2.38	5.39	2.18	2.92	4.77
1976	1.46	0.64	4.64	0.97	9.86	10.03	3.42	10.09	2.72	6.01	5.12	3.26
1977	5.69	1.79	6.82	0.80	0.70	1.30	4.70	9.40	10.20			
			64	FFS st	ation at I	Bristol t	tower nea	ar Bristo	1, Fla.			
					(30°	°25'N. 8	4°54'W.)					
1974	2.27	1.47	3.11	1.06	2.93	7.38	8.51	M.R.	7.11	1.14	1.77	1.82
1975	8.42	5.12	1.89	3.58	5.99	3.88	15.48	8.71	2.76	2.75	5.31	4.49
1976	3.41	0.96	4.97	1.58	9.88	7.31	6.77	8.76	4.36	4.23	5.40	3.22
1977	6.39	1.92	3.56	1.20	2.60	2.20	7.00	6.80	9.30			
			65 US	GS stat	ion at Roo	cky Comf	ort Creel	k near Qu	incy, Fla	١.		
					(30)	32'N. 8	4°38'W.)					
1974	4.37	2.17	2.35	2.80	5.26	6.48	5.18	4.35	4.96	0.74	1.59	3.36
1975	8.01	2.21	4.05	8.23	3.69	3.80	5.77	2.12	4.32	7.25	2.51	2.47
1976	4.63	1.85	5.09	0.55	14.17	6.72	8.82	5.43	1.33			

TABLE 7.--Records of rainfall--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	Ju1y	Aug.	Sept.	Oct.	Nov.	Dec.
			6	6 FFS st	ation at	Havana	tower nea	ar Havana	. Fla.			
						°36'N. 8			,			
1974	4.40	2.90	2.10	4.90	5.90	5.20	5.50	4.50	7.00	0.80	2.00	4.20
1975	M.R.	6.30	4.80	11.10	10.10	5.20	13.70	5.60	M.R.	6.40	2.90	7.60
1976	7.20	0.50	7.50	4.60	12.90	10.30	6.60	6.40	4.80	8.60	10.90	5.40
1977	7.10	2.20	7.50	0.70	1.20	4.40	8.50	14.10	11.40			
				67	NOAA s	tation a	t Quincy,	Fla.				
						°36'N. 8		,				
1974	4.52	2.17	2.54	3.49	5.24	5.48	5.18	4.35	5.29	0.74	0.98	3.66
1975	10.14	3.32	4.11	7.76	6.78	3.44	9.17	6.00	2.99	6.16	2.15	5.30
1976	5.44	1.47	4.81	0.59	14.41	5.95	3.23	8.29	1.87	5.54	7.44	3.75
1977	5.20	M.R.	4.88	1.17	1.46	2.29	7.19	7.41	7.00			
			68 T	all Timbe	rs Resea	rch Stat	ion near	Tallahas	see, Fla.			
					(30	°39'N. 8	4°13'W.)					
1974							7.84	4.99	7.68	0.68	0.77	3.34
1975	9.07	3.95	4.25	8.07	4.65	10.70	12.46	5.22	4.29	3.40	1.40	6.31
1976	4.02	1.28	4.51	1.02	13.03	6.93	4.33	6.55	3.13	7.99	8.71	3.09
1977	5.49	2.05	5.59	M.R.	1.75	5.29	3.93	6.65	6.33			
			69 FF:	S station	at Rose	dale Tow	er near (	Chattahoo	chee, Fla			
						°39'N. 8						
1974	5.40	4.40	4.70	4.10	6.40	4.30	8.40	8.90	11.20	1.90	2.00	5.40
1975	M.R.	3.80	7.00	10.20	9.20	5.30	16.50	8.70	M.R.	6.30	5.50	5.70
1976	7.80	1.40	7.90	6.30	17.00	8.60	2.40	7.30	2.10	7.90	8.50	5.00
1977	8.70	2.90	5.90	1.60	2.70	4.60	4.10	14.60	8.20			

TABLE 7.--Records of rainfall--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
			<u>70</u> NO	)AA stati		odruff Da '43'N. 84		Chattahoo	chee, Fla	•		
1974	4.37	3.34	1.85	3.48	3.06	4.27	3.59	5.20	8.86	0.65	0.83	2.93
1975	11.02	1.93	4.41	7.92	5.76	1.80	14.23	4.60	7.26	6.15	3.64	4.58
1976	5.99	1.81	6.28	1.27	14.26	5.95	3.03	4.54	4.87	3.78	5.36	3.30
1977	5.12	2.42										

TABLE 8.--Pumpage by municipalities.

(NOTE: Pumpage in million gallons; data furnished by municipalities)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
		City	of Quin	cy (Main	source:	Quincy	Creek;	alternat	e source	: groun	d water)		
1964	27.846	28,661	29.000	29.111	33.449	44.463	33.119	34.361	32.400	30.466	33.900	33.000	389.776
1965	28.718	25.960	33.739	41.310	47.326	37.176	37.353	41.769	34.663	37.459	29.546	28.111	423.130
1966	29.597	30.361	29.245	39.162	35.275	41.482	42.133	41.683	38.801	35.712	35.753	33.882	433.086
1967	35.013	27.572	35.503	46.832	53.207	38.921	36.215	41.297	36.143	39.942	34.293	32.310	457.248
1968	31.232	33.570	33.183	38.663	41.953	58.517	48.480	45.881	42.050	43.123	37.704	36.485	490.841
1969	34.739	30.463	51.813	39.510	39.199	40.648	45.454	40.959	41.094	39.849	35.858	36.839	476.425
1970	41.018	35.310	36.837	39.278	57.139	48.338	45.693	43.721	44.735	41.867	38.845	39.408	512.189
1971	46.197	33.935	37.453	40.500	49.503	52.715	49.557	52.494	50.427	51.735	42.204	40.116	546.835
1972	39.512	33.625	42.715	45.801	46.382	52.794	38.874	40.587	48.679	47.503	34.677	34.440	505.589
1973	35.019	32.351	34.208	36.947	62.205	39.985	51.730	46.972	36.951	48.772	34.017	35.334	494.491
1974	34.274	30.719	34.811	37.017	40.848	38.587	51.369	39.020	34.701	39.426	35.597	36.753	453.122
1975	40.380	29.537	30.990	28.994	37.654	39.956	43.259	38.089	34.951	37.907	33.676	37.255	432.648
1976	37.136	34.374	36.023	43.600	38.729	43.572	46.270	42.313	37.693	35.214	36.201	36.389	467.514
1977	43.355	35,655	38.674	48.784	58.746	54.375	45.018	44.047	37.966	42.835	44.352	46.770	540.577
				City	of Chat	tahooche	e (Sourc	ce: grou	ınd water	)			
1965	9.985	8.834	9.643	9.451	11.912	10.114	10.267	10.375	6.389	9.659	10.175	9.669	116.473
1966	10.717	13.865	11.785	12.790	12.194	11.276	9.237	14.209	9.876	9.162	7.340	7.208	129.659
1967	8.788	7.131	7.278	10.414	9.694	9.896	9.878	7.703	7.776	10.363	8.107	7.230	104.258
1968	7.218	8.746	7.594	9.208	9.230	9.678	8.000	8.189	9.531	10.649	8.022	8.678	104.743
1969	7.764	7.370	7.371	9.643	8.925	11.933	10.971	8.745	10.889	10.369	8.485	8.147	110.612
1970	9.087	9.733	7.615	8.416	12.503	9.569	9.676	10.340	9.974	9.991	8.243	8.405	113.552
1971	10.267	9.445	9.126	9.356	8.264	8.516	8.056	7.247	8.126	8.335	7.100	7.598	101.436
1972	7.7	6.9	6.5	8.3	8.1	10.9	7.8	9.1	10.0	9.8	9.4	7.4	101.9
1973	7.4	8.5	7.5	7.5	8.9	10.8	11.2	8.2	9.7	9.6	8.2	7.0	104.5
1974	7.3	8.2	8.0	8.4	11.2	10.2	11.9	11.2	9.9	10.9	8.9	7.8	113.9
1975	8.3	8.9	7.7	10.0	9.0	10.4	11.3	12.0	11.2	12.3	10.7	10.9	122.7
1976	13.5	11.9	11.1	13.1	12.8	12.8	11.8	12.2	11.6	11.3	11.0	10.2	143.3
1977	11.944	9.914	11.622	13.133	17.041	14.732	13.225	11.073	10.841	10.928	9.922	10.366	144.741

Well number: Well numbers are used to identify wells in data and interpretive reports and to locate wells in figure 2.

Site number: Refer to text for explanation of site numbering system.

County: 037, Franklin; 039, Gadsden; 073, Leon; 077, Liberty; 129, Wakulla.

Principal aquifer: 112, Sand; 120, Floridan; 122, Hawthorn.

Altitude of land surface: To tenth of a foot if determined by precise leveling; otherwise to nearest foot above mean sea level.

Mater level: Depth to water below land-surface datum; + denotes water level is above land-surface datum.

Method constructed: B, bored; C, cable; D, dug; H, hydraulic rotary; J, Jetted; £, combination hydraulic rotary and cable.

WELL NUMBER	SITE NUMBER	COUNTY	OWNER	PRINCIPAL AQUIFER	DEPTH OF WELL (FEET)	DEPTH CASED	CASING DIAM- ETER (INCHES)	DATE COMPLETED	ALTITUDE OF LAND SURFACE (FEET)
1 2 3 4 5	294701084494901 294828084424301 295046084394301 295111084412501 295118084412701	037 037 037 037 037	FRANKLIN COUNTY HOWARD, DONALD KILBORN, J F HARRELL, W H CAMPBELL, JUNE	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	163 94 93 75 97	133 79 64 75 73	2 2 6 2 2	05/13/1976 11/26/1974 1950 01/24/1975 10/ /1974	21 8 5•1 11 10
6 7 8 9	295302084223501 295302084360101 295322084350501 295359084203901 295507084311901	037 037 037 037 037	ALLIGATOR POINT W/S HOLLIS, W L REED, E T TRANSPORTATION, DEPT OF ST JOE PAPER CO	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	130 82 86 45 174	99 80 69 42 80	6 2 2 4 10	08/28/1964 11/05/1974 01/10/1977 11/24/1947 1945	28 32 32 10 30
11 12 13 14 15	295535084224101 295535084225001 295536084275301 295546084265001 295557084261701	037 037 037 037 037	ALLIGATOR POINT W/S ALLIGATOR POINT W/S KEMP, EMILY LEE, W S ST JOE PAPER CO	120FLR0 120FLR0 120FLR0 120FLR0 120FLR0	134 140 109 88 130	73 117 96 64 73	6 4 4 10	12/07/1964 08/15/1964 07/21/1976 10/ /1976 1945	23 40 15 22 11
16 17 18 19 20	295700084505401 295732084430701 295845084230501 295845084230502 295918084234401	037 037 129 129 129	EXXON CO BUCKEYE CELLULOSE CO PANACEA. TOWN OF PANACEA. TOWN OF FLA BUR GEOLOGY	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	252  68 90 192	126 51 53 37	8 6 6 10 4	06/01/1976 1961 04/06/1965 09/27/1965 08/ /1968	30 10.0 10.3 10.2 6.7
21 22 23 24 25	295953084290101 300000084261002 300002084260501 300039084323301 3001200843330901	129 129 129 129 129	FLA DIV REC AND PARKS US DEPT INTERIOR US DEPT INTERIOR DAVIS. JOHN L BARNETT.JR, HENRY E	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	74 83 70 100 79	41 63 45  50	4 4 3 2	06/23/1967 08/ /1968 04/01/1939 1946 03/28/1975	11.5 13.9 14 7 15
26 27 28 29 30	300122084330801 300132084295901 300135084335901 300151084235801 300151084235802	129 129 129 129 129	DURRANCE, WILLARD K BRIGGS, LLOYD US FOREST SERV PANACEA, TOWN OF PANACEA, TOWN OF	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	79 126 173 125 125	50 101  90 90	2 2 4 6	1974 03/06/1975 1975 09/ /1970 09/ /1970	15 12 10 12 12
31 32 33 34 35	300154084472501 300305084275701 300328084292201 300337084294201 300343084293001	077 129 129 129 129	PURE OIL BULLARD, W L REVELL, CARL L STEPHENSON, BILLY SOPCHOPPY, CITY OF	120FLRD 120FLRD 120FLRD 120FLRD	4744 98 181 130 260	942 98 131 104 121	6 2 4 2 8	05/28/1946 02/10/1975 12/03/1976 1977 08/20/1968	25.3 15 28 28 26.4
36 37 38 39 40	300344084294701 300350084292701 300355084562801 300356084365701 300404084271001	129 129 077 129 129	UNKNOWN HANKE, NANCY GULF COAST EXPL MCKENZIE, AGNES CRUM, THOMAS	120FLRD 120FLRD 120FLRD 120FLRD	56 10005 200 266	1291 146 231	2 8 4 2	08/20/1968 1975 03/27/1959 10/15/1976 12/ /1967	10.1 29.4 38.4 21 25.2
41 42 43 44 45	300413084241601 300421084361901 300454084390601 300500084182701 300528084311001	129 129 077 129 129	CARRAWAY, HARVEY US FOREST SERV US FOREST SERV TALQUIN ELEC COOP INC CROWELL, PETE	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	70 190 260 188 79	42 151 172 41 71	2 4 4 6 2	03/31/1975 01/28/1955 07/18/1962 09/30/1964 03/ /1975	15 35 20.2 9.4 22
46 47 48 49 50	300538084384501 300540084174001 300610084240101 300618084193801 300618084193802	129 129 129 129 129	US FOREST SERV LEWIS, LESTER JONES, L F TALQUIN ELEC COOP INC TALQUIN ELEC COOP INC	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	136 83 60 205 205	60 35 45 131 83	2 6 4 6	02/09/1961 06/30/1961 03/26/1976 03/21/1966 04/25/1969	21.8 9 34 14.0
51 52 53 54 55	300629084223501 300631084223401 300740084293001 300755084501101 300813084555701	129 129 129 077 077	WAKULLA CO SCH BOARD WAKULLA CO SCH BOARD US GEOL SURVEY PLACID OIL US FOREST SERV	120FLRD 120FLRD 120FLRD  120FLRD	205 221 127 12378 204	82 70 121 4003 163	4 6 10 4	07/ /1968 1968 09/14/1966 10/27/1974 03/ /1975	38.8 36.2 47.3 60 52
56 57 58 59 60	300938084425501 300945084581001 300954084242501 300959084403501 301028084223801	077 077 129 077 129	US FOREST SERV US FOREST SERV LAWHON, W US FOREST SERV CRAWFORDVILLE, CITY OF	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	153 184 109 260 156	139 105 106 203 69	2 4 6 4	10/17/1960 05/25/1962 1975 01/10/1963 1949	58.7 61.8 37 21 25
61 62 63 64 65	301028084223802 301035084225001 301035084403701 301052084421401 301115084241201	129 129 077 077 129	CRAWFORDVILLE, CITY OF WAKULLA CO SCH BOARD U S FOREST SERV .PLACIO OIL US FOREST SERV	120FLRD 120FLRD 120FLRD	170 170 110 11965 129	100 131 88 4044 75	6 6 4 10 6	10/ /1972 02/ /1967 06/ /1960 08/17/1974 04/28/1959	25 28.1 22.3 47.3 35
66 67 68 69 70	301128084251401 301148084434101 301250084214001 301310084404501 301328084283401	129 077 129 129 129	SPARKMAN. DONNIE U S FOREST SERV HUDSON, JEWEL H JOHNS. JAMES A US FOREST SERV	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	105 175 214 300	76  38 160 266	4 6 4	11/ /1975 1975 02/ /1976 05/19/1976 09/28/1961	45 64.7 18 53 63.5
71 72 73 74 75	301650084300701 301808084303001 301822084433401 3018220844365901 301918084413401	129 073 073 073 073	PLACID OIL CO US FOREST SERV GUNN+ GEORGE US FOREST SERV SMITH+ JAMES M	120FLRD 120FLRD 120FLRD 120FLRD	11747 176 158	170  156	4 4 4 4	03/07/1974 1975 1970 1975 09/13/1976	85 77 75 110 70
76 77 78 79 80	301951084490901 302002084320401 302007084231901 302051084244701 302134084490201	077 073 073 073 077	DUNCAN, DONALD US FOREST SERV US FOREST SERV US FOREST SERV FLA VENEER INC	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	212 177 340 175 250	153 122 307 112	4 6 4	04/16/1976 11/05/1958 08/ /1968 07/ /1962 1974	110 111 92 103 95

Type of lift: A, air; B, bucket; C, centrifugal; J, jet; P, piston; S, submergible; T, turbine.

Use of water: C, commercial; E, power; H, domestic; I, irrigation; N, industrial; P, public; S, stock; U, unused.

Type of logs available: A, time; B, collar; C, caliper; D, driller; E, electric; F, fluid conductivity; G, geologist; J, gamma;
N, neutron; T, temperature; U, gamma-gamma; V, fluid velocity.

Other data available: A, field analysis; B, standard complete analysis; Z, standard complete, nutrient, trace metals, pesticides, or any combination.

WATER LEVEL (FEET)	DATE WATER LEVEL MEASURED	METHOD CONST- RUCTED	TYPE OF LIFT	USE OF WATER	DISCHARGE (GALLONS PER MINUTE)	SPECIFIC CAPACITY (GPM/FT)	TYPES OF LOGS AVAILABLE	TEMPERATURE (DEGREES C)	SPECIFIC CONDUCTANCE (UHMOS/CM AT 25 C)	OTHER DATA AVAILABLE QW
11.50	05/13/1976	J	J	c	60	1.044	D			
5.00 2.64	11/26/1974	C	J	U	60		D+G C+J	22.0	420	В
3.00	01/24/1975	J		н	33	==	D+G		122	7
			J	н			D•G	22.0	-	
23.80	11/29/1977	C	S	P	100	10.0	D•G	21.5	170	A
22.00	01/10/1977	J	J	н	34		D			
7.30	11/26/1947	C	Ρ	P	850	==	C.D.E.F.J	24.0	420	Α .
19.00	12/07/1964	С	s	Р						
36.00	08/15/1964	C	S	P	90	6.4	==		==	
20.00	07/21/1976 10/01/1976	C	5	H	28 25	9.3	D	==	==	
9.39	03/03/1977	č		ΰ			C.F.J.N.T	23.0	225	В
17.00	06/01/1976	н	Α	N	300		D			
+ 4.10	11/01/1976			U		C		20.6	599	В
7.50 8.10	05/17/1977 11/29/1977	H C	T	U	150 312	25.0 13.2	C+F+G+J+N G	21.5	560	B Z
4.40	08/ /1968	Z		U	60		Ğ	-1.		-
4.72	01/28/1975	С	C	P			D.G	22.0	450	В
8.00 8.35	08/ /1968 05/07/1974	C	s	н			D+G	25.0	710	В
F 5.00	03/18/1976	c		Н	==			20.0	540	В
12.00	03/28/1975	J		н	15		D+G			
12.00	1974	J	J	н	14		D • G			
5.00	03/06/1975	J_	P	H	60		D+G	20.0	530	В
7.00	11/29/1977	C	T	P	140	22.0		21.5	190	Z
6.77	11/29/1977	С	Т	Р	150	80.6		21.5	160	Z
4 00	03/10/1075	н		U			D.E.G			
4.00	02/10/1975	C		H	60	==	D•G J	==		
12.10	05/19/1977 08/20/1968	н	T .	H	700		C+E+F+J+N			.2
		"			280	28.0	D+G	22.0	360	Z
+ 7.50 5.45	03/13/1975	н_	P	U	==			21.5	330 390	8
		н		U			D.E.G	21.5		В
10.00	10/15/1976	H	5	H	30	30.0	B+C+D+J D+G			
	-3.6.						5,0			
11.00	03/31/1975	C	 J	H	60		D•G	21.0		
6.14	05/19/1977	č	P	P	30	1.4	D,G	21.0	1000	8 8
4.60 FLOWING	05/17/1977 03/ /1975	H		H	50 60	1.0	C+F+G+J+N+E D+G	21.0	800	В
8.08	03/03/1977 11/01/1976	C	P	P	25	==	D.G C.F.J	21.5	450 1400	B B
11.00	03/26/1976	С		H	2.2		C.J.T			
	===	H	T	P	340 370	52.9	D+G D+G	22.0	==	Ž
34.00	07/ /1968	c	Т	P				22.0	150	
30.85	01/28/1975	C		U			C+F+J+T	22.0	150 140	B
16.70	07/08/1977	С		U	==		C+D+G+J E	22.0	210	В
23.00	03/ /1975	C	S	N			Ğ	22.0	420	8
13.00	10/17/1960	J		υ	14		D.G			
6.00	05/25/1962 12/23/1975	C	Ţ	P	100	16.7	D.G	23.0	245	В
+15.60	01/09/1975	c		P			D.G	23.5	520	Z
		С	J	P	71			20.0	270	В
		С	J	P	200			21.0	300	Z
+12.20	02/ /1967 03/03/1977	H C	S	P	30		D+N+C+G+J+U	21.0	515	В
		н		U	0.00		E+G			
4.92	07/08/1975	С	S	С				21.0	280	В
	11/ /1975 01/27/1975	C	S	H	36	36.0	C.J	21 0		
13.00	01/2//19/5	С	C S	н			D,G	21.0	295	В
12.35		C	5	H	9	9.0	D D•G	21.5	420	В
0.50	05/19/1976	C			4.4			21.5	420	
0.50 32.00	05/19/1976 09/28/1961	С								
0.50 32.00	09/28/1961	С Н	 P	U	==	==	C.E.G.J.S	21.0	240	B
12.35  0.50 32.00  11.80 14.37	09/28/1961  06/27/1975 12/17/1974	H	P S	P		==	==	21.0	240 323	B B
12.35 0.50 32.00 	09/28/1961  06/27/1975 12/17/1974 06/27/1975	H	P S P	P H P	=	Ξ	Ξ	21.0 23.0 20.5	240 323 240	B B
12.35 0.50 32.00 	09/28/1961  06/27/1975 12/17/1974 06/27/1975 12/15/1976	H	P S P S	P H P H	32	3.6	D+G	21.0 23.0 20.5 19.0	240 323	В
12.35 0.50 32.00 11.80 14.37 7.33 5.41 44.00	09/28/1961  06/27/1975 12/17/1974 06/27/1975 12/15/1976 04/22/1976	H	P S P	P H P	=	Ξ	D,G C,D,G,J,T	21.0 23.0 20.5 19.0	240 323 240 250	8 B B
12.35 0.50 32.00 	09/28/1961  06/27/1975 12/17/1974 06/27/1975 12/15/1976	H	P S P S	P H P H	32 12	3.6	D+G	21.0 23.0 20.5 19.0	240 323 240	B B

WELL NUMBER	SITE NUMBER	COUNTY	OWNER	PRINCIPAL AQUIFER	DEPTH OF WELL (FEET)	DEPTH CASED	CASING DIAM- ETER (INCHES)	DATE COMPLETED	ALTITUDE OF LAND SURFACE (FEET)
81 82 83 84 85	302138084490001 302231084234701 302242084411301 302258084433401 302301084475601	077 073 077 077	FLA VENEER INC US FOREST SERV BRADWELL, CARL C FLA DIV OF FORESTRY MILAM, G W	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	235 278 395 160 250	207 232 242 	4 6 6 4 2	12/ /1969 02/12/1963 11/13/1959 1925 10/02/1974	94 97 87.7 96.8
86 87 88 89	302303084391801 302314084384501 302321084473501 302411084243801 302434084470801	077 073 077 073 077	ED/BERNICE FISH CAMP FLA BUREAU GEOL ROBERTS, C W US FOREST SERV HOSFORD, DUNCAN	120FLRO 120FLRO 120FLRO 120FLRO 120FLRO	150 400 85 202 200	144  70 63	3 6 4	06/22/1966 03/23/1964 1954 01/01/1975 1974	45 61 87.0 90
91 92 93 94 95	302440084360001 302517084542801 302520084523001 302523084341001 302526084212001	073 077 077 073 073	FLA RUREAU GEOL FLA DIV OF FORESTRY ADAMS, R T FLA BUREAU GEOL SINGLETON, L D	120FLRD 120FLRD  120FLRD 120FLRD	422 308 4266 204 220	30 201 177  110	4 4 14 6	06/ /1964 08/05/1960 08/01/1948 02/ /1965 10/20/1958	95 170.1 176 115 40.9
96 97 98 99 100	302532084320401 302532084320402 302544084583901 302550084583301 302554084343801	073 073 077 077 039	LEON COUNTY SCH BOARD LEON COUNTY SCH BOARD BRISIOL, CITY OF LIBERTY CO IDLEWILDE LODGE	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	118 160 888 301 250	114 110 398 218	4 4 8 6 2	09/11/1941 04/23/1976 08/20/1962 04/18/1955 1974	127 127 165 166.7 72
101 102 103 104 105	302602084230501 302602084585701 302603084585401 302612084261401 302616084242401	073 077 077 073 073	TALQUIN ELEC COOP INC BRISTOL, CITY OF LIBERTY CO TALQUIN ELEC COOP INC TALQUIN ELEC COOP INC	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	345 320 246 305 347	154 228 227 150 171	6 6	06/10/1969 02/ /1974 01/19/1977 1971 06/02/1969	175 162 165 147 135
106 107 108 109	302622084272601 302632084583201 302638084312801 302640084170001 302644084191401	073 077 073 073 073	FLA BUREAU GEOL BRISTOL, CITY OF GIRL SCOUTS OF AMER FLA BUR OF GEOLOGY GANDY MOTEL	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	150 426 290 310 335	247 151 146 274	4 6 6 8	1963 12/29/1955 06/22/1973 08/17/1960 04/21/1950	165 168 115 101 169.7
111 ) 112 113 114 ) 115	302650084362301 302650084581001 302653084362301 302655084371601 302656084241001	039 077 039 039 073	BOY SCOUTS AMER BRISTOL, CITY OF BOY SCOUTS AMER BLACKBURN, DAVIO TALLAHASSEE, CITY OF	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	292 344 600 110 305	252 182 466 55 142	6 6 6 4 4	03/02/1966 1975 05/11/1973 10/15/1975 11/27/1974	153.5 181.7 151 72 133
116 ) 117 118 119 120	302659084191301 302706084204901 302708084240101 302708084240301 302709084240101	073 073 073 073 073	MOORE, COYLE FLORIDIN CO TALLAHASSEE, CITY OF TALLAHASSEE, CITY OF TALLAHASSEE, CITY OF	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	250 175 375 375 370	91 105 159 150 99	4 6 16 16 4	10/14/1941 11/28/1958 06/05/1970 04/17/1970 1969	202.5 85.2 134.1 136.7 138.3
121 122 123 124 125	302710084163001 302711084204801 302716084204801 302718084235301 302718084240201	073 073 073 073 073	TALLAHASSEE, CITY OF TALQUIN ELEC COOP INC TALQUIN ELEC COOP INC TALLAHASSEE, CITY OF TALLAHASSEE, CITY OF	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	314 150 145 406 458	165 100 127 230 160	6 6 6 18 18	07/ /1937 1959 1959 11/ /1975 1975	186.5 84 84 138 130
126 127 128 129 130	302718084241301 302722084184101 302801084163401 302812084590501 302823084560601	073 073 073 077 077	TALLAHASSEE, CITY OF TALLAHASSEE, CITY OF TALLAHASSEE, CITY OF FLA BUREAU GEOL ST JOE PAPER CO	122HTRN 120FLRD 120FLRD 120FLRD 120FLRD	152 370 427 206 350	119 219 238  282	24 20 	1969 1966 06/27/1946 02/ /1966 05/26/1956	129.8 185 193 175 214.4
131 132 133 134 135	302834084352601 302901084372801 302905084531001 302913084481401 302919084262501	039 039 077 077 039	PARRAMORE, W CHASEN, VERNON S FLA BUREAU GEOL SUN OIL CO KENNEN, MARY ELLA	120FLRD 120FLRD 120FLRD  112SAND	541 310 408 4119 25	402 240  306 25	6 4  10 36	01/11/1945 04/16/1976 06/ /1965 07/21/1956 1959	180 210 250 201.9 188
136 137 138 139 140	302920084262101 302920084262102 302926084303801 302938084255801 302947084262101	039 039 039 039 039	JACKSON, MAMIE JACKSON, MAMIE TENNELL, EPHRAN FLETCHER FORD TRACTOR WILLIAMS, DAISY B	120FLRD 120FLRD 112SAND 120FLRD 120FLRD	94 187 10 200 172	41 133 10 160 133	4 4 10 4 4	07/19/1976 09/24/1976 1959 04/02/1976 04/ /1976	160 160 134 130 168
141 142 143 144 145	302950084260301 302950084362101 302954084195501 303008084274701 303009084274601	039 039 073 039 039	BURNS, JOHN H PARRAMORE, W TALQUIN ELEC COOP INC TALQUIN ELEC COOP INC GADSDEN CO SCH BOARD	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	153 150 300 400 308	93 141 200 280 261	4 6 6 4	04/12/1976 09/22/1953 1976 11/ /1977 05/12/1946	170 210 202 215 215
146 147 148 149	303012084135301 303012084135302 303015084195201 303021084423401 303030084175001	073 073 073 039 073	TALLAMASSEE, CITY OF TALLAMASSEE, CITY OF TALQUIN ELEC COOP INC FLA GAS TRANSMISSION ALFRIEND, JEFFERY	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	450 310 300 487 203	257 257 166 300 119	8 24 6 10 4	08/18/1975 01/ /1977 1964 10/09/1959 06/10/1952	180.2 180 200 267.5 119.9
151 152 153 154 155	303032084195501 303036084170301 303042084202201 303050084581601 303059084202701	073 073 073 077 073	TALQUIN ELEC COOP INC LANDRUM, NEY TALQUIN ELEC COOP INC TALQUIN ELEC COOP INC TALQUIN ELEC COOP INC	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	275 200  304 340	201  214 250	6 4 12	1964 1962 1960 11/ /1976 08/15/1975	142 108 135 205 141
156 157 158 159 160	303108084193101 303111084205401 303112084220702 303114084264301 303119084244601	073 073 073 039 073	TALQUIN ELEC COOP INC SANDERS+ JACK TALQUIN ELEC COOP INC WILLIAMS+ DAVIO TALQUIN ELEC COOP INC	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	360 194 330 160 353	165 104 274 140 324	12 4 6 4 6	11/27/1973 02/06/1950 09/05/1972 03/23/1976 08/ /1972	205 113 133 235 133

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WATER LEVEL (FEET)	DATE WATER LEVEL MEASURED	METHOD CONST- RUCTED	TYPE OF LIFT	USE OF WATER	DISCHARGE (GALLONS PER MINUTE)	SPECIFIC CAPACITY (GPM/FT)	TYPES OF LOGS AVAILABLE	TEMPERATURE (DEGREES C)	SPECIFIC CONDUCTANCE (UHMOS/CM AT 25 C)	OTHER DATA AVAILABLE QW
16.85	12/19/1974	С	J	N				23.5	290	В
81.00	02/12/1963 06/02/1960	C		U	==		D.E.G.J E	==		
16.87 35.00	12/16/1974	н	S	H	==			22.0	250	В
+15.30	03/18/1976	С		С				20.0	270	z
+ 1.36	05/04/1977	B	c	C		==	E,G,J	20.0	212	В
60.74	07/08/1975 12/16/1974	c	S	H	==		==	20.0 19.5	245 340	Z A
		В		U	22		G			
46.96	12/16/1974	С	s 	H			D+G D+E+G	24.0	194	В
16.00	10/20/1958	C	==	P	100		G G	==		
39.40	09/16/1976			U			C,J,T	24.0	342	A
43.00 92.19	04/23/1976 10/15/1970	C	S	P	20		C.D.J.T D.E.G.J	24.0	220	В
7.35	12/06/1974	C		P	56	==	D•G	24.0	225	A
154.23 115.74	03/25/1976	H	5 5	P	50 75	10.0	D+G D+G	22.0	85 250	Z
76.00	01/19/1977			U			B,C,J,T	22.0	150	z
105.00 114.78	1971 03/25/1976	н	S	P	250 150	35.7 150.0	D•G	22.0	240	Z
75.00	12/29/1955	B	T-	U	::		G	22.0	190	A
35.07	07/15/1975	Н	s	P		==	D.G G.E.J	21.5	180	В
75.38 145.00	04/21/1950	C		P	250		G			
78.80 65.70	12/06/1974 02/05/1975	н	5	U	100	3.3	C.J.N.U.D.G C.E.F.J	22.0	200 320	B Z
105.00	05/11/1973	н	T C	P			D	23.0	360 235	B
4.10+ 87.06	04/13/1977	C	S	H	14	1.4	D			
175.00 65.00	10/14/1941	C		H	75		G G			
120.00	02/05/1975 02/05/1975	н	T	E	1700	131.0	D+G D+G	22.0	320	В
109.58	02/05/1975	н		บั			C,E,F,J			
166.07	03/13/1945	C	 s	U	80	8.0	==	23.0	320	
60.00 113.00	1959 04/30/1976	C	T	P	90 2060	9.0 294.3		22.5	290	Z Z
103.00	04/30/1976	č	Ť	Ē	2175	94.6	C,F,J,N,T,U,I		=	
46.78 135.11	02/05/1975	H	 T	U	3400		C+E+J	20.6	290	Z
168.00	06/27/1946	H B	T	P	2000	869.6	G			
85.60	05/04/1977	c		ŭ			C.E.J.N	20.6	200	В
121.40	12/06/1974 04/16/1976	C	S	S	15		A • G	20.6	420 <b>240</b>	A B
===	===	В		U			G E•G			
4.33	06/03/1959	D	В	Н				25.0		A
57.00 70.00	07/19/1976	C	5	H	15		B,C,J,T	22.0	118	A
1.35 80.81	06/04/1959 04/12/1976	D H	P S	H	40	2.6	A.G.J.D	22.0	200	Z
98.70	04/ /1976	С	S	н	10	2.0	C.G.J.T			
85.00 127.50	04/16/1976 12/06/1974	C	S	H	12		B,C,D,J,T	22.0	195	A
159.76 180.00	02/10/1976	C	S	P	65	1.6		21.0	200	A
164.83	11/14/1974	С	S	P				21.0	304	A
144.35	12/09/1975 02/16/1977	Z C	Ť	P	500 4500	500.0 250.0	D•G D	==	::	A Z
160.00	1964 03/12/1975	н	T	C	160 146	1.2	D • G	20.5	190 320	Z B
92.00	06/10/1952	С		н	15	••	G			
100.00	1964	==	Ţ	Н	520	104.0	Ğ	20.0	180	Z
142.35	05/11/1977	н	S	P	320 35	1.3	B.C.D.J	20.5	240 290	Z 8
105.00	08/15/1975	н	S	P	600	300.0	D.G	22.0	220	Z
181.73 83.10	02/12/1976	C	P	Н	350	50.0	D+G	20.5	140 315	Z B
75.00 60.00	09/05/1972	C	S	Н	150	3.8 0.6	D+G D+G	21.0	200	Z
104.36	05/03/1977	н		U			C.F.J.N.T	**		

WEL NUMB		COUNTY	OWNER	PRINCIPAL AGUIFER	DEPTH OF WELL (FEET)	DEPTH CASED	CASING DIAM- ETER (INCHES)	DATE COMPLETED	ALTITUDE OF LAND SURFACE (FEET)	
161 162 163 164 165	303120084344001 303122084152901 303125084411901 303127084152501 303128084162901	039 073 039 073 073	KING EDWARD TOBACCO FLA DIV REC AND PARKS EDWARDS, MARCUS FLA DIV REC AND PARKS MACLAY SCHOOL	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	450 300 432 301 290	411 195  172 180	4 14 4 4 6	10/26/1957 07/25/1956 1974 06/01/1955 05/29/1968	232 168 248 223 242.5	
166 167 168 169 170	303142084214601 303142084214602 303143084281101 303145084383701 303150084300501	073 073 039 039 039	U S GEOL SURVEY U S GEOL SURVEY TALQUIN ELEC COOP INC COASTAL LUMBER CO OLES-NAYLOR	120FLRD 122HTRN 120FLRD 120FLRD	225 54 390 256 4240	100 49 221 250	6 6 6 4	09/08/1966 09/02/1966 03/ /1971 1948 07/ /1948	122.2 122.2 160 230.4 190	
171 172 173 174 175	303150084300502 303154084393201 303200084394601 303207084433801 303217084091501	039 039 039 039 073	OLES-NAYLOR MACDONALD. JOHN FLA BUR OF GEOLOGY SUZZANNA FARM LANGLY. ROBERT	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	305 400 475 360	199	6 4	06/21/1948 1964 01/22/1966 1968 1974	190 235 265 231.5 182	
176 177 178 179 180	303218084404901 303223084095001 303223084193701 303224084102201 303224084394701	039 073 073 073 073	SUBER: MARVIN S LANGLY: ROBERT PHIPPS: JOHN H LANGLY: ROBERT LINES: J R	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	232 192 239 481	137 80 152 250	4 6 4 6	1964 10/08/1964 12/26/1956 09/03/1964 01/15/1974	255 138 96 152 263	
181 182 183 184 185	303225084464501 303227084332301 303228084392201 303230084334001 303239084355301	039 039 039 039 039	FLA BUR OF GEOLOGY DUYS. JOE LINES. J R PRINCE-MUNROE UNIV OF FLA	120FLRD 120FLRD 120FLRD  120FLRD	462 340 150 7028 630	235 135 487 443	4 4 8 6	07/ /1965 01/17/1976 04/27/1950 02/ /1963 05/05/1949	265 185 260 201 247.4	
186 187 188 189 190	303241084470201 303243084430301 303244084333001 303245084363001 303246084421701	039 039 039 039 039	SUN DIL CO FLETCHER, FRANKLIN MAXWELL, WILL SUN DIL TALOUIN ELEC COOP INC	120FLRD 120FLRD 120FLRD 120FLRD	4218 803 400 290 700	708 530 350  335	10 8 4 	01/ /1956 1968 1974 04/ /1958 02/12/1971	262 250.4 240.5 147 250	
191 192 193 194 195	303249084490501 303250084344001 303250084370001 303254084381801 303258084381801	039 039 039 039 039	CHURCH OF GOD SUN OIL CO PPINCE-MUNROE MCBRIDE+ R D STROM+ S M	120FLRD 120FLRD  120FLRD 120FLRD	480 290 4196 960 365	377  516 754	8 4 4	1974 04/14/1958 12/ /1962 1971 1974	281 174 197 248.6 256.0	
196 197 198 199 200	303302084293001 303311084281301 303315084314001 303318084340101 303321084285001	039 039 039 039 039	LEON COUNTY SCH BOARD GODWIN, J B FLA BUR OF GEOLOGY OWENBY, CARL GODWIN, J B	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	359 500 472 295 411	225  150 261	6 6 4 4	10/ /1976 1974 10/27/1965 11/17/1953 10/05/1962	185 225 255 249 222	
201 202 203 204 205	303322084525401 303328084365301 303328084540501 303331084350301 303337084374201	039 039 077 039 039	SMITH. E R IMPERIAL NURSERIES FLA BUR OF GEOLOGY MAXWELL. TOM FRYER, CARL	120FLRD 120FLRD 120FLRD 120FLRD	4022 380 298 535 250	742 333 380 184	8 4  8 4	05/05/1955 1947 04/ /1964 11/02/1953 09/04/1974	239 239.4 259.2 242.3 255	
206 207 208 209 210	303347084193801 303348084193301 303352084473002 303353084193301 303353084393501	073 073 039 073 039	PHIPPS, JOHN H PHIPPS, JOHN H LARKIN PHIPPS, JOHN H GADSDEN CO SCH BOARD	120FLRD 120FLRD 112SAND 120FLRD 120FLRD	251 261 60 290 522	129 160 60 103 372	8 4 48 4	04/15/1939 06/02/1950 1974 02/18/1944 09/22/1959	191 160 268 203 267.0	
211 212 213 214 215	303356084245301 303358084245501 303405084371101 303405084371102 303407084443401	039 039 039 039 039	LEON REALTY STENNETTE, CHARLES F TALQUIN ELEC COOP INC TALQUIN ELEC COOP INC GREENSBORO, CITY OF	122HTRN 120FLRD 120FLRD 120FLRD 120FLRD	65 126 800 239 485	65 89 525 239 405	4 6 4 6	02/26/1976 03/02/1976 02/16/1972 1972 12/10/1947	174 163 250.6 252.0 272.4	
216 217 218 219 220	303408084494201 303410084443201 303416084273401 303418084444701 303426084440801	039 039 039 039 039	CHESTER, C L GREENSBORO, CITY OF LAMBERT, T J GREENSBORO, CITY OF FLETCHER, MAX	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	425 388 307 420 600	265 205 190 264 300	4 8 4 6	09/11/1973 05/25/1936 1958 08/29/1974 1960	283 268.0 242.0 275.3 258	
221 222 223 224 225	303431084420501 303433084234001 303434084233701 303435084492501 303437084345001	039 039 039 039 039	BOWEN FARM TALQUIN ELEC COOP INC TALQUIN ELEC COOP INC JACKSON, ROSA QUINCY, CITY OF	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	380 275 343 181 681	269 94 123 126 434	4 6 6 3 8	12/17/1957 06/12/1974 08/10/1972 07/ /1951 06/11/1954	270 132 138 283.7 246.5	
226 227 228 229 230	303437084345002 303438084442001 303439084213701 303441084402501 303442084193501	039 039 073 039 073	UNIV OF FLA TOLER. MARVIN TALGUIN ELEC COOP INC DAVIS SR. FORREST PHIPPS, JOHN H	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	422 545 322 476 249	254 366 264  200	7 6 6 8 4	04/ /1928 04/09/1951 1971 1946 07/ /1932	252 268 160 246.8 191.0	
231 232 233 234 235	303445084403001 303446084510201 303447084072401 303447084314501 303448084232301	039 039 073 039	DAVIS.JR. J F POTIER HUMPHREY. G W GUINCY. CITY OF FLA BUR OF GEOLOGY	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	855 325 231 300 442	582  146 230 60	8 4 4 4	02/26/1960 1971 01/05/1959 09/08/1975 12/16/1965	255 270 - 223 209 230	
236 237 238 239 240	303453084132001 303457084265101 303500084134001 303500084363801 303501084364701	073 039 073 039 039	TALQUIN ELEC COOP INC GREGORY. B L FLA BUR OF GEOLOGY COASTAL LUMBER CO CRAIG OIL CO	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	325 337 262 883 405	203 289 500 324	10 4  6 6	06/16/1972 09/09/1949 06/ /1965 09/02/1954 10/ /1944	222 245 248.8 248.2 280.4	

WATER LEVEL (FEET)	DATE WATER LEVEL MEASURED	METHOD CONST- RUCTED	TYPE OF LIFT	USE OF WATER	DISCHARGE (GALLONS PER MINUTE)	SPECIFIC CAPACITY (GPM/FT)		EMPERATURE DEGREES C)	SPECIFIC CONDUCTANCE (UHMOS/CM AT 25 C)	OTHER DATA AVAILABLE GW
125.00 141.18	10/ /1957 01/21/1975	С		H	10 1400	350.0	D+G D+G			
128.40 171.00	11/11/1974	C	S	H	50		D•G	21.0	350 285	A
208.77	12/05/1974	С	S	Р	100		D•G	21.0	270	B
85.00 35.08	05/16/1977 05/16/1977	C	==	U			C+D+E+G+J D+G	21.0	259	
117.04	03/30/1976 11/15/1974	C	S	U	200	33.3	D.G C.J.N.T	22.0	310 250	B B
		н		U			A.D.G			
150.00	06/21/1948	C		H		==	G			
116.03	10/25/1974	В	5	S			G	22.0	249	A
142.11	12/05/1974		S	н				22.0	248	A
144.30	11/11/1974	c	S	H	==		==	22.0	260	A
58.17 97.00	12/05/1974 09/03/1964	C	S	Н				75	423 217	A
154.65	11/05/1975	н	S	н					325	Ä
120.00	01/21/1976	В	5	н	20		G		==	
98.83	04/03/1975	С	S	H			 G		300	A
175.00	05/05/1949	C	T	I			G		250	В
178.72	10/25/1974	H		U	400	8.0	G+J E+C+F+J+T+N	23.4	275	В
164.70	10/25/1974	C	5	H				21.0	303	В
143.00	12/04/1974	н	5	P	50	1.3	G D	21.0	300	Z
157.93	04/08/1975	н	5	H	==		G.J	21.0	163	A
		н		U			G.J			
176.50 56.70	11/05/1974 11/05/1974	н	S	H	10	==		23.0	2400 255	Z 8
138.00	11/01/1976	H	Ţ	P	90	12.9	D	21.0	340	z
		C	Т	U	==		G			
118.85 164.32	10/25/1974	C	S	S		==	D • G	21.0	270 345	В
142.50	11/12/107/	н		U			G	== .		
	11/13/1974	В	5	C U			G	22.0	240	В
183.94 81.50	10/24/1974 09/04/1974	Н	T S	H	180	10.6	D	23.0	250	A
150.00	04/15/1939	c	S	H	70		G			A
126.35 26.15	12/03/1974 04/09/1975	C	S C	н					234	A
165.06 203.00	12/03/1974 09/22/1959	C	S	Ü			D.G		247	Α
34.70	02/26/1976	C		н			Ĵ			
56.00 192.30	03/02/1976 12/03/1974	С	5	P	145	5.8	J	24.0	1750	8
95.90 193.90	05/16/1975	н	5	P	175	===	C+J+N+T+U	24.0	430	В
157.09	04/09/1975	н	s	н				24.0	250	A
175.00 174.00	07/15/1977 11/ /1974	c 	S	P	60		G•J	23.0	290	A
169.00 179.20	11/06/1974	H C	S	P H	75 100	1.5	D • G	23.0	260 440	B
169.00	11/06/1974	C	s	н				23.0	291	A
68.00 90.00	06/12/1974	н	T	P	200	100.0 50.0	D D•G	21.0	260 280	Z
131.00 185.19	07/ /1951 07/24/1975	C	T-	H	353	22.8	G C.D.E.G.J.N.U.T	23.0	240	В
139.35	08/01/1939	С		U	50	0.8				
200.00	04/09/1951 1971	С	T	H	150 200	6.0	- 11	21.0	540	A
126.12 138.55	11/05/1974	C	S	Н				22.0	285 290	Z B
195.00	02/26/1960	С	T	I	250			21.5	1550	A
131.79 168.98	04/08/1975 11/11/1976	C	5	H			E.J	21.5	209	Ä
133.72	09/08/1975	НВ	S	C	60	0.9	A,C,D,F,G,J,T,U		260	В
172.26	03/17/1975	н	T	Р	600	400.0	D•G	22.0	263	8
187.59	11/14/1974	C B	5	H			 G	22.0	342	A
178.08 179.34	05/27/1975	C	Ţ-	Ü			c•n	22.5	550	В
	*** *** ***	-		3		0.2	17.70			

			TABLE 9Records	of wellsContinu	ed				
WEL	L ER SITE NUMBER	COUNTY	OWNER	PRINCIPAL AQUIFER	DEPTH OF WELL (FEET)	DEPTH CASED	CASING DIAM- ETER (INCHES)	DATE COMPLETED	ALTITUDE OF LAND SURFACE (FEET)
241 242 243 244 245	303503084412701 303509084435201 303509084465501 303520084090501 303522084455101	039 039 039 073 039	SMITH, EVELYN INMAN, W M CLARK, A F FLA BUR OF GEOLOGY CLARK, HERSHAL	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	290 365 305 227 592	244  384	4 4 4  8	1962 1948 09/ /1968 03/ /1965 1969	285 272 292 237 262•0
246 247 248 249 250	303523084392201 303523084503801 303524084410101 303527084385901 303532084304201	039 039 039 039 039	HUGHES, D E BENTLEY COFFEL, CLYDE MACDANIELS, C E POST AND LUMBER CO	120FLRD 120FLRD 120FLRD 120FLRD	4223 280 746 460 275	520 305	4 6 4 4	08/16/1948 1975 11/11/1954 04/10/1976 1974	284 291 280 260 153.3
251 252 253 254 255	303533084384901 303535084400601 303539084275601 303540084430301 303542084465101	039 039 039 039 039	WEINBERG, HENRY RUSHING, JEFF TALQUIN ELEC COOP INC SMITH, JIMMY HARDMAN, RAY	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	500 360 424 500 420	308 284 376 418 400	4 4 6 6 4	1974 12/31/1953 01/17/1973 05/03/1962 11/08/1974	270 277.2 210.2 255 296
256 257 258 259 260	303547084320601 303550084345001 303554084290201 303554084344801 303555084181501	039 039 039 039 073	CRAIG, M E QUINCY, CITY OF GULF COAST FARM QUINCY, CITY OF FLA BUR OF GEOLOGY	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	230 701 400 1346 302	430 332	4 6 4 12	1970 1947 1974 05/ /1928 06/ /1965	166.7 151.0 206.0 148.9 279
261 262 263 264 265	303602084470101 303608084483201 303612084473001 303614084280601 303614084391101	039 039 039 039 039	HILDEBRANDT, W SMITH, MALCOLM SHEPHERD TALQUIN ELEC COOP INC FLA DIV OF FORESTRY	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	466 300 315 520 317	267 398 289	4 4 4 6 4	1971 09/23/1963 1975 10/05/1973 11/10/1955	230 287 290 200.8 280
266 267 268 269 270	303621084392201 303624084514301 303628084313201 303628084371201 303630084281901	039 039 039 039 039	GADSDEN CO SCH BOARD ROBERTS, JAMES JONES, DOROTHY C PEACOCK, GRADY FLA DIV OF FORESTRY	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	467 344 300 305 385	318 172 260 253	6 4 4 4	09/09/1959 05/30/1974 09/ /1957 10/24/1968 1970	288.6 282 253 285 210.7
271 272 273 274 275	303630084281902 303634084234601 303634084485201 303639084282301 303639084365301	039 039 039 039 039	FLA DIV OF FORESTRY WILKIE, WAYNE GIG BEND JAI ALAI GLASS IDUS PEACOCK, GRADY	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	302 380 505 300 340	259 326 365 180 220	4 12 4	11/24/1955 07/ /1975 12/28/1977 09/16/1974 03/22/1965	209.9 182.3 290 208 250
276 277 278 279 280	303639084515201 303642084522401 303645084464701 303645084474101 303655084373501	039 039 039 039 039	SMITH. J M CAROL. LUCILLE UNKNOWN CADISON. JOE GADSDEN COUNTY	120FLRD 120FLRD 1125AND 120FLRD 120FLRD	329 300 51 400 460	230 38  301	4 4 36 4 4	1963 06/08/1974 1977 1963 07/18/1967	272 252 255 272 284
281 282 283 284 285	303659084392901 303701084382401 303702084263101 303702084394301 303710084393201	039 039 039 039 039	GRETNA, CITY OF TIMMONS, CHARLES HARRELL, CONRAD N HANNA GROCERY GRETNA, CITY OF	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	949 345  264 950	469 296  573	8 4 6 4 8	1959 09/15/1950 1940  1971	297.1 290 235 295 295.6
286 287 288 289 290	303712084424401 303712084424402 303713084375301 303714084253001 303715084250701	039 039 039 039 039	HAIRE+ L D HAIRE+ L D KING EDWARD TOBACCO FLA HYBRID SEED CO HAVANA+ CITY OF	120FLRD 1125AND 120FLRD 120FLRD 120FLRD	352 35 914 362 598	270 3 486 278 436	4 48 8 4 12	08/20/1957 1935 1970 1974 10/29/1968	293 293 262.8 243.4 248.7
291 292 293 294 295	303715084250702 303716084434101 303721084354101 303723084024001 303728084101201	039 039 039 073 073	HAVANA, CITY OF SHARPTON, B. F COASTAL LUMBER CO CLEM PLANTATION U S GEOL SURVEY	120FLRD 120FLRD 120FLRD 120FLRD 122HTRN	538 380 342 230 41	436 365 290 151 38	12 4 4 4 1.25	10/29/1968 12/06/1974 1949 02/15/1962 04/ /1955	248.7 285 270 198 102.1
296 297 298 299 300	303739084245101 303739084245102 303739084245103 303804084355901 303805084313501	039 039 039 039 039	HAVANA, CITY OF HAVANA, CITY OF HAVANA, CITY OF COASTAL LUMBER CO COASTAL LUMBER CO	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	415 692 385 353 263	358 419 274 313 230	8 10 7 4 4	08/ /1944 04/ /1955 1940 08/20/1949 1948	240.4 238.6 240 282.1 275
301 302 303 304 305	303809084233601 303812084261201 303812084341201 303813084355801 303814084343801	039 039 039 039 039	WILLIAMS, R A WOODBERRY, W P BOYD, CHARLES HANCOCK, R N LESTER, R N	120FLRD 120FLRD 120FLRD  120FLRD	600 240 329 460	218 275 235	<del>4</del> - 4 4 4	1974 1974 09/07/1975 05/05/1967 05/15/1968	248.5 235 230 267 265
306 307 308 309 310	303818084081101 303821084400201 303824084414301 303825084470101 303827084465701	073 039 039 039 039	FOSHALEE PLANTATION SUBER FARMS TALQUIN ELEC COOP INC DALTON, FLOYD DALTON, ROLANE	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	253 885 390 465 285	158 284 322 280 265	10 8 6 4	03/ /1960 10/28/1947 10/ /1976 09/14/1974 1973	105.0 299.0 295 281 282
311 312 313 314 315	303837084423001 303837084470501 303838084230001 303840084263001 303845084250001	039 039 039 039 039	CLARK, GLENN M JACKSON, DON SHUMAN, CHARLIE HIERS, TURNER GARLAND, A	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	384 377 320 310 506	362 206 255 192 439	4 4 4 6	05/06/1975 07/01/1976 09/30/1975 01/14/1976 09/26/1941	291 285 210 225 257.6
316 317 318 319 320	303852084261401 303859084214801 303859084290601 303900084460201 303913084250201	039 039 039 039 039	BARRINEAU. B A BARINEAU. D I OWENS. DOUGLAS WILLIAMS. SHERRACK COASTAL LUMBER CO	120FLRD 120FLRD 120FLRD 120FLRD 120FLRD	315 367 680 400	351 364	4 4 4 6	1968 1959 1950 12/18/1974 1974	255 230.8 198.8 265 265

WATER LEVEL (FEET)	DATE WATER LEVEL MEASURED	METHOD CONST- RUCTED	TYPE OF LIFT	USE OF WATER	DISCHARGE (GALLONS PER MINUTE)	SPECIFIC CAPACITY (GPM/FT)		EMPERATURE DEGREES C)	SPECIFIC CONDUCTANCE (UHMOS/CM AT 25 C)	OTHER DATA AVAILABLE QW
185.70	11/08/1974	C	 S	H		~~	D • G		-	
177.93	04/04/1975	C	S	н				22.5	240	A
189.90	11/06/1974	Н		U	200	==	G,J C,E,F,J,N,T	22.5	550	В
160.02	04 400 41 075	н		U			D.E.G			
208.50	04/09/1975 11/05/1974	C	S	н				22.5	230 300	A
163.16 86.20	04/12/1976 10/01/1974	н	S	P N	30 30		D + G	23.0	260 310	A A B
167.00	11/11/1974	С	S	н				23.0	252	A
145.00 165.50	12/31/1953 01/17/1973	С	S	P	12 200	50.0	D+G	23.0	249	A
210.00	11/08/1974	C	T S	н	165 11		D+G	23.0	290	Z A
88.30						0.6	D	••		
87.71	10/25/1974 02/28/1977	c	S	U	280		C+F+J+N+T+U	21.0	298 800	A B
145.61 86.00	11/13/1974 02/03/1975	c	S	S	325	7.3		21.0	308	В
		č		Ú	323	7.3	D,G,V,C,E,F,J,U	,N 22.5	640	Z
165.24	04/07/1975	C	S	н			==	21.0	230	A
160.00 147.50	04/07/1975		S	н						
159.19	12/12/1974	C	s	Н	175 40	5.0	C.E.F.T.D.G,U,N	23.0	1200 235	B A
160.37	11/12/1974	C	S	P			D+G	22.0	210	В
161.77	04/04/1975 09/ /1957	C	5	н	15	3.0	D D,G	22.0	150	A
173.52 134.36	10/24/1974	C	S	H	==	==		22.0	245 265	A B
143.06	03/11/1975	С		U			D,C,J,U	22.0		
119.14	08/27/1975 12/28/1977	н	S	н			A + G	25.0	250 340	B B
123.50	09/16/1974	н	T S	P	250 8	12.5	C+J+T	22.0	990	A
121.79	10/24/1974	С	5	н				22.0	233	A
146.75 151.95	04/04/1975 04/04/1975	c	S	H	8	0.8	 D	22.0	248	A
49.00	02/08/1977 04/08/1975	0	5	Н						^
150.00	07/18/1967	н	S	P	40		==	22.0	243 260	A
225.35	11/07/1974	н	S	Р	225	4.0	D • G	21.0	700	Z
161.55 177.00	10/25/1974 01/20/1978	C_	S	H				20.0	237 888	A
159.58 232.57	10/21/1974	н	5	U	220	3.0	==	22.0	572	В
162.00	08/20/1957	С	s	н						
24.80	02/08/1961	D	В	U						
189.70 180.00	12/04/1974 01/10/1975	н	S	U	150 200	1.5	C+E+F+J+N+T C+E+F+J	22.0	1000 310	8
186.28	07/23/1975	н	Т	Р	600	120.0	C.D.E.F.G.J,T	21.6		Z
188.00 209.65	07/09/1977 04/13/1977	H	5	P H	692 11	138.4	) J	23.0	640	В
161.00	04/26/1976	С		U			C+F+J+N+T	21.5	230	8
6.01	02/15/1962 10/30/1976	В		Ü			G•J			
180.00	08/01/1944	С	T	Р	260		G	22.0	210	В
190.00	04/ /1955 04/29/1976	C	T	P U	800	160.0	D.G C.F.J.T	22.5	710 240	8
162.84 163.53	11/15/1974 04/29/1976	H		Ü			C+J+N+U C+J+N+T+U	23.0	280	8
181.32	11/12/1974		S					21.5	250	
168.74	11/11/1974		S	н				21.5	310 333	A
146.79	09/17/1975 10/25/1974	C	S	H	40	1.7		20.0	290 242	B
169.38	10/23/1974	н	S	н				20.0	282	Ã
43.00	03/ /1960	C	5	U	160	1.5	E+G+J D+G	20.0	225	В
219.68	05/10/1977	Н	5	P	100	4.3	D	23.0	220	В
139.24 150.29	04/03/1975 04/03/1975	н	5	H		==		22.5	130	8
220.50	05/05/1975	н	S	н	11	0.4	D+G		355	В
220.00 139.45	07/01/1976	H	5	H	36	9.0	B.J.T D.G.A	20.0	350 240	A
151.65	03/26/1976	H	S	н	40	2.4		22.0	310	В
204.15	11/15/1974	С	S	н				22.0	325	A
186.75 169.35	11/11/1974 06/03/1959	c	S	H				24.0	334	A
161.00	1950 04/13/1977	С	5	S H	10	0.5	D	24.0	880	A
131.77	11/15/1974		S	P						

TABLE 9.--Records of wells--Continued

322 303919 323 303920 324 303924 325 303926 326 303926 327 303927	8084054601 9084491101 9084245501 4084130101 6084194801 7084220901 70842244001 3084215501	073 039 039 073 039	LOVE, G H FLA DIV OF FORESTRY FLA DEPT OF TRANSPORT TALL TIMBERS RESEARCH MCGRIFFIS, ALMA BUTLER FARMS	120FLRD 120FLRD 120FLRD 120FLRD 1125AND	178  250	103	10	07/24/1961 1976	102 284
322 303919 323 303920 324 303924 325 303926 326 303926 327 303927	9084491101 9084245501 4084130101 5084194801 5084250001 7084220901 7084244001	039 039 073 039	FLA DIV OF FORESTRY FLA DEPT OF TRANSPORT TALL TIMBERS RESEARCH MCGRIFFIS, ALMA	120FLRD 120FLRD 120FLRD	250		4		
322 303919 323 303920 324 303924 325 303926 326 303926 327 303927	9084491101 9084245501 4084130101 5084194801 5084250001 7084220901 7084244001	039 039 073 039	FLA DIV OF FORESTRY FLA DEPT OF TRANSPORT TALL TIMBERS RESEARCH MCGRIFFIS, ALMA	120FLRD 120FLRD 120FLRD	250		4		
323 303920 324 303924 325 303926 326 303926 327 303927	0084245501 4084130101 5084194801 5084250001 7084220901 7084244001	039 073 039 039	FLA DEPT OF TRANSPORT TALL TIMBERS RESEARCH MCGRIFFIS, ALMA	120FLRD 120FLRD	250			19/0	
324 303924 325 303926 326 303926 327 303927	4084130101 5084194801 5084250001 7084220901 7084244001	073 039 039 039	TALL TIMBERS RESEARCH MCGRIFFIS, ALMA	120FLRD				07/ /10/1	
325 303926 326 303926 327 303927	5084194801 5084250001 7084220901 7084244001	039 039 039	MCGRIFFIS, ALMA				4	07/ /1961	263.4
326 303926 327 303927	5084250001 7084220901 7084244001	039 039		1125AND	249	551	8	1956	104.5
327 303927	7084220901 7084244001	039	DITLED FADMS		21	21	10	1959	149.4
	7084244001		DUILER FARMS	120FLRD			4	1974	251.2
			ELDER. CHARLES	120FLRD	303	227	4	02/27/1976	230
328 303927		039	TALQUIN ELEC COOP INC	120FLRD	440	216	6	02/23/1971	232
		039	VANN, WOODROW	120FLRD	280	204	4	10/22/1974	232
	9084392001	039	PEACOCK & CLARK	120FLRD	340	180	4	04/14/1965	259.4
330 303727									
331 303930	0084213001	039	DALTON, ETTIE M	120FLRD	260	215	4	05/03/1976	220
332 303930	0084491501	039	MCMILLIAN, FLORENCE	120FLRD	230	171	3	08/24/1951	290
333 303931	084362401	039	GADSDEN CO SCH BOARD	120FLRD	426	283	6	10/05/1959	297.6
334 303934	+084413801	039	BOOTH, JOE H	120FLRD	285	253	4	11/10/1948	300
335 303937	7084212901	039	NORWOOD, JULIUS	112SAND	22	22	48	1976	231
336 303939	084253601	039	FLORIDIN CO	120FLRD	525	381	6	09/08/1955	204.4
	1084162501	073			298	210	6		175
			TALQUIN ELEC COOP INC	120FLRD				03/23/1973	
	2084241501	039	JACKSON, JAMES O	120FLRD	480		4	1964	262.9
	3084241601	039	JACKSON, JAMES 0	120FLRD	210	183	4	1973	263.4
340 303943	3084241901	039	JACKSON, JAMES O	120FLRD			4	1973	263.2
341 303958	3084375101	039	BARKLEY. R.	120FLRD	292	260	4	08/ /1976	300
342 304010	0084273001	039	SMITH, J. F	120FLRD	550		4	1974	261.9
343 304017	7084365701	039	FORD DAIRY	120FLRD	280	216	4	03/16/1959	293
344 304019	9084484401	039	WILLIAMS. J	1125AND	51	51	36	04/22/1977	269
	7084281401	039	JAVDZIMAS, WALTER	120FLRD	540	453	4	01/29/1975	175
346 304034	084282801	039	DORIAN. ALLEN D	120FLRD	520	460	4	04/29/1975	158.2
	084354901	039	COASTAL LUMBER CO	120FLRD	642	422	6	1948	293
	084425501	039	COASTAL LUMBER CO	120FLRD	273	221	4	07/20/1948	295
	3084303701	039	SCRUGGS, JOHN C	120FLRD			4	1944	296.5
							4		
350 304118	3084475501	039	DUNN+ C S	120FLRD	358	265	4	1951	171
351 304134	084502101	039	CHATTAHOOCHEE, CITY OF	120FLRD	200	88	10	08/30/1948	116.3
352 304139	084480201	039	DUNN, C S	120FLRD	260	172	4	01/21/1965	160
353 304139	084502101	039	CHATTAHOOCHEE, CITY OF	120FLRD	239	153	10	04/01/1955	145.5
	084461801	039	DYKES, E B	120FLRD	350	200	4	05/ /1973	285
	0084460201	039	SARNETT . W W	120FLRD	380	329	4	10/16/1974	285
356 304151	084374201	039	GARDNER SAMMY	120FLRD	622	444	8	04/28/1977	292
	084374201	039	GARDNER SAMMY	120FLRD	926	451	8	05/17/1977	292
	084465601	039	ELLIS, FRANK	120FLRD	360	325	4	11/29/1974	280
	084465001	039	ELLIS, FRANK	120FLRD	340	323	4	01/10/1975	265
360 304211	084473501	039	TALQUIN ELEC COOP INC	120FLRD	344	286	6	07/ /1974	257

TABLE 9.--Records of wells--Continued

WATER LEVEL (FEET)	DATE WATER LEVEL MEASURED	METHOD CONST- RUCTED	TYPE OF LIFT	USE OF WATER	DISCHARGE (GALLONS PER MINUTE)	SPECIFIC CAPACITY (GPM/FT)	TYPES OF LOGS AVAILABLE	TEMPERATURE (DEGREES C)	SPECIFIC CONDUCTANCE (UHMOS/CM AT 25 C)	OTHER DATA AVAILABLE QW
39.00	07/24/1961	С	T	I	1000	24	E,G,J	21.0	220	A
			S	н				22.0	230	В
103.64	11/13/1974	н	5	P			D.G	22.0	290	A
41.80	12/13/1974	C	T	I	500					,
1.05	06/03/1955	D	В	н				24.0		
190.35	11/13/1974		S	S						
162.00	02/27/1976	н	S	н	20		D.J			
183.00	02/23/1971	H	S	P	50	2.3	D	23.0	620	Z
181.00	10/22/1974	н	S	н	12	0.4	D			
149.54	10/24/1974	С	S	н				23.0	248	В
155.00	05/03/1976	н	S	н	20		D.G			
136.00	08/24/1951	C		н			G			
177.85	11/13/1974	C	S	P			D.G	21.0	260	В
147.00	11/10/1948	C	T	н			D	21.0	255	A
15.70	03/12/1976	D		н			J			
141.98	03/02/1977	C	S	N	80			21.0	900	8
105.00	03/23/1973	н	T	P	220	220.0	D+G	20.0	220	Z
206.23	11/12/1974		S	н				20.0	268	В
102.98	11/12/1974	н	5	1	12	1.0		20.0	298	В
49.32	11/12/1974		S	I				21.0	323	В
156.90	08/02/1976	C		н			B.C.J.T	21.0	130	A
172.76	10/24/1974		S	н				21.0	272	В
145.00	03/ /1959	С		S	90		D.G			
41.00	04/22/1977	D		н				21.0	45	В
115.00	01/29/1975	Н	S	н	12	0.2	D			
104.00	04/29/1975	н	S	н	12	0.1	D.G.T	23.0	400	В
207.82	03/29/1976	С		U			C+F+J+N+T+U,V	24.0	325	В
120.00	07/20/1948	С	T	U						
190.07	10/23/1974	С	S	н				20.0	286	8
137.58	04/03/1975	н	S	н			7.	20.0	310	A
		C	Ţ	P			G			z
84.59	04/03/1975	н	S	P						
87.01	03/08/1977	Н	T	P	510	102.0	D+G	21.0	265	Z
149.53	04/02/1975	H	S	н				21.0	202	A
215.00	10/16/1974	н	S	Р	20	1.3	D			
213.00	04/28/1977	н		I	4-		C.E.F.J.T	23.0	230	z
218.60	06/21/1977	Z	T	I	1000	15.0				
203.00	11/29/1974	н	S	H	11	0.6	D	23.0	310	A
179.27	04/07/1975	H	S	н	12	0.6	D	20.0	235	Â
174.34	04/02/1975	н	T	P	200	66.7	D	20.0	192	B

## TABLE 10.--Chemical analyses of major constituents in ground water.

(Samples analysed by private laboratories are coded 9801 in column "CODE FOR ANALYZING SAMPLE," and other analyses performed by the U. S. Geological Survey laboratory.)

	an	DATE	TOTAL DEPTH	SAMP-	SPE- CIFIC CON- DUCT-	ogical Surv	ey laborator	BICAR-	DIS- SOLVED CAL-	DIS- SOLVED CHLO-	COLOR (PLAT-	DIS- SOLVED FLUO-
WELL NUMBER	. SITE NUMBER	OF SAMPLE	OF WELL (FT)	LING DEPTH (FT)	ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	BONATE (HCO3) (MG/L)	CIUM (CA) (MG/L)	RIDE (CL) (MG/L)	INUM- COBALT UNITS)	RIDE (F) (MG/L)
3 15 17	295046084394301 295557084261701 295732084430701	75-04-08 77-05-18 72-09-08 75-01-09 75-03-18	93 130	80 100	420 225 530 599	7.5	22.0 23.0 20.6	358	67 21 54	34 30 12 15 7.4	10	.1
18	295845084230501	76-05-03 76-11-01 77-05-04 77-11-01 65-10-04	68	=======================================	520 555  542	=	21.0	76	26	14 11 11 9.0	20	
19 21 22 24	295845084230502 295845084230502 295953084290101 300000084261002 300039084323301	65-11-29 77-09-16 75-03-18 75-07-16 76-06-07	68 90 74 83 100	=======================================	450 710 540	7.4 7.5 7.1	25.0 20.0	88 73 224 174 342	27 59 44 96	35 74 20 110 6.2	20 10 5	.1 .6 .0 .0
28 29 30	300135084335901 300151084235801 300151084235802	75-06-27 75-11-18 77-09-16 75-11-18	173 125 125 125	=======================================	530	7.3	20.0	336 93 43 88	100 27 27	4.2 23 22 30	5	.3
35	300343084293001	77-09-16 68-08-23 75-07-16	125 260 260		360	7.5	22.0	46 124 209	60	8.0 5.2	0 5	.5
36 37 42	300344084294701 300350084292701 300421084361901	76-06-07 75-03-18 75-06-27	56 190		330 460 449	7.4 7.5 7.4	21.5	222 209 272	66 76 76	4.8 13 6.2	5 5 10	.3
43 44 46	300454084390601 300500084182701 300538084384501	75-07-02 77-05-19 77-05-19 77-05-17 75-07-16	260 260 260 188 136	250 185 180	1000 1000 1000 800 450	7.5 7.5 7.7 7.0 7.3	20.5 22.0 22.0 21.0 21.5	266 220 212 340 262	120 120 120 95 73	48 46 45 120 7.0	80 40 5 20 20	1.0 1.0 1.0
47	300540084174001	62-05-01 64-01-02 64-07-09 65-05-06 66-04-29	83 83 83 83	=	=	=				170 100 32 130		
		66-12-30 67-05-05 68-05-15 69-05-12 70-05-11	83 83 83 83	=======================================		=				70 60 86 83 72		
		71-05-05 72-04-26 73-05-08 74-05-07 75-04-08	83 83 83 83	80	1400	7.1	21.0	460	128	62 180 102 77 280	10	.2
49	300618084193801	76-05-03 76-11-01 77-05-02 77-11-01 76-04-23	83 83 83 83 205	=======================================	815 800 900 970		20.5	183	48	75 63 80 139 23		
50 52 53 55 57	300618084193802 300631084223401 300740084293001 300813084555701 300945084581001	76-04-23 75-04-08 75-07-11 75-05-13 75-07-02	205 221 127 204 184	215	140 300 420 245	7.8 7.2 8.0 7.3	23.0	151 72 198 263 165	47 26 58 60 50	31 2.4 5.0 5.2 2.5	0 5 10 5	.3 .1 .3 .4
59 60	300959084403501 301028084223801	75-06-25 71-01-25	260 156	=	550 270	7.3 8.3	23.5 22.0	348 150	61 45	7.0 6.0	45	.6
61	301028084223802	76-03-15 76-08-13	170 170		300 290	7.6 7.3	21.0	149 150	46 48	6.4	0	.1
63	301035084403701	75-03-18 75-04-09 75-04-09 75-06-20	110 110 110 110	108	515 420 500 500	7.4 7.2 7.4 7.3	20.0 20.5 23.5	321	63. 70 70 68	1.4 5.6 5.0 4.6	10 5 5 10	.4
65 67 70 72 73 74	301115084241201 301148084434101 301328084283401 301808084303001 301822084433401 301829084365901	75-12-10 75-03-18 75-07-08 75-12-10 75-03-18 75-12-10	300 176	=======================================	319 420 240 323 240	7.3 7.8 7.2 7.7 6.9 7.7	21.5	148 193 264 159 198 159	48 49 78 47 57	2.4 2.6 .4 2.0	5 10 20 5	.2 .2 .2 .0 .0
75 77 78 81 84	301918084413401 302002084320401 302007084231901 302138084490001 302258084433401	76-12-15 75-06-27 75-06-13 76-06-03 75-03-18	158 177 340 235 160	=	250 395 255 310 300	7.4 7.3 7.3 7.7 6.8	19.0 21.0 27.0 23.5	200 246 114 198 183	59 78 39 57 50	3.0 2.1 3.6 3.6	10 10 5 5	.2 .1 .1
86 88 89 92 98	302303084391801 302321084473501 302411084243801 302517084542801 302544084583901	76-06-03 75-03-18 75-06-17 75-03-18 70-10-15	150 85 202 308 605	=======================================	240 212 245 180 245	7.8 7.6 7.3 8.0 8.0	27.5	161 124 126 106 142	29 36 38 25 32	10 1.1 2.4 1.1 3.6	5 10 0 10	.3 .0 .2 .1

DATE OF SAMPLE	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	CODE FOR AGENCY ANA- LYZING SAMPLE
75-04-08	200	30	6.7	7.1	19	1.2	255	252	17	
77-05-18	63		2.5		21				12	
72-09-08 75-01-09										
75-03-18	270	0	32	26	17	5.6	328	320	.6	
76-05-03						-				
76-11-01										
77-05-04										
77-11-01 65-10-04	94	32	7.3	.0			200		3.0	9801
							144		.0	9801
65-11-29 77-09-16	120 140	48	13	.0	40		310			9801
75-03-18	170	0	5.0	4.6	21	1.2	226	225	4	
75-07-16 76-06-07	140 270	0	7.7	7.9	5.8	2.0	366	343 306	11	
75-06-27 75-11-18	290 72	14	8.8	19	10	.8	324 113	306	.0	9801
77-09-16	69	ő			13		136			9801
75-11-18	76 77	1	3.9		5.7		115		5.0	9801 9801
77-09-16	"			2,57	3.,					
68-08-23	162	60	3.1	12 13	3.9	1.0	219 200	198	3.5	9801
75-07-16 76-06-07	180 180	6	4.2	15	3.6	.9	215	205	1.1	
75-03-18	200	27	1.5	9.0	15	.4	264	250 257	30	
75-06-27	230	4	9.0	21	8.0	1.0	280			
75-07-02	510	290	50	21	29	2.5	762	690	280	
77-05-19 77-05-19	510 510	330 340	50 50	12	31 31	2.2	918	695 691	320 320	
77-05-17	290	8	12	8.4	69	1.6	536	477	2.4	
75-07-16	200	0	4.3	21	7.1	1.2	256	245	.4	
62-05-01										
64-01-02									-	
64-07-09 65-05-06	- ::									
66-04-29										
66-12-30										
67-05-05										
68-05-15	===	- :							-	
69-05-12 70-05-11										
71-05-05										
72-04-26										
73-05-08 74-05-07	==								-	
75-04-08	370	0	11	16	170	11	896	845	1.3	
76-05-03										
76-11-01										
77-05-02 77-11-01	===		-					-		
76-04-23	148	2	6.8		10		172		14	
76-04-23	130	6	2.9		11		212		10	9801
75-04-08	68	9	.8	5.9	1.8	.4	82	81	7.6	
75-07-11 75-05-13	160 220	0	16	10	3.6 6.7	1.3	182	180 236	.2	
75-07-02	140	3	3.1	8.7	2.6	.4	156	150	.0	
75-06-25	270	0	27	22	12	2.2	320	309	.4	
71-01-25		2	3.3	9.3	3.7	.6	164	153	9.6	
76-03-15	130	. 6	3.2	8.5	3.6	5.1	155	156	10	
76-08-13		7	3.3	8.2	4.3	.8	163	154	9.0	
			10				292	281	1.4	
75-03-18 75-04-09		0	19	24	9.0 8.7	1.3	276	201	1.4	
75-04-09	270		22		8.5		360		.7	
75-06-20 75-12-10		0 2	20	25 6.6	7.9	1.4	294 134	285 141	3.0	
75-03-18 75-07-08		0	3.7	17 14	2.4	4.3	186 242	180 233	:7	
75-12-10	130	0	1.7	11	3.7	.8	146	146	.0	
75-03-18		0	2.2	17	3.7	.8	180	179	.0	
75-12-10	130	0	1.9	6.1	3.6	.3	142	142	.0	
76-12-15		0	2.4	15	4.3	.9	203	186		
75-06-27 75-06-13		18	3.5	12	3.2	.5	216 150	216 139	20.0	
76-06-03	160	0	2.9	14	4.0	.8	188	181	.3	
75-03-18	140	0	3.0	55	5.4	1.0	190	172	.0	•••
76-06-03		0	4.3	15	55	1.9	162	164	.8	
75-03-18 75-06-17		5	3.3	13 6.9	1.2	.5	126 120	114	.2	
75-03-18	81	0	4.6	16	2.2	1.3	108	103	.0	
70-10-15	121	4	9.7	17	4.7	1.8	145	147	7.0	

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WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL)	COLOR (PLAT- INUM- COBALT UNITS)	DIS- SOLVED FLUO- RIDE (F)
101 102	302602084230501 302602084585701	76-07-09 75-03-18 75-06-09 76-08-10	345 320 320 320	=	250	7.9 7.8 7.7	23.0	49 137  138	12 25 30	9.0	0 5	.0
104 105 108 111 112	302612084261401 302616084242401 302638084312801 302650084362301 302650084581001	76-07-09 76-07-09 75-07-15 75-04-09 75-07-15	305 347 290 292 344	285	180 200 320	8.0 7.5 7.6	21.5 22.0 22.5	98 134 97 132 182	31 49 24 35 43	7.0 7.0 5.8 2.8 1.8	0 10 5 5 10	.0
113 119 122 123 127	302653084362301 302708084240301 302711084204801 302716084204801 302722084184101	75-04-09 75-03-19 76-07-09 76-07-09 70-12-31	600 375 150 145 370	=======================================	360 320  290	8.1 8.1 184 7.8	23.0	184 128 184 157 170	16 30 59 42 42	32 15 7.0 9.0 6.0	5 5 5 0	.8 .2 .0 .1
130 132 139 147	302823084560601 302901084372801 302938084255801 303012084135302	76-01-08 75-02-05 76-06-03 76-04-12 77-01-21	370 350 310 200 310	330	280 200 240 200	7.3 8.0 7.8 7.8	20.5 24.0 22.0	179 145 150 142 142	43 23 29 32 42	5.8 3.5 3.6 1.8 3.0	0 20 5 0	.1 .4 .5 .2
148 149 151 153 154	303015084195201 303021084423401 303032084195501 303042084202201 303050084581601	76-04-21 75-03-19 76-04-21 76-04-21 77-05-11	300 487 275 	=======================================	216	8.3	23.0	149 126 156 166 164	37 24 37 44 25	6.0 1.1 6.0 8.0 7.8	0 5 0 0 5	.3 .7 .2 .2
155 156 157 158	303059084202701 303108084193101 303111084205401 303112084220702	75-10-07 76-04-21 75-03-20 77-06-01	270 360 194 330	Ξ	315	7.6	=	157 110 186	36 28 41 21	1.0 9.0 3.6 2.8	5	.1 .2 .2
165 168 169 185 187	303128084162901 303143084281101 303145084383701 303239084355301 303243084430301	75-03-20 71-04-02 76-04-29 76-06-01 75-02-04	290 390 256 630 803	254 800	309 250 250 450	7.8 8.4 7.9	22.5	177 201  146 221	34 38 19 17 33	.8 6.6 2.8 2.0	5	.7
188 190 194	303244084333001 303246084421701 303254084381801	75-02-04 75-02-04 75-03-19 76-04-23 75-03-19	803 803 400 700 960	640 540	375 275 332  2630	7.8 8.0 7.8  8.0	24.4	173 170 190 185 157	27 25 32 33 34	52 15 .8 6.0	5 0 5	.6 .7 .5
195 196 200 202	303258084381801 303302084293001 303321084285001 303328084365301	76-08-18 75-03-19 76-10-06 76-06-02 75-03-19	960 365 359 411 380	=======================================	2400 286  340 265	7.8 7.5 8.1	26.0	160 212 220 144	34 30 34 17	5.0 6.0 5.0	5 0 5 5	.7 .7 .5
213 215 218	303405084371101 303407084443401 303416084273401	72-02-16 72-11-03 75-04-10 76-06-15 75-03-17	800 800 800 485 307	=	1750 430 242	7.7 7.7 7.6	24.0	198 161 166 178 134	53 31 44 32 36	570 304 450 43 1.6	0 0 5 0 10	1.2 1.0 1.1 .5
219 222 223	303418084444701 303433084234001 303434084233701	75-07-17 76-08-19 74-07-03 76-06-03 72-08-21	420 420 275 275 343	=======================================	250 240 	7.8	23.0	161 166 168	35 39 43	3.2 3.0 7.0	5 0 0	.5
225	303437084345001	76-06-03 72-08-15 75-07-24 75-07-25 75-07-25	343 681 681 681	670 470 570	180 150 160	7.8 7.6 7.8	24.3 22.0 22.0	176 104 141 143 144	40 23 18 20 19	7.0 10 2.0 2.2 2.6	0 5 10 5	.0 .6 .7 .7
228 229 234 236	303439084213701 303441084402501 303447084314501 303453084132001	77-09-29 76-04-23 75-03-19 75-09-15 75-03-17	681 322 476 300 325	=======================================	280 303 260 263	7.7 7.8 7.8 8.0	23.0	140 134 172 164 148	22 35 33 25 35	18 6.0 7.0 4.6 5.0	0 0 5 5 5	.5 .3 .6 .8
239 245	303500084363801 303522084455101	76-04-23 76-04-05 76-04-28 76-04-28 76-04-28	325 883 592 592 592	492 390 500 580	1100 550 3300 4000	8.8 7.9 7.8 7.7	22.5 22.5 23.0 24.0	139	37 20 30 50 60	10 320 85 1000 1000	0	.2
250 253 257	303532084304201 303539084275601 303550084345001	76-04-28 75-03-17 73-01-22 76-07-09 76-04-27	592 275 424 424 701	420	1500 310  800	7.8 7.8  8.4	23.0	170 139 123	36 23 70 103 25	360 4.0 54 78 190	10 0 10	.7 .8 .1
		76-04-27 76-04-27 76-04-27 76-04-27 76-04-27	701 701 701 701 701	500 420 560 600 620	900 625 1380 2900 5400	8.0 9.2 7.9 7.6 7.4	21.5 21.0 21.0 21.5 21.5		30 10 45 98 200	200 150 320 750 1500		-

		IRDED 10.	Olicination		-					
DATE OF SAMPLE	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS: (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	CODE FOR AGENCY ANA- LYZING SAMPLE
76-07-09	48	8	3.9		.2		54	100	3.0	9801
75-03-18 75-06-09	100	0	10	16	4.4	1.7	146	131	6.4	
76-08-10	110	0	9.2	14	4.5	1.7	133	138	6.8	
76-07-09 76-07-09	90 142	3 12	2.7		7.8		110 150		5.0	9801 9801
75-07-15 75-04-09	89 110	10	7.1 4.2	17 18	4.6	1.0	104	132	2.8	
75-07-15	140	0	8.1	22	5.5	2.3	180	173	.6	
75-04-09 75-03-19	71 110	0	7.3 9.0	11	55 15	4.1	226 184	220 166	2.4	
76-07-09 76-07-09	173 140	55	6.1 8.1		.7		190 172	190	5.0 8.0	9801 9801
70-12-31	146	7	10	14	2.9	.4	171	163	3.2	
76-01-08 75-02-05	150 93	2	10	13	3.5	2.8	172 131	169 138	5.4	
76-06-03 76-04-12	110	0	9.4	8.4	9.9	2.4	159 128	157	5.9	
77-01-21	132	16	6.8	10	3.5		190	145	5.0	9801
76-04-21 75-03-19	128 85	6	8.3	31	6.7	2.0	114	133	5.0	9801
76-04-21	152	24	1.4		15		126 164		5.0 10	9801 9801
76-04-21 77-05-11	130	8	7.8 15	14	18	3.0	236	184	19	
75-10-07	126	0	8.7	3.0	2.4		177		1.0	9801 9801
76-04-21 75-03-20	92 160	8	13	14	.2	.5	160	160	.2	
77-06-01 77-06-01	84		7.7		1.9		230 230		<1.0 <1.0	9801 9801
75-03-20	148	3	15	21	1.8	.6	166 285	166	5.0 27	
71-04-02 76-04-29	198	33	25 10	1.4	17				2.0	
76-06-01 75-02-04	76 160	0	7.8	11	25 53	3.9	154 294	151	11	
75-02-04	130 120	0	15 13		38 25		176 182		12	
75-02-04 75-03-19	150	0	16	27	6.1	2.0	200 194	187	8.3	9801
76-04-23 75-03-19	144 220	90	30	23	402	8.9	1370	1260	48	
76-08-18 75-03-19	130		11	52	4.4	1.8	192	192	9.2	
76-10-06 76-06-02	142 160	0	17 18	6.1	19	3.1	255 203	189 205	8.4	9801
75-03-19	88	ő	ii	12	15	3.7	234	141	9.4	
72-02-16 72-11-03	270 162	110 30	34 20	25 23			1900 990		107	9801
75-04-10 76-06-15	220 150	86 1	26 16	26 17	300 35	3.9	1030	1040 255	94 19	
75-03-17	110	õ	4.0	28	3.3	1.1	150	140	2.0	
75-07-17 76-08-19	120	0	11	20	8.7	2.6	162	160	12	
74-07-03 76-06-03	144 128	12	14 7.3	•1	3.3		205 156	137	3.0	9801 9801
72-08-21	156	18	12	12			178		.0	9801
76-06-03 72-08-15	136 86	0	8.8	==	2.3		170	167	3.0	9801 9801
75-07-24 75-07-25	85 96	0	9.7	11	20 20	4.0	140 142	145	10 11	
75-07-25	89	ő	10		20	4.1	146		11	
77-09-29 76-04-23	100 132	0 22	11	13	28 6.2	4.0	168 170	179	13	9801
75-03-19 75-09-15	140 120	0	13 15	45 11	8.4	2.0 3.6	192 160	196 166	9.7	
75-03-17	130	3	9.0	14	2.0	.2	148	140	1.0	
76-04-23 76-04-05	126 89	12	7.8 9.6		7.1		124	=	3.0 6.3	9801
76-04-28 76-04-28	140 290		15 40		60 570		==	==	20 240	
76-04-28	350	- 11	48		720	==			230	
76-04-28 75-03-17	190 120		24 14	13	220	3.3	188	164	75 7.7	
73-01-22 76-07-09	330 378	220 250	38 29	16	34		700 800	==	280 80	9801 9801
76-04-27	150		21		130				43	
76-04-27 76-04-27	170 83	==	23 14		140 110			-	58 10	
76-04-27	240		30 62		200 500				130 380	
76-04-27 76-04-27	500 990		120		970			==	860	

WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	COLOR (PLAT- INUM- COBALT UNITS)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
257 258 259	303550084345001 303554084290201 303554084344801	76-04-27 75-03-17 70-08-06 75-01-30 75-02-03	701 400 1346 1346 1346	680  1335 1000	7500 340 853 30000 23000	7.4 7.6 7.9 6.9	21.5 21.7 30.7 27.4	197 158 234 229	280 28 32 720 880	2100 3.0 155 13000 8000	5 0	.6 .8 3.0 6.5
		75-02-03 75-02-03 75-02-03 75-02-03 75-02-03	1346 1346 1346 1346 1346	830 700 600 520 365	18000 9500 600 220 200	7.0 7.2 7.9 8.0 7.9	25.6 24.1 22.8 21.5 20.5	216 197 147 145 145	880 470 34 21 18	5900 3200 120 11 5.3	=	6.0 3.8 .7 .6
264	303614084280601	75-06-09 76-04-09 76-04-10 76-08-11 73-10-12	1346 1346 1346 1346 520	=	693 310 610 640	7.8 8.0 7.8	21.5 21.5  22.5	155 150 154 152	28 19 27 28 74	110 25 91 110 114	0 0 0 5	.8 .7 .8 .7
266 270	303621084392201 303630084281901	75-04-07 75-04-07 75-04-07 76-06-01 75-03-17	520 520 520 467 385	410 480 515	1200 1200 1380 250 300	7.8 7.7 7.7 7.6	23.0 24.0 24.0 24.5	140 138 144 142 165	78 74 86 26 31	140 180 210 2.7 3.2	0 0 5 5	.7 .6 .7 .3
271 272 281 285 288	303630084281902 303634084234601 303659084392901 303710084393201 303713084375301	75-04-07 75-09-29 76-06-14 75-03-19 75-07-24	302 380 949 950 914	290	250 340 840 625 280	7.5 8.3 7.7 7.9 8.0	25.5	154 114 164 154	29 38 33 24 17	4.4 13 180 91 12	0 0 5 5	.6 .4 .5 .4
		75-07-24 75-07-24 75-07-24 75-07-24 75-07-24	914 914 914 914 914	580 610 620 640 700	300 500 1100 1150 1150	8.0 8.0 7.8 7.8 7.8	24.0 24.2 24.5 24.7 25.3	=	17 20 34 37 36	16 72 260 300 280	0 0 0 0	.6 .5 .5
289 290	303714084253001 303715084250701	75-07-24 75-07-24 75-07-24 75-01-30 69-04-10	914 914 914 362 598	780 840 900 355	1500 2100 2500 310	7.8 7.7 7.7 7.7	25.6 26.0 26.5 22.2	191 90	41 48 51 32 45	420 620 730 5.5 18	0 0 0 10	1.2 .6
		69-05-13 73-03-01 75-07-23 75-07-23 75-07-23 75-07-23 75-07-23	598 598 598 598 598 598 598	460 500 558 570 575 580	310 310 790 2400 3800 4000	7.8 7.8 7.7 7.5 7.4	21.6 21.6 22.0 22.6 22.8 22.9	83 178   167	77 91 33 34 67 250 420 480	33 92 3.0 5.0 60 340 620 690	0 0 0 0 10	.5 .5 .5 .6 1.6
291 293 296 297	303715084250702 303721084354101 303739084245101 303739084245102	75-07-23 75-07-23 77-07-20 76-04-26 76-06-02 75-08-05	598 598 538 342 415 692	590 598	4750 4750 600 230 210	7.4 7.3 7.4 7.9 7.5	23.1 23.4 24.0 21.5 22.0	179  146 159	570 570 64 25 33 98	850 850 23 3.5 3.7 53	25 10 0  5 5	2.5 2.2 .5 .3
299	303804084355901	76-06-02 76-06-02 76-06-02 76-06-02 76-06-02 75-04-25	692 692 692 692 692 353	345	710 760 760 750 280	7.4	22.0	152	96 90 96 92 90 26	36 35 36 35 36 35	5	.5
300 303 307 308 309	303805084313501 303812084341201 303821084400201 303824084414301 303825084470101	76-04-29 75-09-17 76-06-14 77-05-10 75-08-05	263 240 885 390 465	245	250 290 220 220 130	8.0 7.7 7.8 7.8 7.2	21.5 22.0 23.5 23.0 22.5	179 135 142 78	26 31 25 26 16	2.0 4.6 3.0 3.5 2.0	5 5 5 0	.6 .4 .3 .3
311 313 314 322 328	303837084423001 303838084230001 303840084263001 303919084491101 303927084244001	75-08-05 75-09-30 76-03-26 76-06-15 71-04-13	384 320 310 	=	355 240 310 230	7.7 7.7 7.6 7.7	21.0 22.0 22.0	149 146 205 148 176	29 32 36 27 43	33 5.4 4.2 3.0 30	5 0 20 0	1.3 .3 .4 .4
330 333 336 337	303929084392001 303931084362401 303939084253601 303941084162501	76-06-03 75-03-19 76-06-01 75-03-17 76-02-09	440 340 426 525 298	=	278 290 900 220	8.1 7.7 7.7	20.0	161 152 183 143 161	52 23 30 75 32	32 2.0 3.0 40 5.8	0 5 5 5 0	.1 .4 .5 .6
338 339 340 342 344	303942084241501 303943084241601 303943084241901 304010084273001 304019084484401	75-03-17 75-03-17 75-03-17 75-03-17 77-04-12	480 210  550 51	=======================================	369 342 350 299 45	8.0 8.0 7.9 5.9	=	206 196 196 163	36 29 45 20	3.6 3.2 3.2 3.2 3.0	10 10 10 5	.5 .6 1.0 .4
346 347 349 351	304034084282801 304050084354901 304113084303701 304134084502101	75-07-14 76-04-27 76-04-27 75-03-17 75-08-26	520 642 642 790 200	430 620	400 325 250 310	8.0 7.8 7.6 7.8	23.0 24.0 23.0	142  170 156	24 27 26 22 39	53 7.7 3.3 3.0 3.0	5  10 10	.4

		,,LD 10: <u>91</u>						0.16		CODE
DATE OF SAMPLE	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SILICA (S102) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	CODE FOR AGENCY ANA- LYZING SAMPLE
76-04-27 75-03-17 70-08-06 75-01-30 75-02-03	1400 140 161 4000 4300	0 32 3800 4100	170 16 19 540 500	13 18	1300 13 106 8000 5100	3.1	210 469 25900 19600	181 468	7.2 51 3000 4000	:-
75-02-03 75-02-03 75-02-03 75-02-03 75-02-03	4000 2300 150 93 84	3800 2100 30 0	430 270 16 9.9 9.4	=	4000 2200 100 27 24	=	15600 8960 429 171 140	:	4000 2300 80 15 11	
75-06-09 76-04-09 76-04-10 76-08-11 73-10-12	140 90 130 140 369	11 0 5 13	16 10 15 16 44	16 13 15 15	82 36 73 78 112	4.9 3.6 4.5 5.0	378 191 339 346 700	378 200 339 367	42 18 35 38 137	9801
75-04-07 75-04-07 75-04-07 76-06-01 75-03-17	390 380 430 120 140	280 270 320 2 0	48 47 53 13 14	16 17 17 19 16	120 120 110 3.9 4.7	5.8 5.9 6.6 1.7 2.6	780 808 900 140 162	758 793 750 145 162	280 280 310 8.4 8.4	
75-04-07 75-09-29 76-06-14 75-03-19 75-07-24	140 160 170 130 88	13 68 37 5	16 16 21 17 11	12 11 17 16 23	6.1 8.5 110 57 28	3.0 1.6 4.8 3.2 3.3	150 220 502 338 200	157 213 471 287	9.2 68 21 1.4 17	=
75-07-24 75-07-24 75-07-24 75-07-24 75-07-24	88 110 190 200 200	=	11 14 24 26 26	23 22 15 13 13	31 59 150 160	3.5 3.9 5.5 5.8 5.7	190 276 620 704 648	=	8.9 13 27 30 29	=======================================
75-07-24 75-07-24 75-07-24 75-01-30 69-04-10	220 270 330 150 222	  0 150	29 34 48 16 26	13 15 15 16 3.8	240 390 460 15	7.4 12 14 3.6	1000 1380 1620 180 310	194	46 74 110 11 40	9801
69-05-13 73-03-01 75-07-23 75-07-23 75-07-23	300 326 160 160 320	230 180 	26 24 18 18 36	2.8 12 12 12	83 8.2 8.2 47	2.6 2.5 3.4	410 533 188 204 562		50 220 12 10 180	9801 9801 
75-07-23 75-07-23 75-07-23 75-07-23 75-07-23	1100 1800 2200 2400 2400	2100	120 190 240 240 240	12 13 18 20 17	250 430 500 640 640	7.6 12 13 16 16	2230 3790 4400 5080 5020	4030	1000 2000 2000 2300 2300	=
77-07-20 76-04-26 76-06-02 75-08-05 76-06-02	280 110 120 310 360	130 0 180	28 12 8.6 16 30	19	19 11 3.1 37 25	1.2	421 147 573	382 147	7.5 6.2 200 210	9801
76-06-02 76-06-02 76-06-02 76-06-02 75-04-25	350 360 350 350 120	230	30 30 30 30 14	16	25 25 25 25 25 5.9	2.0	168	153	210 200 210 210 8.5	
76-04-29 75-09-17 76-06-14 77-05-10 75-08-05	120 150 110 120 66	1 1 0 2	13 17 12 12 6.4	14 25 17 36	9.5 4.7 10 2.6	3.1 1.7 1.8 1.2	172 143 204 126	179 147 153 110	12 11 8.8 12 5.4	=
75-08-05 75-09-30 76-03-26 76-06-15 71-04-13	130 130 170 120 216	8 14 4 0 72	15 13 20 12 26	13 8.4 15 25 1.3	20 4.7 7.3 5.3	2.2 .8 3.2 2.1	220 142 186 154 315	199 152 196 156	12 15 8.4 7.8 65	9801
76-06-03 75-03-19 76-06-01 75-03-17 76-02-09	194- 110 140 350 130	35 0 0 240 1	15 13 16 40 13	17 18 15 14	15 7.6 8.2 35 3.6	2.2 2.5 2.9	374 154 173 608 157	150 177 531	9.2 8.7 252 .6	9801
75-03-17 75-03-17 75-03-17 75-03-17 77-04-12	160 140 150 96	0 0 0	17 16 10 11	8.2 30 19 16	12 17 9.1 20	3.4 2.8 2.6 3.5	212 199 199 162 34	205 196 164	9.2 9.6 10 8.4	9801
75-07-14 76-04-27 76-04-27 75-03-17 75-08-26	120 120 100	1  0 0	14 13 13 11 7.3	17	38 12 11 21 2.9	3.2	234 170 163	171	19 10 8.5 7.8 <1.0	9801

TABLE 10. -- Chemical analyses of major constituents in ground water--Continued

WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	COLOR (PLAT- INUM- COBALT UNITS)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
353	304139084502101	70-07-29	239	-	252	7.8		154	37	2.6	0	.2
		75-03-19	239		265	7.9		156	35	.6	5	.2
		75-06-09	239			7.7	21.0					
		75-08-26	239					155	38	3.0	2	.0
356	304151084374201	77-04-28	622	530	230	7.8	23.0	138	21	5.8		
360	304211084473501	75-08-05	344		180	7.6		112	27	3.0	5	.1

TABLE 10.--Chemical analyses of major constituents in ground water--Continued

DATE OF SAMPLE	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	CODE FOR AGENCY ANA- LYZING SAMPLE
70-07-29	127	1	8.3	13	2.7	.5	143	141	.6	
75-03-19	120	0	8.0	13	2.0	.5	140	137	.6	
75-06-09										
75-08-26	127	0	7.3		3.0		160		<1.0	9801
77-04-28	92	0	9.5		16				12	
75-08-05	93	1	6.2	8.9	2.0	.3	110	104	.9	

WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (NO3) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	PHOS- PHATE (PO4) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	TUR- BID- ITY (JTU)
18	295845084230501	65-10-04							.00			0
28	300135084335901	65-11-29 75-06-27					.00		.00	.01	.00	30
35	300133084333901	68-08-23							7.5	.01		
42	300421084361901	75-06-27					.00			.02	.02	15
43	300454084390601	75-07-02					.00			.00	.00	35
46	300538084384501 300618084193801	75-07-16 76-04-23					.00	.22		.12	.12	20
49 50	300618084193802	76-04-23						.34				~-
		77-06-01						.15				10 to
53	300740084293001	75-07-11			***		.01		-	.01	.01	
57 59	300945084581001 300959084403501	75-07-02 75-06-25	.01	.00	.00	.01	.00			.01	.01	10 75
60	301028084223801	71-01-25						.00				100
61	301028084223802	76-03-15				.02	.01		***		**	
4.2		76-08-13					.00			0.1		15
63 70	301035084403701 301328084283401	75-06-20 75-07-08	.37	1.6	.08	.28	.00			.01	.06	15
77	302002084320401	75-06-27	ato ess				.00		60 60	.01	.01	40
78	302007084231901	75-06-13	.06	.30	.04	.02	.00			.16	.16	2
89	302411084243801	75-06-17	.36	1.6	.32	.03	.01			.03	.03	30
98 101	302544084583901 302602084230501	70-10-15 76-07-09						.77				
102	302602084585701	75-06-09	.06	.30	.02	.03	.00		-	.01	.01	1
		76-08-10				~ ~	.00		-		60 60	
104	302612084261401	76-07-09						.01				
105	302616084242401	77-06-01 76-07-09						.01				
		77-06-01						.01				
122	302711084204801	76-07-09						.01	***		***	
123	302716084204801	76-07-09						.01		-		
127	302722084184101	77-06-01 76-01-08				.02	.01	1.0				
147	303012084135302	77-01-21						.93	<.01			
148	303015084195201	76-04-21						.22				
	24242244105541	77-06-01						.05				
151	303032084195501	76-04-21 77-06-01						.24				
153	303042084202201	76-04-21						.06 .58				
154	202050006501601	77-06-01						.07				
155	303050084581601 303059084202701	77-06-01 75-10-07							.20			1
156	303108084193101	76-04-21 77-06-01						.12				
158	303112084220702	77-06-01						1.2				
168	303143084281101	71-04-02	-			***	-		.50			
190	303246084421701	77-06-01 76-04-23						.06				
	303240004421101	77-06-01						.03			40 40	
196	303302084293001	76-10-06					-	.02	<.10			
213	303405084371101	72-02-16							2.8			0
222	303433084234001	72-11-03							2.5			**
222		76-06-03						.06	10.10			
		77-06-01				-		.22			-	
223	303434084233701	72-08-21						.06	.20			
		76~06-03 77-06-01						.01				
228	303439084213701	76-04-23						.06				
		77-06-01						.23			444	
236	303453084132001	76-04-23 77-06-01						.11				
253	303539084275601	73-01-22							3.2			
		76-07-09						.02		-		-
		77-06-01	***				16.00	<.01				
259	303554084344801	70-08-06	.15	.70	.05	.09	.00	.00		.01	.01	1
		76-08-11					.00		1 3			0
264	303614084280601	73-10-12							1.3			
290	303715084250701	69-04-10							.60 .30			0
297	303739084245102	69-05-13 75-08-05						.02			-	-
308	303824084414301	77-06-01						<.01	1.5			
328	303927084244001	71-04-13										
		76-06-03	-					.09				
337	303941084162501	77-06-01 77-06-01						.12			49.00	
351	304134084502101	75-08-26	21		00	.01	.00	.66		-02	.02	1
353	304139084502101	75-06-09 75-08-26	.21	.90	.00	0.00		.39				
360	304211084473501	77-06-01						.03				
							96					

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TABLE 12.--Chemical analyses of trace metals, aluminum through iron (alphabetically),

of ground water.

(Samples analyzed by private laboratories are coded 9801 in column "CODE FOR AGENCY ANALYZING SAMPLE", and other analyses performed by U.S. Geological Survey Laboratory.)

	performed by U.	S. Geologica	l Survey la								,	
WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	TOTAL BARIUM (BA) (UG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)
3	295046084394301	75-04-08	93									
15	295557084261701	77-05-18	130									
17 18	295732084430701	75-03-18										
10	295845084230501	65-10-04 65-11-29	68 68			= ==	===					
19	295845084230502	77-09-16	90		<10		<100			1		2
21	295953084290101	75-03-18 75-07-16	74									
24	300000084261002	76-06-07	83 100									
28	300135084335901	75-06-27	173									
29	300151084235801	75-11-18 77-09-16	125 125		<5 <10		<100 <100			<5 <1		1
30	300151084235802	75-11-18 77-09-16	125 125		5 <10	= ::	<100 <100			<5 <1		2
35	300343084293001	68-08-23	260									
		75-07-16	260									
36	300344084294701	76-08-12 76-06-07	260	40	0				40	2		2
37	300350084292701	75-03-18	56									
42	300421084361901	75-06-27	190						7-			
43	300454084390601	75-07-02 77-05-19	260									
	24454444444	77-05-19	260									
44	300500084182701 300538084384501	77-05-17 75-07-16	188 136		==							
47	300540084174001	75-04-08	83						**			
49	300618084193801 300618084193802	76-04-23 76-04-23	205 205		60		<5			<100		
50	300010004193602	77-06-01	205		<5		<100			<5 <10		
52	300631084223401	75-04-08	221								-	
55	300813084555701	75-05-13	204									
57 59	300945084581001 300959084403501	75-07-02 75-06-25	184 260			0		0			3	
61	301028084223802	76-03-15 76-08-13	170 170		==	1		100			2	
2.4	301035084403701	75-03-18	110									
63	301033084403701	75-04-09	110									
		75-04-09 75-06-20	110									
6.5	301115084241201	75-12-10	129									
67 70	301148084434101 301328084283401	75-03-18 75-07-08	300									
72	301808084303001	75-12-10										
73 74	301822084433401 301829084365901	75-03-18 75-12-10	176	==		===						
75	301918084413401	76-12-15	158									
77	302002084320401	75-06-27	177									
78	302007084231901 302138084490001	75-06-13 76-06-03	340 235			0		0			0	
81 84	302258084433401	75-03-18	160									
86	302303084391801	76-06-03	150	10	0				20	0		0
88 89	302321084473501 302411084243801	75-03-18 75-06-17	85 202			0		0			2	
92	302517084542801	75-03-18	308									
101	302602084230501	76-07-09	345		<b>&lt;</b> 5		<100			<5		
102	302602084585701	75-03-18 76-08-10	320 320		==	0		100			0	
104	302612084261401	76-07-09 77-06-01	305 305		8		<100			<5 <10		
105	302616084242401	76-07-09	347		<5		<100			<5		
	A	77-06-01	347							<10		
108	302638084312801 302650084362301	75-07-15 75-04-09	290									
111 112	302650084581001	75-07-15	344									
		76-06-03	344	20	1				30	0		0
113 119	302653084362301 302708084240301	75-04-09 75-03-19	600 375			===						
122	302711084204801	76-07-09	150		<5		<100			<5		
123	302716084204801	76-07-09 77-06-01	145 145		<5 		100			<5 <10		==
127	302722084184101	76-01-08	370									
130 132	302823084560601 302901084372801	75-02-05 76-06-03	350 310									
139	302938084255801	76-04-12	200					==	20			
		76-06-02	200	20	1							
147 148	303012084135302 303015084195201	77-01-21 76-04-21	310 300		<10 <5	- :-	<500 <100		- :-	<10 <5		
		77-06-01	300							<10		
149 151	303021084423401 303032084195501	75-03-19 76-04-21	487 275		<5		<100			<5		

		01	ground wat	ercontinu	ea				CODE
DATE OF SAMPLE	TOTAL CHRO- MIUM (CR) (UG/L)	HEXA- VALENT CHRO- MIUM (CR6) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	TOTAL COPPER (CU) (UG/L)	CYANIDE (CN) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	TOTAL IRON (FE) (UG/L)	FOR AGENCY ANA- LYZING SAMPLE
75-04-08							80		
77-05-18							30		
75-03-18 65-10-04		==					0	400	9801
65-11-29					o				9801
77 00 14									9801
77-09-16 75-03-18				10			3600		9001
75-07-16							290		
76-06-07							0		
75-06-27							2400		
75-11-18	<10			50				40	9801
77-09-16 75-11-18	<10			<10 50				25	9801 9801
77-09-16				<10					9801
68-08-23				0				120	9801
75-07-16							30		
76-08-12		0	0	0			70		
76-06-07							20		
75-03-18 75-06-27							680 1500		
15 00 21							1500		
75-07-02							2500		
77-05-19 77-05-19							540 30		
77-05-17							420		
75-07-16							1300		
75-04-08							200		
76-04-23	<10			20					
76-04-23	<10			50			110	40	9801
77-06-01 75-04-08							110		
75-05-13 75-07-02							10 880		
75-06-25	<10				2		4200	4800	
76-03-15							0		
76-08-13	30								
75-03-18							2400		
75-04-09 75-04-09							10 30		
75-06-20							2560		
75-12-10							130		
75-03-18							1200		
75-07-08 75-12-10				- ::			590 540		
75-03-18							420		
75-12-10							910		
76-12-15							30		
75-06-27							5000	200	
75-06-13 76-06-03	<10				1		130	380	
75-03-18							90		
76-06-03		0	0	0			70		
75-03-18							280		
75-06-17	<10				500		840	23000	
75-03-18 76-07-09	<10			<20		<.10	40	<50	9801
	110			120		1.10		130	9001
75-03-18							40		
76-08-10 76-07-09	<10			<20	==	<.01		90	9801
77-06-01							60		
76-07-09	<10			<20		<.01		70	9801
77-06-01							90		
75-07-15							10		
75-04-09 75-07-15							10		
76-06-03		0	0	0			10		
75 04-00							4.0		
75-04-09 75-03-19							40 30		
76-07-09	<10			<20		<.01		320	9801
76-07-09	<10			<20		<.01		1200	9801
77-06-01							60		
76-01-08							10		
75-02-05 76-06-03							10		
76-04-12							100		
76-06-02		0	0	0			0		
77-01-21	<10			<100				940	9801
76-04-21	<10			50		<.01		150	9801
77-06-01							60		
75-03-19 76-04-21	<10			<10		<.01	40	20	9801
				• •				-4	

WELL NUMBER	STTE NUMBER	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	TOTAL BARIUM (BA) (UG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)
151	303032084195501	77-06-01	275							<10		
153	303042084202201	76-04-21 77-06-01		- 11	<5 		<100			<5 <10		
154	303050084581601	77-05-11 77-06-01	304 304	==	=	=				<10		
155 156	303059084202701 303108084193101	75-10-07 76-04-21	270 360	::	<5	::	<100	==		 <5		
157	303111084205401	77-06-01 75-03-20	360 194							<10		
158	303112084220702	77-06-01	330		<10		<100			10		
165 168	303128084162901 303143084281101	75-03-20 71-04-02	290 390		=	=	=	=	=	=	==	
185	303239084355301	77-06-01 76-06-01	390 630		==	==				<10		
	303243084430301	75-02-04	803					-		-		
187	303243084430301	75-02-04	803									
188	303244084333001	75-02-04 75-03-19	803 400		- 22	==			==	==		
190	303246084421701	76-04-23	700		<5	••	<10			<5		
194	303254084381801	77-06-01 75-03-19	700 960	==	==	==	==		==	<10		
	303258084381801	76-08-18 75-03-19	960 365	20	0	- ::			190	0		11
195 196	303302084293001	76-10-06	359		<10		<500			<10		<10
200	303321084285001 303328084365301	76-06-02 75-03-19	411 380	==	===							
213	303405084371101	72-02-16 72-11-03	800	==	- ::	- ::	- ::		- ::			
		75-04-10	800									
215 218	303407084443401 303416084273401	76-06-15 75-03-17	485 307		==	- ::	==			===		
219	303418084444701	75-07-17	420	120	1	==			30			29
222	303433084234001	76-08-19 74-07-03	420 275									••
		76-06-03 77-06-01	275 275		<b>&lt;5</b>		<100	===		<5 <10		
223	303434084233701	72-08-21 76-06-03	343 343	==	 <5	==	<100	=		<5		
		77-06-01	343							<10		
225	303437084345001	72-08-15 75-07-24	681 681		==							
	303439084213701	77-09-29 76-04-23	681 322		<5		<100			<5		
228		77-06-01	322							<10		
229	303441084402501 303447084314501	75-03-19 75-09-15	476 300	==						==		
236	303453084132001	75-03-17 76-04-23	325 325		<5		<100			<5		
		77-06-01	325							<10	••	
250 253	303532084304201 303539084275601	75-03-17 73-01-22	275 424		==							
233		76-07-09 77-06-01	424 424		<5	- ::	<100			<5 <10		
258	303554084290201	75-03-17	400								••	
259	303554084344801	75-01-30 75-02-03	1346 1346									
		75-02-03	1346			- ::				- ::		
		75-02-03 75-02-03	1346	==	==	=	==					
		75-02-03 75-02-03	1346 1346	==	==	==			==			
		75-06-09	1346									-
		76-04-09 76-04-10	1346 1346	0	1	=	=		100	2		0
		76-08-11	1346			1		200		-	1	
264	303614084280601	73-10-12 75-04-07	520 520	==								
		75-04-07 75-04-07	520 520	==	Ξ	==	=		=	=		==
266	303621084392201 303630084281901	76-06-01 75-03-17	467 385			= ::	==		:	==		==
270 271	303630084281902	75-04-07	302	==								
272 281	303634084234601 303659084392901	75-09-29 76-06-14	380 949	10	2	=	==	=	40	0		0
285	303710084393201 303713084375301	75-03-19 75-07-24	950 914		==							
288	303113004313301	75-07-24	914									
		75-07-24 75-07-24	914 914	==					=			==
						100						

DATE OF SAMPLE	TOTAL CHRO- MIUM (CR) (UG/L)	HEXA- VALENT CHRO- MIUM (CR6) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	TOTAL COPPER (CU) (UG/L)	CYANIDE (CN) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	TOTAL IRON (FE) (UG/L)	FOR AGENCY ANA- LYZING SAMPLE
	100/2/	100727	1007 17	1007.27	100727	THOVE		100/6/	
77-06-01 76-04-21	<10			20		<.01	20	20	9801
77-06-01							40		7001
77-05-11 77-06-01							40		
75-10-07				<100			60 00	200	9801
76-04-21 77-06-01	<10			50		<.01	100	80	9801
75-03-20							100		
77-06-01	<10		on co	90			10		9801
75-03-20	500 500		***	-	40.00		10		-0.00
71-04-02			10 m	0			300 50		40.00
76-06-01							0	10.00	
75-02-04			00 en				0		49.10
75-02-04 75-02-04	en m					10 m	60		60 40 ·
75-03-19		60.40	***				10		
76-04-23 77-06-01	<10			30		<.01	160	110	9801
75-03-19		62 60					90		
76-08-18 75-03-19		0	0	0			30 20		
76-10-96				<100		<.01	200		9801
76-06-02 75-03-19			***				20 10		
72-02-16	-			0			300		
72-11-03 75-04-10			***	0			130	270	9801
76-06-15					49.69		30		-
75-03-17 75-07-17					***		0		
76-08-19 74-07-03		0	0	0			100 100	, may 440.	9801
76-06-03 77-06-01	<10	0.0		<50		<.01	80	100	9801
72-08-21				0			0		9801
76-06-03 77-06-01	<10			<50	**	<.01	40	1800	9801
72-08-15	-	A 44					~~		9801
75-07-24							0		
77-09-29 76-04-23	<10			30		<,01	50	20	9801
77-06-01			***				430		
75-03-19 75-09-15							10 20		
75-03-17	60.60		-				0		
76-04-23 77-06-01	<10			50		<.01	30	20	9801
75-03-17							20		
73-01-22 76-07-09	<10			<20		<.01	190	1100	9801 9801
77-06-01	<10		***	~~	***		110	1100	7001
75-03-17	**			**			90		40.00
75-01-30 75-02-03							70		-00
75-02-03							60 50		
75-02-03 75-02-03							0		
75-02-03							0	40.00	
75-02-03 75-06-09			***				10 30	-	
76-04-09 76-04-10			0	0	**		20		MA 700 -
76-08-11	30								
73-10-12				0			200	-	9801
75-04-07 75-04-07							60 50		100.001
75-04-07	-						70	**	49-49
76-06-01 75-03-17							0		
75-04-07							30		63.05
75-09-29 76-06-14		0	0	0			10 20	-	
75-03-19	-						50		
75-07-24							30 10		
75-07-24							0	-	
75-07-24			***	***	101		0		) - com

TABLE 12.--Chemical analyses of trace metals, aluminum through iron (alphabetically), of ground water--Continued

WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	TOTAL BARIUM (BA) (UG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)
288	303713084375301	75-07-24	914									
200	303/130043/3301	75-07-24	914									
		75-07-24	914									
		75-07-24	914									- 40 10
		75-07-24	914									
289	303714084253001	75-01-30	362									
290	303715084250701	69-04-10	598									
		69-05-13	598									
		73-03-01	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
291	303715084250702	77-07-20	538									
296	303739084245101	76-06-02	415									
297	303739084245102	75-08-05	692		<10		90			<5		
		76-06-02	692									
299	303804084355901	75-04-25	353									
303	303812084341201	75-09-17	240									
307	303821084400201	76-06-14	885									
308	303824084414301	77-05-10	390									
		77-06-01	390							<10		
309	303825084470101	75-08-05	465									
311	303837084423001	75-08-05	384									
313	303838084230001	75-09-30	320									
314	303840084263001	76-03-26	310					-				
322	303919084491101	76-06-15										
328	303927084244001	71-04-13	440									
		76-06-03	440		<5		<100			<5		
12/22	Transportation.	77-06-01	440							<10		
330	303929084392001	75-03-19	340									
333	303931084362401	76-06-01	426									
336	303939084253601	75-03-17	525									
337	303941084162501	76-02-09	298							-10		
338	303942084241501	77-06-01 75-03-17	298 480					===		<10		
339	303943084241601	75-03-17	210									
340	303943084241901	75-03-17										
342	304010084273001	75-03-17	550									
344	304019084484401	77-04-12	51									
346	304034084282801	75-07-14	520									
349	304113084303701	75-03-17	790									
351	304134084502101	75-08-26	200		<10		<10			<10		
353	304139084502101	75-03-19	239									
		75-08-26	239		<10		<10			<10		
360	304211084473501	75-08-05	344									
	1	77-06-01	344							<10		

TABLE 12.--Chemical analyses of trace metals, aluminum through iron (alphabetically), of ground water--Continued

									1966
	TOTAL	HEXA-	DIS-	DIS-			DIS-		FOR AGENCY
DATE	CHRO-	CHRO-	SOLVED	SOLVED	TOTAL		SOLVED	TOTAL	ANA-
OF	MIUM	MIUM	COBALT	COPPER	COPPER	CYANIDE	IRON	IRON	LYZING
SAMPLE	(CR)	(CR6)	(CO)	(CU)	(CU)	(CN)	(FE)	(FE)	SAMPLE
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(MG/L)	(UG/L)	(UG/L)	
75-07-24							0		
75-07-24							0		
75-07-24							10		
75-07-24				-			0		
75-07-24							0		
75-01-30							0		
69-04-10				0			0		9801
69-05-13				0			0		9801
73-03-01								100	9801
75-07-23							10		
75-07-23							0		
75-07-23							20		
75-07-23							710		
75-07-23							1500		
75-07-23							2100		
75-07-23							3100		
75-07-23							3000		
77-07-20							0		-
76-06-02							0		
75-08-05	<10			<50				60	9801
76-06-02							0		
75-04-25							130		
75-09-17							20		
76-06-14							0		
77-05-10							10		
77-06-01							40		
75-08-05							0		
75-08-05							0		
75-09-30 76-03-26							40		
76-03-26		•	-				20		
76-06-15							0		
71-04-13							100		9801
76-06-03	<10			50		<.01		90	9801
77-06-01 75-03-19							10		
76-06-01 75-03-17							100		
76-02-09							100		
77-06-01							40		
75-03-17							60		
75-03-17							30		
75-03-17							0		
75-03-17							10		
77-04-12								60	9801
75-07-14							0		
75-03-17			144				90		
75-08-26	<10								9801
75-03-19	>						20		
75-08-26	<10							20	9801
75-08-05							130		
77-06-01							210		
75-07-14 75-03-17 75-08-26 75-03-19 75-08-26 75-08-05	<10  <10	=	=	=	=	=	0 90  20  130	1370	

#### TABLE 13.--Chemical analyses of trace metals, lead through zinc (alphabetically), of ground water.

(Samples analyzed by private laboratories are coded 9801 in column "CODE FOR AGENCY ANALYZING SAMPLE," and other analysis performed by U.S. Geological Survey laboratory.)

WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL DEPTH OF WELL	DIS- SOLVED LEAD (PB)	TOTAL LEAD (PB)	DIS- SOLVED LITHIUM (LI)	DIS- SOLVED MAN- GANESE (MN)	TOTAL MAN- GANESE (MN)	DIS- SOLVED MERCURY (HG)	TOTAL MERCURY (HG)	DIS- SOLVED MOLYB- DENUM (MO)	DIS- SOLVED NICKEL (NI)
3	2050//00/20/20/	75 44 45	(FT)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
17	295046084394301 295732084430701	75-04-08 75-03-18	93									
18	295845084230501	65-10-04	68					0				
19	295845084230502	65-11-29 77-09-16	68 90	10			60		1.0		-	
21	295953084290101	75-03-18	74			22						
22	300000084261002 300039084323301	75-07-16 76-06-07	83 100			===						
28	300135084335901	75-06-27	173									
29	300151084235801	75-11-18	125	<10		-	100		<.1			10.00
30	300151084235802	77-09-16 75-11-18	125 125	<10			<10 100		<1.0 <.1			
35	2002/200/202001	77-09-16	125	1			<10		<1.0			
33	300343084293001	68-08-23 75-07-16	260				0					
		76-08-12	260	15		0	0		.0		13	0
36 37	300344084294701 300350084292701	76-06-07 75-03-18	56					**			100	
42	300421084361901	75-06-27	190									
43	300454084390601	75-07-02	260									- 69 49 -
		77-05-19	260									
44	300500084182701	77-05-17	188									
46	300538084384501 300540084174001	75-07-16 75-04-08	136 83									
49	300618084193801	76-04-23	205	<10					<.0			
50	300618084193802	76-04-23	205	<10					.0			
52	300631084223401	77-06-01 75-04-08	205	<50								-
53	300740084293001	75-07-11	127									
55	300813084555701	75-05-13	204								-	-
57 59	300945084581001 300959084403501	75-07-02 75-06-25	184 260		7			30		.0		- 00 00
60	301028084223801	71-01-25	156									
	'301028084223802	76-03-15	170				1.02		500	3.3	- 68	
61		76-08-13	170		12					.1		
63	301035084403701	75-03-18 75-06-20	110									
65	301115084241201	75-12-10	129									
67 70	301148084434101 301328084283401	75-03-18 75-07-08	300									
72	301808084303001	75-12-10										
73 74	301822084433401 301829084365901	75-03-18 75-12-10	176			==						
75	301918084413401	76-12-15	158		- 22							
77	302002084320401 302007084231901	75-06-27	177 340		14			10				
78 81	302138084490001	75-06-13 76-06-03	235		14					-0		
84	302258084433401	75-03-18	160									
86 88	302303084391801 302321084473501	76-06-03 75-03-18	150 85	6		0	0		.4		0	0
89	302411084243801	75-06-17	202		18			110		.0		
92 98	302517084542801 302544084583901	75-03-18 70-10-15	308 605									
101	302602084230501	76-07-09	345	<10					<.1			
102	302602084585701	75-03-18 76-08-10	320 320		5					.1		
104	302612084261401	76-07-09	305	<10					<.1			
105	302616084242401	77-06-01 76-07-09	305 347	<50 <10			<10		<.1			
		77-06-01	347	<50								
108	302638084312801 302650084362301	75-07-15 75-04-09	290 292									
112	302650084581001	75-07-15	344									
		76-06-03	344	25		0	0		.2		0	0
113 119	302653084362301 302708084240301	75-04-09 75-03-19	600 375						(H-40)			
122	302711084204801	76-07-09	150	<10		••			<.1			***
123	302716084204801	76-07-09 77-06-01	145 145	<10 <50					<.1			
127	302722084184101	70-12-31	370									
130	302823084560601	76-01-08 75-02-05	370 350									
132	302901084372801	76-06-03	310									
139	302938084255801	76-04-12 76-06-02	200	10			10		.3		12	0
147	303012084135302	77-01-21	310	10			<50		<1.0		- 60 60	
148	303015084195201	76-04-21	300	<10					<.1			

DATE OF SAMPLE	DIS- SOLVED SELE- NIUM (SE) (UG/L)	TOTAL SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	TOTAL SILVER (AG) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SOLVED NATURAL URANIUM (U) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC (ZN) (UG/L)	CODE FOR AGENCY ANA- LYZING SAMPLE
75-04-08					620					
75-03-18					670					9801
65-10-04										9801
65-11-29 77-09-16	0		<10					60		9801
					110					
75-03-18 75-07-16					100					
76-06-07					300					
75-06-27 75-11-18	<10		<5		190					9801
								40		9801
77-09-16 75-11-18	<10		1 <5							9801
77-09-16	<0		1					50		9801 9801
68-08-23 75-07-16					100					
						19		10		
76-08-12 76-06-07					220	19				
75-03-18					1850					
75-06-27 75-07-02	- 11				180 4600					
77-05-19					4200					
		100			360					
77-05-17 75-07-16					170				-	
75-04-08					650					
76-04-23 76-04-23	<10 <10		<5 <5	- ::						9801
77-06-01										
75-04-08	- ::				210 90					
75-07-11		-	-							
75-05-13					500 360					
75-07-02 75-06-25		0		0	1300		<.4			
71-01-25					550					••
76-03-15					200					
76-08-13		0		0	250 1270					
75-03-18 75-06-20					740					
75-12-10					210					
75-03-18					140					
75-07-08 75-12-10					140 190					
75-03-18					110					
75-12-10					260					
76-12-15					270					
75-06-27 75-06-13		0		0	200 140		<.4		20	
76-06-03					320					
75-03-18					110					
76-06-03					1700	.0		10		
75-03-18 75-06-17				1	100		.8		290	
75-03-18					90					
70-10-15				-	320		-			
76-07-09	<10		<5					40		9801
75-03-18 76-08-10	===	0			190 370					
76-07-09	10		<5					30		9801
77-06-01								30		9801
76-07-09 77-06-01	<10		<5		==		===			7001
75-07-15					90		==			
75-04-09					190					
75-07-15 76-06-03						1.6		10		
75-04-09					1200					
75-03-19 76-07-09	<10	==	<5		40	==		60		9801
76-07-09	<10		<5					60		9801
77-06-01					120					
70-12-31 76-01-08					110					
75-02-05					390					
76-06-03					330					
76-04-12 76-06-02	==				180	5.8		-		
77-01-21	<10		10							9801
76-04-21	<10		<5			105				9801

WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	DIS- SOLVED LEAD (PB) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS- SOLVED LITHIUM (LI) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)
148	303015084195201	77-06-01	300	<50			<10					
149	303021084423401 303032084195501	75-03-19 76-04-21	487 275	<10					<.1			
151	303032004145501	77-06-01	275	<50								
153	303042084202201	76-04-21		<10					<.1		••	
		77-06-01		<50								
154	303050084581601	77-05-11	304									
155	303059084202701	77-06-01 75-10-07	304 270	<50			<50					
156	303108084193101	76-04-21	360	<10					<.1			
		77-06-01	360	<50		-						
157	303111084205401	75-03-20	194									
158	303112084220702	77-06-01	330	<50			<10		<2.0			
165	303128084162901	75-03-20	290									
	2021/200/201101	71 04 02	200				0					
168	303143084281101	71-04-02	390 390	<50								
185	303239084355301	76-06-01	630									
188 190	303244084333001 303246084421701	75-03-19 76-04-23	700	<10					<.1			
190	303240004421701	70 04 25										
	202254004201001	77-06-01	700	<50								
194	303254084381801	75-03-19 76-08-18	960 960	0		30	5		.2		7	0
195	303258084381801	75-03-19	365									
196	303302084293001	76-10-06	359	<10					<1.0			
200	303321084285001	76-06-02	411									
202	303328084365301	75-03-19 72-02-16	380 800						===			
213	303403064371101	72-11-03	800					0				
		75-04-10	800									
215	303407084443401	76-06-15	485									
218	303416084273401	75-03-17	307						=			
219	303418084444701	75-07-17 76-08-19	420 420	4		20	0		.0		9	2
222	303433084234001	74-07-03	275				0					
		76-06-03	275	<10					<.1			
		77-06-01	275	<50								
223	303434084233701	72-08-21	343 343	<10			0		<.1			
		76-06-03 77-06-01	343	<50								
225	303437084345001	72-08-15	681									
		75-07-24	681 681									
		75-07-25 75-07-25	681									
		77-09-29	681									
228	303439084213701	76-04-23	322	<10					<.1			
220		77-06-01	322	<50						==		
229	303441084402501 303447084314501	75-03-19 75-09-15	476 300									
236	303453084132001	75-03-17	325									
		76-04-23	325	<10					<.1			
		77-06-01	325	<50								
250	303532084304201 303539084275601	75-03-17 73-01-22	275 424				0					
253	303539004275001	76-07-09	424	<10					<.1			
		77-06-01	424	<50								
258	303554084290201	75-03-17	400									
259	303554084344801	70-08-06	1346									
		75-06-09 76-04-09	1346 1346									
						20					12	0
		76-04-10 76-08-11	1346 1346	16	8	20	0		.1	.0	12	
264	303614084280601	73-10-12	520				0					
		75-04-07 75-04-07	520 520							- ::		
		13-04-01	320									
	202421004202221	75-04-07 76-06-01	520									
266 270	303621084392201 303630084281901	75-03-17	467 385									
270	303630084281902	75-04-07	302									
272	303634084234601	75-09-29	380									
281	303659084392901	76-06-14	949	12		10	0		.2		2	0
285	303710084393201 303713084375301	75-03-19 75-07-24	950 914									
288	303113004313301	75-07-24	914									
		75-07-24	914									
		75-07-24	914									
		75-07-24	914							- ::		
		75-07-24 75-07-24	914 914									
		75-07-24	914									
							1 2 2					

	DIS-				DIS-	DIS-	DIS-			CODE
DATE	SOLVED SELE- NIUM	TOTAL SELE- NIUM	DIS- SOLVED SILVER	TOTAL	SOLVED STRON- TIUM	SOLVED VANA- DIUM	SOLVED NATURAL URANIUM	DIS- SOLVED ZINC	TOTAL	AGENCY ANA- LYZING
SAMPLE	(SE) (UG/L)	(SE) (UG/L)	(AG) (UG/L)	(AG) (UG/L)	(SR) (UG/L)	(V) (UG/L)	(UG/L)	(ZN) (UG/L)	(ZN) (UG/L)	SAMPLE
77-06-01										
75-03-19 76-04-21	<10		<5		0					9801
77-06-01										9001
76-04-21	<10		<5					••		9801
77-06-01									***	
77-05-11 77-06-01					800					
75-10-07 76-04-21	<10		<5							9801 9801
77-06-01 75-03-20					90					
77-06-01			<10							9801
75-03-20					1110					
71-04-02									<b>100</b> 000	en en
77-06-01 76-06-01					880					
75-03-19 76-04-23	<10		<5		80					9801
77-06-01 75-03-19					8800					
76-08-18 75-03-19					70	.0		10		
76-10-06	<10		<10		70			<10		9801
76-06-02					520					
75-03-19 72-02-16				1	0					
72-11-03 75-04-10					4600					9801
					4600		-	-		-
76-06-15 75-03-17					800					
75-07-17					100					
76-08-19 74-07-03	==	==	==			-4		20		9801
76-06-03	<10		<5					40	-	9801
77-06-01 72-08-21										9801
76-06-03	<10		<5					30		9801
77-06-01 72-08-15										9801
75-07-24					430					
75-07-25 75-07-25					430 430					
77-09-29					900					**
76-04-23	<10		<5							9801
77-06-01 75-03-19					10					
75-09-15					430 280					
75-03-17										
76-04-23 77-06-01	<10		<5							9801
75-03-17					420					9801
73-01-22 76-07-09	<10		<5	==						9801
77-06-01										
75-03-17 70-08-06	==				2600					
75-06-09 76-04-09			==	==	2000 1100					
76-04-10	- 12				1800	2.9		0		
76-08-11		0		0	1700					9801
73-10-12 75-04-07					290					7001
75-04-07					290					- 44
75-04-07 76-06-01					280					
75-03-17					0					
75-04-07 75-09-29	==	==			580 430					
76-06-14					2600	1.6		20		
75-03-19 75-07-24					1010 280					
75-07-24					330					
75-07-24		••			460		-			
75-07-24 75-07-24					1200	40 AN			-	
75-07-24		-			1400 2200					
75-07-24 75-07-24		==			5700			***		

TABLE 13.--Chemical analyses of trace metals, lead through zinc (alphabetically), of ground water--Continued

WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	DIS- SOLVED LEAD (PB) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS- SOLVED LITHIUM (LI) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)
288	303713084375301	75-07-24	914						-			
289	303714084253001	75-01-30	362									
290	303715084250701	69-04-10	598				0					
2,0		69-05-13	598				0					
		73-03-01	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
		75-07-23	598									
291	303715084250702	77-07-20	538									
296	303739084245101	76-06-02	415									
297	303739084245102	75-08-05	692	<1			200		<.1			
		76-06-02	692									
299	303804084355901	75-04-25	353								-	
303	303812084341201	75-09-17	240									
307	303821084400201	76-06-14	885									
308	303824084414301	77-05-10	390									
		77-06-01	390	<50								
309	303825084470101	75-08-05	465									
311	303837084423001	75-08-05	384									
313	303838084230001	75-09-30	320									
314	303840084263001	76-03-26	310									
322	303919084491101	76-06-15										
328	303927084244001	71-04-13	440				0					
- 177		76-06-03	440	<10					<.1			
		77-06-01	440	<50								
330	303929084392001	75-03-19	340									
333	303931084362401	76-06-01	426									
336	303939084253601	75-03-17	525								-	
337	303941084162501	76-02-09	298									
		77-06-01	298	<50								
338	303942084241501	75-03-17	480									
339	303943084241601	75-03-17	210									
340	303943084241901	75-03-17										
342	304010084273001	75-03-17	550									
344	304019084484401	77-04-12	51	- 0.75								
346	304034084282801	75-07-14	520									
349	304113084303701	75-03-17	790									
351	304134084502101	75-08-26	200	<10					.0			
353	304139084502101	70-07-29	239									
		75-03-19	239									
		75-08-26	239	<10					.0			
360	304211084473501	75-08-05	344									
		77-06-01	344	<50			<10					

TABLE 13.--Chemical analyses of trace metals, lead through zinc (alphabetically), of ground water--Continued

DATE OF SAMPLE	DIS- SOLVED SELE- NIUM (SE) (UG/L)	TOTAL SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	TOTAL SILVER (AG) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SOLVED NATURAL URANIUM (U) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC (ZN) (UG/L)	CODE FOR AGENCY ANA- LYZING SAMPLE
75-07-24					5800		-		-	m.m.
75-01-30		-			430				-	se in
69-04-10							-			9801
69-05-13										9801
73-03-01		00 00	***							9801
75-07-23					160					
75-07-23					160					- en en
75-07-23	***				620	-				
75-07-23	-	-	-		2600	-				- 00 00
75-07-23					5000					
75-07-23					6000				-	
75-07-23	-				8100					
75-07-23					6800					-
77-07-20					670		-			-
76-06-02					170					
75-08-05	<10		<5		-					9801
76-06-02					1200					
75-04-25	-				680		-			
75-09-17	-				300			40 80	- 60 40	
76-06-14					150					
77-05-10					390				**	
77-06-01										
75-08-05					20				-	
75-08-05				-	410		-			-
75-09-30		-	-		190					
76-03-26					320					
76-06-15		***	-		270					
71-04-13										9801
76-06-03	<10		<5					50		9801
77-06-01							••			
75-03-19					620					
76-06-01					330					
75-03-17				-	0					
76-02-09	-		~-	10 40	80					
77-06-01										-
75-03-17					950					~~
75-03-17	-				190					
75-03-17					6					
75-03-17					810					
77-04-12										9801
75-07-14					300					
75-03-17					630					19 (6
75-08-26	<1		<10							9801
70-07-29	100 cp.		-	-	120					
75-03-19					0					
	<1		<10							9801
75-08-26			- 2 0							
75-08-26 75-08-05			-	-	20					

TABLE 14. -- Chemical analyses of pesticides of ground water.

WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL ALDRIN (UG/L)	TOTAL LINDANE (UG/L)	TOTAL CHLOR- DANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DI- ELDRIN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL ETHION (UG/L)	TOTA TO) APHE (UG)
59	300959084403501	75-06-25	.00	.00	.0	.00	.00	.00	.00	.00	.00	
61	301028084223802	76-08-13	.00	.00	.0	.00	.00	.00	.00	.00		
78	302007084231901	75-06-13	.00	.00	.0	.00	.00	.00	.00	.00	.00	
89	302411084243801	75-06-17	.00	.00	.0	.00	.00	.00	.00	.00	.00	
102	302602084585701	76-08-10	.00	.00	.0	.00	.00	.00	.00	.00		
259	303554084344801	76-08-11	.00	.00	.0	.00	•00	.00	.00	.00		
WELL NUMBER	SITE NUMBER	DATE OF SAMPLE	TOTAL HEPTA- CHLOR (UG/L)	TOTAL HEPTA- CHLOR EPOXIDE (UG/L)	TOTAL PCB (UG/L)	TOTAL MALA- THION (UG/L)	TOTAL PARA- THION (UG/L)	TOTAL DI- AZINON (UG/L)	TOTAL METHYL PARA- THION (UG/L)	TOTAL 2+4-D (UG/L)		
59	300959084403501	75-06-25	.00	.00	.0	.00	.00	.00	.00	.00		
61	301028084223802	76-08-13	.00	.00	.0					.00		
78	302007084231901	75-06-13	.00	.00	. 0	.00	.00	.00	.00	.00		
89	302411084243801	75-06-17	.00	.00	.0	.00	.00		.00	.00		
102	302602084585701	76-08-10	.00	.00	.0					.00		
259	303554084344801	76-08-11	.00	.00	.0					.00		
WELL		DATE	TOTAL	TOTAL	TOTAL TRI-							
NUMBER	SITE NUMBER	SAMPLE	2,4,5-T (UG/L)	SILVEX (UG/L)	THION (UG/L)							
59	300959084403501	75-06-25	.00	.00	.00							
61	301028084223802	76-08-13	.00	.00								
78	302007084231901	75-06-13	.00	.00	.00							
89	302411084243801	75-06-17	.00	.00	.00							
102	302602084585701	76-08-10	.00	.00								
259												

## TABLE 15.--Lithologic logs of selected wells and core holes.

(NOTE: Logged by J. R. Wagner unless otherwise noted. Number, (example: 9), indicates well or core hole on fig. 2. W number, (example: W-1629), indicates Florida Bureau of Geology number. Name in parentheses shown in Location, such as (Lighthouse Point) is the name of the 7.5 minute U. S. Geological Survey topographic quadrangle.)

## 2 Donald Howard

Location, lat. 29°48'28", long. 84°42'43", in SE\(\frac{1}{4}\text{NW\(\frac{1}{4}\)}\), sec. 3, T. 8 S., R. 5 W., 4 mi west of Carrabelle on beach side of U.S. Highway 98 (Carrabelle); Driller, Revell's Well Drilling; Date drilled, Nov. 1974; Drilling method, jetted; Depth, 94 ft; Casing, 2-in to 79 ft, open hole 79 ft to 94 ft; Aquifer, Floridan; Land-surface altitude, about 8 ft; Water level, 5 ft below land surface on Nov. 26, 1974.

Material	Thickness (feet)	Depth (feet)
Sand, fine to coarse, mostly medium, clear to frosted, angular to subrounded; organics.	20	20
Limestone, very light gray to medium light gray, micritic, to crystalline, high recrystallization, sandy, soft to very hard, moderate porosity, fossil fragments, (85% limestone); clay, medium dark gray, organic, sandy; sand, coarse to very coarse, clear to frosted, subangular to subrounded.	20	40
As above, except limestone, 90%; peat.	20	60
Limestone, yellowish gray, light gray, light olive gray, micritic, crystalline, soft to very hard, high recrystallization, moderate porosity, few sandy fragments, fossil fragmentsshark's teeth, bryozoa, shells, foraminifera (Lepidocylina psuedomarginata?, Operculinodes sp., Sorites sp.).	34	94

## 4 Dr. W.H. Harrell

Location, lat. 29°51'11", long. 84°41'25", in NE4SW4NE4, sec. 24, T. 7 S., R. 5 W., at River Road in Carrabelle (Carrabelle); Driller, Revell's Well Drilling; Date drilled, Jan. 1975; Drilling method, jetted; Depth, 75 ft; Casing, 2-in to 75 ft, open-ended; Aquifer, Floridan; Land-surface altitude, about 11 ft; Water level, 3 ft below land surface in Jan. 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to very coarse, angular to subangular; small amount of organic fragments.	20	20
Sand, clear to frosted, fine to very coarse, angular to subrounded; limestone, yellowish gray, micritic, hard, porous, shell fragments.	15	35
Shell hash, bryozoa, mollusks, poorly preserved; sand, clear to frosted, coarse to very coarse, subangular to subrounded.	15	50
Limestone, yellowish gray, micritic, moldic, porous, hard to brittle; fossiliferous-shell fragments.	15	65
Shell fragments, pelecypods; phosphorite (abundant); marl, bluish gray, sandy, calcareous.	10	75

## TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 5 June Campbell

Location, lat. 29°51'18", long. 84°41'27", in SE½NW½NE½, sec. 24, T. 5 W., R. 7 S., off Mill Road in Carrabelle (Carrabelle); <u>Driller</u>, Revell's Well Drilling; <u>Date drilled</u>, Oct. 1974; <u>Drilling method</u>, jetted; <u>Depth</u>, 97 ft; <u>Casing</u>, 2-in to 73 ft, open hole 73 ft to 97 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, about 10 ft; Water level, 4 ft below land surface in Oct. 1974.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, medium to very coarse, mostly coarse, angular to subrounded; peat.	20	20
Sand, clear to frosted to medium gray, coarse to very fine gravel, argillaceous, (90% sand); clay, medium gray, sandy.	25	45
Limestone, yellowish gray, micritic, crystalline, moderate recrystallization, sandy, soft to very hard, moderate porosity, fossil shell fragments.	15	60
Limestone, as above; also limestone, medium dark gray, crystalline, very hard, low porosity; becoming fossiliferous downward, many echinoid spines, fossil fragments.	18	78
Limestone, yellowish gray, as above, foraminifera.	19	97

## 7 W. L. Hollis

Location, lat. 29°53'02", long. 84°36'01", in SW4NW4SW4, sec. 12, T. 7 S., R. 4 W., near north side of Florida Avenue in Lanark (McIntyre); Driller, Revell's Well Drilling; Date drilled, Nov. 1974; Drilling method, jetted; Depth, 82 ft; Casing, 2-in to 80 ft, open hole 80 ft to 82 ft; Aquifer, Floridan; Land-surface altitude, about 32 ft; Water level, 25 ft below land surface on Nov. 5, 1974.

Material	Thickness (feet)	Depth (feet)
Sand, medium, clear to frosted to yellowish, angular to subangular.	20	20
Sand, medium to coarse, clear to frosted to brownish gray, angular to subrounded, argillaceous.	20	40
Sand, coarse to very coarse, clear to brownish gray, angular to subrounded, argillaceous, (95% sand); limestone, light olive gray, crystalline, sucrosic, low porosity, very hard; peat.	10	50
Sand, medium to coarse, angular to subangular, clear, (55% sand); limestone, yellowish gray to light olive gray, micritic, crystalline, soft to moderately hard, moderate porosity, bryozoa fragments; phosphorite.	15	65
Limestone, olive gray to white (mottled shades) crystalline micritic, moderate recrystallization very hard, moderate porosity, few fossil fragmentsSorites sp.	14	79
Limestone, as above, except more porous- moldic, more fossil fragmentsSorites sp., also phosphoritic.	.3	82

## 9 Florida Department of Transportation (W-1629)

Location, lat. 29°53'59", long. 84°20'39", in NE4NW4SW4 sec.4, T.7 S., R.1 W., on Lighthouse Point, 30 feet from Gulf of Mexico (Lighthouse Point); Driller, Seabrook Hardware Co.; Date drilled, Nov. 1947; Drilling method, cable tool; Depth, 45 ft; Casing, 4-in to 42 ft, open hole 42 ft to 45 ft; Aquifer, Floridan; Land-surface altitude, about 10 ft; Water level, 7.3 ft below land surface on Nov. 26, 1947; Chloride concentration, 500 mg/L on Nov. 26, 1947. Logged by Dan Harmon, Northwest Florida Water Management District.

Material	Thickness (feet)	Depth (feet)
Sand, transparent to white, 33% porosity— intergranular, size—medium, range—fine to coarse, subangular to rounded, medium sphericity, non-indurated; 1% iron stain; 1% limonite; 1% silt; 1% limestone; plant remains.	20	20
Sand, transparent to white, 33% porosity— intergranular, size—medium, range—fine to coarse, subangular to rounded, medium sphericity, non-indurated, iron cement; 1% iron stain; 1% limonite; 1% silt; 1% heavy minerals; plant remains.	5	25
Sand, transparent to white, 33% porosity— intergranular, size—medium, range—fine to coarse, angular to subangular, medium sphericity, non-indurated, iron cement; 1% iron stain; 1% limonite; 1% silt; 1% heavy minerals; no fossil.	5	30
Sand, transparent to light reddish brown, 33% porosityintergranular, sizecoarse, rangemedium to coarse, angular to subangular, medium sphericity, non- indurated, iron cement; 1% iron stain; 1% limonite; 1% silt; no fossils.	5	35
Micrite, dark brownish red to grayish orange, 5% porosityintercrystalline, pin point vugs, grain typemicrite, 80% allochems, sizecryptoscopic, rangecryptoscopic to medium, poor induration, micrite cement, iron cement; laminated; 1% iron stain; 1% heavy minerals; 20% quartz; no fossils.	5	40

Material	Thickness (feet)	Depth (feet)
Limestone, transparent to grayish brown, 10% porosity—intergranular, pin point vugs, intercrystalline, grain type— crystalline, skeletal, skeletal cast, 80% allochems, size—very fine, range— microscopic to fine, moderate induration, silica cement, micrite cement; 1% dolomite; 1% limonite; 15% quartz, 10% spar; chalky; coral, bryozoa, shark teeth, fossil fragments.	2	42
Chalk, white, 5% porositypin point vugs, possibly permeable, moderate induration, micrite cement, massive; 1% iron stain; coral, bryozoa, shark teeth, fossil fragments.	3	45

#### 18 Town of Panacea (W-7156)

Location, lat. 29°58'45", long. 84°23'05", in SW4NE4NE4, sec. 12, T. 6 S., R. 2 W., about 300 ft northwest of the intersection of U.S. Highway 98 and State Highway 372 in Panacea (St. Teresa Beach); Driller, Rowe Drilling Co.; Date drilled, Apr. 1965; Drilling method, hydraulic rotary; Depth, 80 ft; Casing, 6-in to 51 ft, open hole 51 ft to 80 ft; Aquifer, Floridan; Land-surface altitude, 10.4 ft; Water level, 7.50 ft below land surface on May 17, 1977; Specific capacity, 25 (gal/min)/ft; Chloride concentration, 35 mg/L on Nov. 29, 1965. Logged by C. W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, grayish orange, fine to very coarse, subangular to rounder, larger grains frosted, loose.	20	20
Sand, quartz, very pale orange, fine to very coarse (more very coarse than above), subangular to subrounded, larger grains both clear and frosted, loose, few fragments of limestone below.	20	40
Calcarenite, calcilutitic, very pale orange, partially recrystallized, micro and macro fossiliferous but greatly destroyed due to recyrstallization, very sparcely sandy, permeability poor to fair, slightly dolomitic, slightly to moderately hard, some moldic porosity, Archaias sp., Sorites sp.	20	60
Calcarenite, calcilutitic, very light gray, calcitic, dolomitic, partially recrystallized, moderately hard, permeability poor to fair, sparcely sandy, porosity nil to moderate (moldic).	10	70
Calcarenite, as above and very coarse quartz sand, frosted to clear, subrounded.	10	80

## 19 Town of Panacea (W-7417)

Location, lat 29°58'45", long. 84°23'05", in SW4NE4NE4, sec. 12, T. 6 S., R. 2 W., about 300 ft northwest of the intersection of U.S. Highway 98 and State Highway 372 in Panacea (St. Teresa Beach); Driller, Rowe Drilling Co.; Date drilled, Sept. 1965; Drilling method, hydraulic rotary; Depth, 90 ft; Casing, 10-in to 53 ft, open hole 53 ft to 90 ft; Aquifer, Floridan; Land-surface altitude, 10.3 ft; Water level, 8.10 ft below land surface on Nov. 29, 1977; Specific capacity, 13.2 (gal/min)/ft; Chloride concentration, 87 mg/L on Nov. 29, 1977. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, loose, fine to coarse, subangular-subrounded.	20	20
Sand, quartz, loose, fine to very coarse, subangular-subrounded.	10	30
Calcilutite, very pale orange, partially recrystallized, slightly sandy, moderately hard, slightly microfossiliferous.	20	50
As above, but light gray in color.	10	60
Calcilutite, light gray, slightly-moderately porous, soft to moderately hard, slightly to moderately sandy, partially recrystallized, slightly microfossiliferous.	30	90

#### 20 Florida Bureau of Geology (Panacea) Core Hole (W-8477)

Location, lat. 29°59'18", long. 84°23'44", in SW\(\frac{1}{2}\)SW\(\frac{1}{4}\)SW\(\frac{1

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted to grayish orange pink, argillaceous, fine to very coarse mostly medium, angular to subrounded, organics.	7.5	7.5
No samples.	2.5	10
Sand, clear to frosted to pale yellowish brown, very fine to medium mostly medium, angular to subangular, more argillaceous downward.	2.5	12.5
No samples.	2.5	15
Sand, as above, except very fine to coarse.	2.5	17.5
No samples.	2.5	20
Sand, clear to frosted to dusky brown, argillaceous, coarse, subangular to subrounded grades into bed below; very pale orange fine sand at base.	2.5	22.5
No samples.	2.5	25
Sand, clear to frosted to very pale orange, fine, angular, increasingly more clayey downward.	2.5	27.5
No samples.	2.5	30
Clay, grayish orange to pale yellowish brown to very pale orange, sandy, denser toward base; iron stain; (32.5 to 33 ft - very pale orange, calcareous); grades into base below.	4	34

Material	Thickness (feet)	Depth (feet)
Clay, calcareous, white to very pale orange, chalky, dense, sandy.	3	37
Note: 50% circulation loss at 34.5 ft.		
No samples.	1	38
imestone, white to very pale orange, micritic to crystalline, dolomitic, biogenic, high porosity—moldic, many fossil fragments, foraminifera——(Sorites sp.), shell molds and casts, moderately hard becoming softer and more clayey downward; grades into bed below.	11	49
lay, medium light gray, calcareous, dense.	1.5	50.5
crystalline, moderate to high porosity— moldic, moderately hard, many fossil fragments, foraminifera—Sorites sp., shell molds and casts, gastropods, pelecypods, bryozoa; scattered bleps of clay throughout interval, dark yellowish orange.	5.5	56
<pre>imestone, yellowish gray to light gray,     crystalline, dolomitic, sandy, high     porositymoldic, very hard, no fossil     fragments; few scattered bleps of clay.</pre>	9	67
crystalline, sandy, moderate to high porositymoldic, dolomitic, soft to moderately hard, fossil fragments,  Sorites abundant, shell molds and casts; few scattered bleps of clay.	14.5	81.5
Clay, light greenish gray, calcareous, dense.	0.5	82
imestone, as interval 67-81.5'; slight amount of light greenish gray clay at base.	19.5	101.5
lay, white, calcareous, mixed with denser light greenish gray clay, soft to brittle.	2.5	104

Number 20 (Continued)

Material	Thickness (feet)	Depth (feet)
Dolomite, light olive gray to yellowish gray, crystalline, moderately to very hard becoming softer towards base, high porositymoldic, fossil fragments, shell molds and casts; doloclay, calcareous, microfossiliferous.	42	146
Clay, greenish gray, dense; dolomite fragments, as above, scattered throughout.	3	149
Clay, calcareous, chalky, white, soft.	2	151
Clay, as interval 146-149'.	2.5	153.5
No samples.	2	155.5
Dolomite, yellowish gray to light olive gray, crystalline, biogenic, high porosity—extremely moldic, sucrosic, soft to moderately hard, microfossiliferous, shell molds and casts.	36.5	192

## 25 Henry Barnett

Location, lat. 30°01'20", long. 84°33'09", in SW4NE4NE4, sec. 29, T. 5 S., R. 3 W., at Bone Bluff, near the Ochlockonee River, about 4 mi southwest of Sopchoppy (Sanborn); <u>Driller</u>, Revell's Well Drilling; <u>Date drilled</u>, Mar. 1975; <u>Drilling method</u>, jetted; <u>Depth</u>, 79 ft; <u>Casing</u>, 2-in to 50 ft, open hole 50 ft to 79 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, about 15 ft; <u>Water level</u>, 12 ft below land surface on Mar. 28, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, grayish orange, argillaceous, clear to frosted, angular to subrounded, fine to medium, peat.	20	20
Marl, pale yellowish brown, sandy, calcareous, clayey; shell fragments; sand, very fine to fine, clear to frosted, argillaceous, subangular to subrounded.	20	40
Limestone, yellowish gray, micritic, moldic, porous, chalky, shell fragments.	20	60
Limestone, yellowish gray, micritic, very sandy, porous; phosphorite; few shell fragments.	10	70
Same as above; sand coarser; more shell fragments.	9	79

#### 26 Willard K. Durrance

Location, lat. 30°01'22", long 84°33'08", in SW4NE4NE4, sec. 29, T. 5 S., R. 3 W., at Bone Bluff, near Ochlockonee River, about 4 mi southwest of Sopchoppy (Sanborn); Driller, Revell's Well Drilling; Date drilled, 1974; Drilling method, jetted; Depth, 79 ft; Casing, 2-in to 50 ft, open hole 50 ft to 79 ft; Aquifer, Floridan; Land-surface altitude, about 15 ft; Water level, 12 ft below land surface in 1974.

Material	Thickness (feet)	Depth (feet)
Sand, very fine to medium, mostly fine, angular to subrounded, clear to frosted, argillaceous, (60% sand); clay, organic, peak.	20	20
Sand, fine to coarse, mostly medium, angular to subrounded, clear to frosted, argillaceous, (50% sand); clay, dark gray to grayish black, sandy, very organic; peat.	20	40
Limestone, white to medium light gray, micritic to crystalline, high recrystallization, hard to soft, porous, sandy, some fragments moldic, fossiliferous-shell fragments, shark's tooth, (55% limestone); sand, coarse to very coarse, clear to frosted, subangular to subrounded; mica.	20	60
Limestone, various shades of gray, micritic to crystalline, high recrystallization, extremely porous, moldic, very sandy, soft to hard, very fossiliferous, mollusks, gastropod cast, Sorites sp.; mica.	19	79

# TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 27 Lloyd Briggs

Location, lat 30°01'32", long 84°29'59", in SE\sE\sE\sE\sE\s, sec. 23, T. 5 S., R. 3 W., at Riverview Estates, west of U.S. Highway 319, about 2 mi south of Sopchoppy (Sopchoppy); Driller, Revell's Well Drilling; Date drilled, Mar. 1975; Drilling method, jetted; Depth, 126 ft; Casing, 2-in to 101 ft, open hole 101 ft to 126 ft; Aquifer, Floridan; Land-surface altitude, about 12 ft; Water level, 5 ft below land surface in Mar. 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, medium to coarse, subangular to subrounded.	25	25
Marl, greenish olive gray, sandy, clayey, calcareous; limestone, pinkish gray to gray, micritic, hard; sand, clear to frosted, fine to medium; phosphorite.	11	36
Limestone, very light gray, granular, porous, brittle, chalky; limestone, light gray, crystalline, dense, hard.	9	45
Limestone, very light gray to light gray, micritic to crystalline, very moldic, porous, hard, fossiliferous.	20	65
Limestone, yellowish gray to light gray, micritic, moldic, hard, fossiliferous- bryozoa stems; limestone, yellowish gray, crystalline, hard, dolomitic, dense.	25	90
Limestone, dolomitic, same as above, also moldic, porous, fossiliferous.	18	108
Limestone, yellowish gray, micritic, very moldic, porous, dolomitic, few fossils.	18	126

## 31 Pure Oil Company (W-1385)

Location, lat. 30°01'54", long. 84°47'25" in NE4NW4NE4, sec. 24, T. 5 S., R. 6 W., about 12 mi east of Sumatra (Owens Bridge); <u>Driller</u>, Pure Oil Co., <u>Date drilled</u>, May 1946; <u>Drilling method</u>, hydraulic rotary; <u>Depth</u>, 4,744 ft; <u>Casing</u>, 6-in to 942 ft, open hole 942 ft to 4,744 ft; <u>Land-surface altitude</u>, 25.26 ft. Logged by Dan Harmon, Northwest Florida Water Management District, and Chiuh Shan Chen, Florida Bureau of Geology.

Material	al Thickness De	
nater rar	(feet)	Depth (feet)
Sand, white to light gray, 33% porosity— intragranular, size-coarse, range— medium coarse, angular to subangular, medium sphericity, poor induration; 1% iron stain; 1% limestone; 1% limonite; foraminifera, mollusks, plant remains.	50	50
Limestone, white to light gray, 5% porosity- intragranular, intercrystalline, grain type-crystalline, micrite, skeletal cast, 60% allochems, size-microscopic, range-microscopic to very fine, moderate induration, silica cement, micrite cement; foraminifera, mollusks, spicules.	56	106
Micrite, moderate light gray to moderate gray, porosity-low permeability, grain type-micrite, 20% allochems, size-microscopic, moderate induration; 1% phosphatic sand, 1% iron stain, coral.	10	116
Limestone, white to light gray, 5% porosity- intercrystalline, low permeability, grain type-crystalline, 75% allochems, size- very fine, range-microscopic to very fine, good induration, silica cement, 10% phosphatic sand; 1% iron stain; 1% limonite; 1% quartz; coral, spicules, mollusks.	164	280

Material	Thickness (feet)	Depth (feet)
Limestone, white, 5% porosity-intercrystalline, low permeability, grain type-crystalline, 60% allochems, size-very fine, range-microscopic to very fine, good induration, silica cement, micrite cement; 1% phosphatic sand, 1% iron stian, foraminifera.	61	341
Dolostone, grayish brown, 5% porosity- intercrystalline, low permeability, 50-90% altered, subhedral, size-very fine, range-microscopic to very fine, good induration, silica cement, dolomite cement; foraminifera.	31	372
Limestone, white, 5% porosity-intercrystalline, low permeability, grain type-crystalline, 60% allochems, size-very fine, range- microscopic to very fine, good induration, silica cement, micrite cement; 1% dolomite.	30	402
Dolostone, grayish brown, porosity-intercrystalline, low permeability, 50-90% altered, euhedral, size-microscopic, range-cryptoscopic to microscopic, good induration; 1% limonite.	152	554
Limestone, white, grayish brown, 5% porosity- intercrystalline, low permeability, grain type-crystalline, 60% allochems, size- very fine, range-microscopic to very fine, good induration; 50% dolomite; 1% limonite; coral.	30	584
Dolomite, gypsiferous (10%), very fine crystalline, dark brown, gypsum fragments rather common.	151	735
Dolomite, gypsiferous (20%), as above, more gypsum fragments (or Selenite flakes)	75	810
Limestone, fossiliferous, fragmental, very light brown to chalky white, bryozoa fragments.	110	920

Material	Thickness (feet)	Depth (feet)
Limestone, highly fossiliferous, fragmental, microcrystalline, very light brown to light brown, large forams (Lepidocyclina, Camerina, etc.) rather common.	35	955
Dolomite, gypsiferous (10%), very fine crystalline, brown, sugary textured, gypsum forms streaks.	10	965
Limestone, highly fossiliferous, as above.	30	995
Dolomite, gypsiferous (10%), as above.	10	1005
Limestone, fossiliferous, finely fragmental, rather well cemented, light gray brown, large forams.	35	1040
Dolomite, calcareous (20%), very fine crystalline, brown, rather soft.	25	1065
Limestone, fossiliferous, finely fragmental, light brown to brown, rather well cemented, large forams, shell fragments, etc., rather common.	125	1190
Dolomite, fine cyrstalline, dark brown, rather soft, sugary.	18	1208
Limestone, fossiliferous, finely fragmental, light gray brown, to gray brown, well preserved forams rare.	157	1365
Limestone, argillaceous (10%), rather dense, dark gray brown.	35	1400
Dolomite, very fine crystalline, dark gray brown, slightly argillaceous and calcareous.	10	1410
Limestone, gray brown, rather dense, slightly argillaceous.	40	1450
Dolomite, very fine crystalline as above, the dary gray-brown color may indicate that the dolomite contains organic matter.	5	1455

Number 31 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, fossiliferous (fine fragments), light gray brown, rather well cemented, no well preserved fossils.	115	1570
Limestone, cherty (10%), dense, gray brown to dark gray, black chert fragments rather common.	.50	1620
Limestone, gray brown, rather dense, impure, slightly cherty and argillaceous (?).	115	1735
Limestone, fossiliferous (fragments), finely fragmental, light gray brown, rather well cemented, no well preserved fossils but fine fossil fragments.	35	1770
Limestone, cherty (10%), gray brown, dark gray brown chert fragments rather common.	30	1800
Limestone, finely fragmental, rather dense, gray brown, few carbonaceous material.	90	1890
Limestone, cherty (10%), rather dense, very fine fragmental, light gray brown, brown black chert fragments rather common.	120	2010
Limestone, cherty (20%), fossiliferous, finely fragmental, microcrystalline, rather dense and pure, light brown, dark gray brown, chert fragments common.	90	2100
Limestone, light gray brown, rather dense. The limestone is very finely powdered and may be mixed with drilling mud.	260	2360

## TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 32 W.L. Bullard

Location, lat. 30°03'05", long. 84°27'57", in SW4NE4NE4, sec. 18, T. 5 S., R. 2 W., east of State Highway 372, about 1 mi southeast of Sopchoppy (Sopchoppy); Driller, Revell's Well Drilling; Date drilled, Feb. 1975; Drilling method, jetted; Depth, 98 ft; Casing, 2-in to 98 ft, open-ended; Aquifer, Floridan; Land-surface altitude, about 15 ft; Water level, 4 ft below land surface in Feb. 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to coarse, mostly fine, subrounded.	23	23
Clay, pale orange, finely sandy; sand, clear to frosted, fine to coarse, mostly fine, subangular.	5	28
Limestone, pale orange, crystalline, hard, dense, macro-fossiliferous.	5	33
Shell hash, micro-macro, coral, pelecypods; limestone, pale orange, finely granular, porous, brittle.	7	40
Shell hash, macro, mollusks, pelecypods, fragments, thin, brittle, pale orange.	8	48
Limestone, very light gray, micritic, porous, slightly moldic, hard.	10	58
Same as above, greater porosity.	20	78
Same as above, except fossiliferous- shell impressions.	20	98

## 35 City of Sopchoppy (W-8479)

Location, lat. 30°03'43", long. 84°29'30", in SW4SE4NW4, sec. 12, T. 5 S., R. 3 W., 0.2 mi north of State Highway 375 in Sopchoppy (Sopchoppy); Driller, Rowe Drilling Co.; Date drilled, Aug. 1968; Drilling method, hydraulic rotary; Depth, 260 ft; Casing, 8-in to 121 ft, open hole 121 ft to 260 ft; Aquifer, Floridan; Land-surface altitude, 26.4 ft; Water level, 12 ft below land surface on Aug. 20, 1968. Specific capacity, 28 (gal/min)/ft; Chloride concentration, 5.2 mg/L on July 16, 1975. Logged by John Love, Northwest Florida Water Managment District.

Materia1	Thickness (feet)	Depth (feet)
Micrite, very light gray to yellowish gray, 15% porosity - moldic, intergranular, grain type - micrite, intraclast, crystalline, 15% allochems, size - fine, range- very fine to fine, moderate induration, micrite cement, silica cement; 8% clay, 35% sand (quartz); chalky, foraminifera, mollusks, coral, cones, (Sorites sp.; Dictyoconus sp.)	60	60
Calcarenite, very light gray to yellow gray, 10% porosity - moldic, intergranular, grain type - skeletal, crystalline, intraclast, 65% allochems, size - fine, range - very fine to medium, moderate induration, micrite cement; 2% clay, 2% sand (quartz); 4% calcite; foraminifera, mollusks, coral, cones.	38	98
Micrite, white, 8% porosity-moldic, intergranular, grain type - skeletal, intraclast, micrite, 25% allochems, size - fine, range - very fine to fine, moderate induration, micrite cement; 4% calcite; 3% clay; 1% sand (quartz); chalky; foraminifera, coral, mollusks, cones, (Amphistegina sp., Sorites sp., Dictyoconus sp.)	42	140
Micrite, white, 6% porosity - moldic, intergranular, grain type - crystalline, micrite, skeletal, 10% allochems, size - very fine, range - very fine to fine, moderate induration, micrite cement; 4% calcite; 3% clay; 1% sand (quartz); chalky, foraminifera, coral, mollusks.	10	150

Material	Thickness (feet)	Depth (feet)	
Micrite, white, 6% porosity - moldic, intergranular, grain type - micrite, intraclast, skeletal, 30% allochems, size - very fine, range - very fine to fine, moderate induration, micrite cement, dolomite cement; 2% calcite; 10% clay; 5% dolomite; low recrystall-ization, dolomitic, mollusks, foraminifera.	10	160	
Micrite, very light gray to white, 6% porosity— moldic, intergranular, grain type — micrite, intraclast, skeletal, 10% allochems, size— very fine, range— very fine to fine, moderate induration, micrite cement, dolomite cement; 2% calcite; 1% sand (quartz); 3% clay; low recrystallization, dolomitic, mollusks, foraminifera.	20	180	
Micrite, very light gray to yellowish gray, 8% porosity-moldic, intergranular, grain type - micrite, intraclast, skeletal, 25% allochems, size- very fine, range- very fine to fine, moderate induration, micrite cement; 2% calcite; 4% clay; 1% dolomite, chalky, low recrystallization, mollusks, foraminifera, coral.	30	210	
Dolostone, yellowish gray to very light gray, 6% porosity-intergranular, intercrystalline, 50-90% altered, euhedral, size - very fine, range - microscopic to fine, moderate induration, dolomite cement, micrite cement; 40% limestone; high recrystallization, mollusks, foraminifera, coral, ostracods; individual dolomite crystals very distinct.	10	220	
Dolostone, yellowish gray to very light gray, 6% porosity - intergranular, intercrystalline, 50-90% altered, euhedral, size - very fine range - microscopic to fine, moderate induration, dolomite cement, micrite cement; 15% limestone; high recyrstallization, mollusks, foraminifera, coral, ostracods.	20	240	

Material	Thickness (feet)	Depth (feet)
Micrite, yellowish gray to white, 6% porosity- intergranular, grain type - micrite, crystalline, intraclast, 15% percent allochems, size - very fine, range - microscopic to very fine, moderate induration, micrite cement, dolomite cement; 40% dolomite, moderate recrystallization, foraminifera, coral, ostracods.	20	260

38 Gulf Coast Drilling and Exploration, Incorporated (W-4967)

Location, lat. 30°03'55", long. 84°56'28", in SE4SW4SE4, sec. 4, T. 5 S., R. 7 W., about 3.5 mi northeast of Sumatra (Sumatra); Driller, Gulf Coast Drilling & Exploration, Inc.; Date drilled, Mar. 1959; Drilling method, hydraulic rotary; Depth, 10,005 ft; Casing, 8-in to 1291 ft, open hole 1291 ft to 10,005 ft; Land-surface altitude, 38.4 ft; Logged by Dan Harmon, Northwest Florida Water Management District.

Material	Thickness (feet)	Depth (feet)
Limestone, light gray to moderate gray, 5% porosity—low permeability, inter- crystalline, pin point vugs, grain type— micrite, crystalline, skeletal cast, 50% allochems, size—microscopic, range— cryptoscopic to microscopic, good induration, micrite cement, silica cement; 1% quartz; foraminifera, brachiopod, mollusks, coral, bryozoa.	30	30
Limestone, light gray to moderate gray, 5% porosity—low permeability, intercrystalline, pin point vugs, grain type—micrite, crystalline, skeletal cast, 50% allochems, size—microscopic, range—cryptoscopic to microscopic, good induration, micrite cement, silica cement; 1% phosphatic sand, foraminifera, brachiopod, mollusks, coral bryozoa.	30	60
Limestone, light gray to moderate gray, 5% porosity—low permeability, intercrystalline, pin point vugs, grain type—micrite, crystalline, skeletal cast, 50% allochems, size—microscopic, range—cryptoscopic to microscopic, good induration, micrite cement, silica cement; 1% clay; 1% manganese oxide; foraminifera, mollusks, bryozoa, coral, brachiopod.	60	120

Material	Thickness (feet)	Depth (feet)
Limestone, white to moderate gray, 5% porosity— low permeability, intercrystalline, pin point vugs, grain type—micrite, crystalline, skeletal cast, 75% allochems, size—microscopic, range—microscopic to very fine, good induration micrite cement, silica cement; 1% phosphatic sand; 1% limonite; foraminifera, mollusks, coral, shark teeth, brachiopod.	30	150
Limestone, white to moderate light gray, 5% porosity—low permeability, intercrystalline, pin point vugs, grain type—micrite crystalline skeletal cast, 75% allochems, size—microscopic, range—microscopic to very fine, good induration micrite cement, silica cement; 1% phosphatic sand; 1% limonite; foraminifera, mollusks, coral, brachiopod, bryozoa.		300
Limestone, white, 10% porosity—pin point vugs, intercrystalline, intragranular, grain type—micrite, crystalline, skeletal cast, 75% allochems, size—microscopic, range—microscopic to very fine, good induration, micrite cement, silica cement; 1% limonite; 1% iron stain; chalky; foraminifera.	120	420
Limestone, white, 10% porositypin point vugs, intercrystalline, intragranular, grain typemicrite, crystalline, skeletal cast, 75% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, micrite cement, silica cement; 1% limonite; 1% iron stain; chalky; foraminifera, brachiopod.	30	450
Limestone, white, 10% porositypin point vugs, intercrystalline, intragranular, grain typemicrite, crystalline, skeletal cast, 75% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, micrite cement, silica cement; 1% quartz; chalky; bryozoa, foraminifera.	30	480

Material	Thickness (feet)	Depth (feet)
No sample.	30	510
Limestone, white to grayish brown, 10% porosity— pin point vugs, intercrystalline, inter- granular, grain type—micrite, crystalline, skeletal cast, 75% allochems, size— microscopic, range—microscopic to very fine, good induration, micrite cement, silica cement, chalky; foraminifera—Nummulites sp.	30	540
Limestone, white to grayish brown, 10% porosity pin point vugs, intercrystalline, intra- granular, grain typemicrite, crystalline, skeletal cast, 75% allochems, size microscopic, rangemicroscopic to very fine, good induration, micrite cement, silica cement, chalky, foraminifera, coral.	330	870
Limestone, white to grayish brown, 5% porosity— pin point vugs, intercrystalline, grain type—crystalline, micrite, 80% allochems, size—microscopic, range—microscopic to very fine, good induration, silica cement; 1% iron stain; 1% limonite; foraminifera.	70	940
Limestone, white to grayish brown, 5% porosity— pin point vugs, intercrystalline, grain type—crystalline, micrite, 80% allochems, size—microscopic, range—microscopic to very fine, good induration, silica cement; 1% phosphatic sand; 1% iron stain; foraminifera, coral.	30	970
Limestone, grayish orange to grayish brown, 5% porositypin point vugs, intercrystalline, grain typecrystalline, micrite, 80% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, silica cement; 1% limonite; foraminifera, coral.	60	1030

Number 38 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, grayish orange to grayish brown, 5% porositypin point vugs, intercrystalline, grain typecrystalline, micrite, 80% allochems, sizemicroscopic, range microscopic to very fine, good induration, silica cement; 1% phosphatic sand; foraminifera, coral.	30	1060
No sample.	30	1090
Limestone, grayish orange to grayish brown, 5% porositypin point vugs, intercrystalline, grain typecrystalline, micrite, 80% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, silica cement, 1% phosphatic sand, foraminifera, coral.	90	1180
No samples.	140	1320
Clay, dark yellowish brown, porositylow permeability, poor induration, calcareous.	660	1980

#### 40 Thomas Crum (W-8464)

Location, lat. 30°04'04", long. 84°27'10", in NE'4NW4NE'4, sec. 8, T. 5 S., R. 2 W., north of U.S. Highway 319 and about 2.7 mi east of Sopchoppy Post Office (Sopchoppy); <u>Driller</u>, Revell's Well Drilling; <u>Date drilled</u>, Dec. 1967; <u>Drilling method</u>, cable tool; <u>Depth</u>, 266 ft; <u>Casing</u>, 2 -in to 231 ft, open hole 231 ft to 266 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, 25.2 ft; Water level, 22 ft below land surface in Dec. 1967.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, very fine to coarse mostly fine, angular to subangular (85% sand); limestone, white to yellowish gray, micritic, sandy (10% limestone); bryozoa stem, shell fragments; clay, yellowish gray, sandy.	40	40
Limestone, light gray, crystalline, biogenic, high porosity, moderately hard, very fossiliferousArchias sp bryozoa, shell fragments, (95% limestone); sand, as above.	8	48
Limestone, yellowish gray, crystalline, very hard, moderate, porosity; echinoid spines, foraminifera (Amphistegina sp.?)	9	57
Limestone, yellowish gray to light olive gray, crystalline, biogenic, high porosity—moldic, intercrystalline; fossil casts, shell fragments.	11	68
Limestone, yellowish gray, crystalline, biogenic, high porositymoldic, very hard, fossil casts and molds, macroshell fragments; calcite.	15	83
Limestone, as above, extremely fossiliferous, foraminifera ( <a href="Lepidocyclina">Lepidocyclina</a> sp.?), shell fragments, bryozoa and echinoid fragments, (95% limestone); sand (quartz), medium to very coarse.	12	95
Limestone, yellowish gray to light gray, crystalline, biogenic, sandy, very hard, moderate porosity, less fossiliferous than above; <u>Sorites</u> sp., shell casts and molds.	45	140

Number 40 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, white to very pale orange, crystalline, biogenic, sucrosic, moderate to high porosity, moderately hard, foraminifera(Operculinoides sp.?, Sorites sp.), bryozoa, casts and molds, echnoids spines.	44	184
Limestone, as above, except less fossilization; trace amount of sand, medium to coarse.	10	194
No samples.	72	266

#### 41 Harvey Carraway

Location, lat. 30°04'13", long. 84°24'16", in SW4SW4SE4, sec. 2, T. 5 S., R. 2 W., 0.5 mi south of U.S. Highway 319, 1 mi west of U.S. Highway 98, at Medart (Sopchoppy); Driller, Revell's Well Drilling; Date drilled, Mar. 1975; Drilling method, jetted; Depth, 70 ft; Casing, 2-in to 42 ft, open hole 42 ft to 70 ft; Aquifer, Floridan; Land-surface altitude, about 15 ft; Water level, 11 ft below land surface on Mar. 31, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, subangular to subrounded, medium to very coarse.	20	20
Sand, clear to frosted to yellowish, argillaceous, subangular to subrounded, fine to very coarse; slight amount of marl, white.	10	30
Limestone, yellowish gray, micritic, porous, hard, slightly chalky.	20	50
Limestone, pinkish gray, micritic, hard, moldic, porous, fossiliferous.	20	70

### 43 U.S. Forest Service (Hitchcock Lake) (W-5997)

Location, lat. 30°04'54", long. 84°39'06" in SE4NE4SE4, sec. 32, T. 4 S., R. 4 W., 0.8 mi east of State Highway 67 and about 25 mi southeast of Hosford at Hitchcock Lake landing (Thousand Yard Bay); Driller, Revell's Well Drilling; Drilling method, cable tool; Depth, 260 ft; Casing, 4-in to 172 ft, open hole 172 ft to 260 ft; Aquifer, Floridan; Land-surface altitude, 20.2 ft; Water level, 6.14 ft below land surface on May 19, 1977; Specific capacity, 1.4 (gal/min)/ft; Chloride concentration, 48 mg/L on July 2, 1975. Logged by Dan Harmon, Northwest Florida Water Management District.

Material	Thickness (feet)	Depth (feet)
Sand, white to light brownish gray, 33% porosity— intergranular, size—medium, range—medium to coarse, angular to subangular, medium sphericity, non-indurated, micrite cement; 1% iron stain; 1% heavy minerals; 1% chert; plant remains.	20	20
Shell bed, white to light brown, 30% porosity— intragranular, non-indurated, micrite cement, silica cement, brecciated; 1% iron stain; 1% heavy minerals; 1% phosphatic sand; 5% quartz; low recrystallization; brachiopod, mollusks, foraminifera; poor sample.	11	31
Limestone, white to light gray, 15% porosity— intragranular, pin point vugs, intercrystalline, grain type—micrite, crystalline, skeletal, 60% allochems, size—very fine, range— microscopic to very fine, moderate induration, micrite cement, silica cement, massive; 1% phosphatic sand; 10% quartz; low recrystall— ization brachiopod, mollusks.	19	50
Limestone, white to light gray, 1% porosity— intragranular, pin point vugs, inter— crystalline, grain type—micrite, crystalline, skeletal, 60% allochems; size—very fine, range—microscopic to very fine, moderate induration, micrite cement, silica cement, massive, 1% phosphatic sand, 10% quartz, low recrystallization, brachiopod, mollusks.	5	55

Materia1	Thickness (feet)	Depth (feet)
Limestone, white to moderate light gray, 15% porosity—intragranular, pin point vugs, intercrystalline, grain type— micrite, crystalline, skeletal, 60% allochems, size—very fine, range— microscopic to very fine, moderate induration, micrite cement, silica cement, massive; 1% phosphatic sand; 10% quartz; low recrystallization; brachiopod, mollusks.	21	76
Limestone, white, moderate light gray,  15% porosity—intragranular, pin point vugs, intercrystalline, grain type—micrite, crystalline, skeletal, 60% allochems, size—very fine, range—microscopic to very fine, moderate induration, micrite cement, silica cement, massive; 1% phosphatic sand; 10% quartz; low recrystallization; brachiopod, mollusks, coral, foraminifera.	10	86
Limestone, white to moderate light gray,  15% porosity—intragranular, pin point vugs, intercrystalline, grain type— micrite, crystalline, skeletal, 60% allochems, size—very fine, range—microscopic to very fine, good induration, micrite cement, silica cement, massive; 1% phosphatic sand; 10% quartz; 1% iron stain; low recrystallization, brachiopod, mollusks.	11	97
Limestone, white to moderate light gray, porosity—intragranular, pin point vugs, intercrystalline, grain type—micrite, crystalline, skeletal, 60% allochems, size—very fine, range—microscopic to very fine, good induration, micrite cement, silica cement, massive; 1% phosphatic sand; 10% quartz; low recrystallizaiton; chalky; brachiopod, mollusks.	16	113

Material	Thickness (feet)	Depth (feet)
Limestone, white to moderate light gray;  15% porosityintragranular; pin point vugs, intercrystalline, grain type micrite, crystalline, skeletal; 60% allochems, sizevery fine, range microscopic to very fine, good induration, micrite cement, silica cement, massive; 1% phosphatic sand; 10% quartz; poor sample; low recrystallization; chalky; brachipod, mollusks.	27	140
Limestone, white to moderate light gray, 20% porosityintragranular, vugular, intercrystalline, grain typemicrite, crystalline, skeletal, 75% allochems, sizevery fine; rangemicroscopic to very fine, good induration, micrite cement, silica cement, massive; 1% phosphatic sand, 5% quartz; poor sample; moderate recrystallization, no fossil.	5	145
Limestone, moderate gray to light brownish gray, 5% porosityvugular, intercrystalline, grain typecrystalline, micrite, 80% allochems, sizevery fine, rangemicroscopic to very fine, good induration, micrite cement, silica cement, massive, high recrystallization, no fossil.	5	150
Clay, dark gray to black, 2% porositynot observable, low permeability, poor induration, clay cement, laminated; 5% limestone; calcareous; foraminifera, mollusks.	15	165
Sand, white to light brownish gray, 33% porosity— intragranular, size—medium, range—medium to coarse, angular, subangular, medium sphericity, non-indurated, micrite cement; 1% phosphatic sand; poor sample; foraminifera.	13	178

Material	Thickness (feet)	Depth (feet)
Limestone, medium gray to light brownish gray, 5% porosityvugular, intercrystalline, grain typecrystalline, micrite, 80% allochems, sizevery fine, range microscopic to very fine, good induration, micrite cement, silica cement, massive, high recrystallization, foraminifera, mollusks.	2	180
Limestone, moderate orangish pink to light brown, 20% porosityintergranular, vugular, grain typeskeletal, skeletal cast, micrite, 50% allochems, sizevery fine, rangemicroscopic to very fine, non-indurated, micrite cement; 1% phosphatic sand; 10% quartz; poor sample; foraminifera.	8	188
Limestone, moderate orangish pink to light brown, 15% porosityintragranular, vugular, grain typeskeletal, skeletal cast, micrite cement, massive; 1% iron stain, foraminifera.	12	200
Limestone, moderate orangish pink to light brown, 5% porosityintragranular, intercrystalline, grain typemicrite, crystalline, skeletal, 50% allochems, sizevery fine, range microscopic to very fine, good induration, micrite cement, massive, 1% phosphatic sand; moderate recrystallization, foraminifera, mollusks.	40	240
Limestone, light gray to moderate light gray, 10% porosityintragranular, pin point vugs, intercrystalline, grain typecrystalline, skeletal, 75% allochems, sizevery fine, rangemicroscopic to very fine, good induration, silica cement; massive, mollusks.	10	250

## 44 Talquin Electric Cooperative, Incorporated (W-6886)

Location, lat. 30°05'00", long. 84°18'27", in Land grant sec. 125 of Hartsfield Survey, T. 5 S., R. 1 W., west of State Highway 367 and about 2 mi north of Shell Point (Spring Creek); Driller, Rowe Drilling Co.; Date drilled, Sept. 1964; Drilling method, hydraulic rotary; Depth 220 ft; Casing, 6-in to 41 ft, open hole 41 ft to 220 ft; Aquifer, Floridan; Land-surface altitude, 9.5 ft; Water level, 4.60 ft below land surface on May 17, 1977; Specific capacity, 1 (gal/min)/ft; Chloride concentration 112 mg/L on May 17, 1977. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, fine to medium, clear, subangular to subrounded, loose.	25	25
Sand, quartz, medium to coarse, clear, subangular to subrounded, loose and calcarenite, very pale orange, slightly microfossiliferous, sandy (fine and rounded), phosphoritic.	5	30
Calcilutite, very pale orange, sandy (fine and rounded), phosphoritic, medium hard with very coarse, loose quartz sand.	10	40
Calcarenite, very pale orange, slightly finely sandy, partially recrystallized, microfossils (Archaias sp. and Sorites sp.), moldic porosity.	30	70
Becomes calcilutitic, very pale orange, very finely sandy, subearthy looking microfossil as above.	10	80
As 40-70°.	20	100
As 70-80°.	12	112
As 40-60°.	8	120

Number 44 (Continued)

Material	Thickness (feet)	Depth (feet)
Calcilutite, very pale orange, finely sandy, slightly hard, contains traces of pale olive clay, earthy in appearance, microfossil, but indistinct.	10	130
As above, calcarenite, very pale orange, very recrystallized, very microfossil-iferous but indistinct, slightly hard.	10	140
Calcilutite, very pale orange, very recrystallized, molds and ghosts of microfossils, moderately hard, dense.	20	160
Calcarenite, pale orange, partially recrystallized, very microfossiliferous, fair porosity. <u>Discorinopsis</u> sp.	20	180
As above but more recrystallized (finely sucrosic), "cones" and softer than above.	40	220

#### 45 Pete Crowell

Location, lat. 30°05'28", long 84°31'10", in NE<sup>1</sup>4NW<sup>1</sup>4SE<sup>1</sup>4, sec. 34, T. 4 S., R. 3 W., near Sopchoppy River, at Rouse Estates, about 2 mi northwest of Sopchoppy (Sanborn); <u>Driller</u>, Revell's Well Drilling; <u>Date drilled</u>, Mar. 1975; <u>Drilling method</u>, jetted; <u>Depth</u>, 79 ft; <u>Casing</u>, 2-in to 71 ft, open hole 71 ft to 79 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, about 22 ft; <u>Water level</u>, flowing above land surface in Mar. 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, medium to very coarse, angular to subrounded; small amount of peat.	10	10
Marl, grayish orange, sandy, silty, calcareous.	20	30
Limestone, yellowish gray, sandy, micritic to finely granular, porous, hard, shell fragments.	20	50
Limestone, yellowish gray, same as above, also moldic.	15	65
Same as above, less sandy, less shell fragments, also limestone, medium light gray, micrite.	14	79

## 49 Talquin Electric Cooperative, Incorporated (W-7741)

Location, lat. 30°06'18", long. 84°19'38", in Land grant sec. 105 of Hartsfield Survey, T. 5 S., R. 1 W., west of State Highway 365 about 2 mi north of the town of Spring Creek (Spring Creek); Driller, Rowe Drilling Co.; Date drilled, Mar. 1966; Drilling method, hydraulic rotary; Depth, 205 ft; Casing, 6-in to 131 ft, open hole 131 ft to 205 ft; Aquifer, Floridan; Land-surface altitude, 14.1 ft; Chloride concentration, 23 mg/L on May 9, 1977. Logged by John Love, Northwest Florida Water Management District

Material	Thickness (feet)	Depth (feet)
Sand, 33% porosity-intergranular, size- fine, range- very fine to coarse, subangular to rounded, medium sphericity, iron stain; 2% heavy minerals, 1% fossil fragments.	30	30
Micrite, white to very light gray, 9% porosity- intergranular, vugular, grain type- intraclast, micrite, 40% allochems, size - very fine, range - microscopic to fine, moderate induration, micrite cement, 35% clay; 10% dolomite; 9% sand (quartz); 3% heavy minerals, low recrystallization, fossil fragments, mollusks.	10	40
Micrite, white to very light gray, 9% porosity, intergranular, vugular, grain type- intraclast, micrite, 30% allochems, size- fine, range - very fine to fine, moderate induration, micrite cement; 2% dolomite; 3% sand (quartz); 3% phosphatic sand; mollusks.	20	60
Calcarenite, white to very light gray,  9% porosity- intergranular, vugular, grain type - intraclast, micrite, 50% allochems, size - fine, range - very fine to fine, moderate induration, micrite cement; 2% dolomite; 3% sand (quartz); 3% phosphatic sand; foraminifera.	20	80

Material	Thickness (feet)	Depth (feet)
Micrite, very light gray to white, 7%  porosity - intergranular, vuglar, grain type - micrite, intraclast, 30% allochems, size - fine, range - very fine to fine, moderate induration, micrite cement, 10% sand (quartz); 3% phosphatic sand, foraminifera, mollusks; (Sorites sp.)	20	100
Micrite, very light gray to white, 7% porosity - intergranular, vugular, grain type - intraclast, micrite, 35% allochems, size - fine, range - very fine to medium, moderate induration, micrite cement; 5% calcite; 1% sand (quartz); low recrystallization, foraminifera, coral, mollusks.	10	110
Calcarenite, white to very light gray, 10% porosity - intergranular, vugular, moldic, grain type - interclast, skeletal, micrite, 50% allochems, size - fine, range - fine to medium, moderate induration, micrite cement; 3% calcite, moderate recrystallization, foraminifera, mollusks.	10	120
Calcarenite, very light gray to yellowish gray,  12% porosity - intergranular, moldic, pin point vugs, grain type - interclast, crystalline, skeletal, 65% allochems, size - medium, range- fine to medium, moderate induration, micrite cement; silica cement; 2% calcite; 2% dolomite; moderate recrystallization, foraminifera, mollusks.	10	130
Calcarenite, very light gray to light gray,  12% porosity - intergranular, moldic, pin point vugs, grain type - intraclast, crystalline, skeletal, 65% allochems, size - medium, range - fine to medium, moderate induration, micrite cement, silica cement, dolomite cement; 2% calcite; 2% dolomite, foraminifera, cones, mollusks, coral; (Amphistegina sp., Sorites sp., Dictyocones sp.)	20	150

Material	Thickness (feet)	Depth (feet)	
Calcarenite, very light gray to yellowish gray, 10% porosity - intergranular, moldic, pin point vugs, grain type - intraclast, skeletal, crystalline, 65% allochems, size - medium, range - fine to medium, moderate induration, micrite cement, dolomite cement, silica cement; 6% dolomite; 5% calcite, moderate recrystallization, foraminifera, cones, mollusks, coral.	20	170	
Calcarenite, very light gray to yellowish gray, 10% porosity - intergranular, moldic, pin point vugs, grain type - intraclast, skeletal, crystalline, 65% allochems, size - medium, range - fine to medium, moderate induration, micrite cement, silica cement, dolomite cement; 4% dolomite, 8% calcite; moderate recrystallization, foraminifera, cones, mollusks, coral.	20	190	

TABLE 15.--Lithologic logs of selected wells and core holes--Continued
51 Wakulla County School Board (Wakulla County High School) (W-8465)

Location, lat. 30°06'29", long. 84°22'35", in Land grant section 91 of Hartsfield Survey, T. 4 S., R. 1 W., about 0.3 mi east of intersection of U.S. Highway 319 and 98 (Sopchoppy); Driller, Revell's Well Drilling; Date drilled, July 1968; Drilling method, cable tool; Depth, 205 ft; Casing, 4-in to 82 ft, open hole 82 ft to 205 ft; Aquifer, Floridan; Land-surface altitude, 38.9 ft; Water level, 34 ft below land surface in July 1968; Chloride concentration, 6.0 mg/L on Jan. 4, 1977.

Material	Thickness (feet)	Depth (feet)
Sand, fine to coarse, mostly medium, clear to frosted, angular to subrounded, argillaceous.	25	25
Sand, fine, clear to frosted, angular, argillaceous, (80% sand); limestone, yellowish gray, crystalline to micritic, moderate to high porosity—moldic, sandy.	13	38
Limestone, as above, 60%; sand, as above.	18	56
Sand, fine to very coarse, mostly coarse, clear to frosted, angular to subrounded, (75% sand); limestone, as above.	8	64
Sand, coarse, clear to frosted, subangular to subrounded; limestone, white to yellowish gray, micritic, sandy, low to high porosity, (20% limestone).	8	72
Sand, medium to coarse, clear to frosted, subangular to subrounded, (60% sand); limestone, as above, 30%; clay, very light gray, calcareous, chalky, sandy.	8	80
Limestone, yellowish gray to light gray, crystalline, moderate to high porosity— moldic, very hard, sucrosic, foraminifera— (Sorites sp.), bryozoa, fossil casts; sand (quartz), medium.	20	100
Limestone, as above, porosity increasing downward; foraminifera (Archias sp.), sharks tooth; quartz.	20	120

Number 51 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, as above; trace of clay, light gray; sand (quartz), fine to medium.	12	132
Limestone, as above; sand, medium, clear to frosted, angular to subangular, (20% sand).	8	140
Limestone, as above, also <u>Sorites</u> sp., echinoid spines; dolomite, light olive gray, crystalline, sucrosic, moderate porosityintercrystalline, (50% dolomite).	24	164
Limestone, yellowish gray, crystalline, very sandy, high porosity moldic, fossil fragments; dolomite, as above, 30%.	10	174
Limestone, white to very pale orange, crystalline, very hard, moderate porositymoldic, sandy, fossil fragments; spar.	31	205

55 U. S. Forest Service (Placid Oil Water Supply Well)

Location, lat. 30°08'13", long. 84°55'57", in NW4NW4NW4, sec. 10, T. 4 S., R. 7 W., 0.2 mi north of Forest Highway 13 and 2.4 mi east of State Highway 69 (Wilma); Driller, Revell's Well Drilling; Date drilled, Mar. 1975; Drilling method, cable tool; Depth, 204 ft; Casing, 4-in to 163 ft, open hole 163 ft to 204 ft; Aquifer, Floridan; Land-surface altitude, about 52 ft; Water level, 23 ft below land surface in Mar. 1975; Chloride concentration, 5.2 mg/L on May 23, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, dark yellowish brown to clear, fine to coarse, angular to subangular, argillaceous.	20	20
Sand, clear to white, fine to coarse mostly medium, angular to subangular; phosphorite.	20	40
Sand, light gray to white, fine to coarse mostly medium, subangular to subrounded, calcareous, chalky coating; shell fragments, silica cemented spheres; phosphorite.	16	56
No samples.	8	64
Limestone, pinkish gray to light gray, crystalline, very hard, low porosity; dolomite, light brown, low porosity, very hard, moderate alteration; shell fragments.	16	80
Limestone, medium gray, micritic, moderate porosity, soft, (85% limestone); dolomite, light brown, very hard, low porosity; sand, light gray to clear, fine to medium, angular to subangular; shell fragments; calcite.	20	100
Limestone, yellowish gray, micritic, massive, moderate porosity; dolomite, light brown, low porosity; shell fragments; phosphorite; quartz.	29	129
Shell fragments, coral, bryozoa, impressions; limestone, yellowish gray, micritic, low porosity, moderately hard, phosphoritic; dolomite, as above; quartz.	28	157

Number 55 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, yellowish brown, micritic, massive, low to moderate porosity; shell fragments.	7	164
Marl, light olive gray, sandy, clayey, slightly fibrous, calcareous; shell fragments; phosphorite.	12	176
Shell fragments, bryozoa; coral, limestone, pale orange, crystalline, very hard, massive; moderate porositymoldic; limestone, brownish gray, micritic, biogenic, soft; phosphorite.	28	204

#### 57 U.S. Forest Service, Wilma Work Center, (W-5958)

Location, lat. 30°09'45", long. 84°58'10", in NELSELNEL, sec. 6, T. 4 S., R. 7 W., at Wilma Work Center, 0.5 mi west of the intersection of State Highways 12 and 65 in Wilma (Wilma); Driller, Revell's Well Drilling; Date drilled, May 1962; Drilling method, cable tool; Depth, 184 ft; Casing, 4-in to 105 ft, open hole 105 ft to 184 ft; Aquifer, Floridan; Land-surface altitude, 61.8 ft; Water level, 6 ft below land surface on May 25, 1962; Specific capacity, 16.7 (gal/min)/ft; Chloride concentration, 2.5 mg/L on July 2, 1975. Logged by Dan Harmon, Northwest Florida Water Management District.

Material	Thickness (feet)	Depth (feet)
Sand, white to light gray, 33% porosity— intragranular, size—coarse, range— coarse to very coarse, angular to subangular, high sphericity, non— indurated; 1% iron stain; 1% limonite; 1% heavy minerals; no fossil; plant remains.	20	20
Sand, white to light gray, 33% porosity— intragranular, size—coarse, range— coarse to very coarse, angular to subangular, high spherictiy, non— indurated; 1% iron stain; 1% limonite; 1% heavy minerals, no fossils.	10	30
Sand, white to light gray, 33% porosity— intragranular, size—very coarse, range— coarse to very coarse, angular to subangular, high sphericity, non— indurated; 1% iron stain; 1% limonite; 1% heavy mineral; no fossil.	10	40
Sand, white to light gray, 33% porosity— intragranular, size—coarse, range— coarse to very coarse, angular to subangular, high sphericity, non— indurated; 1% iron stain; 1% limonite; 1% heavy mineral; no fossil.	18	58

Material	Thickness (feet)	Depth (feet)
Shell bed, white to greenish gray, 30% porosity— intragranular, vugular, poor induration, micrite cement, brecciated, 5% phosphatic sand; 1% pyrite; low recrystallization; reefal, brachiopod, foraminifera, bryozoa, coral, mollusks, (Nummulites sp.).	10	68
Limestone, grayish green, 25% porosity— intragranular, vugular, grain type— micrite, skeletal, skeletal cast, 50% allochems, size—microscopic, range—cryptoscopic to microscopic, poor induration, micrite cement, brecciated; 1% limonite; 1% phosphatic sand; 1% pyrite; low recrystallization, mollusks, bryozoa, coral, foraminifera (Nummulites sp.).	4	72
Limestone, very light green to light greenish gray, 20% porosity—intragranular, intergranular, grain type—skeletal, skeletal cast, crystalline, 40% allochems, size—microscopic, range—cryptoscopic to microscopic, moderate induration, micrite cement, massive, 1% phosphatic sand; 1% pyrite; 1% limonite; moderate induration, foraminifera, coral, bryozoa, mollusks, (Nummulites sp.).	8	80
Limestone, very light green to light greenish gray, 20% porosity—intragranular, intergranular grain type—skeletal, skeletal cast, crystalline 40% allochems, size—microscopic, range—cryptoscopic to microscopic, moderate induration, micrite cement, massive; 1% phosphatic sand; 1% pyrite; 1% limonite; moderate recrystalline, foraminifera, coral, bryozoa, mollusks.		88

Material	Thickness (feet)	Depth (feet)	
Limestone, very light green to light greenish gray, 20% porosityintragranular, intergranular, grain typeskeletal, skeletal cast, crystalline, 50% allochems, size-microscopic, rangevery fine to microscopic, good induration, micrite cement, silica cement, massive; 1% phosphatic sand; 1% pyrite; moderate recrystallization; foraminifera, coral, bryozoa, mollusks.	47	135	
Limestone, grayish green to grayish brown, 25% porosityintragranular, grain typebiogenic, oolite, oolite cast, 80% allochems, sizevery fine, rangemicroscopic to very fine, poor induration, organic cement; 1% glauconite; 1% phosphatic sand; foraminifera.	15	150	
Limestone, grayish green to moderate gray, 15% porosityintragranular, pin point vugs, grain typeskeletal, skeletal cast, oolite, 75% allochems, sizevery fine, rangemicroscopic to very fine, moderate induration, micrite cement, silica cement; 1% phosphatic sand; 1% limonite; foraminifera, shark tooth, bryozoa, coral, mollusks.	34	184	

#### 59 U. S. Forest Service (Whitehead Lake) (W-6198)

Location, lat. 30°09'59", long. 84°40'35", in SW\(\frac{1}{2}\)SW\(\frac{1}{2}\)SW\(\frac{1}{2}\), sec. 31, T. 3 S., R. 4 W., at Whitehead Lake Recreation area, about 2 mi east of intersection of State Highway 67 and Forest Road 13 (Smith Creek); Driller, Terry-Rosa Hardware Co.; Date drilled, Jan. 1963; Drilling method, cable tool; Depth 260 ft; Casing, 6-in to 203 ft, open hole 203 ft to 260 ft; Aquifer, Floridan; Land-surface altitude, about 21 ft; Water level, +15.60 ft above land surface on Jan. 9, 1975; Chloride concentration, 11 mg/L on Jan. 9, 1975. Logged by Dan Harmon, Northwest Florida Water Management District.

Material	Thickness (feet)	Depth (feet)
Sand, white to light gray, 33% porosity—size—fine, range—fine to medium, subangular to rounded, medium sphericity, non-indurated, micrite cement; 3% limestone; 1% hematite; calcareous; bryozoa, foraminifera, mollusks.	10	10
Sand, white to light gray, 33% porosity—intergranular size—fine, range—fine to medium, subangular to rounded, medium sphericity, non-indurated, micrite cement; 5% limestone; 1% hematite; calcareous; bryozoa, foraminifera, mollusks.	, 30	40
Sand, white to light brown, 33% porosity—intergranula size—fine, range—very fine to fine, subangular to rounded, medium sphericity, non-indurated; 7% phosphatic sand; no fossil.	r, 30	70
Sand, white to light brown, 33% porosity— intergranular, size—fine, range—very fine to fine, subangular to rounded, medium sphericity, non-indurated; 1% clay; 7% phosphatic sand; no fossil.	10	80
Sand, white to light brown, 33% porosity— intergranular, size—fine, range—very fine to fine, subangular to rounded, medium sphericity, non-indurated; 1% clay; 1% limestone; 7% phosphatic sand; poor sample; no fossil.	50	130

Material	Thickness (feet)	Depth (feet)
Sand, white to light grayish brown,  33% porosityintergranular, size fine, rangevery fine to fine, subangular to rounded, medium sphericity, non-indurated, micrite cement, silica cement; 7% limestone; 1% clay; 7% phosphatic sand; 1% iron stain; poor sample; plant remains.	10	140
Limestone, white to light grayish brown, 10% porosityintragranular, inter-crystalline, grain typemicrite, intraclast, crystalline, 50% allochems, sizemicroscopic, rangecryptocrystalline to microscopic, poor induration, micrite cement, silica cement; 10% quartz; 7% phosphatic sand; 1% iron stain; 1% clay; poor sample; plant remains.	10	150
Limestone, white to light grayish brown, 5% porosity—intragranular, intercrystalline, grain type—micrite, intraclast, crystalline, 50% allochems, size—microscopic, range—cryptoscopic to microscopic, moderate induration, micrite cement, silica cement; 10% quartz; 7% phosphatic sand; 1% iron stain; poor sample; chalky; no fossil.	10	160
Limestone, white, moderate dark gray, 5% porosityintragranular, intercrystalline, grain typemicrite, intraclast, crystalline, 50% allochems, sizemicroscopic, rangecryptoscopic to microscopic, good induration, micrite cement, silica cement; 7% quartz; 1% phosphatic sand; 1% iron stain; chalky, no fossil.	10	170
Limestone, white, moderate dark gray, 5% porosity— intragranular, intercrystalline, grain type— micrite, intraclast, crystalline, 50% allochems, size—microscopic, range—cryptoscopic to microscopic, good induration, micrite cement, silica cement; 7% quartz; 1% phosphatic sand; 1% iron stain; mollusks.	20	190

Material	Thickness (feet)	Depth (feet)
Limestone, white to light brown, 5% porosity— intragranular, intercrystalline, pin point vugs, grain type—micrite, crystalline, intraclast, 75% allochems, size—microscopic, range—microscopic to very fine, good induration, micrite cement, silica cement; 1% quartz; 1% iron stain; 1% limonite; chalky, no fossil.	20	210
Limestone, white to light brown, 5% porosity— intragranular, intercrystalline, pin point vugs, grain type—micrite, crystalline, intraclast, 75% allochems, size—microscopic, range—microscopic to very fine, good induration, micrite cement, silica cement; 1% iron stain; 1% limonite; chalky, no fossil.	10	220
Dolostone, light brown to moderate brown, 3% porositylow permeability, intercrystalline, good induration, dolomite cement; 1% iron stain; 1% limonite; 5% limestone; spicules, bryozoa.	20	240
Dolostone, light brown to moderate brown, 3% porosity- low permeability, intercrystalline, good indur- ation, dolomite cement; 1% iron stain; 1% limonite; 5% limestone; 1% manganese oxide; spicules, bryozoa.	10	250

#### 62 Wakulla County School Board (Crawfordville High School) (W-8022)

Location, lat. 30°10'35", long. 84°22'50", in SELNELSEL, sec. 36, T. 3 S., R. 2 W., at former site of Crawfordville High School south of State Highway 368 and about 0.5 mi west of Crawfordville (Crawfordville West); Driller, Rowe Drilling Co.; Date drilled, Feb. 1967; Drilling method, hydraulic rotary; Depth, 170 ft; Casing, 6-in to 131 ft, open hole 131 ft to 170 ft; Aquifer, Floridan; Land-surface altitude, 28.1 ft; Water level, 20 ft below land surface in Feb. 1967; Specific capacity, 30 (gal/min)/ft; Logged by J. W. Yon, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, very fine to very coarse, angular to subrounded. Grains are coated with a tan clay.	20	20
Sand, quartz, very fine to medium, some coarse grains, angular to subrounded. Iron stained fragments of limestone.	20	40
Sand, quartz, very fine to medium with coarse grains angular to subangular. Clear to frosted calcilutite, very pale orange, finely crystalline, sandy, cemented, hard, with CaCO3, slightly porous.	23	63
As above with dolomite, light to medium gray, cryptocrystalline, sandy, hard, dense.	10	73
Calcilutite, very pale orange to medium gray, fine crystalline, chalky, sandy, hard. very slight moldic and intergranular porosity, micro and macro fossiliferous.	2	75
and, quartz, fine to very coarse, angular to subrounded. Clear to frosted-grains appear to be imbedded in a chalky calcareous material.	3	78
Calcarenitic calcilutite, yellowish gray, finely crystalline, sandy, cemented with CaCO3-fair intergranular porosity, Sorites sp.	28	106

Number 62 (Continued)

Material	Thickness (feet)	Depth (feet)
As above with loose very fine to coarse quartz sand and fragments of pale yellowish brown dolomite.	13	119
As above with some coarse sand.	7	126
Sand, quartz, fine to coarse - some very coarse to subrounded, iron stained.	4	130
Calcilutite, same as 101-116', crystalline, calcarenite very pale orange - firm crystalline, cemented firm by CaCO <sub>3</sub> - good intergranular porosity, micro-fossiliferous Coskinolina floridana?. In sample 140-142' occurs some fine to coarse, angular to subangular, clear quartz sand.	12	142
Crystalline calcarenite as above, <u>Coskinolina</u> , floridana, Rotalia Mexicana.	8	150

#### 63 U.S. Forest Service (Porter Lake) (W-5686)

Location, lat. 30°10'35", long. 84°40'37", in SW4NE4NW4, sec. 31, T. 3 S., R. 4 W., at Porter Lake Recreation Area, near the Ochlockonee River, 3.0 mi east of State Highway 67 (Smith Creek); Driller, Revell's Well Drilling; Date drilled, June 1960; Drilling method, cable tool; Depth, 140 ft; Casing, 4-in to 88 ft, open hole 88 ft to 140 ft; Aquifer, Floridan; Land-surface altitude, 22.3 ft; Water level +12.20 ft above land surface on Mar. 3, 1977; Chloride concentration, 1.4 mg/L on Mar. 18, 1975. Logged by Dan Harmon, Northwest Florida Water Management District.

Material	Thickness (feet)	Depth (feet)
Sand, white to very light gray, 33% porosity intragranular, sizemedium, range medium to coarse, subangular to rounded, medium sphericity, non-indurated, no fossil.	20	20
Sand, grayish orange pink to moderate orange pink, 33% porosity—intragranular, size—fine, range—fine to medium, subangular to rounded, medium sphericity, non—indurated, clay cement; 1% iron stain; 1% clay; no fossil.	15	35
Sand, white to very light gray, 33% porosity— intragranular, size—fine, range—fine to medium, subangular to rounded, medium sphericity, non-indurated, micrite cement; 1% iron stain; 1% micrite; 5% phosphatic, no fossil.	21	56
Micrite, white, 5% porosityintragranular, pin point vugs, grain typemicrite, 20% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, micrite cement, laminated; 1% phosphatic sand, no fossil.	8	64
Limestone, white, porositylow permeability, intragranular, grain typemicrite, 20% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, micrite cement; 5% quartz; 2% phosphatic sand; 1% phosphatic gravel, no fossil.	12	76

Material	Thickness (feet)	Depth (feet)
Limestone, light gray to moderate light gray, 5% porosityintragranular, intercrystalline, grain typecrystalline, micrite, 20% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, silica cement; 1% phosphatic sand, foraminifera.	9	85
Limestone, white, 5% porosityintragranular, pin point vugs, grain typemicrite, 20% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, micrite cement; 5% quartz; 1% phosphatic sand, no fossil.	4	89
Sand, white to very light gray, 33% porosity— intragranular, size—medium, range—medium to coarse, subangular, rounded, medium sphericity, non-indurated; 1% iron stain; poor sample, no fossil.	7	96
No sample.	4	100
Limestone, white to light gray, 10% porosity— pin point vugs, intragranular, grain type— micrite, crystalline, 20% allochems, size— microscopic, range—microscopic to very fine, good induration; 5% quartz; mollusks.	17	117
No sample.	15	132
Limestone, light gray to moderate light gray, 15% porosityintragranular, vugular, grain typemicrite, crystalline, 20% allochems, sizemicroscopic, range microscopic to very fine, good induration, micrite cement; 5% quartz; 1% phosphatic sand; 1% phosphatic gravel; foraminifera, mollusks, spicules.	8	140

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

#### 64 Placid Oil Company (W-12496)

Location, lat. 30°10'52", long. 84°42'14", in SE\sW\sE\s, sec. 26, T. 3 S., R. 5 W., about 2 mi west of the community of Smith Creek (Smith Creek); Driller, Placid Oil Co.; Date drilled, Aug. 1974; Drilling method, hydraulic rotary; Depth, 11,965 ft; Casing, 10-in to 4044 ft, open hole 4044 ft to 11,965 ft; Land-surface altitude, 47.3 ft. Logged to 1010 ft by Dan Harmon, Northwest Florida Water Management District.

Material	Thickness (feet)	Depth (feet)
Limestone, light gray to moderate light gray, 10% porosityintragranular, pin point vugs, grain typemicrite, skeletal cast, skeletal, 20% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, silica cement, micrite cement; 1% phosphatic sand; 1% phosphatic gravel; 1% quartz; mollusks.	150	150
Limestone, white to moderate light gray, 5% porosityintragranular, pin point vugs, grain typemicrite, skeletal cast, 15% allochems, sizemicroscopic, rangecryptoscopic to microscopic, good induration, micrite cement; 1% phosphatic sand; 1% quartz; chalky, mollusks.	60	210
Limestone, light gray to moderate light gray, 10% porosityintragranular, pin point vugs, grain typemicrite, skeletal cast, skeletal, 20% allochems, sizemicroscopic, range microscopic to very fine, good induration, micrite cement; 1% phosphatic sand; 1% quartz; foraminifera, mollusks, bryozoa.	60	270
Limestone, white to grayish orange pink, 5% porosityintragranular, pin point vugs, grain typemicrite, skeletal cast, skeletal, 15% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, micrite cement, clay cement; 1% clay; mollusks, foraminifera.	30	300

Material	Thickness (feet)	Depth (feet)
Limestone, white, grayish orange pink, 5% porosity—intragranular, pin point vugs, intercrystalline, grain type—micrite, skeletal cast, skeletal, 15% allochems, size—microscopic, range—microscopic to very fine, good induration, micrite cement; chalky; mollusks, foraminifera.	60	360
Limestone, white to grayish orange pink, 5% porosityintragranular, pin point vugs, intercrystalline, grain typemicrite, skeletal cast, skeletal, 15% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, micrite cement, no fossil.	90	450
Limestone, white to grayish orange pink, 15% porosity—intragranular, pin point vugs, intercrystalline, grain type—micrite, crystalline, skeletal cast, 20% allochems, size—microscopic, range—microscopic to very fine, good induration, micrite cement, silica cement; chalky, foraminifera.	90	540
Limestone, white to grayish orange pink, 15% porosityintragranular, pin point vugs, intercrystalline, grain typemicrite, crystalline, skeletal cast, 25% allochems, sizemicroscopic, rangemicroscopic to very fine, good induration, micrite cement, silica cement; 1% chert; chalky; foraminifera, mollusks.	470	1010

#### 68 Jewel H. Hudson (W-12986)

Location, lat. 30°12'50", long. 84°21'40", in NW4NW4NW4, sec. 20, T. 3 S., R. 1 W., east of U.S. Highway 319 and about 1.5 mi north of Crawfordville (Crawfordville East); Driller, Byron P. Kirkland; Date drilled, Feb. 1976; Drilling method, cable tool; Depth, 175 ft; Casing, 6-in to 38 ft, open hole 38 ft to 175 ft; Aquifer, Floridan; Land-surface altitude, about 18 ft.

Material	Thickness (feet)	Depth (feet)
Sand clear to frosted, medium to very coarse, angular to subrounded.	9	9
Sand, as above, mostly coarse, (85% sand); clay, grayish orange to yellowish gray also reddish, sandy, dense.	9	18
Limestone, white, crystalline, very hard, sandy, moderate porosity, foraminifera (Sorites sp.), (95% limestone); clay, moderate yellowish brown, very dense, sandy; sand (quartz), coarse.	1	19
Limestone, as above, shell molds and casts; clay, grayish orange, dense.	2	21
Limestone, white, micritic, moderately hard, low porosity; sand (quartz), medium, no fossils.	6	27
Limestone, as above, also shell fragments.	3	30
Clay, white, calcareous, soft, chalky; shell fragments.	3	33
Limestone, white, crystalline, biogenic, very hard, low to moderate porosity, foraminifera (Sorites sp., Archias sp.).	7	40
NOTE: No samples collected between 40-54 ft. Descriptions are from driller's log.		
Clay, blue tint.	8	48
Limestone.	1	49
Clay, light color.	1	50

Material	Thickness (feet)	Depth (feet)
Limestone, soft.	4	54
Limestone, yellowish gray to white, micritic, crystalline, biogenic, slightly sandy, low to moderate porosity, very hard.	1	55
NOTE: No samples collected between 55-60 ft. Descriptions are from driller's log.		
Limestone, soft.	5	60
Limestone, yellowish gray to light gray, crystalline, micritic, soft to very hard, low porosity, fossil casts, (85% limestone); clay, greenish gray to white, very sandy, calcareous.	9	69
Limestone, white to yellowish gray, crystalline, very hard approaching sucrosic, moderate porosity, no fossil evidence, (90 limestone); clay, white, calcareous, chalky, soft.	6	75
Clay, calcareous, yellowish gray, soft, chalky, (90% clay); limestone, as above; clay, greenish gray, sandy, denser than calcareous clay.	10	85
Limestone, white, crystalline, very hard, moderate to high porositymoldic, sandy.	5	90
Limestone, as above, except biogenic and dolomite.	5	95
As above, also shell impressions.	15	110
Limestone, white, crystalline, biogenic, dolomitic, high porosity, sucrosic, soft to moderately hard, microfossiliferous, foraminiferaLepidocyclina sp., cephalopods abundantDictyoconites sp., echinoid spines, bryozoa fragments; spar.	20	130
Limestone, as above; clay, white, soft, calcareous.	10	140

Number 68 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, white, crystalline, very hard, sucrosic, moderate porositymoldic, dolomitic, massive, fossil fragments.	10	150
Limestone, as 115-140 ft interval.	25	175

#### 70 U. S. Forest Service (Pope Still Tower) (W-5817)

Location, lat. 30°13'28", long. 84°28'34", in SE4SW4NW4, sec. 18, T. 3 S., R. 2 W., at Pope Still Tower site, about 8 mi northwest of Crawfordville (Crawfordville West); Driller, Revell's Well Drilling; Date drilled, Sept. 1961; Drilling method, cable tool; Depth, 300 ft; Casing, 4-in to 266 ft, open hole 266 ft to 300 ft; Aquifer, Floridan; Land-surface altitude, 63.5 ft; Water level, 32 ft below land surface on Sept. 28, 1961; Chloride concentration, 2.4 mg/L on July 8, 1975. Logged by John Love, Northwest Florida Water Management District.

Material	Thickness (feet)	Depth (feet)
Sand, light brown, 30% porosityintergranular, sizemedium, rangefine to coarse, subangular to rounded, medium sphericity; 10% clay; iron stain.	20	20
Sand, 33% porosityintergranular, sizemedium, rangefine to coarse, subangular to rounded, medium sphericity; 1% heavy minerals; no fossil.	16	36
Sand, 33% porosityintergranular, size medium, rangefine to coarse, subangular to rounded, medium sphericity; 2% pyrite.	14	50
Sand, 33% porosityintergranular, sizefine, rangevery fine to fine, rounded, subangular, high sphericity; 4% heavy minerals, 1% feldspar; fossil fragments.	14	64
Sand, white, 33% porosityintergranular, sizefine; rangevery fine to fine, rounded, subangular, high sphericity; 7% clay.	12	76
Sand, white, 31% porosityintergranular, 4% clay, fossil fragments, shell fragments dolomitized.	11	87
Calcarenite, very light gray to white, 10% porosityintergranular, pin point vugs, grain typeintraclast, crystalline, skeletal, 60% allochems, sizefine, rangevery fine to fine, moderate induration, micrite cement; 7% sand (quartz); 2% heavy minerals; fossil fragments, mollusks, foraminifera.	8	95

Material	Thickness (feet)	Depth (feet)
Calcarenite, very light gray to white, 7% porosityintergranular, grain typeintraclast, skeletal, crystalline, 50% allochems, sizevery fine, rangevery fine to fine, moderate induration, micrite cement, dolomite cement, silica cement; 9% sand (quartz), 5% dolomite; low recrystallization, fossil fragments, Sorites sp.	17	112
Micrite, very light gray, 3% porosityinter- granular, grain typemicrite, 10% allochems, sizecryptoscopic, rangecryptoscopic, moderate induration, micrite cement; 2% sand (quartz); fossil fragments; poor sample mostly cavity filling.	13	125
Micrite, very light gray, 7% porosity— vugular, grain type—micrite, cryatalline, 10% allochems, size—cryptoscopic, range— cryptoscopic, moderate induration, micrite cement; 15% dolomite; 3% pyrite; 8% clay; low recrystallization.	11	136
Micrite, very light gray, 5% porosityintergranular, grain typemicrite, crystalline, 10% allochems, sizecryptoscopic, rangecryptoscopic, moderate induration, micrite cement, dolomite cement; 35% dolomite; moderate recyrstallization, mollusks, Amphistegina sp., Sorites sp.	15	151
Dolostone, yellowish gray, 4% porositypin point vugs, intergranular, low permeability, 50-90% altered, anhedral, sizecryptoscopic, rangecryptoscopic, good induration, dolomite cement, micrite cement; 14% limestone; moderate recrystallization, chalky; mollusks, foraminifera, fossil fragments, coral.	17	168
Micrite, yellowish gray to very light gray, 9% porosityintergranular, pin point vugs, vugular, grain typeintraclast, crystalline, 40% allochems, sizevery fine, range microscopic to very fine, moderate induration micrite cement, dolomite cement; 20% dolomite; moderate recrystallization, chalky; mollusks, coral.	22	190

Material	Thickness (feet)	Depth (feet)
Calcarenite, yellowish gray, 7% porosity— intergranular, pin point vugs, grain type— intraclast, crystalline, skeletal, 60% allochems, size—fine, range—very fine to medium, moderate induration, micrite cement; 8% dolomite; 3% sand (quartz); 8% calcite; mollusks, coral foraminifera.	25	215
Micrite, yellowish gray, 9% porosityintergranular, intragranular, vugular, grain typeintraclast, crystalline, micrite, 20% allochems, sizevery fine, rangemicroscopic to fine, moderate induration, micrite cement; 12% sand (quartz); low recrystallization, chalky; mollusks.	32	247
Dolostone, grayish brown, 10% porosity— intergranular, vugular, 90-99% altered, euhedral, size—fine, range—very fine to medium, moderate induration, dolomite cement; 15% limestone, high recrystallization, fossil mold.	9	256
Micrite, yellowish gray, 8% porosityintergranular, pin point vugs, grain typeintraclast, micrite, 35% allochems, sizefine, rangefine to medium, moderate induration, micrite cement; 25% dolomite; 9% sand (quartz), moderate recrystallization, fossil fragments, mollusks.	6	262
Micrite, white to very light gray, 7% porosity— intergranular, pin point vugs, grain type— intraclast, micrite, 25% allochems, size— very fine, range—very fine to fine, moderate induration, micrite cement; 10% dolomite; 5% sand (quartz); low recrystallization, mollusks, coral.	38	300

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

71 Placid Oil Company (W-12114)

Location, lat. 30°16'50", long. 84°30'07", in NE4SW4NE4, sec. 27, T. 2 S., R. 3 W., about 1.5 mi south of Wakulla-Leon County line and about 6 mi southwest of State Highway 267, (Lake Talquin, S.E.); Driller, Placid Oil Co.; Date drilled, Mar. 1974; Drilling method, hydraulic rotary; Depth, 11,742 ft; Land-surface altitude, about 85 ft.

Material	Thickness (feet)	Depth (feet)
Limestone, light gray to medium light gray, micritic to crystalline, very sandy, moderate porosity, moderately hard, shell fragments, molds and casts, gastropods and pelecypods, echinoid spines, phosphoritic, (90% limestone); sand, clear to frosted, coarse to very coarse,, angular; sand content decreases downward; limestone becoming more porous near bottom of interval.	120	120
Limestone, as above, 90%; sand, coarse, clear to frosted, subangular to rounded.	30	150
Limestone, yellowish gray to light gray, micritic, very sandy, moderate porosity- moldic, moderately hard, (60% limestone); sand, as above, 40%, (shell fragments.)	30	180
As above; except shell fragments abundant- pelecypods.	30	210
Limestone, yellowish gray, micritic, slightly sandy, high porosity, moderately hard, moderately hard; few shell fragments; foraminifera.	90	300
Dolomite yellowish gray to light olive gray, crystalline, sucrosic, moderately to very hard; low to moderate porosity, fossil molds and casts, foraminifera (Archais sp?); porosity increasing downward and becoming moldic.	90	390

Material	Thickness (feet)	Depth (feet)
Dolomite, light olive gray to pale yellowish brown, crystalline, sucrosic, low to moderate porosity, very hard; color becoming darker downward from light olive gray to olive gray.	90	480
Dolomite, as above, 95%; limestone, white crystalline, biogenic, high porosity, high recrystallization, moderately hard.	90	570
Limestone, yellowish gray to very pale orange, crystalline, sucrosic, moderately hard, high porosity-moldic, (90% limestone); dolomite, light olive gray, crystalline, sucrosic, very hard, high porosity-moldic.	30	600
Limestone, as above; fossil fragments, trace of dolomite.	30	630
Limestone, white, micritic, crystalline, sucrosic, moderately hard, slightly sandy; moderate porosity, micaeous; fossil fragments; foraminifera; selenite; selenite and mica contents increase downward.	210	840
Limestone, very pale orange to yellowish gray, crystalline, sucrosic, low porosity, soft to moderately hard, fossil fragments; trace of selenite; mica.	180	1020
No samples.	210	1230

#### 75 James M. Smith (W-13412)

Location, lat. 30°19'18", long. 84°41'34", in NW4NE4SW4, sec. 12, T. 2 S., R. 5 W., east of State Highway 375, 0.25 mi south of Black Creek, and about 6 mi south of the intersection of State Highways 375 and 20 (Ward); Driller, Byron P. Kirkland; Date drilled, Sept. 1976; Drilling method, cable tool; Depth, 158 ft; Casing, 4-in to 156 ft, open hole 156 ft to 158 ft; Aquifer, Floridan; Land-surface altitude, about 70 ft; Water level, 5.41 ft below land surface on Dec. 15, 1976; Specific capacity, 3.6 (gal/min)/ft; Chloride concentration, 3.0 mg/L on Dec. 15, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to medium, angular to subrounded.	5	5
Sand, clear to frosted to grayish orange, argillaceous, medium to coarse mostly medium, angular to subangular; organics (muck) near base.	15	20
Sand, fine to very coarse mostly coarse, clear to grayish orange, argillaceous, angular to subrounded.	10	30
Sand, clear to moderate yellowish brown, argillaceous, medium to coarse, angular to subrounded, (85% sand); organics (muck), 15%.	5	35
Sand, clear to frosted to black, very argillaceous, medium to coarse angular to subrounded; organics (muck).	5	40
Sand, fine, clear to frosted, angular to subangular; phosphorite; trace of limestone.	10	50
Limestone, light gray, crystalline, very sandy, high porositymoldic, very hard, shell fragments, (80% limestone); sand, clear to frosted, fine to very coarse, angular to rounded; limestone becoming crystalline and micritic downward.	10	60

Material	Thickness (feet)	Depth (feet)
Sand, medium to coarse mostly coarse, angular to subrounded, clear to frosted, argillaceous; trace of limestone.	5	65
Sand, fine to very coarse mostly coarse, clear to frosted, angular to rounded.	10	75
Sand, fine to medium mostly fine, angular to subangular, clear to frosted.	5	80
Sand, fine to coarse, angular to subrounded, clear to frosted.	5	85
Sand, clear to frosted, fine to medium mostly medium, angular to subangular, (90% sand); limestone, yellowish gray, micritic, sandy, low porosity, very hard; shell fragments.	5	90
Sand, fine to medium, clear to frosted, angular to subangular, (80% sand); pelecypods-"clam"; shell fragments; shell content increases downward to 50% of material.	15	105
Sand and shells, as above; limestone grayish yellow, micritic, sandy, low to moderate porosityintergranular, moderately hard, (5% limestone).	5	110
Sand, fine to coarse mostly medium, angular to subangular, clear to frosted; shell fragments as above, also few gastropods, (50% shell); sand content increasing downward.	10	120
Sand and shell fragments, as above; limestone, light olive gray, crystalline, biogenic, high porositymoldic, very hard, (5% limestone).	5	125
Shell fragments, various shades of gray; massive, high porosity, moderate recrystall- ization, (95% shell); sand, clear to frosted fine, angular.	5	130

Material	Thickness (feet)	Depth (feet)
Limestone, yellowish gray, micritic, very sandy, high porosity, very hard, (55% limestone); shell fragments and sand, as above.	10	140
Sand, fine, angular, clear to frosted, (60% sand); limestone, as above; (very fine cuttings).	5	145
Sand, medium to coarse, clear to frosted, angular to subrounded, (80% sand); limestone, light gray, micritic, sandy, high porosity, moderately hard; shell fragments.	5	150
No samples.	8	158

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

### 76 Don Duncan (W-13108)

Location, lat. 30°19'51", long. 84°49'09", in SE4SE4SE4, sec. 3, T. 2 S., R. 6 W., east of State Highway 65 and about 1.5 mi southeast of Telogia (Telogia); <u>Driller</u>, McCoy's Well Drilling; <u>Date drilled</u>, Apr. 1976; <u>Drilling method</u>, cable tool; <u>Depth</u>, 212 ft; <u>Casing</u>, 4-in to 153 ft, open hole 153 ft to 212 ft; <u>Aquifer</u>, Floridan, <u>Land-surface altitude</u>, about 110 ft; Water level 44 ft below land surface on Apr. 22, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted to pale yellowish brown, medium to coarse, argillaceous, angular to subrounded, trace of phosphorite.	20	20
Sand, grayish brown, fine to coarse, argillaceous; organics; phosphorite.	10	30
Clay, grayish black, sandy, dense, laminated, blocky, dense, organics.	10	40
Limestone, medium light gray to medium gray, crystalline, high porosity—moldic, moderately hard, sandy, extremely fossiliferous—molds, casts, shell fragments, bryozoa, echinoid spines and plates, foraminifera; phosphorite (10-15%), sand (quartz).	10	50
Limestone, as above, also macro shell fragments (oysters), (95% limestone); clay, white, calcareous, coating limestone fragments.	10	60
Limestone, as above, fewer shell fragments.	10	70
Shells, macro fragments, (85%); limestone, as above; phosphorite.	10	80
Dolomite, light gray, crystalline, sandy, low porosity, very hard, (80% dolomite); clay, calcareous, light gray, soft, chalky; sand, (quartz) medium; phosphorite.	10	90

Material	Thickness (feet)	Depth (feet)
Sand, fine to medium, clear to frosted, angular to subangular, (80% sand); phosphorite; dolomite, as abov.	10	100
Limestone, white to light gray, micritic, very sandy, phosphoritic, low to moderate porosity, moderately to very hard, few shell fragments, fish tooth, (90% limestone); sand, fine; clay, olive gray.	10	110
Sand, fine to coarse, clear to frosted, angular to subrounded, (60% sand); shells, macro-fragments, pelecypods, (20% shells); phosphorite (20%); chalcopyrite.	10	120
Sand, fine to medium, clear to frosted, angular to subrounded, (90% sand); limestone, white, micritic, very sandy, low porosity, moderate hard.	10	130
Sand, (from driller's log, no samples).	18	148
Limestone, light gray, micritic to crystalline, sandy, high recrystallization, soft to moderately hard, high porosity—moldic, intergranular; fossil molds and casts, foraminifera—Sorites sp. (abundant); trace of clay.	12	160
Limestone, as above, high recrystallization, many cone shaped gastropods, micrite cement, Sorites sp.	10	170
Limestone, (from driller's log, no samples).	30	200
Limestone, as 160-170 ft, very fine cuttings, crystalline to micritic, high porosity, moderately hard, microfossiliferous, foraminiferaSorites sp., milliolids, (90% limestone); sand (quartz).	12	212

# 78 U.S. Forest Service, (Trout Pond) (W-8492)

Location, lat. 30°20'07", long. 84°23'19", in NE'4NE'4SW4, sec. 1, T. 2 S., R. 2 W., east of State Highway 373, about 13 mi south of Tallahassee (Hilliardville); Driller, W. R. Perry Drilling Co.; Date drilled, Aug. 1968; Drilling method, cable tool; Depth, 340 ft; Casing, 6-in to 307 ft, open hole 307 ft to 340 ft; Aquifer, Floridan; Land-surface altitude, about 92 ft; Water level 70 ft below land surface in Aug. 1968; Chloride concentration, 3.6 mg/L on June 13, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted to yellowish gray, argillaceous, fine to coarse, mostly medium, angular to subrounded.	10	10
and, clear to frosted, fine to coarse, angular to subangular.	20	30
dame as above, except argillaceous.	10	40
and, same as above, (80%); clay, very light gray, very sandy.	10	50
sandy, hard, slightly moldic, some fragments sucrosic.	20	70
Same as above, except very moldic, moderate permeability.	10	80
ame as above, except more sandy.	20	100
ame as above, except darker gray and porosity increasing also permeability.	10	110
imestone, white to medium gray, same as above.	10	120
imestone, medium gray, same as above, also, very few shell impressions poorly preserved.	20	140
Limestone, same as above, ranges from light olive gray to medium gray, porosity less than above, some fragments dolomitic.	40	180

Material	Thickness (feet)	Depth (feet)
Same as above; some fragments very sandy.	10	190
Limestone, medium gray, same as above; limestone, light olive gray, crystalline, hard, dense, dolomitic.	10	200
Limestone, very light gray, crystalline, moldic, sucrosic, probably recrystallized, hard, fragments.	10	210
Limestones, as in sample 190-300'.	20	230
Limestones, same as above, except mostly dolomitic type.	10	240
Limestone, very light gray, extremely moldic, good permeability, hard, slightly sandy, few reminant casts of fossils.	10	250
Limestone, light olive gray to olive gray, crystalline sucrosic, hard, dense; limestone, medium gray, to very light gray, same as sample 230-240'.		260
Clay, medium gray, very sandy, brittle (50%); sand, clear to frosted, fine to medium, argillaceous; limestone, slight amount, same as above.	20	280
Limestone, medium gray to very light gray, crystalline hard, slightly moldic, very few shell fragments; limestone, light olive gray to olive gray, crystalline, hard, dense.	, 10	290
Limestone, white, crystalline, moldic, fossiliferousechinoid spines, bryozoa fragments; abundant pyrite; small amount of quartz, clear, medium.	10	300
Same as above, also <u>Nummulites</u> sp.	10	310
Same as above, increasing permeability.	10	320
Same as above, higher porosity.	20	340

### 79 U.S. Forest Service (Clear Lake) (W-6019)

Location, lat. 30°20'51", long. 84°24'47", in SE½SE½SE½, sec. 34, T. 1 S., R. 2 W., at Clear Lake about 5 mi southeast of Tallahassee (Hilliardville); Driller, W.R. Perry Drilling; Date drilled, July 1962; Drilling method, cable tool; Depth, 175 ft; Casing, 4-in to 112 ft, open hole 112 ft to 175 ft; Aquifer, Floridan; Land-surface altitude, about 103 ft; Water level, 65 ft below land surface in July 1962. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, grayish orange, loose, medium, slightly coated with clay, subrounded, few grains of dark heavy mineral.	10	10
As above, sand, fine to coarse, mostly medium.	10	20
As above, sand, medium to very coarse, mostly coarse.	10	30
As above, becoming yellowish gray in color.	10	40
Sand, quartz, yellowish gray, loose, medium to very coarse, mostly coarse and few fragments of clay, light greenish gray, silty to finely sandy, waxy.	10	50
Clay, as above, has fair amount of sand grains up to coarse size, contains fragments of light yellow orange calcareous material that may be very small microfossils, has very worn, broken fragments of macrofossils.	10	60
Calcarenite, very pale orange, partially recrystallized, contains moderate amount fine to medium grained, subangular, clear sand.	10	70
As above, becoming yellowish gray.	10	80
As above, very macrofossiliferous but fossils indistinct because of recrystallization, less sandy.	10	90

Number 79 (Continued)

Material	Thickness (feet)	Depth (feet)
Calcilutite, yellowish gray, slightly sandy, fine, microfossil, as above.	10	100
Calcarenite, yellowish gray, sandy (fine), microfossiliferous, partially recrystallized, intergranular porosity good.	10	110
As above, slightly harder.	20	130
As above, more completely recrystallized.	40	170

### 87 Florida Bureau of Geology (Bloxham Core Hole) (W-6599)

Location, lat. 30°23'14", long. 84°38'45", in NW4NW4NW4, sec. 21, T. 1 S., R. 4 W., about 0.5 mi south of intersection of State Highways 20 and 375 (Bloxham); Driller, Florida Bureau of Geology; Date drilled, Mar. 1964; Drilling method, bored; Depth, 400 ft; Aquifer, Floridan; Land-surface altitude, about 61 ft. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Clay, light olive gray, silty to slightly finely sandy, very macrofossiliferous.	5	5
Calcilutite, very pale orange, very finely crystalline (sucrosic), slightly sandy, pyritic, slightly dolomitic.	5	10
Calcilutite, as above, more sandy, phosphatic, clayey.	5	15
Calcilutite, as above, very sandy, fine to coarse.	5	20
Sand, medium to very coarse, subrounded, slightly frosted, loose, mostly coarse.	5	25
Sand, as above and calcilutite, as above.	10	35
Sand as above; clay, green, very sandy.	5	40
Calcilutite, very pale orange, very sandy, fine to coarse, fossiliferous and free sand.	5	45
Calcilutite, as above with much free sand.	15	60
As above, mostly sandy, fine to coarse.	5	65
As above, about equal calcilutite and sand.	5	70
Calcilutite, as above and sand, Sorites sp.	5	75
Sand, medium to very coarse, mostly coarse, loose, subrounded.	5	80
Calcilutite and sand, about equal. sand.	5	85

Material	Thickness (feet)	Depth (feet)
Calcilutite, pale orange, chalky, moderately sandy, fine to coarse mostly medium, some free sand.	10	95
As above, more free sand.	5	100
Sand, very coarse to granular, loose, frosted, subrounded.	10	110
As above, less coarse.	5	115
Sand, quartz, medium to coarse, mostly coarse, subangular, a few very small fragments of calcilutite.	5	120
Calcarenite, very pale orange to blue gray, very sandy mostly medium, macrofossiliferous, granular some very coarse to granular sandy, coarse.	10	130
Sand, quartz, fine to granule, mostly granule, few fragments of above, Miogypsina.	5	135
Calcarenite, as above.	10	145
Calcarenite, as above, slightly broader.	2	147
Calcilutite, pale grayish orange, very fossiliferous (both macro and micro), moderately hard, recrystallized, poor porosity (moldic), dolomite, conglomeratic.	5	152
Lost sample because soft and clayey.	2.5	154.5
Calcilutite, as 147-152'.	2.5	157
No sample.	3	160
Calcilutite, very pale orange, clayey, slightly hard.	2	162
Dolomite, pale orange, hard, recrystallized.	2	164

Material	Thickness (feet)	Depth (feet)
Calcilutite, light gray, dolomitic, hard, sandy, conglomeratic, recrystallized.	2	166
Calcilutite, dolomitic, gray, recrystallized, ghosts of microfossils, hard, dense, moldic porosity.	13	179
Calcilutite, very pale orange, very finely crystalline, dolomitic, sparcely sandy.	3	182
Silt, very light gray, very slightly calcareous and finely sandy, has basal conglomerate of material below.	3	185
Calcilutite, grayish orange, clayey, poor porosity, recrystallized, soft to hard, soft layers do not core well and are usually lost. Contains zones of very dolomitized "chunks" in more calcareous clayey matrix.	18	203
No sample.	7	210
Calcilutite, very pale orange, chalky, slightly sandy.	2	212
No sample.	4	216
Calcilutite, very pale orange, very finely crystalline.	2	218
No sample.	6	224
Calcilutite, very pale orange, slightly finely sandy, very finely crystalline, dolomitic.	4	228
No sample.	5	233
Calcarenite, very pale orange, crystalline, sandy, slightly hard, dolomitic.	6	239
No sample.	7.5	246.5
Calcilutite, very pale orange, very hard, dolomitic.	1.5	248

Material	Thickness (feet)	Depth (feet)
No sample.	2	250
Silt, very pale orange, clayey, finely sandy, slightly calcareous, progressively more sandy toward base and gets greenish in color.	18	268
Becomes sand.	8	276
Becoming more clayey.	4	280
Calcilutite, grayish orange, very older finely sandy, few impressions of macrofossils, very dolomitic, hard.	8	288
Calcilutite, fossil impressions were on downward.	4	292
No sample.	1	293
As 288-292'.	2	295
No sample.	1	296
As 293-295'.	4	300
No sample.	3	303
Sand and silt as 250-280'.	4	307
No sample	3	310
Calcirudite, very pale orange, very moldic, very sandy, hard, very dolomitic (conglomeratic).	3	313
Silt, very pale orange, slightly calcareous and clayey, and dark gray green sand.	5	318
No sample.	4	322
Clay and silt, laminated and cross-bedded, very sandy, slightly calcareous.	3	325
No sample.	7	332

Number 87 (Continued)

Material	Thickness (feet)	Depth (feet)
Silt, very pale orange, finely crystalline, calcareous (dolomitic) hard, dense, noticeable amount of heavy minerals.  Becoming more sandy downward and more calcareous. At 346' very clayey, gray and sandy. Below clayey zone to subconglomerate appearance.	20	352
Calcilutite, pale orange, hard, dense, macromoldic, recrystallized.	7	359
Clay and silt bed, pale olive in color.	1	360
Calcilutite, very pale orange, dense, hard, finely sandy, with blebs of green sandy clay, (366-368' softer), (370-377' more finely sandy), (377-380' becoming very chalky).	20	380
Calcilutite, very pale orange, very finely sandy, dense, occasionally microfossiliferous, subchalky. (391' <u>Discorinopsis</u> gunteril).	20	400

91 Florida Bureau of Geology (Lake Talquin) Core Hole (W-6890)

Location, lat. 30°24'40", long. 84°36'00", in SW4SE4NE4, sec. 11, T. 1 S., R. 4 W., near south side of Lake Talquin on north side of peninsula about 16 mi west of Tallahassee (Lake Talquin, S.E.); Driller, Florida Bureau of Geology; Date drilled, Mar. 1965; Drilling method, bored; Depth, 422 ft; Casing, 4-in to 30 ft, open hole 30 ft to 422 ft; Aquifer, Floridan; Land-surface altitude, about 95 ft. Logged by J.R. Hodges, driller, Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Top soil.	1	1
Dark sandy soil.	2.5	3.5
Yellow sandy clay.	2.5	6
Stiff gray clay.	7	13
Gray clay.	4.5	17.5
ine gray sand with layers of white clay.	7.5	25
hite clay and gray sand.	10	35
ard gray lime rock.	1	36
rayish green clay and coarse sand.	4	40
hite and gray limey clay.	2	42
oft lime rock, very granular and weathered.	9	51
ame with layers of green sandy clay, (few fossils).	30	81
ame with shells increasing.	25	106
oft white lime clay and blue and green streaks.	8	114
oft gray granular lime.	6	120
hells loosely cemented together with clay.	22	142
ray granular lime rock, some shells, streaks of blue clay.	30	172

Material	Thickness (feet)	Depth (feet)
Gray limestone with stringers of greenish blue clay.	24	196
Soft white loose rock.	5	201
Dark gray lime rock (shells).	4	205
Alternating layers of gray lime rock and and blue clay.	9	214
Hard tan colored dolomitic limestone.	7	221
Light gray soft lime rock.	6	227
Same with very soft layers.	20	247
Gray limestone with tan spots.	5	252
Tan colored limerock (many shells).	3	255
Gray limestone soft and broken.	4	259
Light gray limestone (few shells).	4	263
Tan colored slightly harder limerock.	11	274
Tan colored with spot of green silty clay.	2	276
Greenish gray limestone (fairly soft).	9	285
Soft gray broken limerock (few fossils).	7	292
Dark gray sandy limestone (fossils).	2	294
Hard brown dolomitic limestone (very broken).	6	300
Same with layers of silt.	9	309
Greenish gray limey silt.	3	312
Soft gray limestone very weathered and broken.	5.5	317.
Greenish gray silt with streaks of soft lime.	3.5	321
Green hard pocketed silty clay like material with lime streaks.	7	328

Number 91 (Continued)

Material	Thickness (feet)	Depth (feet)
Light gray, some green silt like material.	6	334
right gray limey silt like material becoming harder.	16.5	350.5
Black and tan fossilized dolomitic limestone.	5.5	356.5
Hard grayish tan.	3.5	359.5
Mard grayish limestone thinly layered and streaks of green.	10.5	370
lard tan and green limestone.	4	374
ery soft gray limestone (considerable core loss)	19	393
ard dark gray limestone (shells).	6	399
oft tan dolomitic limestone.	5	404
ray and harder limestone.	6	410
oft tan and gray limestone (some core loss)	10	420
ard gray limestone.	2	422

### 92 Florida Division of Forestry (Bristol Tower) (W-5424)

Location, lat. 30°25'17", long. 84°54'28", in SW4NE4SW4, sec. 2, T. 1 S., R. 7 W., at Bristol Tower, south of State Highway 20 about 5 mi east of Bristol (Bristol); Driller, Terry-Rosa Hardware Co.; Date drilled, Aug. 1960; Drilling method, cable tool; Depth, 308 ft; Casing, 4-in to 201 ft, open hole 201 ft to 308 ft; Aquifer, Floridan; Land-surface altitude, 170.1 ft; Water level, 46.96 ft below land surface on Dec. 16, 1974; Chloride concentration, 1.1 mg/L on Mar. 18, 1975. Logged by Dan Harmon, Northwest Florida Water Management District.

Material	Thickness (feet)	Depth (feet)
Sand, light brown to moderate brown, 33% porosity—intragranular, size—fine, range—very fine to fine, subangular to rounded, high sphericity, non-indurated; 1% iron stain; 1% heavy minerals; plant remains.	20	20
Sand, moderate brown, 33% porosity—intragranular, size—fine, range—very fine to fine, subangular rounded, high sphericity, non-indurated; 1% iron stain, 1% heavy minerals; plant remains.	50	70
Sand, moderate brown, 33% porosityintragranular, sizemedium, rangefine to medium, angular to subangular, low sphericity, non-indurated; 1% iron stain; 1% heavy minerals; plant remains.	12	82
Sand, dark gray to black, 25% porosity—intragranular and intergranular, size—fine, range— very fine to fine, angular to subangular, low sphericity, non-indurated, clay cement; 10% clay; 1% mica; 1% heavy minerals; plant remains.	10	92
Sand, dark gray to black, 25% porosity—intragranular and intergranular, size—fine, range—very fine fine, angular to subangular, low sphericity, non-indurated, clay cement, micrite cement; 5% clay; 10% phosphatic sand; 5% limestone; brachiopod, mollusks.		100
Limestone, dark gray to black, 15% porosity— intergranular and intragranular, grain type— micrite, skeletal, skeletal cast; 20% allochems, size—microscopic, range—microscopic to very fine, poor induration, micrite cement; 15% quartz; 10% phosphatic sand; 1% iron stain; brachiopod, mollusks.	10	110

Material	Thickness (feet)	Depth (feet)
Limestone, transparent to black, 15% porosity— intragranular and intergranular, grain type— micrite, skeletal and skeletal cast, 20% allochems, size—microscopic, range—microscopic, to very fine, poor induration, micrite cement; 15% quartz, 10% phosphatic sand, 1% iron stain; brachiopod, mollusk; poor sample.	18	128
Limestone, transparent to white, 15% porosity— intragranular and intergranular, grain type— micrite, skeletal, skeletal cast, 20% allochems, size—microscopic, range—microscopic to very fin poor induration, micrite cement; 15% quartz, 10% phosphatic sand, 1% iron stain; brachiopod, mollusks; poor sample.	17 e,	145
Sample missing.	7	152
Limestone, white to light gray, 5% porosity— intragranular and intergranular, grain type— micrite, skeletal, skeletal cast, 20% allochems, size—cryptoscopic, range—crypto to microscopic, good induration, micrite cement, massive; 1% iron stain; 1% pyrite, chalky, brachiopod, mollusks, foraminifera.	10	162
Limestone, white, 5% porosity—intragranular, intergranular and intercrystalline, grain type—micrite, skeletal, skeletal cast, 20% allochems, size—cryptoscopic, range—cryptoscopic to micros good induration, micrite cement, massive; 1% iron stain, chalky, mollusks, foraminifera, bryozoa.		208
Limestone, white to light gray, 10% porosity— intragranular to intergranular, and inter— crystalline, grain type—micrite, crystal, skeletal, 40% allochems, size—cryptoscopic, range—cryptoscopic to microscopic, good induration, micrite cement, silica cement, massive; 1% iron stain, moderate recrystallizatio bryozoa, foraminifera, mollusks.	22 n,	230

Material	Thickness (feet)	Depth (feet)
Limestone, white to light gray, 5% porosity— pin point vugs and intercrystalline, grain type—micrite, crystalline, skeletal, 60% allochems, size—cryptoscopic, range— cryptoscopic to microscopic, good induration, micrite cement, silica cement, massive; 1% iron stain; high recrystallization; bryozoa, foraminifera, mollusks.	27	257
Limestone, white, 5% porositypin point vugs and intercrystalline, grain typemicrite, crystalling skeletal, 40% allochems, sizecryptoscopic, rangecryptoscopic to microscopic, good induration, micrite cement, silica cement, massive; 1% iron stain, chalky, bryozoa, mollusks.	13 e,	270
Limestone, white to light brown, 5% porosity— intercrystalline, grain type—micrite, crystalling skeletal, 30% allochems, size—cryptoscopic, rang cryptoscopic to microscopic, good induration, micrite cement, silica cement, clay cement, 1% iron stain, 5% clay, 5% quartz, moderate recrystallization, mollusks, bryozoa, poor sample	e	284
Limestone, white to light brown, 5% porosity— intercrystalline and pin point vugs, grain type— crystalline, 90% allochems, size—microscopic, range—microscopic to very fine, good induration, silica cement, massive, 1% iron stain, high recrystallization, no fossil.		308

#### 93 R.T. Adams (W-1771)

Location, lat. 30°25'20", long. 84°52'30", in center NE\(^1\)SW\(^1\), sec. 6, T. 1 S., R. 6 W., north side of State Highway 20 about 6 miles east of Bristol (Hosford); Driller, R. T. Adams Drilling Co.; Date drilled, Aug. 1, 1948; Drilling method, hydraulic rotary; Depth, 4,266 ft; Casing, 14-in to 177 ft, open hole 177 ft to 4,266 ft; Land-surface altitude, about 176 ft. Logged by F. San Juan, Jr., 0-460 ft; and Chih Shan Chen, 460-2,075 ft, Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, grayish brown to light brownish gray, 25% porosity-intergranular, size-medium, range-coarse to fine, subangular to rounded, medium sphericity, non-indurated; clay; iron stain, no fossil.	10	10
Sand, dark yellowish brown to light brownish gray, 25% porosity-intergranular, size-medium, range- coarse to fine, subangular to rounded, medium sphericity, non-indurated; clay, iron stain, no fossil.	10	20
Sand, grayish orangish pink, 25% porosity— intergranular, size-medium, range-coarse to fine, subangular to rounded, medium sphericity, non-indurated; clay; heavy minerals, iron stain, no fossil.	10	30
Sand, grayish brown, 25% porosity-intergranular, size-medium, range-coarse to fine, subangular, medium sphericity; clay, heavy minerals, iron stain.	10	40
Sand, grayish orangish pink, 25% porosity-intergranula size-medium, range-coarse to fine, subangular, medium sphericity, non-indurated; clay, heavy minerals, iron stain, no fossil.	r, 10	50
Sand, grayish brown, 25% porosity-intergranular, size-medium, range-coarse to fine, subangular, medium, sphericity, non-indurated; clay, heavy minerals, iron stain, no fossil.	20	70

Material	Thickness (feet)	Depth (feet)
Sand, very light orange to grayish orange, size-medium, range-coarse to fine, subangular to rounded, medium sphericity, non-indurated, iron stain, heavy minerals, no fossil.	10	80
Sand, very light orange to grayish orange, 25% porosity-intergranular, size-medium, range-coarse to very fine, subangular to rounded, medium sphericity, non-indurated, iron stain, heavy minerals, micrite, phosphatic sands, no fossil; sand became finer from coarse-medium to low medium.	20	100
Sand, grayish orangish pink to grayish orange, 25% porosity-intergranular, size-medium, range-coarse to very fine, subangular to rounded, medium sphericity, non-indurated, iron stain, heavy minerals; micrite; phosphatic sands, no fossil.	20	120
Sand, very light orange to grayish orangish pink, 25% porosity-intergranular, size-medium, range-coarse to very fine, subangular to rounded, medium sphericity, non-indurated; 4% micrite; heavy minerals; iron stain.	10	130
Sand, very light orange to grayish orangish pink, 30% porosity-intergranular, size-coarse, range-very coarse to fine, subangular to rounded, medium sphericity, non-indurated; 4% micrite; heavy minerals; iron stain.	20	150
Sand, grayish brown to grayish orangish pink, 30% porosity-intergranular, size-coarse, range-very coarse to fine, subangular to rounded, medium sphericity, non-indurated; 4% micrite; heavy minerals, iron stain, phosphatic sand.	10	160
Sand, grayish brown to grayish orangish pink, 30% porosity-intergranular, size-coarse, range-fine to very coarse, subangular to rounded, medium sphericity, non-indurated; 2% limestone; clay; phosphatic sands, fossil fragments, mollusks.	10	170

Material	Thickness (feet)	Depth (feet)
Sand, grayish brown to grayish orangish pink, 30% porosity-intergranular, size-coarse, range- very coarse to fine, subangular, medium sphericit non-indurated; 15% limestone; clay; phosphatic sands, fossil fragments, mollusks, coral.	20 	190
Sand, grayish brown to grayish orangish pink, 30% porosity-intergranular, size-coarse, range-very coarse to fine, subangular, medium sphericity, non-indurated; 10% limestone; clay; heavy minerals; phosphatic sands; fossil fragments-mollusks.	10	200
As above including foraminifera.	10	210
Sand, grayish orangish pink to yellowish gray, 35% porosity-intergranular, size-medium, range-very coarse to very fine, subangular, medium sphericity, non-indurated; 3% limestone; clay; heavy minerals; phosphatic sands, fossil fragments, mollusks, foraminifera; appearance of forams (Operculinoides), sand became finer to medium starting at 220 ft.	10	220
Sand, very light orange to yellowish gray, 35% porosity-intergranular, size-medium, range-very coarse to very fine, subangular, medium sphericit non-indurated; 3% limestone; clay; heavy minerals phosphatic sands, fossil fragments, mollusks, foraminifera.		230
Limestone, very light gray to moderate light gray, 15% porosity-intergranular and vugular, possibility permeable, grain type-micrite, skeletal, 60% allochems, range-granule to cryptoscopic, poor induration, micrite cement, clay cement; 40% sand(quartz); 5% clay, fossil fragments, mollusks.	10	240
Limestone, very light orange to grayish brown, 15% porosity-intergranular and vugular, possibly permeable, grain type-micritic, skeletal, 60% allochems, range-granule to cryptoscopic, poor induration, micrite cement, clay cement, 40% sand(quartz), 5% clay, fossil fragments, mollusks, foraminifera.	10	250

Material	Thickness (feet)	Depth (feet)
Limestone, very light orange to light gray, 10% porosity-intergranular and vugular, possibly permeable, grain type-micrite, skeletal, 20% allochems, range-granule to cryptoscopic, poor induration, micrite cement, clay cement; 5% sand(quartz); clay; heavy minerals; fossil fragments, mollusks; mollusks shell fragments around 20% of rock; micrite pinkish to grayish.	10	260
Limestone, very light orange to light gray, 10% porosity-intergranular and vugular, possibly permeable, grain type-micrite, skeletal, 20% allochems, range-granule to cryptoscopic, poor induration, micrite cement, clay cement, 5% sand(quartz); clay; heavy minerals; fossil fragments, mollusks.	20	280
Limestone, very light orange to grayish orange, 5% porosity-vugular and intergranular, grain type-micrite, skeletal, crystalline, 10% allochems, size-microscopic, moderate induration, micrite cement; 10% limonite, 5% sand, (quartz), iron stain; fossil fragments, mollusks.	10	290
Limestone, very light orange to moderate gray, 5% porosity-vugular and intergranular, grain type-micrite, skeletal, 5% allochems, size- microscopic, moderate induration, micrite cement, dolomite cement; 35% dolomite; 5% sand(quartz); phosphatic sands; iron stains; fossil fragments, mollusks.	20	310
Limestone, very light orange to moderate light gray, 5% porosity-vugular and intergranular, grain type-micrite, skeletal, 15% allochems, moderate induration, micrite cement, 20% sand(quartz), 5% limonite, phosphatic sands; clay, fossil fragments, mollusks, foraminifera. Start of fine to medium grained sand, probably contamination since not much sand (5%) only Sorites sp. noted in limestone fragments.	10	320

Material	Thickness (feet)	Depth (feet)
Limestone, very light orange to moderate light gray, 5% porosity-vugular and intergranular, grain type-micrite, skeletal, 15% allochems, moderate induration, micrite cement; 20% sand(quartz); 15% dolomite; phosphatic sands; clay, sucrosic.	10	330
Limestone, very light orange to moderate light gray, 7% porosity-vugular and intergranular, grain type-micrite, skeletal, 5% allochems, moderate induration, micrite cement; 25% sand(quartz), 30% dolomite; clay; phosphatic sand; sucrosic, fossil fragments, mollusks.	10	340
Limestone, white to light gray, 7% porosity-vugular and intergranular, grain type-micrite, skeletal, 2% allochems, size-cryptoscopic, moderate induration, micrite cement; 25% sand (quartz), 30% dolomite; micrite; phosphatic sands; sucrosic, fossil fragments, mollusks, foraminifera.	10	350
Polostone, very light gray to moderate gray, 8% porosity-vugular and intergranular, possibly permeable, 10-50% altered, subhedral, size-very fine, range-fine to cryptoscopic, good induration, dolomite cement, micrite cement; 30% limestone; 2% sand (quartz), iron stain, sucrosic, fossil fragments, mollusks, foraminifera; a few miliolids noted, white micrite and sucrosic dolomite, orange to brown, finer grained dolomite.	10	360
Polostone, very light gray to moderate gray, 8% porosity-vugular and intergranular, possible permeable, 50-90% altered, subhedral, size-very fine, range-fine to cryptoscopic, good induration, dolomite cement, micrite cement; 10% limestone; sand (quartz); clay; sucrosic, fossil fragments, mollusks.	20	380

Material	Thickness (feet)	Depth (feet)
Limestone, very light orange to light gray, 10% porosity-vugular and intergranular, possibly permeable, grain type-micrite, 2% allochems, size-cryptoscopic, moderate induration, micrite cement, dolomite cement, clay cement, 25% dolomite, 15% sand (quartz); 5% clay; micrite; fossil fragments, mollusks.	10	390
Limestone, very light gray to light gray, 5% porosity- vugular and intergranular, grain type-micrite, 2% allochems; size-microscopic, range-very fine to cryptoscopic, moderate induration, micrite cement, dolomite cement, clay cement; 10% sand (quartz), 5% dolomite; clay; micrite, sucrosic, fossil fragments, mollusks, foraminifera.	20	410
Limestone, very light gray, 8% porosity-vugular, intergranular and intercrystalline, grain type micrite, crystalline, size-microscopic, range-very fine to cryptoscopic, moderate induration, micrite cement, dolomite cement; 5% sand (quartz) dolomite; clay; pyrite, fossil fragments, mollusk foraminifera, echinoid.		420
Limestone, very light gray, 8% porosity-vugular and intercrystalline, low permeability, grain type-micrite, crystalline, size-microscopic, range-very fine to cryptoscopic, moderate induration, micrite cement, dolomite cement; 10% dolomite, 5% sand (quartz), sucrosic, fossil fragments, mollusks, foraminifera, echinoid.	10	430
Dolostone, very light gray, 8% porosity-vugular and intercrystalline, low permeability, 0-10% altered, subhedral, size-microscopic, range-5% sand(quartz), sucrosic, fossil fragments, mollusks.	10	440
Limestone, very light gray, 10% porosity-vugular, intergranular and intercrystalline, grain type-micrite, crystal, size-microscopic, range-very fine to cryptoscopic, moderate induration, micrite cement, dolomite cement; 35% dolomite; 2% sand (quartz), sucrosic, fossiliferous, mollusks, coral, echinoid.	10	450

Material	Thickness (feet)	Depth (feet)
Limestone, very light gray to light gray, 10% porosity-vugular, intergranular, intercrystalline, grain type-micrite, crystalline, size-microscopic, range-very fine to cryptoscopi moderate induration, micrite cement, dolomite cement; 45% dolomite, 2% sand (quartz), sucrosic fossil fragments, mollusks, coral, echinoid.		460
Dolomite, very fine crystalline, rather porous, dark brown.	50	510
Fossiliferous limestone, micro crystalline, rather porous, light brown, with fossils as bryozoa, forams.	40	550
Fossiliferous limestone, microcrystalline, light gray-brown to brown, fragmental and rather well cemented with fossils as large forams, echnoids, bryozoa, etc.	110	660
Fossiliferous limestone, finely fragmental, some large forams, slightly porous, light brown to brown, and large forams rather common.	105	765
Fossiliferous (fragments) limestone, finely fragmental, rather well cemented and slightly porous, brown, well preserved forams rare.  The limestone is almost composed entirely of fine fossil fragments.	45	810
As above, with few glauconite pellets and carbonaceous material.	190	1000
Calcite (20%) dolomite, very fine crystalline, rather dense.	10	1010
Fossiliferous (fragments of limestone as above.)	80	1090
Limestone, very finely crystallized fragmental, rather dense, gray-brown with carbonaceous material.	60	1150
Limestone, rather dense, very finely fragmental, light gray-brown.	132	1282

Number 93 (Continued)

Material	Thickness (feet)	Depth (feet)
Fossiliferous limestone, good biosparite, finely fragmental and rather well cemented, pure and clean, light brown to brown, microcrystalline. The limestone is composed entirely of fine fossil fragments and very slightly glauconitic.	98	1380
ossiliferous limestone as above, slightly glauconitic and with few dark gray-brown chert fragments.	2 10	1390
Cherty (10%) fossiliferous limestone, biosparitic, finely fragmental, microcrystalline, rather well cemented by clear calcite with dark gray brown chert fragments.	80	1470
herty (10%) fossiliferous limestone as above, slightly glauconitic.	60	1530
lauconite, sandy, (20%) of quartz (15%) and glauconite (5%) fossiliferous limestone, finely fragmental, microcrystalline, biosparite, rather clean, light gray brown.	120	1650
lighly glauconitic (glauconitized forams) (20%) and sandy (10%) fossiliferous limestone, finely fragmental, microcrystalline, very common to abundant and no glauconite pellets.	15	1665
lauconitic and sandy (20% of quartz sands)(15%) and glauconite (5%) fossiliferous limestone, finely fragmental with glauconitized forams and pellets.	160	1825
Glauconitic, medium to coarse-grained sandstone, gray-brown, slightly calcareous, with pale green quartz grains.	250	2075

### 94 Florida Bureau of Geology (Harvey's Creek) Core Hole (W-6999)

Location, lat. 30°25'23", long. 84°34'10", in center NW\set\_SE\sqrt{2}, sec. 6, T. 1 S., R. 3 W., near Harvey's Landing on south side of Lake Talquin about 13 mi west of Tallahassee (Lake Talquin, S.E.); Driller, Florida Bureau of Geology; Date drilled, Feb. 1965; Drilling method, bored; Depth, 204 ft; Aquifer, Floridan; Land-surface altitude, about 115 ft. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, loose, grayish orange, very fine to very coarse, mostly medium, few granules, grades downward into material below.	10	10
Sand, quartz, light brown very fine to coarse, mostly coarse to very coarse in very fine to silty matrix, slightly cemented.	1	11
Sand, quartz, grayish orange pink fine to very coarse, mostly coarse to very coarse in silty to very fine matrix, few granules, some kaolinitic zones, slightly to mediumly cemented, grades downward into clay below.	10	21
Clay, top 2 inches light brown grading rapidly to grayish black, slightly mediumly sandy (very fine to fine), slightly micaceous, scattered, very finely broken macroshell fragments. At base grades very abruptly into sandy shell hash.	10	31
Sand, quartz, grayish green, very fine to medium with calcareous zones and blebs, has clay matrix.  Becomes more calcareous towards base.	9	40
Calcarenite, yellowish gray, hard, abundantly sandy, macro and micro fossil, heavy minerals and phosphoritic, partially recrystallized, slightly dolomitized, moldic porosity.	6	46
Same, grading into sandy (very fine), abundantly clayey calcilutite, light pale orange with seams and blebs of very light green clay.	4	50
Clay, silty, sandy, calcareous, light greenish gray clay.	9	59

Material	Thickness (feet)	Depth (feet)
Clay, as above, with seams of clay being less sandy and less calcareous.	6	65
As above, becoming more sandy but containing blebs of calcilutite material.	9	74
No sample.	4	78
Calcilutite, light greenish gray, sandy (fine) with some coarse to very coarse grains, phosphoritic, medium hardness after exposure to air (soft when cored), slightly dolomitic.	1	79
As above, micromoldic.	1	80
Calcilutitic, yellowish gray, abundantly sandy, fine with a few coarse grains, phosphoritic, fossiliferous, contains blebs of bluish green, waxy, sandy clay.	3	83
Sand, light bluish gray, silty to very fine with some coarse, becoming clayey and calcareous downward.	2	85
Silt, sandy and clayey, very slightly calcareous, amount of coarse sand increasing.	2	87
Silt, as above, coarse sand increasing and more calcareous.	3	90
Top 3 inches very coarse, quartz sand in blue clay matrix, grading downward into chalky calcilutite, moderately sandy (coarse) with blebs and zones of bluish green clay.	8	98
As above, becoming slightly less sandy (coarse) some rounded fragments of indurated, sandy, yellow orange calcilutite.	3	101
As above, less coarse sand.	3	104

Material	Thickness (feet)	Depth (feet)
Calcilutite, yellow orange, hard, sandy, macrofossiliferous, moldic porosity.	6	110
No sample.	2	112
Calcarenite, very light pale yellow orange, moderately sandy (medium), hard, very poor porosity.	3	115
No sample.	3	118
Calcarenite, yellow orange, abundantly sandy (medium to coarse), hard.	6	124
No sample.	11	135
Sand, pale olive, very fine to fine with a few coarse grains, with grayish olive clay blebs and some clay matrix, bottom inch is a very calcareous sandy (fine) clay.	2	137
Clay, as at base 135-137', becoming more calcareous.	1.5	138.5
Calcilutite, very pale orange, clayey, sandy, blebs and laminae of light olive green clay.	3.5	142
Calcilutite, very pale orange, abundant sand (very fine to fine).	2	144
Sand, quartz, very pale orange, very calcareous, very fine to fine with some grains up to very coarse.	2	146
Sand, quartz, pale greenish yellow, slightly calcareous, with clay matrix and blebs, very calcareous at base and macrofossiliferous (oysters).	6	152
Oyster fragments.	2	154

Number 94 (Continued)

Material	Thickness (feet)	Depth (feet)
Sand, quartz, pale yellow orange, calcareous, macrofossiliferous, one fragment of very coarse sand semented with calcareous material.	2	156
No sample.	2	158
Calcilutite, very pale orange, chalky, soft, slightly sandy (fine), macroshell fragments.	3	161
Shell fragments as above, calcarenite, yellow orange, slightly sandy, more indurated than calcilutite above, partially recrystallized.	3	164
No sample.	6	170
Silt, light olive, clayey, sandy, slightly calcareous and fragments of oyster shells.	4	174
Silt, as above, becoming much more calcareous.	10	184
No sample.	16	200
Calcilutite, very pale orange, sandy (very coarse) clayey, chalky.	4	204

#### 95 L.D. Singleton (W-4803)

Location, lat. 30°25'26", long. 84°21'20", in SW4SE4NW4, sec. 5. T. 1 S., R. 1 W., west of State Highway 263 and about 1 mi west of Tallahassee (Tallahassee); Driller, Barnes Well Drilling; Date drilled, Oct. 1958; Drilling method, cable tool; Depth, 220 ft; Casing, 6-in to 110 ft, open hole 110 ft to 220 ft; Aquifer, Floridan; Land-surface altitude, 40.9 ft; Water level, 16 ft below land surface on Oct. 20, 1958. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, grayish orange, quartz, unsorted, very fine to coarse, in waxy soft clay matrix.	20	20
Clay, light gray to grayish brown, slightly finely sandy (color due to organics).	10	30
Limestone, very pale orange, chalky to very finely crystalline, finely sandy, soft, interlaminated with milky colored waxy, sandy clay.	10	40
Limestone, very pale orange, chalky to very finely crystalline, micro-fossiliferous with fossils indistinct (Sorites sp. distinct). Iron staining on fragments.	10	50
Limestone, same.	10	60
Sand, quartz, fine to medium grained, in moderate gray brown clay matrix.	20	80
Limestone, very pale orange, chalky to very finely crystalline, micro-fossiliferous with fossils indistinct. Iron staning on some fragments.	10	90
Limestone, as above; clay, pale greenish yellow, waxy, soft.	10	100
Limestone, very light greenish gray, very soft, finely crystalline, microfossiliferous.	10	110
Dolomite, pale orange to grayish orange, very finely crystalline to very finely sucrosic, moderately hard, moldic, dense.	20	130

Number 95 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, white to very pale orange, chalky, granular, porous.	10	140
Sample contains a little of everything from 30-150'.	10	150
Dolomite and calcitic dolomite, grayish orange, very finely crystalline to finely sucrosic, dense.	70	220

#### 98 City of Bristol (W-6025)

Location, lat. 30°25'44", long. 84°58'39", in SW4NE4NW4, sec. 6, T. 1 S., R. 7 W., south of State Highway 20 in Bristol (Bristol); Driller, Rowe Drilling Co.; Date drilled, Aug. 1962; Drilling method, cable tool; Depth, 605 ft; Casing, 8-in to 410 ft, open hole 410 ft to 605 ft (originally drilled to 888 ft but filled back to 605 ft); Aquifer, Floridan; Land-surface altitude, 167.7 ft; Water level, 91.79 ft below land surface on Oct. 15, 1970; Chloride concentration, 5.0 mg/L on Dec. 19, 1974. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, loose, fine to very coarse, subangular to subrounded, coated with slight amount clay matrix, grayish orange in color.	10	10
Sand, quartz, loose, fine to very coarse, mostly coarse to very coarse, subangular to subrounded, coated with moderate reddish orange clay matrix.	10	20
Sand, quartz, loose, fine to very coarse, mostly medium to coarse, coated with grayish-orange pink clay matrix.	20	40
Sand, quartz, fine to medium, medium light gray, silty to argillaceous, micaceous.	10	50
Sand, as above; medium dark gray in color.	30	80
Calcirudite (shell hash), yellowish gray, macro-shells broken, silty to finely sandy, slightly micaceous.	10	90
Calcirudite, as above; and microfossiliferous, phosphoritic, glauconitic.	20	110
As above; more sandy.	10	120
As above; mostly sand, quartz loose, yellowish gray, fine to coarse with few very coarse, subangular to subrounded.	10	130

Material	Thickness (feet)	Depth (feet)
Sand, quartz, white, fine to coarse, subangular, loose.	25	155
As above; most medium to coarse.	15	170
No sample.	5	175
Sand, quartz, loose, medium to very coarse, some fine, subrounded.	5	180
Calcarenite, yellowish gray, sandy, firmly cemented, very microfossiliferous and poorly macrofossiliferous.	10	190
No sample.	10	200
Calcilutite, calcarenitic, yellowish gray, dense, very microfossiliferous, and slightly macrofossiliferous, partially recrystallized, dolomitic, many <u>Sorites</u> sp.	15	215
As above; calcilutitic dolomite, very pale orange, dense, slightly medium sandy.	20	235
As above, increase of sand in dolomite.	10	245
Sand, quartz, loose, medium coarse, subangular, coarse sand size, loose fragments as above.	5	250
As above; mostly calcilutitic dolomite, very pale orange, dense, slightly finely sandy, finely sucrosic, hard.	10	260
Dolomite, calcilutitic, as above.	10	270
As above, containing vesicular porosity.	60	330
As above, some fragments yellowish gray in color.	20	350
As above; calcarenite, very light gray, granular, very microfossiliferous, porous, silty, moderately soft; clay, grayish green, subwaxy, silty.	10	360

Material	Thickness (feet)	Depth (feet)
Calcarenite, as above and clay as above.	10	370
Calcarenite, as above; increase in clay.	20	390
Calcarenite, very pale orange, partially recrystallized, vesicular and interstitial porosity, moderately soft, very microfossiliferous, finely sucrosic to chalky, slightly dolomitic, fragments of light ambered colored crystalline macrofossils.	50	440
Calcarenite, partially dolomitized, yellowish gray, finely crystalline, good interstitial porosity, friable, very microfossiliferous (Rotalia byramensis).	10	450
As above, becoming pale orange in color.	10	460
As above, more finely crystalline or finely sucrosic.	40	500
Dolomite, light grayish orange, sucrosic, dense, poorly porous, many <u>Lepidocyclinas</u> and " <u>Opercs</u> ."	20	520
As above; calciruditic calcarenite, very light yellowish gray, very finely crystalline to chalky, microfossiliferous, slightly dolomitic, slightly hard, fairly porous. Many large forams and nodular masses.	85	605
Calcarenite, very pale orange, partially recrystallize slightly dolomitic, slightly finely sucrosic, microfossiliferous, many broken <u>Lepidocyclina</u> fragments, fair porosity.	ed, 10	615
As above, texture little coarser.	15	630
As above, sample almost completely <u>Lepidocyclina</u> fragments.	30	660
As above, fine grains (rhombs) of dolomite in matrix; fragments of ambered colored chert, matrix little darker than above because of dolomite rhombs.	30	690

Number 98 (Continued)

Material	Thickness (feet)	Depth (feet)
Calcarenite, pale grayish orange, slightly dolomitic, very microfossiliferous, fewer <u>Lepidocyclinas</u> and increase in "Opercs?", glauconitic, finely crystalline to finely sucrosic, fiar porosity, fairly soft (friable) granular.	15	705
as above, an occasional grain of amber-brown.	10	715
as above, phosphoritic type material.	30	745
as above, fewer larger microfossils.	30	775
as above, porosity good.	65	840
To samples.	48	888

99 Liberty County School Board (Liberty County High School) (W-3501)

Location, lat. 30°25'50", long. 84°58'33", in NW4NE4NW4, sec. 6, T. 1 S., R. 7 W., south of State Highway 12 in Bristol (Bristol); Driller, L.M. Gray; Date drilled, Apr. 1955; Drilling method, cable tool; Depth, 301 ft; Casing, 6-in to 218 ft, open hole 218 ft to 301 ft; Aquifer, Floridan; Land-surface altitude, 166.7 ft. Logged by Dan Harmon, Northwest Florida Water Management District.

Material	Thickness (feet)	Depth (feet)
Sand, white to light brown, 33% porosity- intragranular, size-medium, range-fine to medium, subangular to rounded, medium sphericity, non-indurated; 1% iron stain; 1% limonite; 1% heavy minerals; no fossil.	26	26
Sand, white to light brown, 33% porosity— intragranular, size—medium, range—fine to medium, subangular to rounded, medium sphericity, non-indurated; 1% iron stain; 1% limonite; 1% heavy minerals, no fossil, plant remains.	20	46
Sand, light gray to moderate gray, 30% porosity- intragranular, size-fine, range-fine to medium, subangular to rounded, high sphericity, non-indurated; 5% limestone; 1% heavy minerals; 2% glauconite; calcareous, sucrosic; bryozoa, mollusks.	30	76
Shell bed, light grayish green to light gray, 30% porosity-intragranular, non-indurated, brecciated; 1% phosphatic sand; 1% limonite; mollusks, brachiopod, foraminifera.	30	106
Shell bed, light grayish green to light gray, 30% porosity-intragranular, non-indurated, brecciated; 1% phosphatic sand; 1% limonite; mollusks, brachiopod, foraminifera.	20	126

Material	Thickness (feet)	Depth (feet)
Shell bed, light grayish green to light gray, 30% porosity-intragranular, non-indurated, silica cement, brecciated; 1% phosphatic sand; 1% limonite; 2% quartz; mollusks, brachiopod, foraminifera.	20	146
Sand, transparent to light gray, 33% porosity- intragranular, size-coarse, range-medium to coarse, subangular to rounded, medium sphericity, non-indurated, brecciated; 1% phosphatic sand; 5% limestone; poor sample; mollusks, brachiopod, foraminifera.	34	180
Limestone, moderate light gray to moderate gray, 15% porosity-intragranular, pin point vugs, intercrystalline, grain type-micrite, skeletal, skeletal cast, 20% allochems, size-microscopic, range-microscopic to cryptoscopic, moderate induration, silica cement; 30% quartz; low recrystallization, mollusks, brachiopod.	4	184
Sand, transparent to light gray, 33% porosity- intragranular, size-fine, range-fine to medium, subangular to rounded, high sphericity, non-indurated, brecciated; 10% limestone; 1% phosphatic sand; 1% glauconite; poor sample; mollusks, brachiopod.	16	200
Shell bed, transparent to light gray, 30% porosity-intragranular, non-indurated, brecciated; 25% quartz; 1% phosphatic sand; poor sample; mollusks; brachiopod, foraminifera.	6	206
Limestone, light gray to white, 10% porosity- intragranular, pin point vugs, inter- crystalline, grain type- micrite, skeletal, skeletal cast, 70% allochems, size- microscopic, range-cryptoscopic to microscopic, good induration, micrite cement, silica cement, massive; 2% quartz; mollusks, brachiopods, foraminifera.	6	212

Material	Thickness (feet)	Depth (feet)
Limestone, light gray to white, 10% porosity- intragranular, pin point vugs, inter- crystalline, grain type - micrite, skeletal, skeletal cast, 70% allochems, size-microscopic, range-cryptoscopic to microscopic, good induration, micrite cement, silica cement, massive; 2% quartz; 1% iron stain; mollusks, brachiopod, foraminifera.	19	231
Limestone, light gray to white, 10% porosity- intragranular, pin point vugs, intercrystal- line, grain type-micrite, skeletal, skeletal cast, 60% allochems, size-microscopic, range-cryptoscopic to microscopic, good induration, micritic cement, silica cement, massive; 1% iron stain; mollusks, brachiopod, foraminifera.	10	241
Limestone, moderate dark gray to light gray, 5% porosity-pin point vugs, intercrystalline, grain type-micrite, crystalline, skeletal, 60% allochems, size-microscopic, range- cryptoscopic to microscopic, good induration, micrite cement, silica cement, massive; 1% iron stain, moderate recrystallization, mollusks, brachiopod, foraminifera.	10	251
Limestone, light gray to light brownish gray, 5% porosity-pin point vugs, intercrystalline, grain type-micrite, crystalline, skeletal, 60% allochems, size-microscopic, range- cryptoscopic to microscopic, good induration, micrite cement, silica cement, massive; 1% iron stain; high recrystallization; mollusks, brachiopod.	10	261
Limestone, light gray to light brownish gray, 5% porosity-pin point vugs, intercrystalline, grain type-micrite, crystalline, skeletal, 60% allochems, size-microscopic, range- cryptoscopic to microscopic, good induration, micrite cement, silica cement, massive; 1% iron stain; high recrystallization, mollusks, brachiopod, foraminifera.	20	281

Material	Thickness (feet)	Depth (feet)
Limestone, light gray to light brown gray, 5% porosity-pin point vugs, intercrystalline, grain type-micrite, crystalline, skeletal, 60% allochems, size-microscopic, range- cryptoscopic to microscopic, good induration, micrite cement, silica cement, massive; 1% iron stain; 1% pyrite; high recrystallization; mollusks, brachiopod, foraminifera.	20	301

#### 101 Talquin Electric Cooperative, Incorporated (W-10244)

Location, lat. 30°26'02", long. 84°23'05", in SW4SW4SE4, sec. 36, T. 1 N., R. 2 W., at Towers Subdivision about 3 mi west of Tallahassee (Midway);

Driller Rowe Drilling Co.; Date drilled, June 1969; Drilling method, hydraulic rotary; Depth, 345 ft; Casing, 6-in to 154 ft, open hole 154 ft to 345 ft;

Aquifer, Floridan; Land-surface altitude, about 175 ft; Water level, 154.23 ft below land surface on Mar. 25, 1976; Specific capacity, 10 (gal/min)/ft;

Chloride concentration, 9.0 mg/L on Mar. 25, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, medium to coarse, clear to frosted to very pale orange, argillaceous, angular to sub-rounded.	20	20
Sand, as above except phosphoritic.	10	30
Sand, as above, except medium to very coarse.	20	50
Sand, fine to medium, clear to frosted, angular to subangular, (65% sand); limestone, very light gray, micritic, sandy, moderately hard, low porosity, phosphoritic, (30% limestone); limonite.	10	60
Clay, yellowish gray, slightly sandy.	10	70
Limestone, white, micritic, very sandy, moderately hard, moderate porosity.	10	80
Clay, yellowish gray, soft, calcareous, very sandy, trace of limestone, as above.	10	90
Sand, fine to medium, angular to subrounded, clear to frosted, (50% sand); clay, as above; limonite.	10	100
Clay, as above, 45%; limestone, white, micritic, very sandy, moderate porosityintergranular, moderately hard.	10	110
Limestone, as above.	20	130
Limestone, as above, except more porousmoldic; trace of clay, greenish gray.	30	160

Material	Thickness (feet)	Depth (feet)
Limestone, yellowish gray, crystalline, sandy, approaching sucrosic, moderate porosity—moldic, very hard; trace of clay, light greenish gray; few shell casts near bottom of interval.	40	200
Clay, yellowish gray, calcareous, sandy, (50% clay); limestone, as above.	10	210
Limestone, yellowish gray, micritic, moderately hard, moderate porosity; limestone becoming sandy downward.	20	230
Clay, white, calcareous, soft (95% clay); limestone, as above.	10	240
Limestone, white, crystalline to micritic, very hard, moderate porosity, some fragments sandy.	20	260
Clay, light greenish gray, dense, (95% clay); limestone, as above.	10	270
Limestone, very light gray, crystalline, slightly sandy, approaching sucrosic, moderate porosity—moldic, very hard, (90% limestone); clay, as above.	10	280
Clay, light olive brown, dense, micaeous, calcareous (85% clay); limestone, as above.	10	290
Dolomite, light olive gray to olive gray, crystalline, very hard, low porosity—intercrystalline. Porosity becoming moldic and increasing downward; few shell casts and molds.	40	330
Limestone, white, crystalline, biogenic, sucrosic, low porosity, foraminifera Operculinoides sp. (?), bryozoa stems; dolomite light olive gray, as above, (5% dolomite); pyrite.	15	345

#### 102 City of Bristol

Location, lat. 30°26'02", long. 84°58'57", in NW4SW4SW4, sec. 31, T. 1 N., R. 7 W., about 0.5 mi east of Apalachicola River in Bristol (Bristol);

Driller, Rowe Drilling Co.; Date drilled, Feb. 1974; Drilling method, hydraulic rotary; Depth, 320 ft; Casing, 6-in to 228 ft, open hole 228 ft to 320 ft;

Aquifer, Floridan; Land-surface altitude, about 162 ft; Water level, 115.74 ft below land surface on Mar. 13, 1975; Specific capacity, 1.2 (gal/min)/ft;

Chloride concentration, 2.7 mg/L on Aug. 10, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, clear to pale orange, fine to very coarse, subangular to subrounded, argillaceous, becoming less argillaceous downward.	20	20
Sand, clear to light brown to gray, fine to very coarse, subangular to subrounded, argillaceous; organics; mica.	30	50
Sand, clear to light yellowish brown, fine to medium clay, light yellowish brown to dark gray, micaceous; organics; becoming less micaceous downward.	50	100
Sand, clear to yellowish, fine to coarse, subangular to subrounded, argillaceous, macro-shell fragments; limestone, white to gray, micritic, phosphoritic; organics, iron oxides.	10	110
Sand, as above; except no macro-shell fragments mostly shell hash; micaceous.	30	140
Sand, clear to white, fine to very coarse, subangular to subrounded; clay, white, micaceous, calcareous; phosphorite; clay content increasing downward and becoming medium gray.	20	160
Marl, white, clayey, soft calcareous; macro- shell fragments gastropods, pelecypods; sand, fine to coarse, subangular to subrounded, clear to white; limestone, gray, micritic, moderate porosity medium hard; dolomite, light brown, crystalline, low porosity, very hard; mica.	30	190

Material	Thickness (feet)	Depth (feet)
Limestone, gray, micritic, moderately porous, medium hard, microfossiliferous; few macroshell fragments; dolomite, cream, crystalline, low porosity.	30	220
Limestone, as above, less shell fragments.	10	230
Limestone, gray to cream, micritic, medium hard, low to moderate porosity, dolomitic, microfossiliferous, macro-shell fragments.	10	240
Limestone, light gray, calcarenitic, micritic, very hard, dolomitic; shell fragments.	10	250
Limestone, as above except lighter color.	30	280
Dolomite, cream to light gray, crystalline, low to moderate porosity, very hard, moderate alteration.	10	290
Limestone, white, micritic, soft, chalky, low porosity.	10	300
Dolomite, as 280-290 ft interval except cream to light brown.	20	320

TABLE 15.--Lithologic logs of selected wells and core hole--Continued

#### 105 Talquin Electric Cooperative, Incorporated (W-8793)

Location, lat. 30°26'16", long. 84°24'24", in SW4NE4SW4, sec. 35, T. 1 N., R. 2 W., at Ponderosa Trailer Park, 0.6 mi south of State Highway 20 and about 3 mi west of Tallahassee (Midway); Driller, Rowe Drilling Co.; Date drilled, June 1969; Drilling method, hydraulic rotary; Depth, 347 ft; Casing, 6-in to 171 ft, open hole 171 ft to 347 ft; Aquifer, Floridan; Land-surface altitude, about 135 ft; Water level, 114.78 ft below land surface on Mar. 25, 1976; Specific capacity, 150 (gal/min)/ft; Chloride concentration, 7.0 mg/L on July 9, 1976. Logged by F. San Juan, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, very light orange to grayish orange, sizemedium, rangecoarse to fine, subangular to rounded, medium sphericity, non-indurated; phosphatic sand; no fossil.	10	10
Sand, light grayish brown to grayish brown, sizemedium, rangevery coarse to fine, subangular to rounded, medium sphericity, non-indurated; phosphatic sand; no fossil.	10	20
Clay, brownish gray to grayish brown, 5% porosity fracture, vugular, poor induration, clay cement; 5% sand (quartz); no fossil.	10	30
Clay, dark yellowish brown to moderate brown, 3% porosityfracture, vugular, poor induration, clay cement; 10% sand (quartz); phosphatic sand; vertebrate.	10	40
Clay, brownish gray, 5% porosityintergranular, fracture, poor induration, clay cement; 12% sand (quartz); iron stain no fossil.	10	50
Limestone, white to brownish gray, 5% porosity— intergranular, vugular, fracture, grain type—micrite, crystalline, biogenic, moderate induration; 25% sand (quartz); clay; phosphatic sand; fossil fragments, mollusks.	10	60

Material	Thickness (feet)	Depth (feet)
Limestone, white to brownish gray, 5% porosity— intergranular, vugular, fracture, grain type— micrite, crystalline, biogenic, moderate induration, micrite cement; 35% sand (quartz); clay; 3% phosphatic sand; fossil fragments.	10	70
Limestone, white, 3% porosityvugular, intergranular, grain typemicrite, crystalline, sizemicroscopic, rangevery fine to cryptoscopic, moderate induration, micrite cement; 10% clay; 5% sand (quartz); pyrite; fossil fragments.	, 10	80
Limestone, white to yellowish gray, 3% porosity—vugular, intergranular, grain type—micrite, crystalline, size—microscopic, range—very fine to cryptocrystalline, moderate induration, micrite cement; 10% clay; 15% sand (quartz); pyrite; phosphatic sand; no fossils.	10	90
Limestone, white to light gray, 5% porosity— vugular, intergranular, grain type— micrite, size—microscopic, range— microscopic to cryptoscopic, moderate induration, micrite cement; 25% sand (quartz); clay; phosphatic sand; pyrite; fossil fragments, fossil molds.	10	100
Limestone, white to light gray, 8% porosity vugular, intergranular, grain type micrite, sizemicroscopic, range microscopic to cryptoscopic, moderate induration, micrite cement; 25% sand (quartz); clay; phosphatic sand; dolomite; fossil fragments.	10	110
Limestone, white to very light gray, 8%  porosityvugular, intergranular, grain typemicrite, sizemicroscopic, rangemicroscopic to cryptoscopic, moderate induration, micrite cement; 20% sand (quartz); fossil fragments.	10	120

Material	Thickness (feet)	Depth (feet)
No sample.	10	130
Limestone, white to very light gray, 8% porosityvugular, intergranular, grain typemicrite, crystalline, moderate induration, micrite cement; 20% sand (quartz); fossil fragments.	10	140
Limestone, white to very light gray, 5% porosityvugular, intergranular, grain typemicrite, crystalline, biogenic, moderate induration, micrite cement; 20% sand (quartz); clay; fossil fragments, fossil molds.	10	150
Limestone, very light gray to light gray, 8% porositygrain typemicrite, crystalline, biogenic, moderate induration, micrite cement; 20% sand (quartz), clay; fossil fragments; mollusks; fossil molds, increased fossils, mostly mollusk fragments.	10	160
Limestone, very light gray to light gray, 10% porosity—vugular, intergranular, grain type—micrite, crystalline, biogenic, moderate induration, micrite cement; 15% sand (quartz); clay; fossil fragments, mollusks.	10	170
Limestone, very light gray, to light gray, 10% porosityvugular, intergranular, grain typemicrite, crystalline, biogenic, moderate induration, micrite cement; 5% sand (quartz); fossil fragments, mollusks, foraminifera, mollusk fragments numerous, Sorites sp. noted.	20	190
Limestone, very light gray to moderate light gray, 7% porosityvugular, moldic, grain type micrite, crystalline, biogenic, moderate induration, micrite cement; 5% dolomite; sand (quartz); fossil fragments, mollusks, foraminifera.	10	200

Material	Thickness (feet)	Depth (feet)
Limestone, very light gray to light gray, 10% porosity, grain typemicrite, biogenic, moderate induration, micrite cement; 50% dolomite; sand (quartz); 5% clay.	20	220
Dolostone, white to moderate light gray, 12% porosityvugular, moldic, 10-50% altered, subhedral, sizemicroscopic, rangevery fine to cryptoscopic, good induration, dolomite cement, micrite cement; 35% limestone.	10	230
Dolostone, white to very light gray, 15% porosityvugular, moldic, 10-50% altered, subhedral, sizemicroscopic, rangevery fine to cryptoscopic, good induration, dolomite cement, micrite cement; 35% limestone.	10	240
Dolostone, light gray to moderate light gray, 10% porosityvugular, moldic, 50-90% altered, subhedral, sizemicroscopic, rangevery fine to cryptoscopic, good induration, dolomite cement, micrite cement; 25% limestone; clay; fossil fragments, mollusks, foraminifera.	10	250
Dolostone, very light gray to moderate light gray, 8% porosityvugular, moldic, intergranular, 10-50% altered, subhedral, size-microscopic, rangevery fine to cryptoscopic, good induration, dolomite cement, micrite cement; 30% limestone; clay; sand (quartz); fossil fragments, mollusks, foraminifera.	20	270
Dolostone, very light gray to light gray, 15% porositymoldic, vugular, 10-50% altered, anhedral, sizecryptoscopic, rangemicroscopic to cryptoscopic, moderate induration, dolomite cement, micrite cement; 15% limestone; sand (quartz); clay; fossil fragments, foraminifera.	10	280

Material	Thickness (feet)	Depth (feet)
Dolostone, very light gray to light gray, 12% porosity—moldic, vugular, 10-50% altered, anhedral, size—cryptoscopic, range—microscopic to cryptoscopic, moderate induration, dolomite cement, micrite cement; 15% limestone; sand (quartz); fossil fragments, foraminifera.	10	290
Dolostone, very light gray to light gray, 12% porositymoldic, vugular, 0-10% altered, sizecryptoscopic, range microscopic to cryptoscopic, fossil fragments, mollusks.	10	300
Dolostone, light gray to moderate light gray, 10% porosityvugular, moldic, intergranular, 50-90% altered, subhedral, sizemicroscopic, rangevery fine to cryptoscopic, good indur- ation, dolomite cement, micrite cement; 10% limestone; sand (quartz); clay; fossil fragments, mollusks, foraminifera.	20	320
Dolostone, moderate light gray to moderate gray, 10% porosityvugular, moldic, intergranular, 90-99% altered; 5% limestone.	20	340

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

106 Florida Bureau of Geology (Lake Talquin No. 5) Core Hole (W-7527)

Location, lat. 30°26'22", long. 84°27'26", in NW\(\frac{1}{2}\)N\(\frac{1}{2}\), sec. 32, T. 1 N., R. 2 W., southside of State Highway 20 about 6.5 miles west of Tallahassee (Midway); <a href="Driller">Driller</a>, Florida Bureau of Geology; <a href="Date drilled">Date drilled</a>, 1963; <a href="Drilling method">Drilling method</a>, bored; <a href="Depth">Depth</a>, 150 ft; <a href="Aquifer">Aquifer</a>, Floridan; <a href="Land-surface altitude">Land-surface</a> altitude, about 165 ft. <a href="Logged by C.W. Hendry">Logged by C.W. Hendry</a>, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
No samples.	6	6
Sand, quartz, brownish gray, fine to coarse with mostly coarse, subangular to subrounded, clear with a few larger grains frosted, in loosely cemented organic matrix.	1	7
Sand, quartz, grayish to dusky brown, fine to coarse with mostly medium, subangular to subrounded, clear in loosely cementing organic matrix.	4	11
Sand, quartz, brownish black, medium to coarse, subangular to subrounded in loosely cementing organic matrix.	4	15
Sand, quartz, dark yellowish brown, medium to coarse with few very coarse, subangular to subrounded, in loosely cementing clayey matrix.	6	21
Sand, quartz, dark to moderate yellowish brown, coarse to very coarse, subrounded, frosted, in very slight amount loosely cementing clay matrix.	6	27
Sand, quartz, brownish black, medium to coarse with some very coarse subangular to subrounded in loosely cementing organic matrix.	2.5	29.5
Sand, quartz, pale yellowish brown, fine to very coarse to mostly coarse to very coarse, subangular to subrounded, mostly frosted in loosely cementing clay matrix.	6.5	36

Material	Thickness (feet)	Depth (feet)
Upper inch sand, quartz, moderate brown, medium grained in clayey moderately cementing organic matrix grading downward into three or four inches of sand, quartz, pale yellow brown, medium grained, subangular to subrounded, in loosely cementing clayey matrix. Then a one inch grayish brown organic sand moderately cemented grading downward into two to three inches of sand, quartz, pale yellowish brown, fine to very coarse, subangular to subrounded frosted in clayey matrix. This grades downward getting finer grained to 3 inches of clay, pale yellowish brown, slightly silty to finely sandy, waxy. Lower inch sand, quartz, very pale orange, mostly coarse grained, subangular to subrounded, clear with slight amount clay matrix and chunks of clay, pale yellowish brown to very pale orang laminated, silty.	5 e,	41
Sand, quartz, pale grayish blue, fine gravel, subangular, clear in clay matrix.	6	47
Sand, quartz, yellowish gray, very fine to fine, containing abundant waxy clay blebs and fewer very pale orange, fine grained size clay spheres loosely cemented in clay matrix. Some mica flakes. Lower two inches clay, brownish black, slightly silty, slightly waxy.	6.5	53.5
Upper 5 inches, sand as 52-53.5'. Grading downward into clay, brownish black waxy, slightly silty. Lower inches moderate gray in color.	4.5	58
Sand, quartz, yellowish gray, very fine to montmorillonitic clay matrix, phosphoritic at base.	4.5	62.5
Sand, quartz, light gray, very fine to fine, abundant heavy minerals and phosphorite in montmorillonit clay matrix.		64.5
No recovery.	5.5	70

Material	Thickness (feet)	Depth (feet)
Upper 4 inches same as 64-64.5'. Grading downward becomes increasing calcareous. Marl, yellow gray, abundantly sandy (fine) clayey, dolomitic. Many grains of heavy minerals and phosphorite. Blebs of less calcareous sandy clay and clusters of crystalline calcite.	5	75
Upper 22 inches-clay, yellowish gray, abundantly sandy (fine), moderately soft, contains grains of heavy minderals, very slightly calcareous (Dolomite). Zones (blebs) of less sandy clay. Lower portions become very calcitic (crystalline with few medium to coarse sand grains.	5	80
Top is calcilutite as at base 75-80'. Middle of core has more clay as seams and blebs, and more coarse grains of quartz sand.	5	85
Calcilutite, as above to 88°. Calcilutite, very pale orange, hard, slight amount sand, medium to coarse, some very fine to fine dense, moldic porosity.	7	92
Calcilutite, as 88-92'.	3	95
Calcilutite, very pale orange, chalky, sand, (medium to coarse) with some very coarse, moderately soft, moldic porosity, fragments of oysters. Gets abundantly sandy (very coarse) toward base.	5	100
Calcilutite, very pale orange, chalky, abundantly sandy, (very coarse) moderately soft, clayey.	5	105
Same, few oyster fragments.	5	110
As above, but becoming less very coarse sand and more medium sand. Near base abundantly sandy (fine to medium) less coarse to very coarse sand.	5	115
Becoming mostly very fine to fine sand, some coarse calcareous and clayey with oysters. At 118' becomes olive gray silt and clay.	3	118

Material	Thickness (feet)	Depth (feet)
Calcilutite, very pale orange, partially recrystallized, very microfossiliferous moldic porosity, hard. Miliolids, Archaeis, Sorites.	12	130
Calcilutite, very pale orange, hard, dense, slightly to moderately sandy (fine to medium) partially recrystallized, few macrofossil fragments.	5	135
Calcilutite, very pale orange, abundantly fine to medium sandy, chalky fragments of macrofossils, moderate porosity.	15	150

#### 108 Girl Scouts of America (W-11986)

Location, lat. 30°26'38", long. 84°31'28", in SW4NE4NW4, sec. 34, T. 1 N., R. 3 W., at Girl Scout Camp, 0.7 mi north of State Highway 20 and 7 mi east of Bloxham (Lake Talquin); Driller, Rowe Drilling Co.; Date drilled, June 1973; Drilling method, hydraulic rotary; Depth, 290 ft; Casing, 6-in to 151 ft, open hole 151 ft to 290 ft; Aquifer, Floridan; Land-surface altitude, about 115 ft; Water level, 35.07 ft below land surface on July 15, 1975; Chloride concentration, 5.8 mg/L on July 15, 1975. Logged by F. San Juan, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, very light orange to light yellowish orange, porosity-possibly permeable, sizemedium, rangevery coarse to fine, rounded, subangular, medium sphericity, non-indurated, iron stain; clay; no fossil.	10	10
Clay, light yellowish orange to grayish orange, porosity—low permeability, non-indurated; 50% sand (quartz); 3% iron stain; no fossil.	10	20
No sample.	10	30
Limestone, white to very light gray, 5% porosity— intergranular, vugular, fracture, grain type— micrite, crystalline, size—cryptocrystalline, range—microscopic to cryptoscopic, moderate induration, micrite cement; 20% sand (quartz); mollusks.	10	40
Limestone, very light gray to light greenish yellow, 12% porosity—intergranular, vugular, fracture, grain type—micrite, crystalline, size—cryptoscopic, poor induration, micrite cement, 50% sand (quartz); iron stain; fossil fragments.	10	.50
Limestone, very light gray to light greenish gray, 7% porosity—intergranular, vugular, grain type—micrite, crystalline, size—cryptoscopic, range—microscopic to cryptoscopic, moderate induration, micrite cement; 40% sand (quartz); iron stain; fossil fragments, mollusks.	20	70

Material	Thickness (feet)	Depth (feet)
Limestone, white to very light gray, 7% porosityintergranular, vugular, grain typemicrite, crystalline, sizecryptoscopic, moderate induration, micrite cement; 35% sand (quartz); fossil fragment, mollusks, fossil mold.	20	90
Limestone, white, very light gray, 5% porosity— intergranular, vugular, grain type—micrite, crystalline, size—cryptoscopic, moderate induration, micrite cement; 15% sand(quartz); fossil fragments, mollusks, fossil molds.	20	110
Limestone, white to light gray, 5% porosity— intergranular, vugular, grain type—micrite, crystalline, size—cryptoscopic, moderate induration, micrite cement; 15% sand(quartz); iron stain; fossil fragments, mollusks, fossil molds.	10	120
Limestone, light gray to very light gray, 8% porosity- intergranular, vugular, fracture, grain type micrite, crystalline, sizecryptoscopic, moderate induration, micrite cement; 20% sand (quartz); fossil fragment, mollusks.	- 10	130
As above, except sand content is 35%.	10	140
Limestone, light gray to moderate light gray,  8% porosityintergranular, vugular, fracture, grain typemicrite, crystalline, size cryptoscopic, moderate induration, micrite cement; 35% sand(quartz); iron stain; fossil fragments, mollusks, foraminifera; one test of Sorites sp., all other fragments are mollusk.	10	150
Limestone, light gray to very light gray, 10% porosityintergranular, vugular, grain typemicrite, crystalline, sizecryptoscopic, moderate induration, micrite cement; 35% sand (quartz); iron stain; fossil fragments, mollusks, foraminifera.	10	160

Material	Thickness (feet)	Depth (feet)
Limestone, light gray to moderate light gray, 10% porosityintergranular, vugular, grain typemicrite, crystalline, sizecryptoscopic, moderate induration, micrite cement; 20% sand(quartz); fossil fragments, mollusks.	10	170
Limestone, light gray to moderate light gray, 10% porosityintergranular, vugular, grain typemicrite, crystalline, sizecryptoscopic, moderate induration, micrite cement, 10% sand (quartz); 10% dolomite; clay; iron stain; fossil fragments, shark tooth.	10	180
Limestone, light gray to moderate light gray, 7% porosityintergranular, vugular, grain typemicrite, crystalline, sizecyptoscopic, moderate induration, micrite cement; 5% sand (quartz); 20% dolomite; fossil fragments, ostracods.	10	190
Dolostone, very light gray to moderate light gray, 5% porosityintergranular, vugular, 10-50% altered, anhedral, sizemicroscopic, rangemicroscopic to cryptoscopic, moderate induration, dolomite cement, micrite cement; 10% limestone; 3% sand (quartz), iron stain, fossil fragments.	10	200
Dolostone, very light gray to moderate brown, 5% porosityintergranular, vugular, 10-50% altered, anhedral, sizemicroscopic, rangemicroscopic to cryptoscopic, good induration, dolomite cement, micrite cement; 10% limestone; 3% sand (quartz); 20% iron stain; fossil fragments.	20	220
Dolostone, moderate light gray to grayish brown,  3% porosityfracture, vugular, 50-90% altered, subhedral, sizemicroscopic, rangemicroscopic to cryptoscopic, good induration, dolomite cement; sand (quartz); iron stain; clay, fossil fragments, (almost no fossils, few recrystallized fragments, limestone, a dolostone, grayish, probably due to organic matter).	60	280

Material	Thickness (feet)	Depth (feet)
Limestone, white to very light gray, 5% porosity— fracture, vugular, grain type—micrite, crystalline, size—microscopic, range— cryptoscopic to microscopic, poor induration, micrite cement; 20% dolomite; 5% sand	10	290

#### 109 Florida Bureau of Geology (FGS) Core Hole, (W-7218)

Location, lat. 30°26'40", long. 84°17'00", in SE'4NW4NE4, sec. 35, T. 1 N., R. 1 W., at rear of Bureau building, southwest of intersection of U.S. Highway 90 and Woodward Street in Tallahassee (Tallhassee); Driller, Florida Bureau of Geology; Date drilled, Aug. 1960; Drilling method, bored; Depth, 310 ft; Casing, 6-in to 146 ft, open hole 146 ft to 310 ft; Aquifer, Floridan; Land-surface altitude, 100.5 ft; Water level, 75.38 ft below land surface on Nov. 8, 1976. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
No sample.	3	3
Silt to very fine sand, light brown, some medium-coarse grains. Slight amount of clay matrix.	2	5
No sample.	3	8
Sand, grayish orange to very pale orange, clayey, mostly fine with medium-coarse grains. Clay white to orange.	2.5	10.5
No sample.	2.0	12.5
Sand and clay as above. Clay may occur as matrix and in laminae.	1.5	14
No sample.	3	17
Clay, yellowish-gray to grayish orange, with very thin silty to very fine sand partings. Silty to finely sandy.	2	19
No sample.	4	23
Clay, pale yellowish-orange, silty, waxy.	1	24
No sample.	3.5	27.5
Clay as above.	1.5	29
No sample.	3	32

Material	Thickness (feet)	Depth (feet)
Top half: clay, as above; lower half; sand, grayish orange, very fine to fine with some medium in clay matrix.	1	33
No sample.	5	38
Sand, very pale orange to grayish orange, fine to medium, clear subrounded in slight clay matrix.	1	39
No sample.	4	43
Sand as above. Grading downward into clay seams or laminae and into dusky brown, very organic silt with sand.	1	44
No sample.	4.5	48.5
Sand, very pale to grayish orange, fine to medium in clay matrix. Laminated with clay and dusky brown silt as above.	1.5	50
No sample.	3	53
Sand, as above.	2	55
No sample.	3.5	58.5
Sand, very pale orange, fine to medium, silty.	1.5	60
No sample.	3	63
Sand, as above.	2	65
No sample.	3	68
Clay, yellowish gray, silty, waxy.	2	70
No sample.	3	73
Sand, light grayish orange, very fine to medium, silty.	2	75
No sample.	3	78

Material	Thickness (feet)	Depth (feet)
Sand, grayish orange, very fine to medium, silty and contains clay as matrix and in thin beds or laminae. Base sand is finer.	2	80
No sample.	3	83
Upper sample: clay as above with dusky brown, carbonaceous silt. Lower sample: sandy, light grayish orange, mostly medium grained.	2	85
No sample.	4	89
Sand, as above. Yellowish gray in color.	1	90
No sample.	3	93
Sand, pale greenish yellow, very fine, very silty. Much clay.	2	95
No sample.	3	98
Silt, pale greenish yellow, very clayey.	2	100
No sample.	2.5	102.5
Limestone, very soft, white to very faintly tinted green, clayey.	0.5	103
(21" recovery) Limestone, yellowish gray, moderately hard, porous, microfossiliferous, slightly dolomitic. Very slightly granular.	5	108
(4' recovery) Limestone. Same.	10	118
No sample.	20	138
(2" recovery) Cavity fill; sand and clay with small limestone frag., dark yellowish brown.	5	143
(34" recovery) Limestone, white to very light yellowish gray, chalky, non-porous, slightly hard.	5	148

Material	Thickness (feet)	Depth (feet)
(3" recovery) Limestone, as above.	3	151
(18" recovery) Limestone, as above, very pale orange in color.	7	158
(19" recovery) Limestone, as above with very slightly micro-vugular porosity and becoming very finely crystallized in part. The vugular limestone appears as cavity fill in the chalky non-porous limestone, but becoming more predominate at base.	2.5	160.5
(3" recovery) Limestone, very pale orange, very finely crystallized to chalky, partially recrystallized, microfossiliferous but fossils indistinct, porous, slightly hard.	7.5	168
(29" recovery) Limestone, very pale orange, friable, soft, very porous, very finely granular, microfossiliferous.	5	173
(30" recovery) Limestone, as above.	5	178
(9" recovery) Limestone, very pale orange to yellowish gray, finely granular, becoming harder toward base, very porous, microfossiliferous. Lep. zone at 183-184; partially recrystallized and slightly dolomitic. Lower two inches very hard, dense, slightly moldic porosity nonpermeable, dolomite, pale yellowish brown in color.	6	184
(5" recovery) same as above.	4	188
(8" recovery) Same as above.	1.3	189.3
(44" recovery) Dolomite, pale yellowish brown, dense, hard, slightly moldic porosity.	4.7	194
(17" recovery) Dolomite, as above.	2	196
(6" recovery) Dolomite, as above.	5	201
No sample.	11	212

Number 109 (Continued)

Material	Thickness (feet)	Depth (feet)
(7" recovery) Dolomite, as above.	5	217
No sample.	24.5	241.5
(40" recovery) Upper 8" dolomite, as above, grading downward into limestone, white to very pale orange, friable, soft, chalky, very finely granular, microfossiliferous, porous, slightly dolomitic.	9.5	251
(40" recovery) Dolomite, as above, with slight moldic and vugular porosity. No permeability.	5	256
(6" recovery) Dolomite. Same as above.	4	260
(23" recovery) Dolomite, as above.	11	271
(10" recovery) Limestone, white to very light pale orange, partially recrystallized, microcoquina of forams. Very porous and permeable friable.	5	276
(7" recovery) Limestone, as above.	5	281
(6" recovery) as above with less porosity.	5	286
No sample.	1	287
(5" recovery) Limestone, as above.	9	296
No samples.	14	310

# TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 110 Gandy Motor Motel (W-2211)

Location, lat. 30°26'44", long. 84°19'14", in SE'4NE'4NW4, sec. 34, T. 1 N., R. 1 W., on North side of U.S. Highway 90 near intersection with Valcencia Drive in Tallahassee (Tallahassee); Driller, Rowe Drilling Co.; Date drilled, Apr. 1950; Drilling method, cable tool; Depth, 335 ft; Casing, 8-in to 274 ft, open hole 274 ft to 335 ft; Aquifer, Floridan; Land-surface altitude, 169.7 ft; Water level, 145 ft below land surface on Apr. 21, 1950. Logged by J.W. Yon, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
No samples.	50	50
Clay, cream, waxy, finely arenaceous, calcareous, may be montmorillonitic.	5	55
Limestone, white, finely crystalline, soft, porous, slightly finely arenaceous, slightly argillaceous; sand, finely sandy, indurated, calcareous, (cementing agent is a white to cream clay). Shell fragments present.	20	75
Limestone, white to cream, same as above.	10	85
Limestone, as above; clay, olive green to white, waxy, very calcareous very finely arenaceous, many be montmorillonitic. Archaias sp., Ostracod, fragments of shell.	10	95
Limestone, same as above. Archaias sp.	10	105
Limestone, cream, finely crystalline, soft, porous, slightly argillaceous, slightly finely arenaceous, <u>Archaias</u> sp., rare, shell fragments present.	20	125
Limestone, cream, finely granular to lithographic appearing hard, dense, slightly finely arenaceous, argillaceous, Sorites sp.,  Archaias sp.	5	130
Finely granular, hard, dense, porous in part, no fossils, same as above.	10	140
Shell fragments present, same as above.	5	145

Number 110 (Continued)

Material	Thickness (feet)	Depth (feet)
No shell present, same as above.	15	160
Limestone, light cream, hard, finely crystalline, slightly porous, sandy.	35	195
Limestone, cream, hard, finely crystalline, slightly porous, microfossilliferous, moldic.	5	200
Limestone, cream, granular, soft, crystalline, porous, very microfossiliferous <u>Rotalia</u> mexicana abundant. <u>Lepidocyclina</u> sp.	25	225
Limestone, same as 220-225', becoming dark cream.	40	265
olomite, tan, hard, finely crystalline, dense, some brown to black chert.	10	275
No samples.	25	300
Same as 270-275'.	10	310
Limestone, dark cream to tan, finely crystalline, granular, porous in part, microfossiliferous, abundant cones.	25	335

#### 111 Boy Scouts of America (W-7603)

Location, lat. 30°26'50", long. 84°36'23", in SE4SE4SW4, sec. 26, T. 1 N., R. 4 W., at Wallwood Camp on northside of Lake Talquin about 10 mi south of Quincy (Lake Talquin); Driller, Barnes Well Drilling Co.; Date drilled, Mar. 1966; Drilling method, cable tool; Depth, 335 ft; Casing, 6-in to 252 ft, open hole 252 ft to 335 ft; Aquifer, Floridan; Land-surface altitude, 153.5 ft; Water level, 78.80 ft below land surface on Dec. 6, 1974; Chloride concentration, 2.8 mg/L on Apr. 9, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, medium to coarse, clear to frosted to grayish orange, argillaceous, angular to subangular.	20	20
Sand, medium to very coarse, clear to frosted to pale yellowish orange, argillaceous, angular to subrounded; trace of clay, dark yellowish orange.	20	40
Sand, fine to very fine gravel mostly fine to medium, clear to frosted to olive gray, argillaceous, angular to subrounded, micaceous.	20	60
Sand, fine clear to frosted, angular, micaeous, phosphatic, (80% sand); clay, yellowish gray, sandy; heavy minerals.	10	70
Sand, as above, 55%; limestone, white, micritic, sandy, soft, moderate porosity, shell molds, mollusks; clay, greenish gray, sandy; <u>Sorites</u> sp.; heavy minerals; pyrite; phosphorite.	50	120
Limestone, white to yellowish gray, micritic, crystalline, sandy, moderate porosity—moldic, intergranular, soft to medium hard; shell fragments, foraminifera—Sorites sp., Archaias sp. sand, as above; pyrite; sand content increases downward.	40	160

Material	Thickness (feet)	Depth (feet)
Sand, fine to coarse, mostly fine to medium, clear to frosted, angular to subangular, (75% sand); limestone, yellowish gray, micritic, crystalline, sandy, moderate porosity-moldic; shell fragments, gastropod casts, bryozoa, Sorites sp., trace of clay; pyrite; limestone porosity increases downward.	30	190
Limestone, as above, high recrystallization, <u>Sorites</u> sp., sand, fine to coarse, (40% sand.)	50	240
Limestone, yellowish gray to mottled shades of gray, crystalline, sucrosic, sandy, high porosity-moldic, very hard; bryozoa, shell fragments, (90% limestone); sand, as above; clay, olive black; pyrite.	10	250
Dolomite, light olive gray, crystalline, sucrosic, very hard, low porosity; limestone, as above; Sorites sp.; sand, fine to very coarse, mostly coarse; trace of clay, light greenish gray.	10	260
Sand, medium to very fine gravel, mostly very coarse, clear to frosted, angular to rounded, (60% sand); limestone, as above.	10	270
Limestone, yellowish gray, crystalline, very hard, low to moderate porosity-increases downward, moldic, sand, as above, 5%.	40	310
No samples.	25	335

# TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 116 Coyle E. Moore (W-614)

Location, lat. 30°26'59", long. 84°19'13", in SELSELSWL, sec. 27, T. 1 N., R. 1 W., west of Ocala Road and north of U.S. Highway 90 in Tallahassee (Tallahassee); Driller, Terry-Rosa Hardware Co.; Date drilled, Oct. 1941; Drilling method, cable tool; Depth, 200 ft; Casing, 4-in to 91 ft, open hole 91 ft to 250 ft; Aquifer, Floridan; Land-surface altitude, 202.5 ft; Water level, 175 ft below land surface on Oct. 14, 1941. Logged by George Hadd, Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, fine to medium, subrounded to subangular, clear to frosted quartz in a reddish-brown clay matrix with rate, black phosphate grains.	40	40
Clay, blue-gray to tan, arenaceous with rare small inclusions of white clay. Rare, black phosphate grains.	20	60
Sand, fine to medium, subangular, clear to frosted quartz in a tan, clay, matrix with rare black phosphate grains.	10	70
Limestone, cream colored, hard, sandy, dense, poorly porous with white to cream limey clay.	20	90
Limestone, white to cream, hard, sandy, dense, poorly porous with white, hard cryptocrystalline limestone and considerable fine to medium, subangular to subrounded clear quartz sand. Common black phosphate grains present.	27	117
Limestone, cream, sandy, dense, hard to tan, hard, dense, cryptocrystalline. <u>Pecten</u> sp. fragments, small <u>gastropods</u> , small <u>Turritella</u> .	28	145
Limestone, tan, sandy, soft, with common crystalline calcite. <u>Pecten</u> sp., <u>Sorites</u> ?	65	210
Limestone, cream colored, hard, poorly porous, cryptocrystalline, <u>Lepidocyclina</u> sp., <u>Nummulites</u> sp.	40	250

# TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 117 Floridin Company (W-4835)

Location, lat. 30°27'06", long. 84°20'49", in NW4SE4SE4, sec. 29, T. 1 N., R. 1 W., south side of State Highway 20 and about 5 mi west of Capitol building in Tallahassee (Tallahassee); Driller, Rowe Drilling Co.; Date drilled, Nov. 1958; Drilling method, cable tool; Depth, 175 ft; Casing, 6-in to 105 ft, open hole 105 ft to 175 ft; Aquifer, Floridan; Land-surface altitude, 85.2 ft; Water level, 65 ft below land surface on Nov. 28, 1958. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, grayish orange quartz, unsorted, fine to coarse grained with slight amount of clay matrix.	5	5
Sand, grayish orange pink, quartz, mostly fine with medium grains; clay, mottled, sandy, waxy.	5	10
Sand, as 0-5'.	5	15
Sand, as above; clay, dark yellowish orange to gray, waxy, soft, sandy, blocky. One fragment white very sandy clay.	15	30
Sand and clay, as above, and large fragments of very abundantly sandy white clay.	15	45
Sand, quartz, unsorted, very fine to coarse; clay, dark gray to grayish brown, waxy, sandy.	10	55
Clay, light gray, waxy, very sandy, finely laminated.	10	65
Limestone, pale orange, chalky to very finely crystalline, finely sandy, dense.	20	85
Limestone, same with more sand.	10	95
Limestone, very pale oragne, very finely crystalline, dense, microfossiliferous, recrystallization having destroyed distinct character of fossils.	35	130

Number 117 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, very pale orange, very finely crystalline, intergranular porosity, moderately hard.	10	140
Limestone, grayish pale orange, same.	35	175

### 119 City of Tallahassee (W-10589)

Location, lat. 30°27'08", long. 84°24'03", in SE4NW4SE4, sec. 26, T. 1 N., R. 2 W., south of U.S. Highway 90 on Geddie Road, at Arvah B. Hopkins Generating Station, about 3 mi west of Tallahassee (Midway); <a href="Driller">Driller</a>, Rowe Drilling Co.; <a href="Date drilled">Date drilled</a>, Apr. 1970; <a href="Drilling method">Drilling method</a>, hydraulic rotary; <a href="Depth">Depth</a>, 375 ft; <a href="Casing">Casing</a>, <a href="Location">16-in to 150 ft</a>, open hole 150 ft to 375 ft; <a href="Aquifer">Aquifer</a>, Florida; <a href="Land-surface altitude">Land-surface altitude</a>, <a href="136.7">136.7</a> ft; <a href="Water level">Water level</a>, 115 ft below land surface on Feb. 5, 1975; <a href="Specific capacity">Specific capacity</a>, <a href="13813">131 (gal/min)/ft</a>; <a href="Chloride">Chloride</a> concentration, 15 mg/L on Mar. 19, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to medium, angular, argillaceous, (85% sand); clay, pale yellowish orange to dark yellowish orange also greenish gray, sandy, waxy.	10	10
Sand, clear to frosted to yellowish, fine to coarse, angular to subrounded, (95% sand); limonite.	10	20
Sand, clear to frosted, fine to medium (80% sand); limestone, white, micritic, sandy, low porosity, very hard; phosphorite; limonite; limestone content increases downward.	20	40
Limestone, white to very light gray, micritic, very sandy, low to moderate porosityslightly moldic, moderately hard.	10	50
Sand, clear to frosted, fine, angular, (80% sand); limestone, as above; limonite; iron oxides.	10	60
Limestone, very light gray, crystalline to micritic, very sandy, high porosity—moldic; high recrystallization; few poorly preserved shell fragments; trace of medium sand at base of interval.	40	100
Limestone, as above, 85%; clay, greenish gray, waxy, brittle; limestone becoming darker gray downward.	20	120

Material	Thickness (feet)	Depth (feet)
Limestone, as above, mostly crystalline, approaching sucrosic, high porositymoldic, few fragments vugular; few fossil molds.	10	140
imestone, crystalline, as above, becoming dolomitic.	10	150
dolomization increasing downward;  Sorites sp.	20	170
imestone, very light gray, micritic to crystalline, very sandy, moderate porositymoldic, few fossil impressions; limestone becoming whiter and less sandy downward.	160	330
olomite, light olive gray to olive gray, crystalline, sucrosic, low porosity, very hard.	10	340
dimestone, as above, except fossil content and porosity increasing downward; selenite.	25	365

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

#### 128 City of Tallahassee (W-1019)

Location, lat. 30°28'01", long. 84°16'34", in center SW4SW4, sec. 19, T. 1 N., R. 1 E., at Lafayette Park in Tallahassee (Tallahassee); Driller, Layne-Atlantic Co.; Date drilled, June 1946; Drilling method, hydraulic rotary; Depth, 427 ft; Casing, 20-in to 238 ft, open hole 238 ft to 427 ft; Aquifer, Floridan; Land-surface altitude, 193.0 ft; Water level 168 ft below land surface on June 27, 1946; Specific capacity, 870 (gal/min)/ft; Chloride concentration, 6.0 mg/L on Sept. 6, 1946. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Clay, white, soft, very silty; silt, in soft, pale orange (yellowish) clay matrix.	5	5
Sand, medium to coarse, in pale yellow-orange soft clay matrix.	15	20
Same, with size fine to coarse.	10	30
Clay, yellowish gray, waxy, silty, platy, with laminae of moderate reddish brown fine sand.	5	35
Clay, same; clay, light brown, waxy, soft, silty.	5	40
Same with fragments of rounded medium sand in very pale orange clay matrix.	20	60
Clay, white, soft, earthy, abundantly very finely sandy.	5	65
Same with some fragments very fine to medium sand.	20	85
Limestone, very pale orange, chalky to moderately crystalline, sandy, hard, nonporous, calcite crystals, secondary.	10	95
Clay, yellowish gray, silty, montmorillinitic.	5	100
Limestone, as 85-90'; limestone, white, very finely sucrosic, sandy.	10	110

Material	Thickness (feet)	Depth (feet)
Limestone, white, dolomitic, abundant finely sandy, very finely crystalline, slightly argillaceous, moderately soft.	5	115
Fragments of limestone grading from limestone in 85-90' to 110-115'.	5	120
Limestone, very pale orange, abundant finely sandy, chalky to very finely crystalline, few <u>Sorites</u> fragments.	5	125
Limestone, light gray, cryptocrystalline, hard, dense, flaky, clay, grayish yellowish green, waxy, soft, very finely sandy.	5	130
Limestone as 110-115'.	5	135
Limestone, very pale orange, moderately hard, microcoquina, partially recrystallized, fossils indistinct, granular, chalky to finely crystalline, intergranular porosity, slightly sandy, fragments of Archaias floridanus.	10	145
Limestone, yellowish gray, less granular, fossils less distinct than in 135-140, more chalky to very finely crystalline, slightly more sandy.	15	160
Limestone, white, chalky to very finely crystalline, slightly sandy, dense, moderately hard. Few Sorites and Archaias.	25	185
Same; limestone, milky, cryptocrystalline, hard, dense with manganese styolites.	15	200
No sample.	5	205
Limestone, white to very pale orange, dense, finely sandy, very finely crystalline, moderately hard.	5	210
Limestone, as above; dolomite, very pale orange, very finely sucrosic, moderately hard, granular, finely sandy, intergranular and regular porosity		215

Material	Thickness (feet)	Depth (feet)
Limestone and dolomite as above. One fragment grades from limestone to dolomite.	5	220
Same but more sandy.	5	225
Same but abundantly sandy.	10	235
Same; limestone, very pale orange, moderately hard, dense, microcoquina, partially recrystallized, finely crystalline, granular, slightly porous.	5	240
No sample.	5	245
Same as 235-240'.	5	250
Same. Rotalia mexicana.	5	255
Same, slightly chalky.	10	265
Same; limestone, very pale orange, finely granular, very finely crystalline, microcoquinoid, moderately porous, moderately hard.	20	285
Same but very soft and friable.	15	300
ame but becoming harder and less friable.	20	320
ame. Lepidocyclina sp.	5	325
imestone same; dolomite, pale yellow-brown, finely sucrosic, dense, finely ground up.	5	330
cimestone, very pale orange, very finely crystalline to slightly chalky, microcoquinoid, finely granular, moderately porous, moderately soft.	10	340
Same but slightly harder and more granular appearing.	10	350
No sample.	5	355

Material	Thickness (feet)	Depth (feet)
Same; limestone, very pale orange, crypto- crystalline, hard, dense, dolomitic; dolomite, light brown, hard, dense, very finely sucrosic.	10	365
Same, Coskinolina in limestone as 340-350'.	5	370
Limestone and dolomite above.	5	375
Limestone and dolomite as above but finely ground up.	5	380
Limestone, white, soft, chalky, very microfossil, granular; dolomite, light brown, finely sucrosic, finely ground up.	5	385
Same as 380-385' with limestone, white, recrystallized hard, dense fragments.	1, 5	390
Dolomite, light brown, very finely sucrosic, very finely ground up.	10	400
Limestone, very pale orange, very finely crystalline, dense, micro-fossiliferous. One "cone".  Limestone has undergone recrystallization - very finely ground up.	5	405
Same. Gypsina sp.	5	410
Same. Gypsina more numerous. Lepidocyclina fragments.	5	415
Same. Bryozoan fragments.	5	420

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

129 Florida Bureau of Geology (Alum Bluff No. 2) Core Hole (W-7616)

Location, lat. 30°28'12", long. 84°59'05", in NW\(\frac{1}{2}\)SE\(\frac{1}{4}\)NE\(\frac{1}{4}\), sec. 24, T. 1 N., R. 8 W., near east bank of Apalachicola River, about 3 mi north of Bristol (Bristol); <a href="Driller">Driller</a>, Florida Bureau of Geology; <a href="Date drilled">Date drilled</a>, Feb. 1966; <a href="Drilling method">Drilling method</a>, bored; <a href="Depth">Depth</a>, 206 ft; <a href="Aquifer">Aquifer</a>, Floridan; <a href="Land-surface altitude">Land-surface altitude</a>, about 175 ft. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, moderate brown, fine to very coarse (mostly medium to coarse), slight amount organic matrix, top 2 inches very organic (dusky brown) becoming lighter in color downward.	2	2
Sand, quartz, color progressively grading from light brown at top to grayish orange at base, fine to very coarse (mostly medium to coarse), loose, trace of clay matrix, subangular—subrounded, grades into below.	2,5	4.5
Sand, as 2-4.5', but pale orange in color and less clay as matrix.	6	10.5
Sand, quartz, grayish orange at top grading to pale yellowish brown at base, coarse to very coarse (few granules), loose, subangularsubrounded.	2.5	13
Sand, quartz, becoming faintly bedded (mottled) to 14 feet and distinctly bedded, (14-15 feet-no sample), 15-16.5 feet, very pale orange color with 1/8 to 1/4-inch dark yellowish orange, slightly clayey beds (may be cross-bedded) in lower 1-1/2 feet, coarse to very coarse (mostly coarse), loose.	3.5	16.5
As 13-15'.	0.5	17
As 15-16.5', with some increase in grain coarseness to granule size downward with occasional small pebbles of feldspar and quartz.	9.0	26

Material	Thickness (feet)	Depth (feet)
No sample.	1.5	27.5
Sand, quartz, less bedded and more mottled, pale orange to dark yellowish orange, medium to coarse with few very coarse and granule size quartz and feldspar grains, loose, subangularsubrounded.	4	31.5
No sample.	1	32.5
Sand, quartz, light yellow gray, fine to very coarse (gets finer toward base but mostly medium to coarse), loose, subangular—subrounded, (33.5-35 - no sample), grades abruptly into bed below.	2.7	35.2
Sand, quartz, grayish orange, medium to coarse with some very coarse, subangular-subrounded, moderate amount clay as matrix micaceous.	0.8	36
No sample.	1.5	37.5
Sand, quartz, grayish orange, medium to very coarse with some granules, slight amount clay as matrix, abundantly micaceous, faint bedding.	0.5	38
Sand, quartz, light brown, as above with more clay, as 35.5-36'.	0.25	38.25
Sand, quartz, light gray, fine to medium, angular-subangular, clear, about one per cent of dark heavy mineral, micaceous, an occasional granule of quartz, loose.	0.25	38.5
Sand, quartz, dark yellowish orange, fine to medium (few very coarse granules of quartz), subangular subrounded, moderate amount clay as matrix, micaceous, trace of dark heavy mineral.	0.75	39.25
No sample.	0.75	40

Material	Thickness (feet)	Depth (feet)
Sand, as 38.5-39.25', with less clay matrix and size very fine to medium, slight mottling or irregular thin bedding.	2	42
No sample.	0.5	42.5
Sand, quartz, dark yellowish orange, very fine to medium, sugangularsubrounded, trace of one per cent of dark heavy mineral, slight amount clay as matrix, has 45° inclination to faint bedding (probably cross-bedded), slight micaceous.	2	44.5
No sample.	0.5	45
Sand, quartz, grayish to yellowish orange, very fine to medium, subangular to subrounded, trace to one per cent of heavy mineral, slight amount of clay as matrix, slightly micaceous.	7	52
Sand, quartz, dark reddish brown (limonitic), very fine to medium, subangularsubrounded.	0.5	52.5
Sand, as 45-52', but dark heavy mineral increase to 2-3%.	3.5	56
No sample.	4	60
Sand, quartz, light brown, very fine to medium, subangularsubrounded, moderate amount clay as matrix, 2-3% of dark heavy mineral, trace micaceous.	0.5	60.5
Sand, quartz, dark greenish gray, very fine to medium, subangular—subrounded, clayey throughout and progressively more so downward, micaceous with light greenish gray sand (very fine to medium) pockets that have less clay and about 1% dark heavy mineral. These pockets appear to be filled or reworked worm borings.	21	81.5
Clay, dark greenish gray, slightly finely sandy with sand pockets (probably borings), slightly micaceous, at about 86 feet sand begins to increase progressively downward.	8	89.5

Material	Thickness (feet)	Depth (feet)
Sand, quartz, dark olive gray, fine to medium, very clayey, slightly micaceous.	1.5	91
Shell marl, dark greenish gray from 91-96' and light olive gray to dusky yellow toward base, very sandy (fine to medium), slightly micaceous, contains fragments and microfossils of macrofossils that increase in abundance downward, 2-3% of contact below.	10	101
Sand, quartz, yellowish gray, very fine to very coarse (mostly medium to coarse), subangular—subrounded, moderate amount pale greenish yellow waxy clay matrix, few very small grains dark heavy mineral. Has light brown (iron stained) spots and one pocket (probably boring) filled with Jackson Bluff material.	3.5	104.5
No sample.	1.5	106
Calcilutite, very pale orange, very soft, very sandy (fine to medium), trace dark heavy mineral, grades into below.	1.5	107.5
As above, but lighter in color and indurated.	3.5	111
Calcilutite, very pale orange, very sandy, (fine to very coarsemostly medium to coarse), clayey, (pale greenish yellow zones).	1.5	112.5
As 107.5-111'.	4.5	117
No sample.	0.5	117.5
Transitional grading from above to below.	2.5	120
Sand, quartz, dusky yellow, fine to very coarse (mostly medium to coarse), getting coarser downward, very slightly calcareous, subangularsubrounded, trace dark heavy mineral (very wet, poor recovery, no interval structure retained).	12	132

Material	Thickness (feet)	Depth (feet)
Sand, quartz, dusky yellow, coarse to very coarse with granules fo quartz, very slightly calcareous, trace dark heavy mineral, very wet, no interval structures retained.	2	134
Sand, quartz, dusky yellow to moderately yellow (iron stained), fine to medium, very slightly calcareous.	1	135
No sample.	4	139
Sand, quartz, pale olive to dusky yellow, very fine to medium (mostly fine to medium), subangularsubrounded, slightly micaceous, grades into below.	2	141
Sand, quartz, calculite (or a very sandy calcarenite), pale orange, fine to medium, very microfossiliferous, abundantly sand size fragments of macrofossils and also larger macrofossil fragments, micaceous, slightly clayey, upper three feet has few fossils, 1-2% as dark heavy mineral.	24	165
No sample.	6.5	171.
Sand, quartz, dusky yellow, fine to very coarse (mostly medium), subangular subrounded, slightly clayey, slightly calcareous near top, slightly micaceous.	5.5	177
No sample.	5	182
Sand, quartz, brownish gray, very fine to medium (mostly fine), subangularsubrounded, clayey, micaceous, slightly microfossiliferous.	2	184
No sample.	4	188
Shell marl, yellowish gray, very sandy (fine to very coarse), very microfossiliferous, abundantly macrofossils, clayey, slightly silty.	3	191

Number 129 (Continued)

Material	Thickness (feet)	Depth (feet)
Sand, quartz, brownish gray, fine to coarse, macrofossils common but less so than bed above, clayey, slightly silty.	7	198
As 188-191'.	8	206

#### 132 Vernon S. Chasen

Location, lat. 30°29'01", long. 84°37'28", NE<sup>1</sup>4, sec. 49 of the Forbes Purchase land grant, T. 1 N., R. 4 W., on southeast corner of the intersection of State Highways 267 and 65-B at Wetumpka (Lake Talquin); Driller, Moore Electric Co.; Date drilled, Apr. 1976; Drilling method, hydraulic rotary; Depth, 310 ft; Casing, 4-in to 240 ft, open hole 240 ft to 310 ft; Aquifer, Floridan; Land-surface altitude, about 210 ft; Water level, 121.20 ft below land surface on Apr. 16, 1976; Chloride concentration, 3.6 mg/L on June 3, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, argillaceous, very fine to coarse (grain size coarser with depth), angular to subrounded.	40	40
Clay, dark yellowish orange to grayish orange, sandy, dense; iron oxides (content increases downward).	40	80
Clay, medium bluish gray, very dense, sandy; clay, moderate yellowish brown, dense; limestone, white crystalline, very sandy, very hard, low porosity.	15	95
Limestone, light gray to yellowish gray, crystalline, high porosity-moldic, high recrystallization, very hard; shell fragments; limestone, light gray, micritic, very sandy moderate porosity, phosphatic; clay, light brown to greenish gray, dense; trace of sand.	45	140
Clay, light bluish gray, sandy.	10	150
Marl, white to yellowish gray, very sandy, clayey, calcareous; clay, light gray to olive gray, sandy; limestone, yellowish gray to light gray, micritic, sandy, (10% limestone); light bluish gray clay at bottom of section.	40	190

Material	Thickness (feet)	Depth (feet)
Limestone, as above, 50%; clay, very light gray to greenish gray, dense, sandy; sand, medium to coarse, subangular to subrounded.	10	200
Clay, light bluish gray, sandy; limestone, as above, 20%.	10	210
Limestone, light gray to yellowish gray, crystalline, very hard, high recrystallization, low porosity; clay, white to light bluish gray, sandy.	7	217
Clay, light bluish gray, sandy; clay light olive gray to greenish gray, dense; limestone, yellowish gray, crystalline, sandy, very hard, low porosity	23	240
Limestone, light gray to medium gray, micritic, sandy, moderately hard, moderate porosity-moldic, <u>Sorites</u> sp., echinoid spines; limestone, yellowish gray, crystalline, very hard, low porosity, high recrystallization, sucrosic, dolomitic.	70	310

133 Florida Bureau of Geology (Wall No. 1) Core Hole (W-7457)

Location, lat. 30°29'05", long. 84°53'10", in center NE4, sec. 13, T. 1 N., R. 7 W., about 1 mi southeast of State Highway 12 about 5 mi northeast of Bristol (Bristol); Driller, Florida Bureau of Geology; Date drilled, June 1965; Drilling method, bored; Depth, 408 ft; Aquifer, Floridan; Land-surface altitude, about 250 ft. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, pale yellowish brown, loose, fine to coarse, few grains of heavy mineral, subrounded, top two inches organic, clear to slightly frosted.	2.5	2.5
Sand, as above (water table at 2.5 feet), subangular to subrounded.	2.5	5
Sand, as above but grayish orange in color.	18	23
Sand, as above, with lower foot containing faint color mottling.	2	25
Sand, as lower foot above, grain size medium to very coarse.	5	30
Sand, as above, with very slight amount of clay matrix.	2.5	32.5
Sand, as above, but light brown in color.	2.5	35
Sand, as above, upper foot pale brown and slightly finer grained, lower portion grayish orange.	2.5	37.5
Sand, quartz, medium to very coarse, loose, subangular to subround, few grains heavy mineral, loose, has two small zones of color banding in upper foot, lower foot has mottling of pale yellowish brown and pale brown.	2	39.5
Sand, quartz, pale brown, loose, medium to coarse, subangular to subround, trace of heavy mineral.	.5	40

Material	Thickness (feet)	Depth (feet)
Sand, as above, grading in color from pale brown as above to light brown at base, has 2-inch grayish brown to dusky brown (very organic) zone about 8 inches from top grains up to very coarse in size.	2.5	42.5
Sand, as above, grayish orange at top, pale orange through middle to pale yellowish brown at base.	2.5	45
Sand, quartz, pale brown, loose, medium to very coarse, subangular to subround.	5	50
Sand, quartz, pale brown, loose, fine to coarse, subangular to subround, slight amount clay and silt matrix, and gets more organic (darker) at base.	2.5	52.5
Sand, quartz, brownish black, fine to very coarse, very organic, loose to very slightly cemented.	2.5	55
Sand, as above, brownish gray, fine to coarse.	5	60
Sand, as above, fine to very coarse.	7	67
No sample.	3	70
Sand, quartz, black, very organic, mediumly indurated, fine to very coarse, subrounded to rounded (humate).	1	71
No sample.	4	75
Sand, quartz, dark yellowish brown to grayish brown, fine to very coarse, organic (less than above), subangular to subrounded loose.	2	77
No sample.	3	80

Material	Thickness (feet)	Depth (feet)
As 75 - 77'.	1	81
No sample.	4	85
Sand, quartz, very light gray to very pale orange, very fine to very coarse, micaceous, subangular to subrounded, trace of heavy mineral, loose, top 2 inches grades from description of 80 - 81.	2	87
No sample.	3	90
Sand, quartz, as above.	1	91
No sample.	4	95
Sand, quartz as above but less coarse.	2	97
No sample.	3	100
Sand, quartz, yellowish gray, fine to coarse, loose, slightly clayey (as matrix), has !-inch clay seam 3 inches from base.	1.5	101.5
No sample.	3.5	105
Sand, quartz, light gray, very fine to fine, 2% heavy mineral, loose, micaceous, has appearance of being reworked throughly by worm or boring mollusks; (105 - 117.5' has closer affinity to below than above.)	2.5	107.5
No sample.	2.5	110
Sand, quartz as above.	2	112
No sample.	3	115
Sand, quartz, medium to olive gray, fine to medium, silty and clayey in mottled zones (perhaps reworked by mollusks or worms).	2.5	117.5

Material	Thickness (feet)	Depth (feet)
As above, with more clay and dark olive gray in color. Grades into bed below in last 3 inches.	10	175
Calcilutite, pale orange, very sandy, soft to hard, clayey.	5	180
No sample.	21	201
Sand, quartz, greenish gray (mottled), fine to medium, very clayey.	2	203
No sample.	6	209
Calcilutite, pale orange to yellowish gray, hard, partially recrystallized, moldic porosity, sandy (fine to coarse), dolomitic, some pyrite, clay in seams and thin beds.	3	212
olomite calcilutitic, gray, hard, very sandy (fine to medium) (recovery 6 inches), oyster shells at base.	15	227
Dolomite calcilutitic, yellowish gray, soft to medium hard, sandy (fine to very coarse), clayey, micro and macrofossiliferous and becoming progressively very macrofossiliferous downward (oysters at top).	10	237
No sample.	5	242
Sand, quartz, light olive gray, very fine to very coarse, very calcareous, very macrofossiliferous (frags) but larger frags than 227-237', soft.	4	246

Material	Thickness (feet)	Depth (feet)
No sample.	2.5	120
Sand, as above.	2.5	122.5
No sample.	2.5	125
Sand, as above.	2.5	127.5
No sample.	4.5	132
Sand, as above with more silt and clay.	2.5	134.5
No sample.	0.5	135
Sand, quartz, olive gray to olive green, fine to medium, silty and clayey, micaceous.	2.5	137.5
No sample.	2.5	140
Sand, as above.	2.5	142.5
No sample.	2.5	145
Sand, as above.	2.5	147.5
No sample.	2.5	150
Sand, as above.	2.5	152.5
No sample.	2.5	155
Sand, as above.	2.5	157.5
No sample.	2.5	160
Sand, quartz, olive gray, fine to medium, micaceous, 3-5% heavy mineral, slightly silty and clayey, slightly microfossiliferous and macrofossiliferous.	1.5	161.5
No sample.	3.5	165

Material	Thickness (feet)	Depth (feet)
as 242 - 246' but less macrofossiliferous and grades into limestone below.	7.5	253.5
olomite calcilutitic, dusky yellow to to light olive gray, hard, partially recrystallized, micromoldic porosity, clayey, slight to abundantly sandy, grades into sand below; one piece of coral between 246-256'.	2.5	256
and, quartz, light olive gray, fine to medium, soft, clayey with indurated zones (as 253.5 - 256'), becoming more calcareous downward to impure calcilutite at base.	6	262
calcilutite impure, yellowish gray, very sandy, very clayey, has frags (up to 1! inch) of medium gray sandy indurated limestone throughout soft to hard, has flint zone or bed at 264'.	5	267
alcilutite, gray, hard, sandy, partially recrystallized with blebs of dark greenish gray, tough clay.	1	268
alcilutite impure, yellowish gray, soft to hard, silty, with blebs of tough greenish gray clay, slightly sandy,	5	273
clayey. alcilutite impure, yellowish to light olive gray, as above but more indurated and medium hard.	3	276
alcilutite, gray, hard, dolomitic, partially recrystallized, with zones (cavitites) of impure clay.	1.5	277.5
alcilutite impure, yellowish gray, soft clayey, slightly sandy with frags of harder limestone.	4.5	282

Material	Thickness (feet)	Depth (feet)
Calcilutite, yellowish gray, soft to hard, beach rock appearance, very finely crystalline, slightly sandy.	21	303
Calcilutite, light olive gray, very hard, dolomite, with clay seams and blebs.	3	306
Calcarenite, very pale orange, slightly hard, dolomitic, moldic porosity, slightly finely sandy, with a 3-inch zone at 307' that is broken and conglomeratic in appearance.	4	310
Dolomite, light olive gray, very hard, dense, some moldic porosity.	1.5	311.5
Dolomite, pale orange, soft, finely sucrosic, slightly finely sandy, with hard indurated streaks or zones giving a conglomeratic appearance, an occassional macrofossil impression.	19	330.5
Calcilutite, pale orange, soft to medium, slightly sandy, slightly dolomitic.	3	333.5
No sample.	11.5	345
Calcarenite, light gray, very hard, partially recrystallized, very fossiliferous (macro-molds and casts and microghosts), slightly to abundantly sandy, dense.	2	347
Dolomite, pale orange, medium-hard, very sandy.	9	356
Calcarenite, light greenish gray to very pale orange, slightly sandy, very clayey, soft.	9	365
Clay, dark green, with laminae of calcareous clay, soft.	1	366
Calcilutite, very pale orange to light gray, soft to hard with laminae of medium gray clay.	2.5	368.5

Number 133 (Continued)

Material	Thickness (feet)	Depth (feet)
Calcilutite, light gray, sandy, clayey, dolomitic, soft to medium, with conglomeratic appearance.	13.5	382
Dolomite, yellowish gray, hard, dense, with moldic porosity, has a 1-inch clay seam near base.	1.5	383.5
Calcilutite, white, soft, chalky with rhombs of yellow orange soft, dolomite.	24.5	408

#### 134 Sun Oil Company (W-3983)

Location, lat. 30°29'13", long. 84°48'14", in NE½NW½NE½, sec. 14, T. 1 N., R. 6 W., 1 mi east of Telogia Creek and about 7 mi north of Hosford (Hosford); Driller, Sun Oil Co; Date drilled, July 1956; Drilling method, hydraulic rotary; Depth, 4,119 ft; Casing, 10 in to 306 ft, open hole 306 ft to 4,119 ft; Land-surface altitude, 201.9 ft. Logged from 115 to 1,060 ft.

Material	Thickness (feet)	Depth (feet)
No samples.	115	115
Sand, medium to very coarse, clear to frosted, angular to subrounded, (75% sand); clay yellowish gray, sandy, (15% clay); limestone, medium light gray, crystalline, very hard, low porosity; shell fragments—mollusks; foraminifera—Sorites sp.; trace of phosphorite and limonite.	5	120
and, as above, 60%; limestone, white, micritic, sandy, soft, low porosity (25% limestone); shell fragments; clay, white, sandy, calcareous.	80	200
Limestone medium light gray, crystalline, sandy, high porosity—moldic; shell fragments, molds and casts, (90% limestone); sand, as above.	80	280
medium hard, low porosity (40% white limestone); limestone, gray, as above; sand medium to coarse, clear to frosted angular to subangular (30% sand). Sand content decreases downward.	20	300
No samples.	80	380
Limestone and sand, as above.	20	400
Limestone, white, micritic, some fragments crystalline, soft to medium hard; moderate porositymoldic, (90% limestone); echinoid spines, few shell fragments; dolomite, light olive gray, crystalline, sucrosic, low porosity; clay, greenish gray, dense.	60	460

Material	Thickness (feet)	Depth (feet)
Limestone, white, micritic to crystalline to biogenic, sucrosic, sandy, medium hard, high porositymoldic, (35% limestone); dolomite, light brown, crystalline, sucrosic, medium hard, moderate porosity (35% dolomite); sand, clear to frosted, fine to medium, angular	20	480
Sand, medium clear to frosted, angular to subrounded, (60% sand); limestone, white as above, except very fossiliferous, <a href="Lepidocyclina">Lepidocyclina</a> sp.; phosphorite abundant (1ess than 5%).	20	500
Limestone, as above 60%; sand as above, 40%; limestone content increases downward.	200	700
No samples.	100	800
Limestone, white to light yellowish gray, micritic, soft, moderate recrystallization (90% limestone); sand, clear to frosted, fine to coarse, angular to subrounded, clay, brown, calcareous, laminated; fossilsgastropods, pelecypods.	60	860
Limestone, white to yellowish gray, micritic to crystalline to biogenic, moderate porosity, (80% limestone); clay, pale yellowish brown, brittle, calcareous; phosphorite; sand, fine to coarse angular clear to frosted; mica; limestone content increases downward.	200	1060

#### 139 Fletcher Tractor Company

Location, lat. 30°29'38", long. 84°25'58", in NW\2SE\2SE\2, sec. 9, T. 1 N., R. 2 W., north of Interstate Highway 10 and U.S. Highway 90 interchange west of U.S. Highway 90 (Midway); <u>Driller</u>, Moore Electric Co.; <u>Date drilled</u>, Apr. 1976; <u>Drilling method</u>, hydraulic rotary; <u>Depth</u>, 200 ft; <u>Casing</u>, 4-in to 160 ft, open hole 160 ft to 200 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, 130 ft; <u>Water level</u>, 80.81 ft below land surface on Apr. 12, 1976; <u>Specific capacity</u>, 2.5 (gal/min)/ft; Chloride concentration, 1.8 mg/L on Apr. 12, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, clear to dark yellowish orange, angular to subrounded, fine to coarse, mostly medium, very argillaceous; clay, dark yellowish orange.	10	10
Sand, clear to frosted to very pale orange, argillaceous, medium, angular to sub-rounded,(95% sand); iron oxides; trace of limestone, white, micritic, phosphoritic, soft.	10	20
Sand, clear to frosted to yellowish, fine to medium, angular to subangular, argillaceous; iron oxides; phosphorite.	10	30
Sand, as above, also coarse clay, white to dark yellowish orange, dense.	1.0	40
imestone, white, crystalline to micritic, low porosity, very hard; sand, as above, 40%; trace of clay, white, to dark yellowish orange; phosphorite; iron oxides.	20	60
Sand, clear to frosted, fine to very coarse, mostly coarse, angular to subrounded, (70% sand); limestone, white, micritic, sandy, low porosity, moderately hard; limestone content increases downward to 80% at base.	20	80
Sand, as above, 75%; limestone, as above; limestone, frosted, crystalline, high recrystallization, very hard, low porosity; clay, greenish gray.	10	90

Material	Thickness (feet)	Depth (feet)
Limestone, white to yellowish gray to light gray, crystalline, micritic, moderate to very hard, sandy, moderate porosity, high recrystallization.	10	100
Limestone, white to very light gray, crystalline to micritic, moderate porosity—moldic, very hard, fossiliferous, shell fragments, foraminifera—Sorites sp., bivalve pelecypod; recrystallized limestone as above; trace of sand.	10	110
Limestone, as above, 50%; sand, fine to medium; clay, grayish orange to yellowish gray, dense.	30	140
Limestone, white to very pale orange, crystalline to micritic, high porositymoldic, intergranular, shell fragments and impressions. (Water bearing)	10	150
Limestone, as above, more fossiliferous, foraminifera <u>Sorites</u> sp.	10	160
Limestone, as above; dolomite, light olive gray, crystalline, sucrosic, moderate porosity, very hard.	40	200

#### 140 Daisy B. Williams (W-13036)

Location, lat. 30°29'47", long. 84°26'21", in SE<sup>1</sup>4NE<sup>1</sup>4SW<sup>1</sup>4, sec. 9, T. 1 N., R. 2 W., about 1 mi south of Midway (Midway); <u>Driller</u>, McCoy's Well Drilling; <u>Date drilled</u>, Apr. 1976; <u>Drilling method</u>, cable tool; <u>Depth</u>, 172 ft; <u>Casing</u>, 4-in to 133 ft, open hole 133 ft to 172 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, about 168 ft; Water level, 98.70 ft below land surface in Apr. 1976.

Material	Thickness (feet)	Depth (feet)
Sand, fine to very coarse, mostly medium to to coarse, angular to subrounded, clear to frosted to pale yellowish orange, argillaceous; less than 5% limonite.	10	10
Clay, grayish orange, dense, very slightly sandy.	10	20
Clay, same as above, (50%); sand, very fine to fine, clear to frosted, angular to subangular, argillaceous.	10	.30
Sand, same as above, (55%), clay, very light gray, sandy.	10	40
Clay, light gray, very sandy and dense, slightly calcareous, organic streaks.	10	50
Sand, clear to frosted, fine to medium, mostly fine, angular to subangular; small amount of phosphorite.	10	60
Sand, clear to frosted, medium, angular to subrounded, (90%); limestone, white to crystalline, dense, hard, slightly sandy, (5%); clay, olive gray to greenish gray, sandy.	10	70
Sand, coarse to medium, mostly coarse, subangular to subrounded, clear to frosted, (90%); limestone, white, micritic, soft, sandy, porous.	10	80
Marl, white to very pale orange, sandy, calcareous, clayey; few shell fragments.	10	90

Material	Thickness (feet)	Depth (feet)
Clay, grayish orange, sandy, calcareous.	20	110
Limestone, very pale orange, crystalline, hard, some fragments porous and moldic, few shell fragments, (90%); marl, white, clayey, calcareous, sandy; sand, fine, trace amounts.	10	120
Same as above; high recrystallization; (20%) marl.	10	130
Limestone, various shades of white to gray to olive gray, low porosity, (90%); clay, pale yellowish brown; cuttings very fine.	10	140
Limestone, light gray to medium light gray, crystalline to micritic, hard, sandy, moderately porous, fossiliferous—bryozoa stems, shell fragments,  Sorites sp. fragment; trace amounts of fine sand.	10	150
Same as above, less fossiliferous.	10	160
Limestone, yellow gray to various shades of light gray, crystalline to micritic, sandy, porous, few fragments recrystallized, hard, fossiliferous—Sorites sp.,  Archaias sp., molds, shell fragments.	10	170

#### 146 City of Tallahassee (W-13480)

Location, lat. 30°30'12", long. 84°13'53", in NE½SW½NE½, sec. 9, T. 1 N., R. 1 E., at city's Northeast Water Facility, north of Interstate Highway 10, east of Raymond Diehl Road. (Bradfordville); Driller, Meredith Corp.; Date drilled, Sept. 1975; Drilling method, hydraulic rotary and cable tool; Depth, 450 ft; Casing 8-in to 257 ft, open hole 257 ft to 450 ft; Aquifer, Floridan; Land-surface altitude, 180.2 ft; Water level, 144.35 ft below land surface on Dec. 9, 1975; Specific capacity, 500 (gal/min)/ft; Chloride concentration, 5.0 mg/L on Sept. 25, 1975. Logged by Walt Schmidt, Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, very light gray to light grayish red, 28% porosityintergranular, fine to very coarse mostly coarse; subangular to rounded; medium sphericity, poor induration, clay cement (10% clay); 1% limonite; 1% heavy minerals.	10	10
Sand, moderate orangish pink to moderate red, 28% porosityintergranular, fine to coarse mostly medium, subangular, medium sphericity, poor induration, clay cement; 10% clay; 1% limonite; 1% heavy minerals.	10	20
and, moderate red, 26% porosityintergranular, medium subangular, medium sphericity, poor induration, clay cement; 13% clay, 1% limonite.	10	30
Sand, very light orange, 29% porosity, coarse, subangular to rounded, medium sphericity, poor induration, clay cement; 8% clay; 1% limonite; 1% heavy minerals.	10	40
Sand, very light orange, 30% porosity, coarse, subangular to rounded, medium sphericity, poor induration, clay cement; 8% clay.	20	60
Clay, very light gray, 20% porosityintergranular to intragranular, poor induration, clay cement; 40% sand (quartz); 20% micrite, calcareous.	10	70

Material	Thickness (feet)	Depth (feet)
Clay, very light gray, 20% porosityintergranular to intragranular, moderate induration, clay and micrite cement; micrite; 10% spar; 25% sand (quartz), calcareous.	10	80
Micrite, white, 20% porosity—intergranular to intragranular, micritic, moderate induration, micrite, clay cement; 5% sand; 5% clay.	20	100
Limestone, white 2% porosityintergranular, grain typemicrite, crystalline, biogenic, 2% sand (quartz); 1% spar; mollusks.	20	120
Limestone, very light gray, 20% porosity— intergranular, grain type—biogenic, micritic, crystalline, good induration, micrite cement, silica cement; 2% sand, quartz; foraminifera, (Sorites sp.), mollusks.	20	140
Limestone, white, 18% porosityintergranular, grain typebiogenic, crystalline, skeletal cast, rangefine to medium, good induration, micrite cement; 15% spar, dolomite; 5% sand quartz; foraminifera.	40	1.80
Limestone, white, 15% porosityintergranular, intercrystalline, grain typecrystalline, biogenic, micrite, good induration, silica cement, massive; 10% spar; 5% sand (quartz); moderate recrystallization; foraminifera-miliolids.	40	190
Limestone, very light orange to white, 15% porosity—intergranular and intercrystalline; grain type—crystalline, biogenic, micrite, good induration, silica cement, massive, dolomite; 5% spar; 2% sand (quartz); moderate recrystallization, foraminifera.		200
Limestone, very light orange, 15% porosity— intergranular, grain type—crystalline, biogenic, good induration, micrite cement, massive; 2% sand (quartz); spar, foraminifera (Sorites sp., Archais sp., miliolids), mollusks, fossil molds.	10	210

Material	Thickness (feet)	Depth (feet)
Limestone, very light orange, 15% forosity— intergranular, grain type—crystalline, biogenic, good induration, micrite cement, massive; 2% sand (quartz); spar; moderate recrystallization; foraminifera; fossil molds, mollusks.	20	230
Limestone, white, 18% porositymoldic, fracture, intergranular, grain typecrystalline, biogenic, micrite, good induration, massive; 1% spar; foraminifera, bryozoa, mollusks.	20	250
Limestone, white, 20% porositymoldic, inter- crystalline grain typecrystalline, biogenic, skeletal cast, fine, rangefine to very fine, go induration, silica cement; 10% spar; foraminifera, mollusks.	10	260
Dolostone, grayish orange, 25% porosity— intergranular to intercrystalline, pin point vugs, 50-90% altered, euhedral, size—microscopic moderate induration, sucrosic, high recrystallization, foraminifera.	40	300
Dolostone, grayish orange, 23% porosity—intergranular to intercrystalline, pin point vugs, 50-90% altered, euhedral, size—microscopic, moderate induration; 5% limestone; 1% spar; 1% clay; high recrystallization, sucrosic, fossil mold.	30	330
Dolostone, grayish orange, 25% porosity—intergranular pin point vugs, intercrystalline, 50-90% altered, euhedral, size—microscopic, moderate induration, dolomite cement, silica cement; 5% limestone; 5% spar, sucrosic; coral, foraminifera.	2, 20	350
Dolostone, grayish orange, 25% porosity intergranular, pin point vugs, intercrystalline, 50-90% altered, euhedral, sizemicroscopic, mode induration; 5% limestone, sucrosic, high recrystallization, mollusks.	10, erate	360

Material	Thickness (feet)	Depth (feet)
Dolostone, as above; 5% limestone; 1% sand (quartz); sucrosic, high recrystallization.	10	370
Limestone, very light gray to grayish orange, 27% porosityintergranular, moldic, grain typebiogenic, crystalline, rangefine to very coarse, moderate induration, micrite and silica cement; 35% dolomite; spar; foraminifera (Lepidocyclina sp.)	10	380
Limestone, very light gray to grayish orange, 27% porosityintergranular, moldic, grain typebiogenic, crystalline, moderate induration, micrite and silica cement, 10% dolomite; spar; mollusks, foraminifera, coral, bryozoa, echinoid.	30	410
Limestone, white, 30% porosity—intergranular, moldic, grain type—biogenic, micrite, crystalline, range—fine to granular, moderate induration, micrite cement; 3% dolomite; 2% spar; foraminifera, bryozoa, coral.	30	440
Limestone, as above; 5% dolomite; foraminifera, coral, bryozoa.	10	450

#### 149 Florida Gas Transmission Company (W-4798)

Location, lat. 30°30'21", long. 84°41'34", in SW4SE4SW4, sec. 2, T. 1 N., R. 5 W., Depth, 487 ft; Casing, 10-in to 300 ft, open hole 300 ft to 487 ft; Aquifer, Floridan; Land-surface altitude, 267.6 ft; Water level, 123.65 ft below land surface on March 12, 1975; Specific capacity, 1.2 (gal/min)/ft; Chloride concentration, 7.0 mg/L on July 17, 1975. Logged by C.W. Hendry, Jr., Florida Bureau of Geology

Material	Thickness (feet)	Depth (feet)
Sand, very light tan, medium grained, clear, subrounded; clay, very silty, gray.	22	22
Sand, white, clear, subrounded, medium grained.	23	45
Sand, white, medium to coarse with medium grained clear and coarse grains frosted; fragments of medium snad in clayey, very calcareous matrix.	22	67
Sand, white, fine to medium, clear; very small black, shiney to earthy grains of ilmenite (?).	22	89
Sand, as above; clay, cream, soft; calcareous matrix with medium sand; few flakes of mica; grains of phosphorite (?).	22	111
Sand, white, fine to medium, clear with many grains of white, buff, amber, black phosphorite and some fragments of very fine grained calcareous material.	23	134
Sand, as above, with much clay, cream, soft, very sandy to silty, with few phosphorite grains.	22	156
Limestone, cream, very finely crystalline, silty to slightly finely sandy; sand and clay as above. Archaias floridanus.	23	179
Limestone, clay and sand, as above; limestone, gray, cryptocrystalline to very finely crystalline; clay, olive green, silty to finely sandy.	22	201

Material	Thickness (feet)	Depth (feet)
Sand, white, fine grained, clear, subangular with some medium grained iron stained reddish brown; limestone fragments as above.	21	222
Sand, fine to medium grained, equal amounts of clear and iron stained grains; limestone fragments as above; clay, medium gray to green, silty, soft.	22	244
Sand, clay and limestone as above, with preponderance of clay, gray-green, silty, soft, sand-size, fine to medium.	22	266
Clay, dusky, yellow brown, soft, silty; limestone and sand as above.	22	288
as above (sand, clay, limestone fragments)	22	310
Sand, fine to coarse, mostly medium to coarse white, clear to frosted, subangular to subrounded; clay, as above; limestone, white to light cream, very finely crystalline, silty, some fragments very silty to argillaceous.	23	333
Sand, fine grained, white, subangular, clear; fine sand-size limestone grains common.	22	355
as above with increase of limestone grains. <u>Elphidium chipolensis</u> , <u>Sorites</u> sp.	44	399
some fragments finely sucrosic, some chalky, clayey to finely sandy; some fragments dolomitic. There are several limestone-type lithologies in this sample. Also sand as above.	21	420
Dolomitic limestone, light brown, finely sucrosic.  Lithologies as above. The dolomitization  has destroyed the fossil content of the rock.	67	487

#### 150 Jeffery Alfriend, Episcopal Rectory (W-2606)

Location, lat. 30°30'30", long. 84°17'50", in SW4SE4SE4, sec. 2, T. 1 N., R. 1 W., east of Lake Jackson and about 3 mi north of Tallahassee (Lake Jackson); Driller, Libby-Freeman; Date drilled, June 1952; Drilling method, cable tool; Depth, 203 ft; Casing, 4-in to 119 ft, open hole 119 ft to 203 ft; Aquifer, Floridan; Land-surface altitude, 120.0 ft; Water level, 92.0 ft below land surface on June 10, 1952. Logged by R. O. Vernon, Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, red, fine to medium, argillaceous kaolin matrix; white phosphate; sandstone clusters.	55	55
Marl, cream, very sandy, soft.	5	60
Marl, cream, very sandy, almost a clay.	5	65
Limestone as above, hard and dense.	15	80
Dolomite, hard, dense, cryptocrystalline.	5	85
Limestone, as above; dolomite streaks.	20	105
Limestone, cream, hard and crystalline.	20	125
Limestone, hard, poorly porous.	15	140
Limestone, brown, hard, dense, crystalline.	10	150
Limestone, cream, granular, porous, soft, <u>Lepidocyclina</u> , <u>Rotalia</u> <u>mexicana</u> .	10	160
No samples.	43	203

#### 152 Ney Landrum (W-5879)

Location, lat. 30°30'36", long. 84°17'03", in NW4SW4SE4, sec. 1, T. 1 N., R. 1 W., east of Lake Jackson, about 5 mi north of Tallahassee (Lake Jackson); Driller, Mills Well Drilling; Date drilled, Mar. 1962; Drilling method, cable tool; Depth, 200 ft; Aquifer, Floridan; Land-surface altitude, about 108 ft. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, dark yellowish-orange, fine to medium, some coarse, clear, subangular to subrounded in slight clay matrix.	10	10
Sand, quartz, very pale orange, fine to medium, clear, subangular, in slight clay matrix.	10	20
Sand, quartz, as above, slightly finer.	10	30
Sand, quartz, as above, slightly finer.	10	40
Sand, quartz, as above.	10	50
Calcilutite impure, (marl), very light gray, very argillaceous and finely crystalline, poorly porous	10	60
Calcilutite, pale orange, dense, sandy, hard, poorly porous, partially recrystallized.	10	70
Calcilutite impure, (marl), as in 60'.	10	80
Calcarenite, very pale orange, moderately soft, granular very micro-fossiliferous, good intra-granular porosity, very finely crystalline (partially recrystallized).	ar, 10	90
Calcarenite, as above.	10	100
Calcarenite, as above, slightly harder.	10	110
Calcarenite, as above, more granular, softer and very porous; interval 120-130 ft slightly harder.	30	140
Becoming more recrystallized, possibly harder and less porous.	20	160
No sample.	10	170

Number 152 (Continued)

Material	Thickness (feet)	Depth (feet)
Calcarenite, as 140-160 interval.	10	180
Calcarenite, as above, slightly more crystalline.	20	200

155 Talquin Electric Cooperative, Inc. (Bent Tree Subdivision)

Location, lat. 30°30'59", long. 84°20'27", in NE4SW4NW4, sec. 4, T. 1 N., R. 1 W., west of Lake Jackson, about 5 mi north of Tallahassee (Lake Jackson); Driller, Rowe Drilling Co.; Date drilled, Aug. 1975; Drilling method, hydraulic rotary; Depth 340 ft; Casing, 8-in to 250 ft, open hole 250 ft to 340 ft; Aquifer, Floridan; Land-surface altitude, about 141 ft; Water level, 105 ft below land surface on Aug. 15, 1975; Specific capacity, 300 (gal/min)/ft; Chloride concentration, 1.0 mg/L on Oct. 7, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted with light brown, argillaceous, clay, light brown, dense, sandy, (50% clay).	10	10
Same as above, only grayish orange.	10	20
Same as above, only white; clay, calcareous.	20	40
Same as above also limestone, white, micritic, sandy, dense, hard, (25% limestone).	10	50
Limestone, same as above, very sandy, (80% limestone); clay, white, calcareous.	10	60
Limestone, light olive gray, crystalline, very sandy, dense, slightly dolomitic.	10	70
Clay, yellowish gray, very sandy, dense (80% clay); limestone, same as above.	10	80
Clay, grayish orange, very sandy, dense, (90% clay); clay, white, sandy, calcareous; phosphorite.	10	90
Limestone, white, crystalline, very hard, dense.	10	100
Limestone, white, micritic, moderately soft, porous, no fossil evidence; small amount of crystalline limestone.	40	140

Material	Thickness (feet)	Depth (feet)
Same as above, except slightly more porous.	60	200
Limestone, white, micritic, same as above except fossiliferous——Lepidocyclina sp., echinoid spine slightly more moldic than above, limestone, very pale orange, crystalline, hard, dense.	10	210
No sample.	10	220
Limestone, white, micritic, hard to soft, porous, slightly moldic, fossiliferous,  Nummulites sp., Lepidocyclina sp., spicules, brozoa fragments; dolomite, light brown, crystalline, sucrosic, porous, hard.	20	240
Same as above; increasing in dolomite content.	20	260
Same as above, dolomite.	10	270
No samples.	70	340

## 156 Talquin Electric Cooperative, Incorporated (W-12077)

Location, lat. 30°30'38", long. 84°19'31", in SE4SW4SW4, sec. 3, T. 1 N., R. 1 W., in Greenwood Hills Subdivision, west of Lake Jackson, east of U.S. Highway 27 and north of Tallahassee (Lake Jackson); Driller, Rowe Drilling Co; Date drilled, Nov. 1973; Drilling method, hydraulic rotary; Depth, 360 ft; Casing, 12-in to 165 ft, open hole 165 ft to 360 ft; Aquifer, Floridan; Land-surface altitude, about 205 ft; Water level, 181.73 ft below land surface on Feb. 12, 1976; Specific capacity, 50 (gal/min)/ft; Chloride concentration, 9.0 mg/L on Apr. 21, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, light brown, angular to subangular, fine, argillaceous (50% sand); clay, moderate reddish brown.	20	20
Sand, grayish orange, argillaceous, angular to subrounded, fine to medium.	15	35
Clay, light olive gray to pale reddish brown, dense.	20	55
Clay, white, calcareous, sand, (color changes to various shades of brown when wetted)	25	80
Limestone, white to yellowish gray, micritic, very sandy, moderately hard, moderate porosity (intergranular), shell fragments.	20	100
Clay, yellowish gray, (very sticky when wetted) dense sandy.	10	110
Limestone, white, crystalline, very sandy, low porosity, moderately hard.	10	120
Limestone, white, micritic, sandy, soft, intergranula: porosity.	r 20	140
Clay, yellowish gray, sandy, dense, (90% clay) limestone, as above.		
Limestone, as 120-140 ft interval.	10	150

Material	Thickness (feet)	Depth (feet)
Limestone, pinkish gray, crystalline, sucrosic, low porosityintercrystalline, very hard.	10	160
Limestone, white, crystalline, very hard, high porositymoldic, shell casts.	30	190
Limestone, yellowish gray, crystalline to micritic, moderate porosity, moderately hard, sandy, shell casts and bryozoa fragments.	30	220
Limestone, very pale orange, crystalline, biogenic, moderately hard, approaching sucrosic, moderate to high porosity, shell fragments, echinoid spines, foraminifera (Lepidocyclina sp.)	40	260
Limestone, as above (Leps abundant); clay, moderate yellowish brown, dense, (5% clay).	10	270
Limestone, as above, becoming less porous; (no clay).	10	280
Limestone, as above; dolomite, light brown, crystallin sucrosic, moderate porosity—moldic, very hard; section becoming more porous downward; trace of moderate yellowish brown clay.	e, 30	310
Dolomite, as above, 90%; limestone as above, 10%.	10	320
Limestone, white crystalline, micritic, biogenic, high porositymoldic, intergranular, moderately hard, foraminifera (Lepidocyclina sp.); dolomite, as above, 25%; dolomite content decreases downward to less than 5% at bottom of interval.	30	350
Dolomite, light brown, crystalline, sucrosic, moderate hard, moderate alteration, euhedral, moderate porosityintercrystalline; limestone, as above, 25%.	ly 10	360

## 158 Talquin Electric Cooperative, Incorporated (W-11760)

Location, lat. 30°31'19", long. 84°24'46", in SE\sE\sU\sU, sec. 31, T. 2 N., R. 1 W., at Lakewood Business Plaza, 0.4 mi west of State Highway 263 and 2.8 mi north of Interstate Highway 10 (Lake Jackson); Driller, Rowe Drilling Co.; Date drilled Sept. 1972; Drilling method, hydraulic rotary; Depth, 330 ft; Casing, 6-in to 274 ft, open hole 274 ft to 330 ft; Aquifer, Floridan; Land-surface altitude, about 133 ft; Water level, 75 ft below land surface on Sept. 5, 1972; Specific capacity, 3.8 (gal/min)/ft; Chloride concentration, 6.0 mg/L on May 3, 1977.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, argillaceous, fine to coarse, angular to subrounded, (90% sand); clay, light olive gray, sandy, dense; limonite.	20	20
Limestone, white to yellowish gray, micritic to crystalline, very sandy, low porosityintergranular, moderately hard, phosphatic; clay, greenish gray, very sandy, dense, (5% clay).	40	60
Limestone, white to yellowish gray, micritic to to crystalline high recrystallization sandy, moderately hard, low porosity; shell fragments.	10	70
Limestone, very pale orange to light olive gray, dolomitic, very hard, high recrystallized, sandy, moderate porositymoldic, foraminifera (Sorites sp., Archias sp.).	50	120
Limestone, medium gray to light olive gray, crystalline, dolomitic, sandy, moderately hard, moderate porosity.	10	130
Limestone, white to light olive gray, micritic to crystalline, very hard, high porosity— moldic, dolomitic, shell molds; becoming soft to moderately hard and very fossiliferous—shell fragments, casts and molds, bryozoa; trace of clay, calcareous.	30	160

Material	Thickness (feet)	Depth (feet)
Limestone, white, micritic, sandy, low porosity, soft to moderately hard, shell molds; clay, white, soft, chalky, calcareous, (5% clay).	10	170
Limestone, light gray to light olive gray, crystalline, very hard, low porosity, dolomitic.	20	190
Limestone, white to very light gray, micritic, moderately to very hard, low porosity.	10	200
Marl, white, chalky, clayey, very sandy; limestone, as above, 5%.	30	230
Limestone, light gray, micritic, very sandy, moderately porous, moderately to very hard.	20	250
Limestone, light olive gray to yellowish gray, crystalline, very hard, low porosity; limestone, micritic, as above; calcite.	10	260
Limestone, mottled shades of gray, crystalline, dolomitic, sandy, low to moderate porosity, very hard; calcite.	10	270
olomite, light gray to light olive gray, crystalline, sandy, moderate porosity, very hard; calcite; marl, yellowish gray, calcareous, sandy, chalky, soft, (25% marl).	30	300
Limestone, light gray, crystalline, high porosity, biogenic, moderately hard, fossiliferous, (85% limestone); echinoid spines; dolomite as above.	10	310
Dolomite, light brown, crystalline, sucrosic, moderate to high porosity, very hard; calcite; echinoid spines; pyrite.	20	330

#### 159 David William (W-13040)

Location, lat. 30°31'14", long. 84°26'43", in NW4NW4NW4, sec. 4, T. 1 N., R. 2 W., north of U.S. Highway 90 about 1 mi northeast of Midway (Havana South); Driller, Robert W. Rooks; Date drilled, Mar. 1976; Drilling method, cable tool; Depth, 160 ft; Casing, 4-in to 140 ft, open hole 140 ft to 160 ft; Aquifer, Floridan; Land-surface altitude, about 235 ft; Water level, 60 ft below land surface on Mar. 23, 1976; Specific capacity, 0.6 (gal/min)/ft.

Material	Thickness (feet)	Depth (feet)
Sand, fine to medium, argillaceous, angular to subrounded, (50% sand); clay light brown, sandy; limonite.	20	20
Clay, very pale orange to moderate yellowish brown, sandy, micaceous, dense, (90% clay); sand, medium to coarse, angular to subrounded; phosphorite.	40	60
Limestone, white, micritic, very sandy, soft, intergranular porosity, 50% limestone; sand, medium to coarse, angular to subrounded; clay, as above, 2%; phosphorite; limonite; sand becoming finer near bottom of interval.	50	110
Limestone, as above; limestone, white to very light gray, crystalline, very hard, low porosity, high recrystallization; trace of fine sand.	30	140
Limestone, micritic to crystalline, moderately hard, high porositymoldic and intergranular, shell molds, (90% limestone); sand, fine, angular; clay, greenish gray, waxy, 2%.	20	160

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 161 King Edward Tobacco Company (W-4407)

Location, approximate lat. 30°31'20", long. 84°34'40", in NE4SW4SW4, sec. 31, T.2 N., R.3 W., at Potter Farm, about six mi south of Quincy, formerly owned by Embry Tobacco Co. (Quincy); <u>Driller</u>, Seabrook Hardware Co.; <u>Date drilled</u>, Oct. 1957; <u>Drilling method</u>, cable tool; <u>Depth</u>, 450 ft; <u>Casing</u>, 4-in to 411 ft, open hole 411 ft to 450 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, about 232 ft; Water level, 125 ft below land surface on Oct. 26, 1957.

Material	Thickness (feet)	Depth (feet)
Sand, fine to coarse mostly medium, clear to frosted, angular to subrounded, very argillaceous, (75%); clay, pale reddish brown to moderate red, dense, slightly sandy, (20%); limonite.	10	10
Clay, moderate red, sandy, dense (75%); sand, same as above; very little limonite.	10	20
Clay, grayish orange, slightly sandy, dense, (85%); sand, same as above; small amount of moderate red clay.	20	40
Sand, clear to frosted to pale yellowish orange, medium to coarse mostly coarse, angular to subrounded, argillaceous.	20	60
Clay, greenish gray, dense, slightly sandy, (95%); sand, medium to coarse, clear to frosted, angular to subrounded.	20	80
Clay, yellowish gray, slightly sandy, dense.	5	85
Limestone, white, crystalline, approaching sucrosic, fairly dense, (55%); sand, medium to coarse, clear to frosted, angular to subangular; phosphorite, brown, shell fragments abundant.	5	90
Clay, yellowish gray to light olive gray, dense, (55%); limestone, white to yellowish gray, crystalline to micritic, slightly sandy, high recrystallization, hard, slightly porous, shell fragments.	10	100

Material	Thickness (feet)	Depth (feet)
Clay, dark greenish gray, dense, laminated, (55%); limestone, white, crystalline, high recrystallization, dense, slightly sandy, hard, phosphorite.	10	110
Limestone, medium light gray, micritic to crystalline, sandy, slightly porous to dense, hard, high recrystallization, bryozoa stems, shell fragments Sorites fragments (fossils poorly preserved due to recrystallization).	10	120
Limestones, same as above, slightly darker shade of gray, very fossiliferousbryozoa stems, oyster shell fragmentsmany other fragments, as above.	5	125
Limestone, same as above, (55%); sand, medium, clear to frosted, angular to subangular.	5	130
Same as above, except sand, (55%).	5	135
Clay, greenish gray, sandy, dense (75%); limestone, same as above.	5	140
Limestone, white to medium gray, crystalline, high recrystallization, hard, few fragments sandy, low to moderate porosity, shell fragments, (80%); clay, same as above.	10	150
Clay, same as above, (90%); limestone, same as above.	10	160
Limestone, light gray, micritic to crystalline, very sandy, hard, slightly porous, few shell fragments.	5	165
Sand, clear to white, medium, angular, (75%); limestone, white to light gray, micritic, very sandy, fairly dense, hard, shark tooth; clay, very light gray to greenish gray, few fragments sandy, dense, (5%); phosphorite.	10	175

Material	Thickness (feet)	Depth (feet)
Limestone, very light gray, micritic, extremely sandy, hard, slightly porous; sand, clear to frosted, medium to coarse, angular to subrounded.	10	185
Limestone, various shades of light gray, crystalline, high recrystallization, hard, some fragments sandy, moldic, moderate to high porosity, shell fragments, mollusks; pyrite.	25	210
Same as above; except slight amount of clay, yellowish gray, sandy, calcareous; slight amount of sand, medium.	5	215
Limestone, same as above, (80%); also limestone, yellowish gray, micritic, hard, sandy, dense, (10%); clay, dark greenish gray, dense; slight amount of sand.	5	220
Limestone, white to very light gray, crystalline, high recrystallization, hard, porous, (approaching shell hash) very fossiliferous—mollusk fragments Archaias sp.; small amounts of clay, dark greening gray and medium to coarse sand.	5;	225
Same as above; except 10% sand.	20	245
Same as above, except 50% sand.	25	270
Limestone, various shades of gray, micritic to crystalline, high recrystallization, hard, moldic, porous, sandy, shell fragments; limestone, light olive gray,, crystalline, dense, hard, sand, medium to coarse, clear to frosted, angular; slight amount of greenish gray clay; mica.	10	280
Same as above; also bryozoa stems.	10	290
Limestone, medium light gray, crystalline, dolomitic, hard, dense, few shell fragments; slight amount of sand, same as above.	5	295

Materia1	Thickness (feet)	Depth (feet)
Same as above; also few gastropod fragments.	7	302
Limestone, same as above, (75%); clay, dark greenish gray, dense, laminated.	8	310
Limestone, yellowish gray to medium to olive gray, crystalline, dolomitic, hard, some fragments sandy, slightly moldic, porous, few fossils—mollusk fragment molds, (95%); clay, same as above.	20	330
Limestone, yellowish gray, crystalline, dolomitic, hard, moldic, higher porosity than above sample, very little fossil evidencemold fragments.	10	340
Limestone, same as above, except slightly darker in color, ranging from yellowish gray to olive gray, also few fragments of recrystallized limestone.	5	345
Limestone, same as above, except light gray, little or no fossil evidence; slight amount of sand.	5	350
Marl, white, soft, friable, calcaeous, clayey, slightly sand, (75%); limestone, same as above.	5	355
Limestone, white, micritic, moldic, very porous, brittle, few fossil fragmentsmollusks, molds(?), (95%); limestone, dolomitic same as above.	15	370
Same as above; also pelecypod cast fragment.	20	390
Limestone, light gray, micritic, very sandy, brittle, moldic, very porous, few fossil molds.	10	400
Same as above, very slight amount of sand.	5	405
Limestone, white to light gray to yellowish gray, crystalline, very moldic, very porous, sandy, hard to brittle, shell fragments and molds.	5	410

Number 161 (Continued)

Material	Thickness (feet)	Depth (feet)
Same as above; approaching sucrosic, hard.	15	425
Limestone, medium light gray, micritic to crystalline, hard, sandy, very moldic, very porous, little or no fossil evidence.	20	445
Marl, white, soft, friable, calcareous, clayey, (85%); limestone, same as above.	5	450

162 Florida Division of Recreation and Parks (Maclay Gardens) (W-4082)

Location, lat. 30°31'22", long. 84°15'29", in SE\sW\sW\sq., sec. 32, T. 2 N., R. 1 E., at Maclay Gardens Park, about 1 mi north of interstate 10 and west of U.S. Highway 319 (Lake Jackson); Driller, Layne-Atlantic Co.; Date drilled, July 1956; Depth, 300 ft; Casing, 14-in to 195 ft, open hole 195 ft to 300 ft; Aquifer, Floridan; Land-surface altitude, about 168 ft; Water level, 141.18 ft below land surface on Jan. 21, 1975; Specific capacity, 350 (gal/min)/ft; Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, light brown, medium grained, clear to frosted, subangular to subrounded, slight amount of clay matrix.	5	5
Clay, dark yellow-orange, very slightly silty; clay, white slightly silty to finely sandy.	5	10
Same as 5-10; but silty to medium sandy; with color grading into gray.	15	25
Same; sand, clear, fine-grained.	5	30
Clay, dirty, moderate brown, very sandy.	5	35
Clay, white, kaolinitic, sandy, with white phosphorite grains.	5	40
Sand, clear, fine to medium, with white phosphorite grains in white clay matrix.	15	55
Limestone, white, soft, very sandy, very slightly argillaceous, with some crystalline calcite, dense, chalky.	5	60
Limestone, white, hard, less sandy and with some crystalline calcite, dense, chalky.	5	65
Limestone, white, hard, sandy, few dark grains (probably heavy minerals), dense, chalky.	5	70
Limestone, white, hard, very finely sandy, dense chalky.	15	85
Limestone, same with piece light green, calcitic, sandy clay (probably weathered from limestone).	5	90

Material	Thickness (feet)	Depth (feet)
Limestone, same, but chalky to cryptocrystalline.	5	95
Limestone, same, with loose fine, clear sand.	5	100
Limestone, same, with fragment of micro-botryoidal chert.	10	110
Limestone, same and stained brown with brown, sandy clay (?small cavity). Pelecypod fragment.	5	115
Limestone, same; some fragments appear as beachrock. <u>Sorites</u> fragments, oyster fragments.	5	120
Limestone, white to very light cream, hard, dense; slightly sandy, veinlets of crystalline calcite. Brachiopod casts and molds.	5	125
Limestone, light cream, hard, dense, sandy, crypto to very finely crystalline.	5	130
Limestone, cream, hard, dense, sandy, crypto to very finely crystalline.	5	135
Limestone, dolomitic, tan, hard, dense, very finely crystalline, ?sandy.	5	140
Same; dolomite, light brown, hard, dense, very finely crystalline.	5	145
Dolomite, tan, hard, dense, very finely crystalline, sandy; marl, white, very sandy, soft, dense.	5	150
Limestone, slightly dolomitic, cream, hard, dense, very finely crystalline, sandy (clear, angular). <u>Sorites</u> fragments.	5	155
Limestone, cream, soft, slightly sandy, very finely crystalline, dense.	5	160
Limestone, cream, soft, chalky, very sandy.	5	165
Limestone, same. <u>Sorites</u> sp.	5	170

Number 162 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, cream, medium hard, very finely crystalline very sandy.	e <b>,</b> 5	175
Limestone, cream, hard, very finely crystalline, very sandy. Miliolids, Sorites sp. gastropod fragments.	20	195
Limestone, light cream to cream, hard, dense, cryptocrystalline, microfossiliferous. <u>Rotalia mexicana</u> .	45	240
Limestone, white to very light cream, soft, granular, chalky to very finely crystalline, fossiliferous.	10	250
Dolomite, brown, finely sucrosic, dense, nonporous.	50	300

#### 164 Florida Division of Parks and Recreation (W-3553)

Location, lat 30°31'27", long 84°15'25", in NE\( SW\) sec. 32, T. 2 N., R. 1 E., at Maclay Gardens, west of U.S. Highway 319, about 0.5 mi north of Interstate Highway 10, and north of Tallahassee (Lake Jackson); Driller, L.M. Gray; Date drilled, June 1955; Drilling method, cable tool; Depth, 301 ft; Casing, 4-in to 172 ft, open hole 172 ft to 301 ft; Aquifer, Floridan; Land-surface altitude, about 223 ft; Water level, 171 ft below land surface on June 1, 1955; Chloride concentration, 14 mg/L on Dec. 3, 1974.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to medium, angular to subanagular; less than 1% clay, light brown; very slight amount of organic material.	22	22
Sand, clear to frosted (mostly clear), coarse, subangular to subrounded.	10	32
Sand, clear to frosted, medium to coarse, angular to subrounded; slight amount of clay, yellowish.	15	47
Clay, grayish orange to pale yellowish brown, dense, slightly sandy, (90%); sand, clear to frosted, medium to coarse, subangular to subrounded, (10%).	13	60
Sandstone, pale yellowish orange to moderate brown, limonitic, hard, (85%); sand, coarse, subrounded to rounded; slight amount of clay, same as above 1%.		61
Limestone, white, micritic, very sandy, hard, phosphoritic, (50%); sand, fine to medium, clear to frosted, angular to subangular (30%); sandstone, same as above, (15%); clay, pale yellowish brown, dense, (5%).	21	82
Limestone, white, micritic, very sandy, hard, phosphoritic, (90%); sand, same as above; clay, moderate yellowish brown, 1%.	10	92

Material	Thickness (feet)	Depth (feet)
Clay, grayish orange, dense, (50%); sand, fine to medium, same as above, (40%); limestone, same as above; slight amount of loose phosphorite.	11	103
Limestone, same as above, (75%); clay, same as above, (15%); sand, same as above.	20	123
Limestone, very white, crystalline, sucrosic, slightly sandy, porous, hard.	7 18	141
Limestone, same as above; less than 1% clay, pale yellowish brown.	15	156
Limestone, white, micritic, very sandy, dense, hard; limestone, white to very light gray, crystalline, sucrosic, hard.	15	171
Same as above, more porous than above.	20	191
Same as above, porosity increasing.	10	201
No samples.	100	301

## 165 Alfred B. Maclay, Jr., Day School (W-8491)

Location, lat. 30°31'28", long. 84°16'29", in NE4SW4SW4, sec. 31, T. 2 N., R. 1 E., about 5 mi north of Tallahassee, east of State Highway 155 (Lake Jackson); Driller, W. R. Perry Well Drilling; Date drilled, May 1968; Drilling method, cable tool; Depth, 290 ft; Casing, 6-in to 180 ft, open hole 180 ft to 290 ft; Aquifer, Floridan; Land-surface altitude, 242.5 ft; Water level, 208.77 ft below land surface on Dec. 5, 1974; Chloride concentration, 6.5 mg/L on Dec. 5, 1974.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to medium angular, (75% sand); clay, grayish white to moderate red, sandy, brittle; clay content increases downward.	60	60
Limestone, white to yellowish gray, micritic, very sandy, moderately hard, low porosity—intergranula phosphatic; clay, greenish gray to dark yellowish orange, dense, waxy; (10-20% clay); sand, medium to coarse; clay content increases downward.	80 r,	140
Limestone, yellowish gray, micritic, moderate porosity—moldic, moderately hard (45% limestone); sand, fine to medium, angular to rounded (45% sand); clay, dark yellowish orange to greenish gray, dense.	- 10	150
Limestone, white, crystalline, sucrosic, moderately hard, sandy, high recrystallization, low to medium porosity, fossiliferous—foraminifera (Archaias sp shell impressions; trace of fine sand toward bottom of section.	.),	180
Limestone, light olive gray, crystalline, sucrosic, moderate porositymoldic, slightly sandy, dolomit	20	200
No sample.	10	210
Limestone, as in interval 180-200 ft, also foraminifera (Sorites sp.).	10	220
Limestone, white, crystalline, sucrosic, very hard, low porosityintercrystalline, (85% limestone); sand, fine to medium, angular to subangular; trace of clay, greenish gray; phosphorite.		260

Number 165 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, white to yellowish gray,, crystalline, sucrosic, moderate porositymoldic, very hard, high recrystallization, fossiliferousshell impressions.	20	280
Limestone, light olive gray, crystalline, sucrosic, very hard, moderate to high porositymoldic; trace of dark yellowish orange clay.	10	290

## 168 Talquin Electric Cooperative, Incorporated (W-11079)

Location, lat. 30°31'43", long. 84°28'11", in SW4SW4NE4, sec. 31, T. 2 N., R. 2 W., at Lake Yvette Subdivision, about 1.9 mi north of Midway and north of U.S. Highway 90 (Havana South); Driller, Rowe Drilling Co.; Date drilled, Mar. 1971; Drilling method, hydraulic rotary; Depth, 390 ft; Casing, 6-in to 221 ft, open hole 221 ft to 390 ft; Aquifer, Floridan; Land-surface altitude, about 160 ft; Water level, 117.04 ft below land surface on Mar. 30, 1976; Specific capacity, 33 (gal/min)/ft; Chloride concentration, 7.9 mg/L on June 1, 1977.

Material	Thickness (feet)	Depth (feet)
Sand, fine to medium, argillaceous, angular to subrounded, (90% sand); clay, yellowish gray.	10	10
Clay, dark yellowish orange to various shades of gray, very sandy, dense, (80% clay); sand, very fine to medium, angular; iron oxides.	40	50
Limestone, white, micritic, very sandy, moderate hard, phosphatic, (85% limestone); sand, fine, angular; trace of clay, light olive gray; recrystallized limestone toward bottom of section	60 n.	110
Limestone, yellowish gray to very pale orange, crystalline to micritic, moderately hard, high porosity—moldic, high recrystallization, gastropod fragments and casts, (Sorites sp.), shark's tooth; sand, medium; clay, greenish gray, sandy.	50	160
Clay, greenish gray, very sandy, 75%; limestone and sand, as above.	10	170
Sand, medium, 60%; clay and limestone, as above.	20	190
Limestone, light gray to medium gray, micritic to crystalline, moderately to very hard, high porositymoldic, fossiliferousshell molds and casts, (Archaias sp.).	10	200
Limestone, yellowish gray to light gray, micritic, moderately porous, sandy, moderately hard.	10	210

Material	Thickness (feet)	Depth (feet)
Limestone, white to various shades of gray, crystalline, dolomitic, very hard, moderate porosity, high recrystallization; shell fragments; limestone, white, micritic, soft, sandy, moderate porosity.	70	280
Limestone, mottled shades of light gray and yellowish, gray, crystalline, dolomitic, high porositymoldic, sucrosic, fossiliferousmolds and casts.	20	300
Limestone, white to very light gray, micritic, very sandy, moderate porosity, soft.	10	310
Limestone, light olive gray to light brownish gray, crystalline, dolomitic, sucrosic, high porosity, intercrystalline and moldic, very hard.	50	360
Limestone, white to yellowish gray, micritic, soft, microclastics, high porositymoldic, intergranular.	10	370
No sample.	10	380
Limestone, moderate yellowish brown to brownish gray, crystalline, dolomitic, sucrosic, very hard moderate porosity; limestone, moderate yellowish brown, micritic, soft.	10	390

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 170 Paul S. Oles and John W. Naylor (W-1768)

Location, lat. 30°31'50", long. 84°30'05", in SW4NE4NE4, sec. 35, T. 2 N., R. 3 W., east of Little River and about 5 mi southeast of Quincy (Quincy); Driller, Grace Drilling Co.; Date drilled, July 1948; Drilling method, hydraulic rotary; Depth, 4,240 ft; Land-surface altitude, about 190 ft. Interval 460 ft to 2,685 logged by Chik Shan Chen, Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
No samples.	100	100
Clay, greenish gray, sandy, dense, (60% clay); calcareous clay, white, chalky, sandy, soft.	10	110
Limestone, white to very light gray, micritic, very sandy, moderately porousmoldic; shell fragments.	10	120
Limestone, white to very light gray, micritic, sandy, moderately porousmoldic, soft to moderately hard, shell mold and cast fragments.	10	130
Limestone, white to light olive gray, crystalline to micritic, dolomitic sandy, moderately porousmoldic, few shell molds and cast, (75% limestone); clay, olive gray to white, dense, sandy, calcareous, chalky; trace of phosphorite.	10	140
Dolomite, light olive gray, crystalline, low porosity, very hard, sandy; clay greenish gray, sandy, dense, waxy, (25% clay); limestone, white, micritic, sandy, moderately hard, moderate porosity— moldic.	10	150
Shell hash, shell fragments, bryozoa fragments, highly porous; dolomite, as above, 5%; trace of sand, medium to coarse, subrounded.	10	160

Material	Thickness (feet)	Depth (feet)
Dolomite, light olive gray to olive gray, crystalline, low to moderate porosity, moderately hard, (50% limestone); sand, fine to coarse, angular to rounded, (45% sand); shell hash, as above, echinoid spines.	10	170
As above, except sand, 10%, limestone, medium light gray, micritic, low porosity, moderately hard, pyrite; organics.	10	180
Clay, olive gray, very sandy, dense; calcareous; clay, brownish black, sandy, waxy; (45% clay), sand, fine to coarse, angular to subrounded, (45% sand), dolomite, as above; limestone, medium light gray, as above; shell mold and cast fragments.	10	190
Clay, brownish black, as above, 40%; sand, as above, 35%; dolomite, as above, 15%; limestone, light gray, micritic, moderately porousmoldic, soft to moderately hard, sandy; shell fragments; phosphorite.	10	200
Limestone, olive gray, crystalline, moderately hard, dolomitic, moderate porositymoldic, (75% limestone); clay, grayish black, dense, blocky, waxy, micaceous; calcareous clay, olive gray, sandy, dense, 1%; sand, subrounded, coarse.	10	210
Dolomite, light olive gray, crystalline, moderately hard, high porositymoldic, (95% dolomite); limestone, white, micritic, sandy, low porosity, moderately hard; trace of sand.	10	220
Dolomite, white to light olive gray, moderate porositymoldic, moderately hard to soft, chalky, no fossil evidence.	30	250

Material	Thickness (feet)	Depth (feet)
As above, except fossiliferous-shell molds and casts.	10	260
Limestone, yellowish gray, micritic, sandy, moderate porosity, moldic, 80% limestone, dolomite, as above; carbonized wood.	10	270
Limestone, yellowish gray to light olive gray, micritic, moderately hard, high to moderate porosity—moldic.	10	280
Limestone, white to light gray, micritic, moderate porositymoldic, very sandy.	10	290
Limestone, as above, mostly light gray, very moldic.	10	300
Limestone, yellowish gray to light gray, micritic, moderate to very hard, sandy, moderate porositymoldic, shell molds and casts (mollusks).	10	310
Dolomite, mottled shades of light olive gray to medium dark gray, crystalline, moderate to high porositymoldic, moderately hard, sandy, shell molds and casts (mollusks)	10	320
No sample.	10	330
Sand, very fine to medium, angular to subangular, (85% sand); limestone, yellowish gray, crystalline, dolomitic, moldic, moderate to high porosity, biogenic; limestone, light gray, micritic, sandy, moldic, moderate porosity, no fossil evidence; clay, yellowish gray, very sandy, dense; phosphorite.	10	340
Dolomite, mottled shades of medium gray and light olive gray, crystalline, moldic, moderate porosity, very hard, slightly sandy.	10	350

Material Material	Thickness (feet)	Depth (feet)
Dolomite, white to light olive gray also mottled shades of medium gray and light olive gray olive gray, crystalline moldic, moderate porosity, very hard; more massive than above, echinoid spines.	10	360
Dolomite, olive gray, crystalline, sucrosic, hard, moldic, high porosity; limestone, white to yellowish gray, micritic, moderate porosity—moldic, sandy, moderately hard, shell molds, bryozoa fragments and echinoid spines.	10	370
As above; 95% sucrosic dolomite; limestone, white, crystalline, sucrosic, moderate porosity, very hard.	10	380
Dolomite, as above, some fragments very moldic, highly porous.	10	390
Limestone, yellowish gray, micritic, dolomitic, moderate porositymoldic, moderately hard; dolomite, as above (40%); sand, coarse, subrounded.	10	400
As above; limestone, more moldic.	10	410
As above, no sand; 90% dolomitic limestone.	10	420
Limestone, yellowish gray to light gray, micritic, dolomitic, moderately porous moldic; dolomite, olive gray, crystalline, sucrosic, high porositymoldic, (5% dolomite).	10	430
As above; dolomite, 60%; limestone, 30%; sand, coarse, subrounded 10%.	10	440
Dolomite, olive gray to dark yellowish brown; crystalline, sucrosic, moldic, moderate to high porosity, very hard.	20	460
Dolomite, fine crystalline, dark brown, porous to rather dense, sugary textured.	90	550

Material	Thickness (feet)	Depth (feet)
Dolomite, very fine to fine crystalline, brown to dark brown, rather porous, dolomitized forams (Lepidocyclina, Camerina, ?)	30	580
Dolomite, very fine crystalline, brown, rather dense, slightly gypsiferous (gypsum fragments and streaks present) with few dolomitized large forams.	105	685
Fossiliferous limestone, rather dense, chalky like, light brown, forams as <u>Lepidocyclina</u> , etc.	40	725
Calcareous (10%) shale, dark gray brown, laminated.	3	728
Fossiliferous limestone, finely fragmental, rather dense, light gray brown, well preserved fossils very rare.	27	755
Dolomite, very fine crystalline, rather dense, brown.	5	760
Fossiliferous limestone, as above, finely fragmental.	53	813
Dolomite, very fine crystalline, brown.	10	823
Limestone, finely fragmental, light brown.  The limestone is composed entirely of fine fossil fragments.	110	933
Calcareous (10%) shale (?).	5	938
Limestone, finely fragmental, rather dense, soft, light gray brown.	72	1010
Dolomite, very fine to fine crystalline, dark brown, sugary textured, chalcedony and quartz fragments, dolomite slightly gypsiferous, gypsum (selenite) fragments and streaks present.	10	1020
Dolomite, very fine to fine crystalline, as above, slightly gypsiferous.	25	1045

Material	Thickness (feet)	Depth (feet)
Limestone, finely fragmental, light gray brown.	25	1070
Dolomite, very fine crystalline, dark gray brown, rather dense to brown, few carbonaceous material, gypsum fragments.	35	1105
Limestone, finely fragmental, rather dense, light gray brown with few carbonaceous material.	355	1460
Highly fossiliferous limestone, finely fragmental to fragmental, rather well cemented, light gray brown to brown, forams and as (Lepidocyclina, Antillea, etc.,) rather common. The limestone is composed entirely of forams and fossil fragments, it is also very slightly glauconitic.	115	1575
Fossiliferous limestone, finely fragmental, rather dense, light gray brown.	15	1590
Limestone, finely fragmental (probably fossiliferous) rather dense, light gray brown, slightly cherty, chert fragments.	30	1620
Limestone, chalky-like, rather dense, very light brown.	80	1700
Limestone, glauconitic, finely fragmental.	35	1735
Glauconitic, calcitic (30%) dolomite, very fine crystalline.	10	1745
Glauconitic (10%) calcitic (10%) sandstone, medium grained, light green gray, glauconite pellets rather common.	30	1775
Glauconitic, sandy (30%) limestone, light green gray.	25	1800
Glauconitic, calcareous (20% sandstone), medium grained, pale green quartz fragments, quartz gravels rather common. Very coarse grained sandstone or quartz gravel beds may be occurring at this depth.	180	1980

Material	Thickness (feet)	Depth (feet)
Glauconitic, calcareous (30%) sandstone, fine grained, light gray, rather dense.	150	2130
Glauconitic, calcareous (10%) and argillaceous (10%) sandstone fine to medium grained, light gray, rather dense.	100	2230
Calcareous (10%) shale, laminated, light green gray to gray and brittle.	20	2250
Shale, green gray to gray, laminated, slightly calcareous.	30	2280
Calcareous (10%) shale, as above.	35	2315
Calcareous (10%) argillaceous (10%) sandstone, fine to medium grained, glauconitic and micaceous.	20	2335
Calcareous (10%) shale, as above.	35	2370
Fossiliferous limestone, dense, finely fragmental, light gray with small forams.	60	2430
Calcareous (10%) shale, laminated, dark green gray to dark gray.	100	2530
Chalky fossiliferous limestone.	42	2572
alcareous (30%) shale.	68	2640
Chalky, fossiliferous limestone.	45	2685

## 172 John MacDonald (W-6657)

Location, lat. 30°31'54", long. 84°39'32", in land grant section 63 of Forbes Purchase, T. 1 N., R. 4 W., about 12 mi south of Quincy (Gretna); Driller, Mills Well Drilling Co.; Date drilled, 1964; Drilling method, cable tool; Depth, 400 ft; Aquifer, Floridan; Land-surface altitude, about 235 ft.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to medium, angular to subrounded, (55%); clay, moderate reddish brown, dense, slightly sandy.	10	10
Same as above; also limonite.	20	30
Sand, clear to frosted, fine to medium gravel, mostly medium, angular to rounded, (95%); very light gray; limonite.	10	40
Clay, very light gray to yellowish gray, dense, (50%); sand, fine to medium, clear to frosted, angular to subangular.	10	50
Clay, same as above, (75%); sand, clear to frosted, medium to coarse, mostly coarse, subangular to subrounded.	30	80
Clay, yellowish gray, very dense, (95%); trace amount of coarse sand.	10	90
Limestone, yellowish gray to various shades of gray to light olive gray, crystalline, some fragments approaching sucrosic, very sandy, hard, porous, fossiliferous-shell fragments (mollusk), bryozoa pieces, echinoid spines, Sorites sp. abundant, (80%); sand, fine, clear to frosted, angular; (15%); clay, same as above.	10	100
Sand, fine, clear to frosted, angular, (80%); limestone, same as above, (15%); clay, yellowish gray to greenish gray.	10	110

Material	Thickness (feet)	Depth (feet)
Sand, same as above, (60%); limestone, same as above, except more moldic, appears to be reworked, extremely sandy and fossiliferous; also oyster shells.	10	120
Sand, fine to medium, clear to frosted, angular, (75%); also limestone, same as above, foraminifera, (20%), clay, light greenish gray; phosphorite.	10	130
Marl, light olive gray, slightly sandy, clayey, calcareous.	10	140
Sand, fine to medium, clear to frosted, angular, (80%); limestone, white, crystalline, sucrosic, very sandy, porous, very little fossil evidence, fragment of <u>Sorites</u> sp.; trace amounts of clay, same as above; phosphorite.	10	150
Same as above; except increase in clay content (5%), yellowish gray.	10	160
Sand, same as above, (80%); clay, yellowish gray to greenish gray, slightly sandy, (10%); limestone, same as above, also light gray, crystalline, very dense, hard; phosphorite.	10	170
Sand, fine to coarse, mostly medium, angular to subrounded, (95%); limestone, same as above; trace amount of clay.	20	190
Sand, same as above, (80%); limestone, same as above; clay, yellowish gray, slightly calcareous, dense, (10%); phosphorite.	10	200
Same as above; trace amount of clay, dark greenish gray.	10	210
Limestone, very pale orange to yellowish gray, crystalline, very hard, fairly dense, some fragments moldic, few mollusk molds poorly preserved due to crystallization; trace of sand.	10	220

Number 172 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, same as above, (95%); clay, greenish gray.	10	230
imestone, same as above; except more porous; also, less clay.	10	240
dimestone, same as above, slightly more porous and more mollusk fragments than above, (95%); trace amounts of sand and greenish gray clay.	10	250
Marl, yellowish gray, slightly sandy, clayey, calcareous.	10	260
Sand, very fine to medium, angular to subrounded, clear to frosted, (80%); limestone, white to very pale orange, micritic to crystalline, sandy, hard, porous, shell fragments; clay, olive gray, dense, (5%).	10	270
ame as above, except (90%) sand; very little clay.	20	290
dimestone, various shades of light gray, yellowish gray to light olive, gray to olive gray, crystalline, dolomitic, hard, moldic, very porous, few shell fragments.	20	310
Same as above, also (5%) sand.	10	320
ame as above, also trace amounts of mica and greenish gray clay.	10	330
ame as above. (No mica)	10	340
ame as above also Archaias sp., poorly preserved.	10	350
Same as above; trace amounts of mica and greenish gray clay.	50	400

173 Florida Bureau of Geology (Suber No. 1) Core Hole (W-7539)

Location, lat. 30°32'00", long. 84°39'46", in NW4NW4, sec. 32, T. 2 N., R. 4 W., about 1 mi southeast of Sawdust (Gretna); Driller, Florida Bureau of Geology; Date drilled, Jan. 1966; Depth, 475 ft; Aquifer, Floridan; Land-surface altitude, about 265 ft. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, fine, grayish brown (soil zone), grades into below.	1	1
Clay, moderate reddish brown at top grading through light brown to dark yellow orange at bottom, grades into below, very sandy (fine to medium).	6	7
Clay, moderate reddish brown with laminae and thins beds of grayish orange silt and sand.	4	11
Clay, dark yellow orange, with zones of of thin beds of white clay, sandy, very iron enriched (ocher).	6	17
Sand, quartz, dark yellowish orange to grayish orange, thin bedded to laminated with very pale orange to white clay.	9	26
No sample.	1.5	27.5
Sand, quartz, banded very pale orange to grayish orange to dark yellow orange, thin bedded (some cross-bedding), fine to coarse, some thin beds are clay.	17.5	45
No sample.	2.5	47.5
Sand, quartz, faintly mottled light gray to grayish orange to dark yellow orange, fine to coarse, mostly fine to medium, slightly clayey matrix, very fluid 57-61'.	13.5	61

Material	Thickness (feet)	Depth (feet)
Sand, quartz, dark yellow orange, fine to coarse, clayey throughout and more clayey in thin beds that are grayish orange.	9	70
No sample.	6	76
Sand, quartz, grayish orange, fine to medium, some dark grains (heavy mineral), organic blebs throughout, trace of clay is matrix.	4	80
No sample.	3	83
Clay, light gray, waxy, fine sandy partings and slightly sandy throughout.	7	90
Sand, quartz, very light gray, fine to medium, very clayey, silty, thinly bedded with alternate beds more clayey.	1	91
No sample.	4	95
Clay, light olive gray, slightly to moderately finely sandy, soft to medium hard.	14	109
Clay, medium bluish gray, last four feet olive gray, slightly to moderately finely sandy, soft to medium hard.	16	125
Calcilutite, pale orange, soft, sandy, slightly microfossiliferous (few <u>Sorites</u> ).	4	129
Calcilutite, light to medium bluish gray, partially recrystallized, sandy, very fossiliferous (both micro and macro), many Sorites, hard, slightly dolomitic, much moldic porosity.	7	136
Calcilutite, as 125-129'.	1	137
Clay, dark greenish gray, slightly sandy, waxy.	5	142
Impure calcarenite, grayish yellow green, very clayey, sandy, partially recrystallized, microfossiliferous.	2	144

Material	Thickness (feet)	Depth (feet)
As above but without clay and with macrofossil molds.	5	149
Becoming calcilutitic (marly) with much sand.	1	150
Sand, quartz, grayish yellow green, fine to coarse, calcareous and clayey.	8	158
Clay, grayish yellow green, very sandy and silty, tough, hard with calcareous streaks.	4	162
Calcilutite, pale orange, sandy, very hard and dolomitic, dense.	0.5	162.5
Clay, as 158-162' with 3-inch calcilutite zone at 174.5', grades into sand below.	13	175.5
Sand, quartz, grayish yellow green, very fine to fine, clayey, becoming phosphoritic at 187', has few calcilutite pebbles throughout. (182-187' - no sample).	21.5	197
Dolomite, pale orange, dense, hard, very slightly moldic, with sand pockets and seams.	4	201
Sand, quartz, pale greenish yellow, very fine to fine, very calcareous (dolomitic), firm.	11	212
Calcilutite, pale orange, sandy, clayey, firm.	1	213
No sample.	13	226
Clay, very pale orange, sandy, very marly, calcilutite.	1	227
Sand, quartz, greenish yellow, fine to medium, clayey.	2	229
Calcilutite, yellowish gray, very finely sandy, clayey, and contains abundant oyster shell fragments.	8	237

Material	Thickness (feet)	Depth (feet)
Impure calcilutite, yellowish gray, medium hard, sandy, very clayey from 250-251 feet.	15.5	252.5
Clay, brownish gray, sandy, waxy, with abundant small fragments of calcilutite throughout.	6.5	259
Dolomite, pale orange, hard, dense, slightly moldic and clayey, dark greenish gray (appears clay has filled cavities in dolomite).	5	264
Impure calcilutite, pale orange, sandy, very clayey, soft.	6	270
Sand, quartz, medium light gray, very fine to medium, clayey with fragments of calcilutite.	1	271
Clay, dark greenish gray, sandy, phosphoritic, soft to mediumly firm, with up to 3 inches of calcilutite fragments.	2.5	273.5
Dolomite, as 259-264'.	0.5	274
Impure calcilutite, pale orange, very sandy and soft.	4	278
Calcilutite, very pale orange, very sandy, (fine to very coarse), soft.	2	280
Sand, quartz, greenish gray, fine to coarse, very clayey with few fragments of calcilutite, poor recovery, grading into clay below.	10	290
Clay, greenish gray, very sandy, waxy, phosphoritic.	3	293
Impure calcilutite, yellowish gray, very sandy, and clayey and abundant oyster shell fragments in lower 3 feet.	3	296
Sand, quartz, dark greenish gray, fine to coarse, very clayey and calcareous in zones.	5	301

Material	Thickness (feet)	Depth (feet)
As 293-296' and contains oyster shell fragments in lower 3 feet.	4	305
Calcilutite, yellowish gray, very soft, mediumly sandy getting more coarse grained and clayey at base.	7	312
Calcilutite, light gray, very hard, mediumly sandy, partially recrystallized, fossiliferous.	2	314
Calcilutite, light greenish gray, soft, sandy (moderate to coarse), slightly clayey.	8	322
No sample.	5	327
Sand, quartz, greenish gray, fine to medium, very clayey, few hard calcilutite fragments, grades into below, lower 2 inches has macrofossiliferous fragments.	1.5	328.5
Impure calcilutite, light greenish gray, very sandy (fine to coarse), partially recrystallized slightly dolomitic, clayey.	3.5	332
Calcarenite, light gray, very sandy, partially recrystallized, fossiliferous, riddled with solution cavities filled with clay.	1.5	333.5
Calcilutite, light olive gray, very sandy (fine to granule), very soft, clayey, upper two feet has macrofossiliferous fragments.  Progressively downward increase of fragments of hard calcilutite fragments or conglomerate.	18.5	352
Dolomite, yellowish gray, sandy (fine to medium) increase downward hard, very finely crystalline, moldic porosity, conglomeratic, <u>Sorites</u> species.	4	356
Dolomite, light olive gray, hard, micromoldic, very finely crystalline, some voids filled with light green clay.	13.5	369.5

Material	Thickness (feet)	Depth (feet)
Calcilutitic dolomite, yellowish gray, very micromoldic (both micro and macrofossils), brittle, hard, many <u>Sorites</u> species.	3	372.5
Calcilutite, very pale orange, soft to hard, slightly finely sandy, very dolomitic, very finely crystalline.	4.5	377
As 369.5-372.5'.	6	383
As 372.5-377'.	1	384
As 369.5-372.5'.	8.5	392.5
Dolo-silt, yellowish gray, very finely crystalline, very slightly finely sandy, medium hard, dense.	3.5	396
No recovery.	4	400
As 352-356'.	6	406
Dolo-silt, as 392.5-396', more sandy (fine to coarse) with some fragments (up to 3 mm) of hard dolomite toward base of interval.	29	435
Clay, light greenish gray, very silty to sandy, very calcareous throughout and marly at 436-437'.	4	439
Calcilutite, very pale orange, sandy, has trace of dark sand size mineral, and has granule size fragments of dolomite 440-447', slightly dolomitic, slightly clayey.	12	451
Calcarenite, pale orange, sandy, partially recrystallized, dolomitic, sandy, brittle, very micro and macrofossiliferous, moldic.	3	454
Silt, quartz, light greenish gray, sandy, calcareous, grades into bed below.	3	457
Calcilutite, very pale orange, sandy, moderately soft to hard, slightly dolomitic, slight moldic porosity.	8	465
No sample.	10	475

## 181 Florida Bureau of Geology (Wall #2) Core Hole (W-7458)

Location, lat. 30°32'25", long. 84°46'45", in NE'4NW 4SW 4, sec. 30, T. 2 N., R. 5 W., about 2 mi southwest Greensboro (Sycamore); Driller, Florida Bureau of Geology; Date drilled, July 1965; Depth, 462 ft; Aquifer, Floridan; Land-surface altitude, about 265 ft. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
and, quartz, brownish gray, fine to coarse, loose, organic stained (soil profile).	3	3
and, quartz, dusky yellow at top grading to yellowish gray at base, fine to coarse, loose, contains less than one percent of dark heavy mineral.	5.5	8.5
and, quartz, mottled yellowish gray-pale reddish brown-light yellow brown, fine to very coarse, moderate amount of clay as matrix and laminae (kaolin), dark mineral as above.	10.5	19
and, quartz, light yellow brown, fine to coarse, (mostly fine to medium) with some pea gravel, moderate clay as matrix, dark mineral as above.	2.5	21.5
and, light gray with mottled and cross-bedded zones that are reddish brown and yellowish brown, fine to coarse with some very coarse and pea gravel, clay as matrix increasing downward, dark mineral as above.		32
and, quartz, dark yellowish orange, medium to very coarse (some gravel), moderate clay matrix, dark mineral as above, grades into below.	7.5	39.5
lay, pale yellowish brown grading through grayish green to light olive black at base, moderately sandy (medium) throughout with sand pockets.	7	46.5
lay, as above but grayish green and becoming more sandy (appears poorly bedded).	1.5	48
<pre>lay, light grayish green (slightly mottled),   very sandy (could be very clayey sand),   phosphoritic.</pre>	5	53

Material	Thickness (feet)	Depth (feet)
Clay, grayish green at top grading to olive black at base, less sandy than above and becoming less sandy downward.	3	56
Clay-sand, light grayish green, thin bedded- cross bedded, becoming very phosphoritic, less clayey downward.	8.5	64.5
Sand, quartz and phosphorite, thin bedded with clay, grayish green.	1	65.5
Clay, olive green, sandy, phosphoritic, sub-bedded with sand.	2.5	68
Sand, quartz and phosphorite, light olive gray, loose, cross-bedded and thinly bedded with a gray, waxy clay.  Abrupt change with bed below.	17	85
Clay, greenish gray, silty to medium sandy, phosphoritic, waxy.	4	89
No sample.	3	92
Sand, quartz, olive gray, silty, very fine to fine, some phosphorite, very macrofossiliferous.	1	93
No sample.	3	96
<pre>Impure Calcilutite, yellowish gray, many frags of macrofossils, sandy, slightly phosphoritic, clayey.</pre>	2.5	98.5
Silt, quartz, dark greenish gray, sandy, phosphoritic has sand and phosphorite pockets, clayey, medium hard, macrofossils throughout but not abundant.		102.5
Impure calcilutite, light olive gray, thinly bedded with silt, finely sandy, clayey.	9.5	112
Impure calcilutite, light greenish gray, clayey, slightly sandy and phosphoritic, soft to medium hard.	20.5	132.5

Material	Thickness (feet)	Depth (feet)
Sand, quartz, gray, slightly calcareous, fine to coarse, phosphoritic, soft to medium hard, clayey, becoming more calcareous toward base.	9.5	142
Silt, dark green, very sandy, calcareous, clayey, soft to medium hard.	9.5	151.5
Calcilutite, pale yellowish gray, slightly to very abundantly sandy, clayey with clay occurring throughout as blebs.	7.5	159
Silt, dark green, very sandy (some zones are silty sand) with 6-inch zone of sandy calcarenite at 165 feet.	8	167
Clay, brown gray to dark greenish gray, silty-sandy, soft, becoming calcareous at 177 feet.	12	179
Sand, quartz, light greenish gray, clayey, soft.	1.5	180.5
No sample.	3	183.5
Calcilutite, very pale orange, very sandy, hard, macrofossil molds and casts, moldic porosity.	4.5	188
Silt, pale orange, very sandy, slightly calcareous, soft.	2	190
Sand, light greenish gray, fine to coarse, slightly silty, becoming calcareous downward.	6	196
Calcilutite, light gray, sandy (medium to coarse), chalky.	16	212
Calcilutite, pale orange, sandy (fine to medium), soft, clayey, dolomitic.	4	216
Sand, quartz, olive green, calcareous in upper foot, clayey, very fine to medium.	11	227
Impure calcilutite, gray, medium hard, sandy, fossil, with very sandy and/or clayey zones.	3	230

Material	Thickness (feet)	Depth (feet)
Calcilutite, pale orange, sandy, soft, clayey, dolomitic.	2	232
Sand, olive green, calcareous, few macrofossil, fine to medium, silty and clayey.	4	236
Calcilutite, pale orange, soft to medium hard, very macrofossiliferous, clayey.	5	241
Clay, dark olive green, slightly sandy, soft.	3.5	244.5
Calcilutite, very pale orange, sandy, clayey, fossiliferous, soft to medium hard.	15.5	260
No sample.	3	263
Sand, quartz, greenish gray, very fine to medium, silty and clayey, calcareous at 204 feet and 267-269'.	13	276
Calcarenite, pale orange, sandy, medium hard to hard, fossiliferous (algal pisolites) clayey.	4	280
Sand, dark greenish gray, silty, calcareous, oyster shell abundant near top, clayey and algal pisolites abundant near base.	9	289
Calcilutite, yellow gray, sandy, soft to medium hard, dolomitic, slightly fossil.	3.5	292.5
Calcilutite, gray to yellow gray, soft to hard, sandy, brecciated or conglomeratic, moldic porosity, dolomitic.	10.5	303
Calcilutite, yellow gray, silty to finely sandy, very dolomitic, becoming more silty toward base.	8	311
Dolomite, yellow gray, calcareous toward top, more clayey toward base, silty texture, slightly finely sandy (conglomeratic 357-363'; 372-377'), soft to medium hard.	77	388
Calcilutite, yellow gray, medium hard, fossiliferous, moldic porosity, algal pisolites, sandy, brecciate	12 ed.	400

Number 181 (Continued)

Material	Thickness (feet)	Depth (feet)
Calcilutite, yellow gray, very dolomitic, finely sandy, very clayey and silty (becoming more clayey and silty in zones than calcareous).	23	423
Calcarenite, light gray, very fossil, very moldic, very dolomitic, sandy, soft to hard.	7	430
As 400-423'.	5.5	435.5
Calcarenite, pale orange, hard, with solution holes filled with softer very fossil calcilutite sandy.	9.5	445
Calcilutite, very pale orange, soft to medium, sandy, some solution holes clayey, dolomitic.	17	462

## 184 C.E. Prince and W.B. Munroe (W-6217)

Location, lat. 30°32'30", long. 84°33'40", in NE4NW4SW4, sec. 29, T. 2 N., R. 3 W., on Ermine M. Owenby Farm about 2.5 mi southeast of Quincy (Quincy); Driller, B & N Drilling Co.; Date drilled, Feb. 1963; Drilling method, hydraulic rotary; Depth, 7,028 ft; Casing, 8-in to 487 ft, open hole 487 ft to 7,028 ft; Land-surface altitude, about 201 ft.

Material	Thickness (feet)	Depth (feet)
No samples.	50	50
Limestone, yellowish gray to light gray, crystalline, high recrystallization, moderately hard, moderate porosity- moldic, foraminifera (Sorites sp.), echinoid spines, fish teeth, gastropod, shell fragments; sand, angular to rounded, medium to coarse, (10-15% sand); pyrite.	10	60
Limestone, as above, clay, greenish gray, dense, slightly sandy.	10	70
Limestone, as above except increase in porosity and biogenic; Sorites sp. prevalent; clay, medium dark gray to light olive gray, sandy, dense, (5-10% clay).	10	80
Limestone, as above, bryozoa, Archaias sp., 75% limestone; sand, medium to very coarse, angular to subrounded; clay as above also pale yellowish orange; clay content increases downward.	20	100
Clay, white, light olive gray to dark gray, dense, sandy, (70% clay); limestone and sand as above; pyrite.	20	120
Limestone, as above, except very hard and low porosity (90% limestone); clay, greenish gray to olive gray; sand, fine to coarse; limonite; pelecypod; Sorites sp.	7, 30	150
Limestone, white to yellowish gray, micritic, very sandy, moderate porosity-intergranular, moderated hard; sand, fine to coarse, angular to rounded; clay, light brown to greenish gray, sandy; limonite.	10 Ly	160

Material	Thickness (feet)	Depth (feet)
Limestone, white to light gray, crystalline to micritic, approaching sucrosic, low porosity, moderately hard, sandy, fossiliferous- Sorites sp; cement becoming very siliceous downward.	70	230
Limestone, yellowish gray to light gray, micritic, very sandy, moderately porous-moldic, intergranul biogenic, moderately hard, fossiliferous- Sorites sp., shell fragments; dolomite, light olive gray, crystalline, very hard, low porosity; sand, fine to coarse, mostly medium; pyrite; limestone porosity increases downward.	50 ar,	280
Limestone, white to yellowish gray, micritic, biogenic high porosity-moldic, moderately hard, foraminife shell fragments, trace of dolomite.	-	330
Limestone, as above; dolomite, light olive gray, crystalline, moderately hard, moderate porosity; sand, fine to coarse mostly medium, angular to subrounded, (10% sand), interval 350-360 ft contains clay, white.	30	360
Dolomite, light olive gray, crystalline, low porosity, moderately hard, moderate textural alteration; limestone, white to yellowish gray, micritic,	10	370
moderate porosity-moldic, shell fragments. Limestone, as above, except very sandy; dolomite as above; sand, fine to coarse mostly medium (10% sand).	10	380
No sample.	10	390
Limestone, white to gray, micritic, high porosity- moldic, moderately hard, sandy, shell fragments; dolomite, as above; sand, as above, less than 5%; trace of clay, olive black.	80	470
Dolomite, light olive gray, crystalline, high porosity- moldic, moderately hard, moderate textural alteration; limestone, as above; sand, fine to medium, angular to subrounded; clay, white, dense.	- 10	480
No samples.	30	510

Material	Thickness (feet)	Depth (feet)
Limestone, white, crystalline, biogenic, very hard, low porosity; sand, white to yellowish orange, fine to coarse mostly medium, angular to subrounded, (40% sand); clay, light brown; carbonized wood particles; iron oxides.	10	520
Sand, fine to coarse mostly medium, clear to pale orange, argillaceous; clay as above, 10%; limestone as above; iron oxide pebbles; clay content increases downward.	20	540
Limestone, white, crystalline, biogenic, very hard, low porosity; sand, as above, 25%; calcite; clay, light brown, content increases downward.	90	630
Limestone, white, crystalline, biogenic, micritic, moderately hard, high porosity, fossiliferous-bryozoa, echinoid spines, shell fragments, foraminifera (Operculinoides sp?); dolomite, yellowish gray, crystalline, sucrosic, moderate porosity, moderately hard; sand, medium to coarse clay, light brown, sandy. Decrease in sand and clay content downward; limestone becoming highly fossiliferous downward.	100	730
Limestone, white, as above, 60%; dolomite, crystalline, sucrosic, moderate porosity, moderately hard; limestone, light gray to greenish gray, finely granular, glauconitic, low porosity, moderately hard; peat.	80	810
Limestone, white, granular, micritic, biogenic, high porosity, moderately hard, fossiliferous—(Operculinoides sp.); dolomite, as above; glauconitic limestone, as above; chert, 10%.	90	900
Limestone, yellowish gray, biogenic, micritic, soft, moderate porosity, bryozoa stems; dolomite, as above; chert; quartz.	930	1830
Samples not described.	5198	7028

185 University of Florida Agricultural Research and Education Center (W-1990)

Location, lat. 30°32'36", long. 84°35'45", in NW4SW4NW4, sec. 25, T. 2 N., R. 4 W., about 3 mi south of Quincy. (Quincy); Driller, Terry-Rosa Hardware Co., Date drilled, May 1949; Drilling method, cable tool; Depth, 630 ft; Casing, 6-in to 443 ft; Aquifer, Floridan; Land-surface altitude, 247.5 ft; Water level, 175 ft. below land surface on May 5, 1949; Chloride concentration, 2.0 mg/L on June 1, 1976. Logged to 281 ft by J. W. Yon, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, 1.0 to 0.125 mm., round to angular, clear to frosted, argillaceous (rust-brown).	25	25
Clay, olive to rust-brown, arenaceous, 0.5 to 0.125 mm., round to angular, clear to frosted, waxy.	25	50
Clay, light-olive to light-gray, 0.5 to 0.125 mm., subrounded to angular, clear, very calcareous, shell fragments present. Foraminifera present, may be montmorillonitic. Rotalia beccarii.	50	100
Sand, 0.5 to 0.125 mm., subrounded to angular, clear, argillaceous cream; limestone, cream to gray, finely granular, slightly soft, porous in part, finely arenaceous, very argillaceous. Foraminifera and shell fragments present. Rotalia beccarii, Elphidium sp.	20	120
Limestone, cream to gray, finely granular, slightly soft, porous, finely arenaceous, very argillaceous, shell fragments present. Clay may be montmorillonitic.	5	125
Clay, olive, arenaceous, 0.5 to 0.125 mm., angular, clear, calcareous, may be montmorillonitic. Fragments of shell present.	70	195

Material	Thickness (feet)	Depth (feet)
Clay, light-gray, finely arenaceous, 0.5 to 0.125 mm., subrounded to angular, clear, very calcareous, may be montmorillonitic. Shell fragments present.	35	230
Limestone, cream, finely granular to crypto- crystalline, hard, porous, slightly argillaceous; dolomite, tan to gray, finely sucrosic, hard, dense.	26	256
Limestone, cream, cryptocrystalline, hard, porous in part, moldic, fossiliferous, Rotalia mexicana.	25	281
Limestone, grayish yellow green to light gray, micritic, moderate porosity, soft to medium hard, chalky, phosphoritic, mica; no fossils.	21	302
Limestone, medium yellowish gray, micritic, moderate porosity, soft to very hard; chalky, shell fragments; clay, greenish gray, dense; sand (quartz), clear, angular to subangular, coarse.	25	327
Marl, yellowish white to bright grayish yellow green, sandy, chalky, calcareous, clayey; limestone, light gray, micritic, hard, dense, sandy.	43	370
Marl, grayish yellow green, sandy, calcareous, silty; dolomite, very pale orange, crystalline, low porosity, high textural alteration.	40	410
Marl, grayish white, chalky, sandy, calcareous, silty; limestone, grayish white, micritic, medium hard, low porosity; no fossils; carbonized fragments.	13	423

Material	Thickness (feet)	Depth (feet)
Marl, yellowish gray, chalky, sandy, calcareous, soft, clayey to silty.	73	496
Limestone, white, micritic, crystalline, soft to medium hard, moderate porositymoldic; dolomite yellowish gray to medium light gray, crystalline biogenic, sandy, very hard, moderate porositymoldic, moderate textural alteration.		539
Dolomite, yellowish gray, as above; limestone, yellowish gray to medium gray, micritic,, medium hard, low to moderate porosity; shell fragments; sand, fine to medium, clear to frosted, subrounded.	91	630

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 186 Sun Oil Co. (W-3776)

Location, lat. 30°32'41", long. 84°47'02", in center of NE4NE4, sec. 25, T. 2 N., R. 6 W., about 3 mi southwest of Greensboro (Sycamore); <u>Driller</u>, Sunnyland Contracting Co.; <u>Date drilled</u>, Jan. 1956; <u>Depth</u>, 4,218 ft; <u>Casing</u>, 10-in to 708 ft, open hole 708 ft to 4,218 ft; <u>Land-surface altitude</u>, about 262 ft. Logged by J.W. Yon, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
No samples.	75	75
Clay, greenish gray to dark green, waxy, silty, sandy; contains abundant shell fragments and pea size very rounded phosphorite grains.  Streblus beccarii.	45	120
Limestone, white to gray, finely crystalline, hard, very sandy, silty, argillaceous.  Soritessp. and shell fragments.	50	170
Limestone, same as 150-170', but cream to white.	40	210
Limestone, same as 190-210', with dark gray, very crystalline, moldic, sandy limestone. <u>Archaias floridanus</u> .	60	270
Limestone, same as 250-270', dolomite, tan to gray, very finely sucrosic, hard, slightly sandy.	20	290
Dolomite, brown, very finely sucrosic, hard, good moldic porosity, slightly sandy.	20	310
Dolomite, brown, crypto-crystalline, hard, dense, sandy.	20	330
Dolomite, same as 310-330', but white and moldic in part.	20	350
Dolomite, cream, very finely sucrosic, hard, good moldic porosity, sandy.	80	430
Limestone, light cream, chalky to finely crystalline, hard, moldic porosity, blue-green clay dissiminat throughout limestone matrix. Archaias floridanus Sorites sp.; limestone, cream, finely crystalline slight moldic porosity, abundant molds of milioli	sp.,	470

Material	Thickness (feet)	Depth (feet)
Dolomite, dark brown to light brown, finely sucrosic, hard, moldic and granular porosity.	20	490
Limestone, cream, finely crystalline, hard, fragmental granular porosity, fossiliferous.  Abundant Lepidocyclinas. Lepidocyclina cf. parvula crassicosta.	60	550
Limestone, tan, finely crystalline, dolomitic, hard, fragmental granular porosity, fossiliferous. <u>Heterostegina</u> sp.	60	610
Dolomite, brown, finely sucrosic, hard, granular porosity, black spots in dolomite matrix.	100	710
Limestone, dark, cream, abundant calcite crystals held in a chalky matrix, soft, granular porosity glauconitic, fossiliferous.	20	730
Limestone, same as 710-730'. Eponides jacksonensis, Robulus gutticostatus var. cocoaensis.	40	770
Limestone, same as 750-770'. <u>Eponides jacksonensis</u> . <u>Robulus cf. alto limbatus</u> .	40	810
Limestone, same as 770-810', becoming glauconitic.	60	870
Limestone, same as 810-870'. Robulus gutticostatus var. cocoaensis	34	904
Limestone, dark cream to light tan, silty slightly argillaceous, fossiliferous with Globigerina sp. Bulimina jacksonensis. Dark brown chert.	251	1155

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 189 Sun Oil Co. (W-4608)

Location, lat. 30°32'45", long. 84° 36'30", in SW4NE4NW4, sec. 26, T. 2 N., R. 4 W., west of State Highway 267 and about 2.5 mi southwest of Quincy (Quincy); Driller, Sun Oil Co.; Date drilled, Apr. 1958; Depth, 290 ft; Aquifer, Floridan; Land-surface altitude, about 147 ft. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Clay, yellowish gray, waxy, sandy.	10	10
Limestone, white, argillaceous, chalky, sandy.	10	20
Limestone, white, very finely crystalline to chalky, slightly argillaceous, finely sandy.	10	30
Clay, very light gray, slightly finely sandy, calcareous, waxy.	10	40
Marl, soft, very finely sandy.	20	60
Limestone, white, less argillaceous, very finely sandy, soft.	10	70
Same but light gray in color and increase of waxy gray clay.	10	80
Clay, light olive gray, finely sandy with limestone fragments, waxy, fragments micaceous.	10	90
Limestone, white, very finely crystalline, slightly sandy; clay, white, hard (almost clayston	10 ne).	100
Limestone, dark gray, very carbonaceous, sandy, argillaceous; medium sandy, gray, argillaceous with leaf impressions.	10	110
Limestone, white, very finely crystalline, silty to finely sandy, slightly argillaceous.	10	120
Same and more finely sandy; clay, gray, sandy, waxy; becoming chalky downward.	50	170
Limestone, very light gray, chalky, sandy, argillaceous	s. 20	190

Number 189 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, pale yellowish brown, dense, very finely crystalline, slightly sandy; becoming argillaceous, chalky and softer downward.	80	270
Limestone, white, very finely crystalline to chalky, silty to sandy, argillaceous.	20	290

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

# 192 Sun Oil Company (W-4607)

Location, lat. 30°32'50", long. 84°34'40", in SE4NW4NW4, sec. 30, T. 2 N., R. 3 W., about 2 mi south of Quincy (Quincy); Driller, Sun Oil Co.; Date drilled, Apr. 1958; Depth, 290 ft; Aquifer, Floridan; Land-surface altitude, about 174 ft. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, grayish orange, fine to coarse unsorted in waxy, clay matrix.	10	10
Clay, dark yellowish orange, sandy, waxy.	10	20
Clay, dusky yellow, sandy, waxy.	10	30
Clay same and very finely sandy in clay matrix.	10	40
imestone, yellowish gray, sandy, argillaceous, very finely crystalline to chalky.	10	50
imestone, yellowish gray, sandy, slightly argillaceou very finely crystalline to chalky.	ıs, 10	60
imestone same, some fragments with more clay and grayish color.	10	70
imestone same with very sandy streak.	10	80
ame and appears to be more argillaceous.	30	110
imestone, white to light gray, dense, very finely crystalline, sandy hard.	10	120
ame with few fragments being very chalky.	10	130
imestone, white to light gray, very finely crystalline to chalky, sandy, hard.	10	140
ame with increase in clay.	60	200
imestone, medium, light gray, slightly sandy, moldic, very finely crystalline, hard.	20	220
ame but yellow gray in color.	10	230

Number 192 (Continued)

Material	Thickness (feet)	Depth (feet)
Same and becoming chalky.	10	240
Limestone, very light gray, very finely crystalline to chalky sandy, some fragments lacy appearing.	10	250
Limestone, yellowish gray, very finely crystalline, slightly sandy; becoming harder downward.	40	290

## 193 C.E. Prince and William B. Munroe (W-6143)

Location, lat. 30°32'50", long. 84°37'00", in NE4NE4NE4, sec. 27, T. 2 N., R. 4 W., west of State Highway 267 and about 2.5 mi southwest of Quincy (Quincy); Driller, B. & N. Drilling Co.; Date drilled, Dec. 1962; Depth, 4,196 ft; Casing, 8-in to 516 ft, open hole 516 ft to 4,196 ft; Land-surface altitude, about 197 ft.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted with pale orange stain, argillaceous, medium to coarse mostly coarse, angular to rounded; trace of limestone, very light gray to light gray, micritic, moderately hard, low porosity, sandy; phosphorite; carbonized wood fragments.	30	30
Sand, clear to frosted, with pale orange argillaceous stain, medium to coarse mostly medium, angular to subrounded; trace of greenish clay; phos- phorite; iron oxide.	110	140
Sand, as above; marl, white, sandy, soft, phosphatic, calcareous; clay, light olive gray, dense, (5% clay); trace of limestone, light gray, crystalline, slightly sandy, low porosity, dolomitic; iron oxide, carbonized wood fragments	30	170
Sand, fine to medium mostly medium, angular to subangular, (70% sand); limestone, yellowish gray, micritic, very sandy, moderately hard, moderate porosity-moldic, fossiliferous - shell fragments; dolomite, yellowish gray, crystalline very hard, low to moderate porosity, sucrosic; carbonized wood fragments.	60	230
Sand, fine to medium, mostly medium, angular to subrounded, (95% sand); limestone, as above; trace of clay, white to greenish gray; sand content decreases downward to 60%.	90	320
Limestone, yellowish gray, crystalline, sucrosic, dolomitic, very hard, low porosity, few poorly preserved shell fragment; sand, as above, 50%; sand content decreases downward.	90	410

Material	Thickness (feet)	Depth (feet)
Limestone, yellowish gray to light gray, sandy, moderate porosity-moldic, moderately hard, shell fragments, dolomitic limestone, as above; sand, fine to medium, 10%.	120	530
Clay, pale orange, sandy, dense.	30	560
Limestone, white to light gray, crystalline, very sandy, low to moderate porosity - moldic, fossiliferous-shell fragments, bryozoan, foraminifera.	60	620
Limestone, white, biogenic, moderately hard, moderate to high porosity, very fossiliferous-foraminifera ( <a href="Lepidocyclina">Lepidocyclina</a> sp., <a href="Camerina">Camerina</a> sp.); dolomite, light olive gray, crystalline, sucrosic, moderate porosity, very hard.	210	830
Limestone, yellowish gray, crystalline, sucrosic, chalky, moderate porosity; chert; bryozoa stems, foraminifera; sand, medium to coarse mostly medium, argillaceous, angular to subrounded; carbonized wood fragments.	180	1010
Samples not described.	3186	4196

198 Florida Bureau of Geology (Owenby No. 1) Core Hole (W-7472)

Location, lat. 30°33'15", long. 84°31'40", in SE4NW4SE4, sec. 19, T. 2 N., R. 3 W., west of State Highway 268 and about 2.5 mi southeast of Quincy. (Quincy); <u>Driller</u>, Florida Bureau of Geology; <u>Date drilled</u>, Oct. 1965; <u>Depth</u>, 472 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, about 255 ft. Logged by C. W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, brownish black, very fine to coarse, loose, contains some organic material.	1	1
Sand, quartz, light brown, fine to coarse, progressively more clayey toward base, becoming thin bedded to laminated toward base.	3	4
Clay, light brown to gray, thin bedded to laminated, non-sandy.	6	10
Clay, light gray mottled light brown to moderate yellowish brown, slightly sandy, massive to thin-bedded.	2.5	12.5
Clay, grayish orange, sandy, thin bedded to laminated, some cross-bedding.	3	15.5
Sand, quartz, light red, clayey, thin bedded to laminated, some cross-bedding.	7.5	23
Sand, quartz, dark yellowish orange, fine to coarse, loose, coarser toward base, slightly clayey, sandstone (clay cemented sand) clusters near base.	13.5	36.5
No sample.	1	37.5
Clay, dark yellowish orange.	0.5	38
Sand, quartz, grayish orange, fine to coarse, clayey (as matrix and as laminae), some sandstone pebbles as 23-36.5'.	5.5	43.5

Material	Thickness (feet)	Depth (feet)
Clay, very pale orange, laminated, slightly sandy (becoming very sandy at base).	0.5	44
Sand, quartz, very pale orange, fine to coarse, with clay as matrix and laminae.	2.5	46.5
No sample.	1	47.5
Sand, quartz, very pale orange, fine to coarse, slightly clayey, color banded as though thinly bedded, loose.	2	49.5
Sand, quartz, very pale orange to grayish orange, clay as matrix and laminae (6-inch clay bed at 51-51.5 feet), sandstone pebbles as above.	2	51.5
No sample.	1	52.5
Sand, quartz, grayish orange to light brown, fine to coarse, with clay as matrix, sandstone as 1-inch beds that cut diagonally through core, abundant dark gray organic blebs (clay laminae in last 6 inches).	5	57.5
Clay, yellow gray to dusky yellow, waxy, slightly sandy throughout and with several sand laminae, blocky.	4.5	62
Sand,, quartz, pale orange to yellow gray, clayey (as matrix and as thin beds), phosphatic, organic blebs, abundant sponge spicules at 68.5 feet.	7	69
Clay, yellow gray, very sandy (throughout and as thin beds), organic specks, waxy.	8	77
Sand, quartz, yellowish gray to brown, clayey, fine to coarse phosphoritic, organic in zones.	3	80
No sample.	2	82

Material	Thickness (feet)	Depth (feet)
Clay, yellowish orange, sandy, waxy, calcareous, phosphatic; the more calcareous zones are very pale orange in color. At 84 feet becomes less sandy and calcareous and olive in color, and at 86.5 becomes medium dark gray in color.	8	90
farl, gray at top to very pale orange at base, progressively more calcareous toward base, sandy.	4	94
No sample.	4	98
Calcilutite, pale orange, partially recrystallized, moldic porosity, hard, dolomitic, macrofossiliferous (molds), sandy.	7	105
Marl, pale orange, soft to medium hard, sandy, macrofossiliferous.	3	108
Calcilutite, very light gray, hard, sandy, macrofossiliferous near top but decreasing downward, partially recrystallized, dolomitic.	6	114
Calcilutite, as above, light gray, conglomeratic, increases in silt and fine sand downward.	1	115
Gilt, quartz, greenish gray, very sandy and clayey, very slightly calcareous, grades into bed below with 6-inch conglomeratic or beachrock zone.	3.5	118.5
clay, light yellowish gray, very slightly calcareous, sandy-silty, containing angular fragments of clay and calcareous clay.	3.5	122
No sample.	4	126
s 118.5-122'.	4	130
Calcilutite, very pale orange, sandy, calcareous, medium hard, partially recrystallized, moldic porosity, macromolds filled with green waxy clay, grades into clay below.	1	131

Material	Thickness (feet)	Depth (feet)
Clay, light greenish gray, silty, with few laminae of sandy calcilutite. Shrinks perceptably when dry (montmorillonite).	8	139
No sample.	3	142
Sand, yellowish gray, very fine to fine, clay matrix, has trace of heavy mineral, becoming slightly calcareous at 158 feet. Total interval variable in clay content. Few medium coarse sand size grains toward base.	32	174
Clay, olive gray, sandy (fine to coarse), very calcareous, waxy, grades into bed below.	1	175
Calcilutite, very pale orange, conglomeratic, clayey, sandy (fine to coarse), macrofossiliferous, hard to soft, grades into bed below.	5	180
Calcilutite, very pale orange, sandy, macro- fossiliferous, partially recrystallized, moldic porosity.	10	190
Silt, light green, slightly calcareous.	0.5	190.5
Calcilutite, very pale orange, very clayey, sandy, partially recrystallized, soft to hard.	4.5	195
Calcilutite, very pale orange, partially recrystallized, moldic porosity, sandy, top 8 inches conglomeratic, grades into beds below.	2	197
Marl, very pale orange, sandy, very macrofossiliferous, granular, grading into silt below.	6.5	203.5
Silt, olive green, very clayey, sandy.	0.5	204
Calcarenite, pale orange, very micro and macrofossiliferous, sandy, porous, medium hard.	10	214

Material	Thickness (feet)	Depth (feet)
Silt, yellowish gray, clayey, very macrofossiliferous (oyster bed), calcareous at top and base.	9	223
Calcilutite, very pale orange, sandy (fine to coarse) clayey, soft macrofossiliferous, grades into bed below.	8.5	231.5
Sand, dark greenish gray, fine to coarse, clayey, with calcareous zones.	2.5	234
Calcilutite, very pale orange, soft, sandy (coarse to very coarse), silty, clayey, some oyster fragments.	9	243
Calcarenite, very pale orange, soft (friable), sandy (fine to coarse), very microfossili-ferous (micro coquina of Sorites).	3	246
Marl, yellowish gray, soft, very sandy (fine to coarse), calcareous.	2	248
Calcilutite, very pale orange, very sandy (fine to coarse), clayey, soft to medium hard, partally recrystallized.	2	250
Calcilutite, very pale orange, medium hard, very sandy (medium to coarse), some macrofossil-iferous fragments, has hard to soft zones, hard zones, partially recrystallized, grades into bed below.	7.5	257.5
Silt, yellowish gray at top to greenish gray toward base, sandy, (fine to coarse), clayey.	3	260.5
Silt, yellowish gray, clayey and very calcareous, some macrofossiliferous fragments.	5.5	266
Calcilutite, greenish gray, very clayey, with small lenses of dark greenish gray (organic) clay, grading into bed below.	0.5	266.5

Material	Thickness (feet)	Depth (feet)
olomite, light olive gray, hard dense, from 266.5-277 conglomeratic, very moldic, sandy, from 277-279 a clay zone.	15.5	282
olomite, very pale orange, a doloclay texture, soft, slightly sandy.	3	285
s 266.5 - 277' conglomerate zone.	3	288
o sample.	4	292
oloclay, as 282-285'.	6.5	298.5
very moldic, sandy.	5.5	304
olomite, pale orange, sandy, moldic, hard, brittle, solution riddled and solution holes filled with doloclay as above, also dolomite occurs as conglomerate in doloclay zones.	41.5	345.5
olomite, yellowish gray, soft to medium hard, moldic, sandy.	10.5	356
oloclay, very light gray to very pale orange, lower three feet has very light greenish gray zones, sandy, soft.	9.5	365.5
olomite, yellowish gray, sandy (fine to coarse), hard, slightly moldic, conglomeratic in upper three feet.	6.5	372
polomite, yellowish gray, hard, sandy, very moldic.	10	382
and, quartz, yellowish gray, fine to coarse, calcareous matrix, firm.	1	383
olomite, as 372-382°.	12	395
lay, dark greenish gray, silty to slightly sandy, firm (poor recovery).	5	400

Material	Thickness (feet)	Depth (feet)
Calcilutite, yellowish gray, very sandy, slightly dolomitic, clayey.	1	401
Clay, as 395-400' (three inches recovery from 401-407), grades into bed below.	9	410
Dolomite, pale orange to yellowish gray, sandy, hard, moldic (first foot dense), brittle.	15	425
Doloclay, light olive gray, very sandy (more sand than doloclay in zones) firm.	2	427
Dolomite, yellowish orange, sandy, moldic, hard.	8	435
Oolomite, light olive gray, hard, dense, brittle, slightly moldic porosity.	7	442
Calcarenite, pale orange, partially recrystallized, very microfossiliferous, soft, chalky matrix.	7	449
Dolomite, as 435-442', cavity at 457-459'.	13	462
Calcarenite, yellowish gray, very dolomitic, soft to hard, partially recrystallized.	8	470
Calcarenite, very pale orange, soft to firm, partially recrystallized, slightly dolomitic, Lepidocyclina common.	2	472

#### 200 J. B. Godwin (W-6077)

Location, lat. 30°33'21", long. 84°28'50", in NE½NE½SE½, sec. 24, T. 2 N., R. 3 W., about 6.5 mi southeast of Quincy, north of U.S. Highway 90 (Havana South); Driller, Terry-Rosa Drilling Co.; Date drilled, Oct. 1962; Drilling method, cable tool; Depth, 411 ft; Casing, 4-in to 261 ft, open hole 261 ft to 411 ft; Aquifer, Floridan; Land-surface altitude, about 222 ft; Water level, 164.32 ft below land surface on Nov. 14, 1974; Chloride concentration, 8.5 mg/L on Nov. 14, 1974.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to coarse mostly medium, angular to subrounded, argillaceous; clay, grayish orange, sandy, dense, (25% clay); phosphorite, limonite, peat; no clay at bottom of section.	60	60
Limestone, white to yellowish gray, micritic, sandy moldic, moderate porosity, phosphatic, moderately hard, (75% limestone); clay, light gray to greenis gray, chalky, dense; sand, as above.	10 h	70
Clay, moderate yellowish brown, sandy, dense.	30	100
Sand, clear to frosted, fine to medium, angular to subangular, limestone, white to yellowish gray, micritic, sandy, moldic, moderately hard, moderate porosity, fossiliferous—echinoid spine, shell fragments; phosphatic; clay, greenish gray, 1%.	5	105
No samples.	65	170
Sand, clear to frosted, very fine to fine, angular, (85% sand); clay, greenish gray to moderate yellowish brown, sandy, dense; limestone, white to yellowish gray, micritic, sandy, moderate porosity—moldic, moderately hard; limestone content increases downward.	15	185
No samples.	15	200
Limestone, light gray to yellowish gray, micritic, moderately hard, sandy, few shell fragments; (80% limestone) sand, fine to coarse mostly medium, angular to subrounded; clay, greenish gray to moderate yellowish brown, sandy, dense; marl, yellowish gray, very sandy, calcareous, chalky, clayey.	20	220

Material	Thickness (feet)	Depth (feet)
Clay, greenish gray, very sandy; limestone and sand, as above.	10	230
Marl, greenish gray, calcareous, clayey, very sandy; limestone, pinkish gray, micritic, sandy, moderately hard, moderate porosity, shell fragments; sand, as above.	10	240
No samples.	40	280
Limestone, very light gray to medium light gray, micritic, sandy, moderately hard, low porosity, shell fragments; marl, greenish gray, calcareous, clayey; clay, greenish gray; sand, fine to coarse mostly medium; angular to subangular.	23	303
Dolomite, light olive gray to olive gray, crystalline, sucrosic, very hard, low porosity— intercrystalline; limestone, medium light gray, crystalline, very hard, moldic, shell fragments; sand, as above; clay, greenish gray, sandy; marl, white, chalky, calcareous at bottom.	22	325
Clay, dark greenish gray, dense, waxy; dolomite, as above, 10%; shell fragments, foraminifera; trace of sand.	5	330
Dolomite, light olive gray to olive gray, crystalline, sucrosic, very hard, low porosity; clay, as above 10%; shell fragments, trace of limestone, white, micritic, chalky, moldic.	2	332
No samples	38	370
Dolomite, brownish gray to olive gray, crystalline, sucrosic, very hard, moderate porositymoldic; limestone,, yellowish gray, micritic, sandy, moderately hard, low porosity, trace of sand at bottom.	41	411

#### 201 E. R. Smith (W-3577)

Location, lat. 30°33'22", long. 84°52'54", in SW4SW4NW4, sec. 19, T. 2 N., R. 6 W., 510 ft east of west line and 660 ft north of south line, about 8 mi southwest of Greensboro (Rock Bluff); Driller, Thompson Exploration Drilling Co.; Date drilled, May 1955; Depth, 4,022 ft; Casing, 8-in to 742 ft, open hole 742 to 4,022 ft; Land-surface altitude, about 239 ft. Logged by Sam Patterson, U.S. Geological Survey, (0-470 ft) and Chiuh Shan Chen, Florida Bureau of Geology, (450-1740 ft).

Material	Thickness (feet)	Depth (feet)
Sand and gravel, medium grained sand to fine gravel, most quartz is angular.	20	20
As above with some white clay (kaolin?) in clay skins and interstitual fillings.	10	30
Sand, medium to coarse, with some gravel; some clay like above, some sand cemented with iron oxide.	10	40
Sand, as above, with brownish gray clay (clay might be montmorillonite??).	10	50
Sand and gravel, bonded with white clay (kaolin?), a few brown and gray phosphate pellets.	10	60
Sand and gravel, minor quantities of brown clay, trace of phosphate pellets.	10	70
Missing.	10	80
Sand, mostly coarse to very coarse, subangular quartz.	10	90
As above; one phosphate pellet 1/8-inch diameter.	10	100
Sand, mostly coarse to very coarse, subangular quartz, a few small phosphate pellets.	20	120
Coarse to very coarse quartz sand, some sand cemented with carbonate a few black phosphatic fish teeth.	20	140

Material	Thickness (feet)	Depth (feet)
Coarse to very coarse quartz sand, a few chunks of carbonate cemented sand, no phosphate observed.	10	150
Coarse to very coarse quartz sand, minor carbonate cemented sand, trace of phosphate pellets.	10	160
As above; with some (10-20%) brownish gray clay.	20	180
Sand, mostly carbonate cemented, gray clay common; trace of phosphate.	10	190
Limestone and clay, light gray, limestone is very sandy, trace of phosphate.	20	210
Limestone, light gray, very sandy phosphatic.	10	220
Missing.	10	230
Dolomite, light brown, some light gray sandy limestone.	10	240
Limestone, light gray, very sandy, minor clay.	20	260
Sandstone, light brownish gray, carbonate cemented, fine to medium grained.	10	270
Limestone, light brownish gray, very sandy, fine to medium grained, a few shell fragments, with trace of dolomite.	40	310
Limestone, light brownish gray, very sandy.	10	320
Limestone, light gray, slightly sandy.	10	330
Limestone, light gray, very sandy.	40	370
Limestone, light gray, slightly sandy.	10	380
Dolomite and limestone; dolomite is light brown, limestone is light gray; some of limestone is sandy.	20	400

Material	Thickness (feet)	Depth (feet)
Dolomite, light brown crystalline; contains a little white limestone.	70	470
Dolomite, fine to medium crystalline, dark brown, rather porous, dolomitized fossils and fossil molds.	80	550
Highly fossiliferous limestone, fragmental, light brown, large forams rather common (Lepidocyclina Camerina, etc.)	30	580
As above, but microcrystalline and rather dense, large forams rather common.	30	610
Calcitic (10% of undolomitized fossils) dolomite, very fine crystalline, brown to dark brown, rather dense, partly dolomitized forams.	40	650
Dolomite, very fine crystalline, gray brown to dark brown.	125	775
Fossiliferous (fine fragments) limestone, finely fragmental, rather dense, light gray brown, well preserved fossils very rare.	95	870
Calcitic (20%) dolomite, very fine crystalline, rather dense, dark gray brown, brown-black chert fragments.	10	880
Fossiliferous (fine fragments) limestone, as above, the limestone is composed entirely of fine fossils fragments and rather soft.	130	1010
Calcitic (10%) dolomite, very fine crystalline, dark gray brown, rather dense.	10	1020
Limestone, rather dense, light brown, chalky like.	65	1085
Fossiliferous limestone, finely fragmental, rather porous, light gray brown, slightly glauconitic.	25	1110
Glauconitic, fossiliferous limestone, finely fragmental, light brown, slightly sandy (quartz and glauconite may be up to 5%)	100	1210

Material	Thickness (feet)	Depth (feet)
Slightly sandy (quartz and glauconite may be up to 5%) as above, but microcrystalline and few chert fragments.	45	1255
Highly glauconitic and sandy (20% of quartz and glauconite pellets) fossiliferous limestone finely fragmental, large, well preserved forams rare, finely fragmental to fragmental.	35	1290
Glauconitic and sandy (10%) of quartz sands and glauconite pellets) dolomite, fine crystalline, green brown to dark brown.	25	1315
Glauconite, sandy (10% of quartz sands and glauconitic pellets), fossiliferous limestone, fragmental, light brown, forams as Operculinoides, etc., rather common, rather dense and pure.	50	1365
Glauconitic, calcareous (20% as cement material) sandstone, fine to medium grained, light gray brown.	55	1420
Glauconitic, sandy (20%) fossiliferous (fragments) limestone.	20	1440
Glauconitic, sandy (10%) of quartz and glauconite fossiliferous limestone, fragmental, light brown.	260	1700
Glauconitic and sandy (20%), of quartz (15%), and glauconite (5%), dolomite, fine crystalline, dark brown.	40	1740

## 203 Florida Bureau of Geology (Rock Bluff) Core Hole (W-6611)

Location, lat. 30°33'28", long. 84°54'05", in NE4SE4NE4, sec. 23, T. 2 N., R. 7 W., about 8 mi southwest of Greensboro (Rock Bluff); <u>Driller</u>, Florida Bureau of Geology; <u>Date drilled</u>, April 1964; <u>Depth</u>, 298 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, 259.2 ft. Logged by J.W. Yon, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, fine to very coarse, subangular to subrounded, slightly clayey (very pale orange), slightly micaceous.	10	10
Sand, as above, some pea size gravel and larger; clay is grayish orange pink and moderate pink.	5	15
Sand, quartz, fine to very coarse, predominantly angular to subangular, some subrounded, very slightly clayey (very light gray).	35	50
Sand, as above, slightly clayey (dark gray) also contains fragments of microfossil material, a few fragments of macroshell material and pyrite and nodules of phosphorite.	5	55
Sand, as above, no macro or micro fossils present.	5	60
Sand, very fine to fine, some medium, angular to subangular, silty, very clayey (light olive gray), phosphoritic.	5.5	65.5
Clay, grayish olive, interbedded with fine sand, contains pyrite, phosphorite and pockets of sand.	4	69.5
Sand, quartz, very fine to fine, angular, clayey (pale greenish yellow), silty, phosphorite present, micaceous interbedded with pale olive sandy clay, becomes clayer toward bottom of sample.	6	75.5
Clay, pale olive to grayish green, very fine to finely sandy, pyritic, phosphoritic, micaceous interbedded with very fine to fine sand.	2	77.5

Material	Thickness (feet)	Depth (feet)
Sand, quartz, very fine to coarse, angular to subangular, clayey (light olive gray), very phosphoritic.	0.5	78
Sand, quartz, very fine to coarse, angular to subrounded, slightly clayey (light olive gray), phosphoritic (varicolored); pyrite.	15	93
Clay, medium bluish gray and light olive gray, waxy, finely sandy, contains pockets and seams of sand, is interbedded with very fine to coarse phosphoritic sand.	2.5	95.5
Sand, quartz, very fine to fine, angular, clayey, (light olive gray), silty, contains some heavies and ?phosphorite, interbedded with clay same as above.	2.5	98
Clay, medium bluish gray, finely sandy, waxy from approximately 99.0-100.5' becomes a sandy, clayey, pale olive silt containing ?some phosphorite and heavies.	3	101
Clay, medium bluish gray, finely sandy, waxy, rare phosphorite grains.	0.5	101.5
Sand, quartz, very fine to fine, some medium, angular to aubangular, clayey (pale olive), silty, contains heavies.	3.5	105
Sand, quartz, very fine to fine, angular to subangular, clayey (pale olive), silty, some heavies and phosphorite.	1.5	106.5
Sand, as above, more clayey, near 108.5' becomes a sandy, medium bluish gray sandy, silty, waxy clay.	2	108.5
Clay, medium, bluish gray to pale olive, fine sandy, contains pockets of fine sand, waxy micaceous, some heavies.	2.5	111
Silt, pale olive to medium, bluish gray, very finely sandy, clayey, micaceous, trace of heavies.	2.5	113.5

Material	Thickness (feet)	Depth (feet)
Clay, medium bluish gray, finely sandy, contains pockets of sand, silty, micaceous, contains some heavies.	2	115.5
Sand, quartz, very fine to fine, some medium, angular to subangular, clayey (pale olive), silty, some phosphorite grains.	1	116.5
Clay, dark greenish gray and pale greenish yellow, very sandy, silty, calcareous, almost a silt. The sample becomes very calcareous at 117.0' and contains nodules of calcilutite and macrofossils, Sorites sp.	1.5	118
Sand, quartz, very fine to coarse, angular to subangular, clayey (gray), abundant oyster shells and other macrofossils, microfossil.	2.5	120.5
Partially recrystallized Calcilutite, light gray, very finely sandy, finely crystalline, cemented hard with CaCo	1.5	122

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

# 206 John H. Phipps (W-406)

Location, lat. 30°33'47", long. 84°19'38", in SW4NW4NW4, sec. 22, T. 2 N., R. 1 W., about 9 mi north of Tallahassee on north shore of Lake Jackson (Lake Jackson); Driller, Deep Well Drillers; Date drilled, April 1939; Depth, 251 ft; Casing, 8-in to 129 ft, open hole 129 ft to 251 ft; Aquifer, Floridan; Land-surface altitude, 190.8 ft. Logged by Simpson, Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Clay, pink, yellow, and white, sandy.	45	45
Clay, orange with some specks of lighter colored clay, sandy.	5	50
Clay, orange, sandy.	5	55
Marl, white calcareous, sandy.	5	60
Sand, orange, some clay.	20	80
Same, but lighter in color.	15	95
Limestone, hard, close grained, cream colored	60	155
Same, with some pieces of lighter colored limestone.	40	195
Same much lighter in color.	10	205
Limestone, white rather hard fossiliferous Bryozoans.	20	225
Clay, dark gray, dense, carbonaceous with a few fragments of light colored limestone.	15	240
Limestone, white fossiliferous, medium hard, <u>Lepidocyclina;</u> more fossiliferous downward.	11	251

# 210 Gadsden County School Board (Friendship School) (W-5205)

Location, lat. 30°33'53", long. 84°39'35", in SE\sE\sE\sE\sE\sE\s. sec. 16 T. 2 N., R. 4 W., at Friendship Elementary School about 1 mi south of U.S. Highway 90, west of State Highway 274 and southwest of Quincy (Gretna); Driller, Terry-Rosa Hardware Co.; Date drilled, Sept. 1959; Drilling method, cable tool; Depth, 522 ft; Casing, 4-in to 372 ft, open hole 372 ft to 522 ft; Aquifer, Floridan; Land-surface altitude, 267.0 ft; Water level 203 ft below land surface on Sept. 22, 1959.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted with moderate yellowish brown stain, fine to very coarse mostly medium, argillaceous, angular to subrounded; organics; limonite; phosphorite.	90	90
Limestone, medium light gray to yellowish gray, crystalline, sucrosic, very hard, low porosity, bryozoa stems, echinoid spines mollusk fragments and molds, (Sorites sp); sand, as above, 30%; clay, greenish gray, dense; trace of mica; limestone becoming more porous downward.	45	135
Sand, fine to coarse mostly medium, angular to subrounded; mica.	10	145
Sand, fine to coarse mostly medium, angular to subrounded, (50% sand); limestone, medium light gray, crystalline, very hard, low to moderate porosity-moldic, sandy, shell fragments, molds, carbonized wood particles; phosphorite; mica; trace of clay, greenish gray; limestone becoming more fossiliferous downward including foraminifera (Sorites sp., Archaias sp.), gastropods.	40	185
Sand, medium to very coarse mostly medium angular to subrounded; clay, very light gray, sandy; clay content increases downward.	30	215
Limestone, various shades of gray, micritic to crystalline, sandy, low porosity, high recrystallization, moderately hard, fossiliferous shell fragments (Sorites sp), (50% limestone); san as above; clay greenish gray, 10%; clay content increases downward to 25%  355		245

Material	Thickness (feet)	Depth (feet)
Sand, fine to very coarse mostly medium, angular to subrounded, (70% sand); limestone, white to yellowish gray, micritic to crystalline, sandy, moderately hard, low porosity; clay, greenish gray, 5%; shell fragments; mica.	20	265
Sand, as above; limestone, white to gray, micritic, very sandy, low porosity, (30% limestone); shell fragments; mica; trace of clay.	35	300
Sand, clear to frosted with yellowish orange stain, very fine to coarse mostly medium, argillaceous, angular to subangular, (75% sand); limestone, whit to yellowish gray, crystalline, sucrosic, sandy, very hard, low porosity; clay, very light gray, sandy, dense; shell fragments, bryozoa stems; mica		335
Sand, as above.	10	345
Limestone, white to various shades of gray, micritic to crystalline, moderate recrystallization, sandy, moderate porosity-moldic; mollusk fragments, foraminifera (Sorites sp.), pelecypod cast, (90% limestone); sand, fine; trace of clay, greenish gray; mica.	15	360
Limestone, very light gray to light olive gray, micriti soft to moderately hard, moderate porosity-moldic, shell cast fragments, foraminifera (Sorites sp.); limestone becoming crystalline toward bottom of section.	c, 25	385
Limestone, very light gray to light olive gray, crystalline, very hard, moderate porosity-moldic; trace of sand.	15	400
Limestone, very light gray, micritic, soft to moderately hard, sandy, moderate porosity, foraminifera fragment (Archaias sp.); trace of sand, fine to medium.	25	425
Limestone, yellowish gray to olive gray, crystalline, very hard, sucrosic, moderate porosity; limestone, yellowish gray, micritic; soft, high porosity-moldic; sand as above, 10-25%.	20	445

Material	Thickness (feet)	Depth (feet)
Limestone, pale yellowish orange, micritic, high- porosity-moldic, slightly sandy, soft to moderately hard; limestone, yellowish gray to olive gray, crystalline, sucrosic, moderate porosity-moldic, very hard, dolomitic; limestone light gray to medium gray, micritic, moderately low porosity, trace of sand, fine		470
Limestone, various mottled shades of gray to light olive gray, crystalline; dolomitic, very hard, moderate porosity-moldic, fossiliferous (Sorites bryozoa stems; sand, fine to medium, 10%; trace clay, greenish gray; limestone becoming more porous downward.		520
Sand, fine to very coarse, angular to subrounded, (75% sand); clay, light greenish gray, dense, (15% clay); limestone, white crystalline, very hard, sandy, low porosity.	2	522

# 217 City of Greensboro (W-310)

Location, lat. 30°34'10", long. 84°44'32", in NE'4NE'4SW4, sec. 16, T. 2 N., R. 5 W., east of water tank in Greensboro (Gretna); Driller; Gray Artesian Well Co.; Date drilled, May 1936; Drilling method, cable tool; Depth, 407 ft; Casing, 8-in to 205 ft, open hole 205 ft to 407 ft; Aquifer, Floridan; Land-surface altitude, 268.1 ft; Water level, 175.00 ft below land surface on July 15, 1977; Chloride concentration, 5.0 mg/L on June 15, 1976. Logged by Sidney A. Stubbs, Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
No samples.	60	60
Medium coarse to coarse, rounded to subangular, quartz sand; most of the larger grains are etched and nearly all the sand is stained by iron oxide. There are a few small fragments of very porous white limestone and some phosphoripebbles.	20	80
Like the preceding with fragments of waxy, greenish, fuller's earth-like clay.	20	100
About 50% white, argillaceous, sandy porous limestone about 50% greenish waxy, fuller's earth-like clay. Limestone has large grains of angular quartz sand as inclusions. Pecten sp. fragment Sorites sp.	30	130
Fragments of a coarse, calcareous sandstone showing mollusk molds; very fine calcareous sandstone; impure white limestone; waxy fuller's earth-like clay; very large amount of quartz sand. On causa inspection this sample would be called a loose sand with specks of limestone	20	150
Waxy greenish fuller's earth-like clay, few fragments a dense white limestone; some cherty tan colored limestone. Large amount of coarse quartz sand.	of 10	160
White calcareous sandstone and sandy white limestone both rather dense; few fragments of greenish fuller's earth like clay; large amount of sand as above.	10	170

Material	Thickness (feet)	Depth (feet)
Almost entirely coarse iron stained quartz sand as above with scattered fragments of sandstone, limestone, and clay as above.  Gastropod mold.	10	180
Porous, impure white limestone; calcareous sandstone; gray green marl. Large amount of coarse quartz sand. <u>Pecten</u> sp. indet.	10	190
Almost entirely coarse quartz sand with a few pieces of impure white limestone and calcareous sandstor interval 210-220 ft contains large fragments of waxy, greenish fuller's earth-like clay.	30 ne;	220
Same fragments of calcareous sandstone.  Ostrea sp. indet. fragments	10	230
Fragments of porous, white impure limestone; some calcareous sandstone and greenish fuller's earth-like clay. Clear quartz sand predominant constitutent of this sample.	10	240
Like the preceding but with somewhat less sand.	10	250
Finely crystalline compact gray and tan limestone; hard white limestone, and very porous gray limestone; large amount of quartz sand. A few small foraminifera too poorly preserved for identification. <a href="Archaias">Archaias</a> ? (a fragment)	50	300
Like the above but with considerable waxy fuller's earth-like clay.	10	310
Like the above but with less crystalline tan colored limestone; white porous impure limestone is predominant, limestone present.	20	330
Hard, tan colored, finely crystalline limestone with some porous white limestone, and greenish, waxy fuller's earth-like clay. There is some less sand in the sample than has shown in the preceding samples.	10	340

Number 217 (Continued)

Material	Thickness (feet)	Depth (feet)
Very porous, gray to white, highly fossiliferous (mollusk molds and casts) limestone with large amount of coarse sand and small gravel.	20	360
Some limestone as above but largely calcareous sandstone containing <u>Sorites</u> sp. and coming from the Hawthorn formation above.	10	370
No samples.	37	407

#### 219 City of Greensboro (W-12257)

Location, lat. 30°34'18", long. 84°44'47", in SE<sup>1</sup><sub>4</sub>SW<sup>1</sup><sub>4</sub>NW<sup>1</sup><sub>4</sub>, sec. 16, T. 2 N., R. 5 W., west of State Highway 12 in Greensboro (Gretna); Driller, Rowe Drilling Co.; Date drilled, Aug. 1974; Drilling method, hydraulic rotary; Depth, 420 ft; Casing, 6-in to 264 ft, open hole 264 ft to 420 ft; Aquifer, Floridan; Land-surface altitude, 275.3 ft; Water level, 169.00 ft below land surface on Nov. 6, 1974; Specific capacity, 1.5 (gal/min)/ft; Chloride concentration, 7.0 mg/L on Nov. 6, 1974. Logged by J. P. May, Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, transparent, 25% porosityintergranular, sizemedium, rangefine to coarse, subangular, angular, non-induration; 5% limonite; 1% clay, organics, plant remains; contains ironstone concretions (limonite)	1	1
As above; clay, moderate reddish orange.	4	5
Clay, white, moderate reddish orange, porosity low permeability, good induration; 5% sand (quartz)	12	17
Gravel, transparent, moderate reddish orange, 20% porosityintergranular, sizegravel, range-granule to gravel, angular, subangular, non-induration; clay; limonite; sand (quartz).	5	22
Gravel, transparent, 25% porosityintergranular, rangegravelgranule, rounded, angular, non-induration; sand (quartz).	5	27
Sand, transparent, moderate reddish orange, 25% porosityintergranular, sizemedium, rangevery fine to granule, subangular, rounded, non-induration; limonite; clay; grayish grains are orangish-red clay with weathered crust.	33	60
Sand, transparent, moderate reddish orange, 25% porosity-intergranular, size-medium, range - fine to coarse, subangular, non- induration; 5% clay; 10% limonite.	22	82

Material	Thickness (feet)	Depth (feet)
Clay, moderate reddish orange, porositylow permeability, moderate induration; 20% sand (quartz).	5	87
Clay, very light gray, porositylow permeability poor induration; 15% sand (quartz); expands with absorption of waterred clay of sample 87 is apparently a weathered product of 95. Possibly soil zone.	8	95
Clay, moderate light gray, light brownish gray, porositylow permeability, moderate induration; pyrite; gray clay swellsbrown does not.	23	118
Dolostone, light brownish gray, porositylow permeability, 50-90% altered, euhedral, sizemicroscopic, good induration; sand (quartz) clay.	2	120
Micrite, white, porosity—low permeability, poor induration, sand (quartz); clay; fossil fragments; foraminifera (Sorites sp.).	8	128
Micrite, white, moderate gray, porositylow permeability, poor induration; sand (quartz); clay; mollusks; shark's tooth; organics.	9	137
Micrite, pinkish gray, 10% porositymoldic, good induration, micrite cement; 20% sand (quartz); foraminifera (Sorites sp.); crustacea.	2	139
Clay, very light gray, porositylow permeability moderate induration; as abovemicrite; sand (quartz).	9	148
Micrite, as above; calcareous clay as above plus pelecypod fragments.	11	159
Clay, very light gray, brownish gray, porosity— low permeability, moderate induration; sand (quartz); expands with water—dark crust on clay pebbles, light core.	6	165
Clay, as above; sand, transparent, sizefine, range to medium, angular, subangular, non-induration; fossil fragments, mollusks.	- 4	169

Material	Thickness (feet)	Depth (feet)
Micrite, white, porositylow permeability, good induration; 25% sand (quartz); mollusks.	18	187
Clay, white, brownish gray, porositylow permeability moderate induration; 20% sand (quatz).	, 12	199
Micrite, very light gray, porositylow permeability, good induration; 25% sand (quartz); mollusks, foraminifera.	6	205
Calcarenite, pinkish gray, light gray, 10% porosity— intergranular, intragranular, grain type—biogeni intraclast, 90% allochems, good induration, silica cement, micrite cement; 3% sand (quartz); foraminifera.	31	236
Micrite, white, porositylow permeability, good induration, 25% sand (quartz); clay; foraminifera	. 15	251
Micrite, light gray, very light gray, porosity low permeability, good induration; 20% sand (quartz); foraminifera; mollusks.	3	254
Dolostone, light brownish gray, porositylow permeability 50-90% altered, euhedral, sizemicroscopic; good induration, sucrosic, foraminife	8 era.	262
Dolostone, pinkish gray, porositylow permeability, 10-50% altered, sizemicroscopic; good induration 5% sand (quartz); interval between 266-268 ft contains Sorites sp.	6 n;	268
Dolostone, light brownish gray, 5% porositymoldic, low permeability, 10-50% altered, sizemicroscop good induration.	22 ic,	290
Dolostone, white, porositylow permeability, 10-50% altered, moderate induration; sand (quartz), clay, white, porositylow permeability, moderate induration; hard to distinguish dolomicrite from clay.	48	338
Clay, greenish gray, porostiylow permeability, moderate induration; swells with water; dolomicrite, as above.	2	340

Material	Thickness (feet)	Depth (feet)
Dolostone, white, porosityintergranular, moldic, low permeability, 10-50% altered, sizemicroscorangemicroscopic to medium, good induration, 3% sand (quartz); clay; high recrystallization; mollusks.	52 pic,	392
Clay, light grayish green, porositylow permeability sand (quartz); micrite; (clay) does not swell as much as 340.	, 8	400
Dolostone, very light gray, medium gray, porosity low permeability, 50-90% altered, euhedral, sizemicroscopic, good induration, sucrosic; pyrite.	7	407
Dolostone, very light orange, as above.	13	420

### 223 Talquin Electric Cooperative, Incorporated (W-11758)

Location, lat. 30°34'34", long. 84°23'37", in SW4NW4NW4, sec. 13, T. 2 N., R. 2 W., about 2 mi north of Ochlockonee River east of U.S. Highway 27 at Ochlockonee River Estates south of Havana (Havana South); Driller, Rowe Drilling Co.; Date drilled, Aug. 1972 Drilling method, hydraulic rotary; Depth, 343 ft; Casing, 6-in to 123 ft, open hole 123 ft to 343 ft; Aquifer, Floridan; Land-surface altitude, about 138 ft; Water level, 90 ft below land surface on Aug. 10, 1972; Specific capacity, 50 (gal/min)/ft; Chloride concentration, 7.0 mg/L on June 3, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to coarse, mostly coarse, angular to subrounded, argillaceous; clay, dark yellowish orange, very sandy, (50% clay); phosphorite.	30	30
Limestone, light gray to yellowish gray, micritic, sandy, moderate porosity-moldic, moderately hard; shell fragments, foraminifera at 80-90 ft (Sorites sp.); sand, medium to coarse.	90	120
Limestone, as above; dolomite, light olive gray to olive gray, crystalline, very hard, low porosity; sand, medium to coarse; carbonized wood fragments.	30	150
Dolomite and limestone, as above; sand, medium to very coarse; clay, greenish gray, dense.	20	170
Limestone, white to yellowish gray, micritic, sandy, moderately hard, moderate porosity-moldic and intergranular; dolomite, light olive gray to olive gray, crystalline, very hard, sucrosic, moderate porosity; sand, medium to coarse.	60	230
Dolomite, light olive gray, crystalline, very hard, moderate porosity, sucrosic; limestone, white to yellowish gray, micritic, moderately hard, moderate porosity; sand, fine to coarse, angular to subangular (10% sand); phosphorite; iron oxide; very little fossil evidence.	113	343

### 224 Rosa Jackson (W-2467)

Location, lat. 30°34'35", long. 84°49'25", in NE4NW4NE4, sec. 15, T. 2 N., R. 6 W., east of State Highway 269 and about 4 mi west of Greensboro (Sycamore); Driller, L. M. Gray; Date drilled, July 1951; Drilling method, cable tool; Depth, 181 ft; Casing, 3-in to 126 ft, open hole 126 ft to 181 ft; Aquifer, Floridan; Land-surface altitude, 283.75 ft; Water level, 131 ft below land surface in July, 1951.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted with grayish orange stain, medium to medium pebble mostly coarse, angular to subrounded, argillaceous; limonite (5%).	10	10
Sand, clear to frosted with pale yellowish orange stain, fine to very coarse, angular to subrounded argillaceous; clay, white to moderate pink; dense sandy, (20% clay); phosphorite, limonite.		40
Sand, clear to frosted with pale yellowish orange to grayish orange stain, argillaceous, fine to very coarse, angular to subrounded; phosphorite.	20	60
Clay, greenish gray to yellowish gray, very sandy, dense (85-90% clay); sand, medium to very coarse, angular to subangular; mica; phosphorite; limonite	30 e.	90
Sand, clear to frosted, very fine to medium, angular to subrounded; clay, white, sandy, dense, calcareous limestone, white, micritic, low porosity, sandy; shark tooth fragment.		100
Sand, clear, very fine to very coarse, angular to subrounded, (90% sand); clay, light greenish gray, very sandy; limestone, as above; phosphoritomica.	20	120
Marl, yellowish gray, sandy, clayey, calcareous; limestone, crystalline, low porosity, very hard, shell fragments, fish teeth(?); sand, very fine to coarse.	10	130
Limestone, white to very light gray, micritic, sandy, high porosity-moldic and intergranular; fossiliferous-shell fragments; dolomite, very light gray to medium light gray, crystalline, moderate porosity, moderately hard; sand, medium to coarse, (10%).	51	181

# 225 City of Quincy (W-3337)

Location, lat. 30°34'37", long. 84°34'50", in NW4NW4NW4, sec. 18, T. 2 N., R. 3 W., at former site of Experimental Station about 1 mi south of U.S. Highway 90 in Quincy (Quincy); Driller, W.R. Perry Drilling Co.; Date drilled, June 1954; Drilling method, cable tool; Depth, 681 ft; Casing, 8-in to 434 ft, open hole 434 ft to 681 ft; Aquifer, Floridan; Land-surface altitude, 246.5 ft; Water level, 185.19 ft below land surface on July 24, 1975; Specific capacity, 22.8 (gal/min)/ft; Chloride concentration, 18 mg/L on Sept. 29, 1977.

Material	Thickness (feet)	Depth (feet)
Sand, clear to yellow, to reddish pink, angular to subangular, fine to medium, mostly fine, argillaceous; iron stain.	10	10
Sand, clear to frosted, very fine to medium mostly fine, angular to subangular.	10	20
Sand, as above; clay, pale yellowish orange, sandy, dense.	10	30
Sand, clear to frosted to yellow, fine to coarse, mostly medium, argillaceous, subangular to rounded; phosphatic sand.	30	60
Sand, clear to pale yellowish orange, subrounded to rounded, medium to very coarse, silica cement; iron stain; phosphatic sand.	10	70
Clay, medium yellowish gray to medium gray, sandy, dense; (yellowish clay more massive than gray clay).	10	80
Clay, olive gray, sandy, dense; sand, clear, fine, subangular; mica.	10	90
Limestone, light pale orange to light gray, micritic, sandy, very hard, low to moderate porosity-moldic; fossil fragments; clay, olive gray, sand (quartz), medium to coarse.	10	100

Material	Thickness (feet)	Depth (feet)
Limestone, very pale orange, micritic, moderate porosity-moldic, phosphoritic, sandy; mollusks; sand and clay, as above; phosphatic sand; iron stain.	10	110
Limestone, pale yellowish gray to light gray, crystalline, micritic, moderate porosity-moldic, sandy, medium hard; sand (quartz); mica; phosphatic sand; clay, yellowish gray, laminated, dense.	10	120
Clay, very pale yellowish gray, dense, sandy, laminated.	10	130
Sand, clear to frosted, fine to coarse, mostly fine, subangular to subrounded, (95% sand); clay, as above; limestone, very light gray, micritic, sandy, intergranular porosity.	10	140
Sand, clear to frosted, very fine to coarse, mostly fine, subangular to subrounded; clay, very pale yellowish gray, greenish gray, olive gray, sandy, laminated; phosphatic sand; limonite.	10	150
Clay, greenish gray, sandy, laminated.	10	160
Sand, clear to frosted, fine to coarse, mostly medium, subangular; phosphatic sand.	10	170
Limestone, very light gray, micritic, moderate porosity-moldic, sandy, medium hard; sandy (quartz), coarse.	10	180
Dolomite, light gray to pale orange, crystalline, low porosity, very hard, moderate alteration; limestone, very light gray, micritic, crystalline, sandy, low to moderate porosity, medium hard; clay, greenish gray, sandy; marl, very light gray, sandy, clayey, calcareous, chalky; sand (quartz); dolomite content increases downward.	30	210

Material	Thickness (feet)	Depth (feet)
Marl, yellowish gray to light olive gray, sandy, silty to clayey, calcareous; dolomite, as above; clay, olive gray to greenish gray, laminated; shell fragments.	20	230
Sand, clear to frosted, medium to coarse, subangular to subrounded.	10	240
Sand, clear to frosted, fine to very coarse, mostly medium; marl, greenish gray, calcareous, clayey, sandy; clay, greenish gray; limestone, very light gray, micritic, sandy, medium hard, low porosity; shell fragments; phosphatic sand; pyrite.	10	250
Organic material-peat, black, clayey, brittle; gypsum, colorless to white, fibrous; sand, clear to frosted, fine, subangular; pyrite.	10	260
Sand, clear to frosted, fine to medium, subangular, (75% sand); dolomite, yellowish gray to gray, crystalline, moderate porosity-moldic, very hard; limestone, pale yellowish gray, micritic, crystalline, sandy, medium to very hard, low porosity; pyrite, organic material, as above; gypsum.	10	270
Limestone, very light gray to white, soft, micritic, high porosity-moldic, soft to medium hard; dolomite, yellowish gray to light olive gray, crystalline low porosity-moldic, very hard, moderate to high textural alteration; phosphorite.	20	290
Limestone, light gray to very light olive gray, crystalline, high porosity-moldic ("honeycombed"), very hard; fossil fragments.	10	300
Dolomite, very light gray to light olive gray, crystalline, very hard, low porosity, high textural alteration.	20	320

Material.	Thickness (feet)	Depth (feet)
No sample.	10	330
Same as 320 ft interval.	10	340
Limestone, white to very light gray, micritic, high porosity-moldic, very sandy; no fossils.	10	350
Dolomite, very light gray, yellowish gray, medium dark gray, crystalline, low to high porosity (increases downward); fossil fragments; limestone, as above; marl, very light gray, silty to clayey, sandy, calcareous.	30	380
Marl, light greenish gray, silty to clayey, sandy, dense, calcareous; phosphorite pebbles.	10	390
Dolomite, medium light gray to yellowish gray to olive gray, crystalline, moderate porosity-moldic, very hard, fossil fragments; marl, very light gray, silty to clayey, very sandy, calcareous; sand, medium to fine; phosphatic sand, pyrite.	20	410
Clay, light greenish gray to dark greenish gray, laminated, dense.	20	430
Limestone, white to very light gray, micritic, very hard to soft, moderate porosity—moldic; dolomite, light olive gray, crystalline, very hard, low porosity; sand (quartz), coarse; organics; dolomite content increases downward.	15	445
Limestone and dolomite, as above; abundant fossil fragments; Sorites sp.	10	455

Material	Thickness (feet)	Depth (feet)
Dolomite, olive gray, crystalline, moderate porosity-moldic, very hard; limestone, white, micritic, medium hard; fossil fragments, echinoid spines, Sorites sp.; sand (quartz).	15	470
Limestone, white to yellowish gray, crystalline, micritic, medium to soft, low porosity-moldic,; fossil fragments, echinoid spines; phosphorite.	35	505
Dolomite, very light gray to yellowish gray, very hard, crystalline, moderate porosity-moldic, intercrystalline, shell fragments, Sorites sp.	5	510
Limestone, yellowish gray, crystalline, micritic, biogenic, high porosity-moldic, intergranular; fossil fragments, shells, Sorites sp., echinoid spines, bryozoa; fossilization increases downward.	35	545
Limestone, yellowish gray, crystalline, micritic, biogenic, very hard, moderate porosity-intergranular, partially dolomitized; highly fossilized-bryozoa, mollusks, echinoid spines, foraminifera (Lepidocyclina sp.).	70	615
Limestone, white to light yellowish gray, micritic, medium hard, high porosity- intergranular; foraminifera (abundant)- Camerina sp., Lepidocyclina sp., coral, molds; calcite; becoming argillaceous at 775 ft.	185	800

### TABLE 15.--Lithologic logs of selected wells and core holes--Continued

### 234 City of Quincy, Byrd Sanitary Landfill Site Well

Location, lat. 30°34'47", long. 84°31'45", in SW4SE4SW4, sec. 10, T. 2 N., R. 3 W., 2 mi east of Quincy and 1.7 mi north of U.S. Highway 90 (Quincy); Driller, Moore Electric Co., Date drilled, Sept. 1975; Drilling method hydraulic rotary; Depth, 300 ft; Casing, 4-in to 230 ft, open hole 230 ft to 300 ft; Aquifer, Floridan; Land-surface altitude, about 209 ft; Water level 133.70 ft; below land surface on Sept. 8, 1975; Specific capacity, 0.9 (gal/min)/ft; Chloride concentration, 4.6 mg/L on Sept. 8, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, argillaceous, fine to coarse, angular to subrounded; phosphorite; content increases downward.	50	50
Clay, yellowish orange to yellowish gray, dense, sandy; phosphorite.	15	65
Clay, as above; limestone, light gray to yellowish gray, micritic, moderately hard, sandy, phosphoritic; sand, clear to reddish orange medium to very coarse, subangular; limestone content increases downward.	50	115
Clay, medium greenish gray, very sandy, dense; limestone, very light gray to pinkish gray, micritic, soft to moderately hard, very sandy; sand, clear to frosted, medium, subangular.	10	125
Clay, medium bluish gray, very sandy, dense; (50% clay limestone, as above	y) 25	150
Clay, dark yellowish orange, brittle, dense; clay, light gray, soft, dense, sandy; (clay, dark greenish gray, dense, slightly sandy (50% clay); trace of sand, fine to medium.	5	155
Marl, very light gray, calcareous, very sandy, clayey; limestone, very light gray, micritic, moderately hard, intergranular porosity; clay, dark greenish gray, dense, soft, slightly sandy.		160

Material	Thickness (feet)	Depth (feet)
Clay, dark greenish gray, soft to brittle, waxy, very sandy, dense; clay, dark yellowish orange, soft, dense; marl, very light gray, sandy, clayey calcareous; limestone, yellowish gray, micritic, phosporitic, sandy, moderately hard; dolomite, yellowish gray crystalline, very hard, slightly moldic; trace of sand, medium to very coarse; few shell fragments; limestone content increases downward.	60	220
Limestone, medium gray to very light gray, crystalline, very hard, slightly moldic, limestone, yellowish gray, micritic, soft to moderately hard, very sandy, moldic; dolomite, yellowish gray, crystalli very moldic, very hard; trace of clay, as above; shell and shark teeth fragments.		240
Dolomite, light olive gray, crystalline, very hard, slightly moldic, fossiliferous, high recrystallization; increasing porosity with depth.	40	280
Marl, very light yellowish gray, silty, calcareous, sticky, chalky; trace of dolomite, as above.	20	300

### 235 Florida Bureau of Geology (Gregory No. 1) Core Hole (W-7528)

Location, lat. 30°34'48", long. 84°23'23", in SE4SE4SE4, sec. 9, T. 2 N., R. 2 W., north of State Highway 270 and west of State Highway 159 about 2.5 mi southwest of Havana at Scotland (Havana South); Driller, Florida Bureau of Geology; Date drilled, Dec. 1965; Depth, 442 ft; Casing, 4-in to 60 ft, open hole 60 ft to 442 ft; Aquifer, Floridan; Land-surface altitude, about 230 ft. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, light brownish gray (soil), fine to medium, slightly clayey-silty, grades into bed below.	0.8	0.8
Sand, quartz, pale reddish brown, fine to coarse, clayey and silty, firm, grades into below.	4.2	5
Sand, quartz, mottled pale reddish brown, dark yellowish orange, fine to coarse, very clayey and silty, firm, grades into bed below.	4	9
Sand, quartz, mottled, dark yellowish orange light gray, fine to very coarse (mostly coarse to very coarse), very clayey and silty, with zones of blebs and laminae of light gray clay.	4	13
No sample.	2	15
Sand, quartz, light brown at top grading to grayish orange at base, fine to very coarse (mostly medium to coarse), some clay and silt as matrix, faintly bedded.	2	17
Clay, dark yellowish orange, sandy (as laminae and thin beds and disseminated throughout).	2.5	19.5
No sample.	1.5	21
Sand, quartz, dark yellowish orange at top grading to grayish orange at base, very clayey as matrix and beds or zones, top 3 inches thinly bedded, mottled below, more clayey toward base.	3	24

Material	Thickness (feet)	Depth (feet)
Clay, pale yellowish orange, laminated to thinly bedded with sand, grades into sand below.	6	30
Sand, quartz, dark yellowish orange, fine to coarse, thinly bedded (?cross-bedded), with some laminae of clay.	2	32
No sample.	7	39
Sand, as 30-32', with more coarse grains.	3	42
No sample.	1.5	43.5
Clay, dusky yellow, waxy, very slightly sandy, blocky.	3.5	47
Sand, quartz, grayish orange, fine to coarse, clayey, organic staining and blebs, phosphatic.	4.5	51.5
Clay, olive gray, sandy, waxy, blocky, with clay granules, some organic staining and brownish "iron" zones.	2.5	54
Sand, quartz, grayish orange, fine to coarse, clayey throughout and with thin clay beds (°-inch).	1.5	55.5
Clay and sand, as above, interbedded and with sandstone pebbles.	3.5	59
Clay, olive gray, blocky, waxy, phosphoritic, sandy.	10	69
Sand, quartz, pale greenish yellow, fine grained, very clayey, phosphoritic.	2.5	71.5
Calcilutite, white, clayey, very sandy, phosphoritic, dolomitic, soft.	1	72.5
Clay, olive green, waxy, very slightly calcareous throughout and with very calcareous (marly) zones, slightly sandy, at 75.5 feet is a carbonaceous zone, grades into bed below.	9.5	82

Material	Thickness (feet)	Depth (feet)
Marl (Calcilutite), very pale orange, sandy, soft, grading into below.	3	85
Calcilutite, very pale orange, sandy, soft to hard, macrofossiliferous (molds and casts), partially recrystallized, dolomitic.	14.5	99.5
ilt, quartz, pale greenish yellow, very mediumly sandy, very clayey as matrix, blebs and thin beds, slightly calcareous, slightly phosphoritic.	7.5	107
alcilutite, very pale orange, very finely to mediumly sandy, clayey, conglomeratic appearance, slightly phosphoritic.	4	111
ilt, as 99.5-107'.	3	114
alcilutite, as 107-111'.	2	116
<pre>ilt, quartz, light olive gray, clayey,     slightly sandy, slightly calcareous,     grades into below.</pre>	2.5	118.5
alcilutite, as above but not conglomeratic.	2.5	121
and, quartz, dark grayish yellow green, fine, clayey-silty, phosphoritic.	2	123
alcilutite, as 118.5-121'.	2	125
and, as 121-123'.	4	129
alcilutite, as 118.5-121'.	4	133
<pre>ilt, quartz, pale greenish yellow, sandy,     clayey, very slightly calcareous     becoming more calcareous at base, phosphoritic.</pre>	12	145
and, quartz, pale olive to dark greenish gray, clayey-silty, phosphoritic, becoming very clayey (153-154').	9	154

Material	Thickness (feet)	Depth (feet)
Calcilutite, pale orange, slightly sandy, soft to hard, partially recrystallized, slightly dolomitic, few molds of macrofossils, clay zone 166-167'.	23.5	177.5
Dolomite, yellowish gray, hard, slightly sandy, moldic.	1	178.5
Dolomite, yellowish gray, medium hard, slightly sandy, with light greenish clay as blebs or cavity fills.	3	181.5
Sand, quartz, greenish gray, fine to medium with coarse to very coarse quartz and dolomite grains, has calcareous zones.	.5	186.5
Calcilutite, pale orange, sandy, clayey, macrofossiliferous (oyster frags) just above 10-inch fine, light-greenish-gray sand bed in middle of interval.	4.5	191
Sand, quartz, greenish gray, fine to medium with some clay, very clayey.	3	194
Dolomite, as above.	1	195
Sand, as above with abundantly dolomite frags.	3	198
Calcilutite, very pale orange, sandy, soft to hard, dolomitic zone 206-207' and several dolomite frags in lower part.	14	212
Sand, quartz, dusky yellow green, fine to coarse, silty and very clayey, with calcilutite frags, at 216-218 feet and 218-221 feet.	9.5	221.5
Calcilutite, pale orange, sandy throughout and as zones, soft to hard, dolomitic.	5.5	227
Dolomite, pale orange to 244' and light olive gray to base of bed, hard, 256-270' very micro to finely vugular with some vugs filled with micro-crystalline calcilutite.	47	274

Material	Thickness (feet)	Depth (feet)
Dolomite, as above with soft zones (probably doloclay) with poor recovery (only 8 feet of recovery for this section), (291-295' and 297-300' no recovery).	32	306
Calcilutite, pale orange, with many frags of dolomite throughout.	12	318
Calcilutite (chalk), very pale orange, soft to medium hard, dense, very dolomitic (almost a doloclay), slightly finely sandy.	10	328
Calcilutite, pale olive gray, very abundantly finely sandy, very dolomitic.	24	352
Dolomite, light olive gray, very fine, sandy, hard and brittle, abundant moldic porosity (only 13 feet of recovery).	26	378
Clay, dark greenish gray, waxy, sandy throughout and in thin beds, grades into bed below.	7	385
Calcilutite, light greenish gray, very sandy and clayey, medium hard, dolomite.	2	387
Sand, light greenish gray, fine to medium, very calcareous and clayey, firm.	2	389
Calcilutite, as 385-387'.	3	392
No sample.	4	396
Sand, as 387-389'.	2	398
Calcilutite, pale orange, very finely sandy throughout and as zones, moderate amount black fine grained mineral and clayey in zones with some dark grayish green clay blebs. Last foot has laminae of dark grayish green (? organic) clay.	11	409
Dolomite, light olive gray to olive gray, hard, dense, moldic porosity, sandy, sucrosic in zones.	33	442

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

### 236 Talquin Electric Cooperative, Incorporated (W-11992)

Location, lat. 30°34'53", long. 84°13'20", in SW4SE4SW4, sec. 10, T. 2 N., R. 1 E., at Killearn Lakes Subdivision about 8 mi north of Tallahassee west of U.S. Highway 319 (Bradfordville); Driller, Rowe Drilling Co.; Date drilled, June 1972; Drilling method, hydraulic rotary; Depth, 325 ft; Casing, 10-in to 203 ft, open hole 203 ft to 325 ft; Aquifer, Floridan; Land-surface altitude, about 222 ft; Water level, 172.26 ft below land surface on Mar. 17, 1975; Specific capacity, 400 (gal/min)/ft; Chloride concentration, 5.1 mg/L on Mar. 17, 1975.

Material	Thickness (feet)	Depth (feet)
Clay, dark yellowish orange to dark yellowish brown, sandy dense, (90% clay); sand, clear to frosted, argillaceous, medium, angular to subrounded; mica.	40	40
Sand, clear to frosted, argillaceous, fine, angular traces of clay and limestone, white; micritic, sandy.	10	50
Clay, yellowish gray to grayish orange also white, dense, brittle.	10	60
Sand, clear to frosted, argillaceous, fine, angular; clay; white to grayish orange, sandy (25% clay); limestone, white, micritic, sandy, moderately hard, low porosity; phosphorite; limonite.	20	80
Limestone, white, micritic, very sandy, moderate intergranular porosity, moderately hard; limestone, very light gray, crystalline, very hard, high crystallization; foraminifera fragments (Sorites sp.); clay, yellowish gray, 5%.	40	120
Limestone, yellowish gray to light olive gray, crystalline, sandy, moderate porosity-moldic, dolomitic, some fragments sucrosic, very hard, few shell fragments.	110	230
Limestone, white to very pale orange, biogenic, crystalline, sucrosic, moderately hard, moderate porosity, fossiliferous-echinoid and bryozoa fragments, (Lepidocyclina sp.)	95	325

238 Florida Bureau of Geology (Kinhega No. 1) Core Hole (W-7181)

Location, lat. 30°35'00", long. 84°13'40", in NE<sup>1</sup>4SE<sup>1</sup>4, sec. 9, T. 2 N., R. 1 E., about 1.5 mi west of U.S. Highway 319 near Kinhega Lodge, Bradfordville (Bradfordville); <u>Driller</u>, Florida Bureau of Geology; <u>Date drilled</u>, June 1965; <u>Depth</u>, 262 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, 248.8 ft. Logged by C. W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, fine to medium, becoming increasingly more clayey toward base, top 6 inches is gray (so zone) and remainder is light brown.	4.5 i1	4.5
Silt, quartz, mottled gray, light brown, moderate to very dark red, sandy, very clayey with lower 2 feet becoming laminated to thinly bedded.	12.5	17
Sand, quartz, fine to coarse, pale yellowish brown to moderate yellowish brown, thinly bedded to laminated (some laminae are gray clay).	8	25
Sand, quartz, fine, pale yellowish brown to grayish orange, very fluid when first cored.	3	28
Clay, grayish orange, very slightly silty, waxy, with several thin beds of sand.	7.5	35.5
Sand, quartz, grayish orange, very fine to fine, very clayey (top 6 inches is medium to coarse).	5	40.5
Clay, as 28-35.5'.	5.5	46
Sand, quartz, very fine to medium, grayish orange in upper 1.5 feet and lower 2.5 feet, in between very pale orange, clayey throughout becoming increasingly more clayey downward, and becomes a sandy clay in lower foot.	16.5	62.5
Clay, yellowish gray, sandy, phosphatic, waxy, upper 2 feet contain dark gray organic blebs, but mostly in upper half are pellets of lighter colored clay, some are more phosphatic than matrix	10 «•	72.5

Material	Thickness (feet)	Depth (feet)
Clay, light olive brown, very sandy, phosphatic with granules or pebbles of light gray clay.	1	73.5
Sand, quartz, light olive brown, fine to coarse, with laminae of very clayey silt throughout and phosphoritic.	8	81.5
Calcilutite, very pale orange, very clayey and very sandy, phosphoritic, dolomitic, variable in hardness.	4.5	86
Silt, light gray, very fine to clay with laminae of finer grain sizes.	3	89
Calcilutite, very pale orange, less clayey than laminae above, very sandy, phosphoritic, hard.	7	96
Calcilutite, pale orange, sandy, phosphoritic with light green silt and clay zones throughout.	16	112
Calcilutite, as above without silt and clay zones.	10	122
Clay, green, calcareous in upper foot, sandy.	8.5	130.5
Calcilutite, pale yellow, very impure, sandy, clayey, silty in seams and blebs throughout.	12.5	143
Clay, light olive gray to greenish gray, studded with limestone pebbles, waxy, sandy.	3	146
Calcilutite, very pale orange, medium hard, micro- fossiliferous, poorly porous, partially recrystallized, sandy, moldic porosity, slightly dolomitic.	10	156
Clay, pale orange, sandy, calcareous.	1	157
Calcilutite, yellowish gray, hard, partially recrystallized, sandy, dolomitic, moldic, some beachrock type zones.	4	161
Dolomitic calcilutitic calcarenite, grayish orange, very recrystallized, very moldic, hard.	7	168
Calcilutite, pale orange, hard, sandy, partially recrystallized, dolomitic. (Lost circulation at 176 feet).	14	182

Material	Thickness (feet)	Depth (feet)
As 161-168' but less dolomitic.	7	189
Dolomite, hard, dense, sandy, no porosity, interbedded with very soft zones (probably clay) that do not core easily (no recovery).	30	219
Calcilutite, very pale orange, soft to medium hard, chalky, slightly to abundantly sandy, slight moldic porosity, slightly dolomitic.	19	238
Calcarenite, pale orange, slightly to moderately hard, very microfossiliferous, partially recrystallized.	12	250
Calcarenite, very pale orange, soft to slightly hard, good porosity, very microfossiliferous.	12	262

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

### 241 Evelyn Smith (W-6107)

Location, lat. 30°35'03", long. 84°41'27", in NE4NE4SW4, sec. 12, T. 2 N., R. 5 W., 3 mi east of Greensboro (Gretna); <u>Driller</u>, Barnes Well Drilling Co; Date <u>drilled</u>, 1962; <u>Drilling method</u>, cable tool; <u>Depth</u>, 290 ft; <u>Aquifer</u>, Floridan; Land-surface altitude, about 285 ft.

Material	Thickness (feet)	Depth (feet)
Sand, very fine to medium, mostly fine; clear to frosted to very pale yellowish orange, angular to subangular; trace of heavy minerals.	10	10
Same as above; slight amount of yellowish gray clay.	20	30
Same as above; (5%) clay; also few gravel size conglomerates of sand grains with siliceous cement.	10	40
Sand, same as above; (5%) clay, very light gray; phosphorite.	10	50
ame as above; also trace of limestone, white, very sandy.	10	60
and, same as above; phosphorite; trace amounts of limestone.	10	70
and, medium, well sorted, same as above.	10	80
<pre>and, clear to frosted, fine, well sorted,     angular, (95%); clay, yellowish gray,     very dense; mica; heavy minerals abundant.</pre>	10	90
ame as above, (25%) clay; trace amounts of phosphorite and pyrite.	10	100
Clay, yellowish gray, dense, very calcareous; few shell fragments.	10	110

Material	Thickness (feet)	Depth (feet)
Clay, same as above; clay, dark greenish gray, dense, (70%); limestone, light gray, crystalline, very sandy, porous, hard, fossiliferous—Sorites sp., mollusk fragments (fossils poorly preserved); sand, fine, (10%).	10	120
Clays, same as above.	10	130
Clay, yellowish gray, dense, calcareous, (85%); limestone, light gray, crystalline, high recrystallization, sandy, porous, hard, few shell fragments; trace amounts of phosphorite.	10	140
Sand, coarse to very coarse, clear to frosted, angular to subrounded, (85%); limestone, white to yellowish gray to very light gray, crystalline to micritic, some fragments. sandy, slightly porous, few shell fragments, clay, greenish gray, sandy, (5%); phosphorite.	10	150
Clay, yellowish gray, dense, micaceous, (90%); sand, coarse, same as above; limestone, same as above; Sorites sp.	10	160
Clay, greenish gray, sandy, (40%); sand, medium, clear to frosted, angular, (40%); limestone, same as above.	10	170
Sand, clear to frosted, fine, angular, (75%); limestone, white, micritic, very sandy, hard, porous; clay, same as above, (5%); mica.	10	180
Sand, clear to frosted, clean, fine to very coarse, angular to subrounded, micaceous, phosphoritic, (95%); clay, greenish gray to light greenish gray to grayish orange; limestone, light gray, crystalline, hard, sandy, porous, shell molds.	10	190
Sand, same as above, except (60%); limestone, white, micritic, extremely sandy, porous, no fossil evidence, (25%); clay, greenish gray very sandy.	10	200

Material	Thickness (feet)	Depth (feet)
Limestone, white, crystalline to micritic, hard, some fragments sandy, porous, slightly moldic, fossiliferousshell fragments (oyster) (80%); sand, same as above.	10	210
Same as above, except (55%) limestone.	10	220
Same as above, (80%) limestone; clay, greenish gray.	10	230
Sand, clear to frosted, clean, fine to very coarse mostly medium, (85%); limestone, white, micritic very sandy, porous, few shell fragments; small amount of recrystallized gray limestone; clay, light greensih gray, sandy, (5%); mica.	10	240
Same as above; also slight amount of limonite.	10	250
Same as above, except sand fine to medium.	20	270
Sand, clear to frosted, clean, fine to coarse, mostly fine and medium, angular to subrounded, (55%); limestone, yellowish gray, crystalline, slightly sandy, moldic, porous, hard, few shell fragments		280
Sand, fine to medium, angular to subangular, clear to frosted.	10	290

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

244 Florida Bureau of Geology (Goode No. 1) Core Hole (W-6998)

Location, lat. 30°35'20", long. 84°09'05", in SE4SE4NW4, sec. 8, T. 2 N., R. 2 E., about 1.4 mi west of State Highway 151, northeast of Bradfordville (Bradfordville); <u>Driller</u>, Florida Bureau of Geology; <u>Date drilled</u>, Mar. 1965; <u>Depth</u>, 227 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, about 237 ft. Logged by C. W. Hendry, Jr., Florida Bureau of Geology.

Material T	hickness (feet)	Depth (feet)
Sand, quartz, light olive gray at top (3-4 inches) grading downward into moderate yellowish brown, gradual increase in clay from none at top to very clayey at base, fine to medium, silty, loose, grades into bed below.	3	3
Sand, mottled moderate yellowish brown to pale reddish brown, very clayey, fine to medium with some coarse, and silty.	2	5
Silt, mottled light gray and pale reddish brown, slightly sandy (fine to medium), very slightly clayey, grades abruptly into bed below.	1	6
Clay, laminated to thinly bedded, light gray to pale reddish brown, sandy (fine to medium), silty.	2	8
Sand, quartz, pale reddish brown, fine to medium, light brown to dark yellowish orange, laminated and thinly bedded with light gray to white, clay, sample becomes pale reddish brown in lower four feet.	15	23
Sand, quartz, pale reddish brown, fine to medium (mostly medium), very slightly micaceous, slightly clayey, becoming grayish orange to dark yellowish orange between 25-28 feet, becomes very fine to fine toward base, more massive at top and becoming thinly bedded toward base.	17	40
Sand, quartz, pale yellowish orange, very fine to fine, clayey and silty, mottled with light gray very fine sand.	7.5	47.5

Material	Thickness (feet)	Depth (feet)
Sand, quartz, pale yellowish orange to light brown, thinly bedded, silty and clayey, becoming laminated toward base.	2	49.5
Sand, quartz, pale yellowish orange, very fine to fine very clayey, laminated to mottled appearance, organizations and masses throughout.		51
Sand, as above, no liminae and grades into bed below.	2	53
Silt, quartz, pale greenish yellow, clayey and finely sandy, has organic specks as above and at interval of 1/2 to 1 inch there are light gray laminae (apparently organically stained) with no lithologidifference, slightly phosphatic throughout and wiphosphorite grains increasing downward.	ic	58
Sand, quartz, pale greenish yellow, very fine to fine, clayey and silty, phosphoritic, much less organic laminae than above, several 1 inch dark gray organic seams.	7	65
Clay, yellowish gray, sandy (both disseminated throughout and in thin beds), silty, phosphoritic, with irregular light brown organic staining in upper two feet, and with several dark gray organic sandy seams.	15	80
Sand, quartz, yellowish gray, very fine to fine, clayey, organic zone at 80.5 feet, just below which is a 3 inch pebble or granule bed of white phosphate (less than 15% P <sup>2</sup> 0 <sup>5</sup> ).	3	83
(2 feet of recovery) upper foot is clay, as 65-80' grading downward into sand, quartz, fine grained, pale greenish yellow. Sharp contact with bed below.	5	88
Clay, pale olive, sandy, abundant phosphate as white pebbles and seams (slighly less than 15% P <sup>2</sup> O <sup>5</sup> ), grades into bed below (same as 66-72 feet in W-69)	11 37).	99
Calcilutite, very pale orange, soft, very finely sandy, phosphoritic.	3	102
Clay, light olive gray, sandy, phosphoritic, waxy, grades into bed below.	6.5	108.5

Material	Thickness (feet)	Depth (feet)
Calcilutite, as 99-102', but slightly harder than 99-102' interval.	3.5	112
Sand, quartz, yellowish gray, very fine, silty, slightly clayey, phosphoritic, grades into bed below.	5	117
Calcilutite as 108.5-112'.	6	123
No recovery.	9	132
Sand, greenish yellow, very fine to fine, silty and clayey, small seams and impure zones of calcilutite throughout, phosphatic.	10.5	142.5
Calcilutite, very pale orange, sandy very fine to fine), moldic porosity, partially recrystallized, very dolomitic, soft to slightly hard.	3.5	146
Calcilutite, very pale orange, sandy (very fine to medium), much moldic porosity, recrystallized, very dolomitic, medium hard with zones of very soft clayey material that does not core (washes out), calcite interstitial growth.	20	166
Calcilutite, very pale orange, sandy, more dense than above, medium hard, beachrock appearance, less microfossiliferous (moldic porosity), microfossiliferous, some zones are very soft, dolomitic.	26	192
Calcilutite, very pale orange, slightly sandy, moderately soft, less dolomitic than above, partially recrystallized.	2	194
Calcilutite, as 166-192'.	4	198
Calcilutite, very pale orange, very soft to slightly hard, partially recrystallized, sandy.	6	204
Calcilutite, very pale orange, sandy (very fine to fine), very dolomitic, dense, faint beachrock appearance, hard.	14	218
Calcarenite, very pale orange, very microfossiliferous intergranular porosity, partially recrystallized, soft to very slightly hard.	9	227

# 246 D.E. Hughes (W-1786)

Location, lat. 30°35'23", long. 84°39'22", in SW4NW4NW4, sec. 7, T. 2 N., R. 5 W., 2.5 mi northwest of Greensboro (Sycamore); Driller, Grace Drilling Co.; Date drilled, Aug. 1948; Depth, 4,223 ft; Land-surface altitude, about 284 ft.

Material	Thickness (feet)	Depth (feet)
No samples.	120	120
Limestone, yellowish gray, micritic, very sandy, moderate porosity-moldic and intergranular, phosphatic, shell fragments and molds, (90% limestone); sand, clear to frosted, fine to very coarse, angular to subrounded; carbonized wood fragments; mica.	20	140
Clay, greenish gray to grayish orange, sandy, (60% cl limestone and sand same as above; clay content increases downward.	ay); 30	170
Limestone, very light gray to yellowish gray, micritic, very sandy, moderate porosity- moldic and intergranular, moderately hard; clay, greenish gray, sandy, micaceous, very dense; sand, fine to coarse, angular to subrounded.	20	190
Sand, fine to coarse mostly medium, angular to subrounded; limestone, white to grayish white, crystalline to micritic, sandy, moderately porous-moldic, moderately to very hard, fossiliferous; clay, greenish gray, very sandy, dense.	10	200
Limestone, light gray, micritic, slightly sandy, low porosity, moderately hard; sand, as above, mostl coarse; clay as above, micaeous.	20 y	220
Limestone, white to yellowish gray, crystalline to micritic, low to moderate porosity—intercrystalline to moldic, very hard, some fragments, slightly sandy, shell fragments, gastropods, casts; sand, fine to coarse, angular to subrounded, phosphorite.	20	240

Material	Thickness (feet)	Depth (feet)
Limestone, light olive gray to mottled shades of olive gray and medium light gray, crystalline, moderate porosity, slightly sandy, very hard, few shell fragments; becoming very moldic downward with an increase in fossil fragments; calcite.	50	290
Limestone, white to very light gray, micritic to crystalline, very sandy, high porosity-intergranular and moldic, soft to moderately hard, few fossil fragments; dolomite, olive gray, crystalline, high porosity-moldic, moderately hard; sand coarse to very coarse, subrounded to rounded; sand content increases downward.	50	340
Limestone, as above; sand, medium to coarse; clay, dark greenish gray, very dense.	10	350
Limestone, white, micritic, soft to moderately hard, chalky, moderate porosity, sandy, few fossil casts.	40	390
Dolomite, yellowish gray to light olive gray, crystalline, moderate to high porosity-moldic, sucrosic, moderate to very hard; limestone, white to light gray, crystalline to micritic, moderate porosity, moderately hard, few poorly preserved shell fragments; sand, coarse to very coarse, subangular to subround, trace of clay, greenish gray to black, very dense.	180	570
Dolomite, as above; limestone, white, biogenic, micritic, high porosity, moderately hard, bryozoa and shell fragments, foraminifera (Orbitoidid sp., Lepidocyclina sp.); small amount of sand coarse to very coarse, at 590-600 ft interval; calcite; petrified wood.	50	620
Dolomite, yellowish gray, crystalline, moderate to high porosity-moldic, sucrosic, very hard; limestone, white, biogenic and micritic, abundant fossils-foraminifera (Camerina sp., Lepidocyclina sp.); echinoid spines; bryozoa fragments; phosphorite; trace of sand, coarse to very coarse; limestone becoming less fossiliferous downward.	190	810

Material Th	nickness (feet)	Depth (feet)
Limestone, white to yellowish gray crystalline to micritic, also biogenic, moderate porosity, moderately hard, foraminifera (Orbitoidids sp.) dolomite, as above.	10	820
Limestone, as above, chert, various shades of brown and translucent; trace of quartz, coarse.	20	840
Limestone, white to yellowish gray, crystalline, micritic, biogenic, phosphatic, moderate porosity, moderately hard, echinoid spines, bryozoa, foraminifera (Operculina sp.), coral; limestone, yellowish gray to light olive gray, crystalline, sucrosic, very hard; chert; quartz.	50	890
Limestone, white to yellowish gray, micritic, chalky, moderately hard, moderate porosity, echinoid spines, bryozoa, coral, foraminifera; dolomite, light olive gray, crystalline, moderate porosity-moldic; chert, quartz.	90	980
Chalk, yellowish gray, soft, sandy; limestone and dolomite, as above.	10	990
Limestone, light gray to yellowish gray, micritic, low porosity very hard; limestone, yellowish gray, micritic, moderate porosity, very hard, foraminifera (Operculina sp.); chalk, as above; dolomite, light olive gray, crystalline, high porosity— moldic, very hard; quartz; clay, grayish orange; chert.	10	1000
Limestone, light gray to yellowish gray, crystalline to micritic, low porosity, very hard; limestone, white, micritic sandy, moderate porosity, fossiliferous— echinoid spines; dolomite, light olive gray, crystalline, sucrosic, moderate porosity, moderately hard; glauconite, dull green, granular, micaeous; quartz, white.	70	1070
Samples not described.	3153	4223

# 249 C.E. MacDaniels (W-13041)

Location, lat. 30°35'27", long. 84°38'59", in NE½NE½NE½, sec. 8, T. 2 N., R. 4 W., at MacDaniels Trailer Park, south of State Highway 12 and about 3 mi west of Quincy (Gretna); Driller, Moore Electric Co.; Date drilled, Apr. 1976; Drilling method, hydraulic rotary; Depth, 460 ft; Casing, 4-in to 305 ft, open hole 305 ft to 460 ft; Aquifer, Floridan; Land-surface altitude, about 260 ft; Water level, 163.16 ft below land surface on Apr. 12, 1976; Chloride concentration, 6.0 mg/L on Apr. 12, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, medium, clear to frosted, angular to subrounded, very argillaceous; clay, moderate reddish brown, sandy, limonite.	10	10
Sand, fine to medium, same as above, (90%); clay, limonite, same as above.	10	20
Sand, coarse to very coarse, subangular to subrounded, clear to frosted, slightly argillaceous, (95%); clay, very pale orange.	20	40
Sand, fine to coarse, same as above; small amount of clay.	20	60
Sand, medium to very coarse, angular to subrounded, clear to frosted to yellowish tint, (85%); clay, yellowish gray to grayish orange, very sandy also very fine gravel size of sand grain conglomerates with siliceous cement.	20	80
Clay, yellowish gray, dense, some fragments calcaeous.	20	100
Limestone, mottled shades of gray, yellowish gray and light olive gray, crystalline, high recrystallization, some fragments sucrosic, porous, hard, very moldic, very sandy, fossiliferous—Sorites sp. (abundant), shell fragments, molds.	20	120

Material	Thickness (feet)	Depth (feet)
Limestone, white to yellowish gray, micritic to crystalline, very sandy, hard to soft, porous, (80%); sand, fine to medium, angular, clear to frosted, (10%); clay, greenish gray, sandy; phosphorite.	20	140
Clay, greenish gray, very sandy.	20	160
Limestone, same as 140', except fossiliferous Sorites sp. molds, (90%); clay, light olive gray, dense.	20	180
Sand, coarse to very coarse, clear to frosted, subangular to subrounded, (95%); small amounts of limestone; mica.	20	200
Limestone, white to very pale orange, crystalline, dolomitic, sucrosic moderate porosity, trace amounts of coarse sand.	20	220
Limestone, same as above; sand, medium to coarse (10%).	20	240
No samples.	220	460

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

## 252 Jeff Rushing (W-3078)

Location, lat. 30°35'35", long. 84°40'06", in SW4SE4SE4, sec. 6, T. 2 N., R. 4 W., north of State Highway 12, about 6 mi west of Quincy (Gretna); Driller, Rowe Drilling Co.; Date drilled, Dec. 1953; Drilling method, cable tool; Depth, 360 ft; Casing, 4-in to 284 ft, open hole 284 ft to 360 ft; Aquifer, Floridan; Land-surface altitude, 277.3 ft; Water level, 145 ft below land surface on Dec. 31, 1953; Chloride concentration, 6.5 mg/L on Nov. 14, 1974.

Material	Thickness (feet)	Depth (feet)
No samples available from 0-285', descriptions from	m driller's log:	
Black soil.	2	2
Yellow clay.	8	10
Blue mud.	40	50
Yellow sandy clay.	20	70
Sand and muck.	30	100
Green sand marl.	25	125
Sand.	25	150
Marl and fuller's earth.	30	180
Sand and fuller's earth.	20	200
Marl.	20	220
Sand.	20	240
Sandy marl.	45	285
Limestone, medium gray, dolomitic, crystalline, micritic, hard, dense; few shell fragments; carbonized fragments.	10	295
Same as above; also limestone, creme to light gray; hard, micritic, porous, sandy.	10	305

Number 252 (Continued)

Material	Thickness (feet)	Depth (feet)
Dolomite, light olive gray, crystalline, dense, hard, many fractures; limestone; very light gray, micritic, porous, hard, sandy, slightly moldic; limestone, light gray, crystalline, dense, very hard, massive, few fossil remains.	10	315
Same as above; less dolomite.	10	325
Limestone, creme to very light gray, micritic, very moldic, sandy, hard, porous, fossil impressions; dolomite, light olive gray, crystalline, hard, dense to very moldic; limestone, light gray, crystalline, dense, hard, few fossil fragments; dolomite content decreases downward.	35	360

#### 253 Talquin Electric Cooperative, Incorporated (W-11759)

Location, lat. 30°35'39", long. 84°27'56", in SE<sup>1</sup><sub>4</sub>SE<sup>1</sup><sub>4</sub>SE<sup>1</sup><sub>4</sub>, sec. 6, T. 2 N., R. 2 W., at Lake Tallavana Subdivision, south of State Highway 12, about 1 mi west of Havana (Havana South); Driller, Rowe Drilling Co.; Date drilled, Jan. 1973; Drilling method, hydraulic rotary; Depth, 424 ft; Casing, 6-in to 376 ft, open hole 376 ft to 424 ft; Aquifer, Floridan; Land-surface altitude, 210.2 ft; Water level, 165.50 ft below land surface on Jan. 17, 1973; Specific capacity, 50 (gal/min)/ft; Chloride concentration, 54 mg/L on Jan. 22, 1973.

Material	Thickness (feet)	Depth (feet)
Sand, clear to white to grayish orange, fine to coarse, mostly medium, angular to subrounded, argillaceous; clay, grayish orange, laminated, sandy, waxy; phosphorite.	10	10
Clay, grayish yellow green to grayish yellow, laminated, sandy, phosphatic; limestone, white, micritic, crystalline, medium hard, phosphatic, sandy; shell fragments; sand, as above; limonite.	20	30
Limestone, white to light gray, crystalline, micritic, low to moderate porosity, very hard, phosphatic; bryozoa fragments; clay, as above; sand, fine to medium; pyrite; phosphorite; clay content decreases downward.	40	70
Limestone, light olive gray to white, crystalline, micritic, dolomitic, very hard, sandy, low to moderate porosity—moldic; shell fragments, bryozoa; sand, fine to medium; clay, greenish gray, laminated; carbonized fragments.	30	100
Limestone, white to light olive gray, crystalline, micritic, moderate porosity—moldic, dolomitic, very hard; sand, fine to medium; clay, as above; shell fragments; limestone porosity increases downward.	20	120
Limestone, white to yellowish gray, crystalline, micritic, moderate porosity—moldic, very hard to soft, chalky; bryozoa, mollusks; sand, medium to coarse; clay, greenish gray to grayish yellow, laminated, waxy; phosphorite.	70	190

Material	Thickness (feet)	Depth (feet)
Limestone, as above; clay, dark yellowish orange, laminated, waxy; sand, fine to coarse, mostly medium; carbonized fragments.	20	210
Limestone, light olive gray to medium dark gray, crystalline, dolomitic, moderate porositymoldic, very hard.	30	240
Limestone, white to light olive gray, crystalliine, micritic, very hard, dolomitic, moderate porosity—moldic, sandy; clay, dark yellowish orange to greenish gray, sandy, laminated, dense; limonite; sand, coarse to very coarse; shell molds.	20	260
Limestone, white to yellowish gray, crystalline, micritic, sandy, very hard, massive, dolomitic, low porosity; marl, white, soft, chalky, clayey, calcareous; clay, as above, 5%; sand, coarse to very coarse; limestone porosity increases downward.	30	290
Limestone, yellowish gray to light olive gray, crystalline, micritic, high porosity—moldic, very hard; clay, dark yellowish orange to yellowish gray, sandy.	10	300
Limestone, medium light gray, micritic, sandy high porositymoldic, medium hard; fossil fragments; clay, greenish gray.	40	340
Limestone, yellowish gray to medium gray, crystalline, micritic, sandy, moderate porosity—moldic; fossil fragments.	20	360
No samples.	10	370
Dolomite, light olive gray, crystalline, very hard, high textural alteration, moderate porositymoldic; sand; medium to coarse; no fossils.	54	424

# 259 City of Quincy (W-4)

Location, lat. 30°35'54", long. 84°34'48", in NW4NW4SW4, sec. 6, T. 2 N., R. 3 W., at city water plant, east of State Highway 267, 1 mi north of U.S. Highway 90 (Quincy); Driller, Gray Artesian Well Co.; Date drilled, May 1928; Drilling method, cable tool; Depth, 1,395 ft; Casing, 12-in to 332 ft; open hole 332 ft to 1,395 ft; Aquifer, Floridan; Land-surface altitude, 148.9 ft; Water level, 83 ft below land surface on April 9, 1976; Specific capacity, 7.3 (gal/min)/ft; Chloride concentration, 110 mg/L on Aug. 11, 1976. Logged by H. A. Sellin, Magnolia Petroleum Co.

Material	Thickness (feet)	Depth (feet)
Clay, nearly white, dolomitic and with scattered medium-fine quartz sand; grayer and more dolomitic downward.	40	40
Dolomite, tan-white, very finely crystalline and soft, with scattered quartz sand grains, very clayey and almost a clay; at base, very sandy with fine phosphate grains.	20	60
Clay, dark gray and slightly green, waxy, with many fine quartz and phosphate grains.	10	70
Sand, fine to medium-fine, well sorted, angular, very clayey and slightly calcareous, with many tiny phosphate grains.	8	78
Limestone, white to light gray, hard, detrital, slightl dolomitic and with a little light brown, very finely crystalline to compact dolomite; few rare shells and rare <a href="Archaias">Archaias</a> .	у 12	90
Limestone, similar, but with abundant white, thick chalky shells.	10	100
Dolomite, light buff-gray, finely sucrose, rather soft but some brown and firm.	20	120
Limestone, slightly dolomitic, with a little fine sand and abundant thick, pearly shells.	5	125
Sand, loose, medium coarse to coarse, with a few shells and a trace of pyrite; bottom part is fine to medium, silty and shaly with a few carbonaceous streaks.	25	150

Material	Thickness (feet)	Depth (feet)
No sample.	10	160
Sand, as above, but shalier.	5	165
Dolomite, nearly white, very finely sucrose, with scattered medium to coarse quartz grains; bottom part nearly a sand similar to 125', with a little light brown, compact dolomite.	20	185
Dolomite, light brown-gray, very finely sucrose and slightly sandy; part darker and more compact.	15	200
Dolomite, nearly white, very fine, "frothy", with a little dark gray dolomite slightly tan, finely sandy and less "frothy" downward.	50	250
Clay, white, very fine, sandy and limey and/or dolomiti	lc. 10	260
Sand, gray and rather dark, very clayey, medium to coarse; grades downward to gray clay, rather dark and slightly green, blocky to waxy and very sandy.	18	278
Limestone, nearly white, clayey, finely sandy; little light brown-gray, compact dolomite.	12	290
Dolomite, light brown-gray, very finely crystaline to compact, with abundant fine to coarse quartz and few fine to medium phosphate grains; darker gray and less sandy and phosphatic downward.	30	320
Dolomite, light buff-gray, very fine, soft and clayey, slightly sandy and phosphatic.	10	330
Dolomite, buff-gray, very finely crystalline to compact and hard, very slightly sandy and phosphatic.	. 8	338
Dolomite, light brown to brown, finely rhombic to sub-cucrose, porous, with medium-coarse quartz and phosphate grains; generally darker downward.	42	380
Limestone, white, chalky, slightly to very dolomitic and with abundant forams.	6	386
Dolomite, brown, finely rhombic, porous, with some pink and orange, compact, sandy dolomite.	4	390

Material	Thickness (feet)	Depth (feet)
Dolomite, brown-gray and brown, part slightly mottled, finely crystalline and vesic; "brain structure".	25	415
Dolomite, as above, with white, chalky and fine to finely detrital, dolomitic limestone; miliolids, a few smooth Operculina and rare Gypsina.	30	445
Dolomite, brown-gray to honey-brown and more rhombic slightly vesic; deeper honey-brown and more rhombic below 470'; below 480', some light gray, fine limestone with scattered dolomite crystals and with Lepidocyclina.	60 .c	505
Dolomite, brown finely rhombic to sub-sucrose, soft, porous, below 530', coarser and more granular with a little white limestone containing a few Lepidocyclina.	30	535
Limestone, light tan-gray, fine to compact, with scattered dolomite crystals and especially downward, some brown, finely crystalline dolomite; few Lepidocyclina and Operculina (?) and, at the top, large shells; little chalcedonic chert below 550'.	30	565
Dolomite, light brown, finely rhombic to sucrose, soft porous, trace of "brain structure".	35	600
Dolomite, finely rhombic and porous, less abundant downward, grading to limestone, brown-gray, rather granular, dolomitic, with many and various  Lepidocyclina and several smooth, round and rather flat Operculina.	30	630
Limestone, light cream-gray, finely detrital-granular slightly dolomitic; more granular, dolomitic and with a little glauconite downward; abundant large flat Lepidocyclina and a small round, thick Lepidocyclina is common below 640'; few Operculina shells, etc.	42	672
Limestone, cream-gray, very granular and slightly coarser than above, with a little glauconite; bryozoa, shells and echinoias and a few forams.	33	705
Limestone, as above, but less dolomitic, with abundant forams but only a few Lepidocyclina and Operculina pale brown, chalcedonic chert, 715-730'.	25	730

Material	Thickness (feet)	Depth (feet)
Limestone, similar to above, with chert, brown-gray opaque and speckled to brown and translucent; much chert and clear, crystalline quartz in lower part, which is more dolomitic and has a little brown, finely rhombic dolomite.	20	750
No sample.	10	760
Limestone, as above, but most only slightly dolomitic, with very little glauconite; some selenite at 815', probably occurring as void fillings; trace of stain spar and crystalline quartz; littler cher as above but most chert is little gray and opaque.		768
Limestone, as above, but with abundant, scattered, brown, dolomite crystals; little crystalline quartz and a few euhedral quartz crystals; little chert, selenite and satin spar, as above; small forams.	132	900
Limestone, as above, but lighter and less dolomitic, with some brown, finely crystalline dolomite; little gypsum and crystalline quartz, as above, but no chert; very little glauconite; fossiliferous as above, one small cone-shaped, blunt, phosphatic tooth in dolomite at the base.		945
No sample.	5	950
Dolomite, light brown to brown-gray, very finely granul tight and rather soft, part limey, with many small forams; abundant blue-white and a little colorless crystalline quartz.		975
Limestone, very dolomitic and grades from above, cream-gray; abundant formas.	25	1000
Limestone, light cream-gray and similar to above, but less dolomitic with a little light brown, very finely crystalline dolomite, very fine and subchalky, less fossiliferous; much clear, crystalling quartz and a little selenite at the top and a trace of crystalline quartz below.		1115
Limestone, similar, but slightly darker, more dolomitic and slightly argillaceous; some clear crystalline quartz, part chalcedonic; many forams.	40	1155

Material	Thickness (feet)	Depth (feet)
Limestone, non-dolomitic, but very layey and flaky, with much crystalline quartz at the top.	10	1165
No sample.	10	1175
Limestone, similar to 1115', bottom part slightly claye abundant forams and much crystalline quartz.	y; 30	1205
Limestone, light gray, fine and rather chalky, with a little brown, crystalline dolomite; little clear, crystalline quartz and light brown, translucent chert; very fine black grains (pyrite).	55	1260
Limestone, as above, with light gray and slightly brown opaque chert, grading to siliceous limestone	55	1315
Limestone, as above, with some brown dolomite; no chert but much quartz, part in euhedral crystals.	5	1320
No sample.	5	1325
Limestone light gray to light brown-gray, fine, hard, brittle, mottled with much fine blauconite; bottom part grades to brown-gray, mottled, siliceo limestone to rather opaque chert.	35 us	1360
No sample.	5	1365
Limestone, similar to that at 1315', with crystalline quartz and much very fine glauconite.	5	1370
No sample.	25	1395

260 Florida Bureau of Geology (Phipps No. 1) Core Hole, (W-7180)

Location, lat. 30°35'55", long. 84°18'15", in NE4SW4, sec. 2, T. 2 N., R. 1 W., about 0.6 mi west of State Highway 155, northeast of Orchard Pond on Phipps Plantation (Lake Jackson); <u>Driller</u>, Florida Bureau of Geology; <u>Date drilled</u>, June 1965; <u>Depth</u>, 302 ft; <u>Aquifer</u>, Floridan; <u>Land-surface</u> altitude, about 279 ft. Logged by C. W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, top 6 inches gray (soil zone) to light brown, fine to coarse, slightly clayey.	5	5
Sand, quartz, mottled light gray to light brown, fine to coarse, slightly more clayey.	3	8
Silt, quartz, gray to pale reddish brown, thinly bedded to laminated, clayey, sandy.	1.5	9.5
Silt, as above, but more clayey and more gray than reddish brown.	5	14.5
As 8-9.5'.	3.5	18
Clay, gray to pale purple, silty, sandy, thin bedded laminated at lower 6 inches.	2	20
Sand, quartz, dark yellowish orange, fine to coarse, faintly laminated.	5	25
Sand, quartz, yellowish orange, light brown, laminated thin clay seams.	4	29
Clay, medium brown, sandy, very soft when cored (sticky).	1	30
Sand, quartz, pale orange, fine to coarse, loose.	3	33
Clay, as in 29-30'.	0.5	33.5
Sand, quartz, very pale orange to yellowish orange, very fine to coarse, mostly coarse to very coarse, thin bedded, cross bedded, loose, some laminae of (Kaolin) clay, more clay and laminae in lower 2 feet.	23	56.5

Materia1	Thickness (feet)	Depth (feet)
Clay, dark yellowish orange, silty to slightly finely sandy, waxy.	3.5	60
Sand, quartz, mottled grayish yellow, very fine to fine, some medium, some organic blebs, slightly clayey.	13.5	73.5
Clay, yellowish gray at top to pale olive at base, sandy (slightly to abundantly), silty, phosphoritic, with quartzite pebbles (up to 2mm), upper 2 feet more pure than below.	13.5	87
Calcilutite, pale orange, very clayey, sandy, phosphoritic, soft.	0.5	87
Calcilutite, very pale orange, hard, slightly to very sandy, phosphoritic, beach rock appearance, slightly clayey.	12.5	100
Sandstone, very pale orange, calcareous, very fine to medium, phosphoritic, clayey, slightly hard.	13	113
Calcilutite, very pale orange, hard, very sandy, phosphoritic.	4	117
Sand, quartz, yellowish gray, very fine to fine, clayey, phosphoritic, lower 2 feet become more clayey and calcareous.	13	130
Calcilutite, very pale orange, very impure interval soft to hard, many clay blebs (zones), very sandy, phosphoritic, becomes very clayey and macrofossiliferous (oysters) from 135-137'.	8	138
Calcilutite, very pale orange, clayey, less sandy than above with impure beds (zones) of olive green clay, chalky.	30	168
Calcilutite, very pale orange, moldic porosity, macrofossiliferous and microfossiliferous, slightly hard, brittle, poorly permeable.	16	184

Material	Thickness (feet)	Depth (feet)
Dolomite, light brown, macrofossiliferous and microfossiliferous, moldic porosity, dense, vulgular (drusy) good secondary porosity and permeability.	18	202
Calcilutite, pale orange, partially recrystallized, to hard, slightly dolomitic, sandy, porosity poor to fair.	20	222
Calcilutite, very pale orange, chalky, soft, sandy.	36	258
Calcilutite, pale orange, dolomitic, slightly sandy, soft.	6	264
Calcilutite, pale orange, hard, partially recrystallize sandy, moldic, beachrock appearance.	d, 6	270
Calcarenite, pale orange, partially recrystallized, microfossiliferous, soft to hard.	32	302

## 264 Talquin Electric Cooperative, Incorporated (W-12078)

Location, lat. 30°36'14", long. 84°28'06", in NE4SW4NE4, sec. 6, T. 2 N., R. 2 W., at Lake Tallavana Subdivision about 2 mi west of Havana (Havana South); Driller, Rowe Drilling Co.; Date drilled, Oct. 1973; Drilling method, hydraulic rotary; Depth, 520 ft; Casing, 6-in to 398 ft, open hole 398 ft to 520 ft; Aquifer, Floridan; Land-surface altitude, 200.8 ft; Water level, 141.70 ft below land surface on Sept. 25, 1975; Specific capacity, 5.0 (gal/min)/ft; Chloride concentration, 63 mg/L on June 1, 1977.

Material	Thickness (feet)	Depth (feet)
Sand, clear, frosted to grayish orange argillaceous, fine to very coarse, angular to subrounded, (85% sand); clay, white to grayish orange, very sandy, dense, brittle, waxy; limestone, white, micritic, sandy moderately hard, (1% limestone); limonite; phosphorite.	50	50
Clay, grayish orange to moderate yellowish brown, very sandy, dense; limestone, white to very light gray, micritic, moderately hard, shell molds, casts, and fragments; phosphorite; limonite; trace of sand.	20	70
Limestone, white, micritic, sandy, soft to moderately hard, moderate intergranular porosity; limestone, white, crystalline, very hard; sand, fine to very coarse; echinoid spines; phosphorite.		80
Clay, light greenish gray, sandy, brittle; clay, white soft, sandy, dense; limestone, as above; trace of sand.		120
Limestone, white to very light gray, micritic, sandy, very moldic, moderately hard, shell fragments and impressions; limestone, white, crystalline, very hard, low porosity; sand, clear to frosted, fine to coarse mostly fine.	20	140
Limestone, very light gray, micritic, sandy, high porosity, soft to moderately hard, few shell impressions; clay, dark greenish gray, very sandy, brittle; sand, very fine, (20% sand).	20	160

Material	Thickness (feet)	Depth (feet)
Limestone, white to very light gray, crystalline, very hard, moldic; limestone, light gray, micritic, moderately hard, shell fragments, foraminifera, (Sorites sp.)	10	170
Dolomite, light olive gray, crystalline, very moldic, very hard.	30	200
Dolomite, as above; limestone, white to light olive gray, micritic, sandy, moderately hard, moderate intergranular porosity also moldic; clay, greenish gray, sandy; sand, fine.	10 n	210
Limestone, greensih gray to light olive gray, micritic sandy, moderately hard, moderately porous; sand, clear to frosted, fine to coarse mostly medium, angular to subangular, (25% sand); clay, greenish gray, very finely sandy, brittle; clay, grayish orange, sandy, waxy, dense; sand content increases downward.		230
Limestone, yellowish gray, micritic, sandy, moldic, moderately hard; dolomite, light olive gray, crystalline, very hard, moldic; snad, clear to frosted, fine to coarse; marl, white, chalky, calcareous, clayey; clay, dark yellowish orange, sandy, waxy, dense, (1% clay).	30	260
Limestone, very light gray to light gray, micritic, very moldic, moderately hard, casts and molds and bryozoa fragments, shell fragments, foraminifera (Sorites sp.); dolomite light olive gray, crystalline, moldic, very hard; trace of sand at bottom, fine to coarse.	100	360
Clay, greenish gray, sandy, brittle; limestone, as above; sand, fine to medium.	20	380
Dolomite, light olive gray, crystalline, moldic, very hard; micritic, as above 10%; dolomite becoming sucrosic toward bottom.	30	410

Material	Thickness (feet)	Depth (feet)
Limestone, white, micritic, very moldic, moderately hard, shell fragments; dolomite, as above, 5%; sand, medium to coarse.	10	420
Dolomite, light olive gray, crystalline, moldic, very hard; limestone, as above, 5%.	20	440
Limestone, white to light olive gray, micritic to crystalline, moderately hard, moderately porous, shell fragment impressions.	30	470
Dolomite, very light olive gray, crystalline, brittle, becoming sucrosic and more consolidated towards bottom.	50	520

## 265 Florida Division of Forestry (Quincy Tower) (W-3705)

Location, lat. 30°36'14", long. 84°39'11", in SE'4NW4NE'4, sec. 5, T. 2 N., R. 4 W., at Quincy Tower, east of U.S. Highway 90, about 3 mi west of Quincy (Gretna); Driller, Barnes Drilling Co.; Date drilled, Nov. 1955; Drilling method, cable tool; Depth, 317 ft; Casing, 4-in to 289 ft, open hole 289 ft to 317 ft; Aquifer, Floridan; Land-surface altitude, about 280 ft; Water level, 159.19 ft below land surface on Nov. 7, 1974; Chloride concentration, 6.0 mg/L on Nov. 7, 1974.

Material	Thickness (feet)	Depth (feet)
Sand, medium to pebble, mostly coarse, clear to frosted, orange argillaceous stain, angular to subrounded.	30	30
ame as above, except fine to coarse, mostly medium.	10	40
and, clear to frosted to yellow, argillaceous, fine to coarse, mostly medium, angular to subangular; phosphorite.	10	50
lay, pale greenish yellow, extremely sandy; sand, clear to white, medium to pebble, angular to subangular.	10	60
ay, greenish gray, very sandy; sand, same as above.	10	70
and, medium to coarse, clear to frosted, angular to subrounded; clay, yellowish gray, slightly sandy, dense.	10	80
lay, yellowish gray, dense, very little sand.	10	90
and, fine to medium, mostly fine, clear to frosted, angular to subangular; clay, yellowish gray, dense; limonite.	10	100
and, same as above; clay, same as above; limestone, white, micritic, sandy, dense, phosphoritic; mica.	10	110
and, clear to frosted, medium to coarse, angular to subangular, mica.	10	120

Material	Thickness (feet)	Depth (feet)
Limestone, white to yellowish gray, crystalline, high recrystallization, some fragments micritic, slightly sandy, hard.	10	130
Limestone, yellowish gray, light olive gray to light gray; crystalline, high recrystallization, micritic, hard, dense, slightly sandy, few very weathered shell fragments.	10	140
Limestone, light gray to medium light gray, micritic, sandy, moldic, porous.	20	160
Limestone, light gray to light olive gray, micritic, also few fragments crystalline, very sandy, slightly porous.	10	170
Limestone, white to very light gray, micritic, chalky, very sandy, slightly moldic, porous.	10	180
Same as above, higher porosity.	10	190
Clay, yellowish gray dense; limestone, light gray, micritic, sandy, dense, (5%).	10	200
Limestone, very light gray to light gray, micritic, sandy, moldic, porous.	10	210
Same as above, very sandy.	20	230
imestone, light gray, micritic, very sandy, moldic, porous, no fossils; calcite crystals.	10	240
Clay, light gray, very sandy; limestone, light gray, micritic, hard, sandy, dense.	10	250
Limestone, light gray, micritic, very sandy, slightly moldic, porous, hard.	20	270
Clay, light gray, very sandy, dense; calcite, yellowish, crystalline, well developed crystals, (20%); phosphorite, brown.	10	280

Material	Thickness (feet)	Depth (feet)
Limestone, light olive gray, crystalline, sucrosic, dolomitic, some fragments sandy, hard, slightly moldic, porous.	20	300
Limestone, same as above, also echinoid spine; clay, very light gray, very sandy, dense; limestone, very light gray, micritic, sandy, hard; calcite crystals; sand, medium, clear.	10	310
No samples.	20	330

#### 266 Gadsden County School Board (Springfield School) (W-5201)

Location, lat. 30°36'21", long. 84°39'22", in NW4NW4NE4, sec. 5, T. 2 N., R. 4 W., at Springfield Elementary School, 0.5 mi south of Gretna (Gretna); Driller, Terry- Rosa Hardware Co.; Date drilled, Sept. 1959; Drilling method, cable tool; Depth, 467 ft; Casing, 6-in to 318 ft, open hole 318 ft to 467 ft; Aquifer, Floridan; Land-surface altitude, 288.7 ft; Water level, 160.37 ft below land surface on Nov. 12, 1974; Chloride concentration, 2.7 mg/L on June 1, 1976.

Material	Thickness (feet)	Depth (feet)
No sample.	1	1
Sand, clear to frosted to yellowish brown, argillaceous, fine to medium, angular to subangular, (95% sand); siltstone; carbonized fragments; iron stain.	4	5
Sand, clear to frosted, grayish orange, fine to coarse, mostly medium, argillaceous, angular to rounded, (95% sand); clay, moderate brown, very sandy, carbonized fragments.	5	10
Sand, clear to frosted to yellowish gray, argillaceous, fine to coarse, mostly fine, angular to subrounded; siltstone; clay, greenish gray, sandy; limestone, white, micritic, low porosity.	10	20
Sand, clear to frosted, fine, angular, (85% sand); clay, greenish gray to light olive gray; phosphatic sand; silica cement; limestone, white to very light gray, micritic, low porosity; shell fragments.	5	25
Sand, clear to frosted, fine, angular, (75% sand); limonite pebbles, 10%; phosphatic sand; limestone, white, micritic, sandy, low porosity; mollusks.	5	30

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to medium, angular to subangular, argillaceous, (75% sand); clay, moderate red to grayish yellow; limestone, white to light gray, micritic, crystalline, moderate porosity—intergranular; shell fragments; phosphorite; limonite; shark's tooth; chalky.	20	50
Sand, clear to frosted, fine, angular to subangular, (90% sand); clay, yellowish gray; limonite; iron stain; phosphorite; limestone, light gray, crystalline, very hard, low porosity; no fossils.	20	70
Sand, clear to white, fine to medium, angular to subrounded, (50% sand); limestone, white to light gray, micritic, crystalline, sandy, medium to very hard, moderate porosity—moldic; shell fragments, shark's tooth; phosphatic sand.	5	75
and, fine to medium, clear to frosted, angular to subrounded, argillaceous; clay, grayish orange to moderate red, dense, sandy; limonite, trace of limestone and phosphorite.	5	80
Sand, fine to medium, clear to frosted, angular to subangular, limonite, trace of limestone and clay.	10	90
Sand, as above; clay, moderate reddish brown, sandy, dense; limonite, 10%; limestone, white to light gray, micritic, crystalline, very hard, low porosity; foraminifera, phosphorite; limonite content decreases downward.	25	115
Sand, clear to frosted, fine, angular to subangular.	5	120
Clay, greenish gray, dense, micaeous, sandy, (80% clay); sand, as above; limestone, white to medium light gray, medium hard, low porosity, sandy; shell fragments; phosphorite.	10	130

Material	Thickness (feet)	Depth (feet)
Sand, clay, and limestone, as above, except 70% sand.	5	135
Sand, as above, 50%; limestone, yellowish gray to light gray, micritic, chalky, sandy, medium hard, low porosity; shell fragments; mica, limonite.	5	140
Sand, as above; clay, greenish gray to light olive gray, sandy, dense; limestone, yellowish gray to very light gray, micritic, medium hard, low porosity, sandy; mica; iron stain; phosphorite; no fossils.	15	155
Sand, as above, 50%; limestone, as above, 40%; clay, greenish gray to very light gray, micaeous, dense; phosphoritic sand.	5	160
Limestone, light olive gray, crystalline, sandy, moderate porosity—moldic, high recrystallization, very hard; clay, greenish gray, sandy, micaeous, (25% clay); sand, clear to frosted, fine, angular to subangular, (5% sand); sand content increases and clay content decreases downward.	10	170
Limestone, very light gray to medium light gray, crystalline, micritic, moderate recrystallization, medium to very hard, moderate porosity, shell fragments, Sorites sp; sand, very fine to fine, clear to frosted, angular to subangular, (40% sand); phosphatic sand; trace of clay.	5	175
Sand, fine to medium, clear to frosted, angular to subangular; limestone, yellowish gray to light gray, micritic, crystalline, dolomitic, moderate recrystallization, sandy, low to moderate porosity—moldic; shell fragments, bryozoa; clay greenish gray, sandy, (5% clay); phosphorite; hematite; mica.	5	180

Material	Thickness (feet)	Depth (feet)
Clay, grayish yellow green to yellowish gray, greenish gray and dark yellowish orange, sandy, dense, micaceous (85% clay); limestone, yellowish gray to light gray, micritic, crystalline, dolomitic, low to moderate porosity; sand, clear to frosted, fine, angular to subrounded; limestone content increases downward to 50% at bottom of interval.	10	190
Clay, greenish gray, sandy, (50% clay); limestone, as above; sand, as above, 15%.	5	195
Limestone, white to yellowish gray to medium light gray, micritic, low to moderate porosityintergranular, sandy, (60% limestone); shell fragments; sand, as above; clay, greenish gray, san hematite.	5	200
Clay, greenish gray, 50%; sand, as above; limestone, as above, 20%; oyster shell fragment.	5	205
Limestone, yellowish gray, as above, (60% limestone); sand, fine, angular, clear to frosted; clay, greenish gray, dark yellowish orange; hematite.	10	215
Clay, greenish gray to yellowish gray, light gray to medium dark gray, sandy, micaceous, dense, (50% clay); limestone, white to yellowish gray, micritic, crystalline, sandy, very hard, moderate recrystallization; mollusks; sand, fine, angular, silica cement; phosphatic sand; mica.	10	225

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to coarse, angular to subrounded, (75% sand); limestone, white to yellowish gray, crystalline, sandy, sucrosic, moderate porosity—moldic, very hard, fossil molds; phosphorite; trace of clay; limestone content increases downward; hematite.	10	235
Clay, greenish gray, sandy (50% clay); limestone and sand, as above; phosphorite.	5	240
Limestone, white to yellowish gray to light gray, micritic, sandy, moderate porosity, medium hard; shell fragments; clay, light gray to greenish gray, 10%; sand, fine to coarse, mostly medium.	5	245
Sand, clear to frosted, fine to coarse, mostly medium, angular to subrounded, (70% sand); limestone, as above; clay, greenish gray, sandy; hematite.	5	250
Clay, light gray to greenish gray, 50%; limestone, white to yellowish gray, micritic, sandy, moderate porosity, very hard; shell fragments; sand, fine to medium.	5	255
Sand, clear to frosted, fine to coarse, mostly medium, angular to subrounded, (60% sand); limestone, as above; clay, as above, 10%; shark tooth fragment; phosphorite.	5	260
Limestone, yellowish gray, white, light gray, crystalline, micritic, sandy, very hard, low to moderate porositymoldic; shell fragments; sand, fine to medium, 40%; trace of clay.	5	265

Material	Thickness (feet)	Depth (feet)
Clay, greenish gray to light gray, micaceous; limestone and sand, as above; hematite.	5	270
Limestone, various shades of gray to white, micritic, crystalline, sandy, very hard, high porosity—intergranular, moldic; shell fragments; sand, fine, 45%; trace of clay, phosphorite; carbonized fragments; clay content increases downward.	20	290
Limestone, white to light olive gray, crystalline, sucrosic, very hard, moderate porosity, fossil fragmentsbryozoa, echinoid spines,  Archaias sp; (60% limestone); sand, fine to medium.	15	305
Limestone, white to various shades of gray and light olive gray, crystalline, very hard, high porosity, some fragments sandy; trace of fine sand.	35	340
No samples.	127	467

# 268 Dorothy C. Jones (W-4403)

Location, lat. 30°36'28", long. 84°31'32", in NW4NE4NW4, sec. 3, T. 2 N., R. 3 W., 4 mi northeast of Quincy Post Office, east of State Highway 161 (Quincy); Driller, Seabrook Hardware Co.; Date drilled, Sept. 1957; Drilling method, cable tool; Depth, 300 ft; Casing, 4-in to 260 ft, open hole 260 ft to 300 ft; Aquifer, Floridan; Land-surface altitude, 253 ft; Water level 145 ft below land surface in Sept. 1957.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted to grayish orange, fine to very coarse, mostly medium, angular to subrounded, argillaceous.	5	5
No sample.	45	50
Sand, clear to frosted, also moderate orange pink, fine to very fine pebble, mostly coarse, angular to rounded, argillaceous; phosphorite.	10	60
No sample.	10	70
Sand, clear to frosted to pale yellowish orange; very argillaceous, very fine to coarse, mostly medium, angular to subrounded.	10	80
Clay, light olive gray to olive black, sandy, brittle, very dense.	10	90
Limestone, yellowish gray to dark gray, micritic, hard, moldic, porous, phosphatic, very fossiliferous; shell fragments, foram (Sorites ? limestone, white, micritic, sandy, phosphoritic, hard, porous; clay, same as above.	10);	100
Clay, greenish gray, very sandy, dense, brittle.	10	110

Material	Thickness (feet)	Depth (feet)
Clay, same as above; limestone, yellowish gray to medium dark gray, micritic, moldic, porous, hard to brittle, fossiliferous, shell fragments; limestone, white, micritic, sandy, hard, porous, phosphatic; limestone, white, crystalline, micritic, smooth, sand, medium to coarse; carbonized fragments.	15	125
Limestone, white to yellowish gray, micritic, chalky, sandy, brittle to hard, slightly porous.	15	140
Sand, clear to frosted, very fine to fine, angular to subangular; limestone, same as above, (15%); clay, white to yellowish gray, sandy, brittle, dense, (5%).	10	150
Clay, dark greenish gray, sandy, brittle, dense; sand, medium to very coarse; limestone, yellowish gray to medium light gray, micritic, moldic, sandporous, fossiliferous (forams, shell fragments).	25	175
Clay, dark greenish gray, very sandy, brittle, dense; limestone, yellowish gray to light gray, micritic very sandy, phosphatic, hard, slightly porous, fossiliferous, shell fragments; limestone, light olive gray to light gray, crystalline, dense, very hard.	15 ,	190
Limestone, white to very light gray, micritic, sandy, slightly moldic, porous, hard, few shell fragments limestone, white, micritic, smooth, brittle.	20	210
Limestone, yellowish gray to light olive gray, micritic sandy, moldic, porous, hard, phosphatic, fossili- ferous, forams, shell fragments; limestone, same as above; clay, light olive gray to olive gray, slightly sandy, very dense; sand, medium to coarse.	e, 35	245
Sand, clear to frosted, fine to coarse, mostly medium, angular to subrounded; limestone, white, micritic hard, sandy, some fragments moldic; shell fragment clay, greenish gray, dense, brittle.		250
Same as above; clay (30%), sand (50%)	10	260

Material	Thickness (feet)	Depth (feet)
Limestone, light olive gray, crystalline, micritic, dolomitic, hard, dense, few fragments slightly moldic; shell fragments; clay, dark greenish gray, dense, brittle, semi-waxy, (2%).	20	270
Limestone, yellowish gray, crystalline, dolomitic, very hard, dense, some fragments sandy and moldic, fossiliferous; shell fragments.	10	280
Limestone, white to yellowish gray also light gray, micritic, slightly moldic, hard, porous.	5	285
Limestone, yellowish gray to medium gray, crystalline, micritic, moldic, porous, hard, dolomitic.	5	290
Same as above, mostly light olive gray, higher porosit	y. 10	300

# 271 Florida Division of Forestry (Havana Tower) (W-3695)

Location, lat. 30°36'30", long. 84°28'19", in NW4NW4NE4, sec. 6, T. 2 N., R. 2 W., 3 mi west of Havana at Havana Tower on State Highway 12 (Havana South); Driller, Barnes Well Drilling Co., Date drilled, Nov. 1955; Drilling method, cable tool; Depth, 360 ft; Casing, 4-in to 259 ft, open hole 259 ft to 360 ft; Aquifer, Floridan; Land-surface altitude, 209.9 ft; Water level, 143.06 ft below land surface on Mar. 11, 1975; Chloride concentration, 4.4 mg/L at 290 ft.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, argillaceous, fine to coarse, angular to subrounded; clay, white to moderate brown, dense, brittle; limonite; sand becoming mostly fine toward bottom.	40	40
Clay, white to dark yellowish orange, brittle, dense, laminated; sand, clear to frosted, angular to subrounded, fine to very coarse; sand content decreases downward.	30	70
Sand, clear to frosted, very fine to fine, angular; clay, white, very sandy, dense.	20	90
Marl, white, very sandy, clayey, chalky, calcareous.	10	100
Limestone, white to light gray, micritic, moderately hard, low intergranular porosity; limestone, white, micritic, very sandy, low porosity.  Sandy limestone becoming phosphatic downward.	.50	150
clay, very light greenish gray, sandy, brittle, dense; trace of sand, medium; limestone becoming more porous toward bottom also clay content increasing to about 40%.	60	210
Dolomite, yellowish gray, crystalline, very hard, low porosity.	10	220
Limestone, white to yellowish gray, micritic, moderatel hard, moldic, sandy; dolomite, as above.	у 30	250
Limestone, white to light yellowish gray, micritic, moderate to high porosity, soft to moderately hard fossiliferous, shell casts and molds, (Sorites sp., miliolids), echinoid spines; chalky towards bottom.	110	360

## 272 Wayne Wilkie

Location, lat. 30°36'34", long. 84°23'46", in SW\2SW\4SW\4, sec. 36, T. 3 N., R. 2 W., east of State Highway 153, about 1 mi southeast of Havana (Havana South);

Driller, Rowe Drilling Co.; Date drilled, July 1975; Drilling method, hydraulic rotary; Total depth, 380 ft; Casing, 4-in to 326 ft, open hole 326 ft to 380 ft; Aquifer, Floridan; Land-surface altitude, 182.3 ft; Water level, 119.14 ft below land surface on Aug. 27, 1975; Chloride concentration, 13 mg/L on Sept. 29, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, argillaceous, fine to coarse angular to subrounded; (50% sand); clay, grayish orange to greenish gray, sandy, dense, sticky; phosphorite.	50	50
Limestone, yellowish gray, crystalline, low porosity; high recrystallization, very hard; limestone, very light gray, micritic, soft, phosphatic, inter- granular porosity; clay, greenish gray to dark yellowish orange, sandy, dense, brittle; pyrite, iron oxides, clay content decreasing downward.	30	80
Marl, yellowish gray, sandy, calcareous, silty; limeston white, micritic, phosphatic, moderately hard; clay grayish green to dark yellowish orange, dense (5% clay).		100
Sand, clear to frosted, fine to medium, angular to subrounded; marl and limestone, as above.	20	120
Limestone, yellowish gray, micritic, very sandy, moderately hard, moderate intergranular porosity; sand, as above; few shell fragments.	20	140
Marl, white, chalky, calcareous, clayey.	10	150
Limestone, yellowish gray, micritic, sandy, moderately hard, moderate porosity; clay, dark greenish gray; sandy; marl, as above.	20	170
Clay, dark greenish gray, sandy, dense; phosphorite.	30	200

Material	Thickness (feet)	Depth (feet)
Marl, greenish gray, chalky, sandy, calcareous, clayey; clay, greenish gray to dark greenish gray, sandy, dense; limestone, yellowish gray, micritic, sandy, moderate porosity; phosphorite.	30	230
Limestone, yellowish gray to medium gray, micritic, sandy, moderately hard; dolomite, light olive gray crystalline, moldic - high porosity fossiliferous- shell molds and casts; clay, dark greenish gray, sandy, dense.	20	250
Marl, white, chalky, clayey, calcareous; dolomite, as above.	10	260
Limestone, yellowish gray to medium gray, micritic, moldic, moderately hard; dolomite, as above; clay, light olive gray to dark greenish gray, sandy, dense.	60	320
Dolomite, light olive gray, crystalline, very hard, slightly moldic-moderate porosity.	20	340
Limestone, yellowish gray to pale orange, micritic, sandy, very moldic-high porosity; extremely fossiliferous - shell fragments, Sorites sp., echinoid spines; dolomite, light olive gray crystalline, very hard, intercrystalline porosity.	40	380

## 281 City of Gretna (W-4992)

Location, lat. 30°36'59", long. 84°39'29", in NE4SE4NW4, sec. 32, T. 3 N., R. 4 W., in Gretna (Gretna); <u>Driller</u>, Rowe Drilling Co.; <u>Date drilled</u>, Aug. 1959 (0-650 ft), deepened to 949 ft late 1959; <u>Drilling method</u>, cable tool; <u>Depth</u>, 949 ft; <u>Casing</u>, 8-in to 469 ft, open hole 469 ft to 949 ft; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, 297.1 ft; <u>Water level</u>, 225 ft in 1959 (reported); Specific capacity, 4.0 (gal/min)/ft; Chloride concentration, 135 mg/L on Nov. 7, 1974.

Material	Thickness (feet)	Depth (feet)
No samples	460	460
Dolomite, white to light olive gray, crystalline, moldic, soft to very hard, increasing porosity with depth, fossiliferousmolds, casts, bryozoa and gastropod fragments, foraminifera (unidentified), echinoid spines.	115	575
Limestone, white, biogenic, soft to moderately hard, moldic, fossiliferous bryozoa fragments and shell molds and casts; increasing porosity with depth.	65	640
No samples	309	949

# 290 City of Havana (W-8583)

Location, lat. 30°37'15", long. 84°25'07", in NE½SW½NE½, sec. 34, T. 3 N., R. 2 W., west of U. S. Highway 27 in Havana (Havana South); <u>Driller</u>, Rowe Drilling Co.; <u>Date drilled</u>, Oct. 1968; <u>Drilling method</u>, hydraulic rotary; <u>Depth</u>, 605 ft; <u>Casing</u>, 12-in to 436 ft, open hole 436 ft to 605 ft, plugged back to 538 ft in 1977; <u>Aquifer</u>, Floridan; <u>Land-surface altitude</u>, 248.7 ft; <u>Water level</u> 187.68 ft below land surface on July 23, 1975; <u>Specific capacity</u>, 120 (gal/min)/ft; Chloride concentration, 33 mg/L in May 1967.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, angular, medium to coarse mostly medium, argillaceous; clay, white to yellowish gray, soft to brittle; phosphorite; limonite.	60	60
Clay, dark yellowish brown, sandy, brittle; sand, fine, (1%).	20	80
Limestone, white to pale orange, micritic, sandy, moderately hard, intergranular and moldic porosity phosphatic, fossiliferous-molds, casts, shark's tooth, shell fragments, petrified wood; clay, grayish orange, sandy; clay content decreases downward.	50	130
Sand, clear to frosted, fine to medium, angular to subangular; clay, light olive gray, sandy, brittle phosphorite; clay content increases downward. Interval 150-160 ft contains limestone, white, micritic, sandy, moderate hardness, moderate porosity.	30	160
Limestone, white micritic, sandy, moderate to high porosity-intergranular and moldic, fossilferous-shell fragments, foraminifera (Sorites sp.)	40	200
Sand, clear to frosted, fine to medium, subangular; cla yellowish gray, sandy, brittle.	y <b>,</b> 10	210
Clay, light greenish gray to greenish gray, very sandy, brittle, dense; sand, as above; limestone, light gray, micritic, sandy, moderately high, low porosity.	30	240

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to coarse, subangular to subrounded; clay, light greenish gray to yellowish orange, sandy, dense; limestone, as above; dolomite, light brown, very hard, moldic.	10	250
Limestone, very light gray to yellowish gray, micritic, sandy; moderately hard, moldic, moderate porosity; dolomite; as above; and, clear to frosted, fine to coarse; trace of clay, light greenish gray.		260
Sand, clear to frosted, fine to medium mostly fine, subangular, trace of micrite and clay.	20	280
Clay, greenish gray to olive gray, sandy, dense; carbonized wood fragments; gypsum, fibrous; trace of sand.	20	300

### 294 Clem Plantation (W-5858)

Location, lat. 30°37'23", long. 84°02'40", in NE'4NE'4NE'4, sec. 32, T. 3 N., R. 3 E., 2.5 mi north of Miccosukee, west of State Highway 59 (Miccosukee); Driller, John Carr; Date drilled, Feb. 1962; Depth, 230 ft; Casing, 4-in to 151 ft, open hole 151 ft to 230 ft; Aquifer, Floridan; Land-surface altitude, about 198 ft; Water level, 144 ft below land surface on Feb. 15, 1962. Logged by C. W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, medium with some coarse, in dark reddish brown clay matrix.	5	5
Sand, as above, with clay light reddish brown in color.	10	15
Sand, as above, with pieces of white clay and few very coarse quartz grains.	5	20
Sand, as above, clay light grayish orange and less in amount.	5	25
Sand, as above, with more clay.	5	30
Sand, as above, with much clay. May be sandy clay.	5	35
Sand, quartz, medium in white, light orange waxy clay matrix.	5	40
Sand, as above, some white sandy clay fragments that are very hard and may be altering to chert.	ce 10	50
Sand, as above; some sandy calcilutite fragments.	10	60
Sand, as above; clay, very light green, very sandy.	10	70
Calcilutite, impure, sandy, very light pale orange, very fine crystalline.	5	75
Sand, as above, with <u>Sorites</u> sp. common.	5	80
Sand, as above, partially recrystallized.	5	85
Calcilutite, sandy, very pale oragne, slightly finely sandy, partially recrystallized; clay, pale greenish yellow, waxy, finely sandy, moderately soft.	15	100

Material	Thickness (feet)	Depth (feet)
Calcilutite, sandy, as above, with some translucent chert.	5	105
Calcilutite, sandy, as above, becoming dolomitized.	5	110
Calcarenite, sandy, very pale orange, sandmedium grained, partially recrystallized.	5	115
Calcarenite, sandy, as above, more sandy.	5	120
Calcilutite, sandy, very pale orange, very sandymedic grained, partially recrystalline, dolomite, very fine crystalline.	um 10	130
Calcilutite, sandy, as above, slightly denser and more dolomiticslightly darker in color.	10	140
Calcilutitic dolomite, sandy, dense, very fine crystalline.	10	150
Calcilutite, sandy, very pale orange, sandmedium, dolomitic, very fine crystalline, partially recrystallized.	5	155
Calcilutite, sandy, as above, few fragments translucent chert.	t 5	160
Calcilutite dolomite, grayish orange, dense, sandy, very fine crystalline.	5	165
Calcilutite dolomite, as above, less sand and very dolomitic.	5	170
Same as 145 ft.	5	175
As above, more crystalline (sucrosic).	5	180
Same as 175 ft; and very pale orange calcilutite, very fine crystalline, microfossiliferous (indistinct), ? sandy, partially recrystallized.	15	195
Calcilutitic calcarenite, very pale orange, microfossiliferous (indistinct), moderately porous (intergranular), partially recrystallized.	35	230

#### 295 U. S. Geological Survey (W-3647)

Location, lat. 30°37'28", long. 84°10'12", in SE4SE4SW4, sec. 30, T. 3 N., R. 2 W., 70 ft west of U.S. Highway 319, 14.8 mi northeast of Tallahassee (Bradfordville); Driller, U.S. Geological Survey; Date drilled, Apr. 1955; Drilling method, bored; Depth, 41 ft; Casing, 14-in to 38 ft, screened 38 ft to 41 ft; Aquifer, shallow sand; Land-surface altitude, 102.1 ft; Water level, 6.01 ft below land surface on Oct. 30, 1976. Logged by Ralph Heath, U.S. Geological Survey.

Material	Thickness (feet)	Depth (feet)
Soil zone - gray sand.	1	1
Non-stained silty sand.	6	7
Sand, silty, iron stained, very fine to medium.	11.5	18.5
Sand, fine to very fine, clayey.	5	23.5
Sand, fine, slightly silty, damp (moist).	3	26.5
Clay, grayish blue, sandy.	6.5	33
Clay, sandy, blue-gray.	5	38
Clay, calcareous?, silty.	3	41

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

# 296 City of Havana (W-861)

Location, lat. 30°37'39", long. 84°24'51", in SELNELSEL, sec. 27, T. 3 N., R. 2 W., east of U.S. Highway 27 in Havana (Havana North); Driller, Terry-Rosa Hardware Co.; Date drilled, Aug. 1944; Drilling method, cable tool; Depth, 415 ft; Casing, 8-in to 358 ft, open hole 358 ft to 415 ft; Aquifer, Floridan; Land-surface altitude, 240.5 ft; Water level, 180 ft below land surface in Aug. 1944; Chloride concentration, 3.7 mg/L on June 2, 1976.

Material .	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to very coarse, mostly medium, angular to subrounded, (85% sand); clay, dark yellowish orange, waxy, sandy, dense; limestone, white, micritic, sandy, medium hard, moderate porosity, phosphoritic; 5% mica; phosphorite; organics.	20	20
No sample.	40	60
Limestone, white, micritic, crystalline, medium to very hard, sandy, moderate porosity—moldic, phosphoritic, (70% limestone); clay, greenish gray, sandy, very dense, (10% greenish gray clay); sand, clear to frosted, very fine to very coarse, angular to subrounded, (10% sand); clay, dark yellowish orange, dense; phosphorite, limonite; fish tooth; fish bone fragments; limestone content increases downward; clay content decreases to 1% at bottom of interval.	90	150
Sand, clear to frosted, fine to coarse, mostly medium, angular to subrounded, (90% sand); limestone, as above; phosphorite.	40	190
Limestone, white, micritic, high porosity moldic, sandy, very hard, shell molds and casts, (85% limestone); clay, greenish gray, dense; sand, fine to coarse, angular to subrounded.	20	210

Material	Thickness (feet)	Depth (feet)
Dolomite, light olive gray, crystalline, moderate porositymoldic, sandy; limestone, as above, phosphoritic; sand, fine to coarse, (5% sand).	10 .	220
No sample.	15	235
Limestone, light olive gray to yellowish gray, micritic, high porositymoldic, medium hard, sandy, fossil fragmentsmollusks.	10	245
Dolomite, light olive gray, crystalline, very hard, low to moderate porosity—moldic, moderate to high alteration; limestone, white, micritic, sandy, moderate porosity—moldic, intergranular, soft to medium hard; fossil fragments—echinoid spines, bryozoa; clay, greenish gray, waxy, sandy, dense, (10% clay).	10	255
Limestone, medium light gray to light yellowish gray, micritic, crystalline, soft to very hard, low to moderate porosity-moldic, fossil fragments; sand, fine to coarse, (5% sand); clay, greenish gray, sandy, calcareous.	10	265
Limestone, light olive gray to light gray, micritic, crystalline, medium to very hard, high porosity—moldic, some fragments sandy; clay, greenish gray, sandy, calcareous; no fossils; no clay at bottom of interval.	15	280
No sample.	10	290
Limestone, white to yellowish gray to light olive gray, micritic, crystalline, high porosity, high porositymoldic, soft to medium hard, recrystallization, fossil fragmentsmolds and casts.	45	335
No sample.	10	345

Material	Thickness (feet)	Depth (feet)
Limestone, white to yellowish gray, micritic, medium hard, high porositymoldic; no fossils.	10	355
Limestone, light olive gray, micritic, crystalline, dolomitic, medium to very hard, moderate porosity—moldic, limestone, as above, 20%; calcite; spar.	10	365
Limestone, medium light gray, micrite, high porositymoldic, medium hard; sandy; shell casts and molds.	20	385
Limestone, light olive gray to mottled shades of gray, crystalline, sandy, dolomitic, high porositymoldic, very hard; mollusks.	10	395
Limestone, as above; limestone, white, micritic, very sandy, medium hard, moderate porosity; no fossils; sand, fine to medium, (10% sand).	7	402
Limestone, as above, (90% limestone); phosphorite pebbles; clay, light greenish gray, sandy, dense, calcareous, no clay at bottom of interval.	13	415

# 297 City of Havana (W-3504)

Location, lat. 30°37'39", long. 84°24'51", in SE4NE4SE4, sec. 27, T. 3 N., R. 2 W., east of U.S. Highway 27 in Havana (Havana North); Driller, Rowe Drilling Co.; Date drilled, Apr. 1955; Drilling method, cable tool; Depth, 692 ft; Casing, 10-in to 419 ft, open hole 419 ft to 692 ft; Aquifer, Floridan; Land-surface altitude, 238.7 ft; Water level, 190 ft below land surface in Apr. 1955; Specific capacity, 160 (gal/min)/ft; Chloride concentration, 36 mg/L on June 2, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to very coarse, mostly coarse, subangular to rounded, argillaceous; phosphatic sand; organics; limonite; silica cement; sand becoming medium downward.	50	50
Sand, clear to frosted, medium to very coarse, argillaceous, subangular to rounded; clay, white, sand, dense, chalky.	15	65
Sand, as above; clay, light brown, sandy; limestone, white, micritic, phosphatic, sandy, medium hard, low porosity; carbonized fragments.	10	75
Sand, as above; clay, moderate yellowish brown, dense, sandy; limestone, as above; gastropods; phosphorite; carbonized fragments.	10	85
Limestone, white, micritic, sandy, medium hard, low to moderate porosity, phosphatic; sand, as above.	15	100
Limestone, as above; sand, very fine to fine, angular to subangular, clear to frosted.	15	115
Limestone and sand, as above; clay, light gray, sandy, dense, (40% clay); phosphatic sand; calcite.	10	125
Limestone, white to medium gray, micritic, crystalline, sandy, phosphatic, medium to very hard; clay, very light gray, sandy; sand, fine to medium.	25	150

Material	Thickness (feet)	Depth (feet)
Clay, greenish gray to black, sandy, dense; limestone, as above; limestone, pinkish gray to light olive gray, crystalline, high recrystallization, very hard, low porosity; carbonized fragments; mica; sand, fine to medium.	20	170
Limestone, white to medium gray, micritic, crystalline, sandy, phosphatic, high recrystallization, medium to very hard, massive, low porosity; clay; mica; sand, fine to medium.	30	200
Limestone, light olive gray to white, micritic, medium hard, sandy, low porosity-moldic, massive; shell fragments, echinoid spines.	20	220
Marl, greenish gray, very sandy, clayey, calcareous; limestone, as above; sand, very fine to medium; clear to frosted, subangular to subrounded; calcite; shell fragments.	30	250
Limestone, light gray to medium gray, crystalline, very hard, massive, moderate porositymoldic; no fossils.	10	260
Limestone, yellowish gray to light gray, micritic, crystalline, sandy, moderate porositymoldic; Miliolids sp., Sorites sp.	5	265
Dolomite, olive gray to yellowish gray, crystalline, moderate porositymoldic, very hard, some fragments sandy; limestone, very light gray, micritic, sandy, phosphatic, moderate porosity.	20	285
Limestone, yellowish gray, micritic, high porositymoldic, very hard; Sorites sp.; dolomite, as above, shell fragments.	55	340

Material	Thickness (feet)	Depth (feet)
Limestone, medium light gray, micritic, crystalline, sandy, high porositymoldic, very hard; becoming dolomitic downward.	45	385
Clay, greenish gray, sandy, micaeous, dense; limestone, as above, 5%.	5	390
Limestone, medium light gray to olive gray, micritic, crystalline, sandy, low to moderate porositymoldic, dolomitic, very hard; clay, greenish gray, sandy; marl, white, very sandy, silty, calcareous; sand, fine to medium.	5	395
Limestone, yellowish gray to mottled shades of gray, micritic, crystalline, sandy, moderate porositymoldic, very hard; fossil fragments.	10	405
Dolomite, olive gray, crystalline, sucrosic, very hard, high textural alteration, moderate porosity; limestone, as above; shell fragments.	15	420
Limestone, white to very light gray, micritic, biogenic, medium hard, high porosity, extremely fossiliferousforaminifera, shell fragments.	20	440
Dolomite, pale brown to brownish gray, crystalline, sucrosic, very hard, moderate porositymoldic.	65	505
Dolomite, pale yellowish brown, crystalline, sucrosic, very hard, high porositymoldic; reddish brown iron oxide; quartz; selenite.	95	600
Dolomite, grayish orange to grayish olive, crystalline, sucrosic, high porosity— moldic, high alteration; limestone, medium gray, micritic, sandy, medium hard; shell fragments; selenite abundant.	20	620

Material	Thickness (feet)	Depth (feet)
Limestone, pale orange, crystalline, biogenic, micritic, high porositymoldic, medium hard, dolomitic; bryozoa, echinoid spines, selenite, shell fragments.	72	692

#### 306 Foshalee Plantations (W-5270)

Location, lat. 30°38'18", long. 84°08'11", in NE4NW4NW4, sec. 28, T. 3 N., R. 2 E., located north of Tallahassee, about 3 mi south of Georgia-Florida state line, between U.S. Highway 319 (Beachton, Ga-Fla); Driller, Terry-Rosa Hardware Co.; Date drilled, Mar. 1960; Drilling method, cable tool; Depth, 253 ft; Casing, 10-in to 158 ft, open hole 158 ft to 253 ft; Aquifer, Floridan; Land-surface altitude, 105.0 ft; Water level, 43 ft below land surface on Mar. 29, 1960. Logged by C.W. Hendry, Jr., Florida Bureau of Geology.

Material	hickness (feet)	Depth (feet)
Sand, quartz, finemedium with few coarse, clear, subroundround, in moderate amount very pale orange clay matrix.	5	5
Sand, quartz, mostly finesome medium, clear, subrounded, in pale yellowish orange clay matrix.	5	10
Sand, as in 1-5 ft; few fragments of slightly sandy white clay.	10	20
Sand, as above, grayish orange in color.	20	40
Sand, quartz, fine with some medium in moderate amount of pale yellowish orange clay matrix.	15	55
Clay, yellowish gray, waxy, sandy (mediumcoarse); clay, white, sandy.	25	80
Calcilutitic calcarenite, very pale orange, partially recrystallized, microfossiliferous (indistinct); one fragment of amber colored chert.	5	85
Calcarenite, very pale orange, partially recrystallized moderately porous, microfossil.	, 60	145
As above; dolomite, pale yellowish brown, sucrosic, poorly porous.	5	150
Dolomite, as above, with intergranular (?vugular) at 190 ft to 253 ft.	103	253

### 307 Suber Farms (1490)

Location, lat. 30°38'21", long. 84°40'02", in SE4NE4SE4, sec. 19, T. 3 N., R. 4 W., about 2 mi north of Gretna, east of U.S. Highway 90 (Gretna); Driller, W.B. Graham(0-559 ft), Seabrooks Hardware Co. (559-885 ft); Date drilled, Oct. 1947; Drilling method, cable tool; Depth, 885 ft; Casing, 8-in to 284 ft, open hole 284 ft to 885 ft; Aquifer, Floridan; Land-surface altitude, 299.0 ft; Water level, 202.80 ft below land surface on Nov. 4, 1974; Specific capacity, 1.5 (gal/min)/ft; Chloride concentration, 4.0 mg/L on Nov. 4, 1974. Logged by J. W. Yon, Jr. Florida Bureau of Geology, (70-300 ft).

Material	Thickness (feet)	Depth (feet)
No samples.	70	70
Sand, 8.0 to 0.125 mm., rounded to angular, clear to frosted, argillaceous (rust-brown to tan), clay is slightly calcareous.	10	80
Sand, as above.	10	90
Sand, 4.0-0.125 mm., same as above.	10	100
Sand, 6.0 to 0.125 mm., well-rounded, varied colored phosphate?, clay is gray to white, same as above	. 10	110
Sand, 4.0-0.125 mm., clay is olive to cream and may be montmorillonitic, same as above.	30	140
Limestone, cream, finely granular, hard, dense, arenaceous, argillaceous, moldic; clay, olive to cream, very arenaceous, calcareous and may be montmorillonitic. Many fragments of Pelecypods; rare shark's teeth; shells, <a href="Sorites">Sorites</a> sp.; loose grains of well-rounded to angular, clear to frosted quartz. The quartz and clay may be contamination.	10	150
Limestone, cream to dark gray, no <u>Sorites</u> noted; same as above, varied colored phosphate pebbles abundant.	40	190
Limestone, gray, finely granular, arenaceous, hard, dense; clay, olive, very arenaceous, waxy, calcareous and may be montmorillonitic, loose quartz as in 140-150'; same as above.	10	200

Material	Thickness (feet)	Depth (feet)
Limestone, same as above. Clay, cream to olive, finely arenaceous, waxy, calcareous, may be montmorillonitic; loose, rounded to angular, clear to frosted quartz; rare shell fragments.	10 10	210 220
Clay, same as above; rare phosphate.	10	230
Clay, same as above; limestone as in 140-150'.	20	250
Limestone, cream, finely granular, hard, dense, finely arenaceous, argillaceous; clay, olive green, arenaceous, calcareous, may be montmorillonitic; rare phosphate.	30	280
Dolomite, tan, finely sucrosic, hard, porous, moldic.	10	290
Dolomite, same as above; tan to gray.	10	300
No samples.	315	615
Limestone, yellowish gray, micritic to crystalline, low porosity, very hard; dolomite, pale orange, crystalline, moderately hard, sucrosic; sand, coarse to very coarse; clay, very light gray, soft, calcareous; shell fragments; phosphoritic pebbles; bryozoa fragments; clay content decrease downward.	15 es	630
Limestone, very pale orange, micritic, biogenic, low porosity, moderate hardness, (90% limestone); dolomite, as above; sand, fine to medium; clay greenish gray, dense; mica; fossils abundant at bottom of section, bryozoa and shell fragments.	75	705
Limestone, yellowish gray, micritic, biogenic, low porosity, moderately hard; phosphorite.	10	715
Limestone, yellowish gray, micritic to crystalline, dolomitic, moderately to very hard, moderate porosity.	10	725

Material	Thickness (feet)	Depth (feet)
Limestone, yellowish gray to light gray, micritic, biogenic, low porosity, moderately hard, few shell fragments; sand; calcite; phosphorite; pyrite; biotite.	10	735
Limestone, yellowish gray, crystalline, low porosity, moderately hard; mica; few shell fragments.	50	785
Limestone, yellowish gray, crystalline to micritic, low porosity, moderately hard, biogenic, fossiliferous, (90% limestone), sand, medium to coarse; phosphorite.	35	820
Limestone, same as above; dolomite, brown, crystalline, low porosity.	20	840
No samples.	45	885

#### 311 Glenn M. Clark

Location, lat. 30°38'37", long. 84°42'30", in SW4SE4NE4, sec. 23, T. 3 N., R. 5 W., 1 mi south of Mt. Pleasant, west of State Highway 379 (Mt. Pleasant); Driller, Rowe Drilling Co., Date drilled, May 1975; Drilling method, hydraulic rotary; Depth, 384 ft; Casing, 4-in to 362 ft, open hole 362 ft to 384 ft; Aquifer, Floridan; Land-surface altitude, about 291 ft; Water level, 220.50 ft below land surface on May 5, 1975; Chloride concentration, 33 mg/L on Aug. 5, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, yellowish brown and dark brown, fine to coarse, subangular to subrounded; organics.	5	5
Clay, various shades light gray, purple, reddish brown and yellowish brown, sandy, micaeous.	15	20
Sand, clear to frosted, yellowish brown to dark brown fine to coarse, subangular to subrounded, (95% sand); clay, light gray to reddish brown, sandy; sand, medium to medium pebble gravel toward bottom.	60	80
Limestone, yellowish gray to very light gray, micritic to crystalline, very sandy, moderate hardness, few shell fragments; clay, greenish gray to yellowish gray, dense; sand, clear to frosted, coarse to pebble, angular to subrounded; phosphorite; plant fragment remains.	20 V	100
Limestone, as above; sand, clear to frosted, medium to very coarse, angular to subrounded, (30% sand); clay, light gray to light olive gray, dense, clay, dark yellowish orange, sandy.	40	140
No sample	40	180
Clay, olive gray to greenish gray, very dense, slightly sandy, (60% clay); sand and limestone, as 100 ft interval; plant fragment remains, phosphorite.	20	200

Material	Thickness (feet)	Depth (feet)
Limestone, white to yellowish gray, micritic, sandy, moldic, moderate hardness, slightly fossiliferous - shell molds and casts; limestone gray, crystalline, high recrystallization, very hard; clay, olive gray to greenish gray; sand, medium to very coarse, subrounded to subangular; pyrite.	20	220
Clay, greenish gray, very sandy, (75% clay); limestone, light olive gray, crystalline, sucrosic, moldic to intercrystalline porosity, very hard; recrystallized limestone and sand, as above.	20	240
Limestone, medium light gray, crystalline, sucrosic, very hard, moldic, slightly sandy; limestone, whit to yellowish gray, micritic, sandy, moderately har clay and sand, as above.		250
Limestone, medium gray to yellowish gray, micritic, ver porous, moderate hard, sandy, bryozoa and shell fragments; limestone, olive gray to yellowish gray, crystalline, very hard, (55% limestone); cla yellowish gray to greenish gray, slightly sandy, dense; trace of coarse sand; peat near bottom of interval.		270
Limestone, various shades of gray, micritic, moldic, moderately hard, sandy, <u>Sorites</u> sp., bryozoa and shell mold fragments; clay, yellowish gray to dark greenish gray, dense, slightly sandy; clay content increases downward.	50	320
Clay, olive gray to dark greenish gray, dense, (75% clay); limestone, as above; sand, clear, coarse, subangular.	40	360
Limestone, very pale orange, crystalline, very hard, bryozoa stems, shell fragments, foraminifera, (75% limestone) sand, very fine to medium, clear to frosted, angular to subangular; traces of pyrite and phosphorite (sand possibly from above).	15	37
No sample; loss circulation at 375 ft. Many soft spots in last 24 ft.	9	384

#### 313 Charles Shuman

Location, lat. 30°38'38", long. 84°23'00", in SWANE4SE4, sec. 24, T. 3 N., R. 2 W., east of State Highway 12 about 2 mi northeast of Havana (Havana North); Driller, Moore Electric Co.; Date drilled, Sept. 1975; Drilling method, hydraulic rotary; Depth, 320 ft; Casing, 4-in to 255 ft, open hole 255 ft to 320 ft; Aquifer, Floridan; Land-surface altitude, about 210 ft; Water level, 139.45 ft below land surface on Sept. 30, 1975; Specific capacity, 9 (gal/min)/ft; Chloride concentration, 5.4 mg/L on Sept. 30, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to light brown, very fine to medium, angular to subrounded, very argillaceous; phosphorite; organics.	10	10
Sand, clear to medium pale yellowish orange, fine to medium, angular to subrounded, very argillaceous; abundant phosphorite; organics.	10	20
Sand, as above; clay, white to very light gray, soft, finely sandy; clay, dark yellowish brown, brittle; phosphorite, medium to very coarse.	10	30
Sand, clear to grayish orange, fine to medium, angular to subangular, very argillaceous; phosphorite; clay, white, soft, sandy; limonite.	10	40
Clay, white to very light gray to dark yellowish orange, soft, sticky, sandy; clay, greenish gray, greasy, semi-brittle; limestone, very light gray to white, micritic, medium hard; moderate porosity, phosphatic, sandy; limestone, light gray, very hard, crystalline, sandy, low to moderate porosity; sand, clear to frosted, subangular to subrounded; iron stain; phosphorite; (50% clay and 40% limestone).	10	50

Material	Thickness (feet)	Depth (feet)
Limestone, white to very light gray, micritic, soft to medium hard, sandy, phosphatic; limestone, light gray, crystalline, very hard, low porosity; clay, very light gray to yellowish orange, soft, plastic, dense, sandy; clay, light bluish gray, soft, greasy, dense; phosphorite; sand; limonite.	20	70
Clay, greenish gray, very sandy, dense, soft; (90% greenish gray clay); limestone and clays, as above.	30	100
Clays, as above; limestone, very light gray to very pale orange to yellowish gray, micritic, sandy, moderately hard, moderate porosity; no fossils.	10	110
Clays and limestone, as above; also, clay, dark yellowish orange, semi-brittle, sandy, sticky; limestone, white to very light gray, micritic, sandy, phosphatic.	10	120
Limestone, very light gray to yellowish gray, micritic, crystalline, very hard, low porosity, sandy; marl, white to very light gray, chalky, calcareous, sandy, clayey, sticky.	10	130
Limestone and marl, as above; dolomite, pale orange, moderate textural alteration, crystalline, sandy, very hard, low porosity; shell fragments; limonite.	10	140
Limestone, very light gray to yellowish gray, micritic, crystalline, sandy, low to moderate porosity, very hard; dolomite, as above; clay; dark yellowish orange, brittle, sandy, dense; clay greenish gray, sticky, sandy, dense, soft; marl, as above; limonite; (50% limestone, 50% clay).	20	160

Material	Thickness (feet)	Depth (feet)
Limestone, grayish black to dark gray to yellowish gray, crystalline, moderate porosity—moldic, sandy, very hard; clay, bluish gray, sandy, brittle; clay, dark yellowish orange, plastic, sandy, sticky; marl, very light gray to white, sandy, sticky, calcareous; shell fragments, pyrite.	10	170
Limestone, grayish black to dark gray to yellowish gray, crystalline, sandy, very hard, moderate porosity—moldic; dolomite, pale orange, crystalline, very high, moderate to high textural alteration, low porosity; shell fragments; sand, fine to medium; trace of clay, bluish gray to dark yellowish orange; limestone becoming darker in color downward. (water bearing)	20	190
Limestone, dark greenish gray to dark yellowish gray, micritic, high porosity—moldic, intergranular, medium hard, fossils. (water bearing)	10	200
Limestone, as above; dolomite; clay, dark greenish gray, sandy, brittle.	10	210
Limestone, as above; clay, dark yellowish gray to light gray, sandy, dense, sticky; (50% limestone, 50% clay).	20	230
Clay, very light yellowish gray, soft, sandy, sticky; trace of limestone.	10	240
Clay, as above; limestone, dark gray to yellowish gray, sandy, micritic, moderate porosity—moldic, intergranular, medium hard; no fossils.	20	260
Limestone, medium dark gray, sandy, micritic, soft, moderate porosityintergranular. (water bearing)	10	270

Number 313 (Continued)

Material	Thickness (feet)	Depth (feet)
Dolomite, light olive gray, crystalline, micritic, sandy, very hard, moderate to high porositymoldic, (75% dolomite); limestone, as above; clay, medium bluish gray, sandy, laminated, waxy; limonite.	10	280
Dolomite, light olive gray, crystalline, moderate porositymoldic, sandy; 5% clay, bluish.	20	300
Limestone, yellowish gray, micritic, soft to medium hard, high porositymoldic, intergranular, foraminifera.	20	320

Loss circulation at 320 ft.

#### 321 G. H. Love (W-5704)

Location, lat. 30°39'18", long. 84°05'46", in SW4SE4SE4, sec. 14, T. 3 N., R. 2 E., 1 mi south of Georgia-Florida line and 2 mi west of Springhill Road (Miccosukee N.E.); Driller, John C. Carr; Date drilled, July 1961; Drilling method, cable tool; Depth, 178 ft; Casing 10-in to 103 ft, open hole 103 ft to 178 ft; Aquifer, Floridan; Land-surface altitude, about 102 ft; Water level, 39 ft below land surface on July 24, 1961. Logged to 145 ft by C. W. Hendry, Jr., Florida Bureau of Geology.

Material	Thickness (feet)	Depth (feet)
Sand, quartz, finemedium, clear, subangular in slight amount of very pale orange waxy clay, matrix.	5	5
Sand, as above, but slightly darker in color and more clay.	5	10
Sand, as above, but less clay and lighter in color.	5	15
Sand, quartz, fine to very coarse, loosely held in very light pale orange waxy clay; few fragments of sandy, light brown clay.	5	20
Sand, quartz, fine to medium with few coarse, loose, clear, subangular.	5	25
Sand, quartz, mostly fine grained in soft, very pale orange clay matrix.	10	35
Sand, quartz, finemedium, in pale yellowish orange clay matrix.	10	45
Sand, quartz, finemedium, clear, subangular in very pale orange clay matrix. One fragment of sandy, phosphoritic calcilutite.	10	55
Sand, quartz, fine grained, clear, subangular loosely held in slight amount of clay matrix.	5	60

Material	Thickness (feet)	Depth (feet)
Sand, quartz, finemedium, in moderate amount of grayish orange clay matrix.  Tends to be laminated.	5	65
<pre>and, quartz, fine, clear, subangular, in very slight amount very orange clay matrix.</pre>	5	70
Clay, moderate yellowish brown, silty, waxy.	5	75
Clay, as above, but clay seems to be laminated with silty to very fine sand seams.	5	80
Empure calcarenite, pale yellowish orange, badly weathered, microfossiliferous but fossils obscure. Dark yellowish orange clay in sample and filling voids in limerock. Sample has appearance of sink hole type weathered limestone. Clay may be weathered from limestone.	5	85
as above, with few very coarse, angular iron stone pebbles.	1.0	95
Calcarenite, as above, partially recrystallized; clay not present except as a stain on loose fragments. Becoming very porous; microfossils are Suwannee.	20	115
Calcarenite, partially recrystallized, very pale orange, slightly less porous, microfossil, finely crystalline.	10	125
Calcarenite, as above, grayish orange in color and slightly more recrystallized.	5	130
alcilutitic calcarenite, white moderately recrystallized, moderately porous.	5	135
as above, slightly darker in color.	10	145

#### 323 Florida Department of Transportation (W-5705)

Location, lat. 30°39'20", long. 84°24'55", in NE4SE4SE4, sec. 15, T. 3 N., R. 2 W., at former Florida Welcome Station, north of the intersection of State Highway 159-A and U.S. Highway 27 at Hinson (Havana north); Driller, W.R. Perry Drilling; Date drilled, July 1961; Drilling method, cable tool; Depth, 250 ft; Casing, 4-in to 200 ft, open hole 200 ft to 250 ft; Aquifer, Floridan; Land-surface altitude, 263.4 ft; Water level, 103.64 ft below land surface on Nov. 13, 1974; Chloride concentration, 6.8 mg/L on Nov. 13, 1974.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, fine to very coarse mostly fine, angular to subrounded, argillaceous, (85% sand); clay, moderate reddish orange, sandy, brittle, dense; phosphorite; limonite.	70	70
Sand, very pale orange to clear, very fine to coarse mostly fine to medium, subangular to rounded, (98% sand); phosphorite; carbonized wood fragment clay, moderate red.	10 s;	80
Clay, yellowish gray to dark yellowish orange, sandy, dense, laminated, micaceous, (50% clay); sand, very fine to coarse, angular to subrounded; limestone, white, micritic, soft, chalky, low to moderate porosity; phosphorite; iron oxides; clay content increases downward.	30	110
Marl, white, very sandy, chalky, calcareous; limestone, white to yellowish gray, micritic to crystalline; very hard, low porosity; sand, fine to coarse mostly medium, angular to subangular, (10% sand).	10	120
Clay, greenish gray, massive, very dense, sandy.	10	130
Marl, as interval 110-120 ft.	20	150
Limestone, white, crystalline, sandy, very hard, low porosity; shell fragments; clay, light greenish gray to grayish orange, sandy, dense; selenite.	10	160
Sand, clear to frosted, very fine to fine, subangular to subrounded.	10	170

Number 323 (Continued)

Material	Thickness (feet)	Depth (feet)
Clay, greenish gray, very sandy, dense, (80% clay); calcite, clear, recrystallized, moderate alteration; petrified wood.	20	190
Limestone, white, crystalline, dolomitic, sucrosic, very hard, low porosity; dolomite, light olive gray, crystalline, very hard, low porosity, moderate alteration; phosphorite.	30	220
Marl, white, sandy, calcareous, chalky, soft to moderately hard; dolomite, as above; sand, very fine to fine.	10	230
Clay, greenish gray, sandy, dense; dolomite and sand, as above.	20	250

# 331 Ettie M. Dalton (W-13220)

Location, lat. 30°39'30", long. 84°21'30", in SW4NE4SW4, sec. 17, T. 3 N., R. 1 W., north of State Highway 12 at Concord (Calvary); Driller, Moore Electric Co.; Date drilled, May 1976; Drilling method, hydraulic rotary; Depth, 260 ft; Casing, 4-in to 215 ft, open hole 215 ft to 260 ft; Aquifer, Floridan; Land-surface altitude, about 220 ft; Water level, 155 ft below land surface on May 3, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted, medium, angular to subrounded, argillaceous; clay, moderate reddish pink.	10	10
Sand, clear to frosted with very pale orange stain, medium to coarse, subangular to subrounded; phosphorite, limonite.	50	60
Limestone, white to very pale orange, micritic, very sandy, moderately hard, phosphoritic, (50% limestone); sand, clear to frosted, coarse, subangular to subrounded; limonite.	40	100
Clay, light olive gray, sandy, calcareous, (50% clay) limestone, as above.	; 10	110
Limestone, as above, 85%; clay, greenish gray, very sandy.	20	130
Dolomite, light olive gray, crystalline, very hard, moderate porositymoldic; clay, light olive gray.	20	150
Clay, greenish gray to light olive gray, very sandy, (75% clay); dolomite, as above.	10	160
Clay, greenish gray, sandy, calcareous.	10	170
Limestone, medium light gray, crystalline, high recrystallization, very hard, low porosity, sandy.	20	190
Dolomite, light olive gray, crystalline, very hard, moderate to high porositymoldic, sandy, few fossil molds.	20	210

Number 331 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, white, micritic, sandy, moderately hard, high porosity, few fossil molds and casts; sand, medium to coarse.	30	240
Limestone, medium light gray, crystalline to micritic, sandy, high porosityvery moldic.	20	260

#### 332 Florence McMillian (W-2482)

Location, lat. 30°39'30", long. 84°49'15", in NW\(\frac{1}{2}\)SE\(\frac{1}{2}\)NE\(\frac{1}{2}\), sec. 15, T. 3 N., R. 6 W., 3 mi south of Chattahoochee (Chattahoochee); Driller, E. J. Carisle; Date drilled, Aug. 1951; Drilling method, cable tool; Depth, 230 ft; Casing, 3-in to 171 ft, open hole 171 ft to 230 ft; Aquifer, Floridan; Land-surface altitude, about 290 ft; Water level, 136 ft below land surface on Aug. 24, 1951.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted to grayish orange, 6 medium to very coarse, angular to subrounded, (90% sand); sand cleaner and coarser downward; limonite pebbles; siltstone.	0	60
Sand, as above, except mostly medium; clay, grayish orange, dense sandy.	10	70
Clay, yellowish gray, sandy, (85% clay); sand, clear to frosted, fine to medium, angular.	20	90
Clay, as above; limestone, white, micritic, very sandy, moderately hard, phosphatic; limestone content increases to 50% downward.	26	116
Sand, clear to frosted, medium to very coarse mostly medium, angular to subrounded; plant fragment rema	4 ins.	120
Sand, as above, (60% sand); limestone, white, micritic, very sandy, moderately hard; limestone, yellowish gray, crystalline, high recrystallization, very ha few shell fragments; clay, greenish gray, very san	rd;	130
Limestones, as above; clay yellowish gray, very sandy, calcareous, clay, greenish gray; shell fragments; clay content increases downward.	40	170
Sand, clear to frosted, fine to medium, angular to subangular (90% sand); limonite; traces of limesto and clay, as above.	20 ne	190
Limestone, white, micritic to crystalline, sandy, moder ately hard, moldic and intergranular porosity, few fossil fragments; sand, clear to frosted, fine to medium; dolomite, yellowish gray, crystalline, sucrosic, very hard.		230

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

333 Gadsden County School Board (St. John's School) (W-5204)

Location, lat. 30°39'31", long. 84°36'24", in SE\sE\nW\sec. 14, T. 3 N., R. 4 W., at St. John's Elementary School, west of State Highway 267, about 4 mi north of Quincy (Dogtown); Driller, Terry- Rosa Hardware Co.; Date drilled, Oct. 1959; Drilling method, cable tool; Depth, 426 ft; Casing, 6-in to 283 ft, open hole 283 ft to 426 ft; Aquifer, Floridan; Land-surface altitude, 297.6 ft; Water level, 177.85 ft below land surface on Nov. 13, 1974; Chloride concentration, 3.0 mg/L on June 1, 1976.

Material	Thickness (feet)	Depth (feet)
No sample.	1	1
Sand, clear to moderate reddish orange to dark yellowish brown, fine to very coarse, mostly coarse, argillaceous, angular to rounded; clay, moderate reddish orange, light brown, sandy, (20% clay); phosphorite; organics; limonite.	29	30
Sand, clear to frosted, fine, high sphericity, angular to subangular; clay, moderate yellowish brown, sandy, (5% clay); phosphorite.	5	35
Sand, clear to frosted, fine to coarse, angular to rounded; clay, grayish orange, sandy, (10% clay); carbonized fragments.	5	40
Sand, clear to frosted, fine to medium, mostly fine, angular to subangular, micaceous; clay, grayish orange, (5% clay); phosphorite.	5	45
Sand, clear to frosted, fine to coarse, mostly medium, angular to subrounded; clay, greenish gray, (2% clay); phosphorite; carbonized fragments.	5	50
Clay, greenish gray to medium light gray, sandy, dense; sand, as above; carbonized fragments.	40	90

Material	Thickness (feet)	Depth (feet)
Clay, as above, 80%; sand, as above, 10%; limestone, very light gray to medium light gray, micritic, sandy, low porosity, very hard, Sorites sp.; mica.	5	95
Limestone, as above; sand, fine to coarse, clear to frosted, angular to subrounded, (15% sand); clay as above.	5	100
Limestone, white to light gray, micritic, crystalline, sucrosic, medium to very hard, sandy, moderate porosity, brecciated; shell fragments.	, 5	105
Limestone, yellowish gray, crystalline, micritic, sandy, very hard, sucrosic; Sorites sp.; sand, fine to coarse, mostly medium; phosphorite; sand content increases downward.	15	120
Sand, as above, 55%; limestone, as above, also phosphatic; clay, greenish gray, 2%.	10	130
Clay, greenish gray, sandy, (50% clay); sand, fine to very coarse, mostly coarse, angular to subrounded; limestone, as above; pyrite; mica; phosphorite.	30	160
Sand, clear to white, fine to coarse, mostly medium, angular to subrounded, micaceous; trace of clay, greenish gray.	40	200
Sand, fine to very coarse, mostly coarse, clear to frosted, angular to subrounded, (95% sand); limestone, white to yellowish gray, micritic, sandy, very hard, moderate porosity, phosphatic; clay, greenish gray, sandy; phosphorite; sand content increases downward.	20	220

Material	Thickness (feet)	Depth (feet)
Sand, as above; limestone, white to mottled shades of gray, micritic, crystalline, sandy, moderate porositymoldic, very hard; clay greenish gray, sandy.	25	245
Sand, clear to frosted, fine to medium, angular to subangular, (75% sand); clay, greenish gray, sandy; pyrite; mica; phosphorite.	10	255
Sand, as above; limestone, yellowish gray to dark gray, micritic, crystalline, low to moderate porosity—moldic, sandy; clay, greenish gray, sandy; pyrite; petrified wood.	5	260
Sand, clear to frosted, very fine to fine, angular to subangular, (90% sand); clay and limestone, as above; pyrite.	10	270
Limestone, yellowish gray to light gray, crystalline, moderate porosity—moldic, sandy, Sorites sp. (90% limestone); sand, medium to very coarse; porosity increases downward.	25	295
Limestone, light gray to medium light gray, crystalline, high porosity—moldic, sandy, shell fragments; sand, fine to very coarse, (20% sand).	20	315
Limestone, yellowish gray to light olive gray, crystalline, dolomitic, massive, very hard, (90% limestone); sand, as above; pyrite.	35	350
Limestone, light gray, micritic, high porosity moldic, sandy, very hard, dolomitic, limestone and sand, as above.	40	390

Number 333 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, yellowish gray to light olive gray, crystalline, dolomitic, medium porositymoldic, some fragments sandy, (90% limestone); sand, as above.	20	410
Limestone, light gray, micritic, high porosity moldic, intergranular, sandy, medium hard, (90% limestone); sand, as above; no fossils.	16	426

# 337 Talquin Electric Cooperative, Incorporated (W-11982)

Location, lat. 30°39'41", long. 84°16'25", in SW4SE4NW4, sec. 18, T. 3 N., R. 1 E., at Merdian Hills Subdivision, about 0.6 mi south of the intersection of State Highways 12 and 155 (Calvary); Driller, Rowe Drilling Co.; Date drilled, Mar. 1973; Drilling method, hydraulic rotary; Depth, 298 ft; Casing, 6-in to 210 ft, open hole 210 ft to 298 ft; Aquifer, Floridan; Land-surface altitude, about 175 ft; Water level, 105 ft below land surface on Mar. 23, 1973; Specific capacity, about 220 (gal/min)/ft; Chloride concentration, 5.8 mg/L on Feb. 9, 1976.

Material	Thickness (feet)	Depth (feet)
Sand, clear to grayish orange, argillaceous, medium to coarse, angular to subrounded; clay, light brown to grayish orange; limonite.	30	30
Clay, grayish orange to pale yellowish brown, micaeous, sandy; sand, coarse.	10	40
Sand, clear to pale yellowish orange, argillaceous, fine to medium mostly fine, angular to subrounded clay medium light gray.	60	100
Sand, clear to pale yellowish orange, fine to medium, angular to subrounded, argillaceous; clay, pale yellowish orange; trace of limestone, white, micrite, low porosity, sandy.	5	105
Clay, grayish orange, sandy, (80% clay); limestone, white, micritic, moderately hard, low porosity, sandy; siliceous concretions.	20	125
Limestone, white, micritic to crystalline, sandy, very hard, low porosity, phosphoritic, moderate recrystallization, shell molds; clay, light greenish gray, sandy; limonite; sand, fine; slight increase in porosity downward.	63	188
Limestone, white, micritic to crystalline, moderate recrystallization, sandy, low porosity.	57	245
Clay, very light gray, dense; limestone, as above.	40	285
Limestone, yellowish gray to light gray, crystalline, sandy, sucrosic, very hard, moderate porosity.	13	298

# 341 R. Barkley (W-13248)

Location, lat. 30°39'58", long. 84°37'51", in SW4SW4SW4, sec. 10, T. 3 N., R. 4 W., north of State Highway 272 about 3 mi northeast of Gretna (Mt.Pleasant); Driller, KCW Electric Co.; Date drilled, Aug. 1976; Drilling method, cable tool; Depth, 292 ft; Casing, 4-in to 260 ft, open hole 260 ft to 292 ft; Aquifer, Floridan; Land-surface altitude, about 300 ft; Water level, 156.90 ft below land surface on Aug. 2, 1976.

Material	Thickness (feet)	Depth (feet)
Clay, white to moderate pink to light red, sandy, dense, (90% clay); sand, clear to frosted, coarse to very coarse, subangular, limonite.	15	15
Clay, dark yellowish orange, sandy, dense, (90% clay); sand and limonite, same as above.	15	30
Sand, pale yellowish orange to frosted, medium to coarse, subangular, argillaceous; trace amounts of phosphorite and limestone.	20	50
Sand, clear to frosted to pale yellowish orange, argillaceous, coarse to very coarse, subangular to subrounded, (90% sand); limonite.	10	60
Clay, light bluish gray, very dense, slightly sandy.	10	70
Clay, light gray, very sandy; phosphorite.	40	110
Limestone, very light gray, micritic, very sandy, phosphoritic, moderately hard, few shell fragments, (80% limestone); sand, clear to frosted, coarse, angular to subrounded, (15% sand); clay, dark greenish gray, sandy; phosphorite.	20	130
Clay, greenish gray, sandy, dense, calcareous.	20	150
Limestone, white, micritic to crystalline, very sandy, hard, few shell casts, (95% limestone); clay, as above.	20	170
Clay, as 130-150 ft interval, (50% clay); sand, medium, clear, (45% sand); limestone, as above.	, 30	200

Number 341 (Continued)

Material	Thickness (feet)	Depth (feet)
Limestone, yellowish gray, crystalline, dolomitic, ve hard, moderate porosity, (no fossil evidence); increasing porosity, (moldic) downward.	ery 60	260
No samples.	32	292

TABLE 15.--Lithologic logs of selected wells and core holes--Continued

343 Ford Dairy (W-4915)

Location, lat. 30°40'17", long. 84°36'57", in NE<sup>1</sup><sub>4</sub>NE<sup>1</sup><sub>4</sub>SE<sup>1</sup><sub>4</sub>, sec. 10, T. 3 N., R. 4 W., west of State Highway 267, about 7 mi north of Quincy (Dogtown); Driller, Barnes Well Drilling Co.; Date drilled, Mar. 1959; Drilling method, cable tool; Depth, 280 ft; Casing, 4-in to 216 ft, open hole 216 ft to 280 ft; Aquifer, Floridan; Land-surface altitude, about 293 ft; Water level, 145 ft below land surface in Mar. 1959.

Material	Thickness (feet)	Depth (feet)
Sand, medium to very coarse, mostly medium, clear to frosted to moderate reddish orange, argillaceous, angular to subrounded; hematite and limonite pebbles.	10	10
Same as above, except grayish orange; less iron-rich minerals.	10	20
Same as above; (5-10% limonite), very coarse to pebble.	20	40
Sand, clear to frosted, fine to very coarse mostly medium angular to subrounded; clay, dark yellowish orange, dense, slightly sandy. Iron-rich minerals, (5-10%).	10	50
Clay, greenish gray, sandy, micaceous, dense; sand, same as above, (10%); iron-rich minerals.	10	60
Sand, clear to frosted to yellowish, argillaceous, very fine to fine, angular to subangular	10	70
Sand, same as above; clay, greenish gray, sandy, dense; clay, dark yellowish orange, sandy.	10	80
Sand, very fine to fine, clear to frosted, angular to subangular; clay, same as above, (5%); organic fragments.	10	90
Clay, medium light gray, sandy, dense; sand, same as above, (20%); phosphorite.	20	110

Material	Thickness (feet)	Depth (feet)
Limestone, yellowish gray, micritic, moldic, sandy, porous, hard, fossiliferous (few shell impressions—poorly preserved); sand, clear to frosted, fine to coarse, angular; limestone, light olive gray, micritic, very sandy, moldic, porous, hard; dolomite, light olive gray, crystalline, sucrosic, dense, hard; phosphorite, black.	10	120
Sand, same as above, (85%); limestone, yellowish gray to white, crystalline, micritic, slightly sandy, some fragments moldic, hard, shell fragments; clay, greenish gray sandy; phosphorite, black.	10	130
Sand, same as above; clay, greenish gray, sandy, dense, (5-10%); phosphorite.	10	140
Clay, same as above, also micaceous, (50%); limestone light olive gray, micritic, slightly moldic, porous, hard; sand, same as above, (15%); limestone, medium bluish gray, micritic, sandy, hard, dense.	, 10	150
Clay, same as above, (95%); limestone, white to yellowish gray, crystalline, micritic, hard, dense; sand, same as above.	10	160
Sand, fine to medium, clear to frosted, angular to subangular, argillaceous, (90%); clay, same as above; mica.	10	170
Same as above; slight increase in clay content.	20	190
Same as above; also, limestone, white, micritic, porous, slightly moldic, chalky appearance but very hard.	10	200
Limestone, white to yellowish gray, micritic, very sandy, slightly moldic, moderate porosity, hard, (90%); clay, same as above; sand, clear to frosted, fine to medium, angular.	10	210

Material	Thickness (feet)	Depth (feet)
Limestone, white to yellowish gray, micritic, very moldic, extremely porous, hard, clastic, fossiliferous, also few striations from shell impressions; dolomite, light olive gray, crystalline, sucrosic, slightly arenaceous, hard, porous, (5%); pyrite.	10	220
Limestone, yellowish gray to light olive gray, crystalline, micritic, dolomitic, moldic, very porous, slightly sandy, hard; clay, light olive gray to olive gray, dense, sandy; clay, greenish gray, very sandy; sand, clear to frosted, fine to coarse, angular to subangular.	10	230
Limestone, light olive gray to yellowish gray, micritic to crystalline, some fragments sandy, moldic, dense to porous, hard, shell fragment; limestone, white, micritic, sandy, moldic, porous, hard; clay, (5%), same as above; calcite crystals.	10	240
Limestone, light gray to olive gray, micritic to crystalline, sandy, dolomitic, moldic to slightly moldic, porous, hard; calcite crystals.	10	250
Same as above; also unidentifiable shell fragment impressions.	20	270
Same as above; shell fragments.	10	280

## 346 Allen D. Dorian

Location, 1at.30°40'34", 1ong. 84°28'28", in NE4SE4NW4, sec. 7, T. 3 N., R. 2 W., north of State Highway 159 and 2 mi east of Dogtown (Dogtown); Driller, Rowe Drilling Co.; Date drilled, Apr. 1975; Drilling method, hydraulic rotary; Depth, 520 ft; Casing, 4-in to 460 ft, open hole 460 ft to 520 ft; Aquifer, Floridan; Land-surface altitude, 158.2 ft; Water level, 104.00 ft below land surface on Apr. 29, 1975; Chloride concentration, 53 mg/L on July 14, 1975.

Material	Thickness (feet)	Depth (feet)
Clay, light olive gray; sandy, dense, (85% clay); sand, fine to medium, angular to subrounded.	20	20
Clay and sand, as above; limestone, very pale orange, micritic, moderately hard, low porosity, phosphatic.	10	30
Sand, very fine to fine, clear to frosted, very argillaceous, angular to subangular, (75% sand); clay, yellowish gray, sandy; limestone, as above; peat.	20	50
Clay, light olive gray to greenish gray, sandy, dense, (40% clay); limestone, light olive gray, crystall approaching scurosic, sandy, very hard, low poros sand, fine to medium, angular to subangular.	ine,	60
Limestone, yellowish gray to light olive gray, micriti to crystalline, sandy, moderate porosity; clay, greenish gray, sandy; clay content increasing downward to 65% at bottom of interval.	c 20	80
Dolomite, light olive gray, crystalline, moderate alteration, sucrosic, slightly sandy, low porosity, very hard, (95% dolomite); clay, dark greenish gray, dense.	10	90
Clay, yellowish gray to light olive gray, sandy, (75% clay); dolomite, as above; clay content increases downward.	20	110
Limestone, yellowish gray, micritic, sandy, very hard, low porosity, (50% limestone); clay, yellowish gray to greenish gray, sandy.	10	120

Material	Thickness (feet)	Depth (feet)
Clay, yellowish gray to greenish gray, sandy, dense, (90% clay); limestone, as above.	10	130
Limestone, yellowish gray to light olive gray, micritic to crystalline, sandy, moderately high, moderate porosity, shell fragments and molds, (60% limestone); clay, as above; clay content increases downward to 80% at bottom of interval.	30	160
Limestone, yellowish gray to medium gray, crystalline, sucrosic, sandy, moderate to very hard, low porosity, shell fragments, (80% limestone); clay, greenish gray, sandy; carbonized wood particles.	20	180
Dolomite, light olive gray to light gray, crystalline, sucrosic, sandy, high porositymoldic, becoming fossiliferous downward, shell fragments, gastropo		200
Dolomite, various shades of gray, crystalline to micritic, high porositymoldic, micro-fossiliferous, shell fragments, molds, foraminifera (Sorites sp.); clay, yellowish gray; clay content increasing downward.	40	240
Clay, light gray, dense, sandy, (85% clay); dolomite, as above.	40	280
Clay, dark greenish gray to light gray, dense, 55% clay, dolomite, as above.	20	300
Clay, yellowish gray, sandy, dense, calcareous, (90% clay); dolomite, as above.	20	320
Oolomite, various shades of gray and olive gray, crystalline, sandy, high porosity, very hard, sucrosic, molds and fragments, foraminifera (Sorites sp.)	20	340
Clay, greenish gray, sandy, dense, (85% clay); dolomite, as above.	20	360

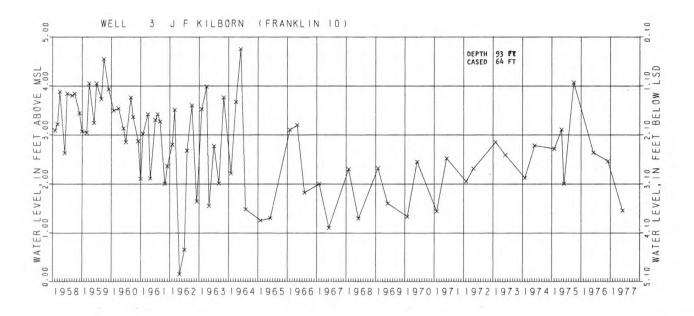
Material	Thickness (feet)	Depth (feet)
Dolomite, as above; limestone, medium gray, micritic, sandy, moderate porosity, moderately hard; clay, dark greenish gray, (25% clay).	10	370
Dolomite, yellowish gray to mottled shades of gray, crystalline, sucrosic, moderately porousmoldic shell fragments, molds.	20	390
Limestone, medium gray, crystalline, high porosity, moldic, moderately hard; dolomite as above.	10	400
Clay, greenish gray, sandy, dense, (90% clay), limestone, as above.	10	410
Dolomite, greenish gray to dark greenish gray, sucrosic, low porosity, very hard; clay yellowish gray, sandy, dense, calcareous.	20	430
Limestone, pale yellowish brown, micritic, biogenic, soft to moderately hard, high porosity moldic, intergranular, macro-and micro-fossiliferous-echinoid spines, bryozoa, foraminifera (Lepidocyclina sp.).	50	480
Limestone, as above, except pale orange and very fossiliferous, foraminifera abundant.	40	520

## 353 City of Chattahoochee (W-3482)

Location, lat. 30°41'39", long. 84°50'21", in SE4SW4SE4, sec. 33, T. 4 N., R. 6 W., 1 mi south of U.S. Highway 90 in Chattahoochee (Chattahoochee); Driller, Layne-Atlanta Co.; Date drilled, Apr. 1955; Drilling method, hydraulic rotary; Depth, 239 ft; Casing, 10-in to 153 ft, open hole 153 ft to 239 ft; Aquifer, Floridan; Land-surface altitude, 145.5 ft; Water level, 87.01 ft below land surface on Mar. 8, 1977; Specific capacity, 102 (gal/min)/ft; Chloride concentration, 0.6 mg/L on Mar. 19, 1975.

Material	Thickness (feet)	Depth (feet)
Sand, clear to frosted with light brown stain, medium to pebble mostly coarse, angular to subrounded, (80% sand); shell fragments; limonite; phosphorite.	10	10
Sand, clear to frosted, fine to medium, angular, (60% sand); clay, grayish orange, dense; interval from 15 to 20 ft contains limonite.	10	20
Clay, yellowish gray, sandy, dense.	5	25
Limestone, white, micritic, sandy, intergranular porosity; clay, as above.	15	40
Limestone, very light gray, micritic, very sandy, moldic, moderately hard; sand, clear to frosted, fine to medium, angular, (25% sand), sand content increases with depth; carbonized wood fragments.	15	55
Clay, dark yellowish gray, sandy, dense; limestone, as above (10% limestone).	5	60
Limestone, very light gray to light gray, micritic, intergranular porosity, very sandy, moderately hard; loose sand toward bottom.	10	70
Limestone, as above; sand, clear to frosted, fine to medium, angular; limestone, yellowish gray, crystalline, moderately recrystallized.	5	75

Material	Thickness (feet)	Depth (feet)
Limestone, yellowish gray, micritic, very sandy, marlly, soft to moderately hard, micaeous, intergranular porosity; sand, clear to frosted, fine to medium, angular, (25% sand); moldic porosity and less sandy downward.	35	110
Dolomite, light olive gray, crystalline, moderately hard, low observable porosity (intercrystalline?).	5	115
Sand, clear to frosted with reddish brown stain, fine to coarse mostly medium, angular to subrounde (75% sand); dolomite, yellowish gray, crystalline, sucrosic, moldic, very hard; clay, dusky yellow, sandy; iron oxides.	5 d,	120
Dolomite, yellowish brown, crystalline, sucrosic, slightly moldic, very hard, (75% dolomite); sand, as above, becoming less sandy downward.	15	135
Limestone, yellowish gray, micritic, very moldic, moderately hard, becoming more porous downward.	25	160
Dolomite, yellowish gray to very pale orange, crystalli very hard, low porosity.	ne, 20	180
Dolomite, grayish orange to very pale orange, crystalli very hard, sucrosic, moldic, increasing porosity toward bottom, fossiliferous, (Operculinoides sp.? at 180-185 ft interval, fossil evidence decreasing with depth; trace of clay at 195-200 ft interval, moderate orange pink, sandy.	200	239



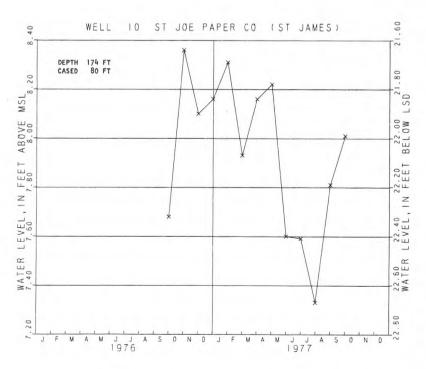
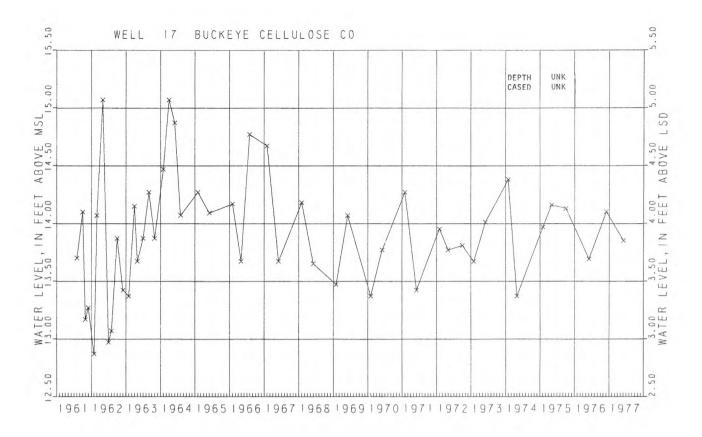


FIGURE 3.--Hydrographs of water levels in selected wells. (Well shown on fig. 2)



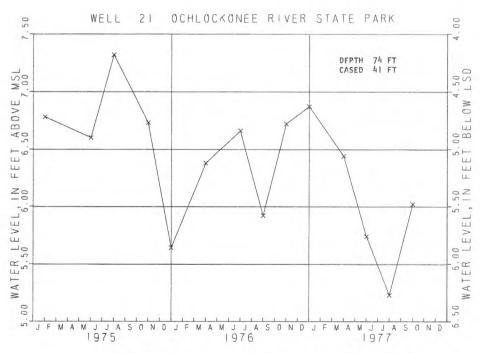


FIGURE 3.--Hydrographs of water levels in selected wells--Continued

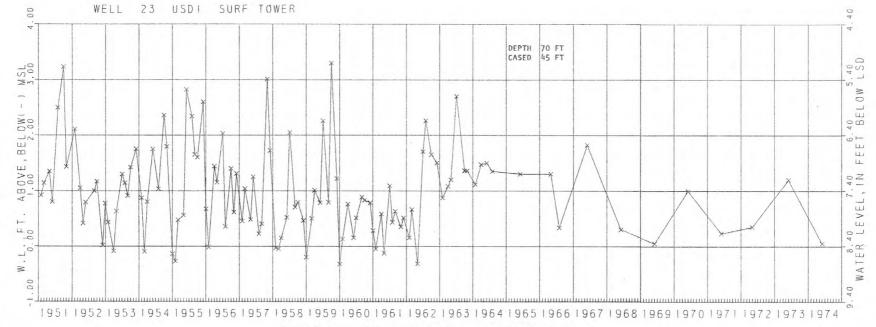
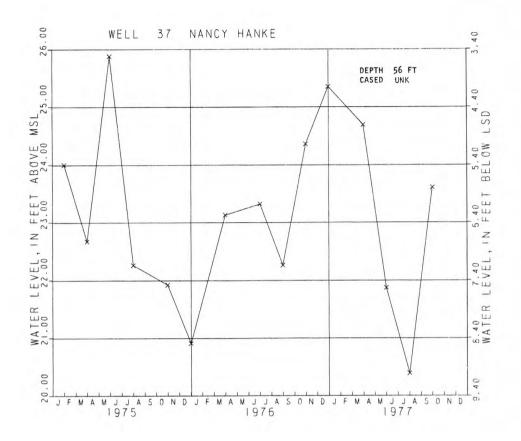


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



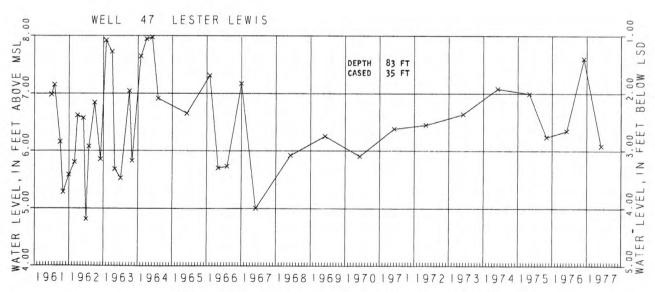
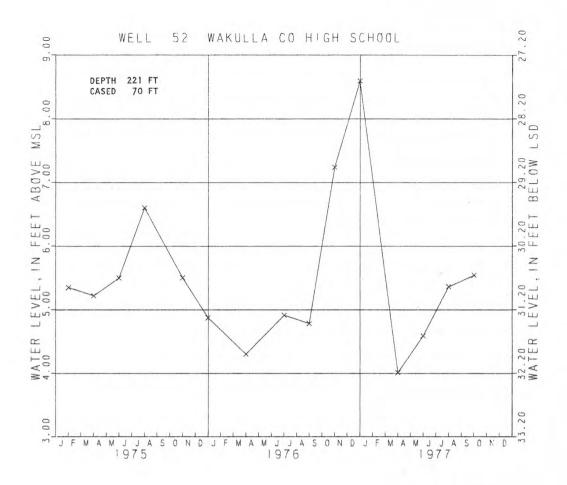


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



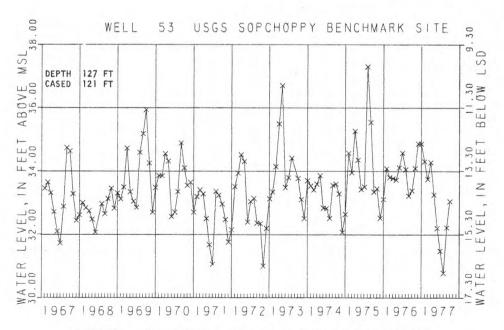
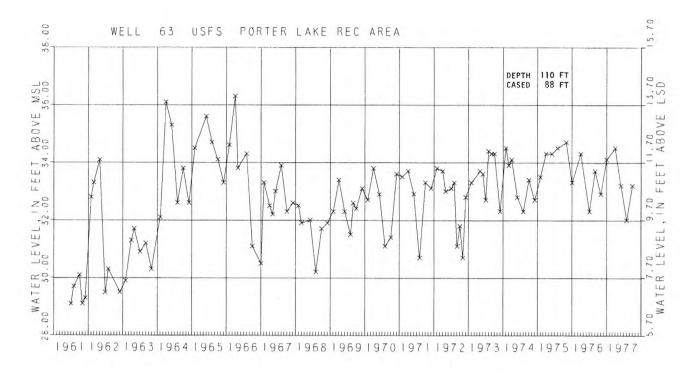


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



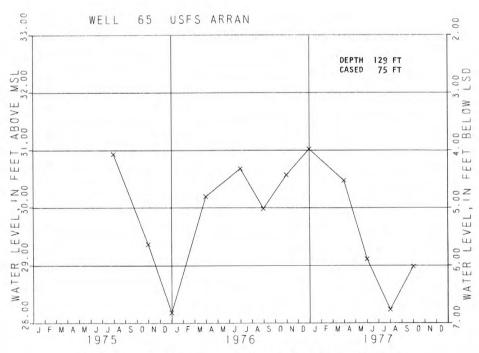
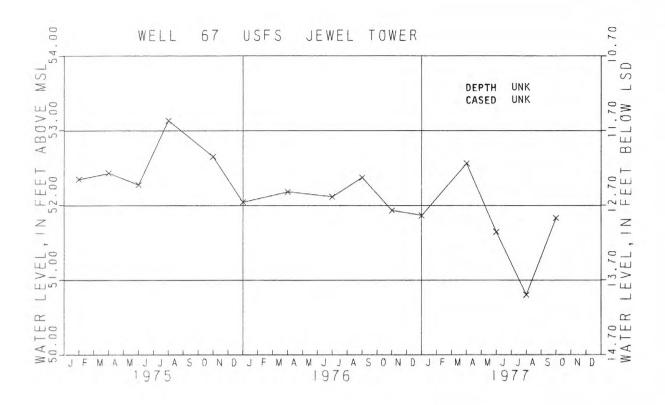


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



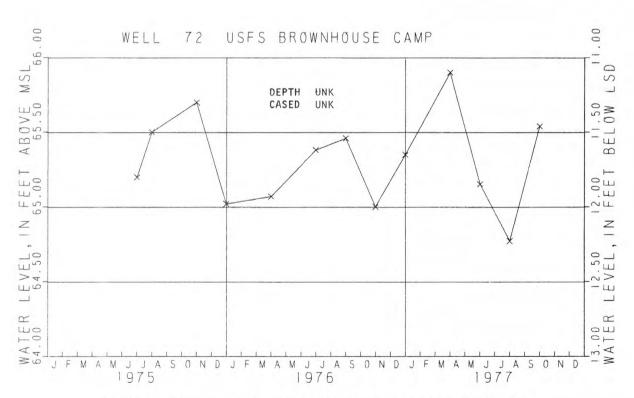


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



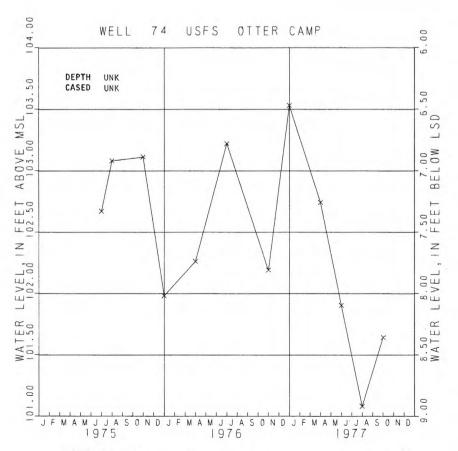
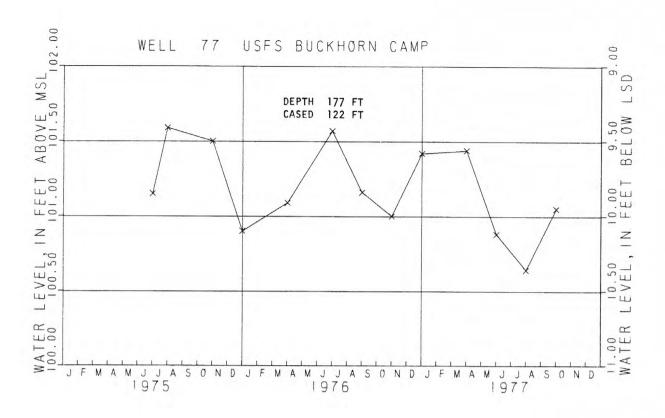


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



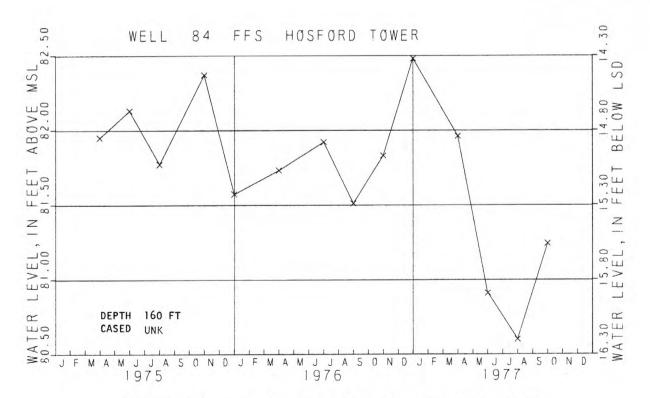
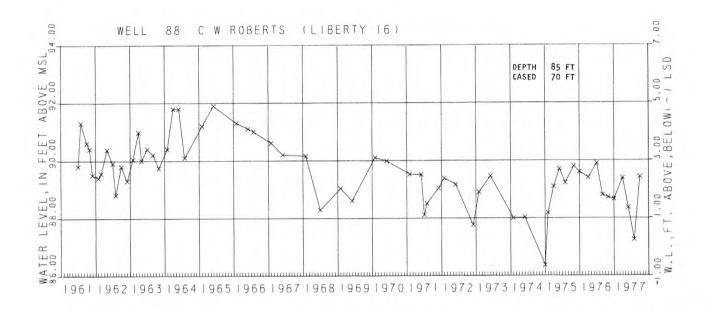


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



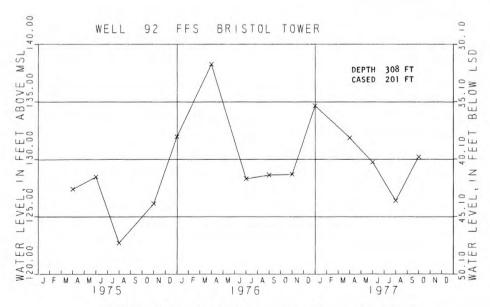
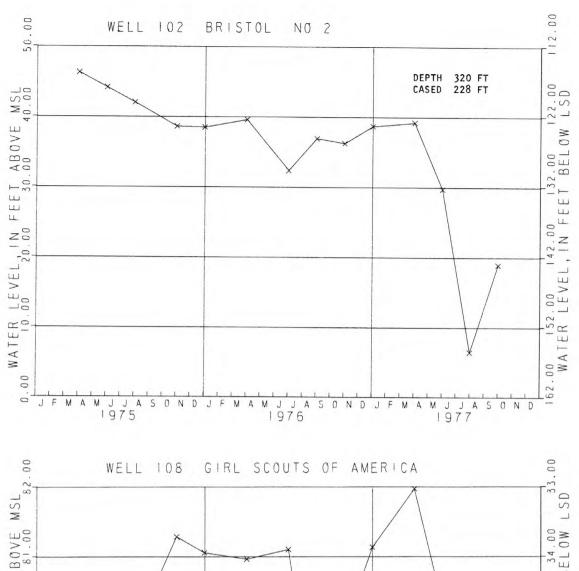


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



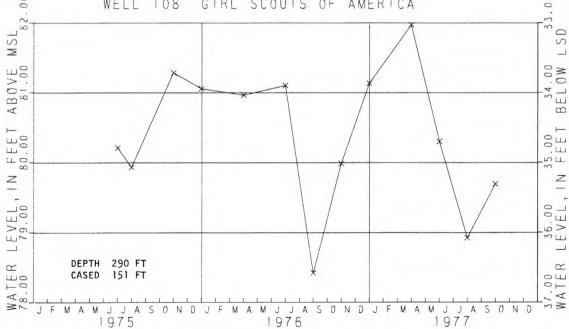


FIGURE 3.--Hydrographs of water levels in selected wells--Continued

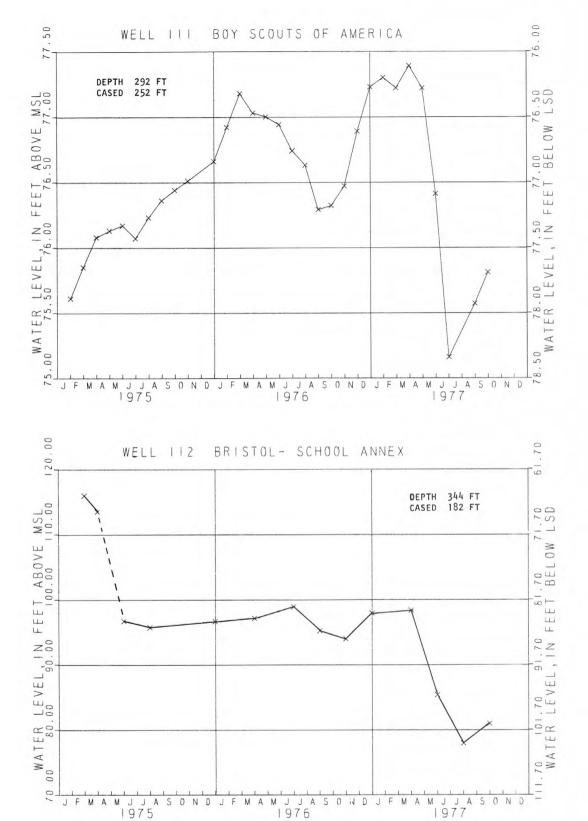
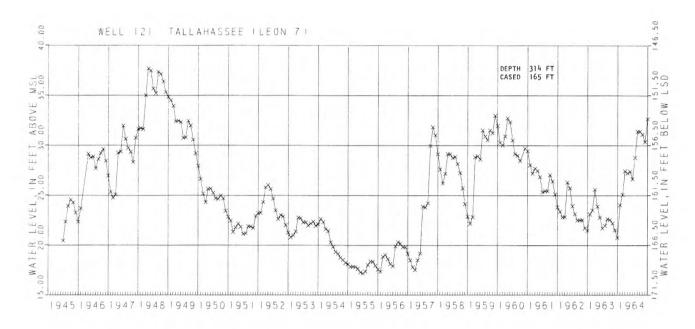


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



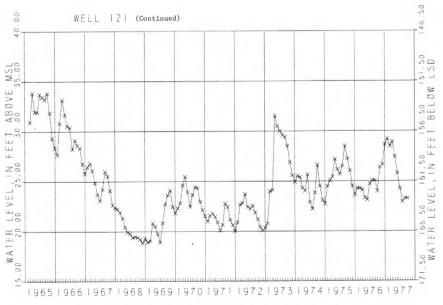
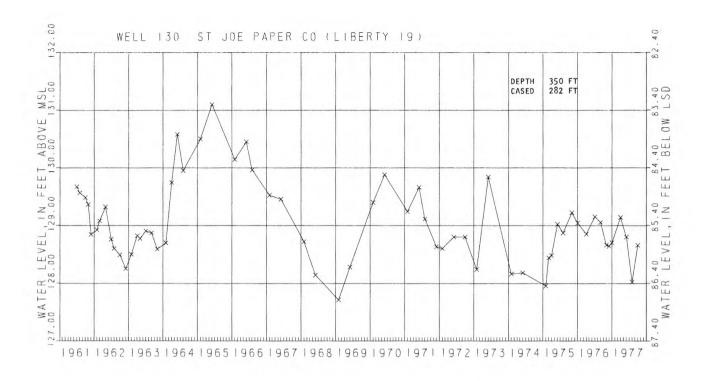


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



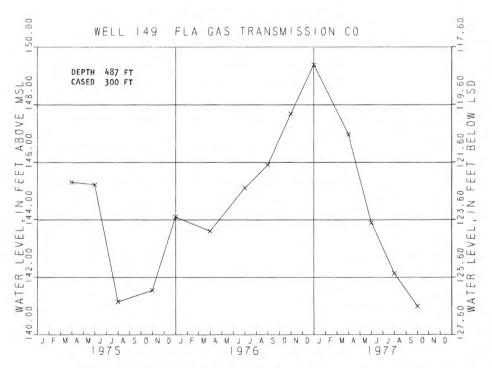
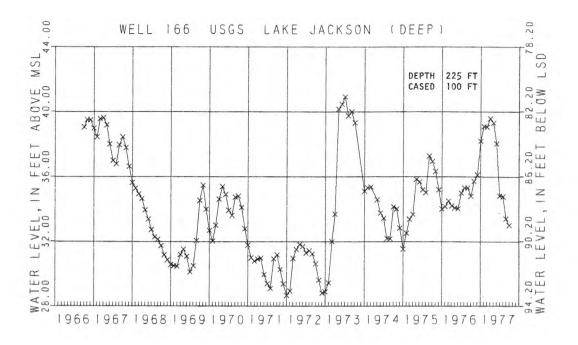


FIGURE 3.--Hydrographs of water levels in selected wells--Continued

FIGURE 3.--Hydrographs of water levels in selected wells--Continued



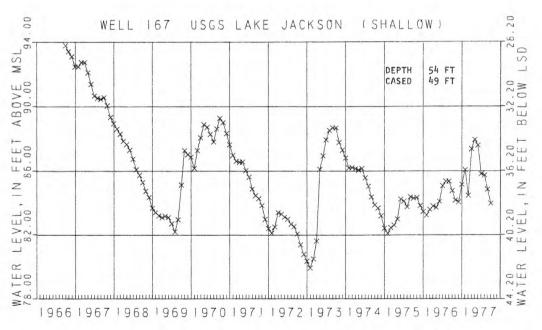
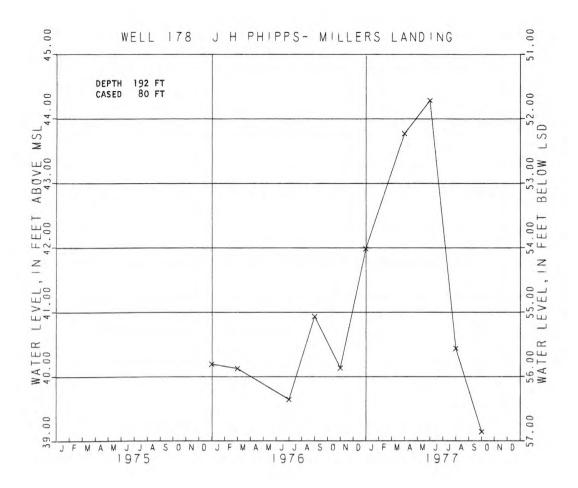


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



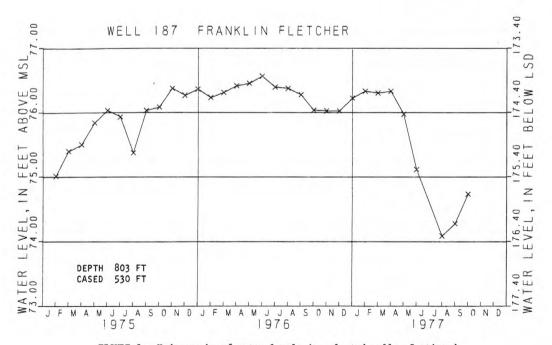
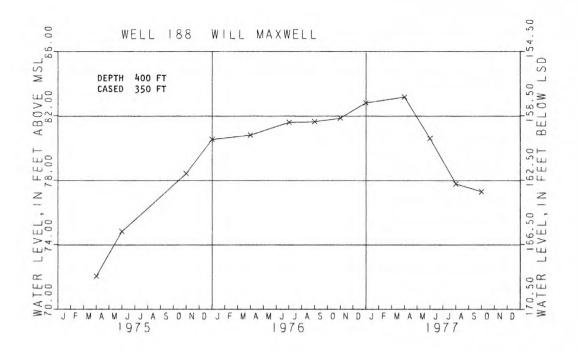


FIGURE 3.—Hydrographs of water levels in selected wells—-Continued



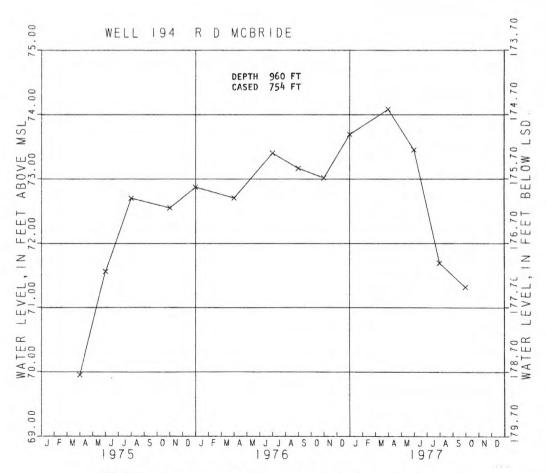
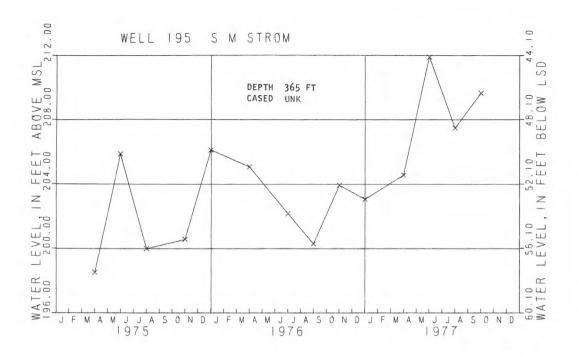


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



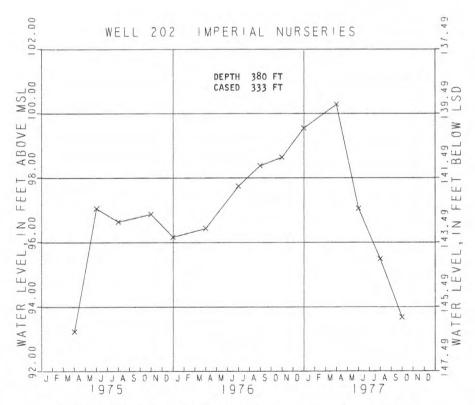
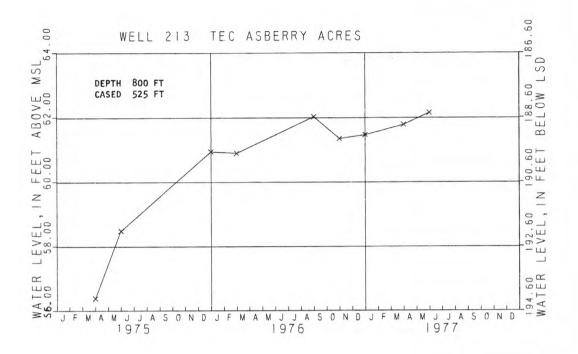


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



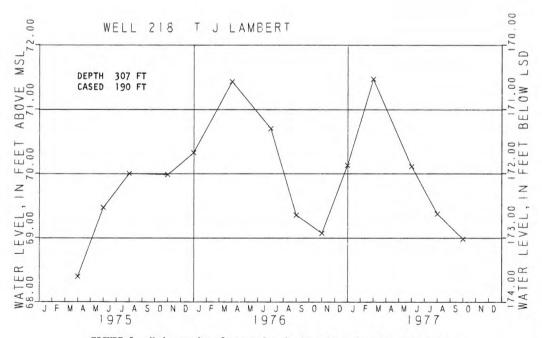


FIGURE 3.--Hydrographs of water levels in selected wells--Continued

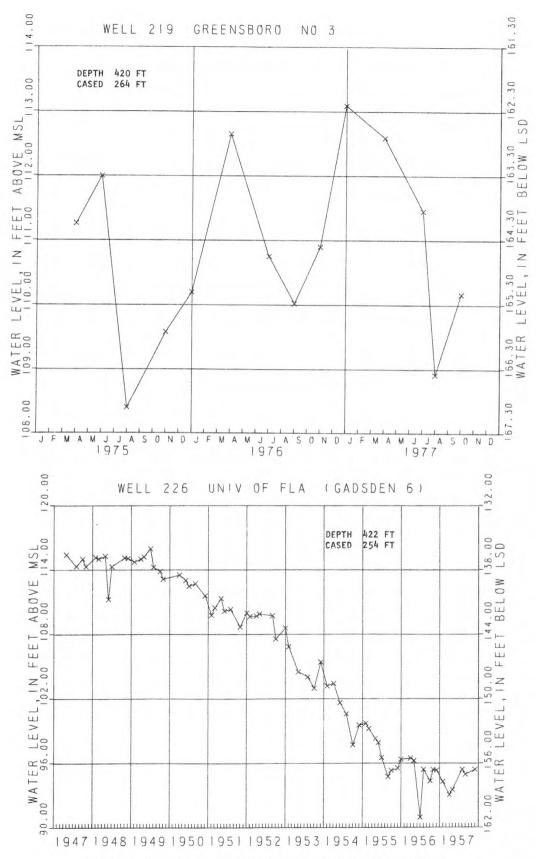
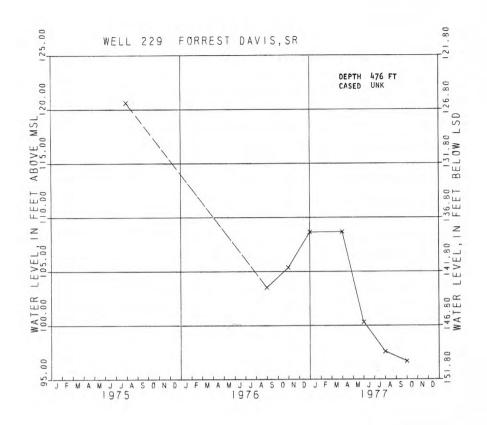


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



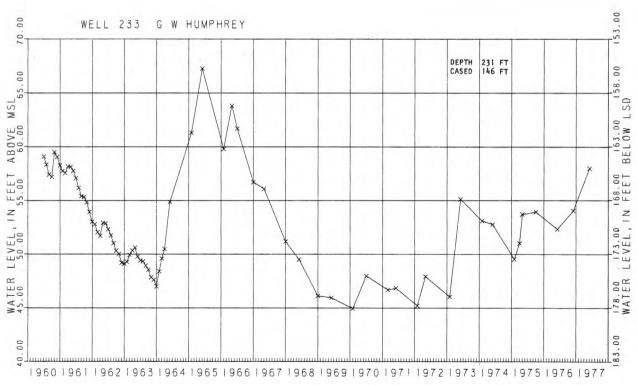
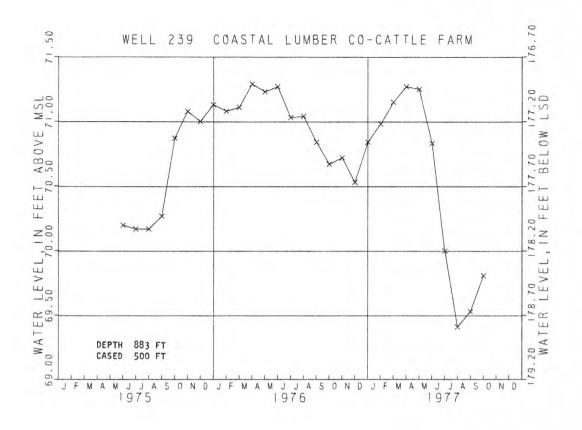


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



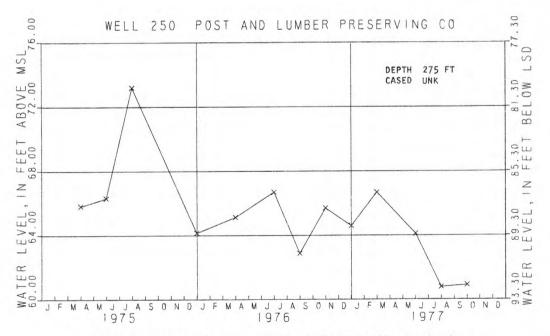
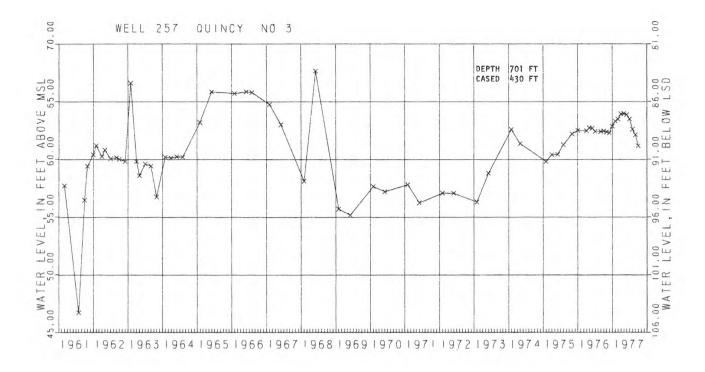


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



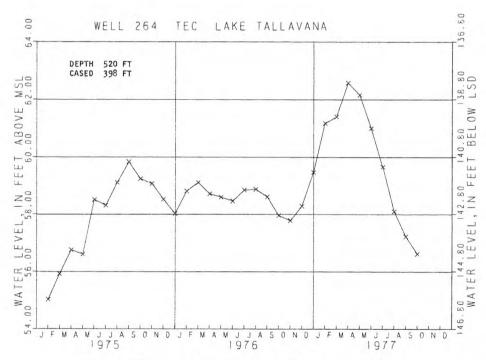
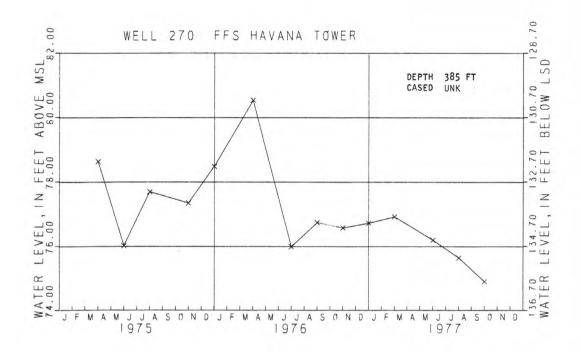


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



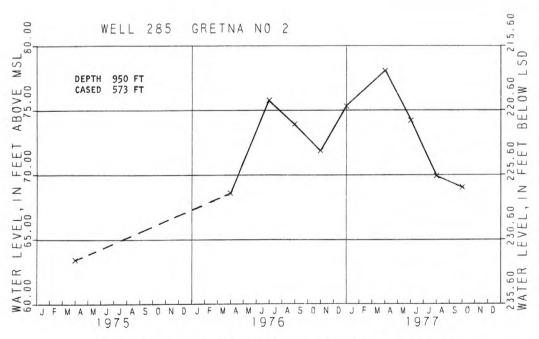


FIGURE 3.--Hydrographs of water levels in selected wells--Continued

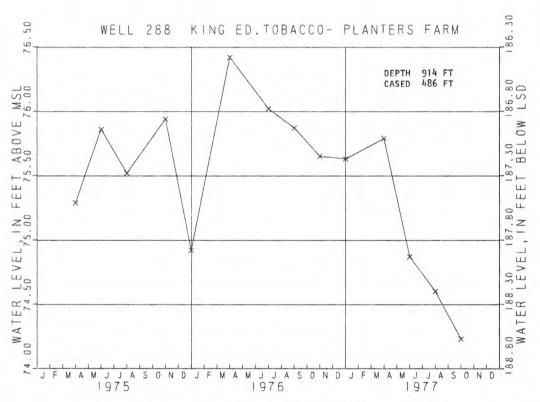
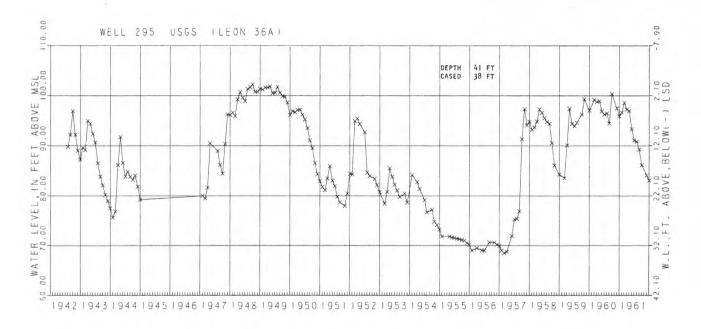


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



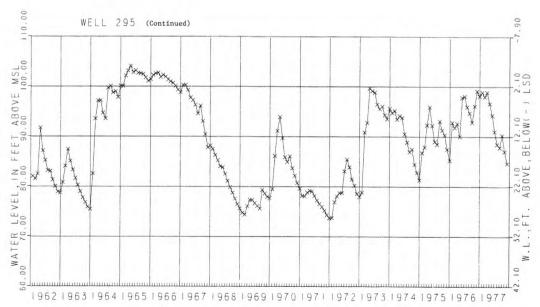


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



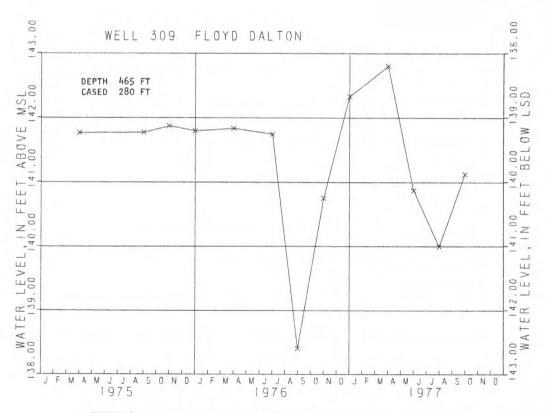
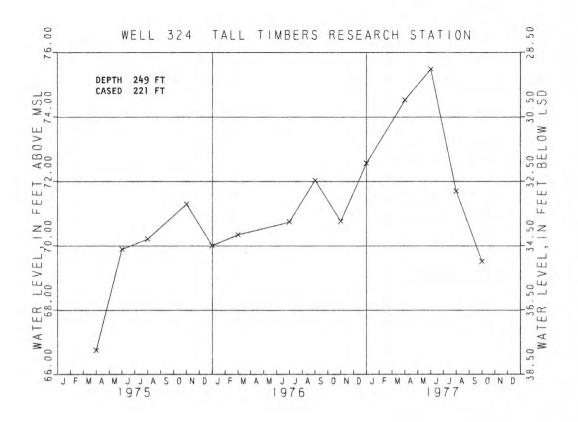


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



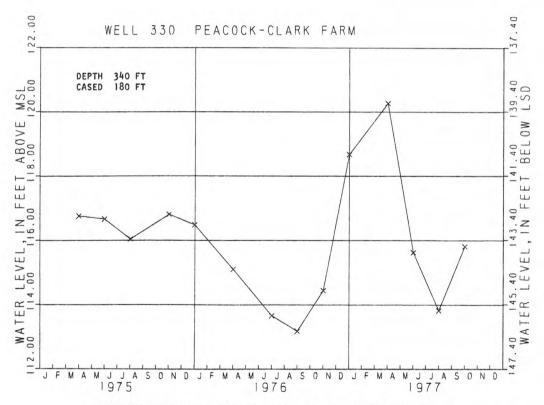
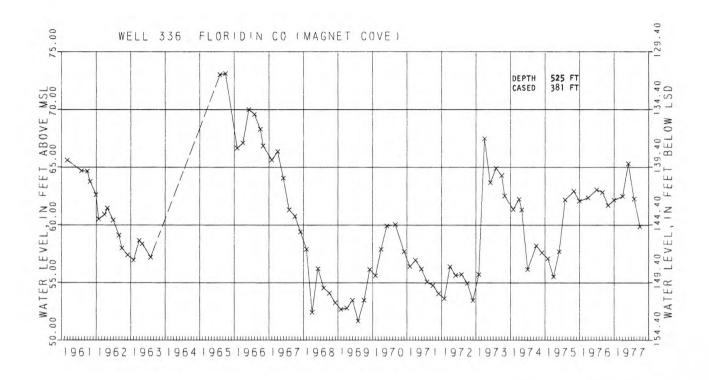


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



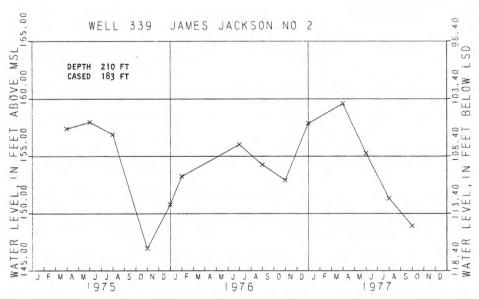


FIGURE 3.--Hydrographs of water levels in selected wells--Continued

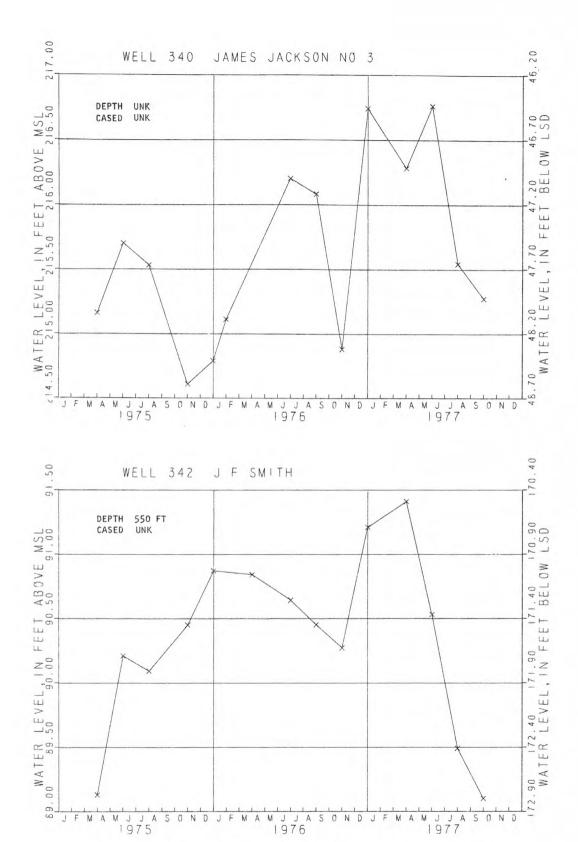
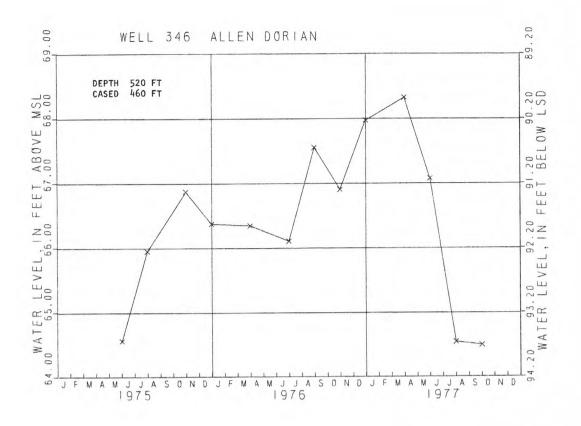


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



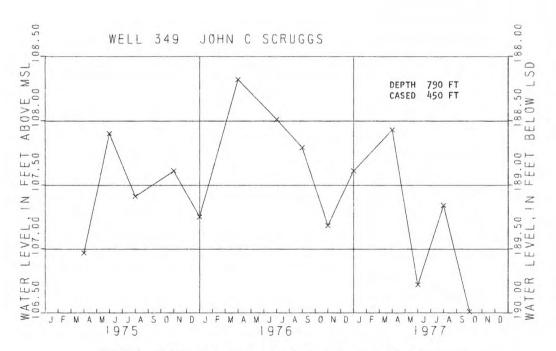
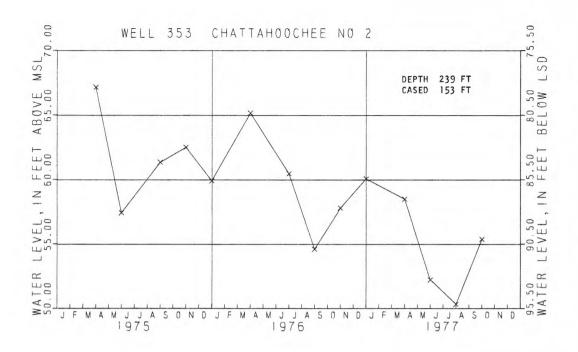


FIGURE 3.--Hydrographs of water levels in selected wells--Continued



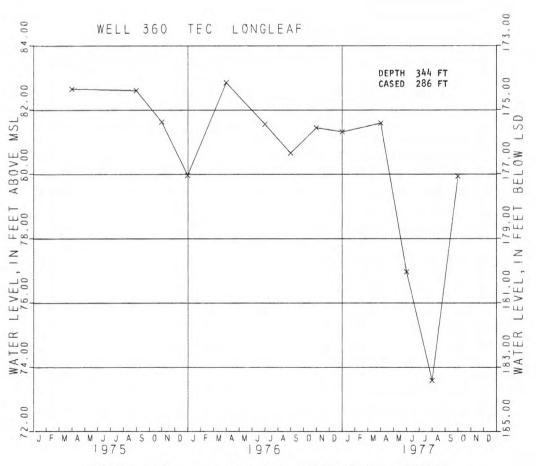
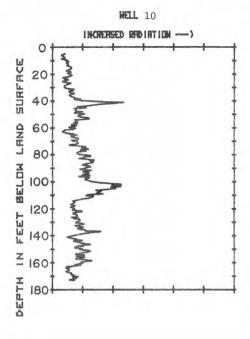
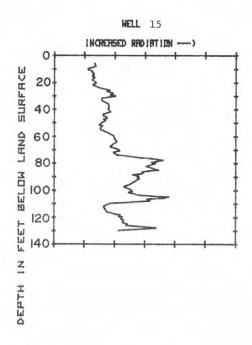
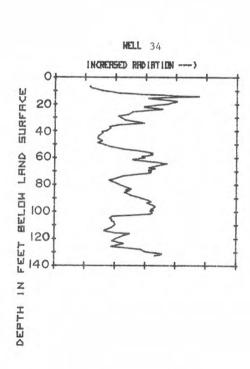


FIGURE 3.--Hydrographs of water levels in selected wells--Continued







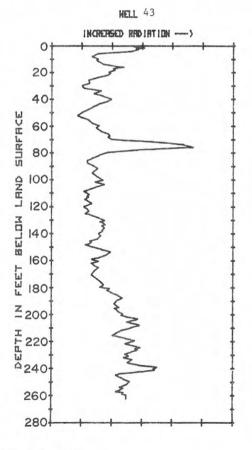


FIGURE 4.—Natural-gamma logs of selected wells.

(Well shown on fig. 2)

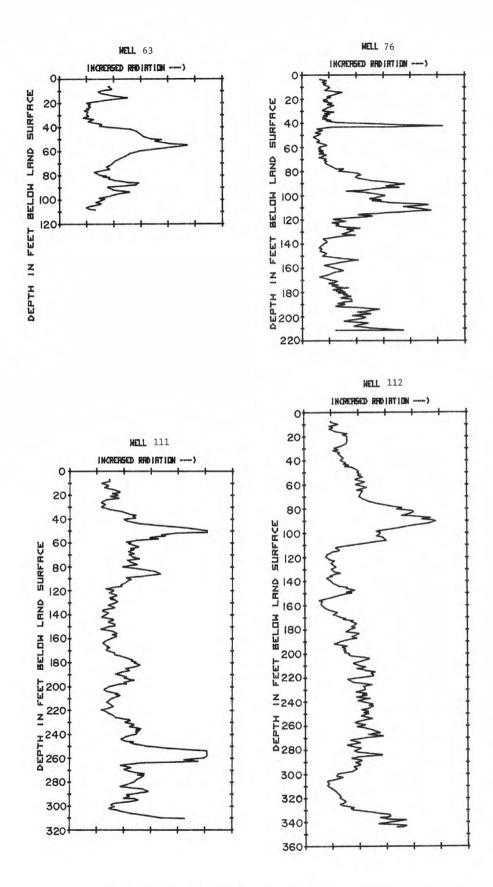
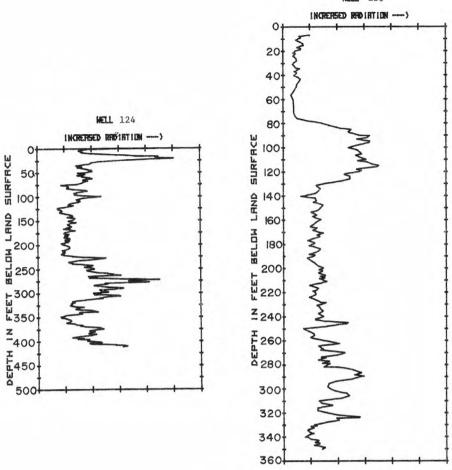


FIGURE 4.--Natural-gamma logs of selected wells--Continued





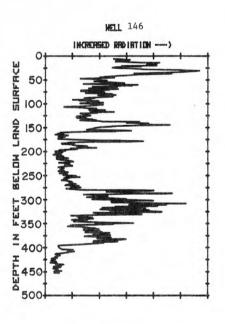
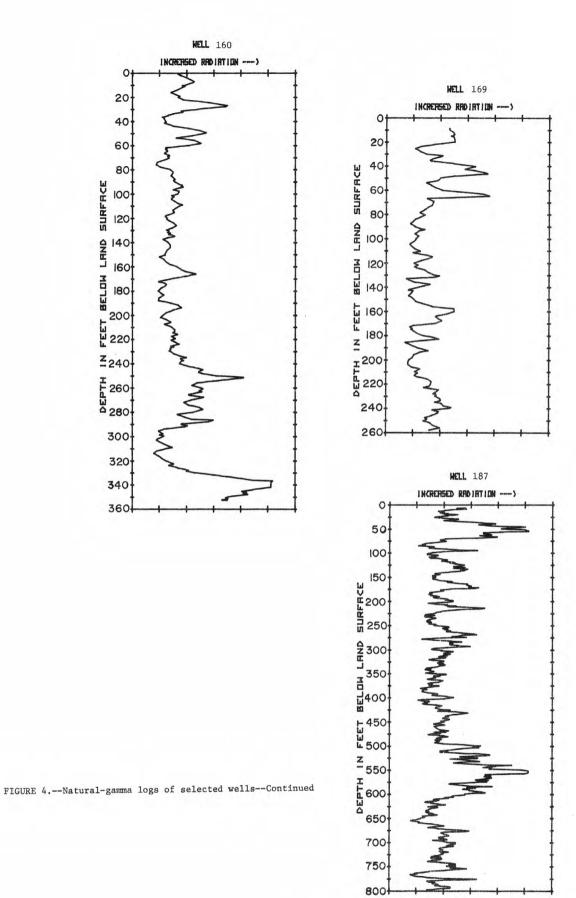
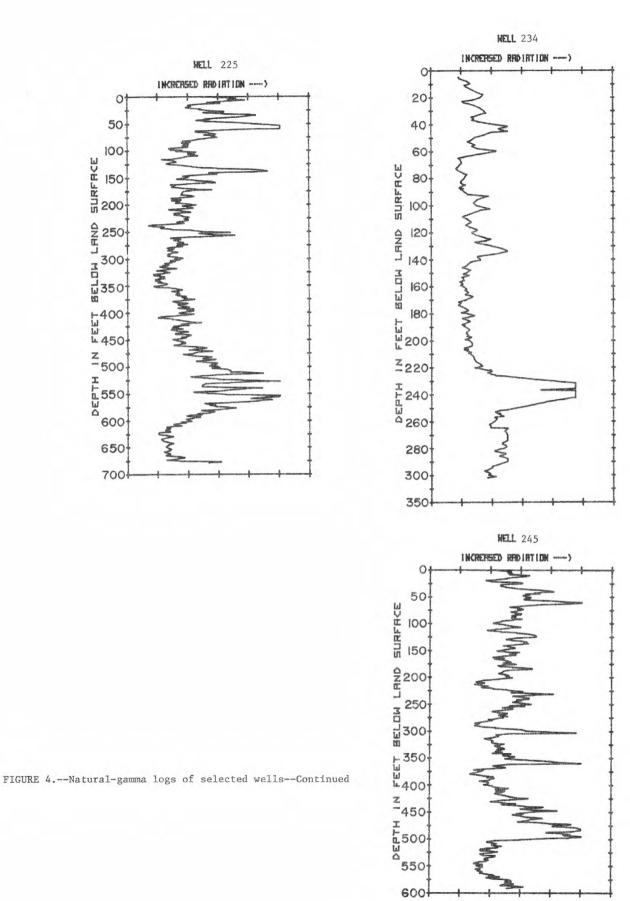


FIGURE 4.--Natural-gamma logs of selected wells--Continued





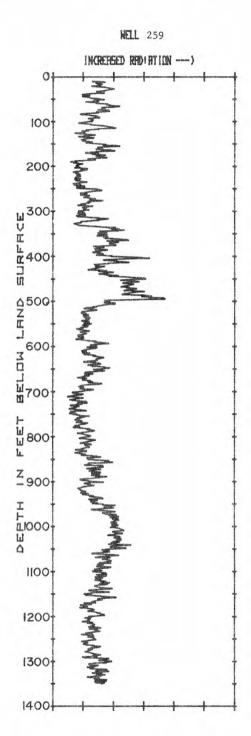
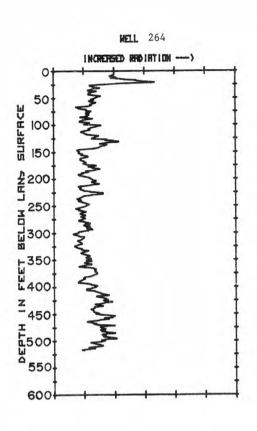


FIGURE 4.--Natural-gamma logs of selected wells--Continued



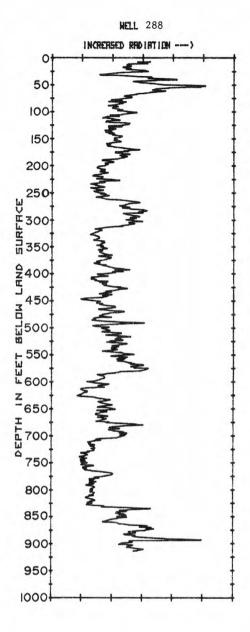


FIGURE 4.--Natural-gamma logs of selected wells--Continued

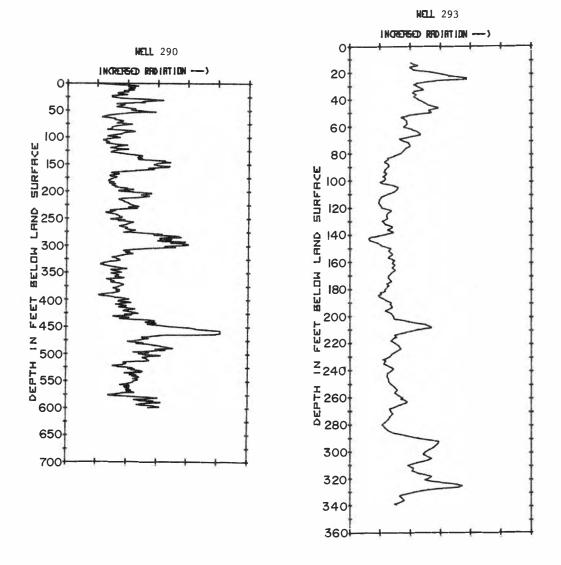


FIGURE 4.--Natural-gamma logs of selected wells--Continued

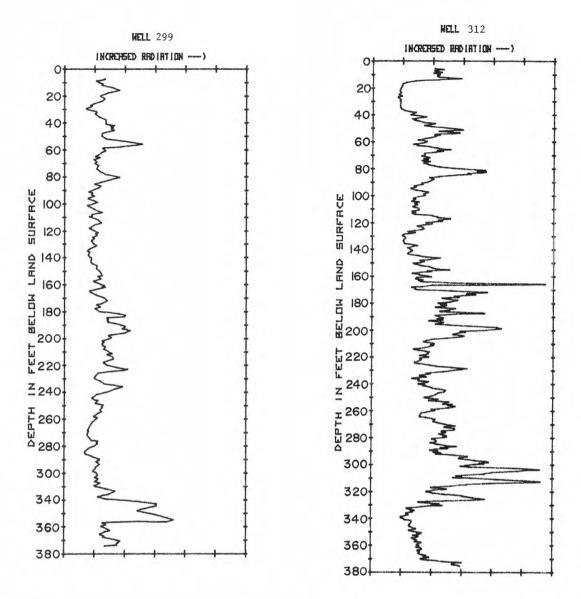


FIGURE 4.--Natural-gamma logs of selected wells--Continued

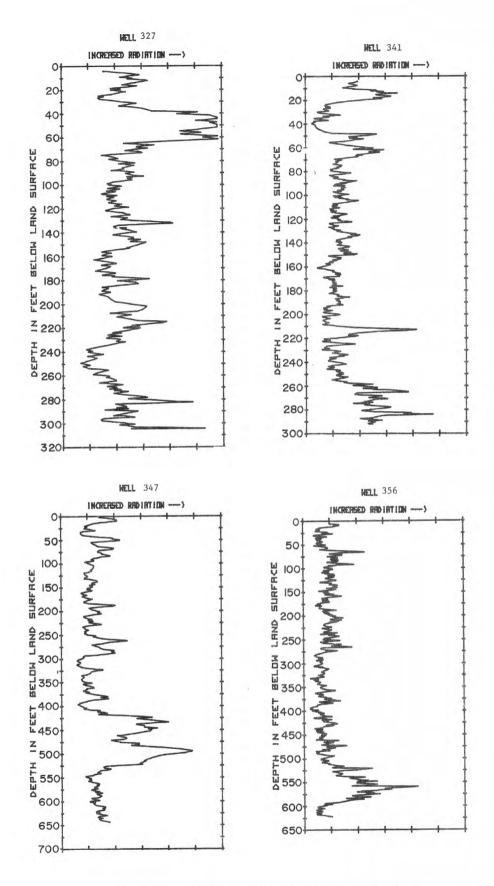


FIGURE 4.--Natural-gamma logs of selected wells--Continued

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