

GEOLOGIC INTERPRETATION OF THE
AQUIFER POLLUTION POTENTIAL IN
ALACHUA COUNTY, FLORIDA

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no.21

State of Florida
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Open File Report 21

Geologic Interpretation of the Aquifer
Pollution Potential in Alachua County, Florida

by

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Florida Geological Survey
Tallahassee, Florida
1988

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POLLUTION POTENTIAL IN ALACHUA COUNTY, FLORIDA

INTRODUCTION

This project was initiated at the request of the Alachua County Department of Environmental Services for the purpose of providing a basic overview of the sediments overlying the Floridan aquifer system in Alachua County. Using well sample lithology data from 21 wells on file at the Florida Geological Survey as well as topographic map analysis of land surface physiography, geologic cross sections were constructed and three major zones of relative aquifer confinement were delineated. Such information is essential to future land use planning and pollution control.

GEOLOGY

The following is a general overview of the Cenozoic geology of Alachua County. Information presented is condensed from work by Puri and Vernon (1964), Clark et al., (1964), Williams et al., (1977), and Scott (1988, in press). Figure 1 shows the generalized Cenozoic stratigraphic section in Alachua County.

Alachua County is underlain by thick sequences of Paleocene and Eocene age marine limestones and dolomites and by Miocene to Holocene age mostly marine siliciclastic sediments. The Upper Paleocene to Lower Eocene Cedar Keys Formation and the Lower to Middle Eocene Oldsmar Limestone are deep carbonate units known only from oil test wells. They are generally not used as a source of consumptive water.

The oldest formation penetrated by water wells within the county is the Middle Eocene Avon Park Formation. In the Alachua County area, the lithology of the Avon Park is typically a hard, dense, tan to dark brown dolostone or dolomitic limestone, occasionally containing beds of cream

TIME SCALE (million years before present)	CENOZOIC	SYSTEM	SERIES		STAGE	UNIT	LITHOLOGY
			QUATER- NARY	HOLOCENE PLEISTOCENE			
0.01	TERTIARY	NEOGENE	PLOS CENE	UPPER LOWER	PACENZIAN	UNDIFFERENTIATED SANDS AND CLAYEY SANDS CYPRESSHEAD FORMATION	White to gray to brown sand and clayey sand, containing organics and localized peat layers.
1.6					ZANCLIAN		Red to pink to orange clayey sands and gravelly sands forming the core of the Brooksville Ridge.
4.6					MESSINIAN		
5.2					TORTONIAN		
6.3							
10.2			MIOCENE	UPPER MIDDLE LOWER	SERRAVALLIAN	ALACHUA FORMATION?	White, gray, or buff clayey phosphatic sands most likely representing reworked Hawthorn Group sediments.
15.2					LANGHIAN		
16.2					BURDIGALIAN		Yellowish gray to greenish gray to olive gray clayey, phosphatic, and calcareous sands, and phosphatic, sandy clays, interbedded with sandy, phosphatic limestones and dolomites.
20.0					AQUITANIAN		
25.2					CHATJIAN		
30.0	PALEOGENE	OLIGOCENE	UPPER LOWER			SUWANNEE LIMESTONE	White to tan calcarenitic marine limestone, in part fossiliferous and containing variable amounts of dolomite.
36.0					RUPELIAN		
49.4		EOCENE	UPPER MIDDLE LOWER			OCALA GROUP	White to cream to tan, porous, fossiliferous marine limestone. Frequently dolomitic in the lower part, grading upward into soft chalky calcarenite and foraminiferal coquina.
42.0					PRIBOHIAN		
49.0					BARTONIAN		Tan to dark brown, hard and variably porous dolomite, interbedded with tan to cream limestone and dolomitic limestone
54.0					LUTETIAN		Tan to light brown, porous to dense, fossiliferous limestone and crystalline dolomite.
60.2		PALEOCENE	UPPER LOWER		YPRESIAN	CEDAR KEYS FORMATION	Light brown to light grayish brown, variably porous, gypsiferous, and microcrystalline dolomite.
66.2					THANETIAN		
					DANIAN		

FIGURE 1: GENERALIZED STRATIGRAPHIC COLUMN FOR ALACHUA COUNTY, FLORIDA
(modified after A.A.P.G., in preparation, and Haq et al., 1987)

colored limestone. This unit underlies all of Alachua County. It is thinnest and shallowest in the southwestern part of the county, where it occurs within 150 feet of the surface. Thickness of the Avon Park Formation may exceed 500 feet under eastern Alachua County.

Upper Eocene marine limestones of the Ocala Group unconformably overlie the Avon Park Formation. The typical Ocala Group lithology grades from alternating tan to brown limestones and dolostones in the basal portion (Inglis and parts of the Williston Formations) to soft, white to tan fossiliferous limestone in the upper portion (upper part of Williston and the Crystal River Formations). The thickness of the Ocala Group sediments in Alachua County is approximately 200 feet. Both the Avon Park Formation and the Ocala Group are major components of the Floridan aquifer system.

Silicified boulders of the Oligocene age Suwannee Limestone occur in a few areas of northwestern and western Alachua County. This marine limestone may have been deposited unconformably on Ocala Group sediments in most of what is now western Alachua County. Post-Oligocene erosion has removed all but a few isolated remnants of the Suwannee Limestone in this area. Well W-324, situated about three miles northwest of Gainesville, penetrated 21 feet of Suwannee sediments. The lithology of these sediments consisted of white chalky limestone containing macrofossil molds. This is the only well in Alachua County known to have penetrated Oligocene age section, and probably represents a local erosional remnant. Lithologically, the Suwannee Limestone is similar to the Ocala Group and is generally differentiated on fossils.

Clastic sediments of the Miocene age Hawthorn Group unconformably overlie the Ocala Group sediments in central and eastern Alachua County. The Hawthorn Group sediments are predominantly green, blue, or gray clays

and sandy clays, sometimes containing interbedded phosphatic limestone and dolostone. In eastern Alachua County, Hawthorn sediments are generally sandier and more phosphatic, with dolostone common in the basal portions. Thickness of the Hawthorn sediments ranges from zero where it pinches out on Ocala Group limestone in west-central Alachua County, to almost 150 feet in the north-east corner of the county. Anomalously thick occurrences of Hawthorn throughout the perforated area are most likely sinkhole fill deposits. The clays, clayey sands and carbonates in the Hawthorn Group serve to confine the Floridan aquifer system.

In a small area in southwestern Alachua County, adjacent to the Brooksville Ridge, localized sinkhole and channel fill deposits of what has previously been called the Alachua Formation lie directly on the Ocala Group limestone. These white, gray, or buff sands frequently contain clays, phosphate pebbles, and vertebrate fossils, and most likely represent weathered and reworked Hawthorn Group deposits (Scott, 1988 in press).

The Plio-Pleistocene age Cypresshead Formation forms the core of the Brooksville Ridge, situated in extreme southwestern Alachua County. These variably-colored, red to pink to orange clayey and gravelly sands are lithologically similar to the Citronelle Formation of the Florida Panhandle. Where present, they overlies the Ocala Group, and are in turn overlain by undifferentiated Pleistocene sands.

Undifferentiated sands and clayey sands of Pleistocene to Holocene age form a thin veneer over most of Alachua County. In the western portion of the county, these relatively porous sands lie directly on Ocala Group limestones or Cypresshead Formation. In central and eastern Alachua County, these sands overlie the Hawthorn Group sediments. Karst features (sinkholes and caves) developed in the Ocala Group limestone may contain substantial thicknesses of fill composed of these sands.

AQUIFER CONFINEMENT ZONE MAP

The aquifer confinement zone map illustrates three primary zones of relative aquifer confinement. These zones were derived and delineated based on the sediment types and thicknesses overlying the Floridan aquifer system as well as the geomorphology.

These three zones, in terms of potential connection to the Floridan aquifer system, are as follows: 1) the confined zone, 2) the perforated zone, and 3) the unconfined zone.

Confined Zone

A zone of relative aquifer confinement stretches from north-central Alachua County southeastward comprising most of the eastern half of the county. This zone is characterized by generally higher elevations underlain by phosphatic clayey sands, sandy clays, and carbonates of the Hawthorn Group. For the purposes of this study, areas underlain by at least ten feet of Hawthorn Group sediments were included in the confined zone. In general, the Hawthorn ranges in thickness from 0 feet in western Alachua County to approximately 150 feet in the northeastern part of the county. Topographic quadrangle maps covering Alachua County were analyzed to ascertain the areal extent of the physiographically high areas which do not show signs of karst development. The boundary between the confined and perforated zones delimits the areas of continuously confining clays from those with significant perforations by karst features.

Perforated Zone

The perforated zone trends southeastward in a variable, one-to-five mile wide band roughly paralleling Interstate 75. Sediments underlying the perforated zone may contain substantial thickness of clays, but are per-

LEGEND

— Cross Section Location
• Well Location



Confined Zone

Perforated Zone

Unconfined Zone

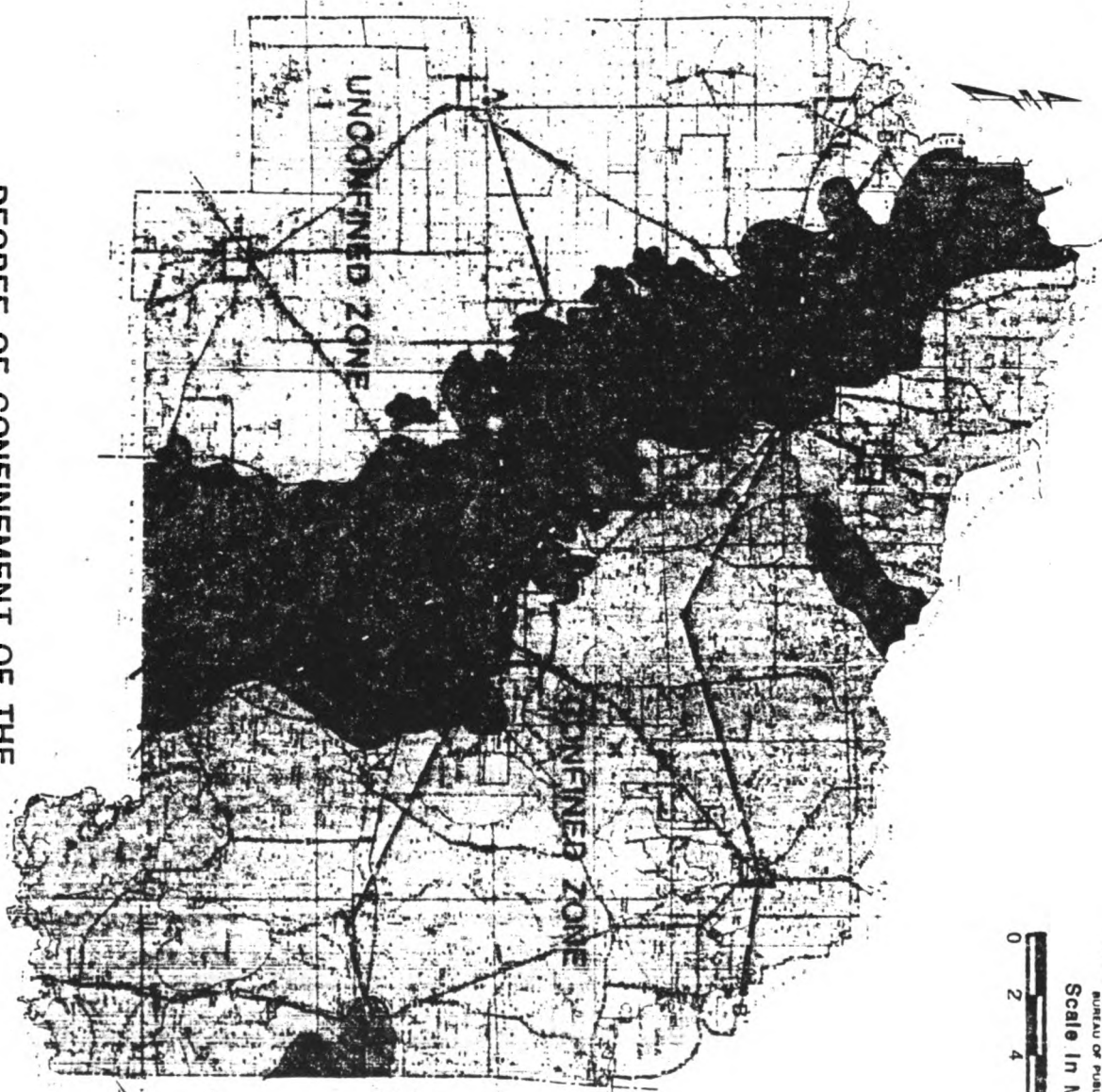
CONFINED ZONE— A region of higher elevations underlain by at least 10 feet of clays or clayey sands which form an aquiclude to the Floridan Aquifer System.

PERFORATED ZONE— Primarily confined with numerous sinkholes allowing hydrologic access to the Floridan Aquifer System.

UNCONFINED ZONE— A region of low and flat terrain where porous sands overlie the Floridan Aquifer System.

FLORIDA

Location of Map Area



0 2 4 8
Scale in Miles

ALACHUA COUNTY
FLORIDA
PHOTOGRAPHIC DIVISION
TRAFFIC AND PLANNING DIVISION
FLORIDA STATE ROAD DEPARTMENT
U.S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

DEGREE OF CONFINEMENT OF THE
FLORIDAN AQUIFER SYSTEM
ALACHUA COUNTY, FLORIDA

forated by numerous karst features. These features allow direct hydrologic access to the aquifer. The western boundary of the perforated zone reflects the areal limit of Hawthorn Group clays.

Small, isolated areas of perforated zone occur in the north-central portion of the county near Cooter Pond, and in southeastern Alachua County in the vicinity of Hawthorne. Both areas occur within the confined zone but are mapped as perforated because they contain significant karst development or lakes with hydrologic connection to the Floridan aquifer system.

Unconfined Zone

The Floridan aquifer system in western and southwestern Alachua County is overlain by highly permeable and generally thin, undifferentiated sands. These porous sands comprise an area of high aquifer recharge and allow pollutants direct access to the aquifer. Within this zone, the terrain is low and flat. Well sample logs indicate that little or no clay is present in the sediments.

GEOLOGIC CROSS-SECTIONS

Three geologic cross-sections through Alachua County were constructed using lithologic and formational data from wells on file at the Florida Geological Survey. Horizontal scale is the same as that of the Aquifer Zone Map, and cross section location lines are provided as an overlay to that map. Vertical scale is exaggerated 250 times to show the necessary strata. Surface relief was obtained from USGS topographic quadrangle maps. The yellow strata represents the Plio-Pleistocene undifferentiated sands and clayey sands. Green represents the mostly Miocene age Hawthorn Group sediments and blue represents Eocene limestones of the Floridan aquifer system. In most water wells, the Ocala Group limestones are the deepest

water-bearing units tapped. A few wells however penetrate limestone of the deeper Avon Park Formation.

Figure 2 shows the three cross-section locations in Alachua County. Cross-section A-A' runs west to east through Gainesville to just east of Hawthorne. Section B-B' trends west to east across northern Alachua County from High Springs to just east of Waldo. Cross-section C-C' runs north to south from LaCrosse to south of Micanopy. Wells used in the cross sections are numbered according to the Florida Geological Survey accession numbers; these numbers consist of a "W-" followed by a one-to-five-digit number unique to each well.

Well Location

Wells are located according to the Township-Range System. The basic units of this system are townships, which are numbered consecutively both north and south of the Tallahassee Base Line. Ranges are numbered consecutively both east and west of the Principal Meridian. Each township is divided into 36 equal one-square-mile pieces called sections. Sections are in turn divided into quarter-quarter sections. The two letters following each section number listed in Table 1 reflect the quarter-quarter section location of the well. The letter A designates the NW quarter, B the NE quarter, C the SW quarter, and D the SE quarter. Quarter-quarter sections are designated the same way. For example, the location of a well in section 32AD would be in the northwest quarter of the southeast quarter of section 32. Table 1 lists the wells used to construct each cross-section, and Appendix I is a series of lithologic summaries for these wells.

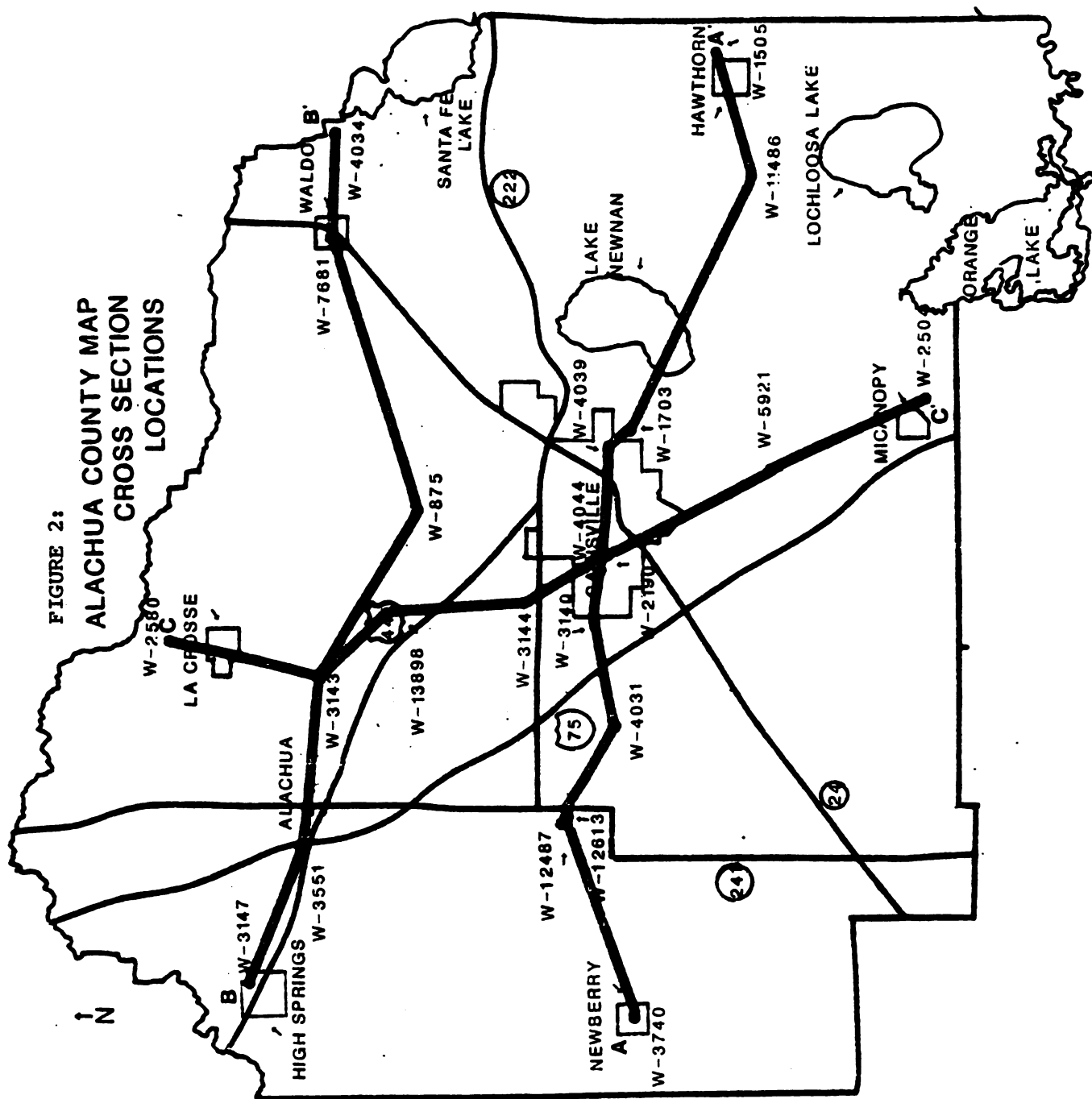
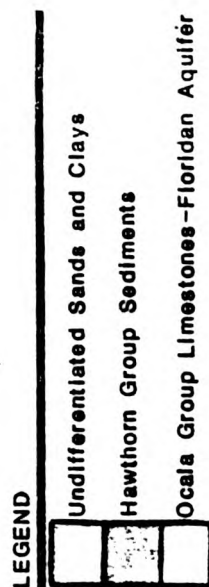
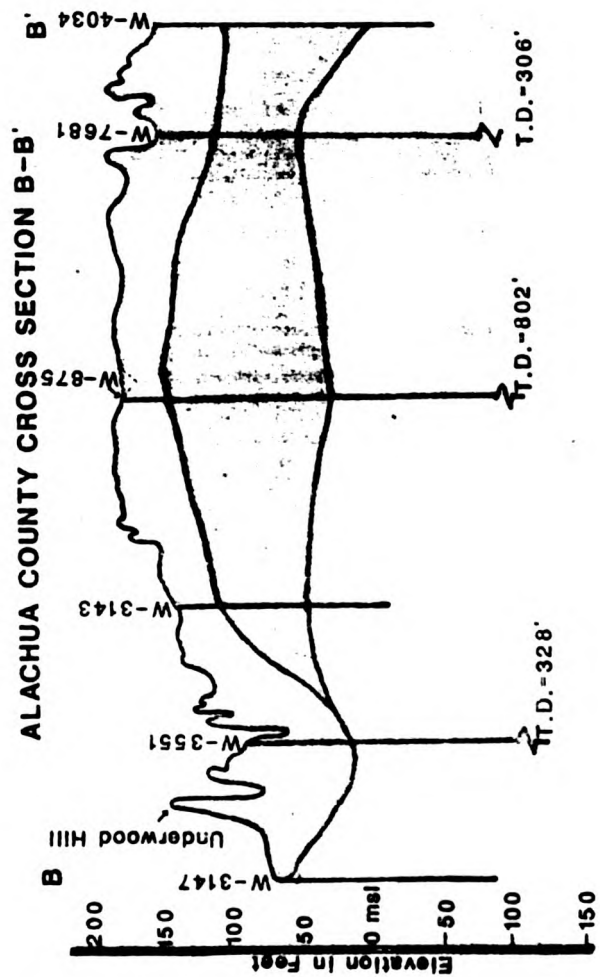
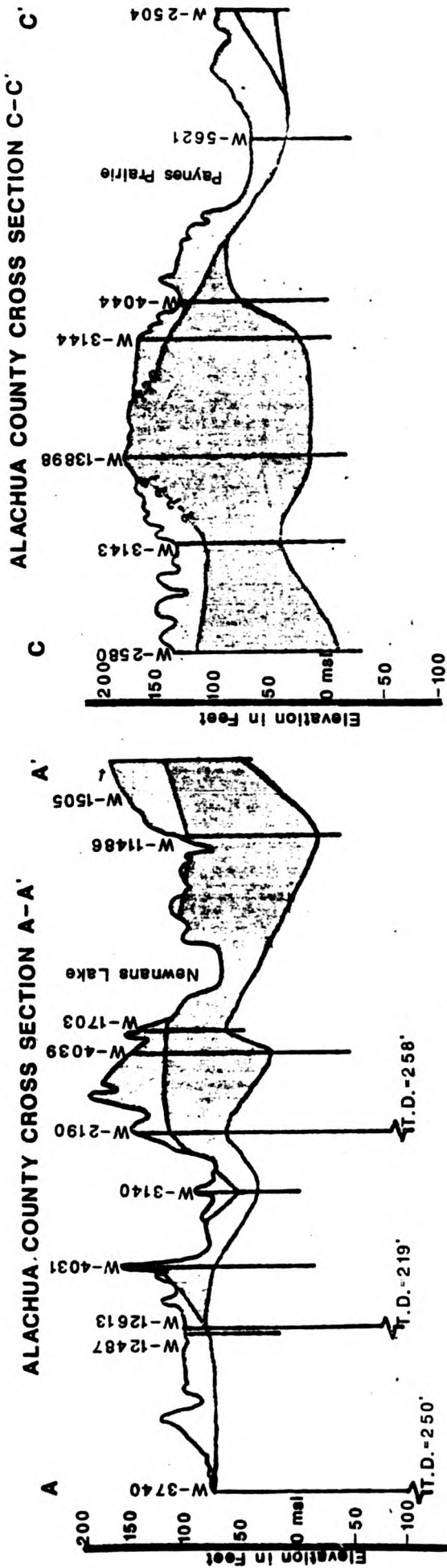


Table 1. Wells Used in Constructing Cross Sections

Cross Section	Well No.	Township/Range/Section			Elevation (Feet)	Depth (Feet)	Date
A-A'	W-1505	10S	22E	2688	161	126	6-20-47
	W-1703	10S	20E	11CA	138	79	2-18-48
	W-2190	10S	20E	06AA	147	258	6-20-50
	W-3140	10S	19E	03DB	90	100	1-25-54
	W-3740	10S	17E	04AD	77	250	N/A
	W-4031	10S	19E	06BC	159	165	9-24-54
	W-4039	10S	20E	03CB	146	194	N/A
	W-11486	10S	22E	31CB	100	145	8-7-72
	W-12487	9S	18E	27BC	100	85	2-75
	W-12613	9S	18E	27BC	100	219	2-75
B-B'	W-875	8S	20E	32BC	177	802	11-28-44
	W-3143	8S	19E	17AD	145	130	10-12-53
	W-3147	7S	17E	34DD	65	150	9-22-53
	W-3551	8S	18E	09BC	92	328	5-22-55
	W-4034	8S	22E	21CC	158	154	12-1-54
	W-7681	8S	21E	27DA	154	306	10-23-65
C-C'	W-2504	11S	20E	25CD	98	70	8-29-51
	W-2580	7S	19E	22CC	136	175	11-19-51
	W-3143	8S	19E	17AD	145	130	10-12-53
	W-3144	9S	19E	23DD	163	160	10-9-53
	W-4044	9S	19E	36DB	127	175	12-7-54
	W-5621	10S	20E	33CD	65	90	N/A
	W-13898	8S	19E	26AC	180	3400	12-31-77



**GEOLOGIC CROSS SECTIONS
ALACHUA COUNTY, FLORIDA**

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APPENDIX I:

**Lithologic summaries of wells used to construct
geologic cross section**

Cross section A-A'

WELL NUMBER: W-1505
TOTAL DEPTH: 126 FT.
13 SAMPLES FROM 0 TO 126 FT.

COUNTY: ALACHUA
LOCATION: T10S, R22E, S26 B
LAT = N 29D 35M 57
LON = W 82D 04M 30

COMPLETION DATE - 20/06/47 ELEVATION: 161 FT.
OTHER TYPES OF LOGS AVAILABLE - GEOLOGIST

OWNER/DRILLER: FL. FOREST AND PARK SERVICE, (E.R. BENEDICT)

WORKED BY: CALDWELL

0. - 40.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
40. - 115.	122HTRN	HAWTHORN GROUP
115. - 126.	124CLRV	CRYSTAL RIVER FM.

WELL NUMBER: W-1703
TOTAL DEPTH: 79 FT.
4 SAMPLES FROM 25 TO 79 FT.

COUNTY: ALACHUA
LOCATION: T10S, R20E, S11 C
LAT = N 29D 30M 20
LON = W 82D 17M 10

COMPLETION DATE - 18/02/48 ELEVATION: 178 FT.
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: JOE E. BAUKNIGHT, ACME DRILLING AND EQUIPMENT -
DRILLER

WORKED BY: GEORGE M. OGDEN, JR., 10-23-75
SAMPLE QUALITY AND SAMPLE INTERVAL POOR

0. - 25.	000NOSM	NO SAMPLE
25. - 79.	122HTRN	HAWTHORN GROUP
79. - 80.	124CLRV	CRYSTAL RIVER FM.

WELL NUMBER: W-2190
TOTAL DEPTH: 258 FT.
26 SAMPLES FROM 0 TO 258 FT.

COUNTY: ALACHUA
LOCATION: T10S, R20E, S06 A
LAT = N 29D 38M 15
LON = W 82D 30M 12

COMPLETION DATE - 20/06/50 ELEVATION: 147 FT.
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: MRS. BAKER, LIBBY AND FREEMAN--DRILLERS

WORKED BY: GEORGE M. OGDEN, JR., 10-28-75
SAMPLE QUALITY GOOD

0. - 30.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
30. - 80.	122HTRN	HAWTHORN GROUP
80. - 180.	124CLRV	CRYSTAL RIVER FM.
180. - 258.	124WLSN	WILLISTON FM.

WELL NUMBER: W-3140
TOTAL DEPTH: 100 FT.
10 SAMPLES FROM 10 TO 100 FT.

COUNTY: ALACHUA
LOCATION: T10S, R19E, S05 D
LAT = N 29D 36M 06
LON = W 82D 23M 20

COMPLETION DATE - 25/01/54 ELEVATION: 77 FT.
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: CITY OF NEWBERRY (LIBBY AND FREEMAN)

WORKED BY: NEIL COOK -- JAN. 6, 1975
MOST SAMPLES INCLUDE CAVINGS

0. - 5.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
5. - 40.	124CLRV	CRYSTAL RIVER FM.
40. - 135.	124WLSN	WILLISTON FM.
135. - 250.	124AVPK	AVON PARK LIMESTONE

WELL NUMBER: W-4031
TOTAL DEPTH: 165 FT.
31 SAMPLES FROM 3 TO 165 FT.

COUNTY: ALACHUA
LOCATION: T10S, R19E, S06 B
LAT = N 29D 29M 00
LON = W 82D 26M 58

COMPLETION DATE - 24/09/54 ELEVATION: 159 FT.
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: GEO NO. 15, MR. BUCKLEY, (GAINESVILLE EQUIP CO.)

WELL NUMBER: W-12487
TOTAL DEPTH: 85 FT.

COUNTY: ALACHUA
LOCATION: T09S, R18E, S27BC
LAT = W 29D 40M 23
LON = N 82D 30M 04

COMPLETION DATE: //84 ELEVATION: 100 FT.
OTHER TYPES OF LOGS AVAILABLE - GEOPHYSICAL

OWNER/DRILLER: FLORIDA GEOLOGICAL SURVEY

WORKED BY: R. HOENSTINE - 1984

0. - 25.	UNDIFFERENTIATED SAND AND CLAY
25. - 85.	OCALA GROUP UNDIFFERENTIATED

WELL NUMBER: W-12613
TOTAL DEPTH: 219 FT.

COUNTY: ALACHUA
LOCATION: T09S, R18E, S27BC
LAT = N 29D 40M 20
LON = W 82D 29M 59

COMPLETION DATE - //84 ELEVATION: 100 FT.
OTHER TYPES OF LOGS AVAILABLE - GEOPHYSICAL

OWNER/DRILLER: FLORIDA GEOLOGICAL SURVEY

0. - 23.	NO SAMPLES
23. - 25.	ALACHUA FORMATION / HAWTHORN GROUP
	UNDIFFERENTIATED
25. - 175.5	OCALA GROUP UNDIFFERENTIATED
171.5- 219.5	AVON PARK LIMESTONE

Cross section B-B'

WELL NUMBER: W- 875
TOTAL DEPTH: 802 FT.
24 SAMPLES FROM 10 TO 802 FT.

COUNTY: ALACHUA
LOCATION: T08S, R20E, S32
LAT = N 29D 45M 02
LON = W 82D 19M 18

COMPLETION DATE - 28/11/44 ELEVATION: 177 FT.
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: NATIONAL TURPENTINE AND PULPWOOD CORP.
(LIBBY AND FREEMAN)

WORKED BY: NEIL COOK

NOTE: THIS WELL IS UNRELIABLE - SAMPLE INTERVALS ARE TOO LARGE
SAMPLES SEEM TO BE MISLABELLED

0. - 20.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
20. - 150.	122HTRN	HAWTHORN GROUP
150. - 620.	124OCAL	OCALA GROUP
620. - 735.	124AVPK	AVON PARK LIMESTONE
735. - 802.	124CLRV	CRYSTAL RIVER FM.

WELL NUMBER: W- 3143
TOTAL DEPTH: 134 FT.
12 SAMPLES FROM 0 TO 130 FT.

COUNTY: ALACHUA
LOCATION: T09S, R19E, S17
LAT = N 29D 47M 20
LON = W 82D 25M 51

COMPLETION DATE - 12/10/53 ELEVATION: 143 FT.
OTHER TYPES OF LOGS AVAILABLE - GEOLOGIST

OWNER/DRILLER: S.B. CULLEN, J.J. HARE -- DRILLER

WORKED BY: CALDWELL - 3/7/87

0. - 20.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
20. - 90.	122HTRN	HAWTHORN GROUP
90. - 130.	124CLRV	CRYSTAL RIVER FM.

WELL NUMBER: W- 3147
TOTAL DEPTH: 160 FT.
14 SAMPLES FROM 0 TO 150 FT.

COUNTY: ALACHUA
LOCATION: T07S, R17E, S34 B
LAT = N 29D 49M 53
LON = W 82D 35M 45

COMPLETION DATE - 25/09/53
OTHER TYPES OF LOGS AVAILABLE - GEOLOGIST

OWNER/DRILLER: MRS. PEARL CARRAWAY, J.J. HARE -- DRILLER

WORKED BY: GREEN - 3/9/87

0. - 150.	124CLRV	CRYSTAL RIVER FM.
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WELL NUMBER: W- 3551
TOTAL DEPTH: 328 FT.
24 SAMPLES FROM 0 TO 238 FT.

COUNTY: ALACHUA
LOCATION: T08S, R18E, S09 B
LAT = N 29D 48M 22
LON = W 82D 31M 26

COMPLETION DATE - 22/05/55
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 92 FT.

OWNER/DRILLER: ALACHUA CO. BD. OF PUB. INSTR. (ACME DRLG. AND EQUIP.)

WORKED BY: NEIL COOK - FEB. 4, 1975

0. - 80.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
80. - 180.	124CLRV	CRYSTAL RIVER FM.
180. - 248.	124WLSN	WILLISTON FM.

WELL NUMBER: W- 4034
TOTAL DEPTH: 154 FT.
28 SAMPLES FROM 10 TO 154 FT.

COUNTY: ALACHUA
LOCATION: T08S, R22E, S21 C
LAT = N 29D 46M 42
LON = W 82D 06M 26

COMPLETION DATE - 01/12/54
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: ROD REESE, GAINESVILLE EQUIPMENT -- DRILLER

WORKED BY: GEORGE M. OGDE, JR., 11-14-75
SAMPLE QUALITY GOOD, SAMPLING INTERVAL POOR

0. - 55.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
55. - 154.	122HTRN	HAWTHORN GROUP

WELL NUMBER: W- 7681
TOTAL DEPTH: 306 FT.
27 SAMPLES FROM 0 TO 290 FT.

COUNTY: ALACHUA
LOCATION: T08S, R21E, S27
LAT = N 29D 46M 05
LON = W 82D 11M 20

COMPLETION DATE - 23/10/65
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 154 FT.

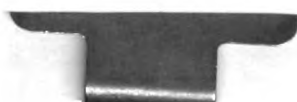
OWNER/DRILLER: CITY OF WALDO (J. J. HARE -- DRILLER)

WORKED BY: NEIL COOK, FEB. 18, 1975

0. - 40.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
40. - 190.	122HTRN	HAWTHORN GROUP
190. - 290.	124CLRV	CRYSTAL RIVER FM.

Cross section C-C'

22



WELL NUMBER: W- 2504
TOTAL DEPTH: 70 FT.
14 SAMPLES FROM 0 TO 70 FT.

COUNTY: ALACHUA
LOCATION: T11S, R20E, S25 C
LAT = N 29D 30M 01
LON = W 82D 15M 43

COMPLETION DATE - 29/08/51 ELEVATION: 98 FT.
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: MRS. J. CLARK, J. C. GLENN -- DRILLER

WORKED BY: GEORGE M. OGDEN, JR., 11-3-75
SAMPLE QUALITY FAIR

0. - 65.	122HTRN	HAWTHORN GROUP
65. - 70.	124CLRV	CRYSTAL RIVER FM.

WELL NUMBER: W- 2580
TOTAL DEPTH: 175 FT.
35 SAMPLES FROM 0 TO 175 FT.

COUNTY: ALACHUA
LOCATION: T07S, R19E, S22 C
LAT = N 29D 51M 32
LON = W 82D 24M 31

COMPLETION DATE - 19/11/51 ELEVATION: 136 FT.
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: FLORIDA FOREST SERVICE, J. C. GLENN -- DRILLER

WORKED BY: GEORGE M. OGDEN, JR., 11-4-75
SAMPLE QUALITY FAIR

0. - 20.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
20. - 150.	122HTRN	HAWTHORN GROUP
150. - 175.	124CLRV	CRYSTAL RIVER FM.

WELL NUMBER: W- 3143
TOTAL DEPTH: 134 FT.
12 SAMPLES FROM 0 TO 130 FT.

COUNTY: ALACHUA
LOCATION: T08S, R19E, S17
LAT = N 29D 47M 20
LON = W 82D 25M 51

COMPLETION DATE - 12/10/53 ELEVATION: 143 FT.
OTHER TYPES OF LOGS AVAILABLE - GEOLOGIST

OWNER/DRILLER: S.B. CULLEN, J. J. HARE -- DRILLER

WORKED BY: CALDWELL, 3/7/87

0. - 20.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
20. - 80.	122HTRN	HAWTHORN GROUP
80. - 130.	124CLRV	CRYSTAL RIVER FM.

WELL NUMBER: W- 3144 COUNTY: ALACHUA
TOTAL DEPTH: 163 FT. LOCATION: T09S, R19E, S23
16 SAMPLES FROM 10 TO 163 FT. LAT/LON - NO ENTRY
COMPLETION DATE - 9/10/53 ELEVATION: 163 FT.
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: BURNHAM & HARTMAN, J. J. HARE -- DRILLER

WORKED BY: THOMAS SEAL, 6/4/88, CONTACT BETWEEN HAWTHORN AND
OCALA GROUP AT 90-100 FT., SUWANNEE MISSING TERRA ROSA
HORIZON AT 100 FT.

0. - 30.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
30. - 110.	122HTRN	HAWTHORN GROUP
110. - 163.	124CLRV	CRYSTAL RIVER FM.

WELL NUMBER: W- 4044 COUNTY: ALACHUA
TOTAL DEPTH: 175 FT. LOCATION: T09S, R19E, S36 D
30 SAMPLES FROM 3 TO 175 FT. LAT = N 29D 40M 13
LON = W 82D 21M 25
COMPLETION DATE - 07/12/54 ELEVATION: 127 FT.
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: G.H. BLACK, JR., GAINESVILLE EQUIPMENT -- DRILLER

WORKED BY: GEORGE M. OGDEN, JR., 12-2-75
SAMPLE QUALITY GOOD

0. - 12.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
12. - 55.	122HTRN	HAWTHORN GROUP
55. - 140.	124CLRV	CRYSTAL RIVER FM.
140. - 175.	124WLSN	WILLISTON FM.

WELL NUMBER: W- 5621 COUNTY: ALACHUA
TOTAL DEPTH: 90 FT. LOCATION: T10S, R20E, S33CD
9 SAMPLES FROM 10 TO 90 FT. LAT = N 29D 33M 45
LON = W 82D 16M 11
COMPLETION DATE - N/A ELEVATION: 69 FT.
OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: JAMES MARTALERO, MALURE GARDENS, GAINESVILLE

WORKED BY: MIKE KNAPP, 10-20-75
SAMPLE QUALITY GOOD

0. - 40.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
40. - 90.	124CLRV	CRYSTAL RIVER FM.

WELL NUMBER: W-13898
TOTAL DEPTH: 3400 FT.
SAMPLES - NONE

COUNTY: ALACHUA
LOCATION: T08S, R19E, S25 A
LAT = N 29D 45M 42
LON = W 82D 23M 18

COMPLETION DATE - 31/12/77
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 180 FT.

OWNER/DRILLER: DEERHAVEN DEEP - STRAT TEST - ALSAY-PIPPIN CORP.

WORKED BY: MIKE KNAPP, SAMPLES DESCRIBED JAN.-APR. 1978
INTERVAL FROM 172-318 FT. CONTAINS WILLISTON-INGLIS CONTACT.
PALEOZOICS WERE PICKED ON THE FIRST OCCURRENCE OF SILICIC S.S.

0. - 110.	122HTRN	HAWTHORN GROUP
110. - 172.	124CLRV	CRYSTAL RIVER FM.
172. - 318.	000NOSM	NO SAMPLE
318. - 330.	124WLIG	WILLISTON-INGLIS
330. - 515.	124AVPK	AVON PARK LIMESTONE
515. - 1020.	124LKCT	LAKE CITY LIMESTONE
1020. - 1540.	124OLDM	OLDSMAR LIMESTONE
1540. - 1827.	125CDRK	CEDAR KEYS LIMESTONE
1827. - 2010.	211LWSN	LAWSON LIMESTONE
2010. - 2191.		LAWSON LIMESTONE LOWER MEMBER
2191. - 2641.	211TYLR	TAYLOR GROUP
2641. - 2720.	211ASTN	AUSTIN GROUP
2720. - 3400.	360ODVC	ORDOVICIAN

