

FLORIDA GEOLOGICAL SURVEY WELL LOG DATA BASE - LITHO LOG SUMMARY FOR SEMINOLE COUNTY

WELL NO.	TOWNSHIP/RANGE	LATITUDE/LONGITUDE	ELEVATION	DEPTH	DATE
	T19S, R. 30E S. 19				
W- 337	T/R/S NO ENTRY	LAT-LON - NO ENTRY	027 FT.	00195 FT.	01/04/37
W- 346	T.20S R.30E S.07 ^{R31}	LAT-LON - NO ENTRY	052 FT.	00100 FT.	01/05/37
W- 347	T.19S R.30E S.28	LAT-LON - NO ENTRY	030 FT.	00160 FT.	13/05/37
W- 348	T/R/S - NO ENTRY	LAT-LON - NO ENTRY	053 FT.	00090 FT.	02/06/37
W- 349	T/R/S - NO ENTRY	LAT-LON - NO ENTRY	044 FT.	00130 FT.	08/06/37
W- 356	T/R/S - NO ENTRY	LAT-LON - NO ENTRY	023 FT.	00195 FT.	15/06/37
W- 357	T/R/S - NO ENTRY	LAT-LON - NO ENTRY	017 FT.	00195 FT.	01/07/37
W- 359	T/R/S - NO ENTRY	LAT-LON - NO ENTRY	026 FT.	00128 FT.	20/05/37
W- 360	T.20S R.30E S.02 D	LAT-LON - NO ENTRY	N/A	N/A	11/08/37
W- 361	T.020 R.030 S.04 A	LAT-LON - NO ENTRY	063 FT.	00076 FT.	16/08/37
W- 363	T.20S R.30E S. D	LAT-LON - NO ENTRY	048 FT.	00105 FT.	24/08/37
W- 364	T.019 R.031 S.33 C	LAT-LON - NO ENTRY	026 FT.	00116 FT.	21/08/37
W- 365	T.020 R.030 S.02	LAT-LON - NO ENTRY	045 FT.	00128 FT.	24/09/37
W- 366	T.19S R.30E S.36 B	LAT-LON - NO ENTRY	048 FT.	00106 FT.	29/09/37
W- 388	T.20S R.31E S.19	LAT-LON - NO ENTRY	012 FT.	00134 FT.	N/A
W- 413	T.19S R.30E S.27 C	LAT-LON - NO ENTRY	032 FT.	00102 FT.	09/06/37
W- 414	T.20S R.30E S.16 B	LAT-LON - NO ENTRY	057 FT.	00085 FT.	01/07/37
W- 417	T.19S R.31E S.31	LAT-LON - NO ENTRY	058 FT.	00168 FT.	14/07/37
W- 419	T.19S R.30E S.22 B	LAT-LON - NO ENTRY	008 FT.	00148 FT.	29/06/37
W- 420	T.19S R.31E S.30 AA	LAT-LON - NO ENTRY	008 FT.	00175 FT.	20/07/38
W- 430	T.20S R.31E S.04	LAT-LON - NO ENTRY	017 FT.	00168 FT.	05/11/37
W- 433	T.19S R.30E S.28	LAT-LON - NO ENTRY	023 FT.	N/A	23/07/37
W- 439	T/R/S - NO ENTRY	LAT-LON - NO ENTRY	N/A	00108 FT.	N/A
W- 441	T.19S R.31E S.29	LAT-LON - NO ENTRY	016 FT.	00200 FT.	N/A
W- 507	T.20S R.31E S.06 B	LAT-LON - NO ENTRY	N/A	00136 FT.	106/42
W- 526	T.19S R.30E S.25	LAT-LON - NO ENTRY	015 FT.	00160 FT.	N/A
W- 594	T.19S R.30E S.25	LAT-LON - NO ENTRY	025 FT.	00183 FT.	01/09/41
W- 765	T.20S R.30E S.11 B	LAT-LON - NO ENTRY	050 FT.	00160 FT.	104/43
W- 1377	T.01S R.29E S.16	LAT-LON - NO ENTRY	097 FT.	01115 FT.	30/03/47
W- 1461	T/R/S - NO ENTRY	LAT-LON - NO ENTRY	N/A	00320 FT.	30/01/47
W- 2523	T.21S R.30E S.05	LAT-LON - NO ENTRY	064 FT.	00200 FT.	17/09/51
W- 2600	T.21S R.29E S.06 CB	LAT-LON - NO ENTRY	094 FT.	01122 FT.	20/04/52
W- 2649	T.21S R.31E S.14 CB	N 28D 39M 42S W 81D 11M 13S	50 FT.	560 FT.	N/A
W- 2792	T.19S R.30E S.20 BB	LAT-LON - NO ENTRY	21 FT.	142 FT.	26/09/52
W- 3582	T.20S R.32E S.21	N 28D 06M 42S W 81D 07M 03S	71 FT.	145 FT.	23/11/54
W- 4195	T.21S R.30E S.33 CA	N 28D 37M 00S W 81D 18M 40S	85 FT.	834 FT.	04/02/57
W- 4649	T.21S R.31E S.15 CB	N 28D 39M 49S W 81D 12M 18S	84 FT.	327 FT.	15/05/58
W- 5340	T.21S R.31E S.15	LAT-LON - NO ENTRY	7 8 FT.	5 23 FT.	1/7
W- 5530	T.21S R.29E S.23 CD	LAT-LON - NO ENTRY	101 FT.	00182 FT.	01/10/60
W- 5755	T.20S R.30E S. 4 AB	LAT-LON - NO ENTRY	65 FT.	360 FT.	107/61
W- 11597	T.20S R.32E S.21	N 28D 44M 05S W 81D 07M 25S	60 FT.	180 FT.	07/09/72
W- 11855	T.21S R.30E S.09	LAT-LON - NO ENTRY	65 FT.	350 FT.	12/02/73
W- 11900	T.21S R.32E S.28	N 28D 37M 57S W 81D 07M 17S	45 FT.	214 FT.	12/07/73
W- 12200	T.20S R.30E S.27	LAT-LON - NO ENTRY	25 FT.	430 FT.	10/01/74

THERE ARE 44 WELLS AVAILABLE FOR SEMINOLE COUNTY

SEMINOLE COUNTY

E. R. APPLIN
Consulting Paleontologist
Fort Worth, Texas
2212 Mistletoe Avenue

October 28, 1937

REPORT ON SAMPLES SUBMITTED FROM THE FRANK L. WOODRUFF

WELL #1. 9 miles west of Lake Monroe
S-19, T-19-S, R-30E, Seminole County
Florida

NOTE: From surface to 90', samples were sand much like that in samples from 80' to 90'.

- 80-90 Samples of fine, sharply angular, clear quartz sand; no fossils noted.
- 90-100 Cuttings of gray-green, sandy clay, gray sand and some finely broken shell fragments. Washed large residue of clear quartz sand, similar to the preceding in character, but sand grains averaging slightly finer in size, a fraction of a percent of small, black, phosphatic grains also present, giving the sand its gray color; a few badly worn and broken fragments of fossil bivalves and an occasional specimen of *Elphidium gunteri*, variety, *Rotalia beccarii* variety, *Nonion* sp. variety present.
- 100-110 Cuttings composed of about 75% finely broken and worn shell fragments, and about 25% moderately fine and moderately even-grained, clear quartz sand.
- 110-115 Cuttings composed of about 50% shell fragments, as above, and 50% very fine to angular quartz sand; a fraction of a percent of small, phosphatic grains present.
- 115-120 Cuttings composed of many, well preserved, small shells and shell fragments, and about 25% fine, uneven-grained, clear quartz sand with about 1% small, black phosphatic pebbles present; many forams also scattered through the material, dominant species of forams present are as follows:

Elphidium incertum
Elphidium incertum var. *mexicanum*

Elphidium gunteri var. *galvestonensis*
Nonion sp.
Rotalia beccarii var. *parkinsoniana*
Cibicides lobatula var.
Buliminata marginata

The small shells present are mainly *Semele* sp. and young specimens of *Arca* sp.

120-130 Cuttings of gray-green, shaly clay-sand and shell fragments. Washed moderately large residue composed of small, indurated and sandy fragments of the shaly clay, about 50% shell fragments, (generally finely broken) and about 25% uneven-grained, clear, angular quartz sand; many forams and some Ostracod carapaces. Common species of forams present are:

Elphidium gunteri var. *galvestonensis*
Elphidium incertum
Rotalia beccarii var. *parkinsoniana*
Cibicides cf. *lobatulus*
Elphidium incertum var. *mexicanum*

130-140 Cuttings of gray, sandy clay with abundant shells and shell fragments; about 2/3rds of the washed residue shell fragments, remaining 1/3rd fine, sharply angular, clear quartz sand, with about 1% small black phosphatic (?) nodules; forams same as noted for the preceding samples, but less abundant.

140-145 Cuttings of a cream-colored, fairly hard, highly fossiliferous limestone; fauna present are in the form lime molds of fossils and fossil fragments, having a worn or rolled appearance; some fragments of Bryozoans, Echinoid fragments and spines and fragments of some bivalves including *Pecten* sp.; a few fragments of *Barnea* sp. noted, many poorly preserved molds of the following forams were present:

Operculina ocalana
Gypsina globula
Amphistegina (an undescribed form; comparable to *Amphistegina cubensis*, common in phases of the lower Ocala)
Two species of large Miliolids, also common to the Ocala.

145-150 Material similar to the preceding, but more loosely consolidated; material has an oolitic appearance from the

abundance of molds of Miliolid forms present, calcite frequently forms the cementing medium, and many of the shell fragments are coated with a smooth layer of calcite; fauna similar to the preceding, with an increase in numbers and number of species of Miliolids present, also an increase in the number of specimens of *Gypsina globula* and a marked decrease in the number of specimens of *Amphistegina* sp. present; *Rotalia* sp. (Cushman) is also common at this depth.

- 153-155 Material and fauna similar to the preceding except that *Amphistegina* sp. is again common and *Operculina* sp. rare; several species of Miliolids still very abundant; *Rotalia* sp. is still very abundant; *Rotalia* sp. is still a dominant form among the smaller forams present; *Reussella sculptilis* is also common at this depth.
- 155-160 Like the preceding.
- 160-165 No change.
- 165-170 Material and fauna similar to the preceding; Miliolid forms somewhat less abundant; *Amphistegina* cf. *cubensis* very abundant.
- 170-175 Cuttings of a white, chalky, nodular, fossiliferous limestone with some light gray nodules also present; fossil material present is in the form of chalky molds and fragmentary casts; many Bryozoans and Echinoid fragments noted; *Amphistegina* cf. *cubensis* very abundant at this depth; Miliolid species present as noted in the preceding samples, but not abundant; several specimens of *Gaudryina* cf. *allantica* and *Valvulineria*? sp. also fairly common at this depth, and a few specimens of *Vaginulina* cf. *sculpturata* and *Haplostiche* sp.
- 175-180 Cuttings of a white, porous limestone, having an oolitic appearance from being composed largely of chalky molds and small forams and some small fossil fragments held together with chalk of calcite cement; some of the casts are bluish-gray in color; fauna consists mainly of forams, including some specimens of *Amphistegina* cf. *cubensis*; many large specimens of *Gypsina globula*; some specimens of Miliolid forms, as above, specimens of *Pseudorbilolina* cf. *cubensis* and many specimens of small foraminifera, same species as noted in the preceding sample.

180-190 Cuttings of a dense, white and light gray, hard limestone;
 numerous specimens of -

Lituonella roberti
Coskinolina cookei
Lituonella liburnica

and a form resembling *Textularia adalta*, but probably a
new genera related to *Climacammina*.

190-195 Cuttings of chalky limestone; washed large residue com-
 posed of fragments of deep cream-colored, finely granular,
 crystalline, soft limestone; some chalky, hard limestone
 fragments, like that noted in the preceding sample; and a
 few forams, species same as for the preceding sample.

SUMMARY

As shown by the microscopic faunas present, the following
formations were encountered in this well:

80-140 Pliocene (Caloosahatchee).
140-180 Ocala - Upper Eocene
180-195 Coskinolina zone - Lower zone of Upper Eocene.

E. R. APPLIN

NOTE: See Mrs. Applin's letter of October 28, 1937.

All data in this county from:
From Field Book of R. O. Vernon

W-337
Seminole Co.

OWNER :	Frank Woodruff - 1.9 Mi W of Lake Monroe
Elev.	27'
120	130 Grey Sandy Clay, shell fragments
130	140 All Shell fragments - probably <u>PLIOCENE</u>
140	145 Light tan, granular, porous Limestone (Ocala), <u>Echinoid</u> fragments, <u>Amphistegina pinarensis</u> , <u>Gypsina globula</u> , <u>Operculinoides R.</u> , Starfish Plates
145	150 Light tan Miliolid Limestone, <u>Camerinids</u>
153	155 Same - <u>Camerinids</u>
155	160 Same Lith. - No Cam. - <u>Discorinopsis gunteri</u> : Reworked.
160	165 Same - T <u>Camerinids</u>
165	170 Same - T <u>Camerinids</u>
170	175 Same - Lith. <u>Peronella dalli</u>
175	180 Same - Lith. No Cams. Nothing diagnostic
180	190 Distinct Lith. change - grey, denser, few miliolids <u>Coskinolina</u> , etc., <u>C</u>
190	195 TD in with 20% brown sugary Dolomite: <u>Lituonella</u>

W-338
Seminole Co.

OWNER :	Nehi Bottling Co., Sanford, Fla.
87	90 Sand and Shell fragments
90	100 Sand and Shells; <u>Elphidium gunteri</u> , T Miliolid Limestone
100	108 Sand and Shells with light tan miliolid Limestone. Nothing diagnostic
108	120 Same: <u>Amphistegina pinarensis</u>
120	132 Same: <u>Peronella dalli</u>
132	136 Same:
	^{† true} Apparently no [^] Ocala here
- 90	
+ 29	
-60 El.	= T. Middle Eocene

W-337
(Stubbs)

OWNER: Frank L. Woodruff
LOCATION: Sec. 19, T. 19, R. 30,
COUNTY: Seminole, Lake Monroe Post Office
DRILLER: A. D. Rosier
STARTED: 3/29/37
COMPLETED: 4/1/37
TOTAL DEPTH: 195'
CASING: 139' 7" of 3"

25-30' (i.c.)
30-40' (i.c.)
40-50' (i.c.)
50-60' (i.c.)

White sand.

Same.

Same.

Sand mixed with organic matter giving it a dark grey color.

White sand.

Same.

Same.

Blue-grey marl.

Badly broken shell fragments

White sand and shell fragments. Identifiable fossil material is lacking.

Same.

Shell loosely cemented in a very sandy marl matrix.

100-110'

110-115'

115-120'

"*Olivella* cf. *O. nitidula* Dillwyn (fragments)

Crepidula sp. (immature)

Arca cf. *A. campyla* Dall (immature)

Phacoides multilineatus Tuomey and Holmes

Ervillea cf. *E. polita* Dall (fragment)

Mulinia contracta (Conrad)"

Identified by Mansfield

Elphidium incertum

Elphidium gunteri

120-130'

130-140'

Blue marl, badly broken shell fragments

Shell in a blue marl matrix.

Arca cf. *A. campyla*

Ervillea polita

Phacoides cf. *P. multilineatus*

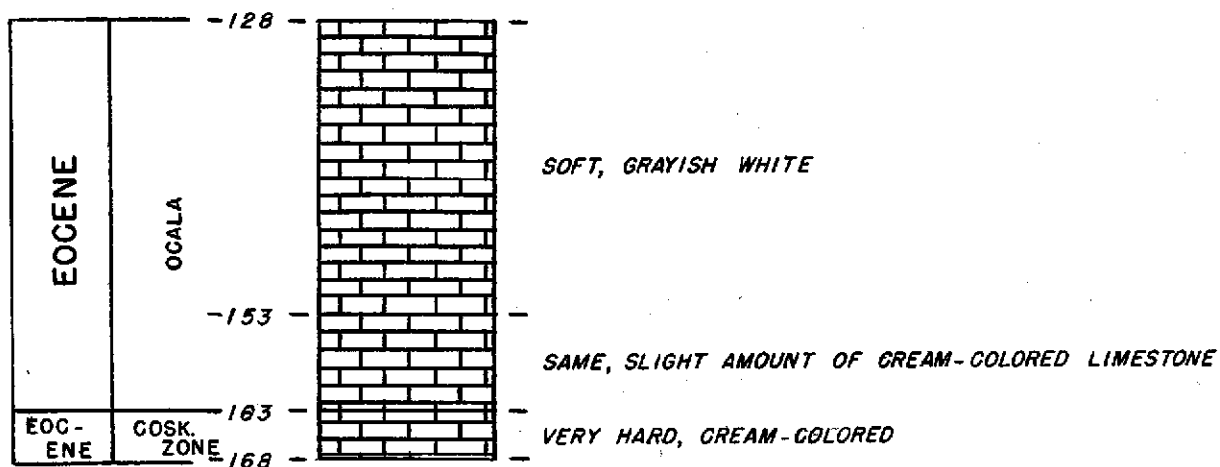
Mulinia contracta

Rotalia beccari var. *parkinsoniana*

Elphidium gunteri.

- Expos. - Carbon
- 140-145' Soft creamy white limestone
- Oligopygus floridanus
Oligopygus haldermani
Amusium sp. indet.
Lepidocyclina ocalana
- 145-150' Harder cream colored limestone
- Operculinella willcoxi.
- 150-153' No sample. Probably represents a cavity.
153-155' Same as 145-150'.
155-160' Soft greyish-white limestone.
- Numerous shell fragments
Echinoid fragments
Rotalia sp.
Textularia recta.
- 160-165' Same.
165-170' Same.
170-175' Same.
175-180' Same.
180-190' Same, with a slight amount of cream colored limestone.
190-195' Very hard cream colored limestone.
- Operculinella willcoxi.

W-337
(Stubbs)



NOTE

ALL SAMPLES FOR A DEPTH OF 2 THROUGH -33' WERE TAKEN FROM THE CASING.
EXACT DEPTH OR THICKNESS OF FORMATIONS IS IMPOSSIBLE TO DETERMINE.

EXPLANATION



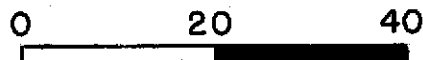
Sand



Marl

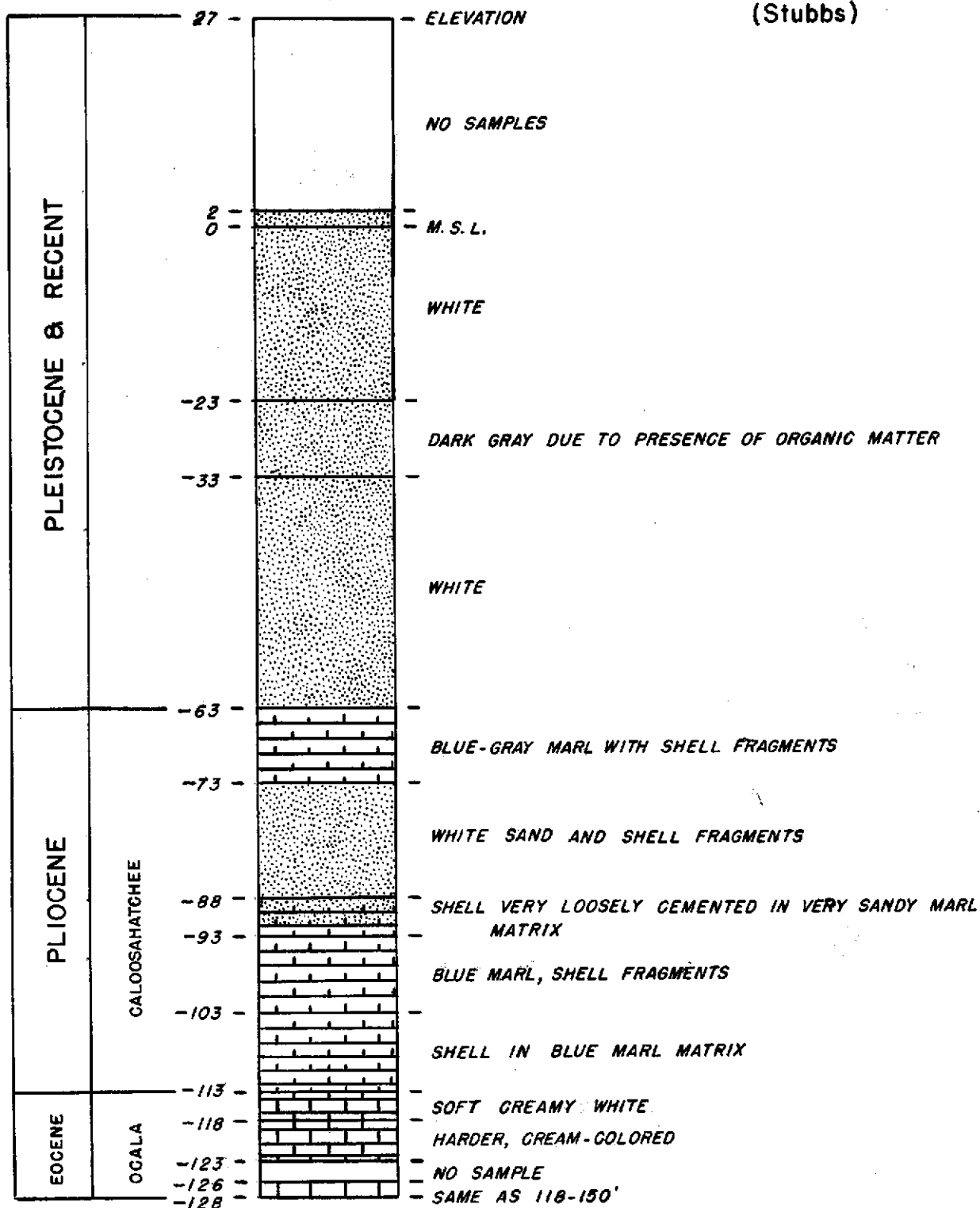


Limestone



VERTICAL SCALE IN FEET

W-337
(Stubbs)



Sec. 19, T. 19S, R. 30E. 1750' FNL

2160' FEL

slat = 26, 32 Gr.

W-337
(Monsour)

INTER-OFFICE CORRESPONDENCE SHEET

SUN OIL COMPANY

SUBJECT:

Date: March 9, 1940

From: Emil Monsour

Office: Florida

To: Mr. J. A. Waters
Box 2880, Sun Oil Co.
Dallas, Texas.

Dear Sir:

W-337 Frank J. Woodruff well, Sec. 19, T19S, R30E, 1.9 mi. W. of Lake Monroe, El. 27', in Seminole Co., Fla., topped the Coskinolina Zone in a cuttings sample from 180-190'. The sample marked the first appearance of light creamy yellowish white to medium grey with slight tinge of yellow, foss., cavernous, slightly dolomitic limestone. Coskinolina cookei and Lituonella were noted. Top Ocala came in a cuttings sample from 140-150'. Sub-sea on Coskinolina Zone is -153'.

W-356, Charley Merriweather well, El. 23', SW $\frac{1}{4}$, Sec. 33, T19S, R31E, about $3\frac{1}{2}$ miles SE of Sanford, in Seminole Co., Fla., topped the Coskinolina Zone in a cuttings sample from 76-80', the lithology being the same in appearance as that noted in W-337. Coskinolina cookei and Lituonella were noted. No Ocala was encountered in this well.

Yours truly,

/s/ Emil Monsour

Emil Monsour

CC-Dr. F. H. Lahee

OWNER : Nehi Bottling Co.
LOCATION : 13 blocks S of Sanford PO on Celery Ave.
Sec 33, T 19S, R 31E. 120' F5L, 438' F60L
COUNTY : Seminole
ELEVATION : 23.84 4/24/37 22.99 ft.
DRILLER : A. D. Rozier
STARTED : 2/22/37
COMPLETED : 2/23/37
DEPTH : 136'
CASING : 108' of 3"
HEAD : -8'
QUALITY : Hard, Cl. 244 pts./mil.
USE : Bottle washing (Commercial)
REMARKS : samples rec., ?

45	50 (i. c.)	Fine brown and white Sand
50	60 "	White Sand
60	85 "	Sand and Shell; Arca sp. fragments; Drilla sp.
65	70 "	Bluish-grey sandy Shell Marl; Rotalia beccari var. parkinsoniana; Elphidium incertum; Elphidium fimbriatulum
70	75	Bluish-grey Shell marl; Elphidium gunteri (?)
75	82	Bluish-grey Marl, no shell; Uvergina sp.: Elphidium incertum
82	87	Bluish-grey sandy Marl, Shell fragments, plentiful: Olivella cf. O. nitidula, Rotalia beccari var. parkinsoniana
87	90	Same
90	100	Same but less sand: Ostrea sp. (fragments)
100	108	Very soft cream colored limestone, slight amount of SHELL and Marl from above: Operculinella willcoxi
108	120	Harder cream colored Limestone: Pecten sp. fragments, Echinoid fragments, Lepidocyclina sp.: Rotalia sp.

OWNER : Overstreet Land Company
LOCATION : E of Longwood, Fla.
Sec. 28, T 20S, R 30E, 2230' E 5L, 2620' F 10E
COUNTY : Seminole
ELEVATION : 23.73 ft.
DRILLER : A. D. Rozier
STARTED : 1937
COMPLETED : 1937
DEPTH : 125'
CASING : 68' of 2"
YIELD : Flowing-13.5' above surface(rising)
QUALITY : Hard, fresh
USE : Land advertising
REMARKS : Samples returned to Mr. Stubbs,
July 24, 1945-

40	54(l. c.)	Fine white sand
54	58 "	Fine white Sand with a very small amount of blue Clay; Sample gives a very definite phosphate test
58	60 "	Sand and soft white Limestone; Phosphate pebbles: Lepidocyclina floridana, Operculinella willcoxi; Gypsina globulus
60	65 "	Soft white Limestone: Operculinella willcoxi: Echinoid spines
65	70	Soft white Limestone: Gypsina globulus; Lepidocyclina floridana, Lepidocyclina pseudomarginata
70	75	Somewhat harder white Limestone: Gypsina globulus; Lepidocyclina Ocalana
75	80	Same
80	85	Soft White Limestone: Lepidocyclina sp.; Operculinella willcoxi; Amusium sp. fragments; Echinoid spines
85	90	Same
90	95	Hard gray Limestone: Operculinella willcoxi; Operculina ocalana; Gypsina globulus
95	100	Hard cream colored Limestone: some gray Limestone: Operculinella willcoxi; numerous shell fragments
100	105	Same
105	110	Same
110	115	Softer cream colored Limestone
115	125	Same

W-340

Seminole Co.

OWNER : Overstreet Land Co., T20S-R30E-23 NE $\frac{1}{4}$ SW $\frac{1}{4}$

Elevation: 18'

40	54	Surface Sand
54	58	Surface Sand

Elevation: 40'

58	60	50% phosphatic Sand with 50% cream colored Limestone, with <u>Operculinoides</u> , <u>Lepidocyclina</u> <u>Ocalana</u> <u>Heterostegina</u> etc.
60	65	Cream colored Limestone, abundant Ocala fauna
65	70	Same
70	75	Same lith. Ocala fauna Limestone A
75	80	Same lith. Ocala fauna present, T. Pyrite, <u>Peronella dalli</u> Comatulid brachials A
80	85	Same lith. Same fauna - Pyrite
85	90	Same lith. <u>Camerinids</u> C, <u>Gypsina globula</u> , <u>Textularia</u> sp.
90	95	Light grey - Ocala fauna
95	100	Light grey- cream colored granular and porous Limestone, Ocala fauna R., <u>Amphistegina</u> cf <u>pinarensis</u>
100	105	Cream colored Limestone: <u>Echinoid</u> fragments, Star fish plates, Crustacea fragments, <u>Gypsina globula</u> , <u>Heterostegina</u>
105	110	Light tan, light grey - <u>Camerinas</u>
110	115	Cream colored Limestone: <u>Miliolidae</u> A, <u>Amphistegina pinarensis</u> C
115	125	Light tan, partly crystalline- <u>Amphistegina pinarensis</u> , Nothing truly Ocala

This is probably the bed directly below Mio-Plio in wells to the NE

W-346

Seminole Co.

Owner: Levy - 2 Mi S of Sanford No Elevation

60	70	Surface Sand
70	80	Same
80	85	Grey clayey Sand
85	90	Slightly clayey grey Sand, Shell fragments abundant; Pliocene
90	93	Same - good Pelecypods; <u>Elphidium gunteri</u> ; <u>Rotalia beccarie</u>

TD

93	100	Light tan; <u>Amphistegina pinarensis</u> , <u>Miliolids</u> abundant
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This is the Amphistegina bed of doubtful position

FLORIDA BUREAU OF GEOLOGY - LITHO LOG PRINTOUT

W- 5740 (PERMIT NO- 237).
SEMINOLE CO. T21S R31E SEC 15 S2 83 93 N 28 11 21 W
TOTAL DEPTH-5 23 FT. ELEV.- 7 8 FT. 7 SAMPLES- 17-0 23 FT.
COMPLETED- 7 .

WELL NAME-
SEMINOLE COUNTY SCHOOL
REMARKS-
WORKED BY M.H. SCHAFIE, A-31-77.
GOOD SAMPLES.

STRATIGRAPHIC FORMATIONS -

0.0-	70.0	UNDIFFERENTIATED SAND, CLAY AND SHELLS
70.0-	120.0	CRYSTAL RIVER FORMATION
120.0-	170.0	HILLISTON FORMATION
170.0-	237.0	AMON PARK LIMESTONE

07-601610 LOGS

SEMINOLE CO. 7218, #31E, SEC 15

5.0	SAND	,LT BF GY, 23 PERCENT	POROSITY-INTERGRAN,SIZE- MED,
	RANGE- MED-FINE, SUB-ANG,	ANGULAR, MED SPH, POOR IND,	
	CLAY CMT, 06 PCT.	CLAY, 02 PCT. HEAVY MIN,	
10.0	AS ABOVE		
15.0	SAND	,LT BF GY, 23 PERCENT	POROSITY-INTERGRAN,SIZE- MED,
	RANGE- CFSE-FINE, ANGULAR,	SUB-ANG, MED SPH, POOR IND,	
	CLAY CMT, 06 PCT.	CLAY, 04 PCT. HEAVY MIN,	
20.0	AS ABOVE		
30.0	SAND	,V LT CR, 27 PERCENT	POROSITY-INTERGRAN,SIZE- MED,
	RANGE- CFSE-FINE, SUB-ANG,	ANGULAR, MED SPH, POOR IND,	
	SPARRY CALCITE CMT ,MICRT CMT,	01 PCT. PHOS SAND, 10 PCT.	
	SPAR,MOLLUSKS ,		
40.0	AS ABOVE		
50.0	AS ABOVE		
60.0	SHELL BED, V LT GY, 26 PERCENT	POROSITY-INTERGRAN,	MOLDIC,
	POOR IND, CLAY CMT,MICRT CMT,SPARRY CALCITE CMT ,	20 PCT.	
	SAND(QTZ),MOLLUSKS ,		
70.0	SHELL BED, V LT GY, 25 PERCENT	POROSITY-INTERGRAN,	MOLDIC,
	POOR IND, CLAY CMT,MICRT CMT, 20 PCT. SAND(QTZ),	02 PCT.	
	PHOS SAND,DOLOMITIC,		
80.0	LIMESTONE, WHITE, 16 PERCENT	POROSITY-INTERGRAN,	MOLDIC,
	GRAINTYPE- BIOGENIC, SKELETAL, 83 PCT. ALLOCHEMS,SIZE- V C,		
	RANGE- V C-CRYP, POOR IND,SPARRY CALCITE CMT ,MICRT CMT,		
	MOLLUSKS ,FORAMINIF,		
	LEPIDOCYCLANA		
90.0	SHELL BED, WHITE, MD BK GY, 25 PERCENT	POROSITY-INTERGRAN,	
	MOLDIC, POOR IND,SPARRY CALCITE CMT ,MICRT CMT, 05 PCT.		
	PHOS GRAV,MOLLUSKS ,		
100.0	LIMESTONE, V LT CR, 15 PERCENT	POROSITY-INTERGRAN,	MOLDIC,
	GRAINTYPE- BIOGENIC, SKELETAL, 80 PCT. ALLOCHEMS,SIZE- MED,		
	RANGE- CFSE-CRYP, POOR IND,SPARRY CALCITE CMT ,MICRT CMT,		
	FORAMINIF,MOLLUSKS ,		
110.0	LIMESTONE, V LT CR, 16 PERCENT	POROSITY-INTERGRAN,	MOLDIC,
	GRAINTYPE- BIOGENIC, SKELETAL, 83 PCT. ALLOCHEMS,SIZE- V C,		
	RANGE- V C-CRYP, POOR IND,SPARRY CALCITE CMT ,MICRT CMT,		
	FORAMINIF,MOLLUSKS ,		
120.0	LIMESTONE, V LT CR, 15 PERCENT	POROSITY-INTERGRAN,	MOLDIC,
	GRAINTYPE- BIOGENIC, SKELETAL, 80 PCT. ALLOCHEMS,SIZE- MED,		
	RANGE- CFSE-CRYP, POOR IND,SPARRY CALCITE CMT ,MICRT CMT,		
	FORAMINIF,MOLLUSKS ,		
130.0	LIMESTONE, OL GY, 13 PERCENT	POROSITY-INTERGRAN,	MOLDIC,
	GRAINTYPE- BIOGENIC, SKELETAL, 80 PCT. ALLOCHEMS,SIZE- MED,		
	RANGE- CFSE-CRYP, MOD IND,SPARRY CALCITE CMT ,MICRT CMT,		
	FORAMINIF,MOLLUSKS ,		
	AMPHESTIGINA		
140.0	LIMESTONE, V LT CR, 14 PERCENT	POROSITY-INTERGRAN,	MOLDIC,
	GRAINTYPE- BIOGENIC, SKELETAL, 80 PCT. ALLOCHEMS,SIZE- MED,		
	RANGE- CFSE-CRYP, POOR IND,SPARRY CALCITE CMT ,MICRT CMT,		
	FORAMINIF,MOLLUSKS ,		

LITHOLOGIC LOG
W- 5340 . SEMINOLE CO. T21S, R31E, SEC 15

157.0 LIMESTONE, V LT GR, 15 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 82 PCT. ALLOCHEMS, SIZE- MED,
RANGE- CRSE-CFYP, POOR IND, SPARRY CALCITE CMT, MICRT CMT,
FORAMINIF,
160.0 AS ABOVE ;
170.0 AS ABOVE ;
180.0 LIMESTONE, V LT GR, 15 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 82 PCT. ALLOCHEMS, SIZE- MED,
RANGE- CRSE-CRYP, POOR IND, SPARRY CALCITE CMT, MICRT CMT,
10 PCT. SPAR, CONES, FORAMINIF,
DICTYCONUS COCKEI.
190.0 AS ABOVE ;
200.0 LIMESTONE, V LT GR, 15 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 82 PCT. ALLOCHEMS, SIZE- MED,
RANGE- CRSE-MICR, POOR IND, SPARRY CALCITE CMT, MICRT CMT,
12 PCT. SPAR, CONES, FORAMINIF,
210.0 AS ABOVE ;
220.0 AS ABOVE ;
230.0 AS ABOVE ;
237.0 LIMESTONE, V LT GR, 15 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 80 PCT. ALLOCHEMS, SIZE- MED,
RANGE- CRSE-CFYP, POOR IND, SPARRY CALCITE CMT, MICRT CMT,
05 PCT. SPAR, CONES, FORAMINIF,
TD

*** END OF DATA ***

OWNER: Levy
 LOCATION: S/E $\frac{1}{4}$ Sec. 7, T. 20S. R 31 E. 1470' FNL
 2 miles south of Sanford 1488' FEL
 COUNTY: Seminole
 TYPE: Driven
 DRILLER: A. D. Rosier
 STARTED: 5/1/37
 COMPLETED: 5/1/37
 TOTAL DEPTH: 100'
 CASING: 92' 11" of 2" casing.
 ELEVATION: 51.8165.
 REMARKS:

60-70 * (i.c.) Fine white and yellowish sand.
 70-80 (i. c.) Same.

Pleistocene and Recent

80-85 (i.c.) Blue-gray sandy marl, a few badly broken
 shell fragments

Elphidium gunteri
 Discorbis gladysae

85-90' (i.c.) Blue-gray sandy marl, numerous shell fragments

Rotalia beccari var. parkinsoniana
 Elphidium incertum
 Elphidium gunteri

90-93' (i.c.) Blue-gray sandy shell marl.

Ervillia cf. E. polita
 Phacoides cf. P. multilineatus
 Olivella nitidula
 Oliva sp fragment
 Elphidium advenum

Pliocene

93-100 Fairly hard cream-colored limestone with slight
 amount of shell from above.

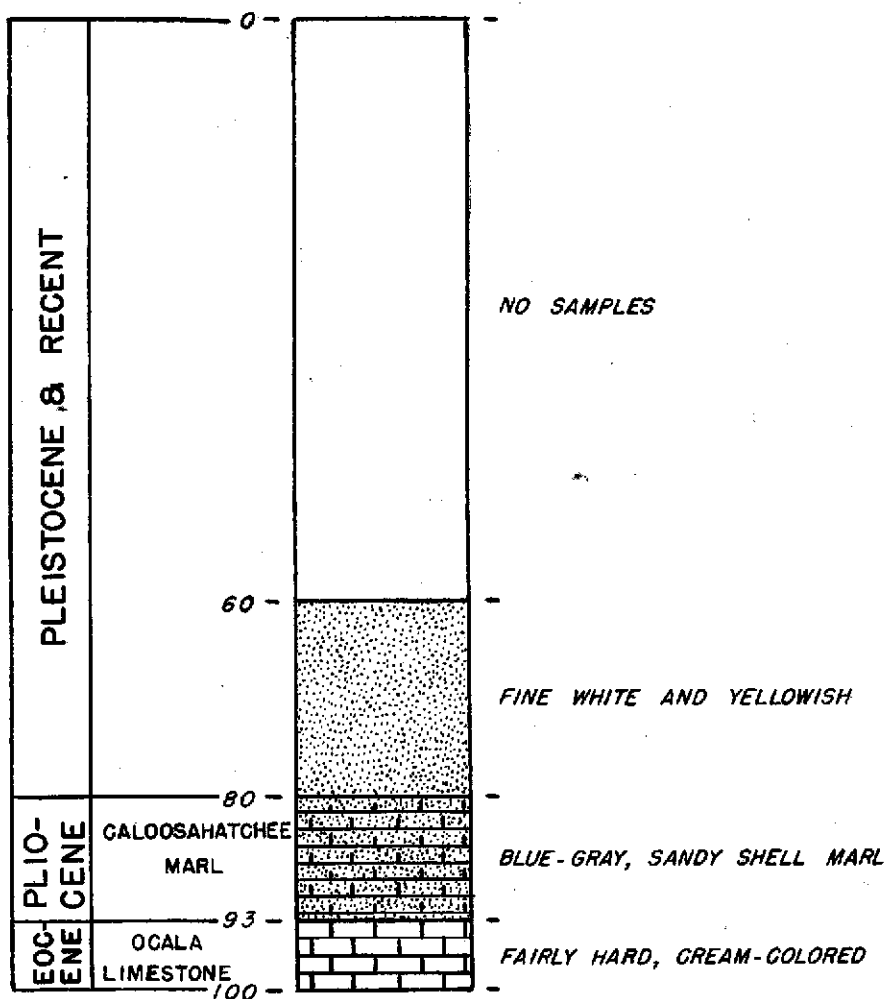
Lepidocyclina cf. L. ocalana.

Sidney A. Stubbs

Eocene: Ocala Limestone

* (i. c. denotes sample taken from the casing.
 The exact depths or thickness of the formations
 is impossible to determine.)

W-346
(Stubbs)



EXPLANATION



Sand



Marl



Limestone

0 20 40



VERTICAL SCALE IN FEET

Sec. 28, T19S, R30E
2310' FAL, 1980' FEL
el. 29.116r.

E. R. APPLIN
Consulting Paleontologist
Fort Worth, Texas

WATER

W-347
(Applin)

2212 Mistletoe Avenue

October 28, 1937

REPORT ON THE M. S. WIGGINS WELL, S-28, T-19-S, R-30-E,
SEMINOLE COUNTY, FLORIDA

- 46-52 Cuttings of gray, sandy clay. Washed small residue of fine angular, clear quartz sand.
- 65-70 Cuttings of gray, sandy clay and shell fragments. Washed large residue of uneven-grained, fine to moderately coarse, angular, clear quartz sand; about 25% shell fragments, mainly fragments of *Semele* sp., a few Echinoid fragments and Bryozoan fragments and about 50% small, indurated fragments of the clay and numerous forams; common species noted were -
- Elphidium incertum* var. *mexicanum*
Elphidium gunteri var. *galvestonensis*
Rotalia beccarii var. *parkinsoniana*
Rotalia beccarii var. *tepida*
Quinqueloculina sp.
- 70-75 Material similar to the preceding, with an increase to about 50% in the fragmental shell material present; forams-fauna also the same as for the preceding sample, but specimens relatively less abundant.
- 75-80 Similar to the preceding, but forams scarce at this depth.
- 80-85 Material about 75% shell fragments at this depth and sand; about 25%; forams fairly common, species abundant at this depth, same as listed for 65-70'.
- 85-90 Cuttings of gray and white, dense, hard, limestone; the limestone was apparently highly fossiliferous, but evidence of fossils now shown only by usually poor cross sections and some very poor molds; a few worn and broken molds of *Operculina* sp. noted, and a few fragments of *Lepidocy-clina* sp., also a few specimens of *Gypsina globula*.
- 90-95 Cuttings of a gray and white, coquina limestone, composed of hard chalk or calcite molds of micro-fossils and fragments

of microscopic bivalves, including fragments of *Pecten* sp., some Bryozoan fragments and fragments of Echinoid tests. Many forams present, among which the following are common:

- (rare) *Lepidocyclina floridana*
- (rare) *Lepidocyclina ocalana*
- (abundant) *Operculina ocalana*
- Gypsina globula*
- Textularia ocalana*
- Sphonina jacksonensis*
- Guttulina irregularis*
- Cibicides mississippiensis* var.
- Reussella sculptilis*
- Eponides jacksonensis*
- Miliola saxorum*
- Massilina jacksonensis*
- Rotalia* sp. (Cushman)
- Ruptertia floridana*

- 100-105 Cuttings of a highly fossiliferous, white, porous limestone, similar to the preceding; common species at this depth similar to those listed from the preceding sample with the additions of *Amphistegina* cf. *cubensis*.
- 105-110 Like the preceding.
- 110-115 Similar to the preceding, but material composed almost entirely of chalky casts of small forams including many Miliolids; cementing material, chalk and some calcite; Bryozoan fragments more abundant than in the preceding samples; Echinoid fragments fairly common; foram fauna like the preceding with Miliolid forms strongly dominant.
- 115-120 Similar to the preceding, with calcite nodules and calcite as a cementing medium, more important; *Rotalia* sp. (Cushman) very common in the small foram fauna.
- 120-125 Like the preceding.
- 125-130 Cuttings of gray and white, chalky and in part calcitic limestone, having an oolitic appearance like the preceding sample, since it is composed largely of chalky molds of small forams, mainly three species of Miliolids; some fragments of bivalves (*Pecten* sp.) and small specimens of the Echinoid (*Laganum* sp.), many specimens of *Operculina* cf. *willcoxi*, and some Bryozoan fragments; other abundant forams are -

Gypsina globula
Haplostiche sp.
Valvulammina (?) sp.
Valvulina ocalana

Amphistegina cf. cubensis is present, but not abundant.

- 130-135 Like the preceding.
- 135-140 No change.
- 140-145 Similar to the preceding in character of lithology and fauna; Operculina cf. willcoxi and Amphistegina cf. cubensis very common at this depth; a few fragments of Lepidocyclina cf. floridana also present.
- 145-150 Like the preceding.
- 150-155 Similar to the preceding, but Operculina cf. willcoxi rare at this depth.
- 155-160 Material and fauna similar to the preceding; Bryozoan fragments more abundant; Miliolid species strongly dominant in the foram fauna, all other species very rare. Pseudorbitolina cf. cubensis appeared at this depth for the first time in this section.

SUMMARY

On the basis of the forams and fauna as present, the following geologic subdivisions are made for this section:

- 46-85 Pliocene.
- 85-160 Ocala - Upper Eocene.

E. R. APPLIN

OWNER : M. S. Wiggins - 3 Mi W of Sanford

Elevation: 30'

75 80 Sand and Shell fragments- mulinia cf. lateralis
-----T Ocala ---Elevation 55'

85 90 Light , tan, light grey Limestone; Operculinoides,
Few fragments of Lepidocyclina sp.
90 95 Cream colored Limestone: Operculinoides, Gypsina
globula, comatulina brachials c.
95 100 Same: Operculinoides, Lepidocyclina Ocalana
100 105 Same, partly grey
105 110 White tan, Camerinids C, Amphistegina pinarensis,
110 115 Same - small forams
Nothing strictly Ocala
Miliolids Abundant, Bolivina alato, Reussella sp.,
Rotalia Cushmani, Nonion #5
115 120 Same - Echinoid fragments, crab fragments, Amphistegina
piranensis C, small forams as above
120 125 Same, one Operculinoide (from above?)
125 130 Operculinoides , Same
130 135 Same, only small forams
135 140 Same
140 145 Same, Camerinas ? Amphistegina pinarensis C
No Eodictyoconus seen

Elevation 115'

145 150 Same, Operculinoides, Eodictyoconus, Operculinoides from
above?
150 155 Peronella dalli, Eodictyoconus - same
155 160 Same, several good Eodictyoconus cubensis

But probably base is higher, See W-337. Since this gives
excessive thickness. T Middle Eocene may be at 110',
giving thickness of 25' which is reasonable

OWNER: M. S. Wiggins
 LOCATION: N/E $\frac{1}{4}$ Sec. 28, T. 19S, R30E.,
 About 3 Mi. W. of Sanford
 COUNTY: Seminole
 DRILLER: A. D. Resier, Sanford, Florida
 STARTED: May 12, 1937
 COMPLETED: May 13, 1937
 ELEVATION: 30 '
 TOTAL DEPTH: 164'
 CASING RECORD: 85 $\frac{1}{2}$ ' of 3"
 REMARKS: Samples from Sidney A. Stubbs and log
 by him. This set of samples studied
 by Mrs: E. R. Applin also.

25-30	* (i. c.)	Fine white sand.	
30-46	(i. c.)	Same	
✓ 48-52	(i. c.)	Sand and blue clay	
✓ 52-55	(i. c.)	Fine white sand.	
✓ 55-60	(i. c.)	Same mixed with some blue clay.	
✓ 60-65	(i. c.)	Coarse white sand and blue marl. few shell fragments.	pl * R

Rotalia beccari var. *parkinsoniana*

✓ 65-70'	(i. c.)	Blue-gray sandy shell marl.
----------	---------	-----------------------------

Rotalia beccari var. *parkinsoniana*
Elphidium incertum

✓ 70-75'	(i. c.)	Same
75-80	(i. c.)	Same but with larger shell fragments

Arca sp. fragments
Pecten sp. fragments
Mulinia cf. *M. contracta*
Elphidium gunteri

80-85	(i. c.)	Same	pl
-------	---------	------	----

* (i. c. denotes sample taken from the casing.
 The exact depth or thickness of the formation
 is impossible to determine.)

Fossils
Ocala

✓ 85-90 Fairly hard creamy white limestone.

Operculina sp.

✓ 90-95

Same

✓ 95-100

Soft white limestone

Lepidocyclus floridana

Echinoid fragments.

✓ 100-105

Harder creamy white limestone.

Operculinella willcoxi

✓ 105-110

Same

✓ 110-115

Same

115-120

Softer creamy white limestone.

Echinoid fragments

Gypsina globula

120-125

Same

125-130

Same

130-135

Same

135-140

Same

140-145

Same

145-150

Same

✓ 150-155

Same

155-160

Soft white limestone

Olygopygus cf. O. haldermani

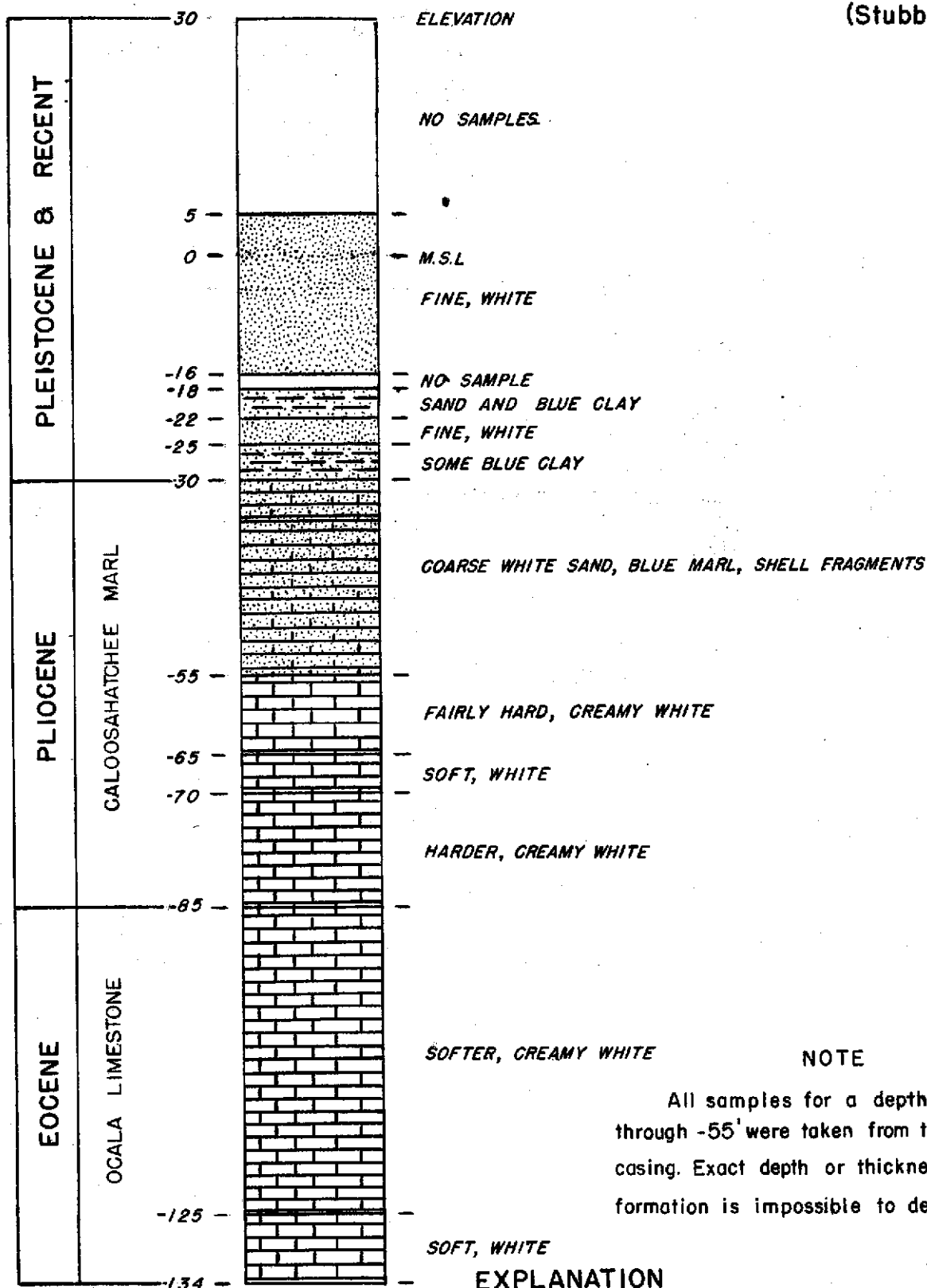
Laganum floridanum

160-164

Same (No sample enclosed)

Sidney A. Stubbs

W-347
(Stubbs)



NOTE

All samples for a depth of 5' through -55' were taken from the casing. Exact depth or thickness of formation is impossible to determine.

EXPLANATION



0 20 40
VERTICAL SCALE IN FEET

OWNER: Howard Hunt
 COUNTY: Seminole
 LOCATION: N/W $\frac{1}{4}$ Sec. 10, T. 21, R. 31 2206' FSL
 4/10 mile North of Oviedo 666' FWL
 TYPE OF WELL: Driven
 DRILLER: G. M. Arie, Oviedo, Florida
 STARTED: 5/31/37
 COMPLETED: 6/2/37
 TOTAL DEPTH: 90'
 CASING: 60' of 3" casing.
 ELEVATION: 53' - 52.76 GR.
 REMARKS: Samples from Sidney A. Stubbs.

The first sample is a mixture of sand and sandy, gray marl containing numerous shell fragments. It was taken from the casing clean-out. Only seven feet of material packed into the casing.

Elphidium incertum

The shell marl appears to be Pliocene. *Nathan*

60-64' Highly phosphatic grayish sandy limestone *Hawthorn*
 Numerous phosphate pebbles.
 64-70 Cream-colored very sandy phosphatic limestone.

Miocene: Hawthorn

70-75 Soft white limestone. *Eocene - Oviedo*

Lepidocyclina floridana
Operculinella willcoxi
Gypsina globula
 Echinoid fragments

75-80 Same
 80-85 No sample.
 85-86 Sample made up almost entirely of Echinoid fragments and *Lepidocyclinas* very loosely cemented together.
 86-90 Cavity filled with bluish-gray marl.

Sidney A. Stubbs

OWNER : Howard Hunt: 2/5/ Mi N of Oviedo

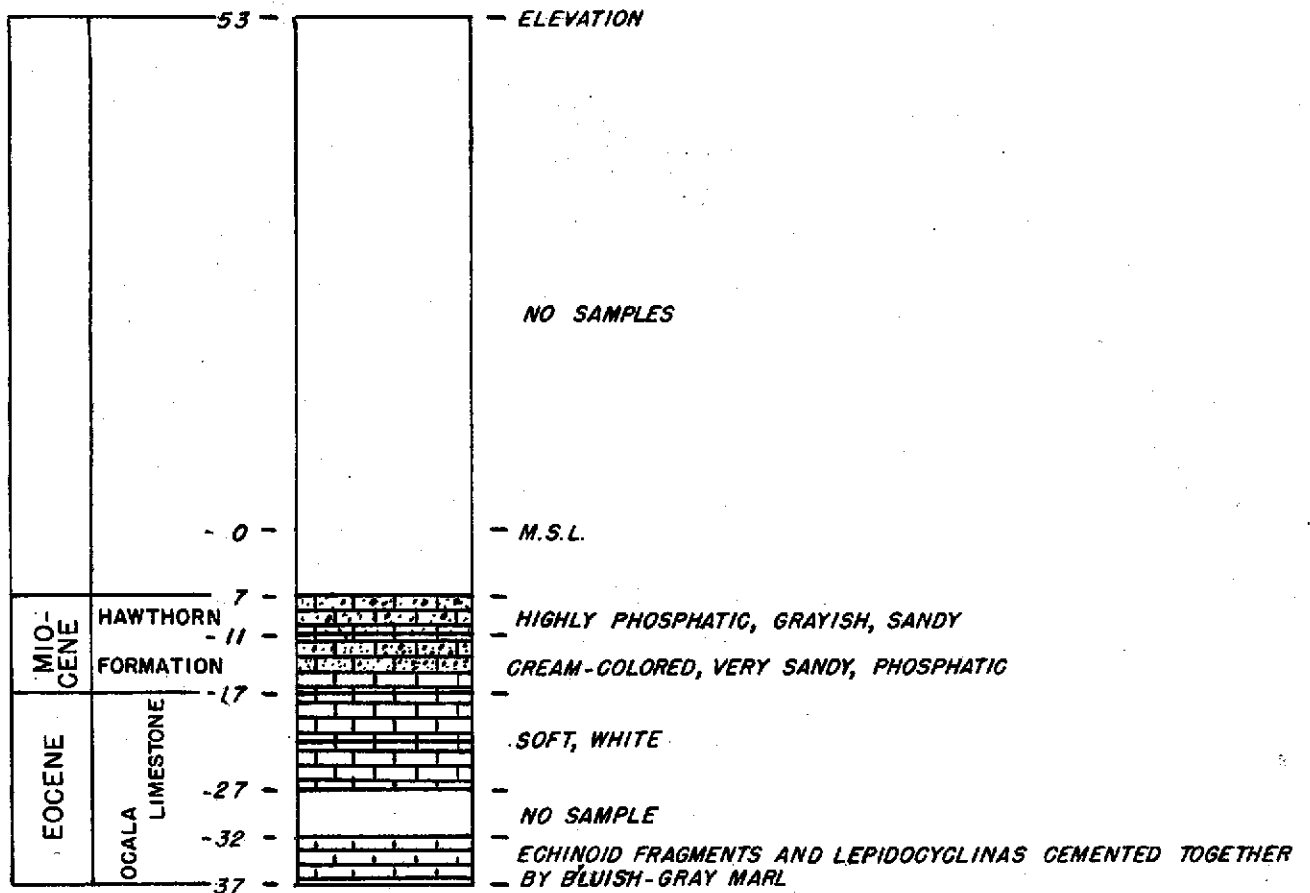
Elevation: 53'

60	64	Grey, sugary , dolomitic Limestone, Phosphorite abundant
64	70	Coarsely sugary, porous Dolomite containing Pyrite
70	75	Good OCALA - <u>No doubt</u>
75	80	Same: Fauna abundant, <u>Lepidocyclina</u> <u>Ocalana</u> , <u>Pseudo-phragmina</u> sp.
85	86	Same Lith. <u>Lepidocyclina</u> <u>Ocalana</u> , starfish plates, <u>Comatulid brachials</u> , small <u>Echinoids</u>
TD		No base of Ocala here.

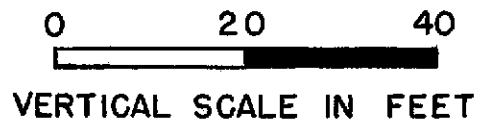
OWNER: L. Swann - 4 Mi S of Sanford, Elevation : 44'

70	80	Grey clayey Sand with Shell fragments
80	85	Same Top of <u>Ocala</u>
85	90	Cream colored Limestone; <u>Lepidocyclina</u> <u>Ocalana</u> , various small forms - <u>Bolivinella</u> <u>alata</u> not surely identified
90	95	Same
95	100	Same
100	110	Same, nothing distinctly Ocala
110	115	Very light tan Limestone; <u>Operculinoides</u> , Small forms. <u>Bolivinella</u> <u>alata</u>
115	120	Same
TD		
120	125	Same- Nothing diagnostic. Crab fragments common, <u>Miliolids</u> abundant and typical small forams of transition zone -85 <u>+44</u> <u>-41'</u> T. of Ocala

W-348
(Stubbs)



EXPLANATION



WATER

W-349
(Stubbs)

OWNER: Leslie Swann
COUNTY: Seminole
LOCATION: S/E $\frac{1}{4}$ Sec. 11, T. 20, R. 30 1730' FSL
4 miles South of Sanford. 1110' FEL
TYPE: Driven
DRILLER: A. D. Rosier, Sanford, Florida
COMPLETED: 6/8/37
TOTAL DEPTH: 130'
CASING: 80' of 2" casing.

Elev. 44

abr - 48.21 ft.

*
60-70 (i. c) Fine white sand
70-80 (i. c) Sand and gray shell marl.

Olivella nitidula
Glebigerina triloba
Elphidium incertum
Elphidium gunteri

80-85 (i. c.) Same

Pliocene

85-90 Fairly soft cream-colored limestone.

Lepidocyclina ocalana
Lepidocyclina floridana
Operculinella Willcoxii

90-95 Same.
95-100 Same.
100-110 Harder cream-colored limestone

Rotalia sp.

110-115 Same
115-120 Same
120-125 Softer cream-colored limestone.

Echinoid fragments

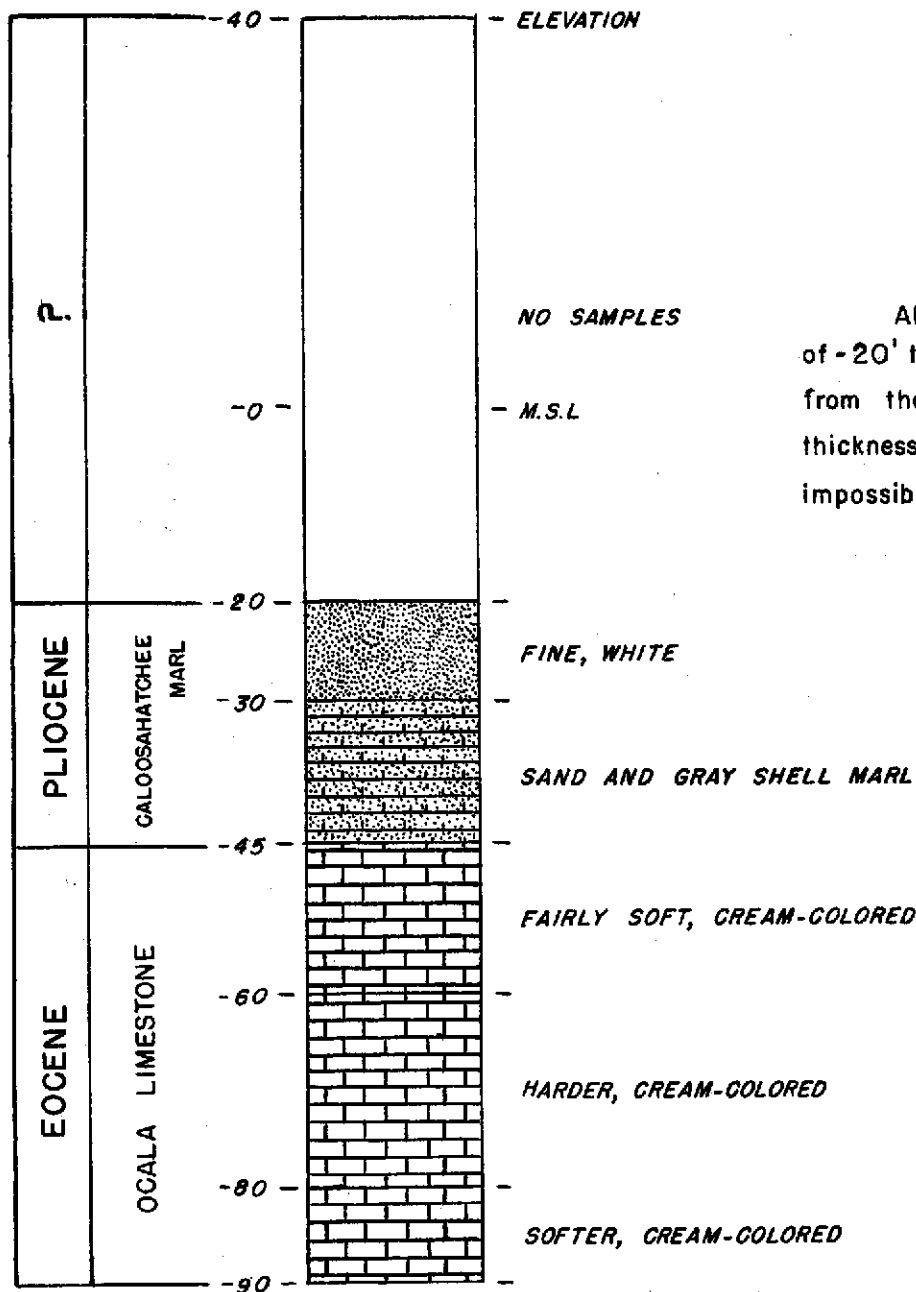
125-130 Same

Eocene: Ocala Limestone

SIDNEY A STUBBS
LOG

* (i. c. denotes sample taken from the casing.
The exact depth or thickness of the formations
is impossible to determine.)

W-349
(Stubbs)



NOTE

All samples for a depth of -20' through -45' were taken from the casing. Exact depth or thickness of the formations is impossible to determine.

EXPLANATION



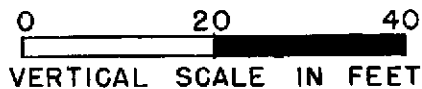
Sand



Marl



Limestone



INTER-OFFICE CORRESPONDENCE SHEET

SUN OIL COMPANY

SUBJECT:

Date: March 9, 1940

From: Emil Monsour

Office: Florida

To: Mr. J. A. Waters
Box 2880, Sun Oil Co.
Dallas, Texas.

Dear Sir:

W-337, Frank J. Woodruff well, Sec. 19, T19S, R30E, 1.9 mi. W. of Lake Monroe, El. 27', in Seminole Co., Fla., topped the Coskinolina Zone in a cuttings sample from 180-190'. The sample marked the first appearance of light creamy yellowish white to medium grey with slight tinge of yellow, foss., cavernous, slightly dolomitic limestone. Coskinolina cooki and Lituonella were noted. Top Ocala came in a cuttings sample from 140-150'. Sub-sea on Coskinolina Zone is -153'.

W-356, Charley Merriweather well, El. 23', SW $\frac{1}{4}$, Sec. 33, T19S, R30E, about 3 $\frac{1}{2}$ miles SE of Sanford, in Seminole Co., Fla., topped the Coskinolina Zone in a cuttings sample from 76-80', the lithology being the same in appearance as that noted in W-337. Coskinolina cooki and Lituonella were noted. No Ocala was encountered in this well.

Yours truly,

/s/ Emil Monsour

Emil Monsour

CC-Dr. F. H. Lahee

Sec 33, T19S, R31E
2370' FWL, 610' FWL

elev = 23.42 ft.

E. R. APPLIN
Consulting Paleontologist
Fort Worth, Texas

WATER

W-356
(Applin)

REPORT ON SAMPLES FROM CHARLEY MERRIWEATHER WELL
3 1/2 MILES S/E OF SANFORD, SEMINOLE COUNTY, FLORIDA

October 28, 1937

- 30-35 Gray-green, sandy clay and shell fragments. Washed large residue of about 25% finely broken shell fragments, including fragments of *Ostraca* sp. and 75% uneven-grained (fine to moderately coarse), sharply angular, clear quartz sand; a number of forams present, among which the common species are -

Rotalia beccarii var. *parkinsoniana*
Elphidium gunteri var. *galvestonensis*
Elphidium discoidale
Elphidium incertum var. *mexicanum*
Cibicides lobatulus var.

- 35-40 Similar to the preceding, shell fragments more abundant and young specimens of *Semele* sp. and *Arca* sp.; some fragments of Bryozoans noted also; sand similar to the preceding, but averaging slightly coarser with a few brown grains and some small, polished, black (phosphatic?) grains also present; foram fauna like the preceding, forams rare.

- 40-60 Sample composed of about 20% shell fragments and a few greenish-gray sandy lime nodules; remaining, washed residue sand, like that on the preceding sample; foram fauna also the same; forams rare.

- 60-70 Like the preceding.

- 70-76 Like the preceding.

- 76-80 Cuttings of a hard, white, chalky and highly micro-fossiliferous limestone; fauna present largely micro-fossils of which the following species are abundant;

Coskinolina cookei
Lituonella roberti
Climacammina (?) sp. (resembling *Textularia adalta*)

Arenobulimina (?) sp.
Cribrobulimina (?) sp.
Valvulammina cf. affinis
Lituonella liburnica
Peneroplis cf. proteus
Spirolina cf. cylindracea
Massilina sp.

A very few fragments of Echinoid tests, a few small fragments of fossil bivalves and a few black (phosphatic?) pebbles also present.

85-90 Cuttings of a hard, cream-colored, often dense, granular, crystalline limestone, scattered specimens of most of the species listed above, but Lituonella apparently absent, and forams generally less abundant and less well preserved; common species noted were -

Arenolublimina (?) sp.
Valvulammina cf. affinis
Triloculina sp.
Coskinolina cookei
Spirolina cf. cylindracea

90-95 Cuttings of a white, porous limestone, composed of small chalky molds of micro-fossils and some calcite casts of small Echinoid and Echinoid fragments; chalk and some calcite forms the cementing material; many forams present; common species present were -

Valvulammina cf. affinis
Coskinolina cookei
Coskinolina liburnica var.
Spirolina cf. cylindracea
Peneroplis cf. proteus
Lituonella liburnica
Climacammina (?) sp. (resembling Textularia adalta)
Arenobulimina (?) sp.
Quinqueloculina sp.
Quinqueloculina cf. polygora
Bigenerina sp. (fragments)
Massilina sp.

95-105 Cuttings of a light blue-gray and white limestone, like the preceding in character and fauna.

- 105-125 Like the preceding.
- 125-135 No change.
- 135-145 Like the preceding.
- 185-195 No change, either lithologically or faunally, except a marked reduction in number of specimens of *Valvulammina* cf. *affinis* present.

S U M M A R Y

The stratigraphic divisions shown by the micro-fossil content of the samples representing this well section are as follows:

- 76-195 Coskinolina zone - Lower, Upper Eocene.

E. R. APPLIN

WATER

W-356
(Stubbs)

OWNER : Charley Merriweather
LOCATION : SW $\frac{1}{4}$ S33 T19 R31, about $3\frac{1}{2}$ mi. S/E of Sanford.
TYPE OF WELL ; Driven
DRILLER :: A. D. Rosier
BEGUN : 6/12/37
COMPLETED : 6/15/37
DEPTH : 195'
CASING : 76'
ELEVATION : 23.07
COUNTY : Seminole

(i.c. indicates sample taken from casing cleanout, exact depth impossible to determine).

25-30' (i.c.) Fine white sand, organic matter, hardpan.

Pleistocene and Recent

30-35' (i.c.) Dark blue-gray shell marl, very little sand

Elphidium gunteri
Amphistegina sp.
Elphidium incertum

35-40' (i.c.) Very sandy shell marl

Elphidium gunteri

40-60' (i.c.) Fine sand with shell fragments

Elphidium incertum
" gunteri
" sagrum

60-70' (i.c.) Same.

Rotalia beccari var. parkinsoniana
Elphidium gunteri
" sagrum

70-76' (i.c.) Same with some marl

Elphidium gunteri
" fimbriatulum

Pliocene: Caloosahatchee

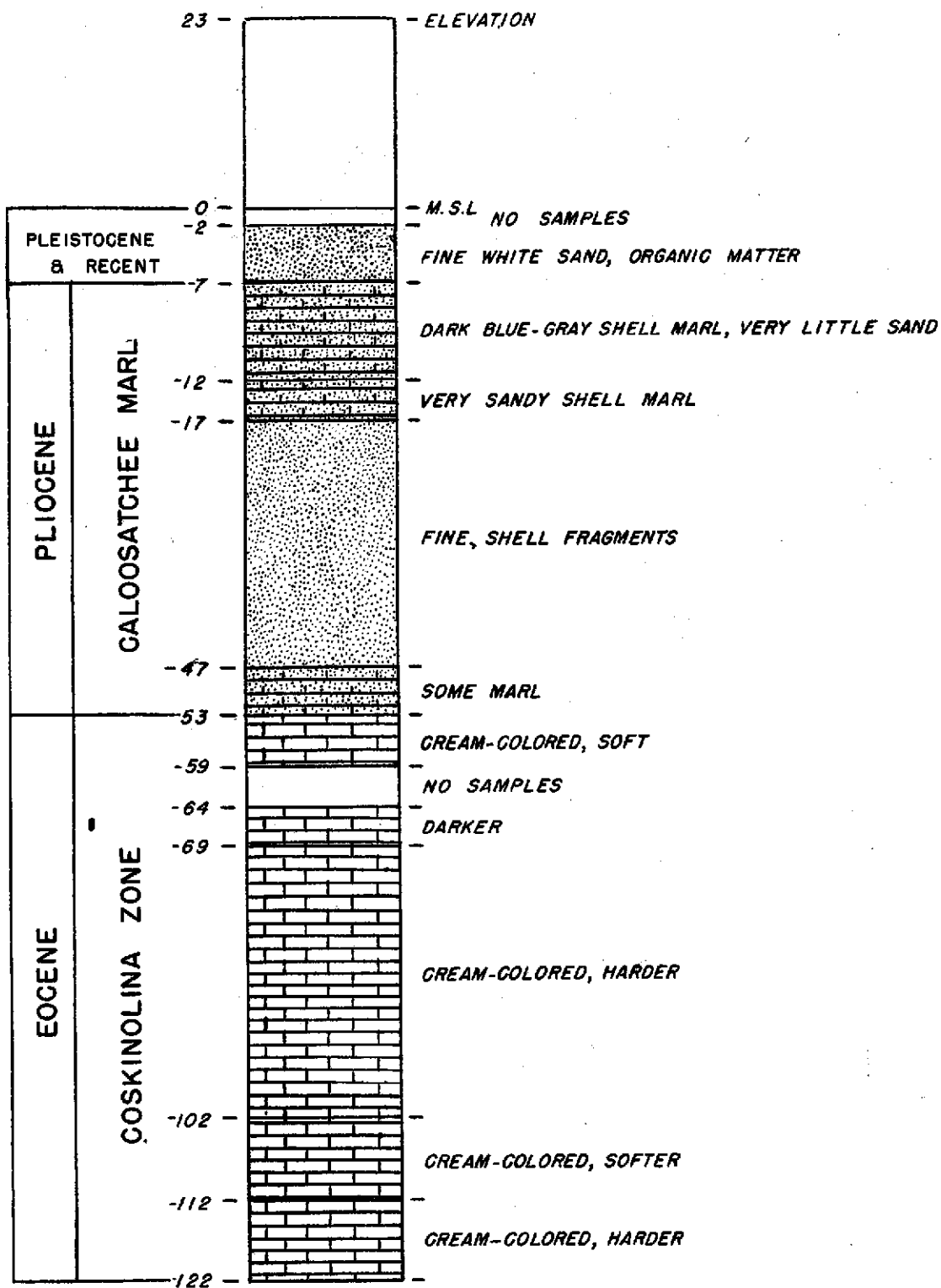
76-80' Limestones, cream-colored, soft

Coskinolina sp.
Textularia sp.

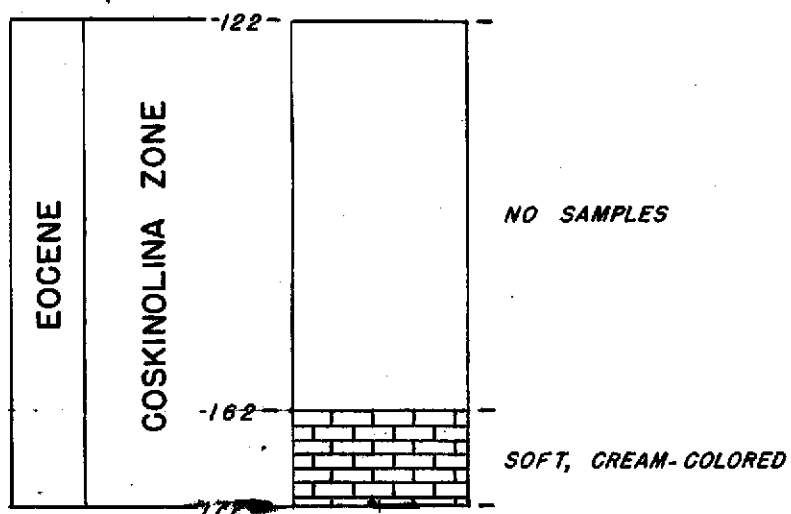
85-90'	Darker-colored limestone	Lituola sp. (?) Gaudryina sp. Textularia sp.
90-95'	Harder cream-colored limestone	Coskinolina sp. Quinqueloculina sp. Lituola sp. Textularia sp.
95-105'	Same	Coskinolina sp. " sp. Textularia sp.
105-125'	Same	Lituola sp. Coskinolina sp. Textularia sp.
125-135'	Softer cream-colored limestone	Coskinolina sp. Textularia sp.
135-145'	Harder cream-colored limestone	Coskinolina sp. Textularia sp. Gaudryina sp.
185-195'	Soft cream-colored limestone	Coskinolina sp. Gaudryina sp. Textularia sp.

Eocene: Probably Middle Eocene or a lower Jackson phase.

SIDNEY A. STUBBS



W-356
(Stubbs)



EXPLANATION



Sand



Marl



Limestone

0 20 40



VERTICAL SCALE IN FEET

OWNER :		C. Merriweather - 3½ Mi SE of Sanford
Elevation :		23'
30	35	Grey Clayey Sand and Shell fragments
35	40	Same
40	60	Same
60	70	Same
70	76	Clear quartz Sand with Shell fragments, <u>Elphidium gunteri</u> T. Cosk. 2
76	80	Cream colored granular porous Limestone, <u>Coskinolina</u> A., <u>Lituonella</u> A, <u>Textularia coryensis</u> , <u>Discorinopsis gunteri</u> , <u>Oogonium</u> sp <u>Charopyte</u> , <u>Spirolina coryensis</u> , <u>Reussella</u> fairly Common in this
Elev. 53' Slide		
85	90	Cream colored finely sugery, fairly dense Limestone, no fauna seen
90	95	Cream colored grey porous Limestone: <u>Orbitolinids</u> C. <u>Peronella dalli</u>
95	105	Same
105	125	Same
125	135	Same; Articul. corollines
135	145	Same
185	195	Same TD

W-357

OWNER :		F. Merriweather, 3 Mi E of Sanford
Elevation: 17'		<u>Unwashed</u>
135	140	In <u>Coskinolina</u> Zone, <u>Valvulina</u> , <u>cushmani</u> , <u>Coskinolina</u> C., <u>Lituonella</u>
140	150	Dark cream colored Limestone, same fauna, articulated corallines
150	160	Same
160	165	Same
165	175	Light Khaki Limestone, same fauna
175	185	Same, finely broken
185	195	Same, Fauna AA, <u>peronella dalli</u>

135

17

118'

Hence T Coskinolina Zone not lower than 118'

WATER

W-357
(Applin)

OWNER: Francis Merriweather
COUNTY: Seminole
LOCATION: S/E 1/4 Sec. 28, T19, R31 1640' FEL
TYPE OF WELL: Driven 810' FSL
DRILLER: A. D. Rosier
STARTED: June 28, 1937
COMPLETED: July 1, 1937
DEPTH: 195'
CASING: 133' 10"
ELEVATION: 16.81 - 15.19 ft.

E. R. APPLIN
Consulting Paleontologist

Fort Worth, Texas
2212 Mistletoe Avenue
August 20, 1938

133-140 Cuttings of a cream-colored, porous, highly micro-fossiliferous limestone; common species of micro-fossils present were -

Coskinolina cookei
Lituonella liburnica
Cribobulimina (?) sp.
Gaudryina cf. *atlantica*
Spirolina cf. *cyindrica*
Elphidium (?) sp.
Climacammina (?) sp.
Quinqueloculina cf. *polygona*
Valvulamina cf. *affinis*
Eponides sp.

140-50' Like the preceding.

150-60' Similar to the preceding with the following species common at this depth -

Coskinolina cookei
Gaudryina cf. *atlantica*
Globigerina subcretacea var.
Cribobulimina (?) sp.
Lituonella roberti
Climacammina (?) sp.

Arenobulimina (?) sp.

Elphidium (?) sp.

- 160-165 Cream-colored, soft, chalky, porous, highly micro-fossiliferous limestone, similar to the preceding and carrying a similar fauna with the addition of numerous specimens of -

Peneroplis cf. *proteus*

Spirolina cf. *cylindrica*

Quinqueloculina cf. *polygona*

Bigenerina sp.

Massilina sp.

Triloculina sp.

- 165-170 Like the preceding.

- 175-185 No change.

- 185-195 Similar to the preceding, but extremely finely granular in part; foram fauna still abundant and like the preceding in character; some fragments of Echinoid tests also present.

SUMMARY

All of the samples submitted from the above described well represent the Coskinolina, Lower Upper Eocene horizon.

OWNER : Francis Merriweather
LOCATION : 3 Mi E of Sanford PO
COUNTY : Seminole
ELEVATION : 16.81 above SL
DRILLER : A. D. Rosier
STARTED : 6/28/37
COMPLETED : 7/1/37
DEPTH : 195'
CASING : 133' of 10" (well driven)
YIELD : rises 10' above surface - flowing
HEAD :
QUALITY : Hard, fresh
USE : irrigation
Remarks ; Samples rec. ?

133	140	Soft creamcolored Limestone: Coskinolina sp.
140	150	Slightly harder cream colored Limestone: Coskinolina sp.: Textularia sp.
150	160	Soft cream colored Limestone: Textularia sp: Coskinolina sp.
160	165	Soft cream colored Limestone: Textularia sp. (3 kinds): Coskinolina sp.; Eponides sp.
165	175	Fairly hard cream colored Limestone: Coskinolina sp.: Textularia sp.
175	185	Same: Coskinolina sp: Gaudryina sp: Textularia sp.
185	195	Soft cream colored Limestone: Coskinolina sp.: Textularia sp.

Eocene: Probably Middle Eocene or a lower Jackson
phase

OWNER : W. E. Kirchoff, Jr., 5 Mi SE of Sanford
Elevation ; None

102 105 Grey Sandy Clay - Shell fragments
112 115 Same
T Ocala ?
115 118 Shell fragments and cream colored Limestone,
Amphistegina pinarensis
118 123 All very light tan Limestone: Amphistegina pinarensis C.,
Camerina V R

123 128 Apparently basal Ocala
Nothing diagnostic

OWNER : City of Sanford, Test Well #1
Elevation ; 43'

108 127 Typical Hawthorn
Hence "Base" must be below -84'. More likely this was
deposited in a solution depression formed during pre-
miocene erosion interval

OWNER : City of Sanford, Test Well #2
Elevation ; 63'

70 76' Poorly sorted Sand with impure Limestone and
Phosphorite. Hawthorn

-76
+63

-13'

OWNER : W. E. Kirehoff, Jr.
LOCATION : N $\frac{1}{2}$ Sec. 20 Twp. 20 Rge. 31 2136' FNL 1965' FEL
TYPE OF WELL : Driven
DRILLER : Sanford Machine Company
DATE : Begun 5/19/37; Completed 5/20/37
DEPTH : 128' Casing: 118'
ELEVATION : 26.046r.

(i.c. denotes sample taken from the casing.
The exact depth or thickness of the formations
is impossible to determine.)

80' (i.c.) Fine sand mixed with organic matter (Hardpan)

85' (i.c.) Fine white sand

Pleistocene & Recent

90-95' (i.c.) Sand and shell fragments. No identifiable fossil material.

98-100' (i.c.) Fine sand, few shell fragments

Elphidium incertum
Rotalia sp.

102-105' (i.c.) Sand and shell.

Elphidium gunteri
Rotalia beccari var. parkinsoniana

105-112' (i.c.) No sample.

112-115' (out of casing)
Sandy shell marl

Elphidium fimbriatulum
Elphidium fimbriatulum var. advenus
Elphidium gunteri

115-118' (i.c.) Same

Rotalia beccari var. parkinsoniana

Pliocene

118-123'

Soft, cream-colored limestone

Quinqueloculina sp.
Operculinella wilcoxi

123'

Shell marl and limestone. A cavity
filled with material from above.

123' plus - 128'

Soft white limestone

Nonion advenum

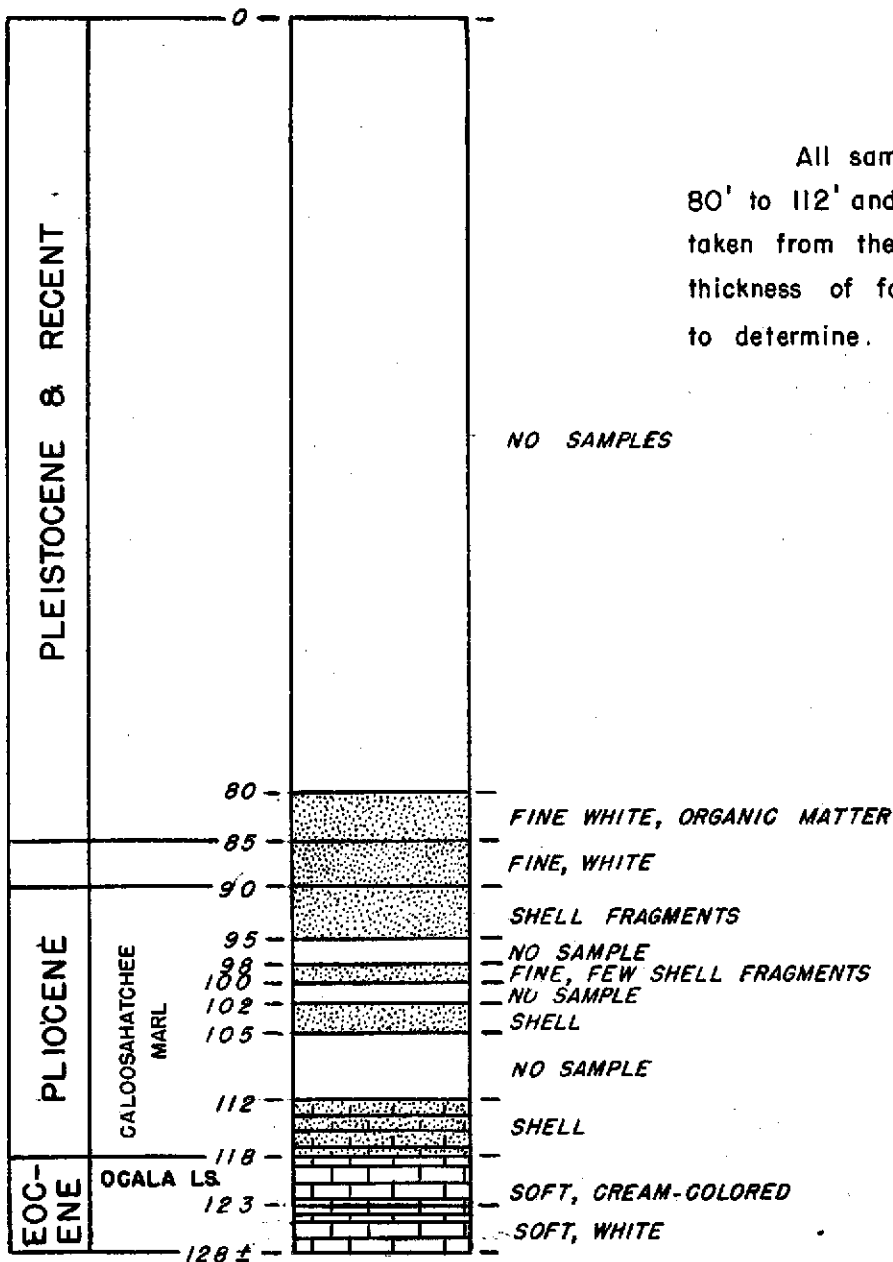
Eocene: Ocala Ls.

SIDNEY A. STUBBS

NOTE

All samples for a depth of 80' to 112' and from 115' to 118' were taken from the casing. Exact depth or thickness of formations is impossible to determine.

NO SAMPLES



EXPLANATION



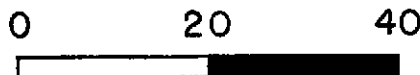
Sand



Marl



Limestone



VERTICAL SCALE IN FEET

WATER

W-360
(Stubbs)

OWNER : City of Sanford
LOCATION : S/E $\frac{1}{4}$ Sec. 2, Twp. 20 - Rge. 30
TYPE OF WELL : Driven
DRILLER : A. Jones
DATE : Begun 8/4/37 Completed: 8/11/37
DEPTH : 127' Casing: 104' 2 "
ELEVATION : 43.34 U. S. C. G. S., B. M.

0-17' Coarse white sand and soil
17-27' Coarse white sand
27-38' Fine white sand.
38-47' Fine white sand with slight amount of yellow clay.
47-54' Fine white sand.

Pleistocene and Recent

54-64' Sandy blue shell marl

Sponge spicule
Phacoides cf. *P. multilineatus* (yo.)
Elphidium gunteri
Elphidium incertum
Elphidium fimbriatulum var. advenum

64-104' Blue shell marl. The material from 64-104' showed no change. Samples were taken at ten foot intervals. It is probably the same as 54-64' but yielded a more prolific fauna.

Ervillea cf. *E. polita* (yo.)
Mulinia contracta
Arca transversa
Mulinia lateralis
Phacoides multilineatus
Leda trochilia ?
Olivella nitidula
Polynices cf. *P. duplicatus* (yo.)
Oliva sayana
Oliva sp.
Grepidula fornicata

Pliocene: Caloosahatchee

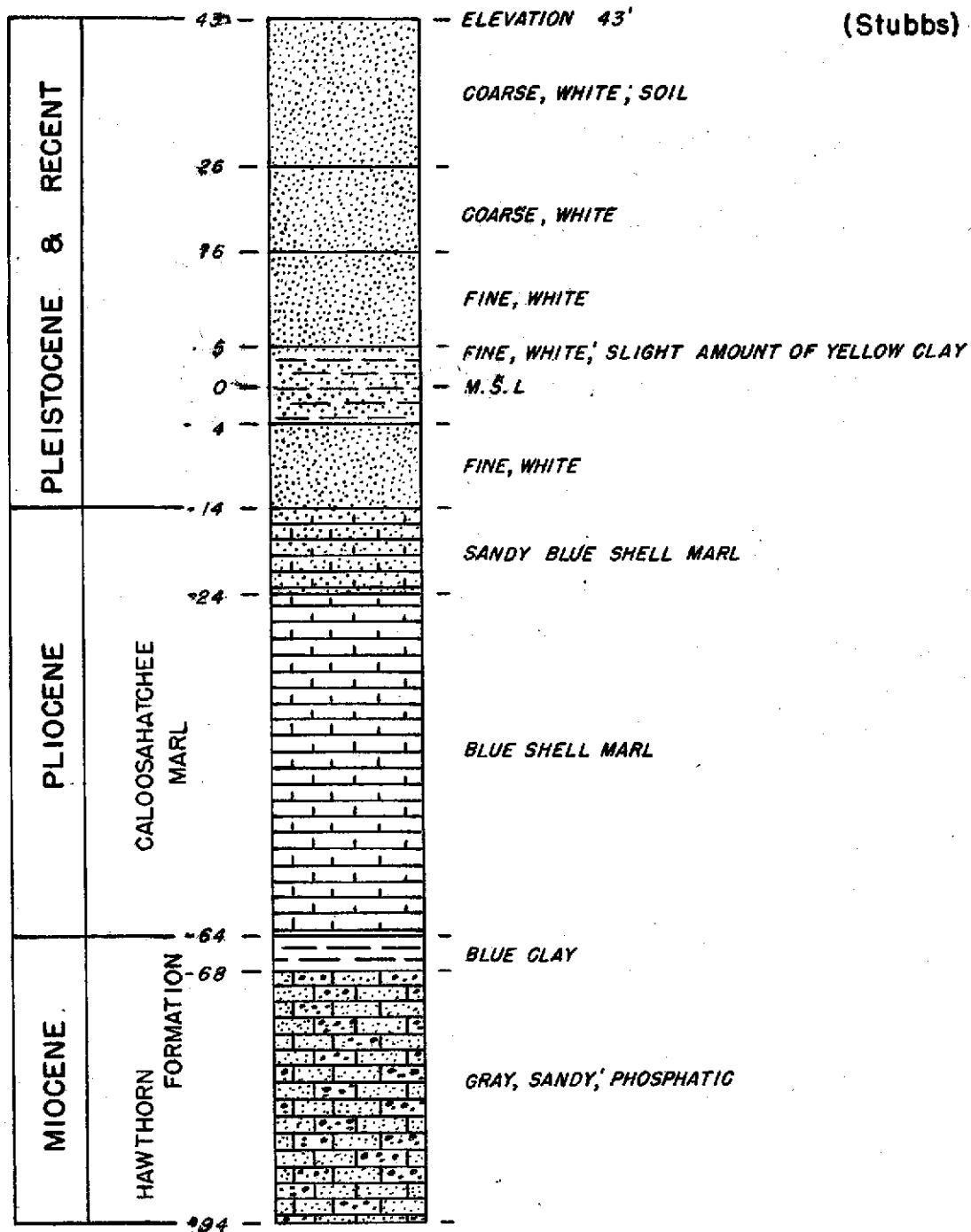
104-108' Blue clay

108-137' Gray sandy limestone, phosphate pebbles and clay
(Material from 108'-127' caving badly.)

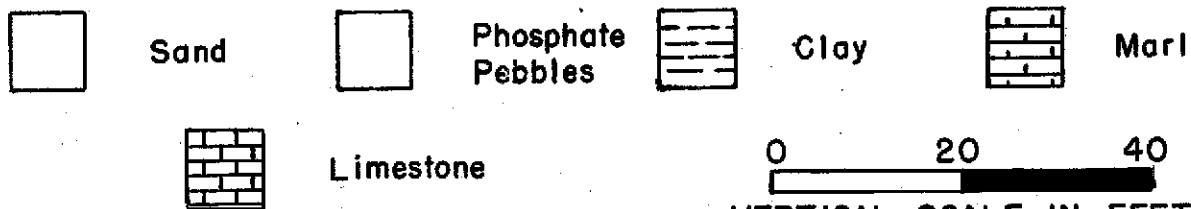
Miocene: Hawthorn

SIDNEY A. STUBBS

W-360
(Stubbs)



EXPLANATION



WATER

W-361
(Stubbs)

OWNER : City of Sanford (Test well No. 2)
LOCATION : At Sanford Country Club. N/W $\frac{1}{4}$ Sec. 4, Twp. 20, R. 30.
TYPE OF WELL : Jet drilled 2260' FNL, 1600' FEL
DRILLER : A. Jones
DATE : Begun: 8/11/37; Completed: 8/16/37
DEPTH : 76' Casing: 68'
ELEVATION : 63' (estimated) 60.26 Gr.

0-33' Fine quartz sand, slight amount of yellowish clay.
33-44' Fine white sand.
44-45' Same as 0'-33'
45-49' Fine white sand.
49-55' Yellowish clay and fine white sand.
55-55 $\frac{1}{2}$ ' Fine sand mixed with blue-grey clay.
55 $\frac{1}{2}$ -63' Fine sand.

Pliocene (?) Pleistocene and Recent

63-68' Sand and shell.

Elphidium gunteri
Amphistegina sp.
Nonion sp.
Eponides sp.
Rotalia beccarii var. parkinsoniana
Textularia sp.
Anomalina sp.

Pliocene: Caloosahatchee

68-69' Gray hard phosphatic limestone.

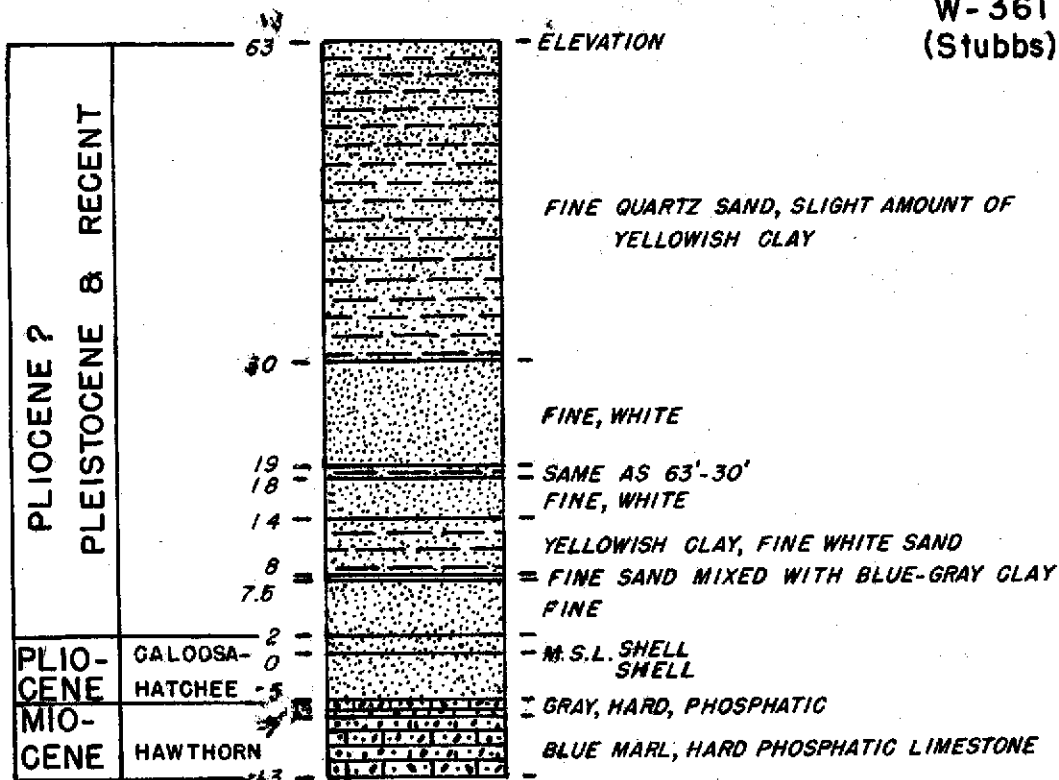
69-70' plus Cavity filled with sand and shell.

70-76' Blue marl and hard phosphatic limestone mixed
with great deal of sand and shell coming from the cavity.

Miocene: Hawthorn

SIDNEY A. STUBBS

W-361
(Stubbs)



EXPLANATION



Sand



Clay



Marl



Phosphate
Pebbles



Limestone



VERTICAL SCALE IN FEET

WATER

W-362

(Stubbs)

OWNER : City of Sanford (Test well No. 3.)
LOCATION : S/E $\frac{1}{4}$ Sec. 3 Twp. 20 R. 30 720' FSL, 1305' FEL
TYPE OF WELL: Jet drilled.
DRILLER : A. Jones
DATE : Begun: 8/16/37; Completed: 8/19/37
DEPTH : 98' Casing: 66' 10"
ELEVATION : 50.80' 49.49' Gr.

0-32' Coarse white sand.
32-34' Same.
34-36' Buff-colored sand, some clay.

Pleistocene and Recent

36-47' Sandy, blue-gray shell marl
Elphidium incertum
Elphidium gunteri
Rotalia beccarii var. parkinsoniana
Elphidium fimbriatulum var. advenum

47-57' Blue-gray shell marl, less sand
Elphidium gunteri
Rotalia beccarii var. parkinsoniana
Elphidium fimbriatulum var. advenum

57-65' Same
Elphidium gunteri
Rotalia beccarii var. parkinsoniana
Elphidium fimbriatulum

Pliocene: Caloosahatchee

65-68' Mixture of limestone and marl

Elphidium gunteri
Quinqueloculina sp.
Amphistegina sp.

Pliocene and Eocene

68-78' Cream-colored limestone

Operculinella willcoxi (?)
Rotalia sp.
Eponides cocoaensis

78-88' Cream-colored limestone

Eponides cocoaensis
Rotalia sp.

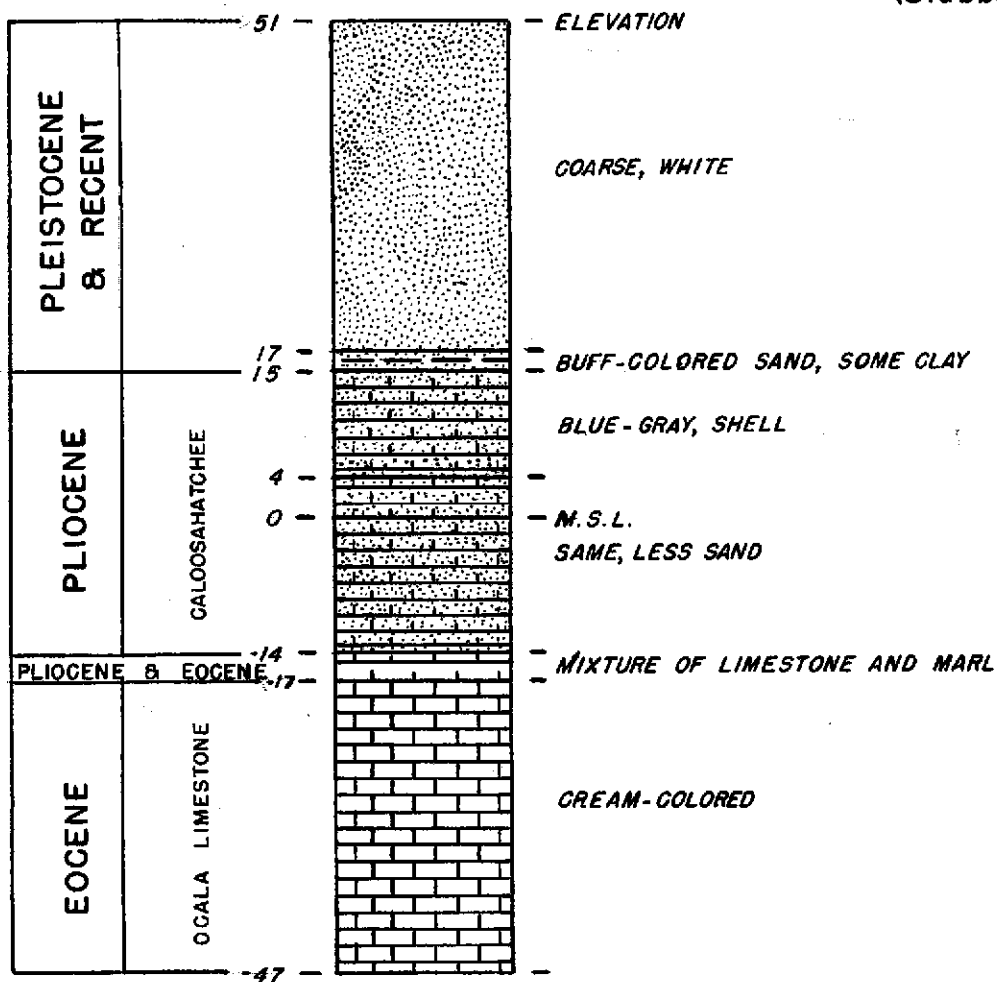
88-98' Cream-colored limestone

Eponides cocoaensis
Rotalia sp.
Robulus sp.

Eocene: Ocala

SIDNEY A. STUBBS

W - 362
(Stubbs)



EXPLANATION



Sand



Clay



Marl



Limestone



VERTICAL SCALE IN FEET

W-362
Seminole County

OWNER : City of Sanford, Test Well #3
Elevation ; 51'

57	65	Sand and Shell fragments with a little Limestone as worn <u>Amphistegina pinarensis</u> and <u>Miliolids</u>

65	68	Light tan Limestone, single <u>Operculinoides</u> , <u>Amphistegina pinarensis</u> , <u>Gypsina globula</u> , <u>Rotalia cushmani</u>
Basal Ocala		
68	78	Cream-light grey granular porous Limestone, <u>Camerinids</u> [C.
78	88	Very light tan Miliolid Limestone, <u>Amphistegina pinarensis</u> , (<u>Discorinopsis gunteri</u> ?) , <u>Reussella</u> , <u>Nonion</u> Sp. NO <u>Camerinids</u> .
88	98	Same: Few <u>Camerinas</u> but maybe from above, <u>Echinoid</u> fragments
NOTHING CONCLUSIVE		

-65

+51

-14

T. Ocala

W-363
Seminole County

OWNER : City of Sanford, Test Well #4
Elevation ; 48'

81	83	Grey Clayey Sand and Shell fragments
83	85	Mostly coarsly crystalline "brown sugary Dolomite": Some impure phosphatic Limestone-----Hawthorn
85	89	Cream colored Ocala: <u>Lepidocyclina Ocalana</u> , C. <u>Heterostegina</u> C., <u>Operculinoides</u> C.
89	95	Same ----Fauna AA
95	100	Same
100	105	Same _____ <u>Pseudophragmina</u> sp.

-85

+48

-37

T. Ocala

W-364
Seminole Co.

OWNER : County School Board --Midway ---E. of Sanford
Elevation ; 26'

Last Sample in typical Hawthorn, "Sink Hole Fill"---Hence Hawthorn to 90'

WATER

W-363
(Stubbs)

OWNER : City of Sanford (City Test Well No. 4.)
LOCATION : S/W $\frac{1}{2}$ Sec. 2. Twp. 20 Rge. 30.
TYPE OF WELL : Jet drilled.
DRILLER : A. Jones
DATE : Begun: 8/20/37 Completed: 8/24/37
DEPTH : 105' Casing: 83'
ELEVATION : 48.37'

(i.c.) denotes sample taken from the casing.
The exact depth or thickness of the formations
is impossible to determine.)

66-67' (i.c.) Sand and organic matter.
67-73' (i.c.) Fine quartz sand.
73-78' (i.c.) Same.
78-81' (i.c.) Same.

Pleistocene and Recent

81-83' (i.c.) Sandy shell marl

Discorbis consobrina (?)
Nonion pizarrensis (?)
Elphidium gunteri

Pliocene: Caloosahatchee

83-85' Buff-colored, hard, sandy limestone, phosphorite pebbles

Elphidium sp.
Eponides mansfieldi (?)
Nonion sp.

Miocene: Hawthorn

WATER

W-363
(Stubbs)

85-89'

Fairly hard white limestone

Quinqueloculina sp.
Gypsina globula
Uvigerina sp.
Operculinella willcoxi
Eponides cocoaensis
Lepidocyclina sp.
Operculina ocalana

89-95'

Fairly hard white limestone

Gypsina globula
Operculinella willcoxi
Rhabdammina sp. (?)
Bulimina sp.
Lepidocyclina sp.

95-100'

Same

Lepidocyclina sp.
Operculinella willcoxi
Gypsina globula

100-105'

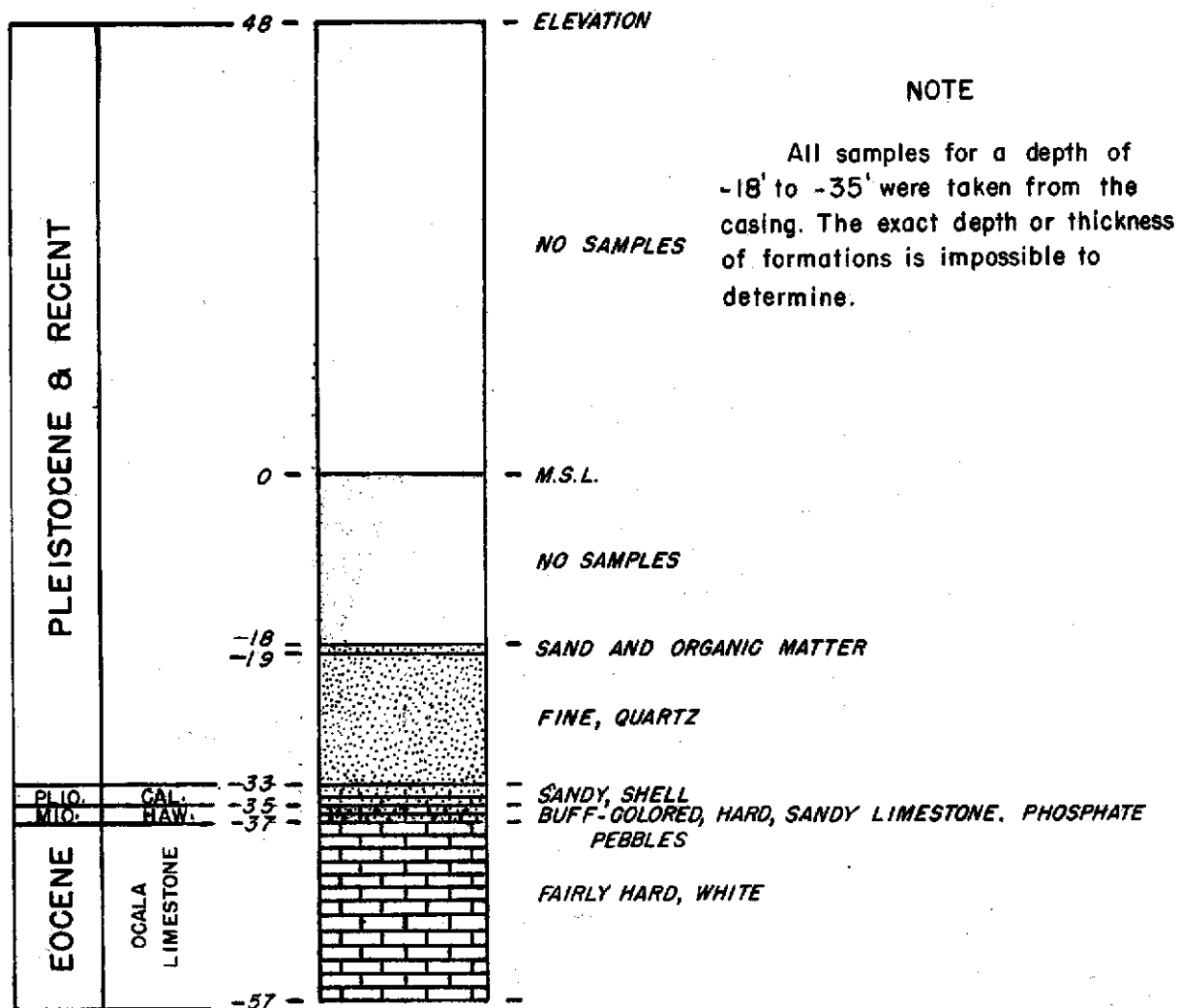
Same

Gypsina globula
Quinqueloculina sp.
Nonion sp.
Operculina sp.
Lepidocyclina fragilis
Lepidocyclina sp.

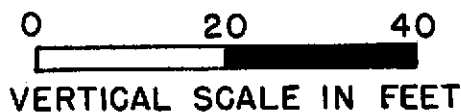
Eocene: Ocala

SIDNEY A. STUBBS

W-363
(Stubbs)



EXPLANATION



OWNER : Seminole County School Board.

LOCATION : At Midway, East of Sanford.
S/W $\frac{1}{4}$ Sec., 33 Twp. 19 Rge. 31.

TYPE OF WELL : Jet drilled.

DRILLER : Howard Long

DATE : Begun: 8/19/37; Completed: 8/21/37

DEPTH : 116' Casing: 111' 3"

ELEVATION : 26.48' 25.49 ft.

(i.c.) Denotes sample taken from the casing. The exact depth or thickness of the formations is impossible to determine.

42' (i.c.) Coarse white sand, some organic matter.

Pleistocene and Recent

47' (i.c.) Fine sand and shell fragments

Rotalia beccarii var. *parkinsoniana*
Elphidium fimbriatulum var. *advenum*
Elphidium gunteri

52' (i.c.) Blue gray shell marl

Elphidium gunteri
Elphidium fimbriatulum

57' (out of casing) Blue gray shell marl

Elphidium gunteri
Elphidium Sp.
Nonion sp.
Rotalia sp.

63' (out of casing) Same

Rotalia beccarii var. *Parkinsoniana*

WATER

W-364
(Stubbs)

78' (i.c.) Sand and shell. No identifiable fossil material.
Numerous shell fragments.

84' (out of casing) Blue-gray shell marl, sand

Elphidium gunteri
Elphidium fimbriatulum var. *advenum*
Elphidium fimbriatulum

90' (i.c.) Blue-gray shell marl, sand

Elphidium gunteri
Rotalia cf. *R. caloosahatcheensis*
Rotalia beccarii var. *parkinsoniana*

95' (i.c.) Same,

Elphidium gunteri
Elphidium fimbriatulum

Pliocene: Caloosahatchee

101' (out of casing) Sandy, phosphatic limestone and marl.

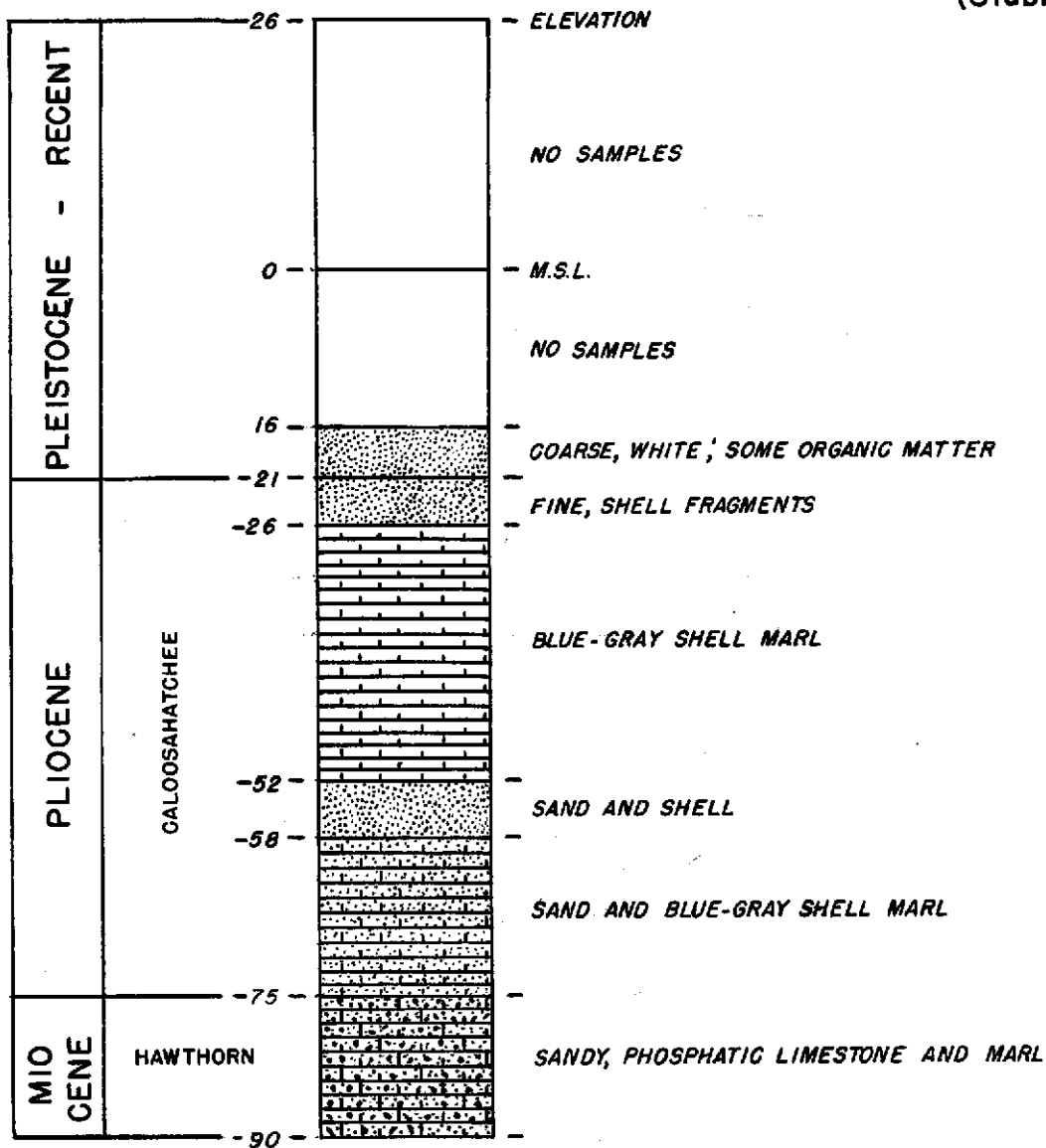
104' Same

111' Same

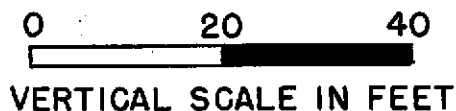
116' Same

Miocene: Hawthorn

SIDNEY A. STUBBS



EXPLANATION



NOTE

All samples for depths of 16' to -31', -52' to -58' and -64' to -75' were taken from the casing. Exact depth or thickness of formations is impossible to determine.

OWNER: City of Sanford -City Test Well
No. 5.
LOCATION: SW $\frac{1}{4}$ Sec. 2 T. 20, R. 30.- at
Reservoir Lake 280' FNL
COUNTY: Seminole 2060' FEL
STARTED: 9/22/37
COMPLETED: 9/24/37
TOTAL DEPTH: 128'
CASING RECORD: 98' of 2"
ELEVATION: 45' (Estimated)
DRILLER: A. Jones
TYPE: Drilled
REMARKS:

0- 22 Fine white sand, organic matter, hardpan.
22- 34 Coarse white sand.
34- 42 Coarse white sand and blue clay.
42- 58 Fine white sand.

Pleistocene-Recent

58- 68 Blue-gray marl, few shell fragments
Elphidium gunteri
Elphidium incertum
Elphidium poeyanum
Elphidium sagrum
Discorbis gladysae
Rotalia beccarii var. parkinsoniana
Nonion sp.
68- 75 Shell marl
Elphidium gunteri
Elphidium poeyanum
Lagena clavata
Discorbis gladysae
Rotalia beccarii var. parkinsoniana
Rotalia beccarii var. tepida
75- 80 Shell marl
Elphidium poeyanum
Elphidium gunteri
Discorbis floridana
Rotalia beccarii var. parkinsoniana

Rotalia beccarii var. ornata
 Rotalia beccarii var. tepida
 Nonion grateloup
 Anomalina basiloba
 Lagena clavata
 Angulogerina occidentalis

80- 86 Shell marl

Elphidium gunteri
 Anomalina-basiloba
 Discorbis gladysae
 Globigerina triloba
 Elphidium sagrum
 Elphidium poeyanum
 Nonion grateloup

Pliocene-Calcoosahatchee

86- 92 Sandy shell marl

Elphidium gunteri
 Elphidium sagrum
 Rhabdammina sp.
 Discorbis floridana
 Gaudryina sp.
 Cancris sagra
 Lepidocyclina sp.
 Cibicides lobatulus
 Rotalia sp.
 Textularia ocalana?
 Rotalia beccarii var. ornata
 Quinqueloculina sp.

Pliocene-Eocene

92-100 Very soft cream-colored limestone

Eponides jacksonensis
 Rotalia sp.
 Lepidocyclina sp.
 Quinqueloculina sp.
 Globulina sp.
 Nonion advenum
 Textularia ocalana
 Elphidium sp.

100-111 Same.

Gypsina globula
 Lepidocyclina sp.
 Nonion advenum
 Rotalia sp.
 Globulina sp.
 Globulina gibba
 Eponides cocoaensis

111-114 Harder cream-colored limestone
Quinqueloculina sp.
Discorbis sp.
Elphidium sp.
Eponides sp.
Rotalia sp.
Reussella sp.

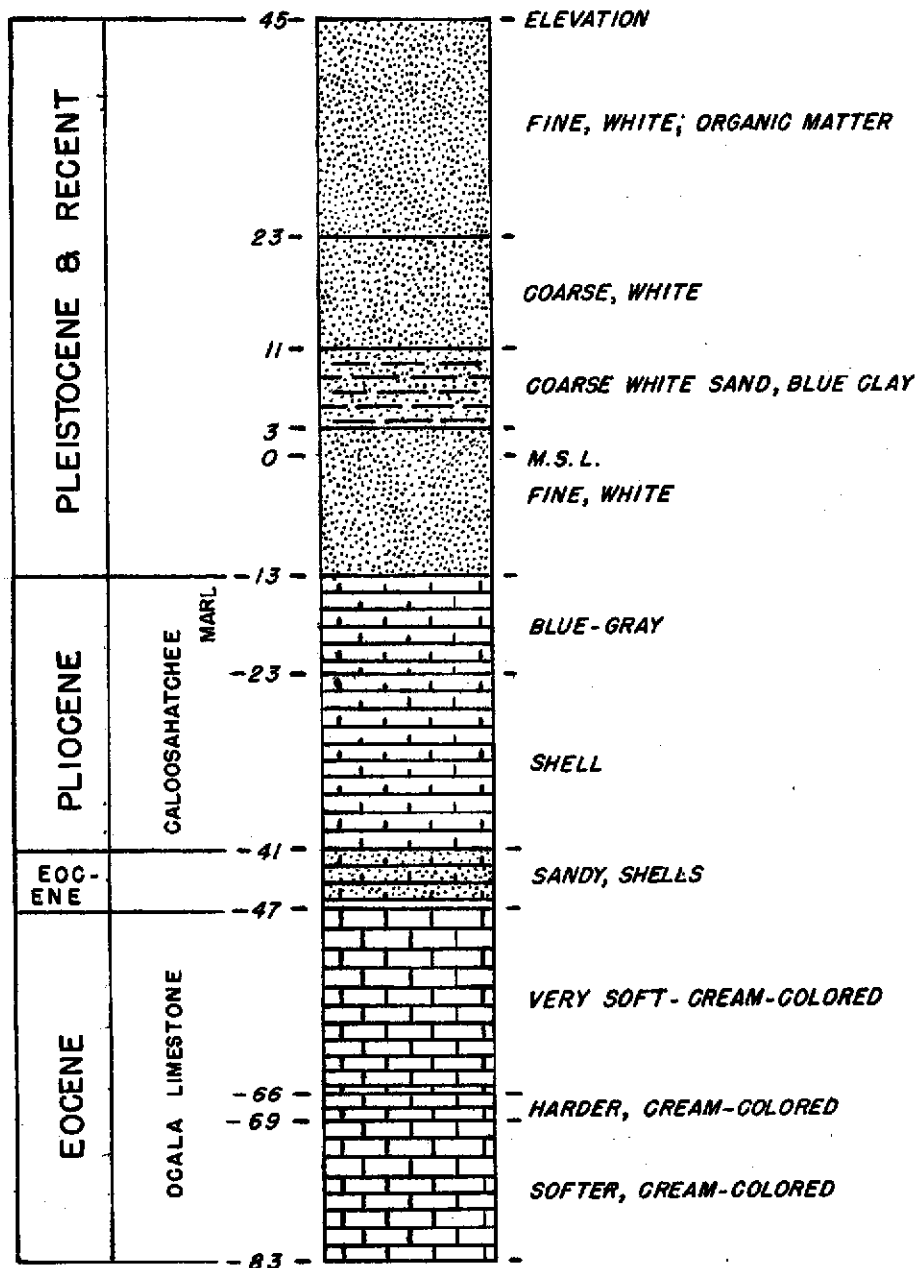
Note: The samples from 92 to 114 feet contain
a contamination of Pliocene foraminifera.

114-120 Softer cream-colored limestone.
Gypsina globula
Rotalia sp.
Operculina ocalana
Lepidocyclina sp.
Reussella sp.
Quinqueloculina sp.
Miliola sp.
Eponides sp.
Nonion sp.
Nonion advenum

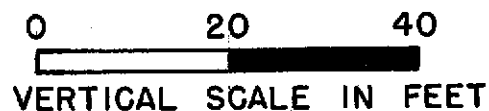
120-128 Same.
Textularia ocalana
Rotalia sp.
Reussella sp.
Nonion advenum
Quinqueloculina sp.
Globulina gibba
Gypsina globula

Eocene-Ocala

W-365
(Stubbs)



EXPLANATION



OWNER :	City of Sanford, Test Well #5, 3 Mi S of Sanford	
Elevation ;	45'	
80	86	Grey Clayey Sand, Shell fragments
86	-92	Same
92	100	Sand and Shell fragments with cream colored Miliolid Limestone: <u>Amphistegina pinarensis</u>
100	111	Very light tan Limestone: Miliolidae A, Nothing diagnostic
111	114	Same with much Sand
114	120	Same - Nothing Ocala
120	128	Same
-92		
+45		
-47	T. of Amphistegina Zone	

OWNER :	City of Sanford, Test Well #6, Cor. 18th & French Sts.	
Elevation ;	51'-----UNWASHED	[Sanford, Fla.]
0	23	Surface Sand
23	30	Angular, medium fine, quartz Sand, Shell fragments
30	37	Same; Shells more abundant
37	47	Grey Clay and Shell fragments
47	52	Very light grey Clay and Shell fragments
52	56	Grey Clay and white chalky material, Shell Fragments A.
56	68	Shells and little grey Clay
68	73	Shells and little Sand
73	78	Shell fragments and little Sand
78	88	Only Shell fragments, T black Phosphorite, no forams
88	93	Entirely Shell fragments with <u>Lituonella</u> , <u>Coskinolina</u> fairly common. Probably reworked in base of Duplin(?)
93	98	Cream colored, very light tan, granular Limestone and <u>Coskinolina</u> , <u>Lituonella</u> , <u>Spirolina</u> abundant and abundant small molluscs, probably Miocene-
HENCE	MIOCENE/Middle EOCENE contact at 95' or Elev. of -45' and No Ocala	
98	103	TD--- Cream colored very porous, granular Limestone, <u>Coskinolina</u>

OWNER: City of Sanford, Test Well No. 6
LOCATION: NE $\frac{1}{4}$ Sec. 36, T19 S. R30E.
Corner of 18th and French St. Sanford
COUNTY: Seminole 1915' FNL, 2500' FEL
TYPE: Drilled
STARTED: 9/27/37
COMPLETED: 9/29/37
DEPTH: 106'
CASING RECORD: 93' of 2"
ELEVATION: 50.76' - 48.37 ft.
REMARKS:

0- 23	Sand and hardpan	
		<u>Pleistocene-Recent</u>
23- 30	Sand and shell	
30- 37	Blue marl, sand and shell	
37- 47	Blue marl and shell	<u>Pleistocene?</u> <u>Pliocene-Calcoosahatchee</u>
	Elphidium poeyanum Elphidium incertum Elphidium sagrum Nonion grateloupi	
47- 52	Blue marl, very little shell	
	Fossil material badly preserved Elphidium gunteri Elphidium poeyanum	
52- 56	Blue marl, some white marl, and shell fragments. Nothing identifiable	
56- 68	Shell marl and sand Elphidium gunteri Elphidium incertum Elphidium discoidale Elphidium poeyanum	

- Discorbis gladysae
Discorbis floridana
Rotalia beccarii var. ornata
Rotalia beccarii var. parkinsoniana
Nonion grateloupi
- 68- 73 Same.
- Rotalia beccarii var. tepida
Discorbis floridana
Discorbis orbicularis
Elphidium poeyanum
Elphidium incertum
- 73- 78 Same.
- Globigerina triloba
Rotalia beccarii var. ornata
Rotalia beccarii var. parkinsoniana
Guttulina sp.
Elphidium poeyanum
Elphidium sagrum
Elphidium gunteri
Discorbis floridana
- 88- 93 Same.
- Discorbis mira
Rotalia beccarii var. ornata
Rotalia beccarii var. parkinsoniana
Elphidium sagrum
Elphidium gunteri
Elphidium poeyanum
Elphidium incertum
Globigerina triloba
Cibicides lobatulus
Textularia floridana
Textularia sp.
Nonion grateloupi
- 93- 98 Sand marl and shell mixed with some limestone.
- Elphidium incertum
Discorbis gladysae
Rotalia beccarii var. parkinsoniana
Cibicides sp.
Quinqueloculina sp.
Triloculina sp.
Textularia sp.

Note: This sample just topped the Eocene

Pliocene-Calcoosahatchee
Eocene-Coskinolina Zone

98-103

Buff-colored limestone

Lituonella sp.?
Lituola sp. (abundant)
Quinqueloculina sp. (three or more different species)
Textularia sp. (Several different species)
Reusella sp. (abundant)
Coskinolina sp. (Plentiful but ill preserved)
Triloculina sp.
Bifarina sp. ?
Massilina sp.
Valvulamina sp. (abundant)
Bulimina sp.
Cribrobulimina sp.

Eocene-Coskinolina Zone

INTER-OFFICE CORRESPONDENCE SHEET
SUN OIL COMPANY

W-366
(Monsour)

Date: May 14, 1940

Subject:

Office: Florida

From: Emil Monsour

To: Dr. F. H. Lahee
Box 2880 Sun Oil Company
Dallas, Texas

Dear Sir:

W-366, City of Sanford, Test Well # 6, Elev. 50.7', NE $\frac{1}{4}$ Sec. 36, T19S, R30E, Cor. 18th and French Streets, Sanford, Seminole County, Florida, topped the Coskinolina Zone in a cutting sample from 88-93'. The sample consisted of a creamy white to gray, fossiliferous, dolomitic limestone and limy dolomite. Coskinolina cookei and Lituonella were noted.

There was no Ocala present.

W-419, W. E. Kirchoff Jr., Elev. 8', NE $\frac{1}{4}$ Sec. 22, T19S, R30E, 1 $\frac{1}{2}$ miles SE of Lake Monroe P. O., Seminole County, Florida topped the Coskinolina Zone in a cuttings from 120-128'. The sample consisted of a creamy white, fossiliferous slightly dolomitic limestone and light yellow, fossiliferous very fine grained dolomite. Coskinolina cookei and Lituonella were noted.

No Ocala present.

W-420, City of Sanford, Fort Mellon Park, Well # 2, NW $\frac{1}{4}$, NW $\frac{1}{4}$ of Sec. 30, T19S, R31E, 2 blocks east of Sanford Post Office., Seminole County, Florida, topped the Coskinolina Zone in a cutting sample from 80-90'. The sample consisted of a creamy to gray fossiliferous, dolomitic limestone and limy dolomite. Coskinolina cookei and Lituonella were noted. No elevation given.

No Ocala present.

W-116, J. L. Quattlebaum $\frac{1}{2}$ mile north of Marietta Post Office, Elevation 59', Sec. 15, T2S, R25E, Duval County, Florida. Determinations are as follows:

510-533 Skip in samples. Driller reported top lime (Ocala) at 510'.

533 In Ocala

619-760 Skip in samples.

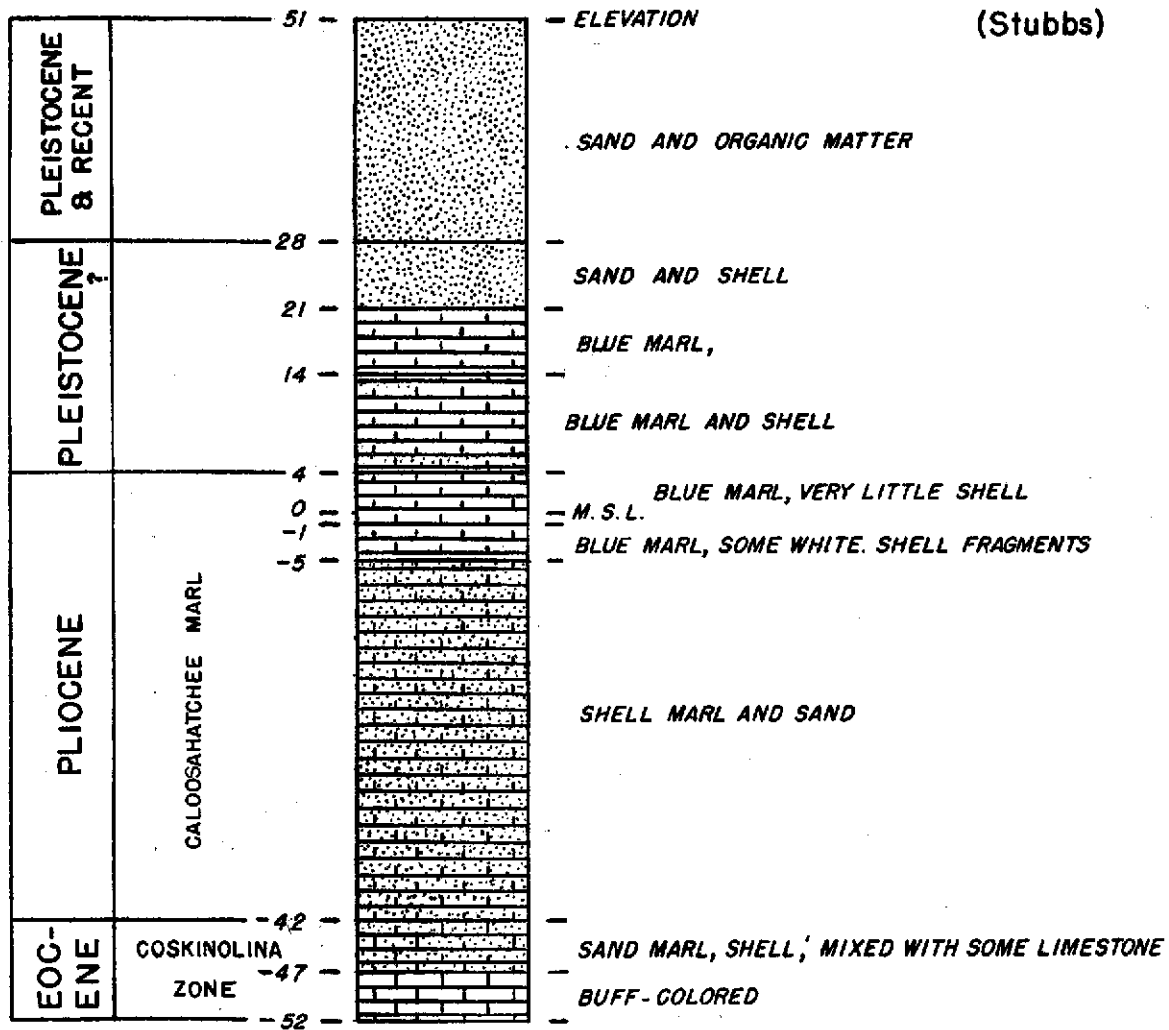
760-800 Top Coskinolina Zone (760'). Light honey brown, fossiliferous, finely crystalline dolomite. Coskinolina cookei, Dictyoconus codon.

Respectfully,

/s/

Emil Monsour

CC-Mr. J. A. Waters



EXPLANATION



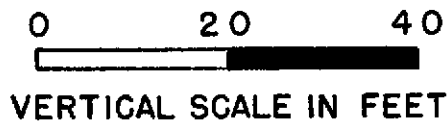
Sand



Marl



Limestone



W-388

WSe-20S-31E-19

S. Stubbs

OWNER : W. A. Fitts
LOCATION : 5 Mi S of Sanford, PO
Sec 19, T 20S, R 31E. 1707' FNL, 2374' FWL
COUNTY : Seminole
ELEVATION : 12' above SL *14.42 Gr.*
DRILLER : Sanford Machine Co.
STARTED : 7/1/37
COMPLETED :
DEPTH : 134'
CASING : 123'8" of 4"
YIELD : flowing; rises $16\frac{1}{4}$ ' above surface
QUALITY : Hard, salty
USE : Irrigation
REMARKS : Samples returned to S. A. Stubbs,
July 24, 1945
No further data

W-388
Seminole County

OWNER : W. A. Fitts: 5 Mi S of Sanford PO
Elevation ; 12'

45 50 Grey, clayey Sand and Shell fragments
55 60 Shell fragments and Sand
65 70 Grey clayey Sand and Shell fragments
-107 Entirely Shell fragments

--- --- ---
114 129 Very light tan Miliolid Limestone: Amphistegina pinarensis,
Few Camerinids

-114

+12

-102 To Ocala --- Not below

W-389
Seminole County

OWNER : A. Duda & Sons: 2 $\frac{1}{2}$ Mi W of Oviedo PO
Elevation ; No elevation

Last Sample in Caloosahatchee

W-413
Seminole County

OWNER : Victor Green: 2 Mi W of Sanford PO
Elevation ; 33'

79 88 Very light tan Miliolid Limestone: Amphistegina pinarensis,
Bolivinella alata, Operculinoides R
Hence: T. Ocala at -46'

W-414
Seminole County

OWNER : Frank Beers, $\frac{1}{2}$ Mi S of Lake Mary PO
Elevation ;

Ends in Hawthorn _____ Simpson

W-389
WSe-21S-31E-17
S. A. Stubbs

OWNER : Andrew Duda & Sons
LOCATION : $2\frac{1}{2}$ Mi W of Oviedo, Florida

COUNTY : Seminole
ELEVATION : 35' above SL
DRILLER : G. M. Arie
STARTED : 7/27/37
COMPLETED : Never completed
DEPTH : 75'
TYPE : Jet drilled- $4\frac{1}{4}$ "
REMARKS : Samples returned to Stubbs; samples
were only useful in a study of the
Caloosahatchee marl of the region

OWNER: Victor Green 190' FSL, 2625' FWL
LOCATION: S W/2 Sec. 27, T19S, R30E. 2 miles
west of Sanford Post Office
COUNTY: Seminole
ELEVATION: 31.50 Grd.
STARTED: June 8, 1937
COMPLETED: June 9, 1937
TOTAL DEPTH: 102'
DRILLER: Howard Long, Sanford, Florida
USE: Irrigation
CASING: 67' 3" of 3"
REMARKS: 10 samples sent in by Sidney Stubbs
June 9, 1939.

		<u>Recent-Pleistocene</u>
0-28	Light gray surface sand with woody and carbonaceous matter.	
28-35	Fine gray sand with very small amount of clay.	
35-44	Fine angular light gray sand.	
		<u>Recent-Pleistocene</u> <u>Pliocene-Caloosahatchee?</u>
44-50	Very fossiliferous blue-gray shell marl many broken and crushed shell fragments.	
55-58	Cream-gray fossiliferous sandy marl.	
58-66	Same.	
69?-79	Cream colored marl very fossiliferous.	
		<u>Pliocene-Caloosahatchee?</u> <u>Eocene-Ocala</u>
79-88	Finely broken cream colored fossiliferous limestone Laganum noted.	
88-98	Same. Operculina noted.	
98-102	Same. <u>Operculina Wilcoxi?</u> <u>Gypsina</u> and <u>Laganum</u> noted.	

W-414
(Simpson)

Stubbs No. S-20

OWNER: Frank Beers 120' FNL, 2481' FEL
LOCATION: NE/4 of Sec. 16, T20S, R30E.
1/2 mile south of Lake Mary
Post Office
COUNTY: Seminole
ELEVATION: 57.47 Grd.
STARTED: June 30, 1937
COMPLETED: July 1, 1937
TOTAL DEPTH: 85'
NO. SAMPLES: 5
CASING: 59'8" of 2"
DRILLER: A. Jones, DeLeon Springs, Florida
USE: Domestic
REMARKS: Sent in by Stubbs, June 9, 1939.

Recent-Pleistocene

40-45 Cream colored fine surface sand.

Pliocene

45-53 Salt and pepper gray fossiliferous sand.

53-59 Same, but lighter in color.

Miocene

60-74 Dark gray sand and small dark phosphate pebbles, and
small fragments of light colored phosphatic limestone.

74-85 Blue gray sand and small black phosphate grains.

OWNER: Chase & Company (Joe Ward Farm)
LOCATION: NE 1/4 Sec. 3, T20S, R31E. 1610' FSL
5 miles E. of Sanford P. O. 1980' FEL
COUNTY: Seminole
STARTED: June 11, 1937
COMPLETED: June 14, 1937
TOTAL DEPTH: 172'
ELEVATION: 15' above sea - 11-46 62.
CASING: 113' of 3"
DRILLER: Howard Long, Sanford, Florida
NO. SAMPLES: 7
REMARKS: Samples sent in by Sidney Stubbs, June 9, 1939.

Recent-Pleistocene

80-85 Very light fine, cream colored sand.
85-90 Hard dark gray clayey hardpan.

Pliocene

90-100 Loose mixture of about 40 % medium sand, and 60% finely broken light colored shell fragments.
105-113 Cream colored, rather soft, limestone and some broken shell fragments.

Eocene-Ocala

113-123 Rather hard cream colored limestone.
138-148 Same, with a few Echinoderm fragments.
170-172 Gray finely broken hard fossiliferous limestone with some fragments of hard blue lime. Laganum fragments noted, also several small corals. Coskinolina abundant.

INTER-OFFICE CORRESPONDENCE SHEET

W-415
(Monsour)

SUN OIL COMPANY

Date: May 15, 1940

Subject:

Office: Florida

From: Emil Monsour

To: Dr. F. H. Lohse
Box 2880 Sun Oil Company
Dallas, Texas

Dear Sir:

W-442, City of Sanford, Ft. Mellon Park Well # 1, Elev. 80'± NW¼, Sec. 30, T19S, R31E, 3 blocks east of Sanford Post Office, Seminole County, Florida, topped the Coskinolina Zone in a cutting sample from 80-90'. The sample consisted of a creamy white to gray, fossiliferous, slightly dolomitic limestone. Coskinolina cooki and Lituonella were noted. This sample appears to have just touched the Coskinolina Zone. Therefore, I will place the top at 88'. No Ocala.

W-415, Chase and Co., Elevation 15', NE¼ Sec. 3, T20S, R31E, 5 miles east of Sanford, Seminole County, Florida, topped the Coskinolina Zone in a cuttings sample from 105-113'. The sample consisted of a creamy white fossiliferous, limestone. Coskinolina cooki and Lituonella were noted. No Ocala.

W-424, H. S. Wiggins, Elev. 31' NE¼ Sec. 28, T19S, R30E, 1½ miles west of Lake Monroe Post Office, Seminole County, Florida, contained Ocala in cuttings samples from 80-150'.

W-425, Brooks, Sec. 6, T18S, R30E, Spring Garden Ranch 1 mile east of DeLeon Post Office, Volusia County, Florida. Determinations are as follows: No elevation (probably about 15').

90-100	Cutting	Probably Caloosahatchee
100-150		Strip in samples

150	Cutting	In Coskinolina Zone. Pale yellow, non-fossiliferous, very finely crystalline dolomite.
-----	---------	--

W-416, Judge S. M. McGregor, Sec. 30, T17S, R30E, 1½ miles south of DeLand Post Office, Volusia County, Florida, topped the Coskinolina Zone in a cutting sample from 50-60'. The sample consisted of a grayish white, fossiliferous, slightly dolomitic limestone. Coskinolina cooki and Lituonella were noted. No Ocala. No Elevation. (Probably about 10').

In W-403, City of Jacksonville Well No. 4, LaRue street between Mira and Cedar Streets, 2½ miles south of Jacksonville P. O., Duval County, Florida, it was reported previously that the top of the Coskinolina Zone came in a cutting sample from 770-780. The sample was labeled - to 770' which would be according to the system of marking, 760-770'. The elevation is 2.7'.

Respectfully,

/s/ Emil Monsour

CC-Mr. J. A. Waters

W-415

Seminole County

OWNER : Chase & Co, (Joe Ward Farm), 5 Mi E of Sanford PO
 Elevation ; 15'

90	100	Sand and Shell fragments, PLIOCENE Cream colored, finely granular, porous Limestone: <u>Textularia coryensis</u> , <u>Lituonella</u> , <u>Coskinolina</u> , Fauna not common This shows that <u>Orbitolinids</u> are not necessarily abundant in upper part of the zone
105	113	
113	123	Light khaki, finely sugary, dolomitic Limestone--- nothing diagnostic
138	148	Very light tan, soft Limestone: <u>Coskinolina</u>
170	172	Light tan- light grey Limestone, <u>Peronella dalli</u> , <u>Cosk-</u> <u>inolina</u> common, <u>Lituonella</u> , <u>Textularia coryensis</u> , Articul corallines <u>Panonina</u> ! sp. , <u>Discorinopsis gunteri</u>

No Ocala

T. Coskinolina Zone at -90'

W-417

Seminole County

OWNER : S. O. Chase, Jr., 1 Mi S of Sanford PO
 Elevation ; None

Hawthorn

128	135	Cream colored , granular Limestone: <u>Camerinas</u> . Sink hole detrital Ocala"
135	140	Very chalky and powdery - more <u>Camerinas</u>
140	145	Partly darker, still Ocala fauna
145	150	Same: finely broken- nothing diagnostic
150	155	Light tan Limestone: <u>Eodictyocomus arbensis</u> , <u>Valvulina</u> <u>floridana</u> , <u>Textularia coryensis</u> , <u>Coskinolina floridana</u> , <u>Nonion</u> #5, <u>Panonina</u> sp.

W-426

Seminole County

OWNER : E. T. Hinkle: 2 Mi E of Longwood, Fla. PO
 Elevation ; Elevation 69'

Last sample at 92' is in typical Hawthorn, hence Ocala below -23'

Stubbs No. S-23

W-417
(Simpson)
USGS-93

OWNER: S. O. Chase, Jr.
LOCATION: 555' from S line, 2370' from
W line, Sec. 31, T19S, R31E.
1 mile south of Post Office.
COUNTY: Seminole
ELEVATION: 50.17 Grd.
DRILLER: Sanford Machine Company,
Sanford, Florida
STARTED: July 12, 1937
COMPLETED: July 14, 1937
DEPTH: 168' ?
CASING: 130' ? of 3"
HEAD:
YIELD:
USE:
DRAWDOWN:
QUALITY:
NO. SAMPLES: 12
REMARKS: Samples sent in by S. A. Stubbs,
June 9, 1939, 65-155'.

		<u>Pleistocene</u>
65-68	Fine white sand.	
68-71	Fine gray sand with a few very small fragments of light colored shell.	
		<u>Pliocene</u>
71-74	Blue gray sandy shell marl.	
74-81	Fine sharp light gray sand with fragments of finely broken light colored shell.	
100-115	Gray sand with many broken fragments of light colored shell.	
115-128	Same, but less sand and more broken shell.	
		<u>Miocene ?</u>
128-135	Gray sand and shell fragments with small black phosphate pebbles and many minute specks of dark phosphate. Sample appears to be badly mixed with upper material.	

Ocala-Eocene

- | | |
|---------|--|
| 128-135 | Cream colored granular limestone. <u>Operculina</u> noted. |
| 135-140 | Same, less fossiliferous. |
| 140-145 | Same. <u>Gypsina</u> common. |
| 145-150 | Same. |
| 150-155 | Same. <u>Coskinolina</u> noted. |

OWNER: W. E. Kirchoff, Jr. ^{1550' FSL} 1890' FEL
LOCATION: NE 1/4 Sec. 22, T19S, R30E.
1 1/2 miles S/E of Lake Munroe
P. O.
COUNTY: Seminole
STARTED: June 25, 1937
COMPLETED: June 29, 1937
TOTAL DEPTH: 148'
DRILLER: A. D. Rosier, Sanford, Florida
ELEVATION: 7.87'
USE: Irrigation
CASING: 135' of 3"
NO. SAMPLES: 16
REMARKS: Samples sent in by Sidney
Stubbs, June 9, 1939.

Pleistocene

35-42 Fine white sand.
45-50 Fine cream colored sand.
50-55 Fine white sand.

Pliocene

55-60 Olive green clayey sand.
60-65 Fine white sand with some fine Mica.
65-75 Light cream colored sand with fine mica flakes more abundant.
85-90 Mixture of very fine salt and pepper gray sand and very finely broken shell.
90-95 Black carbonaceous clay with broken shell fragments.
95-100 Finely broken gray shell and sand.
100-105 Blue gray shell marl.
105-110 Cream colored broken shell very little sand.

115-120 Fine gray sand and finely broken shell.

Miocene ?

120-128 Cream colored phosphatic finely crushed limestone with a small gastropod fossil abundant.

Eocene

128-135 Cream colored finely broken limestone. Coskinolina noted.

135-140 Cream-gray finely ground limestone. Coskinolina abundant.

140-145 Cream colored medium soft limestone.

INTER-OFFICE CORRESPONDENCE SHEET
SUN OIL COMPANY

W-419
(Monsieur)

Subject:

Date: May 14, 1940

From: Mail Monsieur

Office: Florida

To: Dr. F. H. Lahee
Box 2880 Sun Oil Company
Dallas, Texas

Dear Sir:

W-366, City of Sanford, Test Well # 8, Elev. 50.7', NE $\frac{1}{4}$ Sec. 36, T19S, R30E. Cor 18th and French Streets, Sanford, Seminole County, Florida, topped the Coskinolina Zone in a cutting sample from 88-93'. The sample consisted of a creamy white to gray, fossiliferous, dolomitic limestone and limy dolomite. Coskinolina cockei and Lituonella were noted.

There was no Ocala present.

W-419, W. R. Kirehoff Jr., Elev. 8', NE $\frac{1}{4}$ Sec. 22, T19S, R30E, 1 $\frac{1}{2}$ miles SW of Lake Monroe P. O., Seminole County, Florida topped the Coskinolina Zone in a cuttings from 120-128'. The sample consisted of a creamy white, fossiliferous slightly dolomitic limestone and light yellow, fossiliferous very fine grained dolomite. Coskinolina cockei and Lituonella were noted.

No Ocala present.

W-420, City of Sanford, Port Mellon Park, Well # 2, NW $\frac{1}{4}$, NW $\frac{1}{4}$ of Sec. 30, T19S, R31E, 2 blocks east of Sanford Post Office., Seminole County, Florida, topped the Coskinolina Zone in a cutting sample from 80-90'. The sample consisted of a creamy to gray fossiliferous, dolomitic limestone and limy dolomite. Coskinolina cockei and Lituonella were noted. No elevation given.

No Ocala present.

W-116, J. L. Quattlebaum $\frac{1}{2}$ mile north of Marietta Post Office, Elevation 59', Sec. 15, T23, R25E, Duval County, Florida. Determinations are as follows:

510-533 Skip in samples. Driller reported top line (Ocala) at 510'.

533 In Ocala

619-760 Skip in samples.

760-800 Top Coskinolina Zone (760'). Light honey brown, fossiliferous, finely crystalline dolomite. Coskinolina cockei, Dietyecinus oodon.

Respectfully,

/s/

Mail Monsieur

CC-Mr. J. A. Waters

INTER-OFFICE CORRESPONDENCE SHEET
SUN OIL COMPANY

W-420
(Monsour)

Subject:

Date: May 14, 1940

From: Emil Monsour

Office: Florida

To: Dr. F. H. Lakes
Box 2880 Sun Oil Company
Dallas, Texas

Dear Sir:

W-366, City of Sanford, Test Well # 6, Elev. 50.7', NE $\frac{1}{4}$ Sec. 36, T19S, R30E. Cor. 18th and French Streets, Sanford, Seminole County, Florida, topped the Coskinolina Zone in a cutting sample from 88-93'. The sample consisted of a creamy white to gray, fossiliferous, dolomitic limestone and limy dolomite. Coskinolina cooki and Lituonella were noted.

There was no Ocala present.

W-419, W. E. Kirchoff Jr., Elev. 8', NE $\frac{1}{4}$ Sec. 22, T19S, R30E, $1\frac{1}{2}$ miles SE of Lake Monroe P. O., Seminole County, Florida topped the Coskinolina Zone in a cuttings from 120-128'. The sample consisted of a creamy white, fossiliferous slightly dolomitic limestone and light yellow, fossiliferous very fine grained dolomite. Coskinolina cooki and Lituonella were noted.

No Ocala present.

W-420, City of Sanford, Fort Mellon Park, Well # 2, NW $\frac{1}{4}$, NW $\frac{1}{4}$ of Sec. 30, T19S, R30E, 2 blocks east of Sanford Post Office., Seminole County, Florida, topped the Coskinolina Zone in a cutting sample from 80-90'. The sample consisted of a creamy to gray fossiliferous, dolomitic limestone and limy dolomite. Coskinolina cooki and Lituonella were noted. No elevation given.

No Ocala present.

W-116, J. L. Quattlebaum $\frac{1}{2}$ mile north of Marietta Post Office, Elevation 59', Sec. 15, T2S, R25E, Duval County, Florida. Determinations are as follows:

510-533 Skip in samples. Driller reported top line (Ocala) at 510'.

533 In Ocala

619-760 Skip in samples.

760-800 Top Coskinolina Zone (760'). Light honey brown, fossiliferous, finely crystalline dolomite. Coskinolina cooki, Dictyoconus codon.

Respectfully,

/s/

Emil Monsour

CC-Mr. J. A. Waters

Stubbs No. S-37

W-420
(Simpson)

OWNER: City of Sanford, Ft. Mellon
Park Well No. 2.
LOCATION: NW 1/4 of NW 1/4 Sec. 30, ^{1290' FNL}
T19S, R31E. 2 blocks E. of ^{1025' FNL}
Sanford P. O.
COUNTY: Seminole
STARTED: July 19, 1938
COMPLETED: July 20, 1938
TOTAL DEPTH: 175'
CASING: 93' of 3"
DRILLER: A. D. Rosier, Sanford, Florida
NO. SAMPLES: 18
USE: Irrigation
REMARKS: Samples sent in by Sidney Stubbs,
June 9, 1939.
ELEVATION: 8.13 Grd.

Recent-Pleistocene

10	Dark gray medium sand.
10-20	Same.
20-30	Fine gray sand.
30-40	Same.
40-50	Fine gray sand same as preceding sample except some small mica flakes are present and the sand seems to contain a very small amount of dark clay. Sample may be Pliocene.

Pliocene

50-60	Blue-gray shell marl some fragments of <u>Venus</u> sp. noted. Very fossiliferous.
60-70	Same but more finely broken shells of smaller species.
70-80	Gray sand and broken shell with some dark extraneous matter.

Miocene ?

80-90	Blue-gray phosphatic marl some shell fragments.
-------	---

90-100 Finely broken gray and white phosphatic limestone, some internal casts of fossils noted.

Ocala-Eocene

100-110 Cream, finely broken limestone. Coskinolina abundant.

110-120 Same but Coskinolina not so abundant.

120-130 Same. Slightly darker Coskinolina predominating.

130-140 Cream-gray finely broken limestone. Coskinolina abundant.

140-150 Cream-gray finely broken limestone. Coskinolina not so abundant.

150-160 Light cream finely broken limestone fewer fossils Coskinolina.

160-170 Light cream finely broken limestone. Coskinolina noted.

170-174 Cream-gray finely broken limestone. Coskinolina abundant.

INTER-OFFICE CORRESPONDENCE SHEET

W-424
(Monsour)

SUN OIL COMPANY

Date: May 18, 1940

Subject:

Office: Florida

From: Emil Monsour

To: Dr. F. H. Lahee
Box 2880 Sun Oil Company
Dallas, Texas

Dear Sir:

W-442, City of Sanford, Ft. Mellon Park Well # 1, Elev. 20' NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 30, T19S, R31E, 3 blocks east of Sanford Post Office, Seminole County, Florida, topped the Coskinolina Zone in a cutting sample from 80-90'. The sample consisted of a creamy white to gray, fossiliferous, slightly dolomitic limestone. Coskinolina cooki and Lituonella were noted. This sample appears to have just touched the Coskinolina Zone. Therefore, I will place the top at 88'. No Ocala.

W-415, Chase and Co., Elevation 15', NE $\frac{1}{4}$ Sec. 3, T20S, R31E, 5 miles east of Sanford, Seminole County, Florida, topped the Coskinolina Zone in a cuttings sample from 105-113'. The sample consisted of a creamy white fossiliferous, limestone. Coskinolina cooki and Lituonella were noted. No Ocala.

W-424, M. S. Wiggins, Elev. 31' NE $\frac{1}{4}$ Sec. 28, T19S, R30E, 1 $\frac{1}{2}$ miles west of Lake Monroe Post Office, Seminole County, Florida, contained Ocala in cuttings samples from 80-150'. 2545' FNL, 1980' FEL elev = 30.156.

W-425, Brooks, Sec. 6, T16S, R30E, Spring Garden Ranch, 1 mile east of DeLeon Post Office, Volusia County, Florida. Determinations are as follows: No elevation (probably about 15').

90-100	Cutting	Probably Caloosahatchee
100-150		Skip in samples

150	Cutting	In Coskinolina Zone. Pale yellow, non-fossiliferous, very finely crystalline dolomite.
-----	---------	--

W-416, Judge S. M. McGregor, Sec. 30, T17S, R30E, 1 $\frac{1}{2}$ miles south of DeLand Post Office, Volusia County, Florida, topped the Coskinolina Zone in a cutting sample from 50-60'. The sample consisted of a grayish white, fossiliferous, slightly dolomitic limestone. Coskinolina cooki and Lituonella were noted. No Ocala. No Elevation. (Probably about 10').

In W-403, City of Jacksonville Well No. 4, LaRue street between Mira and Cedar Streets, 2 $\frac{1}{2}$ miles south of Jacksonville P. O., Duval County, Florida, it was reported previously that the top of the Coskinolina Zone came in a cutting sample from 770-780. The sample was labeled - to 770' which would be according to the system of marking, 760-770'. The elevation is 2.7'.

Respectfully,

/s/ Emil Monsour

CC-Mr. J. A. Waters

W-426
WSe-21S-30E-4a
S. A. Stubbs

Sec 4, T21S, R30E ←
1580' FWL, 1700' FWL
SL 69.12 61

OWNER	:	E. T. Hinkle
LOCATION	:	2 Mi E of Longwood, Fla. PO
COUNTY	:	Seminole
ELEVATION	:	69.41' above SL
DRILLER	:	A. Jones
STARTED	:	6/16/37
COMPLETED	:	6/17/37
DEPTH	:	95'
CASING	:	59' of 2"
QUALITY	:	Fresh, soft
USE	:	Domestic
REMARKS	:	Samples returned to S. A. Stubbs, July 24 1946

W-430
WSe-20S-31E-4d
S. A. Stubbs

OWNER : W. L. Henley
LOCATION : $e\frac{1}{2}$ Mi SE of Sanford PO
Sec 4, T20S, R31E. 330' E5L, 990' FEZ
COUNTY : Seminole
ELEVATION : 16.95 Gr
DRILLER : A. D. Rosier
DEPTH : 168'
CASING :
STARTED : 11/3/37
COMPLETED : 11/5/37
YIELD : Flowing - just flows
QUALITY : Hard, brackish
USE : Irrigation
SAMPLES : Returned to S. A. STUBBS, 7/24/46
no further data

W-433
WSe-19S-30E-28b
S. A. Stubbs

Sec 29, T19S, R30E
330' FNL, 310' FEL
Area = 22.50 67.

OWNER	:	J. J. Bolly
← LOCATION	:	1 Mi SE of Lake Monroe PO
COUNTY	:	Seminole
ELEVATION	:	23.25' above SL
DRILLER	:	A. D. Rosier
STARTED	:	7/22/37
COMPLETED	:	7/23/37
DEPTH	:	170' jet drilled
CASING	:	125' of 3"
YIELD	:	Flows- rises 6.75'
QUALITY	:	hard, fresh
USE	:	Irrigation
REMARKS	:	Samples ret. to S.A. Stubbs, 7/24/46 no other data

W-430
Seminole County

OWNER :		W. L. Henley: 3½ Mi SE Sanford PO
Elevation ;		None
60	70	Regular Caloosahatchee
70	80	Light tan, granular, porous Limestone: <u>Rotalia cushmani</u> , nothing conclusive
80	90	Cream, porous, granular Limestone: <u>Peronella dalli</u> , <u>Amphistegina pinarensis</u> , <u>gypsina globula</u>
90	100	Very light, tan, granular, porous Limestone: <u>Eodictyoconus arbensis</u>
135	150	Cream, granular, porous Miliolid Limestone: <u>Coskinolina</u> , <u>Spirolina coryensis</u>
150	168	Cream, porous Limestone: <u>Coskinolina</u> abundant

W-433
Seminole County

OWNER :		J. L. Bolly, 1 Mi SE of Lake Monroe PO
Elevation ;		25'
75	80	Sand
80	95	Sand
95	100	Grey, calcitic, phosphatic Sand stone: Shell fragments abundant
110	115	Same
115	120	Grey clayey Sand, Shell fragments
120	125	Same
--- Elv. -100'		
125	130	Light tan, -grey Limestone: Miliolids abundant, <u>Amphistegina pinarensis</u> Nothing conclusive
130	135	Same - <u>Bolivina alata</u>
135	140	Same - Single <u>Lepidocyclina</u>
140	145	Same - few <u>Camerinids</u>
145	150	Nothing conclusive
Elv. -130		
155	160	As below- small forms , <u>Eodictyoconus</u>
160	165	Light grey-light tan Limestone; fauna as below
165	170	Light tan, porous Limestone: <u>Coskinolina</u> common, <u>Eodictyoconus</u> , <u>gypsina globula</u> , <u>Reusella</u> common

W-436-Seminole Co.

OWNER :		? No Elevation
78	88	Sand and Shells, beautiful foram fauna
Cosk. Zone		
100	110	Cream, porous, granular Limestone: <u>Coskinolina</u> , <u>Lituonella</u>
110	118	Very Light tan, granular, porous Limestone: <u>Amphistegina pinarensis</u> , <u>gypsina globula</u> , <u>Eodictyoconus cubensis</u> , "Panonina" sp.

W-439
(R. D. Woods-In Office)
(F. W. Rolshausen)

OWNER: Chase and Company
LOCATION: Blanton Grove near Paola
ELEVATION:
DRILLER:
STARTED:
COMPLETED:
DEPTH:
CASING:
HEAD:
YIELD: DRAWDOWN:
USE: QUALITY:
REMARKS: 10 samples sent in by S. A. Stubbs,
10'-108', June 9, 1939.
(Samples returned to S. A. Stubbs,
July 24, 1945. Well number retained).
COUNTY: Seminole

Houston, Texas
October 3, 1941

28-38 Miocene ?
Gray clay and medium grained sand.

38-108 Hawthorne
Sandy, phosphatic marl and limestone.

Respectfully submitted,

F. W. Rolshausen

W-441
WSe-19S-31E-30
S. A. Stubbs

Sec 29, T19S, R31E
312' E 92, 345' E 42

OWNER : A. B. Mahoney
LOCATION : Sanford, Florida, E of PO
COUNTY : Seminole
ELEVATION : 15.58 62
DRILLER : Howard Long
STARTED : 5/24/37
COMPLETED :
YIELD :
DEPTH : 200'
CASING : 136' (135.6) of 3"
QUALITY :
USE :
REMARKS : Samples ret. to S. A. Stubbs, 7/24/46,
no other data

A.C. (5/24/46)

OWNER :	A. Mahoney: E. of Sanford PO	
Elevation :	None (20-30' elev. ??)	
59	65	Grey clayey Sand, Shell fragments
65	114	Same
		Hawthorn
113	118	Clay and Phosphate nodules
118	121	Mostly black Phosphate
128	130	Same
135	141	Impure grey Limestone and Phosphorite. Typical toothy Hawthorn
143	145	Same
147	150	Coarsely crystalline, brown, sugary Dolomite and 20% grey, sandy Dolomite. These are interbedded, hence "brown, sugary" is Hawthorn
150	155	Same
		Ocala Fauna
155	160	Cream colored, chalky Limestone, <u>Amphistegina pinarensis</u>
		Nothing diagnostic
160	165	Same: Camerinas, <u>Lepidocyclina</u> <u>Ocalana</u>
165	170	Same: This well ends in what appears to be Ocala. Presumably this entered a sink hole, as witnesseth the Hawthorn, the lower part of which contained detrital Ocala. This is supported by the chalky appearance of the Ocala

OWNER :	Experiment Sta: Celery Lab.: Celery Ave next to Ball Park, Sanford	
Elevation ;		
0	40	No samples
PLEISTOCENE		
40	White quartz Sand	
50	Largly Shell fragments, cream, dense Limestone and quartz Sand	
UPPER MIOCENE		
50	60	Shell fragments, quartz Sand, Phosphorite and Upper MIOCENE forams and Ostrocodes
60	65	Same as 50
MIDDLE EOCENE:	Avon Park Limestone	
90, 92, 100, 105-110---183	Abundant light grey, white and tan, porous, soft Coquina of <u>Coskinolina</u> , <u>Dictyoconus</u> , <u>Lituonella</u> , <u>Spirolina</u> , in a chalky matrix	

INTER-OFFICE CORRESPONDENCE SHEET

W-442
(Monsour)

SUN OIL COMPANY

Date: May 15, 1940

Subject:

Office: Florida

From: Emil Monsour

To: Dr. F. H. Lahee
Box 2880 Sun Oil Company
Dallas, Texas

Dear Sir:

1290' FNL, 900' FWL elev = 8.23 Gr.

W-442 City of Sanford, Ft. Mellon Park Well # 1, Elev. 20' + NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 20, T19S, R31E, 3 blocks east of Sanford Post Office, Seminole County, Florida, topped the Coskinolina Zone in a cutting sample from 80-90'. The sample consisted of a creamy white to gray, fossiliferous, slightly dolomitic limestone. Coskinolina cookei and Lituonella were noted. This sample appears to have just touched the Coskinolina Zone. Therefore, I will place the top at 88'. No Ocala.

W-415, Chase and Co., Elevation 15', NE $\frac{1}{4}$ Sec. 3, T20S, R31E, 5 miles east of Sanford, Seminole County, Florida, topped the Coskinolina Zone in a cuttings sample from 105-113'. The sample consisted of a creamy white fossiliferous, limestone. Coskinolina cookei and Lituonella were noted. No Ocala.

W-424, M. S. Wiggins, Elev. 31' NE $\frac{1}{4}$ Sec. 28, T19S, R30E, 1 $\frac{1}{2}$ miles west of Lake Monroe Post Office, Seminole County, Florida, contained Ocala in cuttings samples from 80-150'.

W-423, Brooks, Sec. 6, T16S, R30E, Spring Garden Ranch 1 mile east of DeLeon Post Office, Volusia County, Florida. Determinations are as follows: No elevation) probably about 15').

90-100	Cutting	Probably Caloosahatchee
100-150		Skip in samples

150	Cutting	In Coskinolina Zone. Pale yellow, non-fossiliferous, very finely crystalline dolomite.
-----	---------	--

W-416, Judge S. M. McGregor, Sec. 30, T17S, R30E, 1 $\frac{1}{2}$ miles south of DeLand Post Office, Volusia County, Florida, topped the Coskinolina Zone in a cutting sample from 50-60'. The sample consisted of a grayish white, fossiliferous, slightly dolomitic limestone. Coskinolina cookei and Lituonella were noted. No Ocala. No Elevation. (Probably about 10').

In W-403, City of Jacksonville Well No. 4, LaRue street between Mira and Cedar Streets, 2 $\frac{1}{2}$ miles south of Jacksonville P. O., Duval County, Florida, it was reported previously that the top of the Coskinolina Zone came in a cutting sample from 770-780. The sample was labeled - to 770' which would be according to the system of marking, 760-770'. The elevation is 2.7'.

Respectfully,

/s/ Emil Monsour

CC-Mr. J. A. Waters

OWNER: Belcher Oil Company, Watts &
Sinclair, Inc.
LOCATION: Naval Air Base Sanford. 2 miles
SE of Sanford Post Office NE1/4
Sec. 6, T20S, R31E.
COUNTY: Seminole
ELEVATION:
STARTED:
COMPLETED: June 1942
CASING: 103' of 4"
DEPTH: 136'
DRILLER: Howard Long, Sanford, Florida
HEAD: -26' -10"
YIELD:
REMARKS:

104 Fine, angular, clear quartz sand, and shell fragments with a
small amount of blue-gray marl.

Pliocene-Caloosahatchee

106 Soft white limestone with large amount of sand as above.
(Casing improperly seated in this well).

Lituonella floridana

120 Very soft, porous, highly fossiliferous white limestone; still
a large amount of sand from above.

Dictyoconus cookei
Lituonella floridana
Valvulina sp.
Many other forms

135 Same, very large amount of sand.

SUMMARY

0-104 No samples. Casing in this area is driven
to or near first rock before drilling begins.
104 Pliocene-Caloosahatchee Marl.
106-135 Eocene Coskinolina Zone.

W-526
(E. R. Applin)
(Sun Oil Company)

August 13, 1943

Paleontology
Seminole County, Florida
City of Sanford

Mr. J. A. Waters
Office

Dear Sir:

Cutting samples from 60-160' from City of Sanford, Seminole County, Florida, have been examined.

Location: 5/8 mile NW of Sanford Post Office. Sanford is in Sec. 25, T19S, R30E. 2245' FWL, 2588' FSL.

Elevation: 15' estimated 32,596 ft.

Determinations are as follows:

SUMMARY

- | | |
|--------|---|
| 60-90 | <u>Pliocene</u> (?). Sand, shell fragments, and some foraminifera apparently Pliocene. |
| 90-160 | <u>Claiborne Middle Eocene</u> . Cream-colored and light gray limestone carrying a micro-fauna typical of the Lituonella Zone of the Claiborne. |

-
- | | |
|----|---|
| 60 | <u>In Pliocene?</u> Moderately fine clear quartz sand. |
| 70 | Sand as above and about 25% worn and broken fragments of fossil bivalves. Many specimens of a variety of <u>Rotalia beccarii</u> and <u>Elphidium gunteri</u> var. present. |
| 80 | Sample about 50% fine to coarse quartz sand, and 50% broken shell fragments. Some specimens of <u>Elphidium gunteri</u> and <u>Rotalia beccarii</u> . |

- 90 Lituonella Zone. Claiborne. A cream and gray-colored chalky highly fossiliferous limestone carrying abundant specimens of Lituonella floridana, Valvulina cf. oviedoiana, Coskinolina floridana, some specimens of Spirolina coryensis and others characteristic of the Lituonella Zone.
- 100 Similar to the above. Spirolina coryensis and several species of miliolids also common.
- 110 Like the above.
- 120 Like the above. Valvulammina sp. also common.
- 130 No change.
- 140 Fauna and lithology similar to above. Some specimens of Dictyoconus cookei, and fragments of a hard dense light gray limestone also present.
- 150 Like the above. An increase in the fragments of dense light gray limestone. Some specimens of echinoid and characteristic spines common to this zone.
- 160 In claiborne. Soft chalky cream-colored limestone. Fauna as above, but less abundant.

Yours truly,

/s/ E. R. Applin

ERA:vh

SURFACE CORRELATION
INTEGRATED
PALEONTOLOGICAL SECTION

W-594

STATE Florida ~~FLORIDA~~ COUNTY Seminole ~~DADE~~

COMPANY Experiment Station FARM Water WELL No. _____

Celery Laboratory

SURVEY OR T&R Sec. 25, T 19 S. R 30 E

Celery Ave. next to Ball Park, Sanford

SAMPLE RANGE FROM 40 TO 183

CLASS OF EXAMINATION { A RESEARCH
B ROUTINE
C TOPS ONLY

SAMPLES WASHED FROM 40 TO 183 EXAMINED BY Eleanor Caldwell

SCHLUMBERGER FROM _____ TO _____ PERMANENT DATE July, 1945

COMPLETION DATE OF WELL 9-1-41 SAMPLE FILE Fla. Geol. Surv. File No. W-594 SAMPLES EXAMINED _____

SHOWS NOTED IN SAMPLES T. D. 183' ELEV. 10'

REMARKS:

TYPE OF SAMPLES		A—CUTTINGS	B—BIT	C—CORE	D—DITCH OR SLUSH PIT
FROM	TO	FORMATION		DESCRIPTION	
40	--	Fine white sand; no fossils.			
50	--	Fine white sand; shell fragments.			
60	--	White sand; shell fragments; little phosphate; <u>Elphidium</u> sp.			
65	--	Same as above.			
65	90	No samples.			
90	--	Possible Top <u>Avon Park</u> - <u>Middle Eocene?</u> Cream, nodular, fossiliferous limestone; <u>Coskinolina floridana</u> ; <u>Lituanella floridana</u> ; <u>Spirolina coryensis</u> ; <u>Textularia coryensis</u> ; <u>Valvulina avonparkensis</u> ; <u>Cyclanina watersi</u> ; <u>Flintina avonparkensis</u> ; algal fragments.			
183	---	Last sample - in <u>Avon Park</u> . Hard, cream, porous limestone; molds and casts abundant.			

E. Caldwell

August 13, 1943

Paleontology
Seminole County, Florida
Experiment Station, Celery
Laboratory

Mr. J. A. Waters
Office

Dear Sir:

Cutting samples from 40-183' from Experiment Station, Celery
Laboratory, Seminole County, Florida, have been examined.

Location: Celery Avenue, next to Ball Park, Sanford, Florida.
Center of Sanford Sec. 25, T19S, R30E. 1750' FEL 380' FSL

Elevation: 10' 25.13'

Determinations are as follows:

SUMMARY

- | | |
|--------|--|
| 40-65 | <u>Pliocene</u> (?) Sands, shell fragments and
some foraminifera, apparently Pliocene in
age. |
| 65-90 | No samples. |
| 90-183 | <u>In Claiborne. Middle Eocene.</u> Cream-
colored highly micro-fossiliferous limestone
carrying a fauna typical of the Lituonella
Zone of the Claiborne. |

-
- | | |
|----|---|
| 40 | <u>Pliocene?</u> Moderately fine subangular clear quartz sand. |
| 50 | Fine to coarse, clear quartz sand, and over 50% small fragments
of fossil shell material. Some specimens of <u>Rotalia beccarii</u>
and <u>Elphidium</u> cf. <u>incertum</u> present. |

W-594
(Driller's Log)

OWNER:	Experiment Station Celery Laboratory
LOCATION:	Celery Avenue next to Ball Park, Sanford
COUNTY:	Seminole
ELEVATION:	10'
STARTED:	August 29, 1941
COMPLETED:	September 1, 1941
CASING:	92.5' of 3"
DEPTH:	183'
DRILLER:	A. D. Rosier, Sanford
YIELD:	
USE:	Irrigation
HEAD:	
REMARKS:	22 samples received 9/3/41 by express from R. W. Ruprecht, Sanford, beginning at 40' and continuing to 183'.

0 - 92.5	Sand and shells.
60 - 65	Hard shell.
92.5- 95	Hard rock foot of casing. Small cavities all the way down.
140 -150	Large cavity.
160 -180	Fairly soft limestone.
180 -183	Somewhat harder limestone.

- 50-60 Light gray sandstone carrying many shell fragments. Specimens of Rotalia beccarii, Elphidium gunteri fairly common.
- 65 Samples 50% fine to coarse sand, and 50% finely broken fossil shell material. Some small specimens of Rotalia beccarii present.
- 65-90 No samples.
- 90 In Claiborne. Lituonella Zone. Highly micro-fossil limestone carrying abundant specimens of Coskinolina floridana, Valvulina cf. ovoidiana, Lituonella floridana, and several species of miliolids characteristic of the Lituonella Zone of the Claiborne, some specimens of Spirolina coryensis and other characteristic species.
- 92'8" Chalky limestone like the above.
- 100 Like the above. Spirolina more abundant, and many specimens of Valvulammina sp. and other characteristic forms including many fragments of an echinoid spine also characteristic of this zone.
- 105 Like the above. Many species of foraminifera typical of the Lituonella horizon very abundant.
- 110 Like the above.
- 115 Fauna abundant and like the preceding limestone harder and somewhat calcitic.
- 125 Limestone again chalky, foraminifera abundant. Species as for preceding.
- 130 No change. Some chara fruit cases also present.
- 135 Like the above.
- 140 Nodular hard white porous chalky limestone. Few fossils.
- 145 Highly micro-fossil cream-colored limestone. Fauna as at 135' etc.
- 150 Like the above.

- 160 Material more chalky and harder than above. Fauna somewhat less abundant. Coskinolina floridana the dominant form.
- 165 Similar to above, fossils more abundant and more varied as to species. Fragments of the characteristic echinoid spine very abundant.
- 170 Sample again more chalky and less highly fossiliferous.
- 175 Moderately hard white chalky limestone. Few foraminifera. No change in fauna.
- 180 Like the preceding.
- 183 In Lituonella Zone. Fragments of a hard white chalky porous limestone carrying some fragments and impressions of macro-fossil and some partial impressions of foraminifera.

Yours truly,

/s/ E. R. APPLIN

ERA:vh

SHELL OIL COMPANY INCORPORATED **PALEONTOLOGICAL SECTION**

R-file

W-594

STATE Florida PARISH OR COUNTY Seminole WILDCAT W-594

COMPANY Experiment Station FARM Water WELL No. _____

SURVEY OR T&R Sec. 25, T-19 S, R-20 E CLASS OF EXAMINATION A RESEARCH
Calery Ave. next to Ball Park, Sanford B ROUTINE
SAMPLE RANGE FROM 40 TO 183 C TOPS ONLY

SAMPLES WASHED FROM 40 TO 183 EXAMINED BY Walter Caldwell

SCHLUMBERGER FROM _____ TO _____ PERMANENT DATE July, 1945

COMPLETION DATE OF WELL 2-1-41 SAMPLE FILE Fla. Geol. Surv. File No. W-594 SAMPLES EXAMINED _____

SHOWS NOTED IN SAMPLES T. D. 183' ELEV. 10'

REMARKS:

TYPE OF SAMPLES		A—CUTTINGS	B—BIT	C—CORE	D—DITCH OR SLUSH PIT
FROM	TO	DESCRIPTION			
40	--	Fine white sand; no fossils.			
50	--	Fine white sand; shell fragments.			
60	--	White sand; shell fragments; little phosphate; <u>Elphidium</u> sp.			
65	--	Same as above.			
65	90	No samples.			
90	--	Possible Top <u>Avon Park - Middle Neogene?</u> Green, nodular, fossiliferous limestone; <u>Cerithium floridae</u> ; <u>Littorina floridae</u> ; <u>Hydrobia corrensis</u> ; <u>Yastularia corrensis</u> ; <u>Valvula avonparkensis</u> ; <u>Orthis avonparkensis</u> ; <u>Pecten avonparkensis</u> ; algal fragments.			
183	---	Last sample - in Avon Park. Hard, cream, porous limestone; molds and casts abundant.			

E. Caldwell

W-765
(Unklesbay)

OWNER: Federal Works Agency U. S.
(City of Sanford) 2540' FNL, 1860' FEL
LOCATION: NE 1/2 Sec. 11, T20S, R30E.,
600 feet west of City Well No. 3.
ELEVATION: 49.67 Gr.
COUNTY: Seminole
STARTED:
COMPLETED: April 1943
CASING: 90' of 12"
DEPTH: 160'
DRILLER: Layne-Atlantic Company
USE: Municipal and Navy
REMARKS: 32 samples brought in by J. R.
Galbraith June 5, 1943, beginning
at 5' and continuing to 160'.

5-40 Sand. Fine to medium, angular quartz sand, coated with
light buff kaolin.
40-50 Sand. Fine, angular, buff, micaceous.
50-65 Marl. Dark gray, sandy, fossiliferous shell marl.
65-90 Marl. Light gray, very shelly marl, highly foraminiferal.
90-160 Limestone. Light cream to white, fossiliferous. Upper
part contains Gypsina, Lepidocyclina, and Camerina. Some
sand and forams evidently cavings from above.

SUMMARY

5-50 Recent and Pleistocene sand.
50-90 Caloosahatchee.
90-160 Ocala limestone.

W-997
(Driller's Log)

OWNER: Fla. Livestock Exposition,
Orlando, Florida
LOCATION: Big Lake Fairview, 5 miles
NW of Orlando
COUNTY: Seminole
ELEVATION: 93' above sea level
STARTED: February 7, 1946
COMPLETED: February 27, 1946
DEPTH: 455'
CASING: 229' of 12"
HEAD: -31'
YIELD: 1000 gpm by pump
USE: Drainage
QUALITY: Fresh
DRILLER: Libby-Freeman
REMARKS: 45 samples from 10' to 450'
received by express from Libby-
Freeman, Orlando on March 26,
1946.

0-10	Brown sand
10-25	Kaolin white
30-50	White sand and clay
50-75	Sand and clay
75-105	Hawthorn clay
105-115	Sand and clay
115-135	Sand and clay
135-145	Hawthorn clay
145-170	Clay, lime and shells
170-209	Hawthorn
209-229	Lime, hard and soft
229-264	Hard lime

264-285	Hard lime
285-320	Hard lime
320-332	Soft lime
332-380	Hard lime
380-390	Ocala, hard
390-400	Ocala lime
400-430	Hard lime
430-440	Ocala lime
440-455	Hard lime

W-1010
(Driller's Log)

OWNER: T. W. Tibbetts
LOCATION: Spring Lake, 8 miles northwest
of Maitland, Florida. SW/4 SW/4
COUNTY: Seminole Sec. 23, T21S, R29E.
ELEVATION: 94.03
STARTED: April 11, 1946
COMPLETED: April 17, 1946
DEPTH: 290'
CASING: 119' of 4"
HEAD: -37'
USE: Domestic
YIELD: 1000 gpm by pumping
QUALITY: Good
DRILLER: Richard C. Woodberry, Jr., of
Libby-Freeman Co.
REMARKS: 28 samples beginning with 10'
and continuing to 290' received
by express from Libby-Freeman
Co., on May 13, 1946.

0-10	Sand
10-20	Sand
20-30	Sand
30-40	Sand
40-50	Sand
50-60	Sand
60-70	Sand
70-80	Sand
80-90	Blue marl
90-100	Blue marl, lime shell and sand
100-110	Lime shell, sand and gravel
110-120	Sea shell, sand and gravel

120-130	Sea shell, sand and gravel
140-150	Soft shale
150-160	Hawthorn lime
160-170	Hawthorn lime
170-180	White lime
180-190	White lime
190-200	Ocala lime
200-210	Ocala lime
210-220	Ocala lime, white lime, hard
220-230	White lime, hard
230-240	White lime, hard
240-250	White lime, hard
250-260	White lime shells
260-270	White lime shells
270-280	White lime shells
280-290	Ocala lime

WSe-21S-29E-16
W-1377
Chih Shan Chan
Dec. 31, 1964

COMPANY : Fosgate Growers Corp.
LOCATION : Sec. 16, T1S, R29E
COUNTY : Seminole
ELEVATION : 96.6
DEPTH : 1115'
COMPLETED : 3-30-47
REMARKS : No Electric Log Available

CHEN 1963

0	105	MIOCENE AND YOUNGER
105	150	OCALA GROUP
150	700	AVON PARK LIMESTONE
700	1115(?)	LAKE CITY LIMESTONE

0	105	Miocene and younger
105	115	Highly fossiliferous Limestone (Biosparite)
115	120	DOLOMITE, very fine crystalline, porous, microfossil molds rather common
120	150	Highly fossiliferous Limestone (Biosparite) microcoquina
150	170	Chalky Limestone, dense
170	175	DOLOMITE, very fine crystalline
175	200	Highly fossiliferous Limestone, forams as Cosk., Etc.,
200	205	DOLOMITE, very fine crystalline
205	325	Highly fossiliferous Limestone, microcoquina, Cosk., etc., rather common
325	330	DOLOMITE, very fine crystalline, dense, dark brown
330	345	Highly fossiliferous Limestone, microcoquina
345	350	DOLOMITE, very fine crystalline

W-1377
Chih Shan Chen

350	370	Highly fossiliferous Limestone, microcrystalline
370	375	DOLOMITE, very fine crystalline
375	385	DOLOMITE, fine crystalline, dark brown, dense
385	480	DOLOMITE, very fine crystalline, porous to dense
480	520	DOLOMITE, very fine crystalline to microcrystalline, porous, fragmental
520	560	Calcitic (20%) microcrystalline to very fine crystalline, fragmental and rather porous
560	595	DOLOMITE, microcrystalline to very fine crystalline, calcitic
595	605	DOLOMITE, very fine crystalline, brown, slightly porous
605	660	DOLOMITE, fine crystalline, dark brown, carbonaceous material, rather porous
660	700	DOLOMITE, very fine crystalline
700	755	DOLOMITE, very fine to microcrystalline, fossil molds and Dolomitized Dicty. Americanus (?), rather porous, calcitic
755	760	Calcitic (10%) DOLOMITE, microcrystalline, fossil molds common
760	790	DOLOMITE, very fine crystalline
790	805	DOLOMITE, very fine to micro crystalline, brown
805	820	DOLOMITE, very fine crystalline, dark brown
820	830	Calcitic (10%) DOLOMITE, microcrystalline, porous, fossil molds common, light brown to brown
830	850	DOLOMITE, very fine crystalline
850	895	DOLOMITE, very fine to microcrystalline
895	1000	DOLOMITE, very fine crystalline, brown, rather pure
1000	1030	DOLOMITE as above, dark brown dense
1030	1085	DOLOMITE, very fine crystalline, rather dense
1085	1115	DOLOMITE, very fine crystalline, dark brown, dense

W-1377
(R. O. Vernon)
December 12, 1947

OWNER: Fosgate Growers Cooperation,
Forest City
LOCATION: NE 1/4 SW 1/4 Sec. 16, T21S,
R29E
COUNTY: Seminole
ELEVATION: 96.6'
STARTED: January 14, 1947
COMPLETED: March 30, 1947
CASING: 480' of 16"
DEPTH: 1115'8"
DRILLER: Layne-Atlantic Co., Orlando, Fla.
HEAD: -41'
YIELD: 1500 gpm by pumping
DRAWDOWN: 10'
USE: Manufacturing
QUALITY: Fresh
REMARKS: 213 samples, 15-1115', received
by express collect from Layne-
Atlantic Co., Orlando, on April
25, 1947.

Miocene age - Hawthorn formation
15 Cream, hard, dense, massive, indurated chalky limestone
with some phosphorite.

20, 25, 30, 35, 40
45 Light grey, fissile, very sandy fullers earth-like clay and
clear quartz.

50 Yellowish brown and dark green, very phosphatic, sandy,
hard limestone.

55, 60, 65, 70, 75, 80, 85, 90, 95
100 Yellow-grey, sandy, phosphatic, finely crystalline, soft
to hard limestone. Mollusk molds. Phosphorite locally
abundant and increasing toward the bottom. Increase in
sand and shark's tooth in sample 100.

Eocene age - Lower Jackson group - "Lower Ocala limestone"
105, 110 Limestone above and cream, soft, granular to chalky,
porous limestone. Echinoids, Peronella sp., Lepidocy-
clina sp. Many fragments of spines (not echinoids) or
vertebrae.

- 115 Tan to brown, porous, granular, finely crystalline, massive, soft dolomite.
- Eocene age - Lower Jackson group - "Periarchus bed"
- 120, 125, 130, 135, 140
- 145 Cream, granular, very porous, medium hard, very fossiliferous limestone. Periarchus and other echinoids, Gypsina sp., Amphistegina pinnarensis, Peronella cubae, starfish plates, Camerina sp. cf. C. jacksonensis, Camerina moodysbranchensis, Eodictyoconus cubensis, Periarchus are concentrated at top and above the Camerina.
- 150, 155, 160,
- 165 Light grey, hard, dense, indurated chalky, poorly fossiliferous limestone. Periarchus fragments embedded in the limestone.
- Middle Eocene age - Avon Park limestone
- 170, 175, 180, 185, 190, 200,
- 205 Light grey, granular, soft, very porous, massive limestone and at the top a tan, finely crystalline, dense dolomite. Coskinolina sp., Dictyoconus cookei (two reticules), and abundant Avon Park forams. Peronella dalli.
- 205-210, 220, 230, 240, 250, 260, 280, 290,
- 300 Limestone as above but softer and granulated. Charophytes and Avon Park forams.
- 300-305, 310, 320, 330, 340, 350, 360,
- 365 White to cream, granular, chalky matrix, hard, porous limestone. Forams as above. Many echinoid fragments. Some cavings.
- 365-370 Limestone above and a dark grey brown, dense, finely crystalline dolomite.
- 370-375 Dolomite of 365-370.
- 375-380, 390, 400, 410, 420, 430, 440,
- 445 Tan to brownish-grey, finely crystalline, hard, dense indurated dolomite and dolomitic limestone. Lower part granulated in drilling.
- 445-450, 460, 470, 480,
- 485 Tan to brown, porous, finely crystalline, massive, porous, dolomitic limestone.

- 485-490 Tan, dolomitic limestone of 445-450 and light grey, dense, hard limestone.
- 490-495, 500,
510 Dolomite of 445-450 with fragments of the dolomite of 485-490.
- 510-515, 520, 530, 540, 550, 560,
570 Tan, very porous, fairly hard, finely crystalline, dolomitic limestone. Poorly fossiliferous. Scattered molds of large Dictyoconus.
- 570, 575,
580 Tan, finely crystalline, porous, soft, pumice textured dolomite.
- 580, 585, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690,
695 Dolomite as above but more porous, harder and brown streaks of dark greyish-brown. Fragment white porous limestone at 620 with many molds of Fabularia vauhani(?). Hard and soft streaks.
- Eocene age - Lake City?
- 695, 700, 710, 720, 730, 740, 750, 760, 770, 780,
785 Tan to brownish-grey, slightly porous, finely crystalline, hard, dolomitic limestone. Molds of Coskinolina and Dictyoconus. Streaks of dense, crystalline dolomite.
- 785, 790, 800, 810, 820, 830, 835,
Light brownish-grey, chalky, indurated, hard, poorly fossiliferous dolomitic limestone.
- 835, 840, 850, 860, 870, 880, 890, 900, 910,
915 Tan, soft, porous, finely crystalline, dolomitic limestone with streaks of brownish grey, dolomitic limestone of similar characteristics. Mollusk molds rare.
- 915, 920, 930, 940, 950, 960, 970,
975 Light brownish grey, dense, porous streaks, indurated, chalky, dolomitic limestone and tan to brown, finely crystalline, porous to dense dolomite. Samples 910-950 high in dolomite.
- 980, 990, 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070,
1075 Largely brown, hard, sugary to "silty", finely crystalline, dense, porous streaked dolomite with fragment of dolomitic limestone above. Unidentified mollusk molds.

1080, 1085, 1090, 1100, 1110,

1115 As above but dark brown to dark grey and denser. Some
 Lituonella and Coskinolina molds.

OWNER : Fosgate Growers Cooperation, Forest City
LOCATION : Forest City, NE/4 of SW/4, Sec. 16, T21S, R29E
COUNTY : Seminole
ELEVATION : 96.6' (Station '54)
STARTED : January 14, 1947
COMPLETED : March 30, 1947
CASING : 480' of 16"
DEPTH : 1115' 8"
DRILLER : Layne-Atlantic Co., Orlando, Fla.
HEAD : - 41'
YIELD : 1500 GPM by pumping
DRAWDOWN : 10'
USE : Manufacturing
QUALITY : Fresh
REMARKS : 213 samples, from 15 to 1115', received by express collect from Layne-Atlantic Co., Orlando, Fla., on April 25, 1947.

20-20	Brown sand
20-65	White clay
65-105	Clay and gravel
105-140	Sand and gravel
140-300	Medium hard lime
300-320	Hard white lime
320-365	Medium hard lime rock
365-385	Hard brown lime
385-390	Soft sand rock
390-425	Hard white lime
425-480	Hard brown lime rock
480-560	Medium hard white lime rock
560-660	Soft brown lime rock
660-670	Hard brown lime rock
670-730	Water bearing rock, brown
730-930	Hard brown rock
930-993	Medium - 2 ft. hard - 2 ft. soft
993-1115' 8"	Brown rock - some water

W-1377

R. O. Vernon (Copied from
Field Book, 9/15/59)

OWNER : Fosgate Growers Cooperation, Forest
City
LOCATION : NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T21S, R29E
COUNTY : Seminole
ELEVATION : 96.6'
STARTED : January 14, 1947
COMPLETED : Mar. 30, 1947
CASING : 480' of 16"
DEPTH : 1115'8"
DRILLER : Layne-Atlantic Co., Orlando, Fla.
HEAD : -41"
YIELD : 1500 gpm by pumping
DRAWDOWN : 10'
USE : Manufacturing
QUALITY : Fresh
REMARKS : 213 samples, 15-1115', received by
express collect from Layne-Atlantic
Company, Orlando, on April 15, 1947

UPPER MIOCENE

15' LIMESTONE white to gray-brown, dense to porous, hard to soft,
graybrown material is dense, hard and sandy. Some phosphorite
noted, also small 'vertebrae. "
20-25 LIMESTONE, white to cream, dense, crystalline, arenaceous,
in a ground mass of fine, clear, angular sand. Occasional rice-
sized sand grains which are rounded and frosted.
30, 35, 40 SAND as above, but little limestone.

LOWER MIOCENE - HAWTHORN

45 MARL, light gray, sandy; phosphorite, blue-gray, dense,
crystalline LIMESTONE; sandy CLAY (gray).
50 LIMESTONE, cream to gray, dense, crystalline, sandy; and
much phosphorite.
55, 60, 65,
70, 75 LIMESTONE, cream, porous, sandy and a few phosphorite pebbles.
80 Loose particles of Limestone, described above, sand and much
phosphate.
90 Cream colored, hard, crystalline LIMESTONE, containing sand
grains and phosphorite.
95, 100 Chiefly phosphorite and sand; some limestone as above.

EOCENE

105

LIMESTONE, soft, porous, white. One Camerina noted.

W-1377

Seminole County

OWNER : Fosgate Growers Coop., Forest City, Fla.

Elevation ;

UPPER MIOCENE

15 White to grey-brown, dense to porous, hard to soft Limestone. Grey-brown material is dense, hard and sandy. Some Phosphorite noted: also small "vertebrae"

20 25 White to cream, dense, crystalline, arenaceous Limestone in a ground mass of fine, clear, angular Sand. Occasional rice-sized sand grains which are rounded and frosted

30-35-40 Sand as above but little Limestone

LOWER MIOCENE

45 Light grey, sandy Marl, Phosphorite: blue-grey, dense, crystalline Limestone, Sandy Clay (Grey)

50 Cream to grey, dense, crystalline, sandy Limestone and much Phosphorite

55-60-65-70-75 Cream, porous, sandy Limestone and a few Phosphorite pebbles

80 Loose particles of Limestone as described above, Sand and much Phosphate

90 Cream colored, hard, crystalline Limestone containing sand grains and Phosphorite

95 100 Chiefly Phosphorite and Sand: some Limestone as above

EOCENE

105 Soft, porous, white Limestone. One Camerina noted

W-1461

Seminole County

OWNER : Brig. Gen. J. Newman, 1 Mi N of Maitland, Fla.

UPPER MIOCENE

40 50 Fine to medium, angular, Marl and excrusted sand grains

50 60 Cream to white, dense, crystalline Limestone along with minor quantities of sand and Phosphorite

60 70 Cream, dense, arenaceous Limestone plus a few Phosphorite pebbles

70 80 LOWER MIOCENE - Hawthorn

70 80 Dense, gray, crystalline Limestone in addition to that described above

90 100 Increase in grey Limestone

100 110 Cream, porous, arenaceous Limestone, grey, dense, crystalline Limestone and Phosphorite

110 120 Particles become fine and more sand is present

120 130 White, soft, porous, miliolid Limestone: Camerina

W-1409

WSe-

OWNER : Howard S. Greene
LOCATION : 2 Mi E of Longwood, Florida PO

COUNTY : Seminole
ELEVATION :
DRILLER : Libbly & Freeman
STARTED : 11/4/46
COMPLETED : 11/7/46
DEPTH : 153'
CASING : 94' of 4"
HEAD : 10'
QUALITY : Fresh
USE : Domestic
REMARKS : 15 samples rec., 0 - 152' - no log

Sample Intervals

0	10
10	20
20	30
30	40
40	50
60	70
70	80
80	90
90	95
95	100
100	110
110	120
120	130
130	140
140	152

W-1444

WSe-

OWNER : Fosgate #1 Well
LOCATION : Forest City, Florida
COUNTY : Seminole
REMARKS : 53 samples, 0 - 435', rec. from W. E.
HORSTON, ORLANDO, 12/27/46

NOTE: Fosgate well at Forest City is same well as that drilled for Fosgate Plant by Layne-Atlantic. Well in question never completed, no log or info.

Sample Intervals

0	5
5	10
10	15
15	20
20	25
25	30
30	35
35	40
40	45
45	50
50	55
55	60
60	65
65	70
70	75
75	80
80	85
85	90
90	95
95	100
100	300 samples every 5'
300	335

W-1459
(Driller's Log)

OWNER:	Mr. Estes, Rt. 1, Maitland, Florida
LOCATION:	4 miles north of Maitland, NE/4 SE/4 Sec. 19, T21S, R30E
COUNTY:	Seminole
ELEVATION:	82'
STARTED:	January 31, 1947
COMPLETED:	February 4, 1947
CASING:	61' 6" of 5"
DEPTH:	180'
DRILLER:	Libby-Freeman, Orlando, Florida
HEAD:	-28'
YIELD:	
USE:	Domestic
QUALITY:	Fresh
REMARKS:	11 samples, 60 to 170', received by express collect from Libby and Freeman of Orlando, Florida, on February 10, 1947.

0-60	Blue clay and sand
70-130	Blue rock
130-180	Lime rock

W-1461
R. O. Vernon (Taken from field
book, 9/16/59)

OWNER : Brig. Gen. John B. Newman
Wardman Park Hotel, Washington D. C.
LOCATION : 1 mi. N of Maitland PO
COUNTY : Seminole
ELEVATION :
STARTED : January 28, 1947
COMPLETED : January 30, 1947
DRILLER : Libby and Freeman, Orlando, Fla.
DEPTH : 320'
CASING : 63.6' of 5"
HEAD : -35'
YIELD :
USE : Domestic
QUALITY : Fresh
REMARKS : 27 samples, 40-320', received by express
collect, from Libby and Freeman of Orlando
Florida, on February 10, 1947

UPPER MIOCENE

40-50 Fine to medium, angular, marl encrusted sand grains.
50-60 Cream to white, dense, crystalline LIMESTONE along with
minor quantities of sand and phosphorite.
60-70 LIMESTONE, cream, dense, arenaceous, plus a few phosphorite
pebbles.

LOWER MIOCENE - HAWTHORN

70-80, 80-90 LIMESTONE, dense, gray, crystalline, in addition to that
described above.
90-100 Increase in gray limestone.
100-110 LIMESTONE, cream, porous, arenaceous, gray dense, crystalline
limestone, and phosphorite.
110-120 Particles become fine and more sand is present.
120-130 LIMESTONE, white, soft, porous, miliolid. Camerina.

W-1461
(Driller's Log)

OWNER: Brig. Gen. John B. Newman
Wardman Park Hotel, Washington,
D. C.
LOCATION: 1 mile north of Maitland post office
COUNTY: Seminole
ELEVATION:
STARTED: January 28, 1947
COMPLETED: January 30, 1947
CASING: 63.6' of 5"
DEPTH: 320'
DRILLER: Libby and Freeman, Orlando,
Florida
HEAD: -35'
YIELD:
USE: Domestic
QUALITY: Fresh
REMARKS: 27 samples, 40' to 320' received
by express collect, from Libby
and Freeman, Orlando, Florida,
on February 10, 1947.

0.0-80	Blue clay and small rock
80-130	Blue rock
130-180	Lime rock
180-320	Lime rock

W-1659
(Driller's Log)

OWNER: W. S. Young, Longwood, Florida
LOCATION: NE/4 NE/4 Sec. 5 T?
COUNTY: Seminole
ELEVATION.: 68.8 Grd.
STARTED: January 12, 1948
COMPLETED: January 13, 1948
CASING: 118' of 4"
DEPTH: 180'
DRILLER: Libby & Freeman, 711 W. Church
Street, Orlando, Florida
HEAD: 20' below the surface
YIELD:
DRAWDOWN:
USE: Domestic
QUALITY: Fresh
REMARKS: 14 samples, from 40 to 180',
received by express collect
from Libby & Freeman, Orlando,
Florida, January 19, 1948.

0-40	Sand
40-50	Sand and clay
50-100	Blue clay and gravel
100-110	Clay and gravel
110-180	Lime rock

W-1973
(Driller's Log)
August 9, 1949

OWNER: Dan Collins, Sanford, Florida
LOCATION: Canaan Section - Rt. 1, Box 377,
SE/4 SE/4 Sec. 32, T19S, R31E,
4 miles southeast of post office
at Sanford
COUNTY: Seminole
ELEVATION:
STARTED: July 30, 1949
COMPLETED: August 3, 1949
CASING: 84' 7" of 4"
DEPTH: 255' 0"
DRILLER: Libby & Freeman, 711 W. Church
Street, Orlando, Florida
HEAD: 1/2" above the surface
YIELD: Flows 20 GPM
USE: Domestic
QUALITY: Fresh
REMARKS: 20 samples, from 0 to 253',
received by express collect,
from Libby & Freeman, Orlando,
Florida, August 16, 1949

0-22	Sand
22-40	Blue clay and shell
40-60	Soft mud
60-70	Clay and shell
70-80	Clay and sand
80-255	Lime rock

W-1979
(Driller's Log)
August 20, 1949

OWNER: City of Sanford, Florida
LOCATION: NE/4 NW/4 Sec. 30, T19S,
R31E
COUNTY: Seminole
ELEVATION: 9'
STARTED: August 13, 1949
COMPLETED: August 18, 1949
CASING: 109'4" of 8"
DEPTH: 249'0"
DRILLER: Libby & Freeman, 711 W. Church
Street, Orlando, Florida
HEAD: Flows 4 inches above ground
USE: Flow through swimming pool
QUALITY: Fresh
REMARKS: 23 samples, from 0 to 249',
were received by express collect
from Libby and Freeman, Orlando,
Florida, August 25, 1949

0-20	Sand
20-40	Clay and sand
40-80	Clay and shell
80-90	Sand, clay, and shell
90-100	Soft clay and shell
100-105	Soft lime and shell
105-160	Lime rock
160-180	Brown rock
180-249	Lime rock

W-2523
USGS Field #8 (Louise Jordan)
March 24, 1952

OWNER: Martin Anderson, Longwood,
Florida
LOCATION: 200' NW of Lake Wildmere on
estate of Martin Anderson, 0.7
mile west of U.S. 17 and 92,
NW/4 NE/4 Sec. 5, T21S, R30E,
0.7 mile southeast of post office
at Longwood
COUNTY: Seminole
ELEVATION: 63.7'
STARTED: September 13, 1951
COMPLETED: September 17, 1951
CASING: 114' of 6"
DEPTH: 200'
DRILLER: Libby-Freeman, Orlando, Florida
YIELD: 100+ GPM
DRAWDOWN:
USE: Domestic and air conditioning
QUALITY: Fresh
HEAD: 11.8' below the surface
REMARKS: 39 samples, from 0 to 200 feet,
were brought into the office by
Ralph Heath, USGS, Tallahassee,
November 13, 1951.

SUMMARY

0-120 Hawthorn formation, Miocene formation.
120-123 Ocala limestone restricted, upper Eocene.
123-191 Moodys Branch formation, upper Eocene.
191-200 Avon Park formation, middle Eocene.

0-10 In the Miocene. Fine to medium, loose angular sand w/
rare phosphate grains and with dark brown clay matrix.
10-15 Same, small iron stained sandy segregations, plant remains,
rare fine phosphate grains.

10-20	White, fine loose angular sand, rare phosphate grains.
30-40	White, fine loose angular sand.
40-46	Tan, fine, loose angular, sand with tan clayey matrix.
45-50	Gray, fine, loose, angular sand, gray phosphate fragments.
50	Same.
55-60	Light brown clay with 1/4 inch phosphate pebble, some fine to coarse sand in clay.
60-65	As above, but more sandy, phosphate pebbles and white shell fragments.
65-70	Same.
70-75	Sandy, phosphatic white limestone, 1/4 inch phosphate pebbles, some fine, loose sand.
75-80	Same, 50% loose, fine sand.
80-85	Same, abundant phosphate pebbles.
85-88	Same, abundant phosphate pebbles, also light tan fine sucrose phosphate and sandy dolomite.
88-92	Gravel: 1/4-1/2 inch phosphate pebbles, some white shell fragments.
92-97	Fine to coarse, loose phosphatic sand with 1/8 inch phosphate pebbles, grayish tan clay. A few fragments of white, sandy chalk.
97-101	Same (grayish tan mud when washed).
101-105	Same, 1/4-1/2 inch phosphate pebbles. (drab tan mud).
105-107	Same (dark tan mud).
107-111	Same with 30% lime fragments.
111-116	Fine to coarse sand, 1/8 inch pebbles, 10% of sandy phosphatic limestone (light tan mud).

- 115-118 Light gray, sandy phosphatic fine crystalline, dolomitic, dense limestone, fine to medium loose phosphatic sand.
- 118-123 Top Ocala limestone (restricted) (upper Eocene). Drillers top: 120'. Coquina of large foraminifers, Lepidocyclina ocalana etc.
- 123-128 Top Moodys Branch formation (upper Eocene). Cream coquina or fine granular limestone, very porous, medium hard, bryozoa, echinoids, Gypsina etc.
- 128-133, 133-138, 138-143, 143-148
148-153 Same with Camerina moodysbranchensis, Amphistegina pinarensis cosdeni, etc.
- 153-158 Same, but less indurated.
- 158-168 Cream white fine fragmental limestone or coquina, abundant small foraminifera, Periarchus.
- 168-175, 175-182, 182-185
Coquina as above.
- 185-191 Coquina as above with common Periarchus and abundant Amphistegina.
- 191-195 Top Avon Park formation, middle Eocene. Dense, fine crystalline grayish white hard limestone with rare imbedded Dictyoconus cookei.
- 195-200
Total depth Same. In Avon Park formation.

W-2523
USGS FIELD #8 (Driller's Log)
November 13, 1951

OWNER: Martin Anderson, Longwood, Florida
LOCATION: 200' NW of Lake Wildmere on estate
of Martin Anderson, 0.7 mile west
of U. S. 17 and 92, NW/4 NE/4 Sec. 5,
T21S, R30E, 0.7 mile southeast of
post office at Longwood
COUNTY: Seminole
ELEVATION: 63.7'
STARTED: September 13, 1951
COMPLETED: September 17, 1951
CASING: 114' of 6"
DEPTH: 200'
YIELD: 100+ GPM
DRILLER: Libby-Freeman, Orlando, Florida
DRAWDOWN:
USE: Domestic and air conditioning
QUALITY: Fresh
HEAD: 11.8' below the surface
REMARKS: 39 samples, from 0 to 200 feet,
were brought into the office by
Ralph Heath, USGS, Tallahassee,
November 13, 1951.

0-10	Very fine to medium sand.
10-20	Sand, with some clay and organic matter.
20-40	Same with less clay and organic matter.
40-50	Black, muddy sand.
50-82	Clay containing gravel (poss. phosphate).
82-91	Grayish-tan clay and gravel (poss. phosphate).
91-92	Phosphatic gravel and some gray clay.
92-95	Very resistant layer (could not be determined from samples from well).
95-115	Hard clay and phosphatic gravel.
115-120	Clay, gravel, and layers of chert.
120	Limestone, possibly Ocala.
to 200	Limestone (of unknown family).

USGS# 236

OWNER : Mrs. C. L. Wheeler
 LOCATION : .2 Mi S of Lake Minnie, about 4 Mi
 S of down town Sanford, Fla.
 COUNTY : Seminole
 ELEVATION :
 DRILLER : A. D. Rosier
 STARTED : 11/23/51
 COMPLETED : 11/28/51
 DEPTH : 111'
 CASING : 83' of 4"
 YIELD : 25 GPM
 HEAD : 4'
 QUALITY : Fresh-C1 53 ppm
 USE : Domestic
 REMARKS : 12 samples rec., 10 - 108' - Log by
 R. C. Heath USGS

0	10	Peaty Sand
10	30	Fine Sand and considerable Clay
30	45	Fine Sand and Clay as above
45	55	Same
55	70	Same, possibly more Clay
70	79	Very fine Sand and Clay
79	82	Hard ledge, possibly of flint or limestone or cemented sand
82	86	Sand, Phosphate, shells and Clay
83	85	Same
85	95	Flint, Chert, Phosphate. Some Shell fragments of possibly forams. This section was extremely hard and required about 12 hours of drilling time
95	111	Same, possibly more limestone

The casing in this well was first driven 79' before any material was bailed out. Thus, the samples above that interval are probably mixed up.

W-2579
(Driller's Log)
February 4, 1952

OWNER: Winter Park Land Company,
Winter Park, Florida
LOCATION: North of Maitland, SW/4 SE/4,
S.24, T21S, R29E. cor. Faith Ter.
COUNTY: Seminole & Mangolia Oakland Shores
ELEVATION 92.63 grd. near old house
STARTED: January 25, 1952
COMPLETED: February 1, 1952
CASING: 136'11" of 6"
DEPTH: 361'
DRILLER: Farm & Home Machinery Company,
430 W. Robinson Avenue, Orlando,
Florida
HEAD: 42' below the surface
YIELD:
DRAWDOWN:
USE: Domestic
QUALITY: Fresh
REMARKS: 30 samples, from 60 to 361', were
received from Central Florida Well
Drillers, Orlando, Florida, by
express, March 24, 1952/

0-60	Sand.
60-70	Sand and blue clay.
70-135	Blue clay and gravel.
135-200	Light brown lime.
200-250	Medium brown lime.
250-290	Light brown lime.
290-325	Soft light brown lime.
325-361	Hard brown lime.

OWNER : Fosgate Citrus Concentration Coop.
LOCATION : Forest City, 10 miles north of Orlando
COUNTY : Seminole
STARTED : Feb. 1, 1952
COMPLETED : April 20, 1952
CASING : 99'6" of 26"; 507'9" of 20".
DEPTH : 1122'
DRILLER : Layne-Atlantic Company, P. O. Box 2431
Orlando, Florida
HEAD : 45' below the surface
YIELD : 4500 GPM
DRAWDOWN : 14'
USE : Plant
QUALITY : Fresh
REMARKS : 223 samples received from Layne-Atlantic Co.,
Orlando, May 13, 1952, by express, 0-1122'.

0-15 Quartz sand, grayish brown, very fine to medium with some coarse grains, angular to rounded, clear to frosted; cream sandy clay.

15-40 Quartz sand, white, very fine to fine with some medium, subangular, coated with white to light cream clay.

40-50 Clay, dark gray, slightly waxy, sandy.

50-60 Dolomite, gray, dense; phosphate rock, gray, dense; clay, very calcareous and very sandy with phosphorite.

60-90 Dolomitic limestone, light buff, finely sucrosic, phosphoritic, sandy, soft.

90-100 Becomes more sandy and phosphoritic.

100-125 Same. Very sandy and phosphoritic.

125-140 Less sandy and phosphoritic.

140-150 Same as above; limestone, light cream, granular to chalky, porous, soft.

150-180 Limestone, cream, granular, porous.

180-210 Limestone, light cream, chalky, hard.

210-230 Limestone, cream, hard, chalky, porous, granular.
"Cones". Discocyclina sp.
Litueolla sp.
Coskinolina sp.
Peronella dalli

230-250 Same but soft.

250-260 Limestone, light cream, chalky, soft, porous.

260-275 Same as above; dolomite, finely crystalline, dense, buff colored.

- 275-290 Limestone, light cream, chalky, hard, granular with seams of dolomite as above. Echinoid fragments.
- 290-295 Dolomitic limestone, light cream, soft, finely crystalline to chalky, with few grains phosphorite.
- 295-340 Dolomitic limestone, non-granular, chalky.
- 340-345 Same with much cavings.
- 345-390 Dolomite, buff, finely crystalline, dense, hard.
- 390-400 Limestone, cream, soft, chalky with incipient crystals of dolomite.
- 400-405 Dolomite, buff, dense, finely crystalline.
- 405-415 Same and free quartz crystals with inclusions.
- 415-420 Clay, very organic, dark gray, slightly waxy, containing calcite and dolomite rhombs.
- 420-430 Dolomite, buff, dense, very finely crystalline, slightly peat flecked, hard.
- 430-440 Same, but with few impressions of macro fossils and intergranular porosity.
- 440-465 Same but with some crypto-crystalline dolomite and gray to buff in color.
- 465-480 Dolomite, grayish brown, crypto to finely crystalline, dense, hard.
- 480-495 Dolomite, buff, finely crystalline, dense.
Amphistegina nassauensis.
- 495-525 Same but with intergranular porosity. Fragments of dolomite becoming chalky appearing at 520-525.
- 525-535 Dolomite, cream to light buff, dense, chalky to very finely granular, porous and less crystalline.
- 535-575 Same, but more finely granular and maybe a very dolomitic limestone instead of all dolomite.
- 575-595 Same with very slight trace of pyrite.
- 595-600 Dolomite, buff, very finely ground up, very finely crystalline, dense.
- 600-605 Same, but less ground up.
- 605-625 Same, but deep buff to gray-brown.

625-675 Dolomite, light brown or buff, finely crystalline, dense, hard with moldic? and/or intergranular porosity.

675-720 Dolomite, cream to buff, finely crystalline to chalky, porous, medium soft, granular.

720-735 Same with moldic or intergranular porosity, granular.

735-845 Dolomite, buff, finely crystalline, dense, hard, granular.

845-930 Dolomite, cream, chalky, porous, moldic, slightly very finely crystalline, medium hard. Moldic at 885-890.

930-940 Same, but dense.

940-970 Dolomite, deep buff, dense, finely crystalline, hard.

970-985 Less crystalline and lighter in color with spots of iron staining (May be from drill pipe).

985-1010 Dolomite, buff, finely crystalline, hard, dense.

1010-1035 Dolomite, deep buff to light brown with dark gray spots, dense, finely crystalline, hard.

1035-1055 Same, with some fragments being gray brown in color.

1055-1085 Dolomite, brown, finely crystalline and finely ground up, hard, dense.

1060-1065 Same, less finely ground up.

1065-1070 Very hard.

1070-1075 Finely ground up.

1085-1120 Very hard and in large fragments, cream to gray-buff.

TOTAL DEPTH: 1120'

SUMMARY	:	0-40	Post Miocene-Pleistocene
		40-145	Miocene
		145-210	Ocala Group, Inglis formation - Upper Eocene
		210-415	Claiborne Group, Avon Park limestone - Middle Eocene
		415-1120	Lake City limestone - Middle Eocene

W-2608
(Driller's Log)
May 23, 1952

OWNER: Fosgate Citrus Concentration
Coop.
LOCATION: Forest City, 10 miles north of
Orlando SW/4 NE/4 Sec. 6,
T21S, R29E.
ELEVATION: 94.02'
STARTED: February 1, 1952
COMPLETED: April 20, 1952
CASING: 99'6" of 26"; 507'9" of 20"
DEPTH: 1122'
DRILLER: Layne-Atlantic Company, P. O.
Box 2431, Orlando, Florida
HEAD: 45' below the surface
YIELD: 4500 GPM
DRAWDOWN: 14'
USE: Plant
QUALITY: Fresh
REMARKS: 223 samples received from Layne-
Atlantic, Orlando, May 13, 1952,
by express.

0-5	Top soil.
5-15	Yellow sand.
15-20	Black hard pan.
20-35	Clay and sand.
35-40	Sand.
40-55	Clay and sand.
55-70	Clay and gravel.
70-71	Picked up rock.
71-80	Clay and gravel.
80-82	Rock.
82-99	White clay.
99-101	Rock.

101-120	Clay and gravel.
120-145	Clay and sand - picked up water
145-185	Soft white lime - water level 52'.
185-200	Hard rock.
200-208	Soft rock.
208-210	Hard rock.
210-235	Medium hard.
235-260	Soft.
260-275	Medium hard.
275-290	Hard rock.
290-295	Hard tight brown.
295-335	Soft white.
335-340	Hard brown.
340-370	Dark brown.
370-385	Medium hard.
385-388	Hard brown.
388-400	Soft white.
400-487	Medium hard.
487-517	Medium soft - water level changed at 487'.
517-560	Soft white to 44'.
560-563	Hard brown.
563-575	Soft white.
575-600	Hard dark brown - ran liner pipe to 597'6".

600-603	Hard cemented with 20 bags cement.
603-690	Medium soft changed to 20".
690-705	Hard.
705-735	Soft - water level 52'.
735-750	Medium hard.
750-765	Hard brown - water level 53'.
765-782	Medium hard.
782-1010	Hard brown - water level 48'.
1010-1055	Medium hard.
1055-1060	Hard brown - honey comb formation.
1060-1075	Hard brown - falling in bad.
1075-1122	Hard brown - water level 45'.

Cut 20" liner pipe at 89'9" - cemented.

USGS# 457
OWNER : Acorn River Cattle Co.
LOCATION : 2 Mi NE of Chuluota, E. side of
small creek at cattle pens, 150' S
of Brumley Rd.
COUNTY : Seminole
ELEVATION :
DRILLER : Meridith Bros.
STARTED : Apr. 1952
COMPLETED : Apr. 1952
DEPTH : 90'
CASING : 78' of 2"
HEAD : 13'
YIELD : 10+ GPM
QUALITY : Cl. 15 ppm, 4/29/52
USE : Watering stock
REMARKS : 4 samples rec., 35 - 90'

Heath-" Samples were saved by drillers. No log was kept of formations
penetrated.

Well is located on top of a low sand dune".

Sample Intervals

35	60
60	75
75	85
85	90

USGS# 449
OWNER : B. F. Wheeler
LOCATION : 500' W of Oviedo-Chuluota Rd; appr.
2 Mi slightly SE of Oviedo, & appr.
1 Mi W of Econlockhatchee River
COUNTY : Seminole
ELEVATION :
DRILLER : G. M. Arie
STARTED : Apr. 1952
COMPLETED : June 1952
DEPTH : not finished at last visit(Heath)
CASING : 190' of 8"
YIELD :
QUALITY :
HEAD :
USE : Drainage & Irrigation
REMARKS : 22 samples rec., 190-560'

Heath-"Driller did not keep log. I stopped by well every 2 or 3 weeks to pick up samples. Well was drilled in shallow depression which probably indicates position of old sinkhole. This is somewhat substantiated by the fact that Limestone had not been reached when well was 495' deep. Water level was measured Apr. 30, 1952 to be 15.64 below top of casing. Well at that time was about 450' deep. After 24 gal. of water was bailed from well, WL was measured to be 20.95' below casing".

Sample Intervals

190	
195	
385	
390	
395	
400	
400	410
410	420
420	430
430	440
440	450
450	460
460	470
470	480
480	490
490	500
500	510
510	520
520	530
530	540
540	550
550	560

FLORIDA BUREAU OF GEOLOGY - LITHO LOG PRINTOUT

W- 2649 (PERMIT NO-)
SEMINOLE CO. T21S R31E SEC 14OE 28 39 42 N 81 11 13 W
TOTAL DEPTH- 560 FT. ELEV.- 50 FT. 22 SAMPLES- 190- 560 FT.
COMPLETED- . . .

WELL NAME-
B. F. WHEELER
REMARKS-
WORKED BY M. H. SHAFIE
9-1-77 VERY POOR SAMPLES

STRATIGRAPHIC FORMATIONS -

190.0- 430.0 HAWTHORN FORMATION
430.0- 560.0 AVON PARK LIMESTONE

LITHOLOGIC LOG

W- 2649 SEMINOLE CO. T21S, R31E, SEC 14OE

190.0 DOLOMITE, LT OL GY, 12 PERCENT POROSITY-INTERCRY, INTERGRAN,
50-90 PCT. ALTERED, RUTHERFORD, SIZE- V F, RANGE- FINE-MICR,
MOD IND, DOLOMITE, 20 PCT. SAND(OTZ), 10 PCT. PHOS SAND,
195.0 DOLOMITE, MD GY, 03 PERCENT POROSITY-INTERCRY, 50-90 PCT.
ALTERED, RUTHERFORD, SIZE-MICR, RANGE- V F-MICR, GOOD IND,
DOLOMITE,
385.0 DOLOMITE, V LT GY, V LT OR, 12 PERCENT POROSITY-INTERCRY,
INTERGRAN, 50-90 PCT. ALTERED, RUTHERFORD, SIZE- V F, RANGE-
FINE-MICR, MOD IND, DOLOMITE, 20 PCT. SAND(OTZ), 05 PCT.
PHOS SAND,
20 PERCENT LIMESTONE FRAGMENTS
390.0 SAND, YL GY, 24 PERCENT POROSITY-INTERGRAN, INTERCRY,
SIZE-CRSE, RANGE- V C-MED, SUB-ANG, ROUNDED, MED SPH,
MOD IND, DOLOMITE, 20 PCT. DOLOMITE, 05 PCT. PHOS GRAV,
395.0 LIMESTONE, YL GY, 20 PERCENT POROSITY-INTERGRAN, INTERCRY,
GRAINTYPE- SKELETAL, CRYSTAL, BIOGENIC, 8V PCT. ALLOCHEMS,
SIZE-MED, NON-IND, MICRT CMT, 35 PCT. SAND(OTZ), 05 PCT.
PHOS GRAV, DOLOMITE, MOLLUSKS, FORAMINIF,
400.0 SAND, LT OL GY, 21 PERCENT POROSITY-INTERGRAN, INTERCRY,
SIZE-CRSE, RANGE- CRSE-MED, SUB-ANG, ROUNDED, MED SPH,
MOD IND, DOLOMITE, 20 PCT. DOLOMITE, 05 PCT. PHOS GRAV,
FORAMINIF, MOLLUSKS,
20 PERCENT LIMESTONE FRAGMENTS
410.0 LIMESTONE, V LT OR, 10 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- SKELETAL, BIOGENIC, 5V PCT. ALLOCHEMS, SIZE-FINE,
NON-IND, MICRT CMT, CONES,
DICTIOCCNUS COCKEY
CAVING SANDY DOLOMITE AND PHOSPHATE POSSIBLY FROM HAWTHORNE
420.0 AS ABOVE
430.0 LIMESTONE, V LT OR, 12 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 78 PCT. ALLOCHEMS, SIZE- V F,
RANGE- FINE-CRSE, MOD IND, SPARRY CALCITE CMT, MICRT CMT,
CONES,
440.0 AS ABOVE
450.0 POSSIBLE CAVING HAWTHORNE
460.0 AS ABOVE
470.0 SAND, V LT GY, 22 PERCENT POROSITY-INTERGRAN, INTERCRY,
SIZE-CRSE, RANGE- CRSE-MED, ROUNDED, SUB-ANG, MED SPH,
MOD IND, DOLOMITE, 20 PCT. DOLOMITE, 10 PCT. PHOS SAND,
480.0 SAND, V LT GY, 25 PERCENT POROSITY-INTERGRAN, INTERCRY,
SIZE-CRSE, RANGE- CRSE-MED, ROUNDED, SUB-ANG, MED SPH,
POOR IND, DOLOMITE, 10 PCT. DOLOMITE, 08 PCT. PHOS SAND,
CONES, FORAMINIF, MOLLUSKS,
15 PERCENT LIMESTONE FRAGMENTS
490.0 LIMESTONE, V LT OR, 11 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 77 PCT. ALLOCHEMS, SIZE- V F,
RANGE- MED-CRSE, MOD IND, SPARRY CALCITE CMT, MICRT CMT,
CONES, MOLLUSKS,
CAVING DOLOMITE, SANDS AND PHOSPHATES
500.0 AS ABOVE
510.0 AS ABOVE
520.0 AS ABOVE

LITHOLOGIC LOG

W- 2649 . SEINOLE CO. T217, S31E, SEC 1408

539.0 LIMESTONE, VLT CR, 12 PERCENT POROSITY-INTERGRAN, MOLOIC,
GRAINTYPE- EUGENIC, SKELFAL, 78 PCT. ALLOCHEMS, SIZE- V F;
RANGE- COLE-CLAY, MOD IND, SPARRY CALCITE CNT, MICRT CNT,
CONES, MOLLUSKS;
CAVING HANTHORN
540.0 DOLOSTONE, GY CR, 12 PERCENT POROSITY-INTERGRAN,
550.0 DOLOSTONE, GY CR, 12 PERCENT POROSITY-INTERGRAN, 50-90 PCT.
ALTERED, EUHEDRAL, SIZE- V F. RANGE- FINE-MICR, MOD IND,
BOLOM CNT,
CAVING HANTHORN
560.0 DOLOSTONE, SKYL CR, 10 PERCENT POROSITY-INTERGRAN, 90-99 PCT.
ALTERED, EUHEDRAL, SIZE-FINE. RANGE- FINE- V F, MOD IND,
BOLOM CNT,
TD

*** END OF DATA ***

USGS#467
OWNER : C. S. Nicks
LOCATION : 250' W of Cameron Ave. & 1 $\frac{1}{4}$ Mi S of
SR 46, 4 Mi SE of Sanford
COUNTY : Seminole
ELEVATION :
DRILLER : A. D. Rosier
STARTED : 5/14/52
COMPLETED : 5/14/52
DEPTH : 126'
CASING : 93' of 2"
HEAD : 6 or 7' above surface
YIELD : 25-50 GPM, flowing
QUALITY : Cl. 770 ppm, 5/14/52
USE : vegetable washing, condenser cooling
REMARKS : 5 samples rec., 95- 130'

"Well was drilled by jetting; could only save samples from material
penetrated below casing. I think we penetrated Moody's Branch Formation:"
Ralph Heath

Sample Intervals

95	100
100	105
110	120
120	125
125	130

W-2651
WSe-20S-30E-12bb

USGS# 468
OWNER : A. D. Abrams
LOCATION : 300' W of Sanford Ave. & 1.25 Mi S
of SR 46 at frame house on S side of
dirt St. -3 Mi S of Sanford PO
COUNTY : Seminole
ELEVATION :
DRILLER : M. G. Hodges
STARTED : May 1952
COMPLETED : May 1952
DEPTH : 133'
CASING : 109' of 2"
YIELD :
HEAD : 27'
QUALITY : 65 ppm on 5/12/52
USE : Domestic
REMARKS : 9 samples rec., 109-132' - No log

Sample Intervals

109	111
111	115
115	117
116	118
119	120
123	125
125	127
127	130
130	132

W-2652
(Driller's Log)
June 16, 1952

OWNER: City of Sanford, Sanford, Florida
LOCATION: 30' S of Ground Storage Reservoir
of Sanford Water Dept. at 13th
& French Avenue, 1 mile SW of
Sanford P.O., NW of NE, Sec. 36,
T19S, R30E.
COUNTY: Seminole
ELEVATION: 30' above sea level, Elev. of
top of 2" casing 1' above land
surface is 31.34.
STARTED: May 12, 1952
COMPLETED: May 13, 1952
CASING: 80' of 2"
DEPTH: 171'
DRILLER: M. G. Hodges, Sanford, Florida
HEAD: 7' below surface
YIELD: 40 GPM
DRAWDOWN: 3'
USE: Test Well
QUALITY: Cl. cont. 280 ppm, May 12, 1952.
REMARKS: 13 samples, 80-171, received
by express from Ralph Heath,
USGS, Sanford, Florida, June 9,
1952. 80' of casing was driven
into ground before drilling began.
When casing was jettied out it was
found to contain only 19' of material.
Since it was impossible to determine
what depth the material was from,
no samples were saved from the
casing.

80-82	Limestone and phosphate grains.
82-86	Limestone.
86-95	Avon Park limestone
95-97	Hard layer (probably chert).
97-106	Avon Park limestone.
106-107	Hard layer (probably chert).

107-118	Avon Park limestone.
118-119	Hard layer, (probably chert).
119-124	Limestone - Avon Park.
124-124.5	Hard layer.
124.5-130	Avon Park limestone.
130-131	Hard layer.
131-171	Avon Park limestone.

USGS# 471
OWNER : Roy Wall
LOCATION : 408 Virginia Ave., Sanford, Fla., 1
Mi s/se of Sanford PO
COUNTY : Seminole
ELEVATION :
DRILLER : Ernest Hamilton
STARTED : 5/16/52
COMPLETED : 5/16/52
DEPTH : 107'
CASING : 82' of 2"
YIELD : Flowing-20 GPM, 3' above LS
HEAD : 6.1' on 5/16/52
QUALITY : CL. 465 ppm on 5/16/52
USE : Lawn irrigation
REMARKS : 12 samples rec., 40 - 105'

Sample Intervals

40	45
45	55
50	60
55	65
70	80
80	83
85	90
90	93
90	95
95	100
100	105

LOG

81	84	Fine sand and shells- casing set on hard layer at 82'
89	90	Hard Layer- Limestone
90	107	Limestone

USGS# 477
OWNER : City of Sanford
LOCATION : 30' S of Ground Storage Reservoir at
SE cor. of 13th St & French Ave(see
USGS # 470- W-2652), 1 Mi SW
Sanford PO
COUNTY : Seminole
ELEVATION :
DRILLER : M. G. Hodges
STARTED : 5/23/52
COMPLETED : 5/26/52
DEPTH : 175'
CASING : 85' (38' of 16" & 85' of 12")
YIELD : 750 reported
HEAD : 7'
QUALITY : CL. 225 ppm, 5/27/52
USE : Public Supply
REMARKS : 25 samples rec., 25-175'

I was only able to stop by the well occasionally during the drilling so that I
could not keep a log- Driller did not keep a log either- signed: Ralph HeathUSGS

Sample Intervals

25	30
30	35
35	37
37	39
38	40
40	45
45	50
50	60
60	65
65	70
70	75
75	80
80	84
84	85
85	90
90	95
100	110
110	115
115	125
125	130
135	145
145	155
155	165
165	170
170	175

USGS# 478
OWNER : F. A. Dyson
LOCATION : At cabin on SE shore of Island Lake,
2 Mi S of Paola PO
COUNTY : Seminole
ELEVATION :
DRILLER : Ernest Hamilton
STARTED : 5/28/52
COMPLETED : 5/29/52
DEPTH : 48'
CASING : 31' of 2"
HEAD : 9'
YIELD : 5-10' GPM
QUALITY : Fresh
USE : Domestic
REMARKS : 8 samples rec., 31 - 48' - no log

Sample Intervals

31	
32	
35	
35	37
37	40
40	42
42	46 7.
48	

W-2656
WSe-19S-30E-35bd

USGS# 480
OWNER : Mrs. Lacy
LOCATION : S. side of 20th St., 1 Mi NW of Park
Ave. Sanford, 2 Mi SW of PO
COUNTY : Seminole
ELEVATION :
DRILLER : Ernest Hamilton
STARTED : 5/29/52
COMPLETED : 5/29/52
DEPTH : 122'
CASING : 93' of 2"
YIELD : 20 GPM
HEAD : 8'
QUALITY : ? Fresh
USE : Domestic
REMARKS : 10 samples rec., 50 - 124' - No log

Sample Intervals

50	60
60	70
75	80
84	
92	93
98	105
105	110
110	115
115	119
119	124

W-2657
WSe-19S-30E-36db

USGS# 481
OWNER : Howard Faville
LOCATION : 1813 Park Ave., Sanford, Fla., $1\frac{1}{2}$
Mi S of Sanford PO
COUNTY : Seminole
DRILLER : Ernest Hamilton
STARTED : 6/3/52
COMPLETED : 6/4/52
DEPTH : 154'
CASING : 109' of $2\frac{1}{2}$ "
HEAD : 23'
YIELD :
QUALITY : Fresh
USE : Lawn irrigation
REMARKS : 9 samples rec., 100 - 155'-No log
kept

Sample Intervals

100	106 (2)
106	108
107	109
109	110
110	112
114	116
125	140
145	150
150	155

W-2658
WSe-19S-29E-38

USGS# 482
OWNER : E. M. Cain
LOCATION : Between logs 1 & 8 in Block C of
Astor Farms, 2 Mi W of Lake
Monroe PO
COUNTY : Seminole
ELEVATION :
DRILLER : Ernest Hamilton
Started ; 1951
COMPLETED : "
DEPTH :
CASING :
YIELD :
QUALITY :
USE : Irrigation
REMARKS : 6 samples rec., 40 - 138' - No Log or
data

Sample Intervals

40
100
105
120
128
138

W-2660
USGS # 472 (Driller's Log)
June 18, 1952

OWNER: City of Sanford, Sanford, Florida
LOCATION: At NW/cor of 14th St. & Elm Ave.,
1 mile SW of P.O., NW of NE of
Sec. 36, T19S, R30E.
COUNTY: Seminole
STARTED: May 19, 1952
COMPLETED: May 21, 1952
ELEVATION: 32.85 - 1' above land surface -
top of 2" casing.
CASING: 82' of 2"
DEPTH: 206'
DRILLER: M. G. Hodges, Sanford, Florida
HEAD: 8' below surface
USE: Test well QUALITY: see water
YIELD: analysis
DRAWDOWN:
REMARKS: 24 samples 82-206', received from
Ralph Heath, USGS, Sanford, by
express, June 9, 1952. Geologic
record and water analysis.

82-85	Extremely hard layer
85-100	Avon Park limestone
100-101	Hard layer
101-104	Avon Park -- rel. hard 103-104.
104-106	Cavity.
106-107	Hard layer.
107-110	Avon Park limestone.
110-111	Hard layer.
111-113	Cavity.
113-114	Hard layer.
114-119	Avon Park.
119-120	Hard layer.
120-126	Avon Park limestone.

126-127	Hard layer.
134-134.5	Hard layer.
159-160	Thin hard layer.
164-166	2 thin hard layers.
166-167	Thin hard layer.
178-179	Thin hard layer.
180-181	Thin hard layer.
194-195	<u>Extremely</u> hard layer.

Chloride Content

<u>Depth of Well</u>	<u>PPM</u>
84	290)
107	295) Samples obtained from jet pipe
155	300)
189	310)
206	310)
206	295) After well had pumped 20 min. at 20 GPM

W-2722
(Driller's Log)
September 4, 1952

OWNER: Harden's Dairy, Sanford, Florida
LOCATION: Sanford, SW/4 SW/4 Sec. 32,
T19S, R31E
COUNTY: Seminole
ELEVATION: 36.4' Staton 1954
STARTED: June 25, 1952
COMPLETED: July 4, 1952
DEPTH: 255'
DRILLER: Central Florida Well Drillers,
Orlando, Florida
CASING: 21'1" of 12"; 22' 7" of 12"; 23'8"
of 12"; 22' of 12"; 9' of 12"
HEAD: 12'4" below surface
YIELD:
USE: Irrigation QUALITY: Fresh
REMARKS: 51 samples, 0-255', received by
express from Central Florida Well
Drillers, August 21, 1952, Orlando.
Driller's log.

0-2	Top soil
2-3	Hard pan
3-10	Sand
10-25	Sand
25-97	Green marl shells and clay
97-122	Brown lime
122-200	Hard meal lime
200-215	Soft lime
215-225	Hard lime
225-235	Soft lime
235-255	Hard lime

USGS# 489
OWNER : James Vajgl
LOCATION : 200' E of US 17 & 92, .1 Mi S of rd. to
Lake Mary, E of Mirror Lake, S of
Anderson Court, 2 Mi E of Lake Mary
COUNTY : Seminole
ELEVATION :
DRILLER : Ernest Hamilton
STARTED : 10/13/52
COMPLETED : 10/14/52
DEPTH : 102'
CASING : 83' of 2"
HEAD : 7'
YIELD
QUALITY : Cl. 54 ppm on 10/27/52
USE : Domestic
REMARKS : 11 samples rec., 0 - 100' - no log

Sample Intervals

0	15	
15	25	Inside casing (?)
25	40	Inside casing (?)
40	60	Inside casing (?)
60	70	"
70	75	"
80	84	"
84	85	
93		
95	96	
100		

USGS# 490
OWNER : Mattie Ayytch
LOCATION : . 23 Mi N of intersection of Church
St. with SR 46(25thSt) in Negro
settlement of "Midway", approx. 3
Mi SE of Sanford, Fla.
COUNTY : Seminole
ELEVATION :
DRILLER : M. G. Hodges
STARTED : 10/27/52
COMPLETED : 10/28/52
DEPTH : 106'
CASING : 86' of 2"
HEAD : 2.5'
YIELD :
QUALITY : Cl. 500 ppm on 10/27/52
USE : Domestic
REMARKS : 13 samples rec., 0 - 108' - Well was
drilled by jetting method- not
feasible to keep log(Ralph Heath)

Sample Intervals

0	5	Surface sample
0	10	Inside casing
10	20	"
20	40	"
30	50	"
45	65	"
55	70	"
60	75	"
80	85	"
86	93	
93	97	
97	103	
104	108	

USGS# 483
OWNER : Dr. D. L. Barks
LOCATION : on S. side of pump house at Bark's
residence on W side of Scott Ave, &
300' S of Lake Monroe in Sanford
COUNTY : Seminole
ELEVATION :
STARTED : 9/24/52
COMPLETED : 9/27/52
DRILLER : Ernest Hamilton
DEPTH : 136'
CASING : 93' of 3"
YIELD : Flowing - 75 GPM
HEAD : 15'
QUALITY : Cl. 530 ppm on 9/27/52
USE : Domestic & yard irrigation
REMARKS : 14 samples rec., 10 - 150' - Data*

*

Depth	CL cont. (ppm)	Temp.
100	530	73.9°F
136	510	"

I visited the well at irregular intervals during drilling and could not keep a log.
Ralph Heath

Sample Intervals

First 10' was filled from Lake Monroe

10	25	
20	40 (?)	
40	50	Inside casing
50	60	"
50	70	
93	94	
94	97	
97	104	
110	112	
115	120	
120	126	
129	134	
134	137	
140	150	

USGS#484

OWNER : Ethel Carpenter
LOCATION : In Bookertown, 0.55 Mi W of intersection at Lake Monroe of Orange Blvd. & Monroe Rd. & .18 Mi S of Orange Blvd. on E side of dirt St. at frame house. .5 Mi W of Lake Monroe
COUNTY : Seminole
ELEVATION :
STARTED : 9/26/52
COMPLETED : as above
DEPTH : 142'
CASING : 130' of 2"
YIELD : Flowing, 30 - 35 GPM
HEAD : 7.25'
QUALITY : Cl. 16 ppm on 10/29/52
USE : Domestic
REMARKS : 11 samples rec., 4 - 142', Log*

* Note from Mr. Heath- USGS: "Because this well was drilled by the jetting method it was not practical to keep a log. The bottom samples seem to indicate that the water is obtained from the shell and sand layer that overlies the limestone in Northern Seminole County.

Sample Intervals

* Inside Casing

4	35*
20	40*
50	80*
80	100*
90	110*
105	120*
120	130*
130	133
133	137
138	142

FLORIDA BUREAU OF GEOLOGY - LITHO LOG PRINTOUT. (PROGRAM FBG01)

W- 2792 (PERMIT NO-)
 SE. CO. T19S R30E SEC 20BB
 TOTAL DEPTH- 142 FT. ELEV.- 21FT. 11 SAMPLES- W- 142 FT.
 COMPLETED- 52.09.26

WELL NAME-
 ETHEL CARPENTER, LAKE MONROE

REMARKS-
 WORKED BY M. FILEWICZ
 0 - 133 FT. UNDIFF.
 133 - FT. AVON PARK

LITHOLOGIC LOG
 W- 2792. SE CO. T19S, R30E, SEC 20BB

35.0	SAND	V LT OR,	V LT GY,	35 PERCENT	POROSITY-INTERGRAN,
	POSS PERM, SIZE- MED,	RANGE-	FINE-CRSE,	SUB-ANG,	ANGULAR,
	MED SPH, NON-IND,	01 PCT.	PHOS SAND,		
40.0	AS ABOVE,				
80.0	SAND	OL GY,	DK GN GY,	28 PERCENT	POROSITY-INTERGRAN,
	POSS PERM, SIZE- MED,	RANGE-	FINE-CRSE,	SUB-ANG,	ANGULAR,
	MED SPH, POOR IND,	CLAY CMT,	10 PCT.	CLAY,	04 PCT.
	SILT, MD RECRY,				
100.0	SAND	V LT OR,	V LT GY,	35 PERCENT	POROSITY-INTERGRAN,
	POSS PERM, SIZE- MED,	RANGE-	FINE-CRSE,	SUB-ANG,	ANGULAR,
	MED SPH, NON-IND,	01 PCT.	PHOS SAND,		
110.0	SAND	V LT OR,	V LT GY,	35 PERCENT	POROSITY-INTERGRAN,
	POSS PERM, SIZE- MED,	RANGE-	FINE-CRSE,	SUB-ANG,	ANGULAR,
	MED SPH, NON-IND,	02 PCT.	PHOS SAND,		
115.0	SAND	V LT OR,	V LT GY,	35 PERCENT	POROSITY-INTERGRAN,
	POSS PERM, SIZE- MED,	RANGE-	FINE-CRSE,	SUB-ANG,	ANGULAR,
	MED SPH, NON-IND,	02 PCT.	PHOS SAND, MOLLUSKS,		
120.0	AS ABOVE,				
130.0	SHELL BED,	V LT OR,	MD LT GY,	33 PERCENT	POROSITY-INTERGRAN,
	POSS PERM, NON-IND,	02 PCT.	PHOS SAND,	04 PCT.	SAND (QTZ),
	MOLLUSKS,				
133.0	SHELL BED,	V LT OR,	MD LT GY,	33 PERCENT	POROSITY-INTERGRAN,
	POSS PERM, NON-IND,	02 PCT.	PHOS SAND,	04 PCT.	SAND (QTZ),
	MOLLUSKS, ECHINOID,				
137.0	CALCAREN,	YL GY,	V LT OR,	12 PERCENT	POROSITY-INTERGRAN,
	MOLDIC, P P VUGS, GRAINTYPE-	BIOGENIC,	SKELETAL,	90 PCT.	
	ALLOCHEMS, SIZE- MED,	RANGE-	FINE-CRSE,	MOD IND,	MICRT CMT,
	FORAMINIF, CONES, ECHINOID,	BRYOZOA,	MOLLUSKS,		
	FIRST OCTYOCONUS				
142.0	AS ABOVE,				
	TD				

*** END OF DATA ***

USGS# 492
OWNER : Marion Green
LOCATION : E. of frame house on E side of
Brisson Ave., 0.6 Mi S of SR 415
(Celery Ave), 2½ Mi SE of Sanford
COUNT Y : Seminole
ELEVATION :
DRILLER : M. G. Hodges
STAR TED : 11/30/52
COMPLETED : 11/30/52
DEPTH : 120'
CASING : 105' of 2"
HEAD : 5.3'
YIELD :
QUALITY : Cl. 510 ppm on 10/30/52
USE : Domestic
REMARKS : 12 samples rec., 0 - 120', No Log -
Well was drilled by jetting method.
Not feasible to keep log

Sample Intervals

0	10	Inside Casing
10	15	"
15	20	"
30	50	"
45	80	"
70	90	"
85	95	"
100	105	
110	115	
115	120	

W-2794
WSe-21S-29E-17bb
data: Ralph Heath

USGS# 487
OWNER : R. E. Pervis
LOCATION : .65 Mi W of Intersec. of Forest City
Rd & SR 426, 10' W of green con-
crete block house on W side of
Jewel Drive & 200' N of St. Rd 426,
4 Mi W of Altamonte Springs, Fla.
COUNTY : Seminole
ELEVATION :
DRILLER : G. M. Arie
STARTED : Oct. 1952
COMPLETED : 10/8/52
DEPTH : 123'
CASING : 72' of 2"
YIELD :
HEAD : 18 '
QUALITY : Cl. 13 ppm on 10/10/52
USE : Domestic
REMARKS : 2 samples rec., 105-118' - no log

Sample Intervals

105	110
115	118

NOTE: This well was already 105 feet deep when I saw that it was being drilled. I stopped and collected 2 samples in the remaining depth of the well. The driller reported that limestone was first hit at about 80'. This is probably about right although I cannot vouch for it.

Signed: Ralph Heath

OWNER : Stan J. Bury, Big Bear Lake
 (Lockhart)
 LOCATION : At Bury residence near NW
 shore of Bear Lake, 3 miles
 NW of Lockhart (Orange Co.)
 NE/4 SW/4 Sec. 18, T21S,
 R29E
 COUNTY : Seminole
 ELEVATION : 115.26 $\pm$ 11'
 STARTED : Oct. 7, 1952
 COMPLETED : Oct. 15 or 16, 1952
 DRILLER : F. F. French, Longwood, Fla.
 DEPTH : 233'
 CASING : 95' of 3"
 Casing seated on chert layer in
 Miocene clays
 HEAD : ?
 YIELD :
 USE : Domestic
 QUALITY : Cl. cont. 10 ppm on 10-27-52
 REMARKS: : 36 samples, 0-233', brought
 in by Ralph Heath, USGS,
 12-18-52.
 See driller's log.

0-5 Medium to coarse sand
 5-7 Hard pan. Iron oxide cementing sand -- extremely hard.
 7-17 Iron stained sand (Driller put drilling mud in well to hold sides open)
 17-19 Hard pan-probably similar to above.
 20-25 Iron stained sand, with organic matter
 30-35 Same
 35-38 Same
 38-55 Sticky blue clay, slightly sandy toward lower part
 55-60 Sticky blue clay with few small shells
 60-65 Very fine sand and shells. Probably old Caloosahatchee.
 65-70 Clay silt and shells
 73-78 Pebble (bone) phosphate, clay. Very coarse to medium quartz sand.
 78-81 Same, except sand now nearly all very coarse.
 81-95 Clay containing fine phosphate and sand.
 95-100 Chert - very hard - phosphate and clay. *First chert layer was hit at 95'.
 Was probably 2' thick. Several thin layers were hit down to 106 where
 easier drilling began. Considerable chert was present on down to at
 least 150' although it did not appear to be in very thick layers - if in
 layers at all. Water brought up by bailer when well was about 105'
 deep had a pungent odor like H₂S or SO₂.
 100-150 Phosphatic, sandy cherty clay.

- 150 Phosphatic, limey, cherty, sandy clay.
- 150-175 Cherty, slightly limey, phosphatic green sticky clay.
- 175-193 Same.
- 189-196 Clay, limestone, chert, sand phosphate limestone apparently hit at 193¹.
- 196-202 Cherty, phosphatic limestone. Well tested by pouring water in casing.
 Casing was easily filled - well not yet made.
- 202-212 Cherty, phosphatic limestone.

USGS# 509
OWNER : W. W. Linz
LOCATION : 200' S of Onora St. & .55 mi E of
Sanford Ave. (old Orlando Hwy. at
fruit packing house, $\frac{1}{4}$ Mi N of
Silver Lake, 3 Mi SE of Sanford PO
COUNTY : Seminole
ELEVATION :
DRILLER : Ernest Hamilton
STARTED : 11/8/52
COMPLETED : 11/8/52
DEPTH : 145'
CASING : 90' of 2"
YIELD :
HEAD : 27'
QUALITY : Cl. 83 ppm, 11/8/52
USE : Irrigation
REMARKS : 5 samples rec., 118-145'- no log

Sample Interval

118	122
122	124
124	130
130	140
140	145

C O P Y

ANALYSES BY GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF
THE INTERIOR
(Parts per million)

Laboratory No.	O 2993	O 2994
Date of collection	Nov. 5, 1953	Nov. 5, 1953
Silica (SiO ₂)	11	14
Iron(Fe) <u>1/</u>	.03	.7
Total Fe	.31	5.9
Calcium (Ca)	40	58
Magnesium (Mg)	9.3	7.4
Sodium (Na)	4.7	6.4
Potassium (K)	.6	2.0
Carbonate (CO ₃)	0	0
Bicarbonate (HCO ₃)	158	219
Sulfate (SO ₄)	1.8	2.2
Chloride (Cl)	8.5	7.0
Fluoride (F)	.2	.1
Nitrate (NO ₃)	.5	.1
Dissolved solids	158	204
Total hardness as CaCO ₃	138	175
Specific conductance (Micromhos at 25°C.)	270	351
Color	7	9
pH	7.3	7.3

1/ In solution at time of analysis.

Lab. No. O 2993. Well (drilled) #485, located 1 mi. South of Longwood, Seminole Co., Fla. owned by County Bd. of Education, Dyman School, Sanford, Fla.

Lab. No. O 2994. Drilled well (No. 85) Lake Mary, Seminole County, Fla. Owned by Harvey Pugh, Lake Mary, Fla.

OWNER : Ox Fiber Company, Benson Junction,
 Florida
 LOCATION : Benson Junction
 COUNTY : ~~Seminole~~ Volusia - A.E.B
 ELEVATION :
 STARTED : 9-17-52
 COMPLETED : 9-25-52
 DRILLER : Layne Atlantic Company,
 P. O. Box 2431
 Orlando, Florida
 DEPTH : 190'
 CASING : 83*8" of 10" pulled out
 HEAD : 31" below surface
 YIELD :
 USE : not used
 QUALITY : Red and salty
 REMARKS : 51 samples, 0-255', received by
 express on April 20, 1953, from D. Rudich, Layne
 Atlantic.

0-15 Sand
 15-21 Red clay and sand
 21-30 White clay and sand
 30-42 Sand
 42-55 White clay and sand
 55-60 Yellow clay Yellow water
 60-78 Lime soft
 78-80 Lime hard
 80-190 Lime soft

NOTE: Well not completed - pulled out all casing and abandoned well.

We drilled a second test well, but did not save samples. For your information, log is as follows:
 Started 9-25-52; Completed 10-10-52

0-5 White sand
 5-10 Yellow sand
 10-50 White clay and sand
 50-63 Light yellow clay and sand
 63-76 Light yellow clay and sand
 76-79 Hard lime rock
 79-160 Soft brown lime
 160-200 Soft brown lime
 200-205 Hard brown lime
 205-240 Medium hard brown lime
 240-255 Hard lime rock

water level 36*5"
 Pumped 100GPM - Salty; Pulled 78*8" of 10"
 casing; (all installed) out - abandoned well.

W-3084
WSe-
Driller's Data

OWNER : Reba K. V rnes
LOCATION : Highway 17-92, 3 Mi N of Maitland.

COUNTY : Seminole
ELEVATION : 90' (driller)
DRILLER : A. L. Thompson
STARTED : about 12/23/53
COMPLETED : 1/4/54
DEPTH : 204'
CASING : 113' of 4" black
YIELD : 40 GPM
HEAD : 43'
QUALITY : Fresh
USE : Trailer Park
REMARKS : 9 samples rec., 50 - 204'

Note from Driller- "I enclosed a well
data sheet in the box with the cuttings
sent on to Jacksonville, State Board
of Health- The above is just from
memory as I have no copy"

50	55
70	75
90	95
110	115
130	135
150	155
170	175
190	195
204	

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-3188
TOTAL DEPTH: 140 FT.
5 SAMPLES FROM 75 TO 100 FT.

COUNTY - SEMIN
LOCATION: T.20S R.31E S.34 DC
LAT = 28D 41M 57S
LON = 81D 12M 30S

COMPLETION DATE: 03/29/54
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 17 FT

OWNER/DRILLER:USGS WELL #607

WORKED BY:STEPHEN L. PALMES

0. - 74. 000NOSM NO SAMPLES
74. - . 124OCAL OCALA GROUP

0 - 74 NO SAMPLES

74 - 75 LIMESTONE; GRAYISH YELLOW TO VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, SKELTAL CAST, CALCILUTITE
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY COARSE; RANGE: MICROCRYSTALLINE TO GRAVEL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-02%
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, BRYOZOA
FOSSIL MOLDS
LEPIDOCYCLINA COMMON; NUMMULITES AND ORBULINA PRESENT; 20%
OF SAMPLE IS UNCONSOLIDATED QUARTZ SAND.

75 - 79 NO SAMPLES

79 - 80 LIMESTONE; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR, INTRAGRANULAR
GRAIN TYPE: SKELETAL, BIOGENIC
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO VERY COARSE
MODERATE INDURATION
CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-04%
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, FOSSIL MOLDS
NUMMULITES AND LEPIDOCYCLINA PRESENT; 15% OF SAMPLE IS
UNCONSOLIDATED QUARTZ SAND.

80 - 84 NO SAMPLES

- 84 - 85 LIMESTONE; VERY LIGHT ORANGE TO VERY LIGHT GRAY
20% POROSITY: INTERGRANULAR, INTRAGRANULAR, PIN POINT VUGS
GRAIN TYPE: SKELETAL, CRYSTALS, SKELETAL CAST
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM
RANGE: CRYPTOCRYSTALLINE TO VERY COARSE
MODERATE INDURATION
CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-10%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS, CORAL
- 85 - 87 NO SAMPLES
- 87 - 88 LIMESTONE; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, CRYSTALS, CALCILUTITE
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-12%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL MOLDS
NUMMULITES PRESENT; 25% OF SAMPLE IS UNCONSOLIDATED QUARTZ SAND
- 88 - 94 NO SAMPLES
- 94 - 100 LIMESTONE; GRAYISH ORANGE
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
GRAIN TYPE: SKELETAL, CRYSTALS, CALCILUTITE
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-06%
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, MOLLUSKS
- 100 - 140 NO SAMPLES
- 140 TOTAL DEPTH

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-3188
TOTAL DEPTH: 140 FT.
5 SAMPLES FROM 75 TO 100 FT.

COUNTY - W3188
LOCATION: T.20S R.31E S.34 DC
LAT = 28D 41M 57S
LON = 81D 12M 30S

COMPLETION DATE: 03/29/54
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 17 FT

OWNER/DRILLER:USGS WELL #607

WORKED BY:STEPHEN L. PALMES

0. - 74. 000NOSM NO SAMPLES
74. - 100. 124OCAL OCALA GROUP

0 - 74 NO SAMPLES

74 - 75 LIMESTONE; GRAYISH YELLOW TO VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, SKELTAL CAST, CALCILUTITE
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY COARSE; RANGE: MICROCRYSTALLINE TO GRAVEL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-02%
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, BRYOZOA
FOSSIL MOLDS
LEPIDOCYCLINA COMMON; NUMMULITES AND ORBULINA PRESENT; 20%
OF SAMPLE IS UNCONSOLIDATED QUARTZ SAND.

75 - 79 NO SAMPLES

79 - 80 LIMESTONE; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR, INTRAGRANULAR
GRAIN TYPE: SKELETAL, BIOGENIC
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO VERY COARSE
MODERATE INDURATION
CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-04%
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, FOSSIL MOLDS
NUMMULITES AND LEPIDOCYCLINA PRESENT; 15% OF SAMPLE IS
UNCONSOLIDATED QUARTZ SAND.

80 - 84 NO SAMPLES

- 84 - 85 LIMESTONE; VERY LIGHT ORANGE TO VERY LIGHT GRAY
20% POROSITY: INTERGRANULAR, INTRAGRANULAR, PIN POINT VUGS
GRAIN TYPE: SKELETAL, CRYSTALS, SKELTAL CAST
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM
RANGE: CRYPTOCRYSTALLINE TO VERY COARSE
MODERATE INDURATION
CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-10%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS, CORAL
- 85 - 87 NO SAMPLES
- 87 - 88 LIMESTONE; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, CRYSTALS, CALCILUTITE
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-12%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL MOLDS
NUMMULITES PRESENT; 25% OF SAMPLE IS UNCONSOLIDATED QUARTZ
SAND
- 88 - 94 NO SAMPLES
- 94 - 100 LIMESTONE; GRAYISH ORANGE
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
GRAIN TYPE: SKELETAL, CRYSTALS, CALCILUTITE
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-06%
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, MOLLUSKS
- 100 - 140 NO SAMPLES
- 140 TOTAL DEPTH

W-3188
WSe-20S-31E-34dc
data;J. Barraclough

USGS# 604
OWNER : Alex Leinhart
LOCATION : 2.1 Mi N & .05 mi E of Cen. of
Oviedo-125' N of Howard Ave., 2.1
Mi N of Oviedo, Fla. PO
COUNTY : Seminole
ELEVATION :
DRILLER : Leon Branton
STARTED : Jan. 1953
COMPLETED : Jan. 1953
DEPTH : 125 '
CASING : 74' of 2"
YIELD : 75 - 100 GPM Flowing, rising +12.7'
QUALITY : Cl. 32- ppm, slight H₂S odor
USE : Irrigation
REMARKS : 5 samples rec., 75 - 100'- no log

Sample Intervals

75	
80	
85	
88	
95	100

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-3189
TOTAL DEPTH: 140 FT.
15 SAMPLES FROM 15 TO 140 FT.

COUNTY - SEMIN
LOCATION: T.20S R.31E S.35
LAT = 28D 41M 57S
LON = 81D 11M 21S

COMPLETION DATE: 12/27/52
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 8 FT

OWNER/DRILLER:USGS WELL #591; R.W. BAKER

WORKED BY:STEPHEN L. PALMES

0.	-	14.	000NOSM	NO SAMPLES
15.	-	44.	121PCPC	PLIOCENE-PLEISTOCENE
44.	-	95.	122HTRN	HAWTHORN GROUP
96.	-	124.	000NOSM	NO SAMPLES
125.	-	.	124OCAL	OCALA GROUP
0	-	15	NO SAMPLES	
15	-	20	PEAT; DARK GRAY TO GRAYISH YELLOW 25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY UNCONSOLIDATED ACCESSORY MINERALS: QUARTZ SAND-25%, MICA-01% FINE GRAINED QUARTZ SAND, SUBANGULAR TO SUBROUNDED.	
20	-	30	NO SAMPLES	
30	-	40	SAND; MODERATE YELLOWISH BROWN 25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY GRAIN SIZE: MEDIUM; RANGE: VERY FINE TO COARSE ROUNDNESS: ROUNDED TO SUB-ANGULAR; MEDIUM SPHERICITY UNCONSOLIDATED ACCESSORY MINERALS: HEAVY MINERALS-01%, IRON STAIN-%	
40	-	44	SAND; MODERATE YELLOWISH BROWN 25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY GRAIN SIZE: FINE; RANGE: VERY FINE TO MEDIUM MEDIUM SPHERICITY; UNCONSOLIDATED ACCESSORY MINERALS: HEAVY MINERALS-01%, IRON STAIN- % MICA-%	
44	-	50	SAND; VERY LIGHT ORANGE 25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY INTRAGRANULAR GRAIN SIZE: COARSE; RANGE: FINE TO VERY COARSE MEDIUM SPHERICITY; UNCONSOLIDATED ACCESSORY MINERALS: SHELL-25%, PHOSPHATIC SAND-01% OTHER FEATURES: CALCAREOUS FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS SHELLS ARE BROKEN; GASTROPODS PRESENT.	

- 50 - 60 SHELL BED; VERY LIGHT ORANGE TO LIGHT GRAY
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY; UNCONSOLIDATED
ACCESSORY MINERALS: QUARTZ SAND-20%, LIMESTONE-01%
PHOSPHATIC SAND-01%
OTHER FEATURES: CALCAREOUS
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS
SHELLS ARE BROKEN AND ABRADED; GASTROPODS PRESENT
- 60 - 63 LIMESTONE; YELLOWISH GRAY TO DARK GRAY
15% POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CRYSTALS; 10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): SPARRY CALCITE CEMENT
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-15%, QUARTZ SAND-08%
PHOSPHATIC SAND-02%
OTHER FEATURES: CALCAREOUS, HIGH RECRYSTALLIZATION
10% OF SAMPLE IS PHOSPHATIC SAND CEMENTED WITH SPAR
CALCITE.
- 63 - 68 LIMESTONE; LIGHT OLIVE
15% POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CRYSTALS; 15% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO FINE; MODERATE INDURATION
CEMENT TYPE(S): SPARRY CALCITE CEMENT
ACCESSORY MINERALS: QUARTZ SAND-03%, PHOSPHATIC SAND-02%
PHOSPHATIC GRAVEL-02%
OTHER FEATURES: CALCAREOUS, HIGH RECRYSTALLIZATION
- 68 - 72 NO SAMPLES
- 72 - 75 SAND; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR
GRAIN SIZE: MEDIUM
ROUNDNESS: SUB-ROUNDED TO SUB-ANGULAR; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: LIMESTONE-20%, PHOSPHATIC SAND-10%
OTHER FEATURES: CALCAREOUS
- 75 - 80 SILT; GRAYISH YELLOW
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: CALCILUTITE-20%
OTHER FEATURES: CALCAREOUS
PHOSPHATIC SILT 2%
- 80 - 94 NO SAMPLES

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-3189
TOTAL DEPTH: 140 FT.
15 SAMPLES FROM 15 TO 140 FT.

COUNTY - W3189
LOCATION: T.20S R.31E S.35
LAT = 28D 41M 57S
LON = 81D 11M 21S

COMPLETION DATE: 12/27/52
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 8 FT

OWNER/DRILLER:USGS WELL #591; R.W. BAKER

WORKED BY:STEPHEN L. PALMES

0.	-	14.	000NOSM	NO SAMPLES
15.	-	44.	121PCPC	PLIOCENE-PLEISTOCENE
44.	-	95.	122HTRN	HAWTHORN GROUP
96.	-	124.	000NOSM	NO SAMPLES
125.	-	140.	124OCAL	OCALA GROUP
0	-	15	NO SAMPLES	
15	-	20	PEAT; DARK GRAY TO GRAYISH YELLOW 25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY UNCONSOLIDATED ACCESSORY MINERALS: QUARTZ SAND-25%, MICA-01% FINE GRAINED QUARTZ SAND, SUBANGULAR TO SUBROUNDED.	
20	-	30	NO SAMPLES	
30	-	40	SAND; MODERATE YELLOWISH BROWN 25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY GRAIN SIZE: MEDIUM; RANGE: VERY FINE TO COARSE ROUNDNESS: ROUNDED TO SUB-ANGULAR; MEDIUM SPHERICITY UNCONSOLIDATED ACCESSORY MINERALS: HEAVY MINERALS-01%, IRON STAIN-%	
40	-	44	SAND; MODERATE YELLOWISH BROWN 25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY GRAIN SIZE: FINE; RANGE: VERY FINE TO MEDIUM MEDIUM SPHERICITY; UNCONSOLIDATED ACCESSORY MINERALS: HEAVY MINERALS-01%, IRON STAIN- % MICA-%	
44	-	50	SAND; VERY LIGHT ORANGE 25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY INTRAGRANULAR GRAIN SIZE: COARSE; RANGE: FINE TO VERY COARSE MEDIUM SPHERICITY; UNCONSOLIDATED ACCESSORY MINERALS: SHELL-25%, PHOSPHATIC SAND-01% OTHER FEATURES: CALCAREOUS FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS SHELLS ARE BROKEN; GASTROPODS PRESENT.	

- 50 - 60 SHELL BED; VERY LIGHT ORANGE TO LIGHT GRAY
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY; UNCONSOLIDATED
ACCESSORY MINERALS: QUARTZ SAND-20%, LIMESTONE-01%
PHOSPHATIC SAND-01%
OTHER FEATURES: CALCAREOUS
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS
SHELLS ARE BROKEN AND ABRADED; GASTROPODS PRESENT
- 60 - 63 LIMESTONE; YELLOWISH GRAY TO DARK GRAY
15% POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CRYSTALS; 10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): SPARRY CALCITE CEMENT
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-15%, QUARTZ SAND-08%
PHOSPHATIC SAND-02%
OTHER FEATURES: CALCAREOUS, HIGH RECRYSTALLIZATION
10% OF SAMPLE IS PHOSPHATIC SAND CEMENTED WITH SPAR
CALCITE.
- 63 - 68 LIMESTONE; LIGHT OLIVE
15% POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CRYSTALS; 15% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO FINE; MODERATE INDURATION
CEMENT TYPE(S): SPARRY CALCITE CEMENT
ACCESSORY MINERALS: QUARTZ SAND-03%, PHOSPHATIC SAND-02%
PHOSPHATIC GRAVEL-02%
OTHER FEATURES: CALCAREOUS, HIGH RECRYSTALLIZATION
- 68 - 72 NO SAMPLES
- 72 - 75 SAND; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR
GRAIN SIZE: MEDIUM
ROUNDNESS: SUB-ROUNDED TO SUB-ANGULAR; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: LIMESTONE-20%, PHOSPHATIC SAND-10%
OTHER FEATURES: CALCAREOUS
- 75 - 80 SILT; GRAYISH YELLOW
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: CALCILUTITE-20%
OTHER FEATURES: CALCAREOUS
PHOSPHATIC SILT 2%
- 80 - 94 NO SAMPLES

- 94 - 95 LIMESTONE; YELLOWISH GRAY TO MODERATE GRAY
10% POROSITY: INTERCRYSTALLINE, LOW PERMEABILITY
GRAIN TYPE: CRYSTALS; 05% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): SPARRY CALCITE CEMENT
ACCESSORY MINERALS: PHOSPHATIC SAND-20%, QUARTZ SAND-07%
QUARTZ AND PHOSPHATIC SAND GRAINS ARE CEMENTED WITH SPAR
CALCITE.
- 95 - 124 NO SAMPLES
- 124 - 125 GRAINSTONE; VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, SKELTAL CAST, CALCILUTITE
95% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: GRAVEL; RANGE: MICROCRYSTALLINE TO GRAVEL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, ECHINOID
FOSSIL MOLDS
LEPIDOCYCLINA ABUNDANT; ORBULINA PRESENT; GASTROPODS
PRESENT. THIS SAMPLE WAS TAKEN AT A DEPTH OF 125 FEET AND
DOES NOT CORRESPOND TO AN INTERVAL. THE CONTACT BETWEEN THE
OCALA LIMESTONE AND THE HAWTHORNE GROUP IS ARBITRARILY
PLACED AT A DEPTH OF 125 FEET; BUT COULD OCCUR AS SHALLOW
AS 96 FEET.
- 125 - 139 NO SAMPLES
- 139 - 140 LIMESTONE; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR
GRAIN TYPE: SKELETAL, CRYSTALS
45% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO VERY COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SPARRY CALCITE CEMENT
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, FOSSIL FRAGMENTS
NUMMULITES ABUNDANT; LEPIDOCYCLINA COMMON
- 140 TOTAL DEPTH

W-3189
WSe-20S-31E-35
Data; J. Barraclough

USGS# 591
OWNER : R. W. Baker
LOCATION : .05 Mi E & .05 Mi N of intersection
of Hammock & Howard Ave., 2.4 Mi
NE of Oviedo PO
COUNTY : Seminole
ELEVATION :
DRILLER : L. H. Deason
STARTED : 12/12/52
COMPLETED : 12/27/52
DEPTH : 200'
CASING : 65.5' of 8"
YIELD : 300-400 GPM Flowing-rises + 17'
HEAD :
QUALITY : Chl. 755 ppm
USE : Irrigation
REMARKS : 15 samples rec., 15 - 180' - no log

Sample Intervals

15	20	
30	40	
40	50	Inside casing
44		
45	50	
50	55	
55	60	
60	63	Core that rose up casing (see photograph)?
63	68	
72	75	
75	80	
95		
125		
140		May be caving from above
180		

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-3190
TOTAL DEPTH: 156 FT.
9 SAMPLES FROM 55 TO 156 FT.

COUNTY - SEMIN
LOCATION: T.21S R.31E S.01 CA
LAT = 28D 41M 44S
LON = 81D 10M 41S

COMPLETION DATE: 03/29/54
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 10 FT

OWNER/DRILLER:USGS #571; CRC COUNTS

WORKED BY:STEPHEN L. PALMES

0. - 55. 000NOSM NO SAMPLES
55. - 128. 124OCAL OCALA GROUP
128. - . 124AVPK AVON PARK FM.

0 - 54 NO SAMPLES

54 - 55 LIMESTONE; VERY LIGHT ORANGE TO LIGHT GRAY
20% POROSITY: INTERGRANULAR, INTRAGRANULAR
GRAIN TYPE: SKELETAL, CALCILUTITE
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY COARSE; RANGE: MICROCRYSTALLINE TO GRAVEL
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, ECHINOID
FOSSIL FRAGMENTS
NUMMULITES PRESENT; LEPIDOCYCLINA PRESENT ABOUT 20% OF
SAMPLE IS UNCONSOLIDATED QUARTZ SAND.

55 - 99 NO SAMPLES

99 - 100 LIMESTONE; VERY LIGHT ORANGE TO LIGHT GRAY
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, CALCILUTITE
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: GRAVEL; RANGE: MICROCRYSTALLINE TO GRAVEL
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, FOSSIL FRAGMENTS
CORAL
LEPIDOCYCLINA COMMON; NUMMULITES PRESENT

100 - 104 NO SAMPLES

- 104 - 105 PACKSTONE; VERY LIGHT ORANGE
 20% POROSITY: INTERGRANULAR, INTRAGRANULAR
 GRAIN TYPE: SKELETAL, BIOGENIC, CALCILUTITE
 80% ALLOCHEMICAL CONSTITUENTS
 GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO GRAVEL
 MODERATE INDURATION
 CEMENT TYPE(S): CALCILUTITE MATRIX
 ACCESSORY MINERALS: SPAR-02%
 FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, FOSSIL FRAGMENTS
 NUMMULITES PRESENT
- 105 - 110 GRAINSTONE; VERY LIGHT ORANGE
 25% POROSITY: INTERGRANULAR, INTRAGRANULAR
 POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: SKELETAL; 90% ALLOCHEMICAL CONSTITUENTS
 GRAIN SIZE: VERY COARSE; RANGE: MICROCRYSTALLINE TO GRAVEL
 MODERATE INDURATION
 CEMENT TYPE(S): CALCILUTITE MATRIX
 ACCESSORY MINERALS: SPAR-04%
 FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, FOSSIL MOLDS
 BARNACLES
 NUMMULITES PRESENT; ORBULINA PRESENT
- 110 - 112 AS ABOVE
- 112 - 121 NO SAMPLES
- 121 - 125 PACKSTONE; YELLOWISH GRAY
 20% POROSITY: INTERGRANULAR, INTRAGRANULAR
 GRAIN TYPE: SKELETAL, BIOGENIC, PELLET
 75% ALLOCHEMICAL CONSTITUENTS
 GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO GRAVEL
 MODERATE INDURATION
 CEMENT TYPE(S): CALCILUTITE MATRIX
 ACCESSORY MINERALS: SPAR-08%
 OTHER FEATURES: MEDIUM RECRYSTALLIZATION
 FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, ECHINOID
- 125 - 128 NO SAMPLES
- 128 - 130 PACKSTONE; VERY LIGHT ORANGE
 25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: SKELETAL, CALCILUTITE, CRYSTALS
 85% ALLOCHEMICAL CONSTITUENTS
 GRAIN SIZE: COARSE; RANGE: MICROCRYSTALLINE TO VERY COARSE
 MODERATE INDURATION
 CEMENT TYPE(S): CALCILUTITE MATRIX
 FOSSILS: ECHINOID, CONES, BRYOZOA, BENTHIC FORAMINIFERA
- 130 - 139 NO SAMPLES

- 139 - 140 PACKSTONE; VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, CALCILUTITE
85% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: FINE TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: ECHINOID, BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
BRYOZOA
- 140 - 155 NO SAMPLES
- 155 - 156 GRAINSTONE; VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, PELLET
90% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-02%
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: ECHINOID, FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
CARBONATE ALLOCHEMS ARE ABRADED.
- 156 TOTAL DEPTH

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-3190
TOTAL DEPTH: 156 FT.
9 SAMPLES FROM 55 TO 156 FT.

COUNTY - W3190
LOCATION: T.21S R.31E S.01 CA
LAT = 28D 41M 44S
LON = 81D 10M 41S

COMPLETION DATE: 03/29/54
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 10 FT

OWNER/DRILLER:USGS #571; CRC COUNTS

WORKED BY:STEPHEN L. PALMES

0. - 55. 000NOSM NO SAMPLES
55. - 128. 124OCAL OCALA GROUP
128. - 156. 124AVPK AVON PARK FM.

0 - 54 NO SAMPLES

54 - 55 LIMESTONE; VERY LIGHT ORANGE TO LIGHT GRAY
20% POROSITY: INTERGRANULAR, INTRAGRANULAR
GRAIN TYPE: SKELETAL, CALCILUTITE
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY COARSE; RANGE: MICROCRYSTALLINE TO GRAVEL
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, ECHINOID
FOSSIL FRAGMENTS
NUMMULITES PRESENT; LEPIDOCYCLINA PRESENT ABOUT 20% OF
SAMPLE IS UNCONSOLIDATED QUARTZ SAND.

55 - 99 NO SAMPLES

99 - 100 LIMESTONE; VERY LIGHT ORANGE TO LIGHT GRAY
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, CALCILUTITE
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: GRAVEL; RANGE: MICROCRYSTALLINE TO GRAVEL
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, FOSSIL FRAGMENTS
CORAL
LEPIDOCYCLINA COMMON; NUMMULITES PRESENT

100 - 104 NO SAMPLES

- 104 - 105 PACKSTONE; VERY LIGHT ORANGE
 20% POROSITY: INTERGRANULAR, INTRAGRANULAR
 GRAIN TYPE: SKELETAL, BIOGENIC, CALCILUTITE
 80% ALLOCHEMICAL CONSTITUENTS
 GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO GRAVEL
 MODERATE INDURATION
 CEMENT TYPE(S): CALCILUTITE MATRIX
 ACCESSORY MINERALS: SPAR-02%
 FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, FOSSIL FRAGMENTS
 NUMMULITES PRESENT
- 105 - 110 GRAINSTONE; VERY LIGHT ORANGE
 25% POROSITY: INTERGRANULAR, INTRAGRANULAR
 POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: SKELETAL; 90% ALLOCHEMICAL CONSTITUENTS
 GRAIN SIZE: VERY COARSE; RANGE: MICROCRYSTALLINE TO GRAVEL
 MODERATE INDURATION
 CEMENT TYPE(S): CALCILUTITE MATRIX
 ACCESSORY MINERALS: SPAR-04%
 FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, FOSSIL MOLDS
 BARNACLES
 NUMMULITES PRESENT; ORBULINA PRESENT
- 110 - 112 AS ABOVE
- 112 - 121 NO SAMPLES
- 121 - 125 PACKSTONE; YELLOWISH GRAY
 20% POROSITY: INTERGRANULAR, INTRAGRANULAR
 GRAIN TYPE: SKELETAL, BIOGENIC, PELLET
 75% ALLOCHEMICAL CONSTITUENTS
 GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO GRAVEL
 MODERATE INDURATION
 CEMENT TYPE(S): CALCILUTITE MATRIX
 ACCESSORY MINERALS: SPAR-08%
 OTHER FEATURES: MEDIUM RECRYSTALLIZATION
 FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, ECHINOID
- 125 - 128 NO SAMPLES
- 128 - 130 PACKSTONE; VERY LIGHT ORANGE
 25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: SKELETAL, CALCILUTITE, CRYSTALS
 85% ALLOCHEMICAL CONSTITUENTS
 GRAIN SIZE: COARSE; RANGE: MICROCRYSTALLINE TO VERY COARSE
 MODERATE INDURATION
 CEMENT TYPE(S): CALCILUTITE MATRIX
 FOSSILS: ECHINOID, CONES, BRYOZOA, BENTHIC FORAMINIFERA
- 130 - 139 NO SAMPLES

- 139 - 140 PACKSTONE; VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, CALCILUTITE
85% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: FINE TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: ECHINOID, BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
BRYOZOA
- 140 - 155 NO SAMPLES
- 155 - 156 GRAINSTONE; VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, PELLET
90% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-02%
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: ECHINOID, FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
CARBONATE ALLOCHEMS ARE ABRADED.
- 156 TOTAL DEPTH

W-3190
WSe-21S-31E-1ca
data;J. Barraclough

USGS# 571
OWNER : C. R. Clonts
LOCATION : 0.23 Mi S & o.13 Mi E of intersection
of Howard & Oklahoma Streets, 3 mi
NW of Oviedo, Fla. PO
COUNTY : Seminole
ELEVATION :
DRILLER : G. M. Arie
STARTED : Dec. 1952
COMPLETED : Dec. 1952
DEPTH : 156'
CASING : 53' of 6"
YIELD : 90 GPM flowing
HEAD : 8.0 meas. 1/1/53
QUALITY : Chl. 700 ppm
USE : Irrigation
REMARKS : 9 samples rec., 55 - 156', - no log

Sample Intervals

55	
100	
105	
105	110
108	112
122	125
129	130
140	
156	

W-3191
WSe-20S-30E-10
data; J. Barraclough

USGS# 603
OWNER : A. B. Peterson, Jr.
LOCATION : W on Lake Mary Blvd. from US 17 &
92, 0.42 Mi N - on S shore of Loch
Lou, 4.0 Mi SW of Sanford, Fla. PO
COUNTY : Seminole
ELVATION :
DRILLER : Ernest Hamilton
STARTED : 1/13/53
COMPLETED : 1/13/53
DEPTH : 89'
CASING : 70' of 2"
YIELD :
HEAD : -9' meas. 1/14/53
QUALITY : Water has high iron content
USE : Domestic
REMARKS : 10 samples rec., 30- 90'- no log

Sample Intervals

30	40	
40	60	
55	60	
65	68	
68	70	Cavity 69-70
69	71	Mostly cavity filling
70	72	Cavity filling
72	75	Cavity filling
82	87	
87	90	

OWNER : A. B. Peterson
LOCATION : .09 mi. N. of Lake Mary Blvd., along U.S.
17 & 92. 150' W. of Hwy.
COUNTY : Seminole
DRILLER : Ernest Hamilton, Lake Monroe, Fla.
STARTED : Sept. 29, 1953
COMPLETED : Sept. 30, 1953
DEPTH : 117'
CASING : 88' of 2"
YIELD : 18 GPM Pumping
USE : Nursery irrigation
QUALITY : Fresh
REMARKS : 12 samples, 55-117', received from Ralph
Heath, U.S.G.S., Tallahassee, 3/29/54.

Hit small flow of water at 92'
Struck small (6"-8") cavity at 105'
Honey comb rock structure 114-117'

W-3193
WSe-21S-31E-6dd
data;J. Barraclough

USGS# 586
OWNER : W. R. Dyson
LOCATION : 1.15 Mi SE on SR 419 from intersection
of 419 & Tuskawilla-Galbrieth Rd.,
Near Howell Creek, 2½ Mi NW of
Oviedo, Fla. PO
COUNTY : Seminole
ELEVATION :
DRILLER : Leon Brantley
STARTED : Jan. 1953
COMPLETED : Jan 1953
DEPTH : 90'
CASING : 73' of 2"
YIELD : Flowing 40 GPM
HEAD : 31.3' meas.1/8/53
QUALITY : Chl. 86 ppm
USE : Domestic
REMARKS : 11 samples rec., 0 - 85' - No log

Sample Intervals

0	15	Inside casing
10	15	"
10	20?	"
20	30	"
30	45?	"
45	55	"
55	65	"
65	70	"
73	77	"
75	80	"
80	85	

W-3195
WSe-21S-31E-28ba
data;J. Barraclough

USGS# 539
OWNER : B. F. Wheeler
LOCATION : 0.60 Mi E and 0.23 Mi S of
Lutheran Children's home on SR426,
2.75 Mi SW Oviedo, Fla. PO
COUNTY : Seminole
ELEVATION :
DRILLER : G. M. Arie
STARTED : Dec. 1952
COMPLETED : Dec. 1952
YIELD : 350 GPM-Flow
DEPTH : 240'
CASING : 117' of 6"
HEAD : 7.1' Meas. 1/27/53
QUALITY : Chl. 20 ppm
USE : Irrigation
REMARKS : 11 samples rec., 63 - 240' - no log

Sample Intervals

63		
104		
120		
130		
135		
140		
135	145	Material caved in over-night
145	150	Some caving
155	160	
180	185	
200		
240		

Limestone hit about 112-114'

W-3196
WSe-19S-30E-33bb
data:J. Barraclough

USGS# 588
OWNER : Ernest Lavy
LOCATION : 0.1 Mi E and 0.8 Mi N on intersection
of Sanford-Paola Rd with Country
Club Rd, $3\frac{1}{4}$ MiSW of Sanford, Fla.
COUNTY : Seminole
ELEVATION :
DRILLER : Ernest Hamilton
STARTED : Dec. 1952
COMPLETED : Dec. 1952
DEPTH : 105'
CASING : 82' of 2"
YIELD :
HEAD : -7.25' meas. 1/12/53
QUALITY : Fresh; Chl. 11 ppm
USE : Domestic
REMARKS : 5 samples rec., 75 - 105' - No log

Sample Intervals

75	
80	
85	
90	
100	105

W-3197
WSe-20S-30E-14
data:J. Barraclough

USGS# 590
OWNER : j. L. Darnell
LOCATION : 4.7 Mi S along US 17 & 92 from Cen.
- of Sanford toward Orlando, 4.7 Mi
SSW of Sanford, Fla. PO
COUNTY : Seminole
ELEVATION :
DRILLER : Ernest Hamilton
STARTED : Jan. 1953
COMPLETED : Jan. 1953
DEPTH : 80'
CASING : 72' of 2"
HEAD : -5.8' Meas., 1/6/53
QUALITY : Chl. 425 ppm
USE : Domestic
REMARKS : 10 samples rec. from Ralph Heath,
USGS, 5 - 80'

Sample Intervals

5	15
15	25
20	35
30	50
40	60
65	73
73	76
76	78
77	80
80	

PERMIT # 851

OWNER : Charles Krueger
LOCATION : Lake Mary Water Works, Lake
Mary, Fla., $1\frac{1}{2}$ E of Lake Mary
COUNTY : Seminole
ELEVATION :
DRILLER : F. F. French
STARTED :
COMPLETED :
DEPTH : 202'
YIELD : 100 GPM
HEAD : 14'
CASING : 71' of 4"
QUALITY : Fresh
USE : Town Supply
REMARKS : 14 samples rec., from Farm &
Home Machinery Co, 60 - 205'

Out of casing into brown Lime Rock which turned white as drilling progressed, No water at 190'.

Very white Limerock from 190' to 202'

4' cavity at 198'

Sample Intervals

60	70
70	80
80	90
90	100
100	110
110	120
120	130
130	140
140	150
150	160
160	170
170	180
180	190
190	205

W-3356
Driller's Log

OWNER : Casselberry Utilities Co.
LOCATION : Casselberry, Fla.
COUNTY : Seminole, SE $\frac{1}{4}$, SW $\frac{1}{4}$, S16, T21 S
ELEVATION : 62.32 Grd. (Lyles 6-11-62) R30E
DRILLER : Farm & Home Machinery Co.
by Central Florida Well Drillers
STARTED :
COMPLETED :
DEPTH : 300'
CASING : 182' of 8"
HEAD : 12'
YIELD :
USE : Domestic
DRAWDOWN :
QUALITY : Fresh
REMARKS : 29 samples, 0-300', received by
express from Central Florida Well
Drillers, Orlando, Driller for
Farm & Home Machinery Co.

0-5	Sand
5-30	Brown hard pan
30-50	Sand
50-90	Rock and white marl
90-108	Marl and boulders
108-117	White lime
117-159	Limestone
159-167	Gravel and water
167-171	Quick sand
171-182	Sand and lime
182-201	Limestone and water
201-281	Hard and soft limestone
281-295	Limestone and water
295-300	Hard brown lime

W-3406

WSe-

USGS # 838

LOCATION

: Phillips Property #2, Lockharbor
 $\frac{1}{4}$ Mi E of Sanford Golf Course

REMARKS

: 20 samples rec., 30-107', brought in
by Roy Staton, FGS, 12/30/54

Sample Intervals

30	
35	
40	
45	
50	
55	
55	60
60	65
65	
70	
75	
78'	
80	85
85	90
90	
95	100
100	105
106	
107	

W-3407

WSe-

OWNER : John Williams
LOCATION : $\frac{1}{4}$ Mi S of Golf Course at Sanford, Fla.
COUNTY : Seminole

REMARKS : 10 samples rec., 0 - 98', brought in
by Roy Staton FGS Dec. 30, 1954

Sample Intervals

0	40
40	45
45	50
50	55
55	65
65	75
70	75
75	80
82	85
95	98

W-3408

WSe-

LOCATION : Phillips Property #1- Lockharbor,
 : $\frac{1}{4}$ Mi E of Golf Course in Sanford, Fla.
COUNTY : Seminole
Remarks ; 16 samples, 0 - 108', brought in by
 : Roy Staton, FGS, Dec. 30, 1954

Sample Intervals

0	25
28	30
35	40
40	45
45	50
50	55
55	60
60	62
62	65
65	70
70	76
76	80
80	85
85	90
95	100
100	108

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-3521
TOTAL DEPTH: 113 FT.
13 SAMPLES FROM 85 TO 113 FT.

COUNTY - SEMIN1
LOCATION: T.21S R.32E S.28 CA
LAT = 28D 38M 11S
LON = 81D 07M 35S

COMPLETION DATE: 01/04/55
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 56 FT

OWNER/DRILLER: R.W. SLATER, CHULUOTA, FL

WORKED BY: STEPHEN L. PALMES

0. - 84. 000NOSM NO SAMPLES
85. - 122HTRN HAWTHORN GROUP

0 - 84 NO SAMPLES

84 - 85 SAND; MODERATE LIGHT GRAY TO VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO VERY COARSE
ROUNDNESS: SUB-ROUNDED TO ROUNDED; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC SAND-12%, LIMESTONE-05%
PHOSPHATIC GRAVEL-02%

85 - 88 SAND; MODERATE LIGHT GRAY TO VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: VERY COARSE; RANGE: MEDIUM TO COARSE
ROUNDNESS: SUB-ROUNDED TO ROUNDED; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-15%
PHOSPHATIC SAND-05%, LIMESTONE-02%
FOSSILS: FOSSIL MOLDS, SHARKS TEETH
GASTROPOD MOLDS PRESENT

88 - 95 SAND; BROWNISH GRAY TO LIGHT OLIVE GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO GRAVEL; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC SAND-08%
PHOSPHATIC GRAVEL-03%, LIMESTONE-03%
FOSSILS: FOSSIL MOLDS, BRYOZOA
GASTROPOD MOLDS PRESENT

95 - 106 SAND; LIGHT OLIVE GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO GRAVEL; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC SAND-06%, CALCILUTITE-03%
LIMESTONE-03%, PHOSPHATIC GRAVEL-01%
FOSSILS: SHARKS TEETH, FOSSIL FRAGMENTS

- 106 - 108 SAND; LIGHT OLIVE GRAY TO VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: COARSE; RANGE: FINE TO GRAVEL
ROUNDNESS: ROUNDED TO SUB-ANGULAR; MEDIUM SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: LIMESTONE-07%, PHOSPHATIC GRAVEL-04%
PHOSPHATIC SAND-03%
- 108 - 110 SAND; YELLOWISH GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: COARSE; RANGE: VERY FINE TO COARSE
HIGH SPHERICITY; UNCONSOLIDATED
ACCESSORY MINERALS: LIMESTONE-02%
- 110 - 113 SAND; YELLOWISH GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: COARSE; RANGE: VERY FINE TO VERY COARSE
ROUNDNESS: SUB-ROUNDED TO ANGULAR; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: LIMESTONE-03%, PHOSPHATIC SAND-01%
- 113 TOTAL DEPTH

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-3521
TOTAL DEPTH: 113 FT.
13 SAMPLES FROM 85 TO 113 FT.

COUNTY - W3521
LOCATION: T.21S R.32E S.28 CA
LAT = 28D 38M 11S
LON = 81D 07M 35S

COMPLETION DATE: 01/04/55
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 56 FT

OWNER/DRILLER: R.W. SLATER, CHULUOTA, FL

WORKED BY: STEPHEN L. PALMES

85. - 113. 122HTRN HAWTHORN GROUP

0 - 84 NO SAMPLES

84 - 85 SAND; MODERATE LIGHT GRAY TO VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO VERY COARSE
ROUNDNESS: SUB-ROUNDED TO ROUNDED; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC SAND-12%, LIMESTONE-05%
PHOSPHATIC GRAVEL-02%

85 - 88 SAND; MODERATE LIGHT GRAY TO VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: VERY COARSE; RANGE: MEDIUM TO COARSE
ROUNDNESS: SUB-ROUNDED TO ROUNDED; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-15%
PHOSPHATIC SAND-05%, LIMESTONE-02%
FOSSILS: FOSSIL MOLDS, SHARKS TEETH
GASTROPOD MOLDS PRESENT

88 - 95 SAND; BROWNISH GRAY TO LIGHT OLIVE GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO GRAVEL; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC SAND-08%
PHOSPHATIC GRAVEL-03%, LIMESTONE-03%
FOSSILS: FOSSIL MOLDS, BRYOZOA
GASTROPOD MOLDS PRESENT

95 - 106 SAND; LIGHT OLIVE GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO GRAVEL; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC SAND-06%, CALCILUTITE-03%
LIMESTONE-03%, PHOSPHATIC GRAVEL-01%
FOSSILS: SHARKS TEETH, FOSSIL FRAGMENTS

- 106 - 108 SAND; LIGHT OLIVE GRAY TO VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: COARSE; RANGE: FINE TO GRAVEL
ROUNDNESS: ROUNDED TO SUB-ANGULAR; MEDIUM SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: LIMESTONE-07%, PHOSPHATIC GRAVEL-04%
PHOSPHATIC SAND-03%
- 108 - 110 SAND; YELLOWISH GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: COARSE; RANGE: VERY FINE TO COARSE
HIGH SPHERICITY; UNCONSOLIDATED
ACCESSORY MINERALS: LIMESTONE-02%
- 110 - 113 SAND; YELLOWISH GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: COARSE; RANGE: VERY FINE TO VERY COARSE
ROUNDNESS: SUB-ROUNDED TO ANGULAR; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: LIMESTONE-03%, PHOSPHATIC SAND-01%
- 113 TOTAL DEPTH

W-3521
Driller's Log

USGS Seminole #856
OWNER : R. W. Slater, Chuluota, Fla.
LOCATION : SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 28, T21S, R32E,
0.25 mi. E of intersection of
Chuluota P.O., 0.25 mi. E of
intersection of St. Rd. 419 &
the main St. in Oviedo and 0.23 mi
S.
COUNTY : Seminole
ELEVATION : 57.51 Grd. (Lyles 6-26-62)
DRILLER : C. T. McCulley, Oviedo, Fla.
STARTED : 1/3/55
COMPLETED : 1/4/55
DEPTH : 113'
CASING : 84' of 2"
HEAD : -21.07'
YIELD : 30± GPM
USE : Domestic
QUALITY : Fresh - about 10-15 ppm of
Chloride
REMARKS : 13 samples, 85-113', brought in
in by USGS on May 17, 1955.

0-40	Sand
40-41.5	Hardpan (hard)
42-70	Sand and clay
70±-80±	Sand, clay and some shells
80-84	Shell
84-108	Hawthorn formation
108-113	Sand

W-3522
WSe-20S-30E-12cd
data;J. Barraclough

USGS#851
OWNER : Floyd Hern
LOCATION : S from Sanford Ave. 3 1/3 Mi;turn SW
on old Orlando Rd for 0.7 Mi; then
turn N for 0.2 Mi:3.6 Mi South of
Sanford , Fla., PO
COUNTY : Seminole
ELEVATION :
DRILLER : Ernest Hamilton
STARTED : 12/21/54
COMPLETED : 12/23/54
DEPTH : 78'
CASING : 69.5'
YIELD : 20 - 30 GPM
HEAD : -3.75'
QUALITY : Fresh-Chl. 54 ppm
USE : Domestic
REMARKS : 12 samples rec., 22-78' - No log

Sample Intervals

22	26
26	32
34	39
40	45
48	52
58	63
64	69
69	70
70	75
75	
75	78

W-3523
WSE-20S-30E-3bc
data:J. Barraclough

USGS# 824
OWNER : Sydney Chase
LOCATION : Start at Intersection of old Lake
Mary Rd and Country Club;go South
1.28 Mi, turn W for 0.17 Mi and NW
for 0.30 Mi. Well at edge of
Crystal Lake, 1.5 Mi NE Lake Mary
PO
COUNTY : Seminole
ELEVATION
DRILLER : Central Fla. Well Drillers
STARTED : May 1954-deepened 1/13/55
COMPLETED : May 1954-1/14/54
DEPTH : 107' deepened to 183'
CASING : 63' of 4"
YIELD : 55 GPM(with small pump)
HEAD : -9.1' on 11/16/54: -10.8" on 1/14/55
QUALITY : Fresh; Chl. 20 ppm
USE : Domestic
REMARKS : 8 samples rec., 120+ -183'-No log

Sample Intervals

120+	
125	133
133	
135	140
140	158
160	167
168	183
168	183

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-3530
TOTAL DEPTH: 98 FT.
16 SAMPLES FROM 44 TO 98 FT.

COUNTY - SEMIN1
LOCATION: T.21S R.31E S.10 DD
LAT = 28D 40M 19S
LON = 81D 11M 41S

COMPLETION DATE: 12/30/54
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 86 FT

OWNER/DRILLER:

WORKED BY:STEPHEN L. PALMES

0. - 43. 000NOSM NO SAMPLES
43. - 56. 121PCPC PLIOCENE-PLEISTOCENE
56. - 71. 122HTRN HAWTHORN GROUP
71. - . 124OCAL OCALA GROUP

0 - 43 NO SAMPLES

43 - 50 SAND; PINKISH GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO COARSE; HIGH SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: ORGANICS-01%, HEAVY MINERALS- %

50 - 52 SAND; VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: FINE TO MEDIUM; MEDIUM SPHERICITY
UNCONSOLIDATED
FOSSILS: FOSSIL FRAGMENTS

52 - 56 SAND; YELLOWISH GRAY TO VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: FINE TO MEDIUM
ROUNDNESS: SUB-ANGULAR TO SUB-ROUNDED; MEDIUM SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: HEAVY MINERALS-01%

56 - 60 SAND; VERY LIGHT ORANGE TO YELLOWISH GRAY
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: COARSE; RANGE: VERY FINE TO VERY COARSE
ROUNDNESS: SUB-ROUNDED TO ANGULAR; MEDIUM SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: SHELL-15%, LIMESTONE-10%, SPAR-05%
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, FOSSIL MOLDS

- 60 - 68 SAND; YELLOWISH GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO COARSE
MEDIUM SPHERICITY; UNCONSOLIDATED
ACCESSORY MINERALS: SPAR-10%, PHOSPHATIC SAND-02%
FOSSILS: FOSSIL FRAGMENTS
- 68 - 71 SAND; VERY LIGHT ORANGE TO YELLOWISH GRAY
25% POROSITY: INTERGRANULAR, INTRAGRANULAR
POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO VERY COARSE
HIGH SPHERICITY; UNCONSOLIDATED
ACCESSORY MINERALS: SPAR-06%, PHOSPHATIC SAND-02%
PHOSPHATIC GRAVEL-01%
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, MOLLUSKS
25% OF SAMPLE IS RECRYSTALLIZED LIMESTONE.
- 71 - 74 LIMESTONE; LIGHT YELLOWISH ORANGE
15% POROSITY: INTERGRANULAR, INTRAGRANULAR
LOW PERMEABILITY
GRAIN TYPE: SKELETAL, BIOGENIC
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY COARSE; RANGE: MICROCRYSTALLINE TO GRAVEL
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: PHOSPHATIC SAND-01%, QUARTZ SAND-01%
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, ECHINOID, BRYOZOA
NUMMULITES PRESENT; LEPIDOCYCLINA PRESENT; QUARTZ AND
PHOSPHATIC SAND NOT OBSERVED IN MATRIX.
- 74 - 85 LIMESTONE; LIGHT YELLOWISH ORANGE TO VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR
GRAIN TYPE: SKELETAL, BIOGENIC
90% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY COARSE; RANGE: MICROCRYSTALLINE TO GRAVEL
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, BRYOZOA
FOSSIL MOLDS
NUMMULITES ABUNDANT; LEPIDOCYCLINA PRESENT
- 85 - 90 LIMESTONE; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR, INTRAGRANULAR
GRAIN TYPE: SKELETAL, BIOGENIC
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY COARSE; RANGE: MICROCRYSTALLINE TO GRAVEL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, ECHINOID
FOSSIL MOLDS
LEPIDOCYCLINA ABUNDANT; ORBULINA AND NUMMULITES PRESENT

90 - 95 LIMESTONE; VERY LIGHT ORANGE TO WHITE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, SKELTAL CAST, BIOGENIC
85% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY COARSE; RANGE: FINE TO GRAVEL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, FOSSIL MOLDS
BRYOZOA, FOSSIL FRAGMENTS
LEPIDOCYCLINA ABUNDANT; NUMMULITES COMMON

95 TOTAL DEPTH

W-3530
WSe-21S-31E-10dd
data:J. Barraclough

USGS # 854
OWNER : Spencer Stevens
LOCATION : 0.65 Mi E of the cen. of Oviedo
along SR 419, 200' N of the ϕ & 200'
E of East Side Grocery, 0.65 Mi E
of Oviedo, Fla. PO
COUNTY : Seminole
ELEVATION :
DRILLER : C. T. McCulley
STARTED : 12/28/54
COMPLETED : 12/30/54
DEPTH : 108'
CASING : 92' of 2"
YIELD : 30 - 40 GPM
HEAD : -12.8'
QUALITY : Fresh- Chl. 11 ppm
USE : Domestic
REMARKS : 21 samples rec., 44 - 108' - No log

Sample Intervals

44	50
50	52
53	56
56	60
60	65
65	68
68	71
71	74
75	80
81	85
85	88
88	90
90	91
92	94
94	95
95	96
96	97
97	100
100	102
103	108

W-3536
WSe-21S-29E-20ab
data;J. Barraclough

USGS# 739
OWNER : Edward Clark
LOCATION : Start at Fosgate Citrus Corp. in
Forest City;travel S. 0.25 Mi; turn W
0.28 Mi, go SW along ACL tracks for
0.55 Mi, turn W for 0.22 Mi; 4.8 Mi
WSW of Altamonte Springs, Fla. PO
COUNTY : Seminole
ELEVATION :
DRILLER : F. F. French
STARTED : 6/23/54
COMPLETED : 6/24/54
DEPTH : 160' Meas. - 164' reported
CASING : 80' of 2"
HEAD : -51.29' on 6/24/54
YIELD : (No pump installed)
QUALITY : Fresh
USE : Domestic
REMARKS : 26 samples rec., 85-164' No log

Sample Intervals

85	87
89	
92	
95	
95	100
100	
105	
110	
115	
120	
123	
125	
128	
134	
137	
138	
143	
146	
150	
155	
158	
160	
162	
163	
164	

W-3537
Driller's Log

OWNER : USGS No. Seminole #813
Randall Chase, Sanford, Fla.
LOCATION : Sec. 3, T20S, R30E, 1.40 mi. NE
of Lake Mary, start at intersection
of old Lake Mary Rd. and Country
Club Rd., go S 0.48 mi., SW along
ACL RR tracks 0.81 mi., turn W
and drive 0.24 mi.
COUNTY : Seminole
ELEVATION : 62.31 Grd. (Lyles 6-6-62)
DRILLER : Central Florida Well Drillers,
Orlando
STARTED : 9/17/54
COMPLETED : 9/21/54
DEPTH : 143'
CASING : 83' of 4"
HEAD : -23.93' below surface on 9/21/54
YIELD : no pump installed as yet
USE : Domestic
QUALITY : Fresh
REMARKS : 20 samples, 35-143', brought in
by USGS on May 17, 1955.
Well schedule and other information
on file in USGS office

0-6	Surface sand
6-20	Yellow clay
20-35	Yellow sandy clay
35-45±	Sand
45-50	Sticky blue-gray clay
52-57	Shell bed
58-62	Shell
62-69	Shells and blue-gray clay
72	Very hard layer
75	Shell bed
95-115	Fine creamy limestone (hard drilling 95-100)
115-143	Limestone.

Hit 1st artesian water at 107'

W-3582

OWNER : USGS Seminole #827
Carrie E. Maxwell
LOCATION : 400' SSE of P. O. in Geneva, on
1st N-S Rd. E and 90' E of C of Rd.
Sec. 21, T20S, R32E, SE $\frac{1}{4}$ NE $\frac{1}{4}$
COUNTY : Seminole
ELEVATION : 70.89 Grd (Lyles 6-10-62)
DRILLER : Ernest Hamilton, Lake Monroe, Fla.
STARTED : Nov. 18, 1954
COMPLETED : Nov. 23, 1954
DEPTH : 145'
CASING : 126' of 2"
HEAD : - 50.85' below top of 2" coupling
0.5' above surface
YIELD : 25-40 GPM
USE† : Domestic
QUALITY : Fresh - chloride content 12ppm
DRAWDOWN : (Temperature 75.0°)
REMARKS : 27 samples, 56-145', brought in
by USGS on July 12, 1955.
Well schedule on file in USGS office

Cuttings compacted inside casing from 56-75'

56-60 White to cream sand
60-65 White sand
65-68 Sand with shells
68-70 Sand and shells
70-73 Blue clay and shells
73-75 Blue clay less shells

Outside casing.

75-80 Blue clay and shells
80-89 Shells
90±-145 Limestone

FLORIDA BUREAU OF GEOLOGY - LITHO LOG PRINTOUT

W- 3582 (PERMIT NO-),
 SEMINOLE CO. T26S R32E SEC 21 28 06.42 N 81 07.03 W
 TOTAL DEPTH- 145 FT. ELEV.- 71 FT. 27 SAMPLES- 56- 145 FT.
 COMPLETED- 04.11.23

WELL NAME-
 USGS SEMINOLE NO. 827
 REMARKS-
 WORKED BY M. H. SHAFIE
 9-1-77 GOOD SAMPLES

STRATIGRAPHIC FORMATIONS -

56.0- 130.0 UNDIFFERENTIATED SAND, CLAY AND SHELLS
 130.0- 145.0 AVON PARK LIMESTONE

LITHOLOGIC LOG

W- 3582 . SEMINOLE CO. T26S, R32E, SEC 21

56.0 NO SAMPLE,
 60.0 SAND, V LT GR, 32 PERCENT POROSITY-INTERGRAN, SIZE- MED,
 RANGE- CRSE-FINE, SUB-ANG, ANGULAR, MED SPH, NON-IND,
 21 PCT. PHOS SAND,
 65.0 SAND, WHITE, 32 PERCENT POROSITY-INTERGRAN, SIZE- MED,
 RANGE- CRSE-FINE, SUB-ANG, ANGULAR, MED SPH, NON-IND,
 31 PCT. PHOS SAND,
 68.0 SAND, WHITE, 32 PERCENT POROSITY-INTERGRAN, SIZE- MED,
 RANGE- CRSE-FINE, SUB-ANG, ANGULAR, MED SPH, NON-IND,
 32 PCT. PHOS SAND, MOLLUSKS,
 72.0 SHELL BED, V LT GR, 27 PERCENT POROSITY-INTERGRAN, MOLDIC,
 NON-IND, 20 PCT. SAND(QTZ), 12 PCT. PHOS SAND, MOLLUSKS,
 73.0 SILT, MD LT GY, 10 PERCENT POROSITY-INTERGRAN, MOD IND,
 CLAY CMT, MICRT CMT, CLAY, MICRITE, MOLLUSKS,
 75.0 SHELL BED, V LT GY, 23 PERCENT POROSITY-INTERGRAN, MOLDIC,
 POOR IND, MICRT CMT, CLAY CMT, CLAY, MICRITE, 20 PCT.
 SAND(QTZ), 23 PCT. CHERT, MOLLUSKS,
 80.0 SHELL BED, V LT GY, 25 PERCENT POROSITY-INTERGRAN, MOLDIC,
 POOR IND, MICRT CMT, CLAY CMT, MICRITE, CLAY, 30 PCT.
 SAND(QTZ), 23 PCT. CHERT, MOLLUSKS,
 85.0 AS ABOVE,
 88.0 SHELL BED, LT GY, V LT GY, 25 PERCENT POROSITY-INTERGRAN,
 MOLDIC, POOR IND, CLAY CMT, MICRT CMT, CLAY, 25 PCT.
 SAND(QTZ), 23 PCT. PHOS SAND, MICRITE, MOLLUSKS, BRYOZOA,
 89.0 AS ABOVE,
 118.0 NO SAMPLE,
 119.0 SHELL BED, LT GY, V LT GR, 25 PERCENT POROSITY-INTERGRAN,
 MOLDIC, POOR IND, CLAY CMT, MICRT CMT, CLAY, MICRITE,
 25 PCT. SAND(QTZ), 12 PCT. PHOS SAND, MOLLUSKS, BRYOZOA,
 120.0 SAND, LT GY, 23 PERCENT POROSITY-INTERGRAN, MOLDIC,
 SIZE- MED, RANGE- CRSE-FINE, SUB-ANG, ANGULAR, MED SPH,
 NON-IND, 23 PCT. PHOS SAND, MOLLUSKS,
 40 PERCENT SHELL FRAGMENTS
 122.0 AS ABOVE,
 124.0 AS ABOVE,
 125.0 SAND, V LT GY, 27 PERCENT POROSITY-INTERGRAN, MOLDIC,
 SIZE- MED, RANGE- CRSE-FINE, SUB-ANG, ANGULAR, MED SPH,
 POOR IND, SPARRY CALCITE CMT, MICRT CMT, 25 PCT. PHOS SAND,
 MOLLUSKS, FORAMINIF,
 126.0 LIMESTONE, WHITE, 17 PERCENT POROSITY-INTERGRAN, MOLDIC,
 GRAINTYPE- BIOGENIC, SKELETAL, 85 PCT. ALLOCHEMS, SIZE- MED,
 RANGE- CRSE-CRYP, POOR IND, SPARRY CALCITE CMT, MICRT CMT,
 12 PCT. SPAR, FORAMINIF,
 128.0 LIMESTONE, WHITE, 15 PERCENT POROSITY-INTERGRAN, MOLDIC,
 GRAINTYPE- BIOGENIC, SKELETAL, 80 PCT. ALLOCHEMS, SIZE- MED,
 RANGE- CRSE-CRYP, MOD IND, SPARRY CALCITE CMT, MICRT CMT,
 15 PCT. SPAR, FORAMINIF,
 129.0 LIMESTONE, WHITE, 17 PERCENT POROSITY-INTERGRAN, MOLDIC,
 GRAINTYPE- BIOGENIC, SKELETAL, 85 PCT. ALLOCHEMS, SIZE- MED,
 RANGE- CRSE-CRYP, POOR IND, SPARRY CALCITE CMT, MICRT CMT,
 25 PCT. SPAR, FORAMINIF,
 130.0 AS ABOVE,

LITHOLOGIC LOG

W- 3592 . SEMINOLE CO. T2S, R32E, SEC 21

131.0 LIMESTONE, WHITE, 17 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 55 PCT. ALLOCHEMS, SIZE- CRSE,
RANGE- V C-CRYP, POOR IND, SPARRY CALCITE CMT, MICRT CMT,
20 PCT. SPAR, FORAMINIF, CONES,
DIDYMOCONUS COCKEI

132.0 NO SAMPLE

132.5 LIMESTONE, V LT GR, 1+ PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 80 PCT. ALLOCHEMS, SIZE- V F,
RANGE- CRSE-CRYP, MOD IND, SPARRY CALCITE CMT, MICRT CMT,
FORAMINIF, CONES, MOLLUSKS

135.0 LIMESTONE, V LT GR, 13 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 76 PCT. ALLOCHEMS, SIZE- V F,
RANGE- CRSE-CRYP, MOD IND, SPARRY CALCITE CMT, MICRT CMT,
CONES, FORAMINIF,

138.0 AS ABOVE

145.0 LIMESTONE, V LT GR, 13 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 76 PCT. ALLOCHEMS, SIZE- V F,
RANGE- CRSE-CRYP, MOD IND, SPARRY CALCITE CMT, MICRT CMT,
CONES, FORAMINIF,

TO

*** END OF DATA ***

W-3583
WSe-20S-30E-4bb
data;J. Barraclough

USGS# 832
OWNER : M. A. Evans
LOCATION : 250' E & 300' S of intersection of
Sanford-Paola Road & the Upsala Rd.
& about 0.15 Mi E of Sanford Golf
Course; $3\frac{1}{2}$ Mi SW of Sanford, Fla.
COUNTY : Seminole
ELEVATION :
DRILLER : Ernest Hamilton
STARTED : 11/24/54
COMPLETED : 11/28/54
DEPTH : 72'
CASING : 70.5' of 2"
HEAD : -12.25'
YIELD : 25-30 GPM
QUALITY : Fresh, Chl. 10 ppm
USE : Domestic
REMARKS : 8 samples rec., 42-72'-No Log

Sample Intervals

42
50
55
60
70
71
71+
72

W-3584
WSe-20S-30E-22cc
data:J. Barraclough

USGS# 837
OWNER : I. M. Passons
LOCATION : At 5 points, 6 Mi S of Sanford on
US Hwy 17 & 92. 350' SW of inter-
section of US 17 & 92 & SR 419,
across St. from Shell Service Sta.,
3 3/4 Mi NE of Longwood, Fla.
COUNTY : Seminole
ELEVATION :
DRILLER : F. F. French
STARTED : 11/30/54
COMPLETED : 12/1/54
DEPTH : 140'
CASING : 104' of 2"
HEAD : -6.4'
YIELD : 40 - 50[±] GPM
QUALITY : Fresh, Chl. 13 ppm
USE : Domestic
REMARKS : 11 samples rec., 102-140'- No Log

Sample Intervals

102	105
104	105
110	112
120	123
125	
125	
125	130
130	134
134	137
134	140

W-3652
Driller's Log

OWNER : Adala Groves
LOCATION : Well No. 2 in Goldenrod Grove
N of St. Rd. 426, in same row
as well No. 1, 2½ mi. ENE of
Goldenrod
COUNTY : Seminole
ELEVATION : ½'
DRILLER : Duval Drilling Company,
Jacksonville
STARTED : 9/11/55
COMPLETED : 9/15/55
DEPTH : 385'
CASING : 166' of 10"
HEAD :
YIELD : (see log)
QUALITY : Fresh
DRAWDOWN :
USE : Citrus Grove Irrigation
REMARKS : 11 samples, 19-385', sent in by
parcel post from Duval Drilling
Co., Sept. 22, 1955.

0-15	Surface sand
15-19	Dark brown sand (hard pan)
19-55	Light brown sand
55-95	Blue marsh mud
95-165	Gray marl
165-175	Gray limestone
175-190	Gray marl
190-245	Soft white Ocala limestone
245-255	Hard white Ocala limestone
255-320	Soft white Ocala limestone
320-325	Hard white Ocala limestone
325-340	Cavity (dropped tools without spudding)
340-380	Cavity with a few ribs
380-385	Soft white chalky limestone

Notes:

At 303 ft. while pulling the bailer at top speed, the water level in the well would rise from 22 ft. to the surface of the ground. After the cavities were encountered, bailing would produce a jet head of 3" over the 10" well casing; or, in other words, the bailing would make 985 gpm. flow over the top of the well.

W-3704
Driller's Log

OWNER	: Garapic, Inc. Winter Park, Fla.
LOCATION	: Druid Hills Park Subdivision, Winter Park, T21S, R29E, 23d
COUNTY	: Orange Seminole base
ELEVATION	: 117', gr.; 117'88', SW cor. pump/
DRILLER	: Orlando Pump & Supply Co., Orlando, Fla.
STARTED	: Sept. 25, 1955
COMPLETED	: Oct. 3, 1955
DEPTH	: 215'
CASING	: 103' of 8"
HEAD	: 60'
YIELD	:
USE	: Domestic
DRAWDOWN	:
QUALITY	: Fresh
REMARKS	: 27 samples, 84-360', sent in by Orlando Pump & Supply Co., Orlando, November 14, 1955

Drove and cleaned out casing to depth of 103', pulled back 5', poured cement, drove casing back to 103', and let stand for 48 hours, drilled out cement and through fairly hard rock to 107', picked up small amount of water 107' to 122', with gumbo and blue gravel from 122' to 132' gravel color changed from blue to gray, 132' to 150' gravel remained about the same color with some black gravel added, 150' to 170' gravel of a little lighter color, 170' to 210' limestone all the way. 210' hit 5' cavity of water.

Sep 2010. "Druid Hills Park" S/D is located in Seminole Co @ 21S-29E-23. "Druid Hills" + "Druid Hills Estates" are located in Orange @ 21S-29E-25. nr

PERMIT#
OWNER : Charles E. Bloom
LOCATION : Loch Arbor Subdivision, Sanford, Fla.

COUNTY : Seminole
ELEVATION :
DRILLER : Farm & Home Machinery Co.
STARTED : 9/20/55
COMPLETED : 9/24/55
DEPTH : 260'
CASING : 82' of 6"
HEAD : 10'
QUALITY : Fresh
YIELD :
USE : Domestic
REMARKS : 9 samples rec., 30 - 260'

0	55	Sand and Mud
55	60	Sea Shells
60	70	Limestone and Shell
70	260	Soft Limestone

OWNER : Town of Longwood
LOCATION : Longwood, Florida, SE $\frac{1}{4}$, SE $\frac{1}{4}$, S31, T20S
COUNTY : Seminole R30E
ELEVATION : 82.59 Grd (Lyles 6-14-62)
DRILLER : Layne-Atlantic Company
STARTED : June 25, 1956
COMPLETED : July 11, 1956
DEPTH : 372'
CASING : 220'-7" of 8"
HEAD : 42'
YIELD : 524 gpm.
DRAWDOWN : 2 $\frac{1}{2}$ '
QUALITY : Fresh
USE : Municipal
REMARKS : 72 samples, from 0-370', were
received from the Layne-Atlantic Co.,
Orlando, Fla., by express, on August
14, 1956

0-20	Brown sand and clay
20-42	White sand and clay
42-50	Brown sand
50-85	Hard green clay, sand, and gravel
85-102	Hard green clay and gravel
102-104	Hard brown lime
104-155	Hard green clay, sand, and gravel
155-167	Soft brown lime
167-170	Hard brown lime
170-218	Soft brown lime
218-221	Hard brown lime
221-225	Hard brown lime
225-237	Soft brown lime
237-250	Medium hard brown lime
250-253	Hard brown lime
253-300	Medium hard brown lime
300-312	Hard brown lime
312-348	Medium hard brown lime
348-355	Hard brown lime
355-370	Water bearing lime
370-372	Hard brown lime

W-4019
WSe-21S-33E-30cd
data: J. Barrackough

USGS# 879
OWNER : C. S. Lee
LOCATION : N side of Curryville Rd, 3.5 Mi
from Lake Mills Rd., 4.7 Mi ESE
Chuluota, Fla.
COUNTY : Seminole
ELEVATION : 29.2, 29.19 on top of 2" coupling
DRILLER : C. T. McCulley
STARTED : 4/27/56
COMPLETED : 5/31/56
DEPTH : 273'
CASING : 84' of 2"
HEAD : -1.28' below surface
YIELD : 125 GPM
QUALITY : Chl. 80 ppm
USE : Test well and for Stock
REMARKS : 44 samples rec., 0 - 274' - No Log

Sample Intervals

0	60	164	167
		167	170
15		171	173
		173	180
60	64	180	183
		183	184
74	84	184	187
		189	193
85	91	194	200
		200	207
91	98	207	213
98	103	213	220
103	104	220	227
104	105	227	234
105	110	234	241
106		241	248
110	120	248	255
120	127	255	260
127		262	269
127	135	269	271
135	150	269	274
146			
148			
150	157		
155			
156			
160			
160	164		

W-4020
WSe-19S-30E-35aa
data:J. Barraclough

USGS # 870
OWNER : American Fruit Growers
LOCATION : E side of Grapeville Ave., 0.87 Mi
S of SR 46(W 1st St.), 20' E of a
power pole & 40' E of ϕ of Grape-
ville Ave. Outlet of well is at a
pocket near the pole(well is buried)
& opposite of a road running W
COUNTY : Seminole
ELEVATION : 31.2', 29.93 on top of 3" tee, Sem-
inole Level Bk. 2, page 106
DRILLER : Howard C. Long
STARTED : Nov. 15, 1955
COMPLETED : 11/18/55
DEPTH : 151'
CASING : 90' of 3"
HEAD : +1.7'
YIELD : Flowing 50 GPM
QUALITY : Chl. 470 ppm, moderately salty
USE : Irrigation
REMARKS : 33 samples rec, 38 - 151' - No Log

Sample Intervals

38	40	109	114
40	45	114	119
45	47	119	124
47	51	124	129
51	57	130	135
57	62	135	140
62	64	140	144
64	65	144	
65	68	144	147
68	73	147	151
73	76		
76	80		
80	84		
83	88		
84			
88	90		
90	91		
91	92		
92	94		
94	97		
101	104		
104	109		

USGS# 230
OWNER : City of Sanford, Fla., #6
LOCATION : W side of US Hwys 17 & 92, 4.2. Mi
along hwy. S of Sanford and 100' S
of Entrance to Movieland Drive-in
Theater. last well S of City well
field, 70' W of ϕ of Us 17 & 92

COUNTY : Seminole
DRILLER : A. D. Rosier
STARTED : 5/7/56 deepened
COMPLETED : 5/10/56
DEPTH : deepened from 155' to 191'
CASING : ? of 8 & 6"
HEAD : -16.04' below top of 8" casing, at
land surface on 4/23/56

ELEVATION : 47.63' on top of 8" casing, Seminole
Level Bood 3, page 146

YIELD : 140 GPM
QUALITY : Chl. 43 ppm
USE : Public Supply
REMARKS : 11 samples rec., 132 - 226'-no Log

Sample Intervals

132
137
160
163
164
172
179
180
180 187
190.5
226

W-4022
WSe-20S-30E-6bc
data: J. Barraclough

USGS# 884 - 1st NAS well

OWNER : U. S. Navy Air Station
LOCATION : Mellonville St. & Wylly St in the old
Ft. Reed sec. on Sanford Naval Air
Sta., 35' S of the ¢ of Wylly St &
104' W of the ¢ of Mellonville Ave.,
2.4 Mi S of Sanford, Florida
COUNTY : Seminole
ELEVATION :
Driller ; A. D. Rosier
DEPTH : 188'
CASING : 108' of 10"
STARTED : June 1956
COMPLETED : June 1956
HEAD : -33.25' below top of 10" coupling,
1.5' above surface on 6/27/56
YIELD :
USE : Navy Water Supply
REMARKS : 11 samples rec., 50 - 165'

Sample Intervals

50	
60	65
70	75
80	
80	85
90	95
100	105
115	120
130	135
150	155
160	

W-4023
WSe-21S-33E-31bb
data; J. Barraclough

USGS # 878
OWNER : C. S. Lee
LOCATION : Along Caryville Rd, about 2.8 Mi from
Lake Mills Rd. in the C. S. Lee
Ranch, about 25' N of the Road, 4.4
Mi ESE of Chuluota, Fla . PO
COUNTY : Seminole
ELEVATION : 41.3', - 41.80 on top of 2" casing-
Seminole Co.
DRILLER : C. T. McCulley
STARTED : April 1956
COMPLETED : April 1956
DEPTH : 158'
CASING : 89' of 2"
HEAD : -13.34' below top of 2" casing
YIELD : 12-15 GPM by hand pump
QUALITY : Chl. 12 ppm, Fresh
USE : Test well and for stock
REMARKS : 11 samples rec., 75 - 165' - No log

Sample Intervals

75	
85	90
90	95
95	100
107	112
120	128
128	133
133	140
140	148
150	160
160	165

USGS# 871
OWNER : Oliver W. Reaves
LOCATION : S.side of SR 46 between Paola &
& Wekiva River, 0.85 Mi W. along
SR 46 from Paola corner & 125' S.
of Hwy. 52' S of the SW corner of
owner's house, 6.55 Mi W of
Sanford, Fla. PO
COUNTY : Seminole
ELEVATION : 53.7- Seminole Co. Level Book 2,
page 142
DRILLER : Ernest Hamilton
STARTED : 12/7/55
COMPLETED : 12/10/55
DEPTH : 88'
CASING : 83.5' of 2"
HEAD : -20.5
YIELD : 10 GPM (approx.)
QUALITY : Chl. 10 ppm (fresh)
USE : Domestic
REMARKS : 9 samples rec., 50 - 88' - no Log

Sample Intervals

50	
55	60
60	62
62	65
65	69
69	73
73	81
81	84
84	88

W-4025

WSe-20S-30E-4 bd

Data: J. Barraclough
USGS

USGS# 872

OWNER

LOCATION

: Phillips Industries
: 0.67 Mi S of Sanford-Paola Rd (W 25th
St.) along the Country Club Rd and
0.12 Mi E of Country Club Road, then
300' N and 0.3 Mi Se of Golf Course
Clubhouse. 4Mi SW Lake Mary PO

COUNTY

ELEVATION

: Seminole.
: 47.1'-47.53 on top of 6" coupling-
Seminole Level Book 2, p 132

DRILLER

DEPTH

CASING

STARTED

COMPLETED

HEAD

QUALITY

USE

REMARKS

: Tracy Plumbing & Supply Co.
: 250'
: 91.5' of 6"
: 12/19/55
: 12/21/55
: -8.3'
: Fresh
: Domestic
: 41 samples, 77 - 250' - No LogSample Intervals

77		165	170
77	78	170	175
78	80	175	180
80	83	180	185
83	85	185	190
85.5		190	200
85.5	87	200	205
87	90	205	210
90	92	210	215
92	95	215	220
95	100	220	225
100	105	225	230
105	110	230	235
110	115	235	240
115	120	240	245
120	125	245	250
125	130		
135	140		
140	145		
145	150		
150	152		
152	155		
155	160		
160	165		

USGS #877, C. S. Lee
Seminole County

REMARKS: 14 samples from 10 - to 90', were rec.
on Sept. 6, 1956 from Mr. McCulley of USGS at Oviedo.

Sample Intervals

10	13
13	16
16	19
20	28
29	35
40	42
42	44
46	67
68	75
76	83
84	86
86	88
88	90

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-4183
TOTAL DEPTH: 94 FT.
6 SAMPLES FROM 60 TO 94 FT.

COUNTY - SEMIN
LOCATION: T.20S R.32E S.25 CA
LAT = 28D 43M 19S
LON = 81D 04M 43S

COMPLETION DATE: 02/13/57
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 15 FT

OWNER/DRILLER:ELBERT CAMMACK

WORKED BY:STEPHEN L. PALMES

0. - 59. 000NOSM NO SAMPLES
60. - 67. 122HTRN HAWTHORN GROUP
67. - . 124OCAL OCALA GROUP

0 - 59 NO SAMPLES

59 - 60 SAND; MODERATE DARK GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO MEDIUM
MEDIUM SPHERICITY; UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC SAND-45%
PHOSPHATIC GRAVEL-01%, Limestone-01%
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID

60 - 61 SAND; MODERATE LIGHT GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO VERY COARSE
LOW SPHERICITY; UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC SAND-20%, SHELL-02%
PHOSPHATIC GRAVEL-01%
FOSSILS: ECHINOID, FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
BRYOZOA

61 - 62 SAND; LIGHT GRAY TO WHITE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: COARSE; RANGE: FINE TO VERY COARSE
ROUNDNESS: ANGULAR TO SUB-ROUNDED; MEDIUM SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: PHOSPHATIC SAND-15%, Limestone-05%
SHELL-03%, PHOSPHATIC GRAVEL-02%
FOSSILS: FOSSIL FRAGMENTS, ECHINOID, BRYOZOA
BENTHIC FORAMINIFERA

62 - 63.5 SAND; VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO COARSE
MEDIUM SPHERICITY; UNCONSOLIDATED
ACCESSORY MINERALS: Limestone-07%, PHOSPHATIC SAND-03%
SHELL-02%
FOSSILS: FOSSIL FRAGMENTS

63.5- 67 NO SAMPLES

67 - 68 LIMESTONE; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR, INTRAGRANULAR
GRAIN TYPE: SKELETAL, CALCILUTITE, CRYSTALS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: COARSE; RANGE: MICROCRYSTALLINE TO VERY COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-07%
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA
NUMMULITES PRESENT

68 - 93 NO SAMPLES

93 - 94 GRAINSTONE; VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, SKELTAL CAST, CALCILUTITE
90% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SPAR-04%
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, ECHINOID
ORBULINA PRESENT

94 TOTAL DEPTH

W-4183
Wse-20S-32E-25ca
Data: Jack Barra-
clough, USGS

U. S. G. S. # 843-104-13, Field 888

OWNER : Elbert Cammack
LOCATION : 2.8 Mi SE of Geneva, Fla., 0.2 Mi E
of Lake Harney Rd, 0.17 Mi N of SR
46, at N edge of clearing in woods
COUNTY : Seminole
ELEVATION : About 15-17' above MSL
DRILLER : A. D. Rosier
STARTED : Dec. 1956
COMPLETED : Jan. 1957
DEPTH : 94'
CASING : 58' of 3"
HEAD : -1.03' on 12/8/56
YIELD :
QUALITY : Chl. Content 700 ppm
USE : Irrigation & Dairy
REMARKS : 6 samples rec., 60-94'

Sample Intervals

60	61
61	62
62	63 $\frac{1}{2}$
63 $\frac{1}{2}$	68
68	94

W-4195
Driller's Log

OWNER : Wellborn C. Phillips, Jr.
LOCATION : Section 4, Tanglewood Subdivision
E of Winterpark PO
COUNTY : Seminole
ELEVATION :
DRILLER :
STARTED : 12/26/56
COMPLETED : 2/4/57
DEPTH : 834'6"
CASING : 101' of 20"
HEAD : 33'
YIELD :
USE : Drainage
DRAWDOWN :
QUALITY : Fresh
REMARKS : 83 samples, 0-830', sent in by express
from Meridith Brothers Well Drillers,
Orlando, on Mar. 8, 1957.

0-27	Black muck
27-46	Muck and gray sand
46-66	Gray sand
66-80	Blue clay
80-94	Blue muck
94-138	White lime
138-145	White rock
145-190	Brown lime
190-200	White lime
200-220	Soft white lime
220-240	Hard white lime
240-280	Soft white lime
280-300	White lime
300-320	Soft white lime
320-340	White lime
340-360	Hard white lime
360-380	Soft white lime
380-383	Hard white lime
383-405	Soft white lime
405-420	Hard brown lime
420-430	Brown lime
430-440	Hard brown lime
440-450	Brown lime
450-460	Hard brown lime
460-470	Brown lime
470-480	Soft brown lime
480-490	Brown lime
490-550	Soft brown lime

550-635	Hard brown lime
635-637	Cavity
637-650	Hard brown lime
650-660	Brown lime
660-675	Hard brown lime
675-680	Soft brown lime
680-703	Soft brown lime
703-730	Hard, brown, water bearing
730-745	Hard brown lime
745-746 $\frac{1}{2}$	Cavity
746 $\frac{1}{2}$ -760	Hard brown lime
760-770	Brown lime
770-804	Hard brown lime
804-810	Soft water bearing rock
810-834	Hard brown rock

FLORIDA BUREAU OF GEOLOGY - LITHO LOG PRINTOUT

W- 4195

SEMINOLE CO. T21S R30E SEC 33CA 28 37 00 N 81 18 40 W
 TOTAL DEPTH- 834 FT. ELEV.- 85 FT. 83 SAMPLES- 0- 830 FT.
 COMPLETED- 57.02.04 DEPTH WORKED 830 FT.

WELL NAME-

WELBORN C PHILLIPS, JR.

REMARKS-

WORKED BY BA REIK 79/4/30

*** 210.0 - 830.0 REPORTED AS 124AVPK - LKCT ***

*** IT'S RECORDED BELOW AS 124AVPK ***

STRATIGRAPHIC FORMATIONS -

0.0- 60.0 UNDIFFERENTIATED SAND AND CLAY
 60.0- 120.0 HAWTHORN FORMATION
 130.0- 200.0 OCALA LIMESTONE LOWER MEMBER
 210.0- 830.0 AVON PARK LIMESTONE

LITHOLOGIC LOG

W- 4195 . SEMINOLE CO. T21S, R30E, SEC 33CA

10.0 SILT , DK BR, 08 PERCENT POROSITY-INTERGRAN, MOD IND,
 CLAY CMT, 15 PCT. SAND(QTZ), 15 PCT. CLAY, PLANT REM,
 20.0 AS ABOVE ,
 30.0 SAND , YL GY, 30 PERCENT POROSITY-INTERGRAN, SIZE- MED,
 RANGE- FINE-CRSE, SUB-ANG, MED SPH, POOR IND, MICRT CMT,
 CLAY CMT, 05 PCT. PHOS SAND, 02 PCT. PHOS GRAV, FOSS FRAG,
 MOLLUSKS ,
 40.0 SAND , GY BR, 35 PERCENT POROSITY-INTERGRAN, SIZE- MED,
 RANGE- V F-CRSE, SUB-ANG, MED SPH, NON-IND,
 50.0 AS ABOVE ,
 60.0 SAND , GY BR, 35 PERCENT POROSITY-INTERGRAN, SIZE- MED,
 RANGE- V F-CRSE, SUB-ANG, MED SPH, NON-IND, 01 PCT.
 PHOS SAND,
 70.0 SAND , GY BR, YL GY, 35 PERCENT POROSITY-INTERGRAN,
 SIZE- MED, RANGE- V F- V C, SUB-ANG, MED SPH, POOR IND,
 MICRT CMT, 05 PCT. PHOS SAND, 02 PCT. PHOS GRAV, FOSS FRAG,
 MOLLUSKS ,
 80.0 AS ABOVE ,
 90.0 SAND , GY BR, V LT OR, 35 PERCENT POROSITY-INTERGRAN,
 SIZE- MED, RANGE- V F- V C, SUB-ANG, MED SPH, MOD IND,
 MICRT CMT, 04 PCT. PHOS SAND, 01 PCT. PHOS GRAV,
 100.0 LIMESTONE, V LT OR, YL GY, 18 PERCENT POROSITY-INTERGRAN,
 GRAINTYPE- BIOGENIC, SKELETAL, 15 PCT. ALLOCHEMS, SIZE-MICR,
 RANGE- MICR- V F, GOOD IND, MICRT CMT, 20 PCT. SAND(QTZ),
 02 PCT. PHOS SAND, CLAY, SHARK ITH, FOSS FRAG, MOLLUSKS ,
 110.0 LIMESTONE, YL GY, 15 PERCENT POROSITY-INTERGRAN, INTERCRYS,
 GRAINTYPE- BIOGENIC, OOL CAST, 40 PCT. ALLOCHEMS, SIZE- V F,
 RANGE- MICR- V F, GOOD IND, SPARRY CALCITE CMT, MICRT CMT,
 15 PCT. SAND(QTZ), 01 PCT. PHOS SAND, 02 PCT. DOLOMITE,
 HI RECRYS,
 120.0 AS ABOVE ,
 130.0 LIMESTONE, V LT OR, YL GY, 15 PERCENT POROSITY-INTERGRAN,
 MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 15 PCT. ALLOCHEMS,
 SIZE-MICR, RANGE- MICR- V F, GOOD IND, MICRT CMT, SPARRY CAL
 CITE CMT, 05 PCT. SAND(QTZ), 01 PCT. PHOS SAND, 02 PCT.
 DOLOMITE, MD RECRYS, FOSS MOLD, FORAMINIF,
 140.0 LIMESTONE, V LT OR, 15 PERCENT POROSITY-INTERGRAN, MOLDIC,
 GRAINTYPE- BIOGENIC, SKELETAL, 20 PCT. ALLOCHEMS, SIZE-FINE,
 RANGE- MICR- MED, GOOD IND, MICRT CMT, 05 PCT. SAND(QTZ),
 PHOS SAND, LC RECRYS, FOSS MOLD, FORAMINIF, MOLLUSKS, ECHINOID ,
 150.0 LIMESTONE, V LT OR, WHITE, 15 PERCENT POROSITY-INTERGRAN,
 MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 25 PCT. ALLOCHEMS,
 SIZE-FINE, RANGE- MICR- MED, GOOD IND, MICRT CMT, 01 PCT.
 SAND(QTZ),
 FORAM AMPHISTEGINA PINARENSIS COSDENSI
 160.0 AS ABOVE ,
 170.0 AS ABOVE ,

LITHOLOGIC LOG
W- 4195 . SEMINOLE CO. T21S, R30E, SEC 33CA

180.0 LIMESTONE, V LT OR, WHITE, 18 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 40 PCT. ALLOCHEMS,
SIZE-FINE, RANGE- MICR- MED, GOOD IND, MICRT CMT, SPARRY CAL
CITE CMT, LO RECRY, FORAMINIF, ECHINOID, BRYOZOA,
190.0 AS ABOVE,
200.0 LIMESTONE, V LT OR, WHITE, 18 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 25 PCT. ALLOCHEMS,
SIZE- V F, RANGE- MICR-FINE, GOOD IND, MICRT CMT, LO RECRY,
FORAMINIF, ECHINOID,
210.0 LIMESTONE, WHITE, 15 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 10 PCT. ALLOCHEMS, SIZE-MICR,
RANGE- MICR-FINE, GOOD IND, MICRT CMT, FORAMINIF, ECHINOID,
220.0 LIMESTONE, WHITE, 15 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 10 PCT. ALLOCHEMS, SIZE-MICR,
GOOD IND, MICRT CMT, FORAMINIF, CONES, ECHINOID,
DICTYOCONUS FORAMS
230.0 LIMESTONE, V LT OR, WHITE, 15 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 15 PCT. ALLOCHEMS,
SIZE-MICR, RANGE- MICR- V F, GOOD IND, MICRT CMT, FORAMINIF,
CONES, ECHINOID,
240.0 LIMESTONE, V LT OR, WHITE, 15 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 10 PCT. ALLOCHEMS,
SIZE-MICR, GOOD IND, MICRT CMT, FORAMINIF, CONES,
250.0 AS ABOVE,
260.0 AS ABOVE,
270.0 LIMESTONE, V LT OR, WHITE, 15 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 10 PCT. ALLOCHEMS,
SIZE-MICR, GOOD IND, MICRT CMT, FORAMINIF, CONES, ECHINOID,
280.0 LIMESTONE, WHITE, V LT OR, 15 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 05 PCT. ALLOCHEMS,
SIZE-MICR, GOOD IND, MICRT CMT, FORAMINIF, CONES,
290.0 LIMESTONE, WHITE, V LT OR, 15 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 05 PCT. ALLOCHEMS,
SIZE-MICR, GOOD IND, MICRT CMT, 01 PCT. CHERT, FORAMINIF,
CONES,
300.0 AS ABOVE,
310.0 LIMESTONE, WHITE, V LT OR, 15 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 15 PCT. ALLOCHEMS,
SIZE-MICR, RANGE- MICR- V F, GOOD IND, MICRT CMT, 01 PCT.
CHERT, FORAMINIF, CONES,
320.0 AS ABOVE,
330.0 LIMESTONE, V LT OR, WHITE, 15 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, OOL CAST, 30 PCT.
ALLOCHEMS, SIZE-MICR, RANGE- MICR- V F, GOOD IND, MICRT CMT,
SPARRY CALCITE CMT, MD RECRY, FORAMINIF, CONES,
340.0 LIMESTONE, V LT OR, 12 PERCENT POROSITY-INTERGRAN, MOLDIC,
INTERCRY, GRAINTYPE- BIOGENIC, SKELETAL, OOL CAST, 35 PCT.
ALLOCHEMS, SIZE-MICR, RANGE- MICR-FINE, GOOD IND, SPARRY CAL
CITE CMT, MICRT CMT, 02 PCT. SAND (QTZ), HI RECRY, FORAMINIF,
CONES,
350.0 AS ABOVE,
360.0 AS ABOVE,
370.0 LIMESTONE, V LT OR, 12 PERCENT POROSITY-INTERGRAN, MOLDIC,
INTERCRY, GRAINTYPE- BIOGENIC, SKELETAL, OOL CAST, 35 PCT.
ALLOCHEMS, SIZE-MICR, RANGE- MICR-FINE, MD IND, SPARRY CAL
CITE CMT, MICRT CMT, HI RECRY, FORAMINIF, CONES,
380.0 LIMESTONE, V LT OR, 12 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, OOL CAST, 25 PCT. ALLOCHEMS,
SIZE-MICR, RANGE- MICR- V F, GOOD IND, MICRT CMT, SPARRY CAL
CITE CMT, 01 PCT. CHERT, 02 PCT. SAND (QTZ), MD RECRY,
FORAMINIF, CONES,
390.0 LIMESTONE, V LT OR, YL GY, 12 PERCENT POROSITY-INTERGRAN,
MOLDIC, INTERCRY, GRAINTYPE- BIOGENIC, SKELETAL, OOL CAST,
25 PCT. ALLOCHEMS, SIZE-MICR, RANGE- MICR- V F, GOOD IND,
SPARRY CALCITE CMT, HI RECRY, FORAMINIF, CONES, ECHINOID,
400.0 LIMESTONE, V LT OR, YL GY, 10 PERCENT POROSITY-INTERGRAN,
MOLDIC, INTERCRY, GRAINTYPE- BIOGENIC, SKELETAL, OOL CAST,
10 PCT. ALLOCHEMS, SIZE-MICR, GOOD IND, SPARRY CALCITE CMT,
01 PCT. CHERT, HI RECRY, FORAMINIF, CONES,
410.0 AS ABOVE,

LITHOLOGIC LOG

W- 4195 . SEMINOLE CO. T21S, R30E, SEC 33CA

- 420.0 LIMESTONE, V LT OR, WHITE, 15 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 20 PCT. ALLOCHEMS,
SIZE-MICR, RANGE- MICR-FINE, GOOD IND, MICRT CMT, LO RECRYS,
FORAMINIF, CONES, ECHINOID, MOLLUSKS,
- 430.0 DOLOMITE, GY OR, 17 PERCENT POROSITY-INTERGRAN, INTERCRYS,
50-90 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, GOOD IND, DOLOM CMT,
15 PCT. LIMESTONE,
- 440.0 AS ABOVE,
- 450.0 DOLOMITE, GY OR, GY BR, 17 PERCENT POROSITY-INTERGRAN,
INTERCRYS, 50-90 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, GOOD IND,
DOLOM CMT, 05 PCT. LIMESTONE, ALGAE,
- 460.0 AS ABOVE,
- 470.0 LIMESTONE, V LT OR, YL GY, 15 PERCENT POROSITY-INTERGRAN,
MOLDIC, GRAINTYPE- BIOGENIC, SKELETAL, 35 PCT. ALLOCHEMS,
SIZE- V F, RANGE- MICR-FINE, GOOD IND, MICRT CMT, SPARRY CAL
CITE CMT, 10 PCT. DOLOMITE, MD RECRYS,
- 480.0 LIMESTONE, V LT OR, YL GY, 15 PERCENT POROSITY-INTERGRAN,
INTERCRYS, GRAINTYPE- BIOGENIC, SKELETAL, 35 PCT. ALLOCHEMS,
SIZE- V F, RANGE- MICR-FINE, GOOD IND, SPARRY CALCITE CMT,
MICRT CMT, 05 PCT. SAND (QTZ), DOLOMITE, HI RECRYS,
- 490.0 AS ABOVE,
- 500.0 LIMESTONE, V LT OR, YL GY, 15 PERCENT POROSITY-INTERGRAN,
INTERCRYS, GRAINTYPE- BIOGENIC, SKELETAL, OOL CAST, 20 PCT.
ALLOCHEMS, SIZE- V F, RANGE- MICR- V F, GOOD IND, SPARRY CAL
CITE CMT, DOLOMITE, HI RECRYS, FORAMINIF,
- 510.0 AS ABOVE,
- 520.0 LIMESTONE, GY YL, YL GY, 12 PERCENT POROSITY-INTERGRAN,
INTERCRYS, GRAINTYPE- BIOGENIC, OOL CAST, SKELETAL, 05 PCT.
ALLOCHEMS, SIZE-MICR, GOOD IND, 10 PCT. DOLOMITE, HI RECRYS,
- 530.0 LIMESTONE, V LT OR, YL GY, 15 PERCENT POROSITY-INTERGRAN,
INTERCRYS, GRAINTYPE- BIOGENIC, OOL CAST, SKELETAL, 15 PCT.
ALLOCHEMS, SIZE-MICR, RANGE- MICR- V F, GOOD IND, SPARRY CAL
CITE CMT, 03 PCT. SAND (QTZ), HI RECRYS, FORAMINIF,
- 540.0 AS ABOVE,
- 550.0 LIMESTONE, V LT OR, YL GY, 18 PERCENT POROSITY-INTERGRAN,
INTERCRYS, GRAINTYPE- BIOGENIC, OOL CAST, SKELETAL, 25 PCT.
ALLOCHEMS, SIZE-MICR, RANGE- MICR- V F, GOOD IND, SPARRY CAL
CITE CMT, 15 PCT. DOLOMITE, HI RECRYS, ECHINOID,
- 560.0 LIMESTONE, V LT OR, 15 PERCENT POROSITY-INTERGRAN, INTERCRYS,
GRAINTYPE- BIOGENIC, OOL CAST, 30 PCT. ALLOCHEMS, SIZE-MICR,
RANGE- MICR- V F, MOD IND, SPARRY CALCITE CMT, MICRT CMT,
HI RECRYS,
- 570.0 AS ABOVE,
- 580.0 LIMESTONE, V LT OR, GY OR, 15 PERCENT POROSITY-INTERGRAN,
INTERCRYS, GRAINTYPE- BIOGENIC, OOL CAST, 25 PCT. ALLOCHEMS,
SIZE-MICR, RANGE- MICR- V F, MOD IND, SPARRY CALCITE CMT,
MICRT CMT, HI RECRYS, ECHINOID,
- 590.0 DOLOMITE, V LT OR, GY OR, 15 PERCENT POROSITY-INTERGRAN,
INTERCRYS, 50-90 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, RANGE-
MICR- V F, MOD IND, DOLOM CMT, MICRT CMT, 05 PCT. SAND (QTZ),
SUCROSIC,
- 600.0 DOLOMITE, V LT OR, GY OR, 15 PERCENT POROSITY-INTERGRAN,
INTERCRYS, 50-90 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, RANGE-
MICR- V F, MOD IND, DOLOM CMT, 10 PCT. SAND (QTZ), 01 PCT.
PHOS SAND, SUCROSIC,
- 610.0 AS ABOVE,
- 620.0 AS ABOVE,
- 630.0 DOLOMITE, V LT OR, GY YL, 18 PERCENT POROSITY-INTERGRAN,
INTERCRYS, 50-90 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, RANGE-
MICR- V F, MOD IND, DOLOM CMT, 18 PCT. SAND (QTZ), 02 PCT.
PHOS SAND, SUCROSIC,
- 640.0 DOLOMITE, GY YL, YL GY, 18 PERCENT POROSITY-INTERGRAN,
INTERCRYS, 50-90 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, RANGE-
MICR- V F, MOD IND, DOLOM CMT, 10 PCT. SAND (QTZ), SPAR,
SUCROSIC,
- DOLOMITE, LT GY, 04 PERCENT POROSITY-INTERGRAN, INTERCRYS,
50-90 PCT. ALTERED, SIZE-CRYP, GOOD IND, DOLOM CMT,
- 650.0 DOLOMITE, V LT OR, GY YL, 15 PERCENT POROSITY-INTERGRAN,
INTERCRYS, 50-90 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, RANGE-
MICR- V F, MOD IND, DOLOM CMT, 10 PCT. SAND (QTZ), SUCROSIC,
- 660.0 AS ABOVE,

LITHOLOGIC LOG

W- 4195 . SEMINOLE CO. T21S, R30E, SEC 33CA

- 679.0 LIMESTONE, V LT OR, 15 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 15 PCT. ALLOCHEMS, SIZE-MICR,
RANGE- MICR- V F, MOD IND, SPARRY CALCITE CMT, 06 PCT.
SAND(QTZ), MD RECRY, S,
- 680.0 LIMESTONE, V LT OR, 18 PERCENT POROSITY-INTERGRAN, MOLDIC,
P P VUGS, GRAINTYPE- BIOGENIC, SKELETAL, 15 PCT. ALLOCHEMS,
SIZE-MICR, RANGE- MICR- V F, MOD IND, SPARRY CALCITE CMT,
03 PCT. SAND(QTZ), MD RECRY, S, FORAMINIF, MOLLUSKS,
- 690.0 LIMESTONE, V LT OR, 18 PERCENT POROSITY-INTERGRAN, MOLDIC,
P P VUGS, GRAINTYPE- BIOGENIC, SKELETAL, 40 PCT. ALLOCHEMS,
SIZE- V F, RANGE- MICR- V F, MOD IND, SPARRY CALCITE CMT,
SAND(QTZ), MD RECRY, S, FORAMINIF, CONES,
- 700.0 LIMESTONE, V LT OR, 18 PERCENT POROSITY-INTERGRAN, MOLDIC,
GRAINTYPE- BIOGENIC, SKELETAL, 35 PCT. ALLOCHEMS, SIZE-MICR,
RANGE- MICR-FINE, NON-IND, SPARRY CALCITE CMT, SPARRY CAL
CITE CMT, DOLOM CMT, FROSTED, SPLINTER, Y,
- 710.0 DOLOMITE, GY YL, V LT OR, 15 PERCENT POROSITY-INTERGRAN,
INTERCRY, 50-90 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, RANGE-
MICR- V F, MOD IND, DOLOM CMT, LIMESTONE,
- 720.0 AS ABOVE,
SAMPLES 710-730 ARE DOLOMITE CALCARENITE
- 730.0 AS ABOVE,
- 740.0 DOLOMITE, GY YL, V LT OR, 15 PERCENT POROSITY-INTERGRAN,
INTERCRY, 50-90 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, RANGE-
MICR- V F, MOD IND, DOLOM CMT, 03 PCT. SAND(QTZ),
- 750.0 AS ABOVE,
- 760.0 AS ABOVE,
- 770.0 DOLOMITE, GY YL, V LT OR, 15 PERCENT POROSITY-INTERGRAN,
INTERCRY, 50-90 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, RANGE-
MICR-FINE, MOD IND, DOLOM CMT, 03 PCT. SAND(QTZ), SUCROSIC,
- 780.0 AS ABOVE,
- 790.0 DOLOMITE, V LT OR, GY YL, 15 PERCENT POROSITY-INTERGRAN,
INTERCRY, 10-50 PCT. ALTERED, SUBHEDRAL, SIZE-MICR, RANGE-
MICR- V F, MOD IND, DOLOM CMT,
- 800.0 LIMESTONE, V LT OR, MD OR PK, 15 PERCENT POROSITY-INTERGRAN,
INTERCRY, GRAINTYPE- BIOGENIC, OOL CAST, SKELETAL, 30 PCT.
ALLOCHEMS, SIZE-MICR, RANGE- MICR-FINE, MOD IND, MICRT CMT,
SPARRY CALCITE CMT, DOLOMITE, HI RECRY, S,
- 810.0 DOLOMITE, V LT OR, 15 PERCENT POROSITY-INTERGRAN, INTERCRY,
MOD IND, SPARRY CALCITE CMT, DOLOMITE, HI RECRY, S, FOSS FRAG,
MOLLUSKS,
- 820.0 AS ABOVE,
- 830.0 LIMESTONE, V LT OR, 18 PERCENT POROSITY-INTERGRAN, INTERCRY,
P P VUGS, GRAINTYPE- BIOGENIC, OOL CAST, SKELETAL, 15 PCT.
ALLOCHEMS, SIZE-MICR, RANGE- MICR- V F, MOD IND, SPARRY CAL
CITE CMT, 02 PCT. SAND(QTZ), DOLOMITE, HI RECRY, S,
TD

*** END OF DATA ***

W-4246
Driller's Log WSe -21S-29E-14
ab

OWNER : City of Orlando
LOCATION : Cor. Rosevear ave. and Helen Street,
2 $\frac{1}{4}$ mi. N of Orlando P.O. Sec. 14 NW $\frac{1}{4}$
COUNTY : Seminole(of NW $\frac{1}{4}$, Twsp. 21S, Rge. 29E)
ELEVATION : 96.85' surface ground
DRILLER : Central Florida Well Drillers, Orlando
STARTED : Jan. 9, 1957
COMPLETED : Mar. 2, 1957
DEPTH : 418'
CASING : 184'9" of 20"
HEAD : 43' below surface
YIELD :
USE : Drainage
DRAWDOWN :
QUALITY : Fresh
REMARKS : 40 samples, 20-410', received Apr. 22,
1957, from Central Florida Well Drillers,
Orlando

0-22	Brown hard rock
22-42	Sand
42-60	Blue clay
60-80	Black marl
100-120	Gravel and sand
120-145	Gravel
145-175	Boulders
175-180	Open
180-220	White lime
220-290	Brown lime and water
290-363	Lime rock, cavities, and water
363-389	Hard lime
389-403	Crevice water, no bailer return, w.l. change 28' to 43'
403-410	Hard brown lime
410-418	Brown lime

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-4296
TOTAL DEPTH: 68 FT.
8 SAMPLES FROM 0 TO 68 FT.

COUNTY - SEMIN
LOCATION: T.20S R.32E S.12 CC
LAT = 28D 45M 56S
LON = 81D 04M 31S

COMPLETION DATE: N/A
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 3 FT

OWNER/DRILLER: TEST WELL WEST OF LAKE HARNEY

WORKED BY: STEPHEN L. PALMES

0. - 40. 121PCPC PLIOCENE-PLEISTOCENE
40. - 60. 122HTRN HAWTHORN GROUP
60. - . 124OCAL OCALA GROUP

0 - 10 SAND; YELLOWISH GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; LOW SPHERICITY; UNCONSOLIDATED
ACCESSORY MINERALS: HEAVY MINERALS-01%

10 - 20 SAND; YELLOWISH GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO COARSE
MEDIUM SPHERICITY; UNCONSOLIDATED
ACCESSORY MINERALS: HEAVY MINERALS-01%

20 - 30 SAND; GRAYISH ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: FINE TO COARSE
ROUNDNESS: SUB-ROUNDED TO SUB-ANGULAR; MEDIUM SPHERICITY
UNCONSOLIDATED
ACCESSORY MINERALS: HEAVY MINERALS-01%

30 - 40 SAND; GRAYISH ORANGE
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO COARSE; HIGH SPHERICITY
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: SHELL-05%, PHOSPHATIC SAND-02%
CALCILUTITE-01%
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS

- 40 - 50 Limestone; LIGHT OLIVE GRAY
15% POROSITY: INTERGRANULAR, MOLDIC
GRAIN TYPE: SKELETAL, CRYSTALS
25% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: COARSE; RANGE: MICROCRYSTALLINE TO VERY COARSE
GOOD INDURATION
CEMENT TYPE(S): SPARRY CALCITE CEMENT
ACCESSORY MINERALS: QUARTZ SAND-12%, PHOSPHATIC SAND-02%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, FOSSIL MOLDS
GASTROPOD MOLDS; 20% OF SAMPLE IS UNCONSOLIDATED QUARTZ SAND.
- 50 - 60 SAND; LIGHT OLIVE GRAY TO LIGHT GRAY
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: VERY FINE TO VERY COARSE
LOW SPHERICITY; UNCONSOLIDATED
ACCESSORY MINERALS: LIMESTONE-15%, PHOSPHATIC SAND-02%
PHOSPHATIC GRAVEL-01%
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, BRYOZOA
- 60 - 68 LIMESTONE; YELLOWISH GRAY
20% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: SKELETAL, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO GRAVEL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
FOSSILS: ECHINOID, BENTHIC FORAMINIFERA, FOSSIL MOLDS
BRYOZOA
20% OF SAMPLE IS UNCONSOLIDATED QUARTZ SAND
- 68 TOTAL DEPTH

Test well W of Lake Harney, Gov. Lot
#6
Seminole County

8 samples rec., 0 - 68', brought in by E. J. Cameron, Sr., Sanford, Fla.
June 4, 1957

Intervals

0	10
10	20
20	30
30	40
40	50
50	60
60	68
68	bottom

Copy of Letter from Dr. Herman Gunter to Mr. Cameron, June 13, 1957

"Dear Mr. Cameron:

In regard to the heavy minerals present in the samples of your test well located west of Lake Harney, we have completed the laboratory examination that we described to you and Mr. Smith during your visit June 4.

We found the heavy mineral content not to exceed 1.48 percent by weight. The heavy minerals identified were ilmenite, rutile, zircon, hematite, magnetite, pyrite, leucoxene. By visual inspection we estimated the ilmenite, rutile and zircon not to comprise over two-thirds of the total heavy mineral content, or one percent or less.

For the sample to be considered commercial it should contain at least three to four percent heavy mineral.

We are recording these samples as our well numbered W-4296.

Sincerely yours,

Herman Gunter

W-4378
Driller's Log

OWNER : Farm and Home Machinery Co.
LOCATION : Oakland Shore, approx. 20' S. of
pump house in Oakland Shores S/D
COUNTY : ~~Orange~~ Seminole pump
ELEVATION : 81.72', top of conc. base @ S. side of/
DRILLER : Central Florida Well Drillers, Orlando
STARTED :
COMPLETED :
DEPTH : 385'
CASING : 117'9" of 8"
HEADING : 28'
YIELD :
USE : Water supply
DRAWDOWN :
QUALITY : Fresh
REMARKS : 31 samples, 30-380', sent in by
express from Central Florida Well
Drillers, Orlando, on Oct. 7, 1957

0-30	Sand
30-50	Blue clay and shell
50-80	Gray rock
80-100	Gray rock and gravel
100-110	Very hard gray rock
110-150	White lime rock
150-250	Soft mud and lime rock
250-290	Hard brown rock
290-340	Brown porous lime rock
340-385	Hard lime rock

Sep 2010, BB says well is in
Seminole, awr

W-4378

WSe-21S-29E-24 cd

Farm and Home 8" well
Oakland Shores, Orange County
Seminole County

30-40

40-50

50-60

60-70

70-80

80-90

90-100

100-110

110-120

120-130

130-140

140-150

150-160

160-170

170-180

180-190

190-200

200-210 31 samples, 30-380', sent in by express from Central
Florida Well Drillers, Orlando, on Oct. 7, 1957

220-230

230-240

240-250

250-260

280-290

290-300

300-310

310-320

320-330

330-340

340-350

380

847-4000

W-4494

Driller's Log

General Waterworks Corp.
OWNER : Florida Utilities Division
LOCATION : Magnolia Ave., Winter Park, Fla.
E₂¹. E₂¹, Sec 32, T21S, R30E
COUNTY : Seminole
ELEVATION : 85.39 Grd.
DRILLER : Layne-Atlantic Co. Orlando
STARTED : Feb. 28, 1957
COMPLETED : Nov. 21, 1957
DEPTH : 1315'
CASING : 114' of 30", 327' of 24", 474' of 20"
HEAD : 42' 693' of 16"
YIELD : 4000gpm
USE : Municipal
REMARKS : 124 samples 0' - 1300' sent in by Layne-Atlantic by express, on Dec. 6, 1957.

0 - 45	Sand
45 - 68	Sandy mud-gray
68 - 74	Stone and lime, gray, firm
74 - 78	Mud, brown, firm
78 - 125	Lime, gray
125 - 160	Lime, white, soft
160 - 181	Lime, White, firm
181 - 192	Lime, white, soft
192 - 194	Lime, white, firm
194 - 201	Lime, white, soft
201 - 210	Lime, white, firm
210 - 214	Lime, white, soft
214 - 220	Lime, white, firm
220 - 224	Lime, white, soft
224 - 245	Lime, gray, firm
245 - 251	Lime, gray hard
251 - 263	Lime, gray, soft
263 - 265	Lime, gray, hard
265 - 274	Lime, light brown, soft
274 - 296	Lime, light brown, firm
296 - 326	Lime, light brown, hard
326 - 328	Lime, light brown, soft
328 - 347	Lime, light brown, hard
347 - 361	Lime, light brown, medium hard
361 - 373	Lime, light brown, hard
373 - 378	Lime, dark brown, hard
378 - 388	Lime, dark brown, firm
388 - 404	Lime, dark brown, hard
404 - 414	Rock keeps running in
414 - 419	Lime dark brown, hard
419 - 421	Rock
421 - 426	Lime, dark brown, hard
426 - 428	Lime, very dark brown, hard
428 - 443	Lime dark brown, hard
443 - 445	Lime, very dark brown, hard
445 - 483	Lime, dark brown, hard
483 - 491	Lime and clay, brown, medium
491 - 496	Lime, brown hard
496 - 498	Lime clay, brown, medium
498 - 502	Lime, brown, hard

502 - 504	Lime clay, brown, medium
504 - 508	Lime, brown, hard
508 - 512	Lime clay, brown, medium
512 - 518	Lime, brown, hard
518 - 523	Lime, brown, medium
523 - 542	Lime, brown, hard
542 - 552	Lime, brown, firm - lost circulation @ 556'
552 - 588	Lime, brown, hard
588 - 1225	Lime, dark brown, hard
1225 - 1256	No cuttings
1256 - 1310	Lime, light brown, hard
1310 - 1315	Lime, light brown and shell

114' of 30" casing

Set 425' of 24" - cut out 98' leaving 327'

Set 474' of 20" with float shoe - cemented with 438 bags cement

Drilled to 1150' with 20" hole, set in 1148' of 16" with float shoe - cemented with 490 bags cement - cut out 455' of 16" leaving 693' in hole.

Tested November 21, 1957 42' Static Water level, pumped 4000 gpm with 45' drawdown 87' pumping level.

Pump No. 29041 - TF1227 head, 70' of 1 1/4" x 3" x 1-15/16" column, 18" RKMC two stage bowls, 10' of 1 1/4" Suction 1 1/4" Strainer, 75HP
Frame 505-7 1200 RPM 3/60 ser 984949.

W-4494
Water Analysis

Florida Utilities Division
OWNER : General Waterworks Corp.
LOCATION : Magnolia Ave., Winter Park, Seminole County, Fla.
ELEVATION : 85.39 Grd. E₂¹, E₂¹, Sec. 32, T21S, R30E
DEPTH : 1315'
CASING : 114' of 30", 327' of 24", 474' of 20", 693' of 16"
STARTED : Feb. 28, 1957
COMPLETED : Nov. 21, 1957
DRILLER : Layne-Atlantic Co. Orlando
YIELD : 4000 gpm
USE : Municipal
WATER LEVEL : 42'
DATE COLLECTED : Nov. 21, 1957
REMARKS : 124 samples 0' - 1300' sent in by Layne-Atlantic
by express, on Dec. 6, 1957.

Chemical Analysis
by Florida Chemists and Engineers, Inc.
November 26, 1957
Date of collection Nov. 21, 1957

Total Dissolved solids @ 105°C	146
Total hardness, as CaCO ₃	120
Hardness, carbonate "	114
Hardness, non-carbonate "	6
Alkalinity, Methyl Purple "	114
Calcium, as Ca	29
Iron, as Fe	0.03
Magnesium as Mg	12
Bicarbonates as HCO ₃	139
Carbonates as CO ₃	0
Carbon Dioxide as CO ₂	8
Chlorides as Cl	10
Fluorides as F	--
Hydroxides as OH	0
Phosphates as P ₂ O ₅	--
Silicates, as SiO ₃	16.4
Sulphates, as SiO ₄	0
Turbidity, as SiO ₂	1.1
pH, laboratory	7.71
pHs, at 25°C	7.92
Color, hellige Disc, True	5
Odor	Slight

W-4495

Driller's Log

OWNER	: Florida Utilities Division
LOCATION	: General Waterworks Corp.
	: Magnolia Ave., Disposal Well
	: Winter Park, E $\frac{1}{2}$, E $\frac{1}{2}$, Sec. 32, T21S, R30E
COUNTY	: Seminole
ELEVATION	: 85.39 Grd.
DRILLER	: Layne-Atlantic Co. Orlando
STARTED	: Oct. 8, 1957
COMPLETED	: Oct. 16, 1957
DEPTH	: 164'
CASING	: 74' of 16"
HEAD	:
YIELD	:
USE	: Dispose of water while pumping on Nov. 21.
REMARKS	: 16 samples 0' - 160' sent in by Layne-Atlantic Co. by express, on Dec. 6, 1957.

0 - 52	Sand
52 - 82	Sand and mud
82 - 126	Gray lime, firm
126 - 161	White soft lime
161 - 164	Firm white lime

Set 74' of 16" Casing.

NOTE: Well used only to dispose of water
when testing supply well.
ALL CASING WILL BE PULLED AND HOLE PLUGGED.