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HYDROGEOLOGIC RECONNAISSANCE OF LEE COUNTY, FLORIDA

PART 3 : APPENDICES

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HYDROGEOLOGIC RECONNAISSANCE OF LEE COUNTY, FLORIDA

By

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Groundwater Division
Resource Planning Department
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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APPENDIX 1-1: DATA ON GEOLOGIC CONTROL WELLS

WELL NUMBER, PLATE 1 ATLAS	SFWMD WELL NUMBER	USGS WELL NUMBER	FLA. BOG WELL NUMBER	TWP RNG SEC	LATITUDE LONGITUDE	DEPTH (FT.)	CASING (FT./IN.)	LITHOLOGY AVAILABLE	GEOPHYSICS* AVAILABLE
1	W-LE024	L-687	W-7342	43S 21E 26	26°43'23"N 82°15'34"W	575	141' 6"	X	G, E
2	W-LE005	L-651		43S 22E 13AB	26°44'18"N 81°59'25"W	195	n/a	X	G, E
3	WA-127			43S 23E 19BB	26°43'28"N 82°02'22"W	685	183' 6"		G, E, F, FR, T, ΔT, SP, C
4	W-LE012	L-653		43S 23E 15AB	26°44'18"N 81°59'25"W	210	n/a	X	G, E
5		L-642		43S 24E 04CC	26°45'37"N 81°55'22"W	210	n/a		G, E
6	WA-64			43S 24E 16BB	26°44'06"N 81°54'40"W	769	150' 4"		G, C, E, SP
7	WA-11			43S 24E 33DC	26°41'10"N 81°55'05"W	590	162' 5"		G, C, E, F, FR, T, ΔT, SP
8		L-633		43S 25E 07A	26°45'11"N 81°51'03"W	300	n/a		G, E
9	WA-44			44S 25E 3AB	26°41'05"N 81°47'55"W	390	145' 5"		G, C, F, T, ΔT, SP
10	W-LE003	L-641		43S 25E 36DA	26°41'41"N 81°46'29"W	535	n/a	X	G, E
11		L-632		43S 25E 13A	26°44'17"N 81°46'34"W	390	n/a		G, E
12	W-LE007			43S 26E 6CC	26°45'27"N 81°44'20"W	2150	542' 12"	X	G, E, C, F, N, A, FR, SP, T, ΔT

APPENDIX 1-1: DATA ON GEOLOGIC CONTROL WELLS (Continued)

WELL NUMBER, PLATE 1 ATLAS	SFWMD WELL NUMBER	USGS WELL NUMBER	FLA. BOG WELL NUMBER	TWP RNG SEC	LATITUDE LONGITUDE	DEPTH (FT.)	CASING (FT./IN.)	LITHOLOGY AVAILABLE	GEOPHYSICS* AVAILABLE
13	WA-77			43S 26E 26BB	26 42'55"N 81 40'42"W	699	190' 4"		G, E, C, SP
14	W-LE002	L-628		43S 27E 28AC	26 42'12"N 81 37'50"W	435'	n/a	X	G, E
15	WA-34			43S 28E 27BB	26 42'50"N 81 37'03"W	560	107' 6"		G, E, C, FR, T, ΔT, SP
16		L-630		43S 27E 10C	26 44'22"N 81 36'25"W	540	n/a		G, E
17	W-LE022			42S 27E 10DD	26 44'33"N 81 36'06"W	1200	346' 8"	X	SP, FR, F, G, E, C, N, T, ΔT
18	W-LE015			44S 21E 5	26 39'44"N 82 12'43"W	345	n/a	X	
19	W-LE021			45S 21E 5	26 35'55"N 82 13'02"W	300	n/a	X	
20	W-LE014			44S 22E 6DC	26 40'02"N 82 11'00"W	963	360' 9.8"	X	G, E, C, N, T, ΔT, SP
21		L-665		44S 22E 33D	26 35'30"N 82 06'51"W	270	n/a		G, E
22	L-3004D			44S 22E 17CC	26 38'81"N 82 02'27"W	778	450' 9.8"		E, C, F, N, G, T, ΔT
23	WA-54			44S 23E 21CD	26 37'18"N 82 00'50"W	599	121' 5.5"		G, C, E, SP

APPENDIX 1-1: DATA ON GEOLOGIC CONTROL WELLS (Continued)

WELL NUMBER, PLATE 1 ATLAS	SFWMD WELL NUMBER	USGS WELL NUMBER	FLA. BOG WELL NUMBER	TWP RNG SEC	LATITUDE LONGITUDE	DEPTH (FT.)	CASING (FT./IN.)	LITHOLOGY AVAILABLE	GEOPHYSICS* AVAILABLE
24	W-LE013	L-648		44S 23E 28BB	26°36'54"N 82°00'54"W	195	n/a	X	G, E
25	WA-68			44S 24E 9BC	26°39'27"N 81°54'56"W	1012	144' 8"		G, C, E
26	WA-28			44S 25E 17BA	26°39'10"N 81°50'05"W	596	155' 4"		G, C, E, T, ΔT, SP
27	WA-70			44S 25E 16CC	26°38'40"N 81°49'23"W	857	126' 6"		G, C, E, F
28	WA-129			44S 25E 3BC	26°40'29"N 81°48'02"W	814	80' 5"		G, C, E, FR, T, ΔT, SP
29	WA-45			44S 25E 22DD	26°37'57"N 81°37'35"W	518	119' 5.5"		G, C, E, F, SP
30	WA-35			44S 26E 7BA	26°40'07"N 81°45'15"W	742	98' 5"		G, C, E, FR, T, ΔT, SP
31	WA-21			44S 26E 19DB	26°38'15"N 81°43'40"W	780	195' 5.5"		G, C, E, FR, T, ΔT, SP
32		L-612		44S 26E 28D	26°37'00"N 81°42'54"W	300	n/a		G, E
33		L-624		44S 27E 18C	26°38'34"N 81°39'43"W	495	n/a		G, E
34	W-LE025		1014	46S 27E 29DA	26°30'52"N 81°41 46"W	1100	n/a	X	

APPENDIX 1-1: DATA ON GEOLOGIC CONTROL WELLS (Continued)

WELL NUMBER, PLATE 1 ATLAS	SFWMD WELL NUMBER	USGS WELL NUMBER	FLA. BOG WELL NUMBER	TWP RNG SEC	LATITUDE LONGITUDE	DEPTH (FT.)	CASING (FT./IN.)	LITHOLOGY AVAILABLE	GEOPHYSICS* AVAILABLE
35		L-623		44S 27E 28A	26°37'38"N 81°37'29"W	340	n/a		G, E
36	W-LE009	L-625		44S 27E 09D	26°39'27"N 81°36'50"W	540	n/a	X	G, E
37	WA-12			44S 27E 11CC	26°39'32"N 81°35'46"W	760	115' 6"		G, C, E, FR, T, ΔT, SP
38		L-627		44S 27E 02B	26°40'59"N 81°34'58"W	480	n/a		G, E
39	WA-27			44S 27E 12	26°39'30"N 81°33'57"W	852	120' 6"		C, E, FR, T, ΔT, SP
40	W-LE006	L-2525		45S 22E 27AB	26°31'17"N 82°05'10"W	650	n/a	X	G, E
41	WA-85			43S 25E 36CD	26°31'37"N 81°57'23"W	916	162' 6"		G, C, E, FR, T, ΔT, SP
42	WA-73			45S 24E 29BB	26°32'14"N 81°55'13"W	874	125' 4"		C, E, G, SP
43	WA-99			45S 24E 28AC	26°31'48"N 81°55'00"W	966	192' 6"		C, F, E, N, G, FR, T, ΔT SP
44	WA-46 W-LE018			45S 24E 17BB	26°33'16"N 81°55'15"W	620	n/a	X	G, E, C, T, SP
45	WA-98			45S 24E 3CD	26°34'56"N 81°53'45"W	920	114'		T, ΔT, SP, C, F, E, G, FR

APPENDIX 1-1: DATA ON GEOLOGIC CONTROL WELLS (Continued)

WELL NUMBER, PLATE 1 ATLAS	SFWMD WELL NUMBER	USGS WELL NUMBER	FLA. BOG WELL NUMBER	TWP RNG SEC	LATITUDE LONGITUDE	DEPTH (FT.)	CASING (FT./IN.)	LITHOLOGY AVAILABLE	GEOPHYSICS* AVAILABLE
46	WA-111			45S 24E 22CB	26°33'03"N 81°53'26"W	901	135		T, ΔT, SP, C, F, E, G, FR
47	WA-15			45S 24E 27BC	26°31'38"N 81°53'45"W	360	130' 4"		C, E, G, FR, T, ΔT, SP
48	WA-39			45S 25E 19AD	26°32'52"N 81°50'49"W	481	130' 6"		G, E, C, FR, T, ΔT, SP
49	W-LE008		W-9310	45S 25E 35A	26°31'36"N 81°46'54"W	1126	n/a	X	
50		L-661		45S 25E 14B	26°33'52"N 81°46'42"W	270	n/a		G, E
51		L-652		44S 26E 05A	26°41'01"N 81°44'30"W	598	n/a		G, E
52		L-613		45S 27E 07B	26°34'59"N 81°38'45"W	360	n/a		G, E
53	WA-25			45S 27E 5AB	26°35'55"N 81°37 50"W	966	126' 4"		G, E, C, T, ΔT, SP
54	W-LE001	L-2063		45S 27E 33D	26°30'53"N 81°36'37"W	1340	n/a	X	G, E
55	W-LE026		W-14011	46S 52E 01		635	n/a	X	
56	W-LE004			46S 22E 28AB		774	660	X	G
57	WA-48			46S 24E 7BB	26°29'38"N 81°56'21"W	706	155' 6"		G, E, C, SP

APPENDIX 1-1: DATA ON GEOLOGIC CONTROL WELLS (Continued)

WELL NUMBER, PLATE 1 ATLAS	SFWMD WELL NUMBER	USGS WELL NUMBER	FLA. BOG WELL NUMBER	TWP RNG SEC	LATITUDE LONGITUDE	DEPTH (FT.)	CASING (FT./IN.)	LITHOLOGY AVAILABLE	GEOPHYSICS* AVAILABLE
58		L-638		46S 24E 07B	26°29'14"N 81°56'07"W	300	n/a		G, E
59		L-608		46S 25E 7CD	26°28'41"N 81°50'47"W	320	n/a		G, E
60		L-987		46S 25E 10	26°29'00"N 81°47'55"W	240	n/a		G, E
61		L-607		46S 25E 33AC	26°25'51"N 81°49'02"W	235	n/a		G, E
62	WA-105			46S 25E 27BC	26°26'25"N 81°48'02"W	828	198' 4"		C, E, G, FR, T, ΔT, SP
63	L-3001D			46S 25E 27CA	26°26'13"N 81°47'46"W	818	181'		E, C, F, N, G, T, ΔT, SP
64		L-986		46S 25E 35	26°25'43"N 81°46'54"W	285	n/a		G, E
65		L-989		46S 26E 6CC	26°29'34"N 81°45'22"W	310	n/a		G, E
66		L-988		46S 26E 16	26°28'27"N 81°42'36"W	465	n/a		G, E
67	W-LE019	L-2183		46S 26E 21BA	26°27'09"N 81°42'41"W		n/a	X	G
68	W-LE020		W-14072	46S 25E 15CC			n/a	X	
69	W-LE010	L-1984		46S 26E 22B	26°37'13"N 81°41'46"W	288	n/a	X	G, E

APPENDIX 1-1: DATA ON GEOLOGIC CONTROL WELLS (Continued)

WELL NUMBER, PLATE 1 ATLAS	SFWMD WELL NUMBER	USGS WELL NUMBER	FLA. BOG WELL NUMBER	TWP RNG SEC	LATITUDE LONGITUDE	DEPTH (FT.)	CASING (FT./IN.)	LITHOLOGY AVAILABLE	GEOPHYSICS* AVAILABLE
70		L-602		25S 12E 26D	26°25'12"N 81°41'53"W	475	n/a		G, E
71		L-616		46S 26E 13A	26°28'30"N 81°40'06"W	345	n/a		G, E
72		L-620		46S 26E 1AA	26°30'07"N 81°40'07"W	470	n/a		G, E
73		L-617		46S 27E 30AA	26°26'59"N 81°39'36"W	340	n/a		G, E
74		L-614		46S 27E 27AA	26°27'02"N 81°36'42"W	380	n/a		G, E
75		L-604		47S 25E 17BA	26°23'13"N 81°49'36"W	300	n/a		G, E
76		L-601		47S 25E 15AD	26°23'12"N 81°47'57"W	265	n/a		G, E
77		L-603		47S 25E 34AA	26°20'47"N 81°48'05"W	345			G, E
78	W-LE011	L-605		47S 26E 19B	26°22'15"N 81°44'19"W	585	n/a	X	G, E
79	W-LE017		W-9324	47S 26E 13CA	26°23'12"N 81°42'15"W		n/a	X	
80		L-600		48S 27E 5AA	26°19'52"N 81°44'19"W	525	n/a	X	G, E

APPENDIX 1-1: DATA ON GEOLOGIC CONTROL WELLS (Continued)

WELL NUMBER, PLATE 1 ATLAS	SFWMD WELL NUMBER	USGS WELL NUMBER	FLA. BOG WELL NUMBER	TWP RNG SEC	LATITUDE LONGITUDE	DEPTH (FT.)	CASING (FT./IN.)	LITHOLOGY AVAILABLE	GEOPHYSICS* AVAILABLE
81	LE-023			45S 26E 34B	26°37'42"N 81°38'45"W	1350	n/a	X	

*C = Caliper
G = Natural Gamma
E = 16", 64" Normal and/or 6' Lateral Resistivity
FR = Fluid Resistivity
T = Temperature
ΔT = Temperature Differential
N = Neutron
A = Acoustic
SP = Spontaneous Potential

APPENDIX 1-2

Lithologic Logs

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE001

LEE CO. T45S R27E SEC 33CD 26 30 53 N 81 36 37 W
TOTAL DEPTH- 1340 FT. ELEV.- 30 FT. 90 SAMPLES- 0- 1340 FT.
COMPLETED- 81.03.27 DEPTH WORKED 1340 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
ELECTRIC

WELL NAME-
USGS WELL L2063 - ALLEN BAUM
REMARKS-
WORKED BY MIKE KNAPP,JAN.1981,SAMPLE QUAL FAIR.

HYDROGEOLOGIC UNITS

0.0-	125.0	SURFICIAL AQUIFER
125.0-	190.0	UPPER HAWTHORN CONFINING ZONE
190.0-	330.0	SANDSTONE AQUIFER
330.0-	395.0	MID-HAWTHORN CONFINING ZONE
395.0-	475.0	MID-HAWTHORN AQUIFER
680.0-	815.0	LOWER HAWTHORN / TAMPA PRODUCING ZONE
815.0-	1220.0	SUWANNEE AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	10.0	UNDIFFERENTIATED SAND AND CLAY
10.0-	45.0	CALOOSAHATCHEE FORMATION
45.0-	125.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
125.0-	680.0	HAWTHORN FORMATION
680.0-	815.0	TAMPA LIMESTONE *
815.0-	1220.0	SUWANNEE LIMESTONE
1220.0-	1340.0	CRYSTAL RIVER FORMATION

LITHOLOGIC LOG
W-LE001 . LEE CO. T45S, R27E, SEC 33CD

0.0-	5.0	SAND, WHITE TO VERY LIGHT GRAY, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 10% MICRITE, MOLLUSKS,
5.0-	10.0	AS ABOVE,
10.0-	17.0	SHELL BED, VERY LIGHT ORANGE, 20% POROSITY, INTERGRANULAR, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, 01% CLAY, 10% MICRITE, 35% QUARTZ SAND, MOLLUSKS,
17.0-	28.0	SHELL BED, WHITE, 20% POROSITY, INTERGRANULAR, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, 01% CLAY, 10% MICRITE, 10% QUARTZ SAND, MOLLUSKS,

* This unit is included as part of the Hawthorn Formation in this report.

LITHOLOGIC LOG
W-LE001 . LEE CO. T45S, R27E, SEC 33CD

28.0- 39.0 SANDSTONE, VERY LIGHT ORANGE TO WHITE, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, 15% MICRITE, MOLLUSKS,

39.0- 45.0 AS ABOVE,

45.0- 50.0 LIMESTONE, VERY LIGHT ORANGE, 16% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 20% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

50.0- 85.0 AS ABOVE,

85.0- 103.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 08% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

103.0- 125.0 AS ABOVE,

125.0- 140.0 DOLO-SILT, GREENISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 03% CLAY, 02% PHOSPHATIC SAND, 10% QUARTZ SAND, MOLLUSKS,

140.0- 170.0 AS ABOVE,

170.0- 180.0 LIMESTONE, GREENISH GRAY TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 06% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

180.0- 190.0 AS ABOVE,

190.0- 200.0 SANDSTONE, VERY LIGHT ORANGE TO GREENISH GRAY, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% MICRITE, 15% DOLOMITE, MOLLUSKS, CORAL,

200.0- 255.0 AS ABOVE,

255.0- 265.0 DOLOMITE, GREENISH GRAY, 12% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 25% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

LITHOLOGIC LOG
W-LE001 . LEE CO. T45S, R27E, SEC 33CD

265.0- 275.0 AS ABOVE,

275.0- 285.0 SANDSTONE, GREENISH GRAY TO VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 20% MICRITE, 01% PHOSPHATIC SAND, 30% DOLOMITE, MOLLUSKS,

285.0- 330.0 AS ABOVE,

330.0- 340.0 SAND, GREENISH GRAY, 20% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, DOLOMITE CEMENT, 15% DOLOMITE, 03% PHOSPHATIC SAND, MOLLUSKS,

340.0- 350.0 AS ABOVE,

350.0- 375.0 SAND, GREENISH GRAY TO DARK GRAYISH YELLOW, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, 02% CLAY, 01% PHOSPHATIC GRAVEL, 03% PHOSPHATIC SAND, 15% DOLOMITE, MOLLUSKS,

375.0- 395.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 01% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

SAMPLE IS A MIXTURE OF SAND (50%) AND DOLOMITE

395.0- 435.0 AS ABOVE,

435.0- 445.0 LIMESTONE, VERY LIGHT ORANGE TO GREENISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% DOLOMITE, 01% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

445.0- 475.0 AS ABOVE,

475.0- 480.0 DOLO-SILT, GREENISH GRAY TO DARK GRAYISH YELLOW, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 01% CLAY, 25% MICRITE, 20% QUARTZ SAND, 06% PHOSPHATIC SAND, SHARK TEETH, MOLLUSKS,

480.0- 500.0 AS ABOVE,

LITHOLOGIC LOG
W-LE001 . LEE CO. T45S, R27E, SEC 33CD

500.0- 510.0 DOLOMITE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 04% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS, ECHINOID,

510.0- 525.0 AS ABOVE,

525.0- 540.0 LIMESTONE, VERY LIGHT ORANGE TO GREENISH GRAY, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 02% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS,

540.0- 560.0 DOLO-SILT, GREENISH GRAY TO DARK GRAYISH YELLOW, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 04% CLAY, 04% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, SHARK TEETH,

560.0- 570.0 LIMESTONE, WHITE TO GREENISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 03% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS, BRYOZOA,

570.0- 590.0 AS ABOVE,

590.0- 600.0 DOLOMITE, WHITE TO GREENISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 40% MICRITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS, CORAL,

600.0- 645.0 AS ABOVE,

645.0- 665.0 DOLOMITE, VERY LIGHT ORANGE TO GREENISH GRAY, 14% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE, SUCROSIC, MOLLUSKS,

665.0- 680.0 AS ABOVE,

680.0- 695.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 04% QUARTZ SAND, MOLLUSKS, ECHINOID,

695.0- 704.0 AS ABOVE,

LITHOLOGIC LOG
W-LE001 . LEE CO. T45S, R27E, SEC 33CD

704.0- 740.0 LIMESTONE, WHITE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS, ECHINOID, CORAL, BENTHONIC FORAMINIFERA,

SCRITIES

740.0- 760.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 05% QUARTZ SAND, MOLLUSKS, ECHINOID, CORAL, BENTHONIC FORAMINIFERA,

760.0- 800.0 AS ABOVE,

800.0- 810.0 SAND, WHITE, 35% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 10% MICRITE, BENTHONIC FORAMINIFERA,

810.0- 815.0 DOLO-SILT, GREENISH GRAY TO DARK GRAYISH YELLOW, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, 15% CLAY, 05% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, BENTHONIC FORAMINIFERA, SHARK TEETH,

815.0- 820.0 SAMPLE IS A MIXTURE OF GREEN DOLO/CLAY AND LIMESTONE

820.0- 830.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, ECHINOID, MOLLUSKS, CORAL, BRYOZOA,

MILLIOLIDS

830.0- 880.0 AS ABOVE,

880.0- 890.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, CORAL,

890.0- 910.0 AS ABOVE WITH SOME PHOS.

LITHOLOGIC LOG
W-LE001 . LEE CO. T45S, R27E, SEC 33CD

910.0- 920.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 06% QUARTZ SAND, .01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

920.0- 960.0 AS ABOVE,

960.0- 1000.0 NO SAMPLE,

1000.0- 1022.0 SAND, WHITE, 35% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 10% MICRITE, 03% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA,

1022.0- 1060.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, BENTHONIC FORAMINIFERA, BRYOZOA,

SAND, WHITE, 35% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 03% PHOSPHATIC SAND,

SAMPLE IS A MIXTURE OF SAND AND LIMESTONE (CAVINGS?)

1060.0- 1080.0 AS ABOVE,

1080.0- 1100.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, 04% QUARTZ SAND, 02% PHOSPHATIC SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, BRYOZOA, ECHINOID,

1100.0- 1142.0 AS ABOVE WITH SOME GREEN DOLO/CLAY AND GRAVEL SIZE PHOS.

1142.0- 1200.0 AS ABOVE,

1200.0- 1220.0 DOLO-SILT, GREENISH GRAY TO DARK GRAYISH YELLOW, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% CLAY, 30% MICRITE, 10% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, BENTHONIC FORAMINIFERA, BRYOZOA,

1220.0- 1340.0 AS ABOVE W/ MANY OCALA FORAMS (UPERCULINOIDES MOODYSBR.)

SOUTH FLORIDA WMD - LITHC LUG PRINTOUT

W-LE002

LEE CO. T43S R27E SEC 28AC 26 42 12 N 81 37 50 W
TOTAL DEPTH- 435 FT. ELEV.- 19 FT. SAMPLES- - FT.
COMPLETED- . . DEPTH WORKED 435 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

ELECTRIC
GAMMA

WELL NAME-
USGS L628 (MOBIL)
REMARKS-
MIKE KNAPP,12-16-80,SAMP.QUAL-GOOD.

HYDROGEOLOGIC UNITS

00.0- 30.0 SURFICIAL AQUIFER
30.0- 65.0 UPPER HAWTHORN CONFINING ZONE
65.0- 175.0 SANDSTONE AQUIFER
175.0- 240.0 MID-HAWTHORN CONFINING ZONE
240.0- 270.0 MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0- 30.0 COCOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
30.0- 435.0 HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE002 . LEE CO. T43S, R27E, SEC 28AC

0.0- 10.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, 03% QUARTZ SAND,

10.0- 20.0 AS ABOVE,

20.0- 30.0 LIMESTONE, MODERATE ORANGE PINK TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 01% PHOSPHATIC SAND, 03% QUARTZ SAND,

30.0- 45.0 DOLO-SILT, LIGHT OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 10% CLAY, 03% PHOSPHATIC SAND, 03% QUARTZ SAND,

45.0- 65.0 AS ABOVE WITH SOME COARSE PHOS(2%)

LITHOLOGIC LOG
W-LE002 . LEE CO. T43S, R27E, SEC 28AC

65.0- 75.0 SANDSTONE, LIGHT OLIVE TO WHITE, 10% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 15% DOLOMITE, 20% MICRITE, 10% CLAY,

75.0- 90.0 AS ABOVE,

90.0- 105.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% DOLOMITE, 10% QUARTZ SAND, 01% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

105.0- 120.0 AS ABOVE,

120.0- 135.0 AS ABOVE,

135.0- 150.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% DOLOMITE, 03% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

150.0- 175.0 AS ABOVE,

175.0- 180.0 LIMESTONE, WHITE TO YELLOWISH GRAY, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: CRYSTALS, MICRITE, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 04% CLAY, 06% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

180.0- 195.0 SAND, LIGHT OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, DOLOMITE CEMENT, 10% CLAY, 10% MICRITE, 10% DOLOMITE, 02% PHOSPHATIC SAND, MOLLUSKS,

195.0- 220.0 DOLO-SILT, LIGHT OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, DOLOMITE CEMENT, 25% MICRITE, 10% CLAY, 03% PHOSPHATIC SAND, 20% QUARTZ SAND, MOLLUSKS,

220.0- 225.0 AS ABOVE WITH INCREASE IN PHOS(10%)(RUBBLE ZONE)

225.0- 240.0 RUBBLE ZONE

LITHOLOGIC LOG
W-LEO02 . LEE CO. T43S, R27E, SEC 28AC

240.0- 255.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: CRYSTALS, MICRITE, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% DOLOMITE, 06% PHOSPHATIC SAND,

255.0- 270.0 DOLOMITE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 06% PHOSPHATIC SAND, 03% QUARTZ SAND,

270.0- 285.0 AS ABOVE WITH FRAGS OF GREEN CLAY

285.0- 330.0 SAMPLES AT 300,315, AND 330 SAME AS 270.

330.0- 345.0 DOLO-SILT, LIGHT OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 10% CLAY, 08% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS,

345.0- 360.0 AS ABOVE,

360.0- 375.0 AS ABOVE,

375.0- 390.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: CRYSTALS, MICRITE, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 30% DOLOMITE, 03% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

390.0- 405.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 11% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, SUCROSIC, FOSSIL MOLDS, MOLLUSKS,

405.0- 420.0 AS ABOVE,

420.0- 435.0 DOLOMITE, VERY LIGHT ORANGE TO LIGHT GRAY, 09% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 10% MICRITE, 01% PHOSPHATIC SAND,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE003

LEE CO. T43S R25E SEC 36DA 26 41 41 N 81 46 29 W
TOTAL DEPTH- 535 FT. ELEV.- 5 FT. SAMPLES- 0- 535 FT.
COMPLETED- 80.12.20 DEPTH WORKED 535 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
ELECTRIC

WELL NAME-
USGS L641,MOBIL OIL
REMARKS-
WORKED BY MIKE KNAPP,DEC.1980,SAMPLE QUALITY, GOOD.

HYDROGEOLOGIC UNITS

0.0-	30.0	SURFICIAL AQUIFER
30.0-	70.0	UPPER HAWTHORN CONFINING ZONE
70.0-	155.0	SANDSTONE AQUIFER
155.0-	180.0	MID-HAWTHORN CONFINING ZONE
180.0-	255.0	MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	10.0	UNDIFFERENTIATED SAND AND CLAY
10.0-	30.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
30.0-	535.0	HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE003 . LEE CO. T43S, R25E, SEC 36DA

0.0-	10.0	SAND, VERY LIGHT ORANGE, 25% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 03% CLAY, 10% MICRITE, 02% PHOSPHATIC SAND, MOLLUSKS,
10.0-	20.0	LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 35% DOLOMITE, 06% PHOSPHATIC SAND, LOOKS LIKE HAWTHORN
20.0-	30.0	AS ABOVE,
30.0-	45.0	DOLO-SILT, LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 06% CLAY, 02% PHOSPHATIC SAND, 04% QUARTZ SAND,

LITHOLOGIC LOG
W-LE003 . LEE CO. T43S, R25E, SEC 36DA

45.0- 70.0 AS ABOVE,

70.0- 75.0 DOLOMITE, LIGHT OLIVE, 14% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 20% MICRITE, 02% CLAY, 06% QUARTZ SAND, 01% PHOSPHATIC SAND, FOSSIL MOLDS,

75.0- 100.0 SANDSTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% DOLOMITE, 20% MICRITE,

100.0- 105.0 DOLOMITE, GRAYISH ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, FOSSIL MOLDS, MOLLUSKS,

105.0- 120.0 AS ABOVE,

120.0- 135.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 02% PHOSPHATIC SAND, 06% QUARTZ SAND, FOSSIL MOLDS,

135.0- 155.0 AS ABOVE WITH INCREASE IN SAND CONTENT

155.0- 165.0 DOLO-SILT, LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% CLAY, 25% MICRITE, 08% PHOSPHATIC SAND, 02% QUARTZ SAND,

165.0- 180.0 RUBBLE ZONE

180.0- 195.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 05% PHOSPHATIC SAND, 03% QUARTZ SAND, CHALKY, FOSSIL MOLDS, MOLLUSKS,

195.0- 255.0 SAMPLES AT 210,225,240,AND 255 AS ABOVE.

255.0- 270.0 AS ABOVE WITH FRAGS OF GREEN CLAY AND VERY COARSE PHOS.(25%)

270.0- 285.0 DOLO-SILT, LIGHT OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 10% CLAY, 04% PHOSPHATIC SAND, 02% PHOSPHATIC GRAVEL,

285.0- 300.0 AS ABOVE,

LITHOLOGIC LOG
W-LE003 . LEE CO. T43S, R25E, SEC 36DA

300.0- 315.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, SKELETAL, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 03% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, 02% QUARTZ SAND, MOLLUSKS, ECHINOID, BRYOZOA,

315.0- 345.0 AS ABOVE,

345.0- 360.0 AS ABOVE,

360.0- 375.0 DOLOMITE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS,

375.0- 465.0 SAMPLES AT 390,405,420,435,AND 465 AS ABOVE.

465.0- 480.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, 05% SPAR, 04% PHOSPHATIC SAND, 02% QUARTZ SAND, FOSSIL MOLDS, ECHINOID, MOLLUSKS,

480.0- 495.0 AS ABOVE,

495.0- 510.0 DOLOMITE, YELLOWISH GRAY TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 02% CLAY, 35% MICRITE, 10% PHOSPHATIC SAND, ECHINOID, MOLLUSKS,

510.0- 525.0 AS ABOVE,

525.0- 535.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE004

LEE CO. T46S R22E SEC 28AB N W
TOTAL DEPTH- 774 FT. ELEV.- 4 FT. SAMPLES- 0- 774 FT.
COMPLETED- 81.02.05 DEPTH WORKED 774 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA

WELL NAME-
MISSIMER WELL LM987,REVERSE AIR
REMARKS-
SAMPLES WORKED BY MIKE KNAPP 2-5-81,QUALITY (GOOD)

HYDROGEOLOGIC UNITS

0.0-	64.0	SURFICIAL AQUIFER
64.0-	151.0	UPPER HAWTHORN CONFINING ZONE
151.0-	224.0	SANDSTONE AQUIFER
224.0-	310.0	MID-HAWTHORN CONFINING ZONE
310.0-	378.0	MID-HAWTHORN AQUIFER
648.0-	732.0	LOWER HAWTHORN / TAMPA PRODUCING ZONE
732.0-	774.0	SUWANNEE AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	26.0	CALOOSAHATCHEE FORMATION
26.0-	64.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
64.0-	652.0	HAWTHORN FORMATION
648.0-	732.0	TAMPA LIMESTONE *
732.0-	774.0	SUWANNEE LIMESTONE

LITHOLOGIC LOG
W-LE004 . LEE CO. T46S, R22E, SEC 28AB

0.0-	10.0	SHELL BED, LIGHT OLIVE GRAY, 20% POROSITY, INTERGRANULAR, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 10% MICRITE, 02% CLAY, 20% QUARTZ SAND, MOLLUSKS,
10.0-	16.0	SHELL BED, LIGHT OLIVE GRAY, 25% POROSITY, INTERGRANULAR, POOR INDURATION, MICRITE CEMENT, 10% MICRITE, MOLLUSKS,
16.0-	20.0	SHELL BED, GRAYISH OLIVE, 18% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 10% MICRITE, 10% CLAY, 05% QUARTZ SAND, MOLLUSKS, SPICULES,
20.0-	26.0	AS ABOVE,

* Note, this unit is included as part of the Hawthorn Formation in this report.

LITHOLOGIC LOG
W-LE004 . LEE CO. T46S, R22E, SEC 26AB

26.0- 33.0 LIMESTONE, MODERATE GRAY, 13% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: BIOGENIC, CRYSTALS, MICRITE, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, SPARRY CALCITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 01% CLAY, 10% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

33.0- 50.0 AS ABOVE,

50.0- 55.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

55.0- 62.0 AS ABOVE,

62.0- 64.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 03% PHOSPHATIC SAND, FOSSIL MOLDS,

LOOKS LIKE HAWTHORN

64.0- 65.0 CLAY, LIGHT OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 25% MICRITE, 20% DOLOMITE, 05% SILT,

65.0- 75.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: COARSE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 01% PHOSPHATIC SAND, 06% QUARTZ SAND, 01% MICA, MOLLUSKS, BENTHONIC FORAMINIFERA,

75.0- 85.0 LIMESTONE, VERY LIGHT ORANGE TO LIGHT GREENISH GRAY, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 10% QUARTZ SAND, 06% PHOSPHATIC SAND, 01% MICA, MOLLUSKS, BENTHONIC FORAMINIFERA,

85.0- 95.0 AS ABOVE,

95.0- 105.0 SANDSTONE, YELLOWISH GRAY, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, 02% CLAY,

105.0- 115.0 AS ABOVE,

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115.0- 124.0 LIMESTONE, YELLOWISH GRAY TO GRAYISH YELLOW, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, DOLOMITE CEMENT, 05% CLAY, 10% DOLOMITE, 20% QUARTZ SAND, 02% PHOSPHATIC SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

124.0- 127.0 AS ABOVE,

127.0- 147.0 CLAY, YELLOWISH GRAY TO GRAYISH YELLOW, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, DOLOMITE CEMENT, 20% MICRITE, 15% DOLOMITE, 15% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

147.0- 151.0 AS ABOVE,

151.0- 159.0 DOLOMITE, YELLOWISH GRAY TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 30% MICRITE, 08% CLAY, 08% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

159.0- 169.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 25% QUARTZ SAND, 10% DOLOMITE, MOLLUSKS,

169.0- 174.0 AS ABOVE,

174.0- 179.0 AS ABOVE WITH LESS SAND (08%)

179.0- 184.0 AS ABOVE,

184.0- 189.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 02% QUARTZ SAND, MOLLUSKS,

189.0- 198.0 DOLO-SILT, LIGHT OLIVE GRAY TO LIGHT GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 35% MICRITE, 10% CLAY, MOLLUSKS,

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198.0- 209.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 01% PHOSPHATIC SAND, MOLLUSKS,

209.0- 216.0 AS ABOVE,

216.0- 224.0 AS ABOVE WITH QTZ SAND (3%)

224.0- 230.0 CLAY, GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 35% MICRITE, 30% DOLOMITE, 06% PHOSPHATIC SAND, 05% QUARTZ SAND, MOLLUSKS,

230.0- 240.0 AS ABOVE WITH INCREASE IN PHOS. GRAVEL (4%)

240.0- 250.0 AS ABOVE,

250.0- 255.0 DOLO-SILT, GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 15% CLAY, 15% MICRITE, 30% QUARTZ SAND, 06% PHOSPHATIC SAND, MOLLUSKS,

MUCH VERY COARSE PHOSPHATE (3%).

255.0- 264.0 AS ABOVE,

264.0- 282.0 AS ABOVE,

282.0- 290.0 SAND, GREENISH GRAY, 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 10% MICRITE, 25% DOLOMITE, 05% CLAY, 10% PHOSPHATIC SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

290.0- 320.0 AS ABOVE,

LIMESTONE, WHITE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 04% PHOSPHATIC SAND, 02% QUARTZ SAND,

LIMESTONE IS ABOUT 2% OF WHOLE SAMPLE

320.0- 324.0 AS ABOVE WITH L/S(4%) AND SD (90%)

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324.0- 330.0 DOLOMITE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 07% PHOSPHATIC SAND, 07% QUARTZ SAND, MOLLUSKS,

330.0- 350.0 AS ABOVE,

350.0- 360.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 03% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS,

360.0- 370.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% MICRITE, 01% PHOSPHATIC SAND, 02% QUARTZ SAND,

370.0- 378.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

378.0- 425.0 AS ABOVE,

425.0- 430.0 AS ABOVE WITH INCREASE IN PHOS (10%) & SAND (4%)

430.0- 435.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS, ECHINOID,

435.0- 450.0 AS ABOVE,

450.0- 465.0 NO SAMPLE,

465.0- 470.0 CLAY, YELLOWISH GRAY TO LIGHT OLIVE GRAY, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 25% MICRITE, 25% DOLOMITE, 04% PHOSPHATIC SAND, 02% QUARTZ SAND,

470.0- 472.0 AS ABOVE,

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472.0- 475.0 DOLO-SILT, GRAYISH ORANGE TO YELLOWISH GRAY, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 25% MICRITE, 15% CLAY, 02% PHOSPHATIC SAND, 12% QUARTZ SAND,

475.0- 480.0 DOLOMITE, GRAYISH ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% MICRITE, 01% PHOSPHATIC SAND,

480.0- 483.0 AS ABOVE,

483.0- 485.0 LIMESTONE, YELLOWISH GRAY TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 02% PHOSPHATIC SAND, MOLLUSKS, CORAL, FOSSIL MOLDS, BRYOZOA, ECHINOID,

485.0- 490.0 LIMESTONE, WHITE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, 01% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, POOR INDURATION, MICRITE CEMENT, 01% PHOSPHATIC SAND, MOLLUSKS,

490.0- 495.0 DOLOMITE, GRAYISH ORANGE TO GRAYISH BROWN, 08% POROSITY, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 12% MICRITE, 01% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

495.0- 499.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 11% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 35% MICRITE, 01% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

499.0- 506.0 LIMESTONE, YELLOWISH GRAY, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, 02% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 25% DOLOMITE, 15% CLAY, 01% PHOSPHATIC SAND,

506.0- 510.0 AS ABOVE,

510.0- 512.0 DOLOMITE, MODERATE LIGHT GRAY TO GRAYISH ORANGE, 09% POROSITY, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% MICRITE, FOSSIL MOLDS, MOLLUSKS,

512.0- 522.0 AS ABOVE,

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522.0- 525.0 LIMESTONE, MODERATE LIGHT GRAY TO VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, 01% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS, ECHINOID,

525.0- 526.0 LIMESTONE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, 01% PHOSPHATIC SAND, 02% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS, ECHINOID,

ALSO CONTAINS FRAGS OF HIGHLY RECRYSTAL DOLO(35%)

526.0- 531.0 DOLOMITE, YELLOWISH GRAY TO GRAYISH BROWN, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

531.0- 542.0 AS ABOVE,

542.0- 543.0 LIMESTONE, YELLOWISH GRAY TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% DOLOMITE, 08% PHOSPHATIC SAND, 01% QUARTZ SAND,

543.0- 546.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 02% PHOSPHATIC SAND, FOSSIL MOLDS, BRYOZOA, MOLLUSKS,

546.0- 552.0 AS ABOVE,

552.0- 557.0 DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 08% PHOSPHATIC SAND, 02% QUARTZ SAND,

557.0- 560.0 AS ABOVE,

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560.0- 569.0 DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, 01% PHOSPHATIC GRAVEL, FOSSIL MOLDS,

569.0- 574.0 AS ABOVE,

574.0- 578.0 DOLO-SILT, YELLOWISH GRAY TO VERY LIGHT ORANGE, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 35% MICRITE, 10% CLAY, 08% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL,

578.0- 579.0 AS ABOVE WITH SOME WELL INDURATED FRAGS.

579.0- 584.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 08% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 02% PHOSPHATIC SAND, 02% PHOSPHATIC GRAVEL, FOSSIL MOLDS, SHARK TEETH,

584.0- 588.0 AS ABOVE,

588.0- 589.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 02% PHOSPHATIC SAND,

589.0- 595.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

595.0- 599.0 AS ABOVE,

599.0- 604.0 AS ABOVE WITH SOME GRAVEL PHOS (10%) AND SHARK TEETH

604.0- 608.0 DOLO-SILT, YELLOWISH GRAY TO VERY LIGHT ORANGE, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 35% MICRITE, 10% CLAY, 01% PHOSPHATIC SAND,

608.0- 610.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 01% PHOSPHATIC SAND, FOSSIL MOLDS,

610.0- 616.0 AS ABOVE WITH SOME CRYSTALLINE DOLO.

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616.0- 620.0 AS ABOVE WITH SOME GRAV. PHOS(1%)

620.0- 624.0 LIMESTONE, WHITE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, ECHINOID, MOLLUSKS,

ABUNDANT ECHINOID FRAGS

624.0- 632.0 AS ABOVE,

632.0- 635.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 02% PHOSPHATIC GRAVEL, ECHINOID, MOLLUSKS,

635.0- 639.0 DOLOMITE, GRAYISH BROWN TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, 02% PHOSPHATIC SAND, FOSSIL MOLDS,

639.0- 642.0 DOLOMITE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 40% MICRITE, 01% PHOSPHATIC SAND,

642.0- 644.0 AS ABOVE,

644.0- 646.0 DOLOMITE, LIGHT OLIVE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE,

646.0- 652.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 02% QUARTZ SAND, 01% PHOSPHATIC SAND, ECHINOID, MOLLUSKS,

652.0- 657.0 AS ABOVE WITH SOME FRAGS OF TAN DOLOMITE

657.0- 662.0 AS ABOVE,

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662.0- 667.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 01% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS, ECHINOID, FOSSIL MOLDS,

667.0- 672.0 AS ABOVE,

672.0- 677.0 AS ABOVE WITH SOME FRAGS OF PHOS/SANDY LIMESTONE

677.0- 682.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, MOLLUSKS, ECHINOID, BENTHONIC FORAMINIFERA, FOSSIL MOLDS,

SORITES

682.0- 687.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 01% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, ECHINOID, BENTHONIC FORAMINIFERA,

SORITES

687.0- 692.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 01% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS, ECHINOID, BENTHONIC FORAMINIFERA,

692.0- 702.0 AS ABOVE,

702.0- 707.0 AS ABOVE WITH MUCH SPAR XSTALS

707.0- 712.0 AS ABOVE,

712.0- 717.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

717.0- 726.0 AS ABOVE,

LITHOLOGIC LOG
W-LE004 . LEE CO. T46S, R22E, SEC 28AB

726.0- 732.0 AS ABOVE WITH ECHINOID FRAGS(2%), AND TRACE SAND AND PHOS.

732.0- 738.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, MOLLUSKS, ECHINOID, BENTHONIC FORAMINIFERA, CORAL, BRYOZOA,

738.0- 743.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 08% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 30% MICRITE, 15% SPAR, BENTHONIC FORAMINIFERA, MOLLUSKS,

743.0- 749.0 AS ABOVE WITH SOME XSTALLINE DOLO

749.0- 754.0 DOLOMITE, GRAYISH BROWN, 10% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, FOSSIL MOLDS, BENTHONIC FORAMINIFERA,

754.0- 759.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, FOSSIL MOLDS, MOLLUSKS, BRYOZOA, ECHINOID,

759.0- 764.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID,

764.0- 767.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE005

LEE CO. T43S R22E SEC 13AB 26 44 19 N 82 03 19 W
TOTAL DEPTH- 195 FT. ELEV.- 6 FT. SAMPLES- 0- 195 FT.
COMPLETED- . . DEPTH WORKED 195 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
ELECTRIC

WELL NAME-
USGS L651,MOBIL
REMARKS-
WORKED BY MIKE KNAPP, DEC.1980, SAMPLE QUAL.(GOOD)

HYDROGEOLOGIC UNITS

0.0- 30.0 SURFICIAL AQUIFER
30.0- 120.0 UPPER HAWTHORN CONFINING ZONE
120.0- 135.0 SANDSTONE AQUIFER
135.0- 150.0 MID-HAWTHORN CONFINING ZONE
150.0- 195.0 MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0- 10.0 UNDIFFERENTIATED SAND AND CLAY
10.0- 30.0 OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
30.0- 195.0 HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE005 . LEE CO. T43S, R22E, SEC 13AB

0.0- 10.0 SAND, WHITE TO MODERATE BROWN, 32% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 05% MICRITE,

10.0- 20.0 LIMESTONE, VERY LIGHT ORANGE, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, 02% CLAY, 15% MICRITE, 01% PHOSPHATIC SAND, 12% QUARTZ SAND, MOLLUSKS,

20.0- 30.0 AS ABOVE,

30.0- 45.0 DOLO-SILT, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 45% MICRITE, 03% CLAY, 10% QUARTZ SAND,

45.0- 60.0 DOLO-SILT, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 10% CLAY, 25% MICRITE, 15% QUARTZ SAND, MOLLUSKS,

LITHOLOGIC LOG
W-LE005 . LEE CO. T43S, R22E, SEC 13A8

60.0- 75.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, MOLLUSKS, FOSSIL MOLDS,

75.0- 90.0 DOLO-SILT, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 20% MICRITE, 10% CLAY, 03% QUARTZ SAND, 01% PHOSPHATIC SAND, OSTRACODS, MOLLUSKS,

90.0- 115.0 AS ABOVE,

115.0- 120.0 AS ABOVE WITH INCREASE IN PHOS(3%)

120.0- 135.0 SANDSTONE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 10% MICRITE, 10% SPAR,

135.0- 150.0 SAND, GRAYISH OLIVE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 10% CLAY, 10% DOLOMITE, 10% MICRITE, 10% PHOSPHATIC SAND, MOLLUSKS,

150.0- 165.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 30% DOLOMITE, 09% PHOSPHATIC SAND, 15% QUARTZ SAND,

165.0- 195.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE006

LEE CO. T45S R22E SEC 27AB 26 31 17 N 82 05 10 W
TOTAL DEPTH- 650 FT. ELEV.- 8 FT. SAMPLES- 0- 650 FT.
COMPLETED- . . DEPTH WORKED FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
ELECTRIC

WELL NAME-
USGS 2525
REMARKS-
WORKED BY MIKE KNAPP, DEC.1980, SAMPLE QUAL.(GOOD).

HYDROGEOLOGIC UNITS

0.0- 50.0 SURFICIAL AQUIFER
50.0-130.0 UPPER HAWTHORN CONFINING ZONE
130.0-150.0 SANDSTONE AQUIFER
150.0-240.0 MID-HAWTHORN CONFINING ZONE
240.0-330.0 MID-HAWTHORN AQUIFER
605.0-650.0 LOWER HAWTHORN / TAMPA PRODUCING ZONE

STRATIGRAPHIC FORMATIONS -

0.0- 30.0 UNDIFFERENTIATED SAND, CLAY AND SHELLS
30.0- 50.0 OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
50.0- 605.0 HAWTHORN FORMATION
605.0- 650.0 TAMPA LIMESTONE *

LITHOLOGIC LOG
W-LE006 . LEE CO. T45S, R22E, SEC 27AB

0.0- 5.0 SAND, LIGHT BROWN, 32% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 01% LIMESTONE,

5.0- 10.0 SAND, LIGHT BROWN, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 10% MICRITE, MOLLUSKS,

AS ABOVE WITH MUCH SHELL (SHELL BED).

10.0- 15.0 SHELL HASH

15.0- 30.0 AS ABOVE,

30.0- 40.0 SANDSTONE, YELLOWISH GRAY TO VERY LIGHT ORANGE, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, 40% MICRITE, MOLLUSKS,

* Note, this unit is included as part of the Hawthorn Formation in this report

LITHOLOGIC LOG
W-LE006 . LEE CO. T45S, R22E, SEC 27AB

40.0- 50.0 SAND, GREENISH GRAY, 25% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 15% DOLOMITE, 10% MICRITE, MOLLUSKS,

50.0- 60.0 CLAY, GRAYISH OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 35% DOLOMITE, 15% MICRITE, 10% QUARTZ SAND,

60.0- 70.0 DOLO-SILT, GRAYISH OLIVE TO LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 12% CLAY, 35% MICRITE, BENTHONIC FORAMINIFERA,

70.0- 130.0 AS ABOVE,

130.0- 140.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, 03% PHOSPHATIC SAND,

140.0- 150.0 AS ABOVE,

150.0- 160.0 DOLO-SILT, VERY LIGHT ORANGE TO LIGHT OLIVE, 13% POROSITY, INTERGRANULAR, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 02% CLAY, 25% MICRITE, 03% PHOSPHATIC SAND, 02% PHOSPHATIC GRAVEL,

160.0- 190.0 AS ABOVE,

190.0- 200.0 DOLO-SILT, LIGHT OLIVE TO GRAYISH OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 12% CLAY, 25% MICRITE, 10% PHOSPHATIC SAND, 10% QUARTZ SAND,

VERY COARSE PHOSPHATE (3%).

200.0- 240.0 AS ABOVE,

240.0- 250.0 DOLOMITE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 04% PHOSPHATIC SAND,

250.0- 270.0 AS ABOVE,

270.0- 280.0 DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 13% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, 07% PHOSPHATIC SAND, SUCROSIC,

LITHOLOGIC LOG
W-LE006 . LEE CO. T45S, R22E, SEC 27AB

280.0- 290.0 AS ABOVE,

290.0- 300.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, FOSSIL MOLDS,

300.0- 320.0 AS ABOVE,

320.0- 330.0 AS ABOVE WITH GREEN CLAY FRAGS.

330.0- 335.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, FOSSIL MOLDS,

335.0- 345.0 AS ABOVE,

345.0- 360.0 LIMESTONE, WHITE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 35% DOLOMITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS, BRYOZOA,

360.0- 380.0 AS ABOVE,

380.0- 390.0 DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, MOLLUSKS, BRYOZOA, FOSSIL MOLDS,

390.0- 405.0 NO SAMPLE,

405.0- 410.0 DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, MOLLUSKS, BRYOZOA, FOSSIL MOLDS,

410.0- 417.0 AS ABOVE,

417.0- 425.0 DOLO-SILT, YELLOWISH GRAY TO LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% CLAY, 35% MICRITE,

425.0- 435.0 AS ABOVE WITH PHOS (3%)

435.0- 445.0 AS ABOVE,

445.0- 465.0 NO SAMPLE,

LITHOLOGIC LOG
W-LE006 . LEE CO. T45S, R22E, SEC 27AB

465.0- 470.0 DOLOMITE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, 01% PHOSPHATIC SAND, FOSSIL MOLDS, BRYOZOA, MOLLUSKS,

470.0- 505.0 AS ABOVE,

505.0- 515.0 DOLO-SILT, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 06% CLAY, 15% MICRITE, 06% PHOSPHATIC SAND, 02% QUARTZ SAND,

515.0- 525.0 AS ABOVE AND VERY SUCROSIC

525.0- 535.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 03% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL,

535.0- 565.0 AS ABOVE,

565.0- 575.0 DOLOMITE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND,

575.0- 605.0 AS ABOVE,

605.0- 625.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, MOLLUSKS, ECHINOID, FOSSIL MOLDS, BRYOZOA, BENTHONIC FORAMINIFERA,

625.0- 650.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE007

LEE CO. T43S R26E SEC 06CC N W
TOTAL DEPTH- 2105 FT. ELEV.- 26 FT. 295 SAMPLES- 0- 2105 FT.
COMPLETED- 81.03.18 DEPTH WORKED 2150 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

CALIPHER
ELECTRIC
GAMMA
PHOTO
NEUTRON

WELL NAME-
U.S.GYPSUM #1,ALSAY PIPPIN
REMARKS-
WORKED BY MIKE KNAPP,MARCH 1981, SAMPLE QUAL.(GOOD)

X-RAY DIFFRACTOGRAM RESULTS (SELECTED INTERVALS)

75.0- 80.0 (80% DOLOMITE AND 20% CALCITE)
105.0- 110.0 (80% DOLOMITE AND 20% CALCITE)
125.0- 130.0 (95% DOLOMITE AND 5% CALCITE)
265.0- 270.0 (70% DOLOMITE AND 30% CALCITE)

HYDROGEOLOGIC UNITS

0.0- 40.0 SURFICIAL AQUIFER
40.0- 115.0 UPPER HAWTHORN CONFINING ZONE
115.0- 145.0 SANDSTONE AQUIFER
145.0- 240.0 MID-HAWTHORN CONFINING ZONE
240.0- 265.0 MID-HAWTHORN AQUIFER
700.0- 780.0 LOWER HAWTHORN / TAMPA PRODUCING ZONE
780.0-1205.0 SUWANNEE AQUIFER
1990.0-2105.0 BOULDER ZONE

STRATIGRAPHIC FORMATIONS -

0.0- 5.0 UNDIFFERENTIATED SAND AND CLAY
5.0- 20.0 CALOOSAHATCHEE FORMATION
20.0- 40.0 OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
40.0- 740.0 HAWTHORN FORMATION
740.0- 780.0 TAMPA LIMESTONE *
780.0- 1205.0 SUWANNEE LIMESTONE
1205.0- 1425.0 CRYSTAL RIVER FORMATION
1425.0- 1500.0 WILLISTON FORMATION
1500.0- 2080.0 AVON PARK LIMESTONE
2080.0- 2105.0 LAKE CITY LIMESTONE

* Note, this unit is included as part of the Hawthorn Formation in this report

LITHOLOGIC LOG
W-LE007 . LEE CO. T43S, R26E, SEC 06CC

0.0- 5.0 SAND, GRAYISH ORANGE, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, CLAY CEMENT, 01% CLAY,

5.0- 10.0 SANDSTONE, GRAYISH ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, CLAY CEMENT, MICRITE CEMENT, 20% CLAY, 25% MICRITE, MOLLUSKS,

CHIONE CANCELLATTA, SHELL INTERMIXED WITH SAMPLE

10.0- 15.0 AS ABOVE,

15.0- 20.0 LIMESTONE, GRAYISH BROWN, 10% POROSITY, INTERCRYSTALLINE, LOW PERMEABILITY, MOLDIC, GRAIN TYPE: CRYSTALS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, CLAY CEMENT, FOSSIL MOLDS,

20.0- 25.0 DOLOMITE, VERY LIGHT ORANGE, 16% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 01% CLAY, 02% QUARTZ SAND, FOSSIL MOLDS,

25.0- 35.0 AS ABOVE,

35.0- 40.0 INCREASE IN MOLLUSKS ESP.(CHIONE AND TURRITELLA)

40.0- 50.0 LIMESTONE, GREENISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, 02% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 12% CLAY, 10% DOLOMITE, 01% PHOSPHATIC SAND, MOLLUSKS,

50.0- 61.0 NO SAMPLE,

61.0- 65.0 SHELL BED, MODERATE GRAYISH GREEN, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% DOLOMITE, 20% MICRITE, 20% CLAY, 03% PHOSPHATIC SAND, MOLLUSKS, ECHINOID,

SANDY (3%)

65.0- 75.0 CLAY, MODERATE GRAYISH GREEN, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% MICRITE, 25% DOLOMITE, 01% PHOSPHATIC SAND, MOLLUSKS, ECHINOID, SPICULES,

75.0- 80.0 AS ABOVE,

LITHOLOGIC LOG
W-LE007 . LEE CO. T43S, R26E, SEC 06CC

80.0- 85.0 DOLO-SILT, LIGHT OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 35% MICRITE, 05% CLAY, 06% QUARTZ SAND, 04% PHOSPHATIC SAND, MOLLUSKS, SHARK TEETH,

85.0- 110.0 CLAY, LIGHT OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% DOLOMITE, 10% MICRITE, 01% QUARTZ SAND, 02% PHOSPHATIC SAND, OSTRACODS, BENTHONIC FORAMINIFERA,

110.0- 115.0 AS ABOVE,

115.0- 120.0 SANDSTONE, VERY LIGHT ORANGE TO LIGHT OLIVE, 13% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% DOLOMITE, 10% MICRITE, 01% CLAY, MOLLUSKS,

120.0- 125.0 AS ABOVE,

125.0- 130.0 DOLOMITE, VERY LIGHT ORANGE, 16% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, MOLLUSKS, FOSSIL MOLDS,

GOOD POROSITY

130.0- 135.0 AS ABOVE,

135.0- 145.0 AS ABOVE,

145.0- 150.0 DOLOMITE, WHITE TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 35% MICRITE, 01% CLAY, 01% QUARTZ SAND,

150.0- 155.0 AS ABOVE,

155.0- 165.0 NO SAMPLE,

165.0- 170.0 DOLO-SILT, WHITE TO LIGHT OLIVE, 11% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 35% MICRITE, 01% CLAY, 15% QUARTZ SAND, 01% PHOSPHATIC SAND,

170.0- 185.0 NO SAMPLE,

185.0- 190.0 AS ABOVE,

190.0- 195.0 AS ABOVE,

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195.0- 200.0 SANDSTONE, WHITE, 13% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 20% MICRITE, 20% DOLOMITE, 03% PHOSPHATIC SAND, 02% PHOSPHATIC GRAVEL, MOLLUSKS,

200.0- 205.0 AS ABOVE,

205.0- 210.0 INCREASE IN PHOSPHORITE (10)%)

210.0- 215.0 DOLO-SILT, GRAYISH OLIVE GREEN, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, 10% CLAY, 04% PHOSPHATIC SAND, 02% PHOSPHATIC GRAVEL, MOLLUSKS,

RUBBLE ZONE

215.0- 220.0 AS ABOVE,

220.0- 225.0 SAND, GRAYISH OLIVE GREEN, 13% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, 25% CLAY, 15% DOLOMITE, 12% PHOSPHATIC SAND, SHARK TEETH, MOLLUSKS,

225.0- 235.0 AS ABOVE,

235.0- 240.0 AS ABOVE,

240.0- 245.0 DOLOMITE, WHITE, 14% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, 10% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS, BRYOZOA,

SAMPLE CONTAINS LARGE AMOUNT OF PHOS. AND GREEN CLAY.

245.0- 250.0 AS ABOVE WITH MUCH CAVING

250.0- 255.0 DOLOMITE, WHITE, 14% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 08% PHOSPHATIC SAND, 06% QUARTZ SAND, MOLLUSKS, BRYOZOA, FOSSIL MOLDS,

255.0- 260.0 INCREASE IN PHOSPHORITE (10%)

260.0- 265.0 AS ABOVE,

265.0- 270.0 DOLOMITE, WHITE, 11% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 10% PHOSPHATIC SAND, 02% QUARTZ SAND,

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270.0- 275.0 AS ABOVE,

275.0- 280.0 DOLO-SILT, LIGHT GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 10% CLAY, 08% PHOSPHATIC SAND, 05% QUARTZ SAND, MOLLUSKS,

280.0- 330.0 SAMPLES AT 290,300, AND 330 AS 280.

330.0- 335.0 DOLO-SILT, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 04% CLAY, 10% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS,

335.0- 350.0 NO SAMPLE,

350.0- 355.0 AS ABOVE,

355.0- 365.0 DOLOMITE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 07% PHOSPHATIC SAND, 03% QUARTZ SAND, 01% CLAY, FOSSIL MOLDS, MOLLUSKS, SHARK TEETH,

365.0- 375.0 AS ABOVE,

375.0- 385.0 AS ABOVE,

385.0- 395.0 AS ABOVE WITH 2% CLAY AND POORLY INDURATED

395.0- 450.0 AS ABOVE,

450.0- 410.0 DOLO-SILT, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 05% CLAY, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, SHARK TEETH, MOLLUSKS,

410.0- 420.0 AS ABOVE WITH INCREASE IN PHOSPHORITE(8%)

420.0- 430.0 AS ABOVE,

430.0- 440.0 DOLO-SILT, YELLOWISH GRAY TO MODERATE GRAYISH GREEN, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 10% CLAY, 06% PHOSPHATIC SAND, 02% PHOSPHATIC GRAVEL, SHARK TEETH, MOLLUSKS,

GREEN CLAY FILLING IN DOLOMITE VOIDS

440.0- 445.0 DOLO-SILT, LIGHT OLIVE, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 15% MICRITE, 06% CLAY, 06% PHOSPHATIC SAND, 02% PHOSPHATIC GRAVEL, SHARK TEETH, MOLLUSKS, BRYOZOA,

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445.0- 450.0 CLAY FILLING VOIDS

450.0- 455.0 DOLO-SILT, LIGHT GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 03% CLAY, 02% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, SHARK TEETH, MOLLUSKS,

455.0- 465.0 AS ABOVE WITH SOME SUCROSIC DOLOMITE

465.0- 470.0 DOLOMITE, LIGHT GREENISH GRAY TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 01% CLAY, 01% PHOSPHATIC SAND, SUCROSIC, FOSSIL MOLDS, MOLLUSKS,

470.0- 495.0 SAMPLES AT 475,485, AND 495 AS ABOVE.

495.0- 505.0 DOLOMITE, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 20% MICRITE, 05% CLAY, MOLLUSKS, ECHINOID,

505.0- 510.0 AS ABOVE,

510.0- 515.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, CRYSTALS, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 35% SPAR, 10% DOLOMITE, 02% QUARTZ SAND, ECHINOID, MOLLUSKS, FOSSIL MOLDS, BRYOZOA, BENTHONIC FORAMINIFERA,

POOR SAMPLES OF FORAMS

515.0- 540.0 SAMPLES AT 528,535, AND 540 AS ABOVE.

540.0- 545.0 SAMPLE IS A MIXTURE OF XSTAL.L/S,DOLO.,AND GREEN CLAY.

545.0- 550.0 DOLOMITE, VERY LIGHT GRAY TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 02% QUARTZ SAND,

550.0- 555.0 AS ABOVE,

555.0- 560.0 DOLOMITE, VERY LIGHT ORANGE TO GREENISH GRAY, 14% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: FINE, RANGE: FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, 01% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, FOSSIL MOLDS,

560.0- 565.0 AS ABOVE GOOD POROSITY

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565.0- 570.0 DOLOMITE, VERY LIGHT ORANGE TO WHITE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, MOLLUSKS,

570.0- 575.0 AS ABOVE,

575.0- 585.0 DOLOMITE, VERY LIGHT ORANGE TO WHITE, 10% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

585.0- 595.0 AS ABOVE,

595.0- 605.0 DOLOMITE, WHITE, 11% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 02% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS,

605.0- 615.0 AS ABOVE WITH INCREASE IN PHOS.(3%)AND SAND(4%).

615.0- 635.0 SAMPLES AT 620,625, AND 635 AS ABOVE

635.0- 645.0 DOLOMITE, GREENISH GRAY, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: FINE, RANGE: FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, 01% PHOSPHATIC SAND, FOSSIL MOLDS,

645.0- 655.0 AS ABOVE,

655.0- 665.0 AS ABOVE,

665.0- 675.0 DOLOMITE, WHITE, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS,

675.0- 700.0 SAMPLES AT 685,695, AND 700 AS ABOVE.

700.0- 705.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, CRYSTALS, MICRITE, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 12% SPAR, 10% DOLOMITE, MOLLUSKS, FOSSIL MOLDS, BENTHONIC FORAMINIFERA,

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705.0- 710.0 AS ABOVE,

710.0- 715.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 12% SPAR, 04% PHOSPHATIC SAND, 10% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

715.0- 725.0 AS ABOVE,

725.0- 740.0 DOLOMITE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 02% PHOSPHATIC SAND, 08% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

740.0- 755.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% SPAR, 15% DOLOMITE, 06% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, FOSSIL MOLDS,

ARCHIAS SP.
J.MILLER (USGS) REPORTS PENEROPOLIS BRADYI THIS ZONE.

755.0- 765.0 AS ABOVE WITH INCREASE IN SAND (12)

765.0- 775.0 AS ABOVE WITH FRAGMENTS OF ARCHIAS SP.

775.0- 780.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, 12% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 10% DOLOMITE, 04% QUARTZ SAND, BENTHONIC FORAMINIFERA,

780.0- 785.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 15% SPAR, MOLLUSKS, BENTHONIC FORAMINIFERA,

FLORILUS SP.?

785.0- 795.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, 55% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, BENTHONIC FORAMINIFERA,

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795.0- 825.0 SAMPLES AT 805,815,AND 825 AS ABOVE.

825.0- 830.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 55% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 12% SPAR, 06% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA,

830.0- 840.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, CORAL, ECHINOID,

840.0- 850.0 AS ABOVE WITH BROWN CALCITE OR DOLO. XSTALS.

850.0- 860.0 AS ABOVE WITH INCREASE IN SAND (4%)

860.0- 870.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, PELLET, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

870.0- 875.0 LIMESTONE, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, BIOGENIC, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 05% CLAY, 35% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

875.0- 880.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 03% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

880.0- 890.0 SANDSTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 20% MICRITE, 05% SPAR, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

890.0- 900.0 AS ABOVE,

900.0- 905.0 DOLOMITE, GRAYISH BROWN TO VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 08% QUARTZ SAND,

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905.0- 910.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 01% CLAY, 25% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

910.0- 915.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, 10% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

915.0- 920.0 DOLOMITE, GRAYISH BROWN TO VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 03% QUARTZ SAND, 01% PHOSPHATIC SAND, SUCROSIC,

920.0- 925.0 LIMESTONE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 01% CLAY, 04% QUARTZ SAND, MOLLUSKS,

925.0- 930.0 AS ABOVE,

930.0- 935.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 11% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, POOR INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% QUARTZ SAND, ECHINOID,

935.0- 950.0 SAMPLES AT 940,945,AND 950 AS ABOVE.

950.0- 955.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

955.0- 960.0 AS ABOVE,

960.0- 964.0 AS ABOVE,

964.0- 965.0 DOLOMITE, GRAYISH BROWN TO GRAYISH ORANGE, 10% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, 01% QUARTZ SAND,

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FRAGS OF GREY(BLACK FLECKS) MOD. INDURATED CLAY

965.0- 970.0 MIXTURE OF ABOVE 3 LITHOS.

970.0- 980.0 CLAY, GRAYISH BROWN TO MODERATE DARK GRAY, 06% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 30% MICRITE, 20% DOLOMITE, 01% QUARTZ SAND, 01% PHOSPHATIC SAND,

980.0- 985.0 DOLOMITE, GRAYISH BROWN, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 40% MICRITE, 10% CLAY,

985.0- 990.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 30% DOLOMITE,

990.0- 995.0 DOLOMITE, GRAYISH BROWN TO GRAYISH ORANGE, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% MICRITE,

995.0- 1000.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 30% DOLOMITE, 01% QUARTZ SAND,

1000.0- 1005.0 AS ABOVE WITH A TRACE OF PHOS

1005.0- 1010.0 DOLOMITE, GRAYISH BROWN TO GRAYISH ORANGE, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, 02% QUARTZ SAND,

1010.0- 1015.0 DOLOMITE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 40% MICRITE,

1015.0- 1020.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: MICRITE, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% MICRITE, FOSSIL MOLDS,

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1020.0- 1025.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, POOR INDURATION, MICRITE CEMENT, 10% QUARTZ SAND,

1025.0- 1030.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 20% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, BRYOZOA,

1030.0- 1035.0 AS ABOVE,

1035.0- 1040.0 AS ABOVE WITH APPARENT REWORKING, GOOD POROSITY AND PERMEABILITY, FORAM TESTS HIGHLY REXSTAL. AND BROKEN.

1040.0- 1045.0 AS ABOVE,

1045.0- 1050.0 AS ABOVE,

1050.0- 1055.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 65% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 06% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

1055.0- 1060.0 AS ABOVE WITH DECREASE IN SAND.

1060.0- 1065.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 04% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, BRYOZOA,

1065.0- 1070.0 AS ABOVE,

1070.0- 1075.0 AS ABOVE,

1075.0- 1080.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, POOR INDURATION, MICRITE CEMENT, 01% QUARTZ SAND, FOSSIL FRAGMENTS,

1080.0- 1085.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, BRYOZOA, CORAL, ECHINOID,

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1085.0- 1090.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA,

1090.0- 1095.0 AS ABOVE,

1095.0- 1105.0 AS ABOVE,

1105.0- 1110.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID,

1110.0- 1115.0 AS ABOVE,

1115.0- 1120.0 DOLOMITE, GRAYISH BROWN TO GRAYISH ORANGE, 08% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE,

SAMPLE IS A COMBINATION OF THE LITHOS AT 1110 AND 1120.

1120.0- 1125.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, BRYOZOA, ECHINOID,

1125.0- 1150.0 SAMPLES AT 1130,1135,1140,1145,AND 1150 AS ABOVE.

1150.0- 1155.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1155.0- 1165.0 AS ABOVE,

1165.0- 1175.0 AS ABOVE,

1175.0- 1185.0 AS ABOVE ROTALLIA SP.

1185.0- 1195.0 APPEARS REWORKED-SOME PHOS (1%)

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1195.0- 1200.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1200.0- 1205.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA,

LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1205.0- 1215.0 SOME CHERT(1%), AND A TRACE OF GREEN CLAY

1215.0- 1225.0 AS ABOVE,

1225.0- 1235.0 AS ABOVE,

1235.0- 1245.0 LEPIDOCYCLINA SP.

1245.0- 1255.0 LEPIDOCYCLINA OCALANA

1255.0- 1265.0 AS ABOVE,

1265.0- 1270.0 AS ABOVE,

1270.0- 1305.0 AS ABOVE,

1305.0- 1310.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

LEPIDOCYCLINA SP., OPERCULINOIDES SP, PERONELLA SP.

1310.0- 1315.0 AS ABOVE,

1315.0- 1325.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 65% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1325.0- 1355.0 SAMPLES AT 1335,1345,AND 1355 ARE AS 1325.

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1355.0- 1365.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA,

1365.0- 1375.0 AS ABOVE WITH MANY LARGE FORAMS

1375.0- 1425.0 SAMPLES AT 1385,1395,1405,1415 ALL AS ABOVE

1425.0- 1435.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 85% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA,

OPERCULINOIDES ABUNDANT,MOODYSBRANCHENSIS SPECIES.

1435.0- 1445.0 AS ABOVE WITH AMPHISTEGINA SP.

1445.0- 1495.0 SAMPLES AT 1455,1465,1475,1485 ALL AS ABOVE

1495.0- 1500.0 DOLOMITE, MODERATE YELLOWISH BROWN, 14% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, SUCROSIC, FOSSIL MOLDS, BENTHONIC FORAMINIFERA, ECHINOID,

1500.0- 1505.0 AS ABOVE,

1505.0- 1510.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 40% MICRITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1510.0- 1515.0 AS ABOVE,

1515.0- 1525.0 AS ABOVE,

1525.0- 1530.0 DOLOMITE, MODERATE YELLOWISH BROWN, 13% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, SUCROSIC, BENTHONIC FORAMINIFERA, ECHINOID,

1530.0- 1535.0 AS ABOVE,

1535.0- 1540.0 AS ABOVE,

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1540.0- 1545.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, BENTHONIC FORAMINIFERA,

1545.0- 1550.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 35% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

MILLIOLIDS, PERONELLA SP.

1550.0- 1555.0 AS ABOVE,

1555.0- 1560.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1560.0- 1575.0 SAMPLES AT 1565,1570,AND 1575 ARE AS ABOVE.

1575.0- 1580.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1580.0- 1590.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1590.0- 1600.0 AS ABOVE,

1600.0- 1610.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1610.0- 1620.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, FOSSIL MOLDS,

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1620.0- 1630.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, SKELETAL, CRYSTALS, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, BENTHONIC FORAMINIFERA,

1630.0- 1640.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 02% PEAT,

1640.0- 1650.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, SKELETAL, CRYSTALS, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, BENTHONIC FORAMINIFERA,

1650.0- 1660.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, SKELETAL, CRYSTALS, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA,

DICTYOCONUS COOKEI.

1660.0- 1670.0 AS ABOVE,

1670.0- 1680.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, CRYSTALS, SKELETAL, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, CLAY CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1680.0- 1685.0 DOLOMITE, GRAYISH ORANGE, 10% POROSITY, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, FOSSIL MOLDS,

1685.0- 1690.0 AS ABOVE WITH MOLDS OF CONES.

1690.0- 1700.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA,

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1700.0- 1710.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: BIOGENIC, CRYSTALS, SKELETAL, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, CORAL,

1710.0- 1720.0 AS ABOVE,

1720.0- 1730.0 AS ABOVE,

1730.0- 1740.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 40% MICRITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

1740.0- 1750.0 AS ABOVE,

1750.0- 1760.0 LIMESTONE, YELLOWISH GRAY TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 01% CLAY, BENTHONIC FORAMINIFERA, MOLLUSKS,

1760.0- 1765.0 AS ABOVE,

1765.0- 1770.0 LIMESTONE, YELLOWISH GRAY, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, SKELETAL, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, SPARRY CALCITE CEMENT, 03% CLAY, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA,

WELL DEVELOPED BROWN CALCITE XSTALS.PRESENT

1770.0- 1775.0 LIMESTONE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: BIOGENIC, CRYSTALS, MICRITE, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, BENTHONIC FORAMINIFERA,

SOME DOLOMITIC L/S INTERMIXED

1775.0- 1780.0 AS ABOVE,

1780.0- 1790.0 AS ABOVE,

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1790.0- 1800.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, SKELETAL, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, BENTHONIC FORAMINIFERA, ECHINOID,

1800.0- 1810.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 10% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 40% MICRITE, BENTHONIC FORAMINIFERA,

1810.0- 1820.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, BENTHONIC FORAMINIFERA,

1820.0- 1830.0 AS ABOVE,

1830.0- 1840.0 AS ABOVE,

1840.0- 1855.0 DOLOMITE, DARK YELLOWISH BROWN, 11% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE, FOSSIL MOLDS,

1855.0- 1860.0 AS ABOVE,

1860.0- 1870.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, BENTHONIC FORAMINIFERA,

1870.0- 1880.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, BENTHONIC FORAMINIFERA,

1880.0- 1885.0 AS ABOVE,

FRAGS. OF GREY PHOSPHATIC(CLAYEY?)LIMESTONE

1885.0- 1890.0 AS ABOVE,

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1890.0- 1900.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA,

1900.0- 1910.0 DOLOMITE, GRAYISH ORANGE, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 25% MICRITE, 10% SPAR, BENTHONIC FORAMINIFERA, FOSSIL MOLDS, CORAL,

1910.0- 1920.0 AS ABOVE,

1920.0- 1930.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, BENTHONIC FORAMINIFERA,

1930.0- 1944.0 AS ABOVE WITH DICTYOCONUS COOKEI

1944.0- 1950.0 AS ABOVE,

1950.0- 1960.0 DOLOMITE, GRAYISH ORANGE, 09% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, FOSSIL MOLDS,

1960.0- 1970.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 11% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 01% GYPSUM, FOSSIL MOLDS,

1970.0- 1980.0 DOLOMITE, GRAYISH ORANGE TO MODERATE YELLOWISH BROWN, 08% POROSITY, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 10% MICRITE, 01% GYPSUM,

1980.0- 1990.0 DOLOMITE, DARK YELLOWISH ORANGE TO MODERATE YELLOWISH BROWN, 15% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 10% MICRITE,

LITHOLOGIC LOG
W-LE007 . LEE CO. T43S, R26E, SEC 06CC

1990.0- 2000.0 DOLOMITE, DARK YELLOWISH BROWN TO MODERATE YELLOWISH BROWN, 11% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE,

2000.0- 2010.0 AS ABOVE W/LS FRAGS CONTAINING DICTYOCONUS COOKEI

2010.0- 2020.0 DOLOMITE, MODERATE YELLOWISH BROWN, 09% POROSITY, INTERCRYSTALLINE, MOLDIC, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE,

2020.0- 2070.0 SAMPLES AT 2030,2040,2050,AND 2060 ALL AS ABOVE

2070.0- 2080.0 DOLOMITE, DARK YELLOWISH BROWN TO DARK YELLOWISH BROWN, 11% POROSITY, INTERCRYSTALLINE, MOLDIC, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 10% MICRITE, 01% GYPSUM,

2080.0- 2090.0 AS ABOVE,

2090.0- 2105.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE008

LEE CO. T45S R25E SEC 35A N W
TOTAL DEPTH- 1126 FT. ELEV.- 20 FT. SAMPLES- 0- 1126 FT.
COMPLETED- . . DEPTH WORKED 1126 FT.

WELL NAME-
BUREAU OF GEOLOGY W9310
REMARKS-
WORKED MIKE KNAPP,JAN 1980,SAMPLE QUALITY FAIR.

HYDROGEOLOGIC UNITS

0.0-	40.0	SURFICIAL AQUIFER
40.0-	70.0	UPPER HAWTHORN CONFINING ZONE
70.0-	110.0	SANDSTONE AQUIFER
110.0-	180.0	MID-HAWTHORN CONFINING ZONE (RUBBLE ZONE)
180.0-	?.?	MID-HAWTHORN AQUIFER
660.0-	750.0	LOWER HAWTHORN / TAMPA PRODUCING ZONE
750.0-	1120.0	SUWANNEE AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	40.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
40.0-	660.0	HAWTHORN FORMATION
660.0-	750.0	TAMPA LIMESTONE *
750.0-	1120.0	SUWANNEE LIMESTONE
1120.0-	1126.0	OCALA GROUP

LITHOLOGIC LOG
W-LE008 . LEE CO. T45S, R25E, SEC 35A

0.0-	10.0	LIMESTONE, VERY LIGHT ORANGE TO MODERATE ORANGE PINK, 09% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, GRAIN TYPE: CRYSTALS, MICRITE, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MEDIUM TO VERY FINE, MODERATE INDURATION, SPARRY CALCITE CEMENT, MICRITE CEMENT, 05% QUARTZ SAND, MOLLUSKS, ECHINOID,
10.0-	20.0	AS ABOVE,
20.0-	30.0	AS ABOVE,
30.0-	40.0	SHELL BED,
40.0-	50.0	SAND, VERY LIGHT GRAY TO LIGHT GRAY, 14% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 10% MICRITE, 15% PHOSPHATIC SAND, 05% CLAY,
50.0-	60.0	AS ABOVE,
60.0-	70.0	AS ABOVE,

* Note, this unit is included as part of the Hawthorn Formation in this report.

LITHOLOGIC LOG
W-LE008 . LEE CO. T45S, R25E, SEC 35A

70.0- 80.0 SANDSTONE, YELLOWISH GRAY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 20% MICRITE, 10% SPAR, 01% PHOSPHATIC SAND,

80.0- 90.0 AS ABOVE,

90.0- 100.0 AS ABOVE WITH SOME SHELL

100.0- 110.0 AS ABOVE,

110.0- 130.0 SAND, VERY LIGHT GRAY TO LIGHT GRAY, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 08% PHOSPHATIC SAND, 12% MICRITE, MOLLUSKS,

130.0- 150.0 AS ABOVE,

150.0- 160.0 SAND, LIGHT GRAY, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 39% PHOSPHATIC SAND, 06% PHOSPHATIC GRAVEL, 03% MICRITE, MOLLUSKS, SHARK TEETH,

160.0- 170.0 AS ABOVE,

170.0- 180.0 AS ABOVE,

180.0- 190.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 03% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS, BRYOZOA, CORAL,

190.0- 200.0 AS ABOVE WITH MUCH CORAL

200.0- 210.0 AS ABOVE,

210.0- 250.0 AS ABOVE,

250.0- 260.0 CAVINGS IN SAMPLE (CONTAMINATION)

260.0- 270.0 SAMPLES AT 270,280,290,AND 300 ARE SAME AS 190

270.0- 310.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, 02% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, FOSSIL MOLDS, MOLLUSKS, CORAL,

310.0- 320.0 SAMPLES AT 320,350,380,390,AND 400 SAME AS 310

320.0- 410.0 AS ABOVE WITH PHOS. LOOSE IN TRAY (35%)

LITHOLOGIC LOG
W-LE008 . LEE CO. T45S, R25E, SEC 35A

410.0- 420.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% PHOSPHATIC SAND, MOLLUSKS, ECHINOID, CORAL, BRYOZOA,

420.0- 430.0 DOLOMITE, GRAYISH BROWN TO GRAYISH ORANGE, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE, 03% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, MOLLUSKS,

430.0- 450.0 AS ABOVE,

450.0- 460.0 DOLOMITE, GRAYISH ORANGE TO GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, FOSSIL MOLDS,

460.0- 470.0 AS ABOVE,

470.0- 480.0 DOLOMITE, GRAYISH ORANGE, 13% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 70% MICRITE, 01% PHOSPHATIC SAND, FOSSIL MOLDS,

480.0- 490.0 AS ABOVE,

490.0- 500.0 AS ABOVE WITH SOME V.COARSE PHOS.

500.0- 510.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, 01% PHOSPHATIC SAND, MOLLUSKS,

510.0- 520.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, ECHINOID, MOLLUSKS, FOSSIL MOLDS,

520.0- 540.0 AS ABOVE,

LITHOLOGIC LOG
W-LE008 . LEE CO. T45S, R25E, SEC 35A

540.0- 550.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% PHOSPHATIC SAND, 01% QUARTZ SAND,

550.0- 560.0 AS ABOVE,

560.0- 570.0 AS ABOVE,

570.0- 580.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

580.0- 590.0 AS ABOVE,

590.0- 600.0 AS ABOVE,

600.0- 610.0 AS ABOVE WITH MORE SAND (2%) AND PHOS.(3%)

610.0- 620.0 LIMESTONE, WHITE, 09% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, 03% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS, CORAL,

620.0- 630.0 DOLOMITE, VERY LIGHT GRAY, 10% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

630.0- 640.0 AS ABOVE,

640.0- 650.0 LIMESTONE, WHITE TO VERY LIGHT GRAY, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 01% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS, CORAL,

650.0- 660.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 05% DOLOMITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, CORAL, ECHINOID,

SORITES AND ARCHIAS SP..

LITHOLOGIC LOG
W-LE008 . LEE CO. T45S, R25E, SEC 35A

660.0- 670.0 SAMPLES AT 670,680,AND 690 AS ABOVE

670.0- 700.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 20% QUARTZ SAND, 05% PHOSPHATIC SAND, MOLLUSKS, FOSSIL MOLDS, CRUSTACEA,

700.0- 710.0 AS ABOVE,

710.0- 720.0 AS ABOVE WITH CRAB CLAWS

720.0- 730.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 18% QUARTZ SAND, 02% PHOSPHATIC SAND, MOLLUSKS, ECHINOID, CRUSTACEA,

730.0- 740.0 AS ABOVE,

740.0- 750.0 AS ABOVE,

750.0- 760.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID,

760.0- 770.0 AS ABOVE,

770.0- 780.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 55% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 03% DOLOMITE, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID, FOSSIL MOLDS,

FRAGS.OF FORAM COQUINA (CALCARENITE) IN SAMPLE

780.0- 790.0 AS ABOVE,

790.0- 800.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, 35% MICRITE, 25% QUARTZ SAND, 01% PHOSPHATIC SAND, ECHINOID, MOLLUSKS, CORAL,

800.0- 810.0 AS ABOVE,

LITHOLOGIC LOG
W-LE008 . LEE CO. T45S, R25E, SEC 35A

810.0- 820.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: VERY FINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 30% DOLOMITE, 08% QUARTZ SAND, BENTHONIC FORAMINIFERA, ECHINOID, MOLLUSKS,

820.0- 830.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, MOLLUSKS, ECHINOID, BENTHONIC FORAMINIFERA, FOSSIL MOLDS,

830.0- 840.0 POOR SAMPLES

840.0- 850.0 AS ABOVE,

850.0- 860.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, INTRACLASTS, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 10% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

860.0- 870.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, FOSSIL MOLDS,

870.0- 880.0 AS ABOVE,

880.0- 890.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, INTRACLASTS, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 08% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

890.0- 900.0 AS ABOVE WITH LESS SAND (02%) AND NO PHOS.

900.0- 910.0 NO SAMPLE,

910.0- 920.0 AS ABOVE,

LITHOLOGIC LOG
W-LE008 . LEE CO. T45S, R25E, SEC 35A

920.0- 930.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

930.0- 940.0 AS ABOVE,

940.0- 950.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA,

950.0- 960.0 SAMPLES AT 960,970,AND 980 AS ABOVE

960.0- 990.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

990.0- 1000.0 SAMPLES AT 1000,1010,1020,1030,AND1040 AS ABOVE

1000.0- 1050.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, PELLET, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, PLANT REMAINS, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID,

1050.0- 1060.0 SAMPLES AT 1060,1070,AND 1080 AS ABOVE

1060.0- 1100.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, PLANT REMAINS, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID,

1100.0- 1120.0 AS ABOVE,

1120.0- 1126.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID, BRYOZOA,

LEPIDOCYCLINA OCALANA?

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE009

LEE CO. T44S R27E SEC 09D 26 39 27 N 81 36 50 W
TOTAL DEPTH- 540 FT. ELEV.- 23 FT. SAMPLES- 0- 540 FT.
COMPLETED- 80.11.15 DEPTH WORKED 540 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
ELECTRIC

WELL NAME-
USGS 625,MOBIL OIL
REMARKS-
WORKED BY MIKE KNAPP, NOV.1980, SAMPLE QUAL.GOOD

HYDROGEOLOGIC UNITS

0.0-	30.0	SURFICIAL AQUIFER
30.0-	45.0	UPPER HAWTHORN CONFINING ZONE
45.0-	150.0	SANDSTONE AQUIFER
150.0-	240.0	MID-HAWTHORN CONFINING ZONE
240.0-	270.0	MID-HAWTHORN AQUIFER
520.0-	540.0	LOWER HAWTHORN / TAMPA PRODUCING ZONE

STRATIGRAPHIC FORMATIONS -

0.0-	10.0	CALOOSAHATCHEE FORMATION
10.0-	30.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
30.0-	520.0	HAWTHORN FORMATION
520.0-	540.0	TAMPA LIMESTONE *

LITHOLOGIC LOG
W-LE009 . LEE CO. T44S, R27E, SEC 09D

0.0- 10.0 DOLOMITE, GRAYISH ORANGE PINK TO GRAYISH ORANGE, 11% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 35% MICRITE, 02% CLAY, 02% QUARTZ SAND, MOLLUSKS,

10.0- 20.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH ORANGE PINK, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 35% DOLOMITE, 02% CLAY, 02% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

20.0- 30.0 AS ABOVE,

* Note, this unit is included as part of the Hawthorn Formation in this report.

LITHOLOGIC LOG
W-LE009 . LEE CO. T44S, R27E, SEC 09D

30.0- 45.0 CLAY, LIGHT OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 10% MICRITE, 10% DOLOMITE, 10% QUARTZ SAND, MOLLUSKS,

45.0- 60.0 DOLOMITE, GRAYISH ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 05% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

SANDSTONE, WHITE TO MODERATE LIGHT GRAY, 10% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% MICRITE, 10% SPAR, 10% DOLOMITE, FOSSIL MOLDS,

60.0- 75.0 AS ABOVE,

75.0- 90.0 SAND, WHITE TO LIGHT OLIVE GRAY, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, UNCONSOLIDATED, CLAY CEMENT, DOLOMITE CEMENT, 02% CLAY, 10% DOLOMITE, MOLLUSKS,

90.0- 105.0 DOLOMITE, GRAYISH ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 20% QUARTZ SAND, 04% PHOSPHATIC SAND, MOLLUSKS, FOSSIL MOLDS,

105.0- 115.0 AS ABOVE WITH DECREASE IN SAND (2%)

115.0- 135.0 DOLOMITE, GREENISH GRAY, 11% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 04% CLAY, 03% QUARTZ SAND, SUCROSIC,

135.0- 150.0 NO SAMPLE,

150.0- 165.0 CLAY, WHITE TO LIGHT GRAY, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 30% MICRITE, 12% DOLOMITE, 10% QUARTZ SAND,

165.0- 180.0 NO SAMPLE,

180.0- 195.0 SANDSTONE, LIGHT OLIVE GRAY TO LIGHT OLIVE, 11% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 05% CLAY, 15% DOLOMITE, 15% MICRITE, 01% PHOSPHATIC SAND,

LITHOLOGIC LOG
W-LE009 . LEE CO. T44S, R27E, SEC 09D

195.0- 210.0 SANDSTONE, LIGHT OLIVE TO GRAYISH OLIVE, 09% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 10% CLAY, 15% DOLOMITE, 35% MICRITE, 07% PHOSPHATIC SAND, MOLLUSKS,

SOME VERY COARSE PHOSPHATE (2%)

210.0- 225.0 AS ABOVE RUBBLE ZONE

225.0- 240.0 AS ABOVE,

240.0- 255.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 05% PHOSPHATIC SAND,

255.0- 270.0 AS ABOVE,

270.0- 285.0 DOLOMITE, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 25% MICRITE, 10% CLAY, 03% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

285.0- 300.0 NO SAMPLE,

300.0- 315.0 LIMESTONE, YELLOWISH GRAY TO WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 03% PHOSPHATIC SAND, MOLLUSKS,

315.0- 330.0 NO SAMPLE,

330.0- 345.0 AS 315

345.0- 360.0 NO SAMPLE,

360.0- 375.0 LIMESTONE, YELLOWISH GRAY TO WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 03% PHOSPHATIC GRAVEL, 03% PHOSPHATIC SAND, 29% DOLOMITE, MOLLUSKS,

375.0- 390.0 CLAY, YELLOWISH GRAY, 06% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, 20% DOLOMITE, 01% QUARTZ SAND, 01% PHOSPHATIC SAND,

LITHOLOGIC LOG
W-LE009 . LEE CO. T44S, R27E, SEC 09D

DOLOMITE, GRAYISH BROWN, 08% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE, 04% PHOSPHATIC SAND, 02% PHOSPHATIC GRAVEL, 02% QUARTZ SAND,

390.0- 405.0 DOLOMITE, YELLOWISH GRAY, 11% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 02% PHOSPHATIC SAND, MOLLUSKS, BRYOZOA,

405.0- 420.0 AS ABOVE,

420.0- 435.0 DOLOMITE, GRAYISH BROWN, 08% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE,

435.0- 450.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 02% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 12% DOLOMITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

450.0- 465.0 NO SAMPLE,

465.0- 480.0 AS 450 WITH MORE SAND(6%) AND PHOS. (6%)

480.0- 510.0 AS ABOVE,

510.0- 520.0 NO SAMPLE,

520.0- 540.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 65% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 05% SPAR, 05% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID, BRYOZOA,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE010

LEE CO. T46S R26E SEC 226C 26 37 13 N 81 41 46 W
TOTAL DEPTH- 486 FT. ELEV.- 20 FT. SAMPLES- 0- 486 FT.
COMPLETED- . . DEPTH WORKED 486 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
ELECTRIC

WELL NAME-
USGS 1984,OBS. WELL.
REMARKS-
WORKED BY MIKE KNAPP JAN.1981, SAMPLE QUAL.(FAIR)

HYDROGEOLOGIC UNITS

0.0-	159.0	SURFICIAL AQUIFER
159.0-	209.0	UPPER HAWTHORN CONFINING ZONE
209.0-	298.0	SANDSTONE AQUIFER
298.0-	440.0	MID-HAWTHORN CONFINING ZONE
440.0-	466.0	MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	27.0	UNDIFFERENTIATED SAND AND CLAY
27.0-	159.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
159.0-	486.0	HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE010 . LEE CO. T46S, R26E, SEC 226C

0.0-	5.0	SAND, DARK YELLOWISH ORANGE, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 01% CLAY, 01% HEAVY MINERALS,
5.0-	11.0	AS ABOVE,
11.0-	15.0	SAND, DARK YELLOWISH ORANGE, 20% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, 03% CLAY,
15.0-	27.0	AS ABOVE,
27.0-	32.0	SANDSTONE, WHITE, 13% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, 30% MICRITE, MOLLUSKS,
32.0-	37.0	SAND, WHITE, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 10% MICRITE, MOLLUSKS,

LITHOLOGIC LOG
W-LE010 . LEE CO. T46S, R26E, SEC 226C

37.0- 42.0 LIMESTONE, WHITE, 20% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, 25% MICRITE, 35% QUARTZ SAND, MOLLUSKS,

42.0- 47.0 AS ABOVE,

47.0- 48.0 SANDSTONE, MODERATE ORANGE PINK, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% MICRITE, 10% DOLOMITE, MOLLUSKS,

48.0- 56.0 AS ABOVE,

56.0- 61.0 AS ABOVE,

61.0- 68.0 SANDSTONE, GREENISH GRAY TO MODERATE GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, SPARRY CALCITE CEMENT, MICRITE CEMENT, 10% SPAR, 10% MICRITE, BENTHONIC FORAMINIFERA, MOLLUSKS,

68.0- 71.0 AS ABOVE,

71.0- 76.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 10% SPAR, 10% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

76.0- 81.0 AS ABOVE,

81.0- 97.0 AS ABOVE,

97.0- 106.0 AS ABOVE,

106.0- 116.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 16% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 10% SPAR, 03% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

116.0- 123.0 SANDSTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 03% MICRITE, 10% SPAR, FOSSIL MOLDS,

LITHOLOGIC LOG
W-LE010 . LEE CO. T46S, R26E, SEC 226C

123.0- 126.0 AS ABOVE,

126.0- 130.0 LIMESTONE, VERY LIGHT ORANGE, 16% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 10% SPAR, 02% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

130.0- 146.0 AS ABOVE,

146.0- 150.0 AS ABOVE,

150.0- 159.0 AS ABOVE WITH INCREASE IN SAND (6%)

159.0- 166.0 CLAY, LIGHT OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 30% DOLOMITE, 15% MICRITE, 03% QUARTZ SAND,

166.0- 186.0 DOLOMITE, LIGHT OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 12% CLAY, 15% MICRITE, 03% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA,

186.0- 196.0 AS ABOVE,

196.0- 209.0 AS ABOVE,

209.0- 221.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 12% DOLOMITE, 10% SPAR, 03% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

221.0- 226.0 AS ABOVE,

226.0- 237.0 SANDSTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, 30% MICRITE, FOSSIL MOLDS, MOLLUSKS,

237.0- 246.0 AS ABOVE,

246.0- 266.0 AS ABOVE,

266.0- 270.0 DOLOMITE, GRAYISH BROWN TO VERY LIGHT ORANGE, 09% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 25% QUARTZ SAND, MOLLUSKS,

LITHOLOGIC LOG
W-LE010 . LEE CO. T46S, R26E, SEC 226C

270.0- 280.0 SANDSTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% DOLOMITE, 25% MICRITE, MOLLUSKS,

280.0- 286.0 AS ABOVE,

286.0- 290.0 AS ABOVE,

290.0- 296.0 AS ABOVE,

298.0- 306.0 DOLOMITE, LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 08% CLAY, 03% QUARTZ SAND,

ABUNDANT SHELL FRAGS. AND MUCH SANDSTONE

306.0- 323.0 SAND, LIGHT OLIVE, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, 20% CLAY, 20% DOLOMITE, MOLLUSKS,

323.0- 326.0 AS ABOVE,

326.0- 336.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% SPAR, 10% DOLOMITE, MOLLUSKS, FOSSIL MOLDS,

338.0- 346.0 DOLOMITE, GREENISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 10% CLAY, 03% QUARTZ SAND,

346.0- 356.0 DOLOMITE, LIGHT GREENISH GRAY TO WHITE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% CLAY, 35% MICRITE, 02% QUARTZ SAND,

356.0- 366.0 AS ABOVE,

366.0- 386.0 AS ABOVE,

386.0- 396.0 SAND, LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, 06% CLAY, 35% DOLOMITE, 06% PHOSPHATIC SAND,

LITHOLOGIC LOG
W-LE010 . LEE CO. T46S, R26E, SEC 226C

396.0- 406.0 AS ABOVE,

406.0- 416.0 DOLOMITE, GRAYISH OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, 10% CLAY, 06% PHOSPHATIC SAND, 03% PHOSPHATIC GRAVEL, 10% MICRITE,

416.0- 426.0 AS ABOVE,

426.0- 440.0 AS ABOVE,

440.0- 446.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 03% PHOSPHATIC SAND, MOLLUSKS, FOSSIL MOLDS,

446.0- 456.0 AS ABOVE,

456.0- 466.0 AS ABOVE,

466.0- 476.0 DOLOMITE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 02% CLAY, 10% MICRITE, 02% PHOSPHATIC SAND,

476.0- 486.0 AS ABOVE WITH INCREASE IN PHOS.(6%).

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE011

LEE CO. T47S R26E SEC 1988 26 22 15 N 81 44 19 W
TOTAL DEPTH- 585 FT. ELEV.- 15 FT. 50 SAMPLES- 0- 585 FT.
COMPLETED- . . DEPTH WORKED 585 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
ELECTRIC

WELL NAME-
USGS 605,MOBIL OIL.
REMARKS-
SAMPLES WORKED BY MIKE KNAPP (1-19-81), QUALITY FAIR.

HYDROGEOLOGIC UNITS

0.0-	60.0	SURFICIAL AQUIFER
60.0-	90.0	UPPER HAWTHORN CONFINING ZONE
90.0-	295.0	SANDSTONE AQUIFER
295.0-	345.0	MID-HAWTHORN CONFINING ZONE
345.0-	420.0	MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	10.0	UNDIFFERENTIATED SAND AND CLAY
10.0-	60.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
60.0-	585.0	HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE011 . LEE CO. T47S, R26E, SEC 1988

0.0- 10.0 SANDSTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, CLAY CEMENT, 35% MICRITE, 01% CLAY, MOLLUSKS,

10.0- 20.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 30% DOLOMITE, FOSSIL MOLDS, MOLLUSKS,

20.0- 30.0 AS ABOVE,

30.0- 40.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: CRYSTALS, MICRITE, BIOGENIC, 12% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, 03% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

MICA (3%) LOOSE IN SAMPLE

LITHOLOGIC LOG
W-LE011 . LEE CO. T47S, R26E, SEC 1988

40.0- 50.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, MOLDIC, LOW PERMEABILITY, GRAIN TYPE: CRYSTALS, MICRITE, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, MOLLUSKS, BENTHONIC FORAMINIFERA, FOSSIL MOLDS,

50.0- 60.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 35% MICRITE, 06% QUARTZ SAND, 01% MICA,

60.0- 75.0 DOLOMITE, LIGHT OLIVE, 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 12% CLAY, 15% MICRITE, 05% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

MICA (1%) AND PYRITE (1%)

75.0- 90.0 AS ABOVE,

90.0- 105.0 LIMESTONE, LIGHT OLIVE GRAY, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: CRYSTALS, MICRITE, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, 15% QUARTZ SAND, MOLLUSKS, ECHINOID,

105.0- 120.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: CRYSTALS, MICRITE, SKELETAL, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 30% DOLOMITE, 04% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

120.0- 135.0 AS ABOVE,

135.0- 150.0 SANDSTONE, YELLOWISH GRAY, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% MICRITE, 15% DOLOMITE, 02% MICA, MOLLUSKS,

150.0- 165.0 SAMPLES AT 165,180,AND 195 AS ABOVE.

LITHOLOGIC LOG
W-LE011 . LEE CO. T47S, R26E, SEC 19BB

165.0- 225.0 DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 15% QUARTZ SAND, MOLLUSKS,

225.0- 240.0 SANDSTONE, YELLOWISH GRAY, 14% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% DOLOMITE, 15% MICRITE, 02% MICA, MOLLUSKS,

240.0- 265.0 AS ABOVE,

265.0- 280.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 03% QUARTZ SAND, MOLLUSKS, BRYOZOA,

280.0- 295.0 SANDSTONE, LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 10% MICRITE, 10% SPAR, 01% PHOSPHATIC SAND, MOLLUSKS,

295.0- 310.0 SANDSTONE, LIGHT OLIVE TO GRAYISH OLIVE, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 02% CLAY, 02% MICA, 15% MICRITE, 03% PHOSPHATIC SAND, MOLLUSKS, BRYOZOA,

SAMPLE IS A MIXTURE OF LIMESTONE,DOLOMITE,CLAY,AND MICA.

310.0- 325.0 AS ABOVE WITH SOME VERY COARSE PHOSPHORITE GRAINS.

325.0- 345.0 SANDSTONE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 05% CLAY, 15% DOLOMITE, 10% MICRITE, 01% PHOSPHATIC SAND, MOLLUSKS,

MICA (1%)

345.0- 360.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 15% QUARTZ SAND, 01% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

LITHOLOGIC LOG
W-LE011 . LEE CO. T47S, R26E, SEC 19BB

360.0- 375.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, FOSSIL MOLDS, MOLLUSKS,

375.0- 390.0 AS ABOVE,

390.0- 405.0 AS ABOVE WITH SOME SAND (2%)

405.0- 420.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 02% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

420.0- 435.0 DOLOMITE, LIGHT OLIVE, 14% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 03% CLAY, 01% PHOSPHATIC SAND, 10% QUARTZ SAND,

435.0- 455.0 SAMPLE IS A MIXTURE OF ABOVE TWO LITHOS. (CAVINGS?)

455.0- 465.0 AS ABOVE,

465.0- 480.0 AS ABOVE WITH VERY COARSE PHOS.(3%)

480.0- 495.0 SAMPLES AT 495,510,AND 525 SAME AS 435.

495.0- 540.0 DOLOMITE, LIGHT OLIVE TO GRAYISH OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 08% CLAY, 25% MICRITE, 12% PHOSPHATIC SAND, SHARK TEETH,

540.0- 550.0 AS ABOVE,

550.0- 570.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 05% PHOSPHATIC SAND, FOSSIL MOLDS,

570.0- 585.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE012

LEE CO. T43S R23E SEC 15AB 26 44 18 N 81 59 25 W
TOTAL DEPTH- 210 FT. ELEV.- 17 FT. 15 SAMPLES- 0- 210 FT.
COMPLETED- . . DEPTH WORKED 210 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
ELECTRIC

WELL NAME-
USGS 653, MOBIL OIL
REMARKS-
WORKED BY MIKE KNAPP,NOV.1980,SAMPLE QUAL.(FAIR)

HYDROGEOLOGIC UNITS

0.0-	60.0	SURFICIAL AQUIFER
60.0-	135.0	UPPER HAWTHORN CONFINING ZONE
135.0-	155.0	MID-HAWTHORN CONFINING ZONE
155.0-	210.0	MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	60.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
60.0-	210.0	HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE012 . LEE CO. T43S, R23E, SEC 15AB

0.0-	10.0	SANDSTONE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 10% MICRITE, 05% SPAR, 10% DOLOMITE, MOLLUSKS, MUCH SHELL
10.0-	20.0	AS ABOVE,
20.0-	30.0	AS ABOVE,
30.0-	45.0	DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 20% PHOSPHATIC SAND, 01% PHOSPHATIC SAND, MOLLUSKS,
45.0-	60.0	AS ABOVE,

LITHOLOGIC LOG
W-LE012 . LEE CO. T43S, R23E, SEC 15AB

60.0- 75.0 DOLO-SILT, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% CLAY, 25% MICRITE, 02% PHOSPHATIC SAND, 15% QUARTZ SAND, MOLLUSKS,

75.0- 90.0 AS ABOVE,

90.0- 100.0 DOLO-SILT, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 11% CLAY, 25% MICRITE, 03% QUARTZ SAND, 01% PHOSPHATIC SAND,

100.0- 120.0 AS ABOVE,

120.0- 135.0 AS ABOVE,

135.0- 155.0 SAND, GRAYISH OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% CLAY, 20% DOLOMITE, 10% MICRITE, 11% PHOSPHATIC SAND, MOLLUSKS,

RUBBLE ZONE

155.0- 165.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 05% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS,

165.0- 210.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE013

LEE CO. T44S R23E SEC 28BB 26 36 54 N 82 00 54 W
TOTAL DEPTH- 195 FT. ELEV.- 10 FT. SAMPLES- 0- 195 FT.
COMPLETED- . . DEPTH WORKED 195 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
ELECTRIC

WELL NAME-
UGSG 648
REMARKS-
WORKED BY MIKE KNAPP,11-10-80,SAMPLE QUALITY (FAIR).

HYDROGEOLOGIC UNITS

0.0- 30.0 SURFICIAL AQUIFER
30.0- 130.0 UPPER HAWTHORN CONFINING ZONE
130.0- 135.0 MID-HAWTHORN CONFINING ZONE (RUBBLE BED)
135.0- 195.0 MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0- 30.0 UNDIFFERENTIATED SAND, CLAY AND SHELLS
30.0- 195.0 HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE013 . LEE CO. T44S, R23E, SEC 28BB

0.0- 10.0 SAND, WHITE, 25% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 05% MICRITE, MOLLUSKS,

10.0- 20.0 AS ABOVE,

20.0- 30.0 AS ABOVE,

30.0- 48.0 SANDSTONE, GREENISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% DOLOMITE, 15% MICRITE, MOLLUSKS,

48.0- 60.0 DOLO-SILT, LIGHT OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 30% MICRITE, 10% CLAY, 06% QUARTZ SAND, BENTHONIC FORAMINIFERA,

60.0- 130.0 SAMPLES AT 75,90,125,AND 130 AS ABOVE.

LITHOLOGIC LOG
W-LE013 . LEE CO. T44S, R23E, SEC 28BB

130.0- 135.0 DOLO-SILT, LIGHT OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 06% CLAY, 15% MICRITE, 06% PHOSPHATIC SAND, 08% QUARTZ SAND,

135.0- 150.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, SUCROSIC,

150.0- 165.0 AS ABOVE WITH INCREASE IN PHOS.(7%) AND XSTAL. DOLOMITE

165.0- 180.0 AS ABOVE,

180.0- 190.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE014

LEE CO. T44S R22E SEC 06DC 26 40 02 N 82 11 00 W
TOTAL DEPTH- 963 FT. ELEV.- 3 FT. SAMPLES- 0- 963 FT.
COMPLETED- 81.05.22 DEPTH WORKED 963 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

ELECTRIC
CALIPHER
GAMMA
NEUTRON
TEMPERATURE

WELL NAME-
SFWMD L3002D (ALDEN PINES), REVERSE AIR, FULL SUITE LOGS, MISSIMER LM1622.
REMARKS-
WORKED BY MIKE KNAPP, 5-22-81, SAMPLE QUALITY (GOOD).
SAMPLES FOR 0.0-90.0 ARE FROM MISSIMER WELL LM1594.

HYDROGEOLOGIC UNITS

0.0-	75.0	SURFICIAL AQUIFER
75.0-	153.0	UPPER HAWTHORN CONFINING ZONE
153.0-	198.0	SANDSTONE AQUIFER
198.0-	268.0	MID-HAWTHORN CONFINING ZONE
268.0-	308.0	MID-HAWTHORN AQUIFER
407.0-	518.0	LOWER HAWTHORN/TAMPA PRODUCING ZONE
518.0-	963.0	SUWANNEE AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	14.0	UNDIFFERENTIATED SAND AND CLAY
14.0-	45.0	CALOOSAHATCHEE FORMATION
45.0-	75.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
75.0-	407.0	HAWTHORN FORMATION
407.0-	518.0	TAMPA LIMESTONE *
518.0-	963.0	SUWANNEE LIMESTONE

LITHOLOGIC LOG
W-LE014 . LEE CO. T44S, R22E, SEC 06DC

0.0-	5.0	SAND, GRAYISH BROWN, 35% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 01% PHOSPHATIC SAND, 02% LIMESTONE,
5.0-	14.0	AS ABOVE,
14.0-	15.0	SHELL BED, WHITE, 20% POROSITY, INTERGRANULAR, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, 02% CLAY, 08% QUARTZ SAND, MOLLUSKS, ECHINOID,
15.0-	21.0	AS ABOVE,

* Note. this unit is included as part of the Hawthorn Formation in this report.

LITHOLOGIC LOG
W-LE014 . LEE CO. T44S, R22E, SEC 06DC

21.0- 26.0 AS ABOVE,

26.0- 34.0 NO SAMPLE,

34.0- 35.0 SHELL BED, WHITE, 20% POROSITY, INTERGRANULAR, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, 02% CLAY, 10% QUARTZ SAND, MOLLUSKS, ECHINOID,

35.0- 45.0 AS ABOVE,

45.0- 50.0 LIMESTONE, LIGHT GREENISH GRAY TO WHITE, 15% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: MICRITE, BIOGENIC, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, 15% QUARTZ SAND, 01% PHOSPHATIC SAND, FOSSIL MOLDS,

SAMPLE IS A MIXTURE OF L/S,SANDSTONE, AND SHELL.

50.0- 55.0 AS ABOVE,

55.0- 60.0 LIMESTONE, LIGHT OLIVE GRAY, 13% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, CLAY CEMENT, 06% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

60.0- 70.0 NO SAMPLE,

70.0- 75.0 AS ABOVE WITH MORE PHOS.(4%)

75.0- 90.0 DOLO-SILT, GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 30% MICRITE, 02% CLAY, 05% PHOSPHATIC SAND, 13% QUARTZ SAND, MOLLUSKS,

90.0- 94.0 NO SAMPLE,

94.0- 97.0 DOLO-SILT, GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 03% CLAY, 03% PHOSPHATIC SAND, 09% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

97.0- 118.0 SAMPLES AT 103,109,113,AND 118 AS ABOVE.

118.0- 123.0 SAND, GREENISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, 25% DOLOMITE, 03% CLAY, 04% PHOSPHATIC SAND, MOLLUSKS,

123.0- 128.0 AS ABOVE,

LITHOLOGIC LOG
W-LE014 . LEE CO. T44S, R22E, SEC 06DC

128.0- 133.0 AS ABOVE,

133.0- 138.0 NO SAMPLE,

138.0- 143.0 SAND, YELLOWISH GRAY TO LIGHT REDDISH BROWN, 25% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 03% PHOSPHATIC SAND, 02% DOLOMITE, 02% MICRITE, MOLLUSKS, ECHINOID,

143.0- 148.0 AS ABOVE,

148.0- 153.0 SAND, YELLOWISH GRAY, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, 01% CLAY, 05% DOLOMITE, 02% PHOSPHATIC SAND, MOLLUSKS, ECHINOID,

153.0- 158.0 SANDSTONE, GREENISH GRAY, 14% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 02% PHOSPHATIC SAND, 10% SPAR, MOLLUSKS, ECHINOID,

158.0- 163.0 AS ABOVE,

163.0- 168.0 SAND, GREENISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, DOLOMITE CEMENT, 30% DOLOMITE, 02% PHOSPHATIC SAND, MOLLUSKS, ECHINOID,

168.0- 173.0 DOLOMITE, GREENISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, DOLOMITE CEMENT, 02% PHOSPHATIC SAND, 25% QUARTZ SAND, MOLLUSKS, ECHINOID,

173.0- 178.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 03% PHOSPHATIC SAND, 03% QUARTZ SAND,

178.0- 183.0 SANDSTONE, GREENISH GRAY, 16% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 10% SPAR, 04% PHOSPHATIC SAND, MOLLUSKS,

183.0- 188.0 DOLOMITE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 02% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS,

LITHOLOGIC LOG
W-LE014 . LEE CO. T44S, R22E, SEC 06DC

188.0- 193.0 AS ABOVE,

193.0- 198.0 AS ABOVE,

198.0- 203.0 DOLO-SILT, GREENISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 04% PHOSPHATIC SAND, 03% QUARTZ SAND, 01% PHOSPHATIC GRAVEL, MOLLUSKS,

203.0- 208.0 AS ABOVE,

208.0- 213.0 AS ABOVE WITH SOME LIMESTONE

213.0- 218.0 LIMESTONE, WHITE TO TRANSPARENT, 21% POROSITY, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, ECHINOID, BRYOZOA,

218.0- 223.0 AS ABOVE WITH MUCH ORGANICS/WOOD FIBER,SOME DOLO (5%).

223.0- 228.0 AS ABOVE,

228.0- 232.0 CLAY, GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 35% DOLOMITE, 35% MICRITE, 02% PHOSPHATIC SAND, 03% QUARTZ SAND,

SAMPLE IS PREDOMINANTLY WOOD FIBER.

232.0- 238.0 AS ABOVE,

238.0- 243.0 DOLO-SILT, GREENISH GRAY TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 02% CLAY, 30% MICRITE, 10% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS,

243.0- 248.0 DOLOMITE, VERY LIGHT ORANGE TO GREENISH GRAY, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, 08% PHOSPHATIC SAND, 02% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

248.0- 260.0 NO SAMPLE,

260.0- 263.0 DOLO-SILT, VERY LIGHT ORANGE TO GREENISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 03% CLAY, 30% MICRITE, 04% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS,

263.0- 268.0 AS ABOVE,

LITHOLOGIC LOG
W-LE014 . LEE CO. T44S, R22E, SEC 06DC

268.0- 273.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

273.0- 278.0 AS ABOVE,

278.0- 283.0 AS ABOVE,

283.0- 298.0 NO SAMPLE,

298.0- 303.0 AS 273

303.0- 308.0 DOLOMITE, VERY LIGHT ORANGE TO GREENISH GRAY, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 04% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS, CORAL,

308.0- 313.0 DOLOMITE, GRAYISH ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, 04% PHOSPHATIC SAND, 02% QUARTZ SAND, FOSSIL MOLDS,

MUCH WOOD FIBER

313.0- 323.0 NO SAMPLE,

323.0- 328.0 DOLOMITE, VERY LIGHT ORANGE TO GREENISH GRAY, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 06% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, SHARK TEETH,

328.0- 338.0 SANDSTONE, GREENISH GRAY, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, HIGH SPHERICITY, POOR INDURATION, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 20% SPAR, 08% PHOSPHATIC SAND, MOLLUSKS,

338.0- 345.0 DOLOMITE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 04% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS,

345.0- 360.0 NO SAMPLE,

360.0- 368.0 AS 345

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368.0- 371.0 NO SAMPLE,

371.0- 378.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

378.0- 383.0 AS ABOVE,

383.0- 400.0 NO SAMPLE,

400.0- 402.0 AS 378

402.0- 403.0 DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, PIN POINT VUGS, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 12% MICRITE, 01% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, SHARK TEETH, BRYOZOA, MOLLUSKS,

403.0- 404.0 DOLOMITE, VERY LIGHT ORANGE TO LIGHT GRAY, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 12% MICRITE, FOSSIL MOLDS,

404.0- 406.0 AS ABOVE,

406.0- 407.0 NO SAMPLE,

407.0- 408.0 LIMESTONE, WHITE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, SKELETAL, MICRITE, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, CORAL, BRYOZOA, ECHINOID,

408.0- 410.0 DOLOMITE, VERY LIGHT ORANGE TO LIGHT GRAY, 12% POROSITY, INTERGRANULAR, MOLDIC, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, 01% QUARTZ SAND, 01% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

410.0- 413.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 02% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS, ECHINOID,

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413.0- 415.0 DOLOMITE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, FOSSIL MOLDS, MOLLUSKS,

415.0- 418.0 LIMESTONE, WHITE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS, ECHINOID, BRYOZOA, CRUSTACEA,

418.0- 423.0 AS ABOVE,

423.0- 428.0 LIMESTONE, WHITE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% PHOSPHATIC SAND, 03% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, FOSSIL MOLDS,

SORITES

428.0- 430.0 AS ABOVE,

ARCHIAS FLORIDANUS.

430.0- 432.0 AS ABOVE,

432.0- 435.0 LIMESTONE, WHITE TO VERY LIGHT GRAY, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 03% PHOSPHATIC SAND, 04% QUARTZ SAND, CORAL, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

435.0- 440.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, CRYSTALS, MICRITE, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

QUINQUELOCULINA SP.

440.0- 443.0 AS ABOVE,

443.0- 447.0 AS ABOVE,

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447.0- 451.0 AS ABOVE,

451.0- 453.0 DOLOMITE, GRAYISH BROWN, 10% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, PIN POINT VUGS, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE,

453.0- 457.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 01% PHOSPHATIC SAND, 03% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, CORAL, ECHINOID,

SORITES

457.0- 461.0 LIMESTONE, WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% PHOSPHATIC SAND, 03% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, CORAL, BRYOZOA,

461.0- 465.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 02% PHOSPHATIC SAND, 03% QUARTZ SAND, 20% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, CORAL,

465.0- 469.0 LIMESTONE, WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% PHOSPHATIC SAND, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, BRYOZOA, ECHINOID, CORAL,

469.0- 473.0 AS ABOVE,

ARCHIAS FLORIDANUS.

473.0- 475.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 03% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS, ECHINOID,

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475.0- 477.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 08% PHOSPHATIC SAND, 10% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

477.0- 478.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, PIN POINT VUGS, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE, 02% PHOSPHATIC SAND, 02% QUARTZ SAND, FOSSIL MOLDS,

478.0- 485.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, 04% PHOSPHATIC SAND, 06% QUARTZ SAND, MOLLUSKS, CRUSTACEA,

485.0- 490.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS, CRUSTACEA,

490.0- 495.0 AS ABOVE,

495.0- 500.0 AS ABOVE,

500.0- 503.0 AS ABOVE,

503.0- 505.0 DOLOMITE, GRAYISH BROWN, 10% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE, 01% PHOSPHATIC SAND, FOSSIL MOLDS,

505.0- 508.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 35% DOLOMITE, 03% QUARTZ SAND, CORAL, FOSSIL MOLDS, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID,

SOME RUBBLE

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508.0- 512.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 02% QUARTZ SAND, 30% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS,

ARCHIAS? MOLDS.

512.0- 518.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, PELLET, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

518.0- 525.0 AS ABOVE,

525.0- 535.0 NO SAMPLE,

535.0- 540.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, OSTRACODS,

540.0- 545.0 AS ABOVE,

545.0- 550.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, OSTRACODS,

QUINQUELOCULINA SP.

550.0- 577.0 AS ABOVE,

577.0- 580.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, CRUSTACEA, OSTRACODS,

580.0- 585.0 AS ABOVE,

585.0- 590.0 AS ABOVE,

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590.0- 593.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

593.0- 598.0 AS ABOVE,

598.0- 600.0 AS ABOVE,

600.0- 610.0 NO SAMPLE,

610.0- 615.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, CRUSTACEA, CORAL,

615.0- 617.0 AS ABOVE,

617.0- 618.0 LIMESTONE, VERY LIGHT ORANGE, 09% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 01% CHERT, BENTHONIC FORAMINIFERA, MOLLUSKS,

618.0- 620.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 08% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 35% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, OSTRACODS,

620.0- 625.0 AS ABOVE,

625.0- 630.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, OSTRACODS,

630.0- 640.0 LIMESTONE, VERY LIGHT ORANGE, 08% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, OSTRACODS,

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640.0- 650.0 LIMESTONE, VERY LIGHT ORANGE TO LIGHT GRAY, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 30% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, OSTRACODS, FOSSIL MOLDS,

650.0- 655.0 AS ABOVE,

655.0- 657.0 LIMESTONE, WHITE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, CORAL, OSTRACODS,

657.0- 664.0 NO SAMPLE,

664.0- 669.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, CORAL, OSTRACODS,

669.0- 674.0 AS ABOVE,

674.0- 675.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, OSTRACODS,

675.0- 679.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, MOLLUSKS, ECHINOID, BENTHONIC FORAMINIFERA,

679.0- 684.0 LIMESTONE, WHITE, 08% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS,

684.0- 689.0 AS ABOVE,

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689.0- 694.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, CRUSTACEA, FOSSIL MOLDS,

694.0- 699.0 AS ABOVE,

699.0- 704.0 AS ABOVE WITH QUINQUELOCULINA SP.AND ROTALLIA SP.

704.0- 709.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, GRANULAR, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, CORAL,

709.0- 714.0 NO SAMPLE,

714.0- 717.0 LIMESTONE, WHITE TO VERY LIGHT GRAY, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, SKELETAL, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS, ECHINOID,

ROTALIA SP.

717.0- 719.0 AS ABOVE,

719.0- 724.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

724.0- 729.0 LIMESTONE, WHITE TO VERY LIGHT GRAY, 11% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS, ECHINOID, OSTRACODS,

729.0- 733.0 AS ABOVE,

733.0- 739.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, SKELETAL, CRYSTALS, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, OSTRACODS, CONES,

DICTYOCONUS COOKEI, MANY CONES.

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739.0- 741.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, OSTRACODS, FOSSIL MOLDS,

741.0- 749.0 CALCARENITE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, MILIOLIDS,

CORNUSPIRA SP., QUARTZ SAND IN SAMPLE (CAVINGS?)

749.0- 753.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

753.0- 755.0 LIMESTONE, VERY LIGHT ORANGE TO LIGHT GRAY, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 30% DOLOMITE, 02% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, FOSSIL MOLDS,

755.0- 758.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, CRYSTALS, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, MILIOLIDS,

758.0- 759.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: SKELETAL, MICRITE, CRYSTALS, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, ECHINOID, MOLLUSKS,

MANY ECHINOID SPINES

759.0- 764.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, PELLET, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, GRANULAR, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, MILIOLIDS,

764.0- 774.0 AS ABOVE,

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774.0- 776.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

776.0- 779.0 AS ABOVE WITH FRAGS OF DARK GRAY DOLOMITE

779.0- 784.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, MILIOLIDS,

784.0- 794.0 AS ABOVE,

794.0- 799.0 AS ABOVE WITH FRAGS OF DARK GRAY DOLOMITE

799.0- 809.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

809.0- 814.0 AS ABOVE,

814.0- 819.0 AS ABOVE,

819.0- 829.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

829.0- 839.0 NO SAMPLE,

839.0- 849.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, FOSSIL MOLDS,

849.0- 854.0 DOLOMITE, VERY LIGHT GRAY TO LIGHT GRAY, 14% POROSITY, INTERGRANULAR, MOLDIC, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 35% MICRITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, FOSSIL MOLDS, OSTRACODS,

APPEARS REWORKED.

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854.0- 859.0 AS ABOVE,

859.0- 864.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 65% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, BENTHONIC FORAMINIFERA, MILIOLIDS, ECHINOID, MOLLUSKS, BRYOZOA,

864.0- 869.0 AS ABOVE,

869.0- 874.0 LIMESTONE, WHITE TO VERY LIGHT GRAY, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, CHALKY, BENTHONIC FORAMINIFERA, FOSSIL MOLDS, ECHINOID, FOSSIL FRAGMENTS,

874.0- 879.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, FOSSIL MOLDS, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

879.0- 884.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 20% MICRITE, 20% SPAR, BENTHONIC FORAMINIFERA, FOSSIL MOLDS,

884.0- 889.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, BENTHONIC FORAMINIFERA, ECHINOID, MOLLUSKS,

889.0- 891.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: MICRITE, SKELETAL, CRYSTALS, 65% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, BENTHONIC FORAMINIFERA, FOSSIL MOLDS, ECHINOID, BRYOZOA, CORAL,

891.0- 896.0 AS ABOVE,

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896.0- 901.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, ECHINOID, BRYOZOA,

901.0- 906.0 AS ABOVE,

906.0- 911.0 AS ABOVE WITH ROTALIA SP. (MEXICANA?)

911.0- 922.0 AS ABOVE,

922.0- 926.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, ECHINOID, CORAL, MOLLUSKS,

926.0- 931.0 AS ABOVE,

931.0- 936.0 AS ABOVE,

936.0- 941.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

941.0- 944.0 AS ABOVE,

944.0- 951.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 14% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: MICRITE, SKELETAL, CRYSTALS, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, BENTHONIC FORAMINIFERA, ECHINOID, MOLLUSKS,

951.0- 956.0 AS ABOVE,

956.0- 961.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 35% DOLOMITE, BENTHONIC FORAMINIFERA, ECHINOID, MOLLUSKS,

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961.0- 962.0 DOLOMITE, DARK YELLOWISH BROWN TO MODERATE YELLOWISH BROWN, 07% POROSITY, INTERCRYSTALLINE, PIN POINT VUGS, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE,

962.0- 963.0 DOLOMITE, DARK YELLOWISH BROWN TO DARK YELLOWISH BROWN, 05% POROSITY, INTERCRYSTALLINE, PIN POINT VUGS, LOW PERMEABILITY, 90-100% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 05% MICRITE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE015
LEE CO. T44S R21E SEC 09 26 39 44 N 82 12 43 W
TOTAL DEPTH- 345 FT. ELEV.- FT. 40 SAMPLES- 0- 345 FT.
COMPLETED- 81.05.18 DEPTH WORKED 345 FT.

WELL NAME-
USEPPA ISLAND CLUB,E.MILLER DRILLER,REVERSE AIR.
REMARKS-
WORKED BY MIKE KNAPP 5-28-81, SAMPLE QUAL.(GOOD).

HYDROGEOLOGIC UNITS

0.0-	80.0	SURFICIAL AQUIFER
80.0-	92.0	UPPER HAWTHORN CONFINING ZONE
92.0-	160.0	SANDSTONE AQUIFER
160.0-	170.0	MID-HAWTHORN CONFINING ZONE
170.0-	198.0	MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	40.0	UNDIFFERENTIATED SAND, CLAY AND SHELLS
40.0-	80.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
80.0-	345.0	HAWTHORN FORMATION

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0.0-	20.0	SAND, GRAYISH ORANGE, 35% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 02% HEAVY MINERALS,
20.0-	40.0	SAND, GRAYISH ORANGE TO VERY LIGHT ORANGE, 35% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 01% HEAVY MINERALS,
40.0-	60.0	NO SAMPLE,
60.0-	70.0	LIMESTONE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, SKELETAL, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, 10% QUARTZ SAND, MOLLUSKS, ECHINOID,
70.0-	80.0	AS ABOVE,
80.0-	92.0	DOLO-SILT, MODERATE GRAYISH GREEN, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 05% CLAY, 35% MICRITE, 01% PHOSPHATIC SAND, MOLLUSKS, SPICULES,

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92.0- 103.0 LIMESTONE, YELLOWISH GRAY TO MODERATE GRAY, 09% POROSITY, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: CRYSTALS, SKELETAL, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, SPARRY CALCITE CEMENT, 03% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

103.0- 109.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, PIN POINT VUGS, GRAIN TYPE: MICRITE, CRYSTALS, SKELETAL, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 06% PHOSPHATIC SAND, 06% QUARTZ SAND, 02% PHOSPHATIC GRAVEL, ECHINOID, MOLLUSKS, FOSSIL MOLDS,

109.0- 120.0 AS ABOVE,

120.0- 130.0 AS ABOVE,

130.0- 140.0 DOLOMITE, YELLOWISH GRAY TO GREENISH GRAY, 13% POROSITY, INTERGRANULAR, PIN POINT VUGS, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 04% PHOSPHATIC SAND, 06% QUARTZ SAND, FOSSIL MOLDS,

140.0- 150.0 DOLOMITE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 45% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS,

150.0- 158.0 DOLOMITE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, PIN POINT VUGS, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 40% MICRITE, 05% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

SAMPLE IS A MIXTURE OF SUCROSIC DOLO AND DOLO/LS.

158.0- 160.0 LIMESTONE, WHITE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 03% PHOSPHATIC SAND, 08% QUARTZ SAND, MOLLUSKS, CORAL, ECHINOID,

160.0- 170.0 CLAY, GRAYISH OLIVE TO GRAYISH OLIVE GREEN, 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 40% DOLOMITE, 20% MICRITE, 03% PHOSPHATIC SAND, MOLLUSKS,

RUBBLE ZONE

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170.0- 175.0 DOLOMITE, DARK GRAYISH YELLOW TO GRAYISH BROWN, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, DOLOMITE CEMENT, 02% PHOSPHATIC SAND, SUCROSIC,

175.0- 190.0 AS ABOVE,

190.0- 195.0 AS ABOVE,

195.0- 198.0 DOLOMITE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, PIN POINT VUGS, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

198.0- 200.0 DOLO-SILT, VERY LIGHT GRAY TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 40% MICRITE, 02% CLAY, 01% PHOSPHATIC SAND,

200.0- 202.0 CLAY, LIGHT OLIVE, 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 40% DOLOMITE, 30% MICRITE, 02% PHOSPHATIC SAND,

202.0- 210.0 DOLOMITE, VERY LIGHT ORANGE TO LIGHT OLIVE GRAY, 12% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 45% MICRITE, 02% PHOSPHATIC SAND, MOLLUSKS, CORAL, ECHINOID, FOSSIL MOLDS,

210.0- 220.0 AS ABOVE,

220.0- 230.0 AS ABOVE,

230.0- 238.0 DOLOMITE, GRAYISH BROWN TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 30% MICRITE, 04% PHOSPHATIC SAND, 02% QUARTZ SAND, FOSSIL MOLDS,

238.0- 240.0 DOLOMITE, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, 01% PHOSPHATIC SAND, SUCROSIC,

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240.0- 250.0 LIMESTONE, WHITE TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 35% DOLOMITE, 02% PHOSPHATIC SAND, MOLLUSKS, SHARK TEETH, ECHINOID,

250.0- 260.0 DOLOMITE, LIGHT OLIVE GRAY TO YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 03% PHOSPHATIC SAND, 04% QUARTZ SAND, 35% MICRITE,

260.0- 270.0 LIMESTONE, WHITE, 13% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 35% DOLOMITE, 04% PHOSPHATIC SAND, 04% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

270.0- 276.0 AS ABOVE,

276.0- 280.0 DOLOMITE, MODERATE GRAY, 09% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE, 08% PHOSPHATIC SAND, 06% QUARTZ SAND, MOLLUSKS,

280.0- 290.0 DOLOMITE, LIGHT OLIVE GRAY TO GRAYISH BROWN, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

290.0- 300.0 DOLOMITE, MODERATE GRAY, 09% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE, 08% PHOSPHATIC SAND, 04% QUARTZ SAND, 02% PHOSPHATIC GRAVEL, FOSSIL MOLDS,

300.0- 310.0 DOLOMITE, LIGHT OLIVE GRAY, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

LITHOLOGIC LOG
W-LE015 . LEE CO. T44S, R21E, SEC 09

310.0- 315.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, MOLLUSKS, ECHINOID,

315.0- 320.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE, 02% PHOSPHATIC GRAVEL, MOLLUSKS, FOSSIL MOLDS,

320.0- 330.0 AS ABOVE,

330.0- 335.0 DOLO-SILT, GRAYISH OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, 02% PHOSPHATIC SAND,

335.0- 340.0 DOLOMITE, GRAYISH BROWN TO GREENISH GRAY, 11% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 03% QUARTZ SAND,

340.0- 345.0 LIMESTONE, GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 40% DOLOMITE, 03% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE016

LEE CO. T46S R21E SEC 29BA 26 26 22 N 82 07 44 W
TOTAL DEPTH- 625 FT. ELEV.- 5 FT. SAMPLES- 0- 625 FT.
COMPLETED- 80.11.05 DEPTH WORKED FT.

WELL NAME-
USGS 2524
REMARKS-
SAMPLES WORKED MIKE KNAPP (NOV.1980), QUALITY (POOR).

HYDROGEOLOGIC UNITS

0.0-	55.0	SURFICIAL AQUIFER
55.0-	170.0	UPPER HAWTHORN CONFINING ZONE
170.0-	215.0	SANDSTONE AQUIFER
215.0-	235.0	MID-HAWTHORN CONVINING ZONE
235.0-	255.0	MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	30.0	UNDIFFERENTIATED SAND, CLAY AND SHELLS
30.0-	55.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
55.0-	625.0	HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE016 . LEE CO. T46S, R21E, SEC 29BA

0.0-	5.0	SAND, WHITE, 32% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 10% MICRITE, MOLLUSKS,
5.0-	15.0	AS ABOVE,
15.0-	20.0	CLAY, YELLOWISH GRAY TO LIGHT OLIVE, 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 35% DOLOMITE, 15% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,
20.0-	30.0	AS ABOVE,
30.0-	35.0	SANDSTONE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, MICRITE CEMENT, 20% DOLOMITE, 10% SPAR, 10% MICRITE, MOLLUSKS,
		MUCH SHELL IN SAMPLE
35.0-	45.0	AS ABOVE,
45.0-	55.0	AS ABOVE,

LITHOLOGIC LOG
W-LE016 . LEE CO. T46S, R21E, SEC 29BA

55.0- 65.0 DOLO-SILT, LIGHT OLIVE TO GRAYISH OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 10% CLAY, 35% MICRITE, 03% QUARTZ SAND,

65.0- 70.0 SAND, LIGHT OLIVE TO GRAYISH OLIVE, 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 05% CLAY, 10% DOLOMITE, 10% MICRITE, BENTHONIC FORAMINIFERA,

70.0- 145.0 SAMPLES AT 80,90,110,115,120,130,AND 145 AS ABOVE.

145.0- 150.0 CLAY, LIGHT OLIVE TO GRAYISH OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 15% MICRITE, 15% DOLOMITE, 35% QUARTZ SAND, BENTHONIC FORAMINIFERA, ECHINOID,

150.0- 160.0 AS ABOVE,

160.0- 170.0 AS ABOVE WITH SOME L/S AND COARSE PHOS. FRAGS.

170.0- 180.0 SAND, LIGHT OLIVE, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 06% DOLOMITE, 02% CLAY, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

180.0- 185.0 AS ABOVE,

185.0- 195.0 AS ABOVE WITH FRAGS.OF SANDSTONE.

195.0- 205.0 SANDSTONE, WHITE TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% MICRITE, 10% DOLOMITE,

205.0- 215.0 BAD CAVINGS

215.0- 220.0 SAND, YELLOWISH GRAY, 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 03% CLAY, 06% PHOSPHATIC SAND, 03% PHOSPHATIC GRAVEL,

220.0- 225.0 AS ABOVE,

225.0- 230.0 DOLO-SILT, VERY LIGHT ORANGE TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 25% MICRITE, 01% CLAY, 05% PHOSPHATIC SAND, 10% QUARTZ SAND,

230.0- 235.0 AS ABOVE,

LITHOLOGIC LOG
W-LE016 . LEE CO. T46S, R21E, SEC 29BA

235.0- 240.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 35% DOLOMITE, 03% PHOSPHATIC SAND, 01% QUARTZ SAND,

240.0- 245.0 AS ABOVE,

245.0- 255.0 AS ABOVE,

255.0- 265.0 DOLO-SILT, LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 10% CLAY, 35% MICRITE, 08% PHOSPHATIC SAND, 02% QUARTZ SAND, SHARK TEETH,

265.0- 305.0 SAMPLES AT 275,285,295,AND 305 AS ABOVE.

305.0- 315.0 SAND, LIGHT OLIVE, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, CLAY CEMENT, 05% CLAY, 05% DOLOMITE, 05% MICRITE, 06% PHOSPHATIC SAND,

315.0- 325.0 AS ABOVE,

325.0- 335.0 DOLOMITE, YELLOWISH GRAY TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND,

335.0- 345.0 AS ABOVE WITH INCREASE IN PHOS.(6%).

345.0- 355.0 DOLOMITE, YELLOWISH GRAY TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND,

355.0- 365.0 AS ABOVE,

365.0- 375.0 AS ABOVE,

375.0- 385.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 03% PHOSPHATIC SAND, 03% QUARTZ SAND, WORM TRACES, BRYOZOA,

385.0- 420.0 SAMPLES AT 390,400,410,AND 420 AS ABOVE.

LITHOLOGIC LOG
W-LE016 . LEE CO. T46S, R21E, SEC 29BA

420.0- 435.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: CRYPTOCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% DOLOMITE, 01% QUARTZ SAND, 02% PHOSPHATIC SAND, FOSSIL MOLDS, BRYOZOA, MOLLUSKS,

435.0- 444.5 AS ABOVE,

444.5- 455.0 AS ABOVE,

455.0- 465.0 AS ABOVE,

465.0- 475.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 14% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, SUCROSIC, MUDDY, PLATY, REEFAL, SUCROSIC, NO FOSSIL,

475.0- 485.0 AS ABOVE,

485.0- 490.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 03% PHOSPHATIC SAND, 03% QUARTZ SAND,

490.0- 495.0 AS ABOVE,

495.0- 505.0 DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, 02% CLAY,

505.0- 515.0 DOLOMITE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 30% MICRITE, 02% SPAR,

515.0- 525.0 AS ABOVE,

525.0- 535.0 AS ABOVE WITH A TRACE OF PHOS.

535.0- 545.0 AS ABOVE,

545.0- 555.0 DOLOMITE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 13% MICRITE, 03% PHOSPHATIC SAND, FOSSIL MOLDS,

LITHOLOGIC LOG
W-LE016 . LEE CO. T46S, R21E, SEC 29BA

555.0- 575.0 AS ABOVE,

575.0- 580.0 AS ABOVE,

580.0- 590.0 AS ABOVE WITH SOME CRYSTALLINE DOLOMITE

590.0- 605.0 AS ABOVE,

605.0- 615.0 DOLOMITE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, 01% PHOSPHATIC SAND,

615.0- 625.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE017

LEE CO. T47S R26E SEC 13CA N W
TOTAL DEPTH- 1460 FT. ELEV.- FT. SAMPLES- 0- 1460 FT.
COMPLETED- 81.01.26 DEPTH WORKED FT.

WELL NAME-
BUREAU OF GEOLOGY W9324
REMARKS-
WORKED BY MIKE KNAPP 1-26-81, SAMPLE QUAL.(FAIR).

HYDROGEOLOGIC UNITS

0.0-	150.0	SURFICIAL AQUIFER
150.0-	160.0	UPPER HAWTHORN CONFINING ZONE
160.0-	300.0	SANDSTONE AQUIFER
300.0-	320.0	MID-HAWTHORN CONFINING ZONE
320.0-	400.0	MID-HAWTHORN AQUIFER
610.0-	840.0	LOWER HAWTHORN/TAMPA PRODUCING ZONE
840.0-	1460.0	SUWANNEE AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	10.0	CALOOSAHATCHEE FORMATION
10.0-	150.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
150.0-	680.0	HAWTHORN FORMATION
680.0-	840.0	TAMPA LIMESTONE *
840.0-	1460.0	SUWANNEE LIMESTONE

LITHOLOGIC LOG
W-LE017 . LEE CO. T47S, R26E, SEC 13CA

0.0-	10.0	SHELL BED, VERY LIGHT ORANGE TO GRAYISH BROWN, 20% POROSITY, INTERGRANULAR, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 01% CLAY, 35% MICRITE, 15% QUARTZ SAND, MOLLUSKS,
10.0-	20.0	SANDSTONE, LIGHT GRAY, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% MICRITE, 10% SPAR, 05% DOLOMITE, MOLLUSKS, FOSSIL MOLDS,
20.0-	30.0	AS ABOVE,
30.0-	40.0	LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, MOLLUSKS, CORAL, BRYOZOA,
40.0-	50.0	AS ABOVE,
50.0-	60.0	AS ABOVE,

* Note. this unit is included as part of the Hawthorn Formation in this report.

LITHOLOGIC LOG
W-LE017 . LEE CO. T47S, R26E, SEC 13CA

60.0- 70.0 LIMESTONE, GRAYISH BROWN TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, INTERCRYSTALLINE, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 04% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, FOSSIL MOLDS,

70.0- 80.0 AS ABOVE,

80.0- 90.0 DOLOMITE, GRAYISH ORANGE, 10% POROSITY, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 35% MICRITE, 10% SPAR, 02% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID,

90.0- 100.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, 04% QUARTZ SAND, MOLLUSKS,

100.0- 110.0 AS ABOVE,

110.0- 120.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 55% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, 06% QUARTZ SAND, MOLLUSKS, ECHINOID, BENTHONIC FORAMINIFERA,

120.0- 150.0 SAMPLES AT 130,140,AND 150 AS ABOVE.

150.0- 160.0 CLAY, LIGHT OLIVE GRAY TO LIGHT OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 30% MICRITE, 30% DOLOMITE, 05% QUARTZ SAND, 02% PHOSPHATIC SAND,

SAMPLE ALSO CONTAINS MUCH L/S (50%).

160.0- 170.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 06% QUARTZ SAND, 02% PHOSPHATIC SAND, MOLLUSKS, ECHINOID,

LITHOLOGIC LOG
W-LE017 . LEE CO. T47S, R26E, SEC 13CA

170.0- 180.0 LIMESTONE, LIGHT GRAY, 16% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 02% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS, CORAL, BRYOZOA,

180.0- 190.0 AS ABOVE,

190.0- 200.0 AS ABOVE,

200.0- 210.0 AS ABOVE WITH (1%) SAND AND NO PHOS.

210.0- 220.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, 02% QUARTZ SAND, MOLLUSKS, ECHINOID, CORAL,

220.0- 230.0 AS ABOVE,

230.0- 240.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, INTRACLASTS, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 35% QUARTZ SAND, 15% DOLOMITE, MOLLUSKS, FOSSIL MOLDS,

240.0- 250.0 SANDSTONE, VERY LIGHT ORANGE TO WHITE, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% MICRITE, 15% DOLOMITE,

250.0- 260.0 AS ABOVE,

260.0- 280.0 AS ABOVE WITH SHELL FRAGS. AND PHOS.(1%) INTERMIXED.

280.0- 290.0 LIMESTONE, YELLOWISH GRAY TO VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 35% DOLOMITE, 10% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

290.0- 300.0 AS ABOVE,

300.0- 310.0 SAND, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, DOLOMITE CEMENT, 01% CLAY, 10% DOLOMITE, 10% MICRITE, 07% PHOSPHATIC SAND,

LITHOLOGIC LOG
W-LE017 . LEE CO. T47S, R26E, SEC 13CA

SAMPLE CONTAINS MUCH L/S (40%) AND V.C.PHOS (3%).

310.0- 320.0 AS ABOVE,

320.0- 330.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 35% DOLOMITE, 05% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS, ECHINOID,

330.0- 340.0 DOLOMITE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 40% MICRITE, 06% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

340.0- 350.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 01% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS, ECHINOID, CORAL, FOSSIL MOLDS, BRYOZOA,

350.0- 380.0 SAMPLES AT 360,370,AND 380 AS ABOVE.

380.0- 390.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, 06% PHOSPHATIC SAND, 10% QUARTZ SAND, MOLLUSKS,

390.0- 400.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 02% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, ECHINOID, FOSSIL MOLDS,

400.0- 410.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 08% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 20% MICRITE, 10% SPAR, FOSSIL MOLDS, MOLLUSKS,

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410.0- 420.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, 03% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

420.0- 430.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 11% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 30% MICRITE, 01% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

430.0- 440.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, CORAL, BRYOZOA, MOLLUSKS,

440.0- 450.0 AS ABOVE,

450.0- 460.0 AS ABOVE,

460.0- 470.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 11% POROSITY, INTERGRANULAR, MOLDIC, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 25% MICRITE, 04% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

470.0- 480.0 AS ABOVE,

480.0- 490.0 AS ABOVE WITH PHOS.(4%) LOOSE IN TRAY.

490.0- 500.0 DOLOMITE, VERY LIGHT ORANGE TO DARK YELLOWISH BROWN, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 20% MICRITE, 04% PHOSPHATIC SAND, MOLLUSKS, FOSSIL MOLDS,

500.0- 510.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS, BRYOZOA, ECHINOID, CORAL,

510.0- 520.0 AS ABOVE,

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520.0- 530.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 30% MICRITE, ECHINOID, MOLLUSKS,

530.0- 540.0 AS ABOVE,

540.0- 550.0 AS ABOVE,

550.0- 560.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS,

560.0- 600.0 SAMPLES AT 570,580,590,AND 600 AS ABOVE.

600.0- 610.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, CORAL, MOLLUSKS, FOSSIL MOLDS, ECHINOID,

AS ABOVE WITH TRACE PHOS. AND SOME L/S WITH HIGH PORO.(20%)

610.0- 620.0 AS ABOVE,

620.0- 630.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 12% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS,

630.0- 640.0 AS ABOVE,

640.0- 650.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 01% PHOSPHATIC SAND, SUCROSIC,

650.0- 660.0 AS ABOVE,

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660.0- 670.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 02% PHOSPHATIC SAND, 0 % QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS,

670.0- 680.0 AS ABOVE,

680.0- 690.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS,

690.0- 700.0 AS ABOVE WITH TRACE PHOS.

700.0- 710.0 AS ABOVE,

710.0- 720.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 01% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS, ECHINOID,

ARCHIAS SP. AND SORITES.

720.0- 730.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, MOLLUSKS,

730.0- 740.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, 02% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, 02% QUARTZ SAND,

740.0- 750.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 01% PHOSPHATIC SAND, 30% QUARTZ SAND, MOLLUSKS,

750.0- 760.0 AS ABOVE,

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760.0- 770.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, 10% QUARTZ SAND, 01% PHOSPHATIC SAND,

770.0- 780.0 AS ABOVE,

780.0- 790.0 AS ABOVE,

790.0- 800.0 LIMESTONE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, 01% QUARTZ SAND, MOLLUSKS,

800.0- 810.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 55% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS,

810.0- 820.0 AS ABOVE,

820.0- 830.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 35% MICRITE, 25% QUARTZ SAND,

830.0- 840.0 AS ABOVE,

840.0- 850.0 LIMESTONE, WHITE TO VERY LIGHT GRAY, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

850.0- 860.0 AS ABOVE,

860.0- 870.0 AS ABOVE,

870.0- 880.0 LIMESTONE, WHITE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, 05% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS,

880.0- 890.0 AS ABOVE,

890.0- 900.0 AS ABOVE,

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900.0- 910.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS,

910.0- 920.0 AS ABOVE,

920.0- 930.0 AS ABOVE,

930.0- 970.0 SAMPLES AT 940,950,960,AND 970 AS ABOVE.

970.0- 980.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 80% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

980.0- 990.0 AS ABOVE,

990.0- 1000.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 01% QUARTZ SAND, MOLLUSKS, ECHINOID, BENTHONIC FORAMINIFERA,

1000.0- 1010.0 AS ABOVE,

1010.0- 1020.0 AS ABOVE WITH MORE SAND (25%).
1020.0- 1030.0 AS ABOVE,

1030.0- 1040.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 16% POROSITY, INTERGRANULAR, MOLDIC, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 15% MICRITE, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MILIOLIDS, MOLLUSKS,

REWORKED AND RECRYST.,GOOD POROSITY.

1040.0- 1050.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

1050.0- 1060.0 AS ABOVE,

1060.0- 1070.0 AS ABOVE,

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1070.0- 1080.0 AS ABOVE,

1080.0- 1090.0 CALCARENITE, VERY LIGHT ORANGE, 16% POROSITY, INTERGRANULAR, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 05% DOLOMITE, ECHINOID, BRYOZOA, CORAL, BENTHONIC FORAMINIFERA, MOLLUSKS,

1090.0- 1100.0 AS ABOVE,

1100.0- 1110.0 AS ABOVE WITH SOME CHERT

1110.0- 1120.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, SKELETAL, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, ECHINOID, BRYOZOA, CORAL, BENTHONIC FORAMINIFERA, MOLLUSKS,

1120.0- 1130.0 AS ABOVE,

1130.0- 1140.0 AS ABOVE,

1140.0- 1150.0 CALCARENITE, VERY LIGHT ORANGE, 18% POROSITY, INTERGRANULAR, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, CORAL,

1150.0- 1160.0 AS ABOVE,

1160.0- 1170.0 AS ABOVE,

1170.0- 1180.0 CALCARENITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 16% POROSITY, INTERGRANULAR, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA,

DICTYOCONUS COOKEI.

1180.0- 1190.0 AS ABOVE,

1190.0- 1200.0 AS ABOVE,

1200.0- 1210.0 DOLOMITE, GRAYISH BROWN TO MODERATE LIGHT GRAY, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 15% MICRITE, 01% CHERT, FOSSIL MOLDS,

1210.0- 1220.0 DOLOMITE, GRAYISH BROWN TO MODERATE LIGHT GRAY, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 02% QUARTZ SAND, FOSSIL MOLDS,

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1220.0- 1230.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 05% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

1230.0- 1240.0 AS ABOVE,

1240.0- 1260.0 AS ABOVE,

1260.0- 1270.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 03% QUARTZ SAND, 02% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS, CORAL,

1270.0- 1280.0 AS ABOVE,

1280.0- 1290.0 AS ABOVE,

1290.0- 1300.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, FOSSIL MOLDS,

1300.0- 1310.0 AS ABOVE,

1310.0- 1320.0 AS ABOVE,

1320.0- 1330.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% QUARTZ SAND, 01% PHOSPHATIC SAND, 01% CHERT, BENTHONIC FORAMINIFERA, FOSSIL MOLDS, MOLLUSKS,

1330.0- 1340.0 AS ABOVE,

1340.0- 1350.0 AS ABOVE,

1350.0- 1360.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS, ECHINOID,

1360.0- 1380.0 AS ABOVE,

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1380.0- 1390.0 AS ABOVE,

1390.0- 1400.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% QUARTZ SAND, 02% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA,

1400.0- 1410.0 AS ABOVE,

1410.0- 1420.0 AS ABOVE,

1420.0- 1430.0 AS ABOVE,

1430.0- 1450.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 02% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS,

1450.0- 1460.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE018
LEE CO. T45S R24E SEC 17BB 26 33 16 N 81 55 15 W
TOTAL DEPTH- 570 FT. ELEV.- 5 FT. SAMPLES- 0- 570 FT.
COMPLETED- 80.12.04 DEPTH WORKED 570 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
ELECTRIC
CALIPHER
TEMPERATURE

WELL NAME-
WELL ABANDONMENT #46, LANDINGS DEVEL., E.MILLER&YOUNQIST DRILLERS.
REMARKS-
WORKED BY MIKE KNAPP 12-04-80, SAMPLE QUAL.(GOOD).

HYDROGEOLOGIC UNITS

0.0-	30.0	SURFICIAL AQUIFER (GAMMA PICK)
30.0-	100.0	UPPER HAWTHORN CONFINING ZONE (GAMMA PICK)
30.0-	100.0	UPPER HAWTHORN CONFINING ZONE (GAMMA PICK)
100.0-	110.0	SANDSTONE AQUIFER
110.0-	130.0	MID-HAWTHORN CONFINING ZONE
130.0-	160.0	MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	30.0	UNDIFFERENTIATED SAND, CLAY AND SHELLS
30.0-	570.0	HAWTHORN FORMATION

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0.0- 50.0 NO SAMPLE,

50.0- 60.0 DOLOMITE, VERY LIGHT ORANGE TO LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 12% CLAY, 50% MICRITE, 20% QUARTZ SAND, 01% PHOSPHATIC SAND, SHARK TEETH, MOLLUSKS,

SAMPLE COULD BE CONTAMINATED

60.0- 70.0 DOLOMITE, LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 20% MICRITE, 10% CLAY, 01% PHOSPHATIC SAND, 10% QUARTZ SAND, MOLLUSKS,

70.0- 80.0 AS ABOVE WITH DECREASE IN QTZ (5%)

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80.0- 90.0 AS ABOVE,

90.0- 100.0 AS ABOVE,

100.0- 110.0 SANDSTONE, WHITE TO VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, DOLOMITE CEMENT, 39% DOLOMITE, 02% PHOSPHATIC GRAVEL, 04% PHOSPHATIC SAND, MOLLUSKS,

MUCH CAVINGS

110.0- 120.0 AS ABOVE WITH INCREASE IN PHOSPHORITE(8%)

120.0- 130.0 SANDSTONE, GRAYISH OLIVE GREEN, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, DOLOMITE CEMENT, 15% DOLOMITE, 06% PHOSPHATIC SAND, 06% PHOSPHATIC GRAVEL, 02% CLAY, MOLLUSKS,

130.0- 140.0 DOLOMITE, WHITE, 15% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 40% MICRITE, 06% QUARTZ SAND, 03% PHOSPHATIC SAND, MOLLUSKS, CORAL, BRYOZOA,

140.0- 150.0 AS ABOVE,

150.0- 160.0 AS ABOVE,

160.0- 170.0 DOLOMITE, YELLOWISH GRAY TO WHITE, 13% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 40% MICRITE, 02% PHOSPHATIC SAND, 02% QUARTZ SAND, 02% CLAY, MOLLUSKS, CORAL, BRYOZOA, ECHINOID,

170.0- 210.0 SAMPLES AT 180,190,200,AND 210 AS ABOVE.

210.0- 220.0 DOLOMITE, WHITE, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 45% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS, CORAL, BRYOZOA, ECHINOID,

220.0- 240.0 AS ABOVE,

240.0- 250.0 DOLO-SILT, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 30% MICRITE, 05% PHOSPHATIC SAND, 01% QUARTZ SAND, 02% CLAY, MOLLUSKS,

LITHOLOGIC LOG
W-LE018 . LEE CO. T45S, R24E, SEC 17BB

250.0- 260.0 DOLOMITE, WHITE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 45% MICRITE, 03% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

260.0- 270.0 AS ABOVE WITH DECREASE IN PHOS(02%)

270.0- 280.0 AS ABOVE,

280.0- 300.0 AS ABOVE,

300.0- 310.0 DOLO-SILT, YELLOWISH GRAY TO WHITE, 15% POROSITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 35% MICRITE, 05% PHOSPHATIC SAND, 01% QUARTZ SAND, 02% CLAY, SHARK TEETH,

MUCH CAVING

310.0- 320.0 AS ABOVE,

320.0- 330.0 DOLOMITE, WHITE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 40% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

330.0- 340.0 AS ABOVE,

340.0- 350.0 DOLO-SILT, YELLOWISH GRAY TO GREENISH GRAY, 15% POROSITY, INTERGRANULAR, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 30% MICRITE, 02% CLAY, 04% PHOSPHATIC SAND, 01% QUARTZ SAND, SHARK TEETH, MOLLUSKS,

AS ABOVE WITH V.COARSE PHOS.

350.0- 360.0 AS ABOVE,

360.0- 370.0 DOLOMITE, WHITE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 40% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, SHARK TEETH, MOLLUSKS,

370.0- 380.0 DOLOMITE, YELLOWISH GRAY, 15% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 30% MICRITE, 02% CLAY, 04% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

380.0- 390.0 AS ABOVE,

LITHOLOGIC LOG
W-LE018 . LEE CO. T45S, R24E, SEC 17BB

390.0- 400.0 DOLOMITE, YELLOWISH GRAY, 17% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 15% MICRITE, 01% CLAY, 01% PHOSPHATIC SAND, SUCROSIC,

400.0- 410.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 35% MICRITE, 01% PHOSPHATIC SAND, 01% PHOSPHATIC GRAVEL, 01% QUARTZ SAND,

410.0- 420.0 AS ABOVE,

420.0- 430.0 DOLOMITE, YELLOWISH GRAY, 15% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 30% MICRITE, 02% CLAY, 03% PHOSPHATIC SAND, 02% QUARTZ SAND,

430.0- 440.0 AS ABOVE,

440.0- 450.0 AS ABOVE,

450.0- 460.0 DOLOMITE, WHITE TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 35% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, 01% CLAY,

MUCH CAVINGS

460.0- 470.0 DOLOMITE, WHITE, 12% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 45% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

470.0- 510.0 SAMPLES AT 480,490,500,AND 510 AS ABOVE.

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE019

LEE CO. T46S R26E SEC 21BA N W
TOTAL DEPTH- 513 FT. ELEV.- 20 FT. SAMPLES- 0- 513 FT.
COMPLETED- . . DEPTH WORKED FT.

WELL NAME-
USGS WELL 2183
REMARKS-
WORKED BY MIKE KNAPP,1-11-81,SAMPLE QUAL.(FAIR TO POOR)

HYDROGEOLOGIC UNITS

0.0-	83.0	SURFICIAL AQUIFER
83.0-	134.0	UPPER HAWTHORN CONFINING ZONE
134.0	263.0	SANDSTONE AQUIFER
263.0	370.0	MID-HAWTHORN CONFINING ZONE
370.0	?.?	MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	26.0	NO SAMPLES
26.0-	83.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
83.0-	513.0	HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE019 . LEE CO. T46S, R26E, SEC 21BA

0.0-	26.0	NO SAMPLE,
26.0-	33.0	LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, CRYSTALS, MICRITE, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 10% DOLOMITE, 35% SPAR, 03% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,
33.0-	43.0	AS ABOVE,
43.0-	63.0	LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: COARSE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, MOLLUSKS, CORAL, BRYOZOA,
63.0-	83.0	LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, CRYSTALS, MICRITE, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 35% SPAR, 03% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

LITHOLOGIC LOG
W-LE019 . LEE CO. T46S, R26E, SEC 21BA

83.0- 93.0 CLAY, LIGHT OLIVE GRAY TO OLIVE GRAY, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 25% DOLOMITE, 25% MICRITE, 15% QUARTZ SAND,

93.0- 103.0 DOLO-SILT, LIGHT OLIVE, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 25% CLAY, 25% MICRITE, 15% QUARTZ SAND,

103.0- 113.0 SAMPLES AT 113,123,AND 127 AS ABOVE.

113.0- 134.0 LIMESTONE, LIGHT OLIVE TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: BIOGENIC, CRYSTALS, 09% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, SPARRY CALCITE CEMENT, CLAY CEMENT, 30% QUARTZ SAND, 03% CLAY, MOLLUSKS,

134.0- 143.0 SANDSTONE, LIGHT OLIVE TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, SPARRY CALCITE CEMENT, CLAY CEMENT, 40% SPAR, MOLLUSKS,

143.0- 153.0 AS ABOVE,

153.0- 163.0 AS ABOVE WITH INCREASE IN POROSITY (13%)

163.0- 183.0 AS ABOVE,

183.0- 193.0 SANDSTONE, LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, CLAY CEMENT, 15% MICRITE, 15% SPAR, 03% CLAY, MOLLUSKS,

193.0- 203.0 POOR SAMPLES

203.0- 223.0 POOR SAMPLES

223.0- 243.0 SANDSTONE, LIGHT OLIVE TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, CLAY CEMENT, 20% MICRITE, 20% SPAR, 03% CLAY, MOLLUSKS,

243.0- 263.0 AS ABOVE,

263.0- 283.0 SAND, LIGHT OLIVE, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 20% MICRITE, 02% PHOSPHATIC SAND, 03% CLAY,

283.0- 303.0 AS ABOVE,

303.0- 314.0 AS ABOVE,

LITHOLOGIC LOG
W-LE019 . LEE CO. T46S, R26E, SEC 21BA

314.0- 323.0 SANDSTONE, YELLOWISH GRAY, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 01% PHOSPHATIC SAND, 03% CLAY, MOLLUSKS,

323.0- 333.0 SANDSTONE, LIGHT OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 15% CLAY, 15% DOLOMITE, 10% MICRITE,

333.0- 343.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, 25% QUARTZ SAND,

343.0- 354.0 AS ABOVE,

354.0- 363.0 DOLO-SILT, LIGHT OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 20% MICRITE, 15% CLAY, 15% QUARTZ SAND, 01% PHOSPHATIC SAND,

363.0- 370.0 AS ABOVE,

370.0- 383.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 12% DOLOMITE, 10% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

383.0- 393.0 AS ABOVE,

393.0- 403.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 12% DOLOMITE, 01% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

403.0- 463.0 SAMPLES AT 419,423,439,443,AND 463 AS ABOVE.

463.0- 475.0 DOLOMITE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 03% PHOSPHATIC SAND, 01% QUARTZ SAND,

475.0- 483.0 AS ABOVE,

483.0- 513.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE020C

LEE CO. T46S R26E SEC 15CC N W
TOTAL DEPTH- 310 FT. ELEV.- 23 FT. SAMPLES- - FT.
COMPLETED- . . DEPTH WORKED 310 FT.

WELL NAME-
BUREAU OF GEOLOGY W14072,CORE,DRILLED BY JUSTIN HODGES
REMARKS-
WORKED BY MIKE KNAPP,12-21-80,QUAL.(GOOD).
INTERVAL FROM 0-17 IS FROM W14071.

HYDROGEOLOGIC UNITS

0.0-	60.0	SURFICIAL AQUIFER
60.0-	94.0	UPPER HAWTHORN CONFINING ZONE
94.0-	173.0	SANDSTONE AQUIFER
173.0-	230.0	MID-HAWTHORN CONFINING ZONE
230.0-	310.0	MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	17.0	UNDIFFERENTIATED SAND, CLAY AND SHELLS
17.0-	60.0	TAMIAMI FORMATION
60.0-	310.0	HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE020C. LEE CO. T46S, R26E, SEC 15CC

0.0-	2.0	SAND, LIGHT BROWN, 32% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 01% CLAY,
2.0-	9.5	AS ABOVE,
9.5-	11.5	SAND, LIGHT BROWN, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, 02% CLAY,
11.5-	12.0	SAND, VERY LIGHT GRAY, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 01% CLAY, 04% MICRITE,
12.0-	15.0	AS ABOVE,
15.0-	16.5	SAND, VERY LIGHT GRAY, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 08% MICRITE, 01% CLAY, MOLLUSKS,
16.5-	17.0	LITHO GRADES INTO A LESS CALCAREOUS SAND (NO SHELL)

LITHOLOGIC LOG
W-LE020C. LEE CO. T46S, R26E, SEC 15CC

17.0- 20.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% CLAY, FOSSIL MOLDS,

20.0- 25.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, FOSSIL MOLDS, MOLLUSKS,

25.0- 30.0 AS ABOVE,

30.0- 35.0 SAND, VERY LIGHT ORANGE, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 15% MICRITE, 08% CLAY, MOLLUSKS,

35.0- 40.0 AS ABOVE,

40.0- 45.0 AS ABOVE,

45.0- 50.0 SAND, VERY LIGHT ORANGE, 16% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 40% MICRITE, 04% CLAY, MOLLUSKS,

50.0- 55.0 AS ABOVE,

55.0- 60.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, DOLOMITE CEMENT, 20% CLAY, 20% DOLOMITE, MOLLUSKS, BENTHONIC FORAMINIFERA,

60.0- 80.0 CLAY, GRAYISH OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 15% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, SPICULES, PLANKTONIC FORAMINIFERA,

80.0- 83.0 CLAY, GRAYISH OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 12% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, PLANKTONIC FORAMINIFERA,

83.0- 92.0 AS ABOVE,

92.0- 94.0 DOLO-SILT, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 30% MICRITE, 30% CLAY, BENTHONIC FORAMINIFERA, MOLLUSKS, SHARK TEETH,

LITHOLOGIC LOG
W-LE020C. LEE CO. T46S, R26E, SEC 15CC

CLAY, LIGHT OLIVE GRAY, POOR INDURATION, CLAY CEMENT,

94.0- 100.0 LIMESTONE, WHITE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, SKELETAL, BIOGENIC, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 12% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

100.0- 103.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, POOR INDURATION, MICRITE CEMENT, 10% QUARTZ SAND,

103.0- 108.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, 45% QUARTZ SAND,

108.0- 113.0 AS ABOVE,

113.0- 118.0 SHELL BED, WHITE TO VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, POOR INDURATION, MICRITE CEMENT, 30% QUARTZ SAND, MOLLUSKS,

118.0- 120.0 SANDSTONE, WHITE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, 35% MICRITE, FOSSIL MOLDS, MOLLUSKS,

120.0- 125.0 SANDSTONE, WHITE, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 20% MICRITE, 20% SPAR, FOSSIL MOLDS, MOLLUSKS,

125.0- 128.0 AS ABOVE,

128.0- 132.0 SANDSTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% MICRITE, 15% DOLOMITE, 02% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

132.0- 140.0 SANDSTONE, YELLOWISH GRAY, 18% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 18% MICRITE, 12% CLAY, 01% PHOSPHATIC SAND, MOLLUSKS,

140.0- 143.0 SANDSTONE, YELLOWISH GRAY TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 25% MICRITE, 02% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS, CORAL,

LITHOLOGIC LOG
W-LE020C. LEE CO. T46S, R26E, SEC 15CC

143.0- 152.0 SANDSTONE, VERY LIGHT ORANGE, 16% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, 25% MICRITE, FOSSIL MOLDS, MOLLUSKS,

152.0- 165.0 SAND, LIGHT OLIVE, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, UNCONSOLIDATED, 01% MICRITE, 01% CLAY,

165.0- 173.0 SANDSTONE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, GOOD INDURATION, MICRITE CEMENT, 20% MICRITE, 01% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

173.0- 210.0 NO SAMPLE,

210.0- 215.0 SAND, LIGHT OLIVE GRAY, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 01% MICRITE, 02% CLAY, NO FOSSIL,

215.0- 215.5 SAND, GRAYISH OLIVE, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 01% MICRITE, 20% CLAY, 03% PHOSPHATIC SAND, MOLLUSKS,

215.5- 225.0 SAND, GRAYISH OLIVE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, HIGH SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 04% MICRITE, 05% CLAY, 03% PHOSPHATIC SAND, 04% PHOSPHATIC GRAVEL, MOLLUSKS,

225.0- 230.0 CLAY, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 40% MICRITE, 20% QUARTZ SAND, 05% PHOSPHATIC SAND, MOLLUSKS,

230.0- 232.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 10% CLAY, 20% QUARTZ SAND, 03% PHOSPHATIC SAND,

232.0- 235.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, 00% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, 03% QUARTZ SAND,

235.0- 242.0 LIMESTONE, WHITE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, POOR INDURATION, MICRITE CEMENT, 15% QUARTZ SAND, 02% PHOSPHATIC SAND, MOLLUSKS,

242.0- 248.0 AS ABOVE,

LITHOLOGIC LOG
W-LE020C. LEE CO. T46S, R26E, SEC 15CC

248.0- 250.0 CLAY, YELLOWISH GRAY, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, MICRITE CEMENT, 30% MICRITE, 02% PHOSPHATIC SAND, OSTRACODS, BENTHONIC FORAMINIFERA,

250.0- 293.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, 01% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS, BENTHONIC FORAMINIFERA, CORAL,

LIMESTONE IS A COQUINA OF MOLLUSKS - GOOD POROSITY

293.0- 295.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, 01% PHOSPHATIC SAND, MOLLUSKS, FOSSIL MOLDS,

295.0- 300.0 LIMESTONE, LIGHT OLIVE, 08% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, CLAY CEMENT, 15% CLAY, 01% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS,

300.0- 310.0 LIMESTONE, YELLOWISH GRAY, GRAIN TYPE: MICRITE, BIOGENIC, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, CLAY CEMENT, 15% CLAY, 12% QUARTZ SAND, 03% PHOSPHATIC SAND,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE021

LEE CO. T43S R21E SEC 5 N W
TOTAL DEPTH- 300 FT. ELEV.- 5 FT. 28 SAMPLES- 0- 300 FT.
COMPLETED- 81.06.15 DEPTH WORKED 300 FT.

WELL NAME-
SAMPLES SUPPLIED BY MISS. ASSOC.,DRILLER E.MILLER
REMARKS-
WORKED BY MIKE KNAPP,6-15-81,SAMPLE QUAL.(FAIR).

HYDROGEOLOGIC UNITS

0.0-	60.0	SURFICIAL AQUIFER
60.0-	170.0	UPPER HAWTHORN CONFINING ZONE
170.0-	180.0	SANDSTONE AQUIFER
180.0-	230.0	MID-HAWTHORN CONFINING ZONE
230.0-	300.0	MID-HAWTHORN AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	40.0	CALOOSAHATCHEE FORMATION
40.0-	60.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
60.0-	300.0	HAWTHORN FORMATION

LITHOLOGIC LOG
W-LE021 . LEE CO. T43S, R21E, SEC 5

0.0-	10.0	SHELL BED, WHITE TO GREENISH GRAY, 20% POROSITY, INTERGRANULAR, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, 50% QUARTZ SAND, MOLLUSKS,
10.0-	20.0	AS ABOVE,
20.0-	30.0	SHELL HASH
30.0-	40.0	AS ABOVE,
40.0-	50.0	LIMESTONE, MODERATE LIGHT GRAY TO WHITE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, GRAIN TYPE: MICRITE, CRYSTALS, 03% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 45% QUARTZ SAND, SAMPLE IS PREDOMINANTLY SHELL FRAGS (80%) CAVINGS?.
50.0-	60.0	SANDSTONE, LIGHT GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% MICRITE, 20% SPAR, 10% DOLOMITE, CAVINGS. SOME V.C. PHOSPHATE GRAINS.

LITHOLOGIC LOG
W-LE021 . LEE CO. T43S, R21E, SEC 5

60.0- 70.0 DOLO-SILT, GREENISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 35% MICRITE, 05% CLAY, 20% QUARTZ SAND, 04% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, PLANKTONIC FORAMINIFERA, MOLLUSKS,

MUCH SHELL INTERMIXED WITH SAMPLE.

70.0- 80.0 AS ABOVE,

80.0- 90.0 AS ABOVE,

90.0- 100.0 DOLO-SILT, GREENISH GRAY TO LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 20% MICRITE, 10% CLAY, 05% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, OSTRACODS, CORAL,

100.0- 110.0 DOLO-SILT, GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 15% MICRITE, 15% CLAY, 10% QUARTZ SAND, 04% PHOSPHATIC SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, PLANKTONIC FORAMINIFERA, OSTRACODS,

110.0- 120.0 AS ABOVE,

120.0- 130.0 DOLO-SILT, GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% MICRITE, 05% CLAY, 25% QUARTZ SAND, 10% SILT, BENTHONIC FORAMINIFERA, PLANKTONIC FORAMINIFERA, MOLLUSKS,

130.0- 140.0 AS ABOVE,

140.0- 150.0 AS ABOVE WITH SOME V.COARSE PHOS.AND SAND.

150.0- 160.0 AS ABOVE,

160.0- 170.0 SAND, GREENISH GRAY TO LIGHT GREENISH GRAY, 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 20% DOLOMITE, 05% CLAY, 15% MICRITE, 08% PHOSPHATIC SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

170.0- 180.0 DOLOMITE, VERY LIGHT ORANGE TO GREENISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 40% MICRITE, 06% QUARTZ SAND, 04% PHOSPHATIC SAND, MOLLUSKS,

MUCH CAVING

LITHOLOGIC LOG
W-LE021 . LEE CO. T43S, R21E, SEC 5

180.0- 190.0 SAND, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, DOLOMITE CEMENT, 15% MICRITE, 25% DOLOMITE, 02% CLAY, 03% PHOSPHATIC SAND, MOLLUSKS,

190.0- 200.0 DOLO-SILT, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 15% MICRITE, 02% CLAY, 02% PHOSPHATIC SAND, 35% QUARTZ SAND, MOLLUSKS,

200.0- 210.0 AS ABOVE,

210.0- 220.0 DOLO-SILT, VERY LIGHT ORANGE TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 12% MICRITE, 01% CLAY, 01% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS,

220.0- 230.0 SAND, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 15% DOLOMITE, 05% MICRITE, 02% CLAY, 05% PHOSPHATIC SAND, MOLLUSKS,

230.0- 240.0 DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 03% PHOSPHATIC SAND, 05% QUARTZ SAND, MOLLUSKS,

240.0- 260.0 NO SAMPLE,

260.0- 270.0 DOLOMITE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 02% PHOSPHATIC SAND, 15% QUARTZ SAND, MOLLUSKS,

270.0- 280.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 35% DOLOMITE, 01% PHOSPHATIC SAND, 05% QUARTZ SAND, MOLLUSKS, CORAL,

280.0- 290.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 02% PHOSPHATIC SAND, 05% QUARTZ SAND, SUCROSIC, MOLLUSKS,

290.0- 300.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE022

LEE CO. T43S R27E SEC 10DD 26 44 33 N 81 36 06 W
TOTAL DEPTH- 1200 FT. ELEV.- 19 FT. 240 SAMPLES- 0- 1200 FT.
COMPLETED- 81.11.17 DEPTH WORKED 1200 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA
NEUTRON
CALIPHER
ELECTRIC
TEMPERATURE

WELL NAME-
GREENS CITRUS GROVE EXPLORATION WELL.(REVERSE AIR - ALVIN WOOSTER DR.)
REMARKS-
WORKED BY MIKE KNAPP,11-17-81,QUAL.(GOOD),FULL SUITE LOGS AND WATER QUAL.

HYDROGEOLOGIC UNITS

0.0-	20.0	SURFICIAL AQUIFER
20.0-	90.0	UPPER HAWTHORN CONFINING ZONE
90.0-	168.0	SANDSTONE AQUIFER
168.0-	340.0	MUD-HAWTHORN CONFINING ZONE
340.0-	400.0	MID-HAWTHORN AQUIFER
400.0-	620.0	LOWER HAWTHORN CONFINING ZONE
620.0-	920.0	LOWER HAWTHORN TAMPA PROD.ZONE
920.0-	1200.0	SUWANNEE AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	4.0	UNDIFFERENTIATED SAND AND CLAY
4.0-	20.0	TAMIAMI FORMATION
20.0-	620.0	HAWTHORN FORMATION
620.0-	915.0	TAMPA LIMESTONE *
915.0-	1200.0	SUWANNEE LIMESTONE

LITHOLOGIC LOG
W-LE022 . LEE CO. T43S, R27E, SEC 10DD

0.0-	4.0	NO SAMPLE,
4.0-	10.0	LIMESTONE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, 12% QUARTZ SAND, CORAL, MOLLUSKS, ECHINOID,

* Note, this unit is included as part of the Hawthorn Formation in this report.

LITHOLOGIC LOG
W-LE022 . LEE CO. T43S, R27E, SEC 10DD

10.0- 20.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, PIN POINT VUGS, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, GRAIN SIZE: MICROCRYSTALLINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 04% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

20.0- 30.0 DOLO-SILT, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 10% CLAY, 07% QUARTZ SAND, 01% PHOSPHATIC SAND, CORAL, MOLLUSKS,

SAMPLE IS A MIXTURE OF DOLO-SILT (75%) AND L/S (25%)

30.0- 40.0 DOLO-SILT, OLIVE GRAY TO GRAYISH OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 20% CLAY, 01% PHOSPHATIC SAND, 05% QUARTZ SAND,

40.0- 50.0 AS ABOVE,

50.0- 60.0 DOLO-SILT, OLIVE GRAY TO GRAYISH OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 25% CLAY, 05% PHOSPHATIC SAND, 10% QUARTZ SAND,

60.0- 70.0 DOLO-SILT, OLIVE GRAY TO GRAYISH OLIVE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 20% MICRITE, 25% CLAY, 02% PHOSPHATIC SAND, 05% QUARTZ SAND, PLANKTONIC FORAMINIFERA, MOLLUSKS,

70.0- 80.0 AS ABOVE,

80.0- 90.0 AS ABOVE,

90.0- 100.0 SAND, WHITE TO OLIVE GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 10% MICRITE, 05% PHOSPHATIC SAND, 05% CLAY,

100.0- 110.0 SAND, WHITE TO OLIVE GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, CLAY CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 05% MICRITE, 02% CLAY, 02% PHOSPHATIC SAND,

110.0- 120.0 SAND, WHITE TO OLIVE GRAY, 19% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, UNCONSOLIDATED, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 05% DOLOMITE, 01% MICRITE, 01% CLAY, 01% PHOSPHATIC SAND,

LITHOLOGIC LOG
W-LE022 . LEE CO. T43S, R27E, SEC 10DD

120.0- 130.0 AS ABOVE,

130.0- 140.0 AS ABOVE,

140.0- 150.0 SANDSTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, 30% MICRITE, 04% PHOSPHATIC SAND,

150.0- 160.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 01% PHOSPHATIC SAND, 05% QUARTZ SAND, 25% DOLOMITE, MOLLUSKS, ECHINOID, CORAL,

160.0- 170.0 DOLOMITE, GRAYISH ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 01% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

170.0- 180.0 LIMESTONE, GRAYISH ORANGE TO VERY LIGHT GRAY, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT,

180.0- 188.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 02% PHOSPHATIC SAND, 04% QUARTZ SAND, 40% DOLOMITE, MOLLUSKS, FOSSIL MOLDS, ECHINOID,

188.0- 190.0 DOLO-SILT, LIGHT GREENISH GRAY, 06% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 03% PHOSPHATIC SAND, 15% QUARTZ SAND, 03% CLAY, MOLLUSKS,

190.0- 200.0 AS ABOVE,

200.0- 210.0 AS ABOVE,

210.0- 220.0 DOLO-SILT, LIGHT OLIVE GRAY TO LIGHT GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 04% CLAY, 02% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS,

220.0- 230.0 DOLO-SILT, GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 20% MICRITE, 05% CLAY, 15% QUARTZ SAND, 05% SILT, MOLLUSKS,

LITHOLOGIC LOG
W-LE022 . LEE CO. T43S, R27E, SEC 10DD

230.0- 240.0 AS ABOVE W/MORE PHOSPHORITE (3%)

240.0- 250.0 AS ABOVE,

250.0- 260.0 DOLO-SILT, LIGHT GREENISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 20% MICRITE, 03% CLAY, 02% PHOSPHATIC SAND, 10% SILT, MOLLUSKS,

SMALL QUANT. OF L/S FRAGS. IN SAMPLE

260.0- 270.0 DOLO-SILT, YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 30% MICRITE, 12% CLAY, 02% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

270.0- 280.0 AS ABOVE,

280.0- 290.0 DOLO-SILT, DARK GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, 10% CLAY, 14% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS,

290.0- 300.0 AS ABOVE,

300.0- 310.0 SAND, LIGHT GREENISH GRAY TO YELLOWISH GRAY, 14% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 20% PHOSPHATIC SAND, 15% MICRITE, 25% DOLOMITE, MOLLUSKS,

310.0- 320.0 DOLO-SILT, GRAYISH OLIVE TO LIGHT OLIVE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 03% CLAY, 20% PHOSPHATIC SAND, 20% QUARTZ SAND, 10% MICRITE, MOLLUSKS,

WELL IND. L/S FRAGS.IN SAMPLE

320.0- 330.0 LIMESTONE, LIGHT GREENISH GRAY TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MEDIUM, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 02% CLAY, 03% PHOSPHATIC SAND, 10% QUARTZ SAND, 25% DOLOMITE, MOLLUSKS,

330.0- 340.0 LIMESTONE, YELLOWISH GRAY TO YELLOWISH GRAY, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 12% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: VERY FINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 02% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS, CORAL, ECHINOID,

340.0- 350.0 AS ABOVE,

LITHOLOGIC LOG
W-LE022 . LEE CO. T43S, R27E, SEC 10DD

350.0- 360.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, CHALKY, MOLLUSKS, CORAL, ECHINOID, CRUSTACEA,

360.0- 370.0 AS ABOVE,

370.0- 380.0 AS ABOVE,

380.0- 390.0 LIMESTONE, WHITE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, 04% PHOSPHATIC SAND, CHALKY, MOLLUSKS,

390.0- 400.0 AS ABOVE,

400.0- 410.0 AS ABOVE WITH (1%) DOLO-SILT

410.0- 420.0 DOLOMITE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, 40% MICRITE, 10% PHOSPHATIC SAND, 06% QUARTZ SAND, MOLLUSKS,

420.0- 430.0 AS ABOVE,

430.0- 440.0 DOLOMITE, YELLOWISH GRAY TO YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 35% MICRITE, 07% PHOSPHATIC SAND, 05% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

440.0- 450.0 DOLO-SILT, LIGHT OLIVE GRAY TO YELLOWISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 03% CLAY, 15% PHOSPHATIC SAND, 02% QUARTZ SAND, 15% MICRITE, MOLLUSKS, BENTHONIC FORAMINIFERA,

450.0- 460.0 AS ABOVE,

460.0- 470.0 DOLOMITE, YELLOWISH GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 01% CLAY, 35% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, ECHINOID,

470.0- 480.0 AS ABOVE,

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480.0- 490.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 01% QUARTZ SAND, 01% PHOSPHATIC SAND,

490.0- 500.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, MOLLUSKS, ECHINOID, BRYOZOA,

500.0- 510.0 DOLOMITE, GRAYISH ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 10% MICRITE, 03% PHOSPHATIC SAND, SUCROSIC, BRYOZOA, MOLLUSKS,

510.0- 520.0 AS ABOVE,

520.0- 530.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, 02% QUARTZ SAND, 01% PHOSPHATIC SAND,

530.0- 540.0 AS ABOVE,

540.0- 550.0 DOLOMITE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 11% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 35% MICRITE, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

550.0- 560.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, 10% PHOSPHATIC SAND, 02% QUARTZ SAND,

560.0- 570.0 AS ABOVE,

570.0- 580.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MEDIUM, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% DOLOMITE, 06% PHOSPHATIC SAND, 10% QUARTZ SAND, MOLLUSKS,

580.0- 590.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, 02% PHOSPHATIC SAND, 01% QUARTZ SAND, MOLLUSKS,

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590.0- 600.0 AS ABOVE,

600.0- 610.0 AS ABOVE,

610.0- 620.0 AS ABOVE WITH PHOSPHATIC DOLO-SILT (2%)

620.0- 630.0 AS ABOVE,

630.0- 640.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 05% DOLOMITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND,

640.0- 650.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MEDIUM, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, MOLLUSKS, BENTHONIC FORAMINIFERA,

650.0- 660.0 AS ABOVE,

660.0- 670.0 AS ABOVE,

670.0- 680.0 AS ABOVE,

680.0- 690.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 10% PHOSPHATIC SAND, 10% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

690.0- 700.0 AS ABOVE,

700.0- 710.0 AS ABOVE,

710.0- 720.0 LIMESTONE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 03% PHOSPHATIC SAND, 10% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, BRYOZOA, ECHINOID, CRUSTACEA,

SORITES

720.0- 730.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, 10% PHOSPHATIC SAND, 25% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS, BENTHONIC FORAMINIFERA,

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730.0- 765.0 AS ABOVE,

765.0- 740.0 AS ABOVE WITH LESS PHOS.(5%)

740.0- 745.0 AS ABOVE,

745.0- 750.0 LIMESTONE, WHITE TO GRAYISH ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 02% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, BRYOZOA, CRUSTACEA, BENTHONIC FORAMINIFERA,

750.0- 760.0 AS ABOVE,

760.0- 770.0 DOLOMITE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 25% MICRITE, 02% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

770.0- 780.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 01% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, BRYOZOA, CRUSTACEA, CORAL,

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780.0- 790.0 AS ABOVE,

790.0- 795.0 AS ABOVE,

795.0- 800.0 DOLOMITE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 40% MICRITE, 04% PHOSPHATIC SAND, 04% QUARTZ SAND, FOSSIL MOLDS,

800.0- 805.0 SANDSTONE, WHITE TO LIGHT GRAY, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 20% MICRITE, 20% DOLOMITE, 10% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

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805.0- 817.0 DOLOMITE, GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 05% MICRITE, 08% PHOSPHATIC SAND, 30% QUARTZ SAND, HIGH RECRYSTALIZATION, FOSSIL MOLDS,

817.0- 820.0 AS ABOVE,

820.0- 825.0 AS ABOVE,

825.0- 830.0 DOLOMITE, GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 04% PHOSPHATIC SAND, 20% QUARTZ SAND, 05% MICRITE, HIGH RECRYSTALIZATION, FOSSIL MOLDS,

830.0- 835.0 DOLOMITE, GRAYISH BROWN TO VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 02% PHOSPHATIC SAND, 25% QUARTZ SAND, 05% MICRITE, HIGH RECRYSTALIZATION, FOSSIL MOLDS,

835.0- 838.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, PELLET, SKELETAL, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: COARSE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, 01% PHOSPHATIC SAND, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, CORAL, BRYOZOA,

838.0- 840.0 AS ABOVE,

840.0- 850.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: COARSE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, 04% PHOSPHATIC SAND, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, CORAL, BRYOZOA,

ABUNDANT SORITES

850.0- 860.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, 08% PHOSPHATIC SAND, 10% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

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860.0- 865.0 DOLOMITE, LIGHT GRAY TO MODERATE LIGHT GRAY, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 30% MICRITE, 20% PHOSPHATIC SAND, 20% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

865.0- 875.0 AS ABOVE,

875.0- 880.0 AS ABOVE,

880.0- 885.0 AS ABOVE,

885.0- 890.0 AS ABOVE,

890.0- 900.0 DOLOMITE, VERY LIGHT ORANGE TO LIGHT GRAY, 16% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 40% MICRITE, 15% PHOSPHATIC SAND, 10% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS,

900.0- 910.0 AS ABOVE,

910.0- 915.0 DOLOMITE, DARK GRAY, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 05% MICRITE, 10% PHOSPHATIC SAND, 05% QUARTZ SAND, HIGH RECRYSTALIZATION, FOSSIL MOLDS,

915.0- 920.0 DOLOMITE, GRAYISH BROWN, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 01% PHOSPHATIC SAND, 15% QUARTZ SAND, MOLLUSKS,

920.0- 930.0 AS ABOVE,

930.0- 935.0 AS ABOVE,

935.0- 940.0 DOLOMITE, GRAYISH ORANGE, 15% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 10% MICRITE, 35% QUARTZ SAND, MOLLUSKS,

940.0- 945.0 AS ABOVE,

945.0- 950.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, MICRITE CEMENT, 20% DOLOMITE, 25% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS, ECHINOID,

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950.0- 955.0 AS ABOVE,

955.0- 960.0 AS ABOVE,

960.0- 970.0 LIMESTONE, WHITE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 05% QUARTZ SAND, MOLLUSKS,

970.0- 980.0 AS ABOVE,

980.0- 987.0 SAND, WHITE TO VERY LIGHT ORANGE, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, UNCONSOLIDATED, 02% PHOSPHATIC SAND,

987.0- 1000.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH BROWN, 12% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 30% DOLOMITE, 01% PHOSPHATIC SAND, 03% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

1000.0- 1010.0 LIMESTONE, WHITE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, 04% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, BRYOZOA, ECHINOID,

1010.0- 1015.0 LIMESTONE, WHITE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 40% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

1015.0- 1020.0 AS ABOVE,

1020.0- 1025.0 SAND, WHITE, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, UNCONSOLIDATED, 01% PHOSPHATIC SAND,

1025.0- 1030.0 AS ABOVE,

1030.0- 1035.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 25% QUARTZ SAND, 02% PHOSPHATIC SAND, MOLLUSKS,

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1035.0- 1040.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 25% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

ROTALLIA SP.

1040.0- 1045.0 AS ABOVE WITH MUCH SAND LOOSE IN SAMPLE.

1045.0- 1050.0 AS ABOVE,

1050.0- 1055.0 AS ABOVE,

1055.0- 1060.0 SANDSTONE, VERY LIGHT ORANGE TO WHITE, 16% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 20% MICRITE, 01% PHOSPHATIC SAND, MOLLUSKS,

1060.0- 1065.0 AS ABOVE,

1065.0- 1070.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 30% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

1070.0- 1075.0 AS ABOVE,

1075.0- 1080.0 AS ABOVE WITH MUCH CAVING

1080.0- 1085.0 SAND, WHITE TO VERY LIGHT ORANGE, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, UNCONSOLIDATED, 03% PHOSPHATIC SAND,

COULD BE CAVINGS FROM 1025.

1085.0- 1090.0 AS ABOVE,

1090.0- 1095.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, 25% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, ECHINOID,

1095.0- 1100.0 AS ABOVE,

1100.0- 1105.0 AS ABOVE,

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1105.0- 1110.0 SANDSTONE, VERY LIGHT ORANGE TO WHITE, 14% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 25% MICRITE, MOLLUSKS,

1110.0- 1115.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 25% QUARTZ SAND, MOLLUSKS, CORAL, BENTHONIC FORAMINIFERA,

1115.0- 1120.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 55% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, 03% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA,

1120.0- 1130.0 CALCARENITE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, GOOD INDURATION, MICRITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, CORAL,

1130.0- 1135.0 AS ABOVE GOOD SUWANNEE LITHO.

1135.0- 1140.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 65% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, 02% QUARTZ SAND, MOLLUSKS, ECHINOID, BENTHONIC FORAMINIFERA, MILIOLIDS, BRYOZOA,

1140.0- 1150.0 AS ABOVE,

1150.0- 1155.0 CALCARENITE, VERY LIGHT ORANGE, 16% POROSITY, INTERGRANULAR, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, MOLLUSKS, ECHINOID, BENTHONIC FORAMINIFERA, MILIOLIDS, BRYOZOA,

1155.0- 1160.0 AS ABOVE,

1160.0- 1170.0 AS ABOVE,

1170.0- 1175.0 AS ABOVE,

1175.0- 1180.0 CALCARENITE, VERY LIGHT ORANGE, 17% POROSITY, INTERGRANULAR, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, MILIOLIDS,

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1180.0- 1185.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 18% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 60% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, CRUSTACEA, BRYOZOA, MILIOLIDS,

APPEARS REWORKED,THEN RECRYSTALLIZED

1185.0- 1190.0 AS ABOVE,

1190.0- 1195.0 AS ABOVE,

1195.0- 1200.0 DOLOMITE, GRAYISH ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, LOW PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, HIGH RECRYSTALIZATION, FOSSIL MOLDS,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE023

LEE CO. T45S R26E SEC 34B N W
TOTAL DEPTH- 1350 FT. ELEV.- 28 FT. SAMPLES- 0- 1340 FT.
COMPLETED- 79.09.14 DEPTH WORKED 1350 FT.

WELL NAME-
NRM-CHAPMAN (PROGRESS),#34-1.
REMARKS-
WORKED BY MIKE KNAPP (6-18-81),SAMPLE QUAL.(FAIR),INTERVAL 30FT.

HYDROGEOLOGIC UNITS

0.0-	90.0	SURFICIAL AQUIFER?
90.0-	210.0	SANDSTONE AQUIFER?
210.0-	420.0	MID-HAWTHORN CONFINING ZONE
	420.0	MID-HAWTHORN AQUIFER
660.0-	750.0	LOWER HAWTHORN / TAMPA PRODUCING ZONE
750.0-	1110.0	SUWANNEE AQUIFER
1110.0-	1350.0	DEEPER AQUIFERS

STRATIGRAPHIC FORMATIONS -

0.0-	90.0	OCHOPEE LIMESTONE MEMBER OF TAMIAMI FORMATION
90.0-	660.0	HAWTHORN FORMATION
660.0-	750.0	TAMPA LIMESTONE *
750.0-	1110.0	SUWANNEE LIMESTONE
1110.0-	1350.0	CRYSTAL RIVER FORMATION

LITHOLOGIC LOG
W-LE023 . LEE CO. T45S, R26E, SEC 34B

0.0-	30.0	LIMESTONE, LIGHT GRAY TO YELLOWISH GRAY, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, CRYSTALS, MICRITE, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 15% QUARTZ SAND, MOLLUSKS, FOSSIL FRAGMENTS, FOSSIL MOLDS, ECHINOID, CORAL,
30.0-	60.0	LIMESTONE, VERY LIGHT ORANGE TO YELLOWISH GRAY, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, CRYSTALS, MICRITE, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 40% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS, ECHINOID, CORAL, FOSSIL MOLDS,
60.0-	90.0	LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 25% QUARTZ SAND, MOLLUSKS,

* Note, this unit is included as part of the Hawthorn Formation in this report.

LITHOLOGIC LOG
W-LE023 . LEE CO. T45S, R26E, SEC 34B

90.0- 120.0 SANDSTONE, GREENISH GRAY, 15% POROSITY, INTERGRANULAR, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 20% MICRITE, 20% DOLOMITE, 03% PHOSPHATIC SAND, MOLLUSKS,

SHELL FRAGMENTS

120.0- 150.0 AS ABOVE,

150.0- 180.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MEDIUM, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 05% QUARTZ SAND, MOLLUSKS, ECHINOID, CORAL, FOSSIL MOLDS,

180.0- 210.0 AS ABOVE,

210.0- 240.0 DOLO-SILT, YELLOWISH GRAY TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, SPARRY CALCITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 35% MICRITE, 02% CLAY, 04% QUARTZ SAND, 05% SILT, MOLLUSKS,

LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 75% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 05% QUARTZ SAND, MOLLUSKS, ECHINOID, CORAL, FOSSIL MOLDS,

LIMESTONE IS CAVINGS OR INTERBEDDED.

240.0- 270.0 LIMESTONE, LIGHT GREENISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, POOR INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 15% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS,

270.0- 300.0 DOLO-SILT, MODERATE GRAY TO GREENISH GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 02% CLAY, 40% MICRITE, 05% QUARTZ SAND, 02% PHOSPHATIC SAND, MOLLUSKS,

300.0- 330.0 AS ABOVE WITH SOME VERY COARSE PHOSPHATE

330.0- 360.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 05% PHOSPHATIC SAND, 05% QUARTZ SAND,

LITHOLOGIC LOG
W-LE023 . LEE CO. T45S, R26E, SEC 34B

360.0- 390.0 DOLO-SILT, YELLOWISH GRAY TO LIGHT OLIVE GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 25% MICRITE, 05% CLAY, 05% PHOSPHATIC SAND, 05% QUARTZ SAND, MOLLUSKS,

RUBBLE ZONE

390.0- 420.0 DOLO-SILT, YELLOWISH GRAY TO OLIVE GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 20% MICRITE, 10% CLAY, 04% PHOSPHATIC SAND, 05% SILT, MOLLUSKS,

SOME VERY COARSE PHOSPHATE

420.0- 450.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 10% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, CLAY CEMENT, 02% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

450.0- 480.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE,

480.0- 510.0 AS ABOVE,

LIMESTONE CAVINGS

510.0- 540.0 AS ABOVE,

540.0- 570.0 DOLOMITE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 40% MICRITE, 03% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, CORAL,

570.0- 600.0 LIMESTONE, WHITE, 13% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 25% DOLOMITE, 02% PHOSPHATIC SAND, 04% QUARTZ SAND, MOLLUSKS, CORAL, BRYOZOA, FOSSIL MOLDS, CRUSTACEA,

600.0- 630.0 AS ABOVE,

LITHOLOGIC LOG
W-LE023 . LEE CO. T45S, R26E, SEC 34B

630.0- 660.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% PHOSPHATIC SAND, 02% QUARTZ SAND, MOLLUSKS, CRUSTACEA, ECHINOID,

660.0- 690.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 03% QUARTZ SAND, BENTHONIC FORAMINIFERA, MILIOLIDS, MOLLUSKS, ECHINOID,

690.0- 720.0 AS ABOVE,

720.0- 750.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 10% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, CORAL, CRUSTACEA,

ARCHIAS SP.

750.0- 780.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 70% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, MILIOLIDS,

QUINQUELOCULINA SP.

780.0- 810.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 65% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 15% DOLOMITE, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, MILIOLIDS,

810.0- 840.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 08% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

840.0- 870.0 AS ABOVE,

LITHOLOGIC LOG
W-LE023 . LEE CO. T45S, R26E, SEC 34B

870.0- 900.0 LIMESTONE, WHITE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 65% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 05% QUARTZ SAND, BENTHONIC FORAMINIFERA, CRUSTACEA, FOSSIL MOLDS, MOLLUSKS,

900.0- 930.0 AS ABOVE,

930.0- 960.0 AS ABOVE WITH FRAGS. OF DK GREEN PHOSPHATIC/DOLO-SILT.

960.0- 990.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% DOLOMITE, 10% QUARTZ SAND, 02% PHOSPHATIC SAND, MOLLUSKS,

990.0- 1020.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 02% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS, FOSSIL MOLDS,

1020.0- 1050.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, MOLLUSKS, ECHINOID,

1050.0- 1080.0 AS ABOVE,

1080.0- 1110.0 DOLOMITE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 35% MICRITE,

1110.0- 1140.0 LIMESTONE, WHITE, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN TYPE: MICRITE, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, CHALKY,

1140.0- 1170.0 AS ABOVE,

1170.0- 1200.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, CHALKY, BENTHONIC FORAMINIFERA,

LITHOLOGIC LOG
W-LE023 . LEE CO. T45S, R26E, SEC 34B

1200.0- 1230.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, CHALKY, BENTHONIC FORAMINIFERA, MOLLUSKS,

OPERCULINOIDES SP.,HETERESTEGINA SP.

1230.0- 1260.0 AS ABOVE WITH LEPIDOCYLINA SP.

1260.0- 1290.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, CHALKY, BENTHONIC FORAMINIFERA,

1290.0- 1320.0 AS ABOVE,

1320.0- 1350.0 LIMESTONE, WHITE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, SPARRY CALCITE CEMENT, MICRITE CEMENT, BENTHONIC FORAMINIFERA,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE024

LEE CO. T43S R20E SEC 26AD N W
TOTAL DEPTH- 570 FT. ELEV.- 4 FT. 61 SAMPLES- 0- 570 FT.
COMPLETED- 81.10.12 DEPTH WORKED 570 FT.

OTHER GEOPHYSICAL LOGS AVAILABLE -

GAMMA

WELL NAME-
806 W7324, SEABOARD A/L RR,BOCA GRANDE.
REMARKS-
WORKED BY MIKE KNAPP (10-12-81) AND ED LANE (1-8-65)

HYDROGEOLOGIC UNITS

0.0- 60.0 SURFICIAL AQUIFER
60.0- 65.0 UPPER HAWTHORN CONFINING ZONE
360.0-570.0 LOWER HAWTHORN/TAMPA PRODUCING ZONE

STRATIGRAPHIC FORMATIONS -

0.0- 60.0 UNDIFFERENTIATED SAND AND CLAY
60.0- 360.0 HAWTHORN FORMATION
360.0- 570.0 TAMPA LIMESTONE*

LITHOLOGIC LOG
W-LE024 . LEE CO. T43S, R20E, SEC 26AD

0.0- 10.0 SAND, WHITE, 30% POROSITY, INTERGRANULAR, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 02% CLAY, 10% SILT, 01% PHOSPHATIC SAND, FROSTED, FOSSIL FRAGMENTS,

10.0- 20.0 AS ABOVE,

20.0- 30.0 AS ABOVE,

30.0- 40.0 SAND, WHITE, 18% POROSITY, INTERGRANULAR, LOW PERMEABILITY, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 02% CLAY, 10% SILT, 01% PHOSPHATIC SAND, FROSTED, FOSSIL FRAGMENTS,

40.0- 50.0 AS ABOVE,

50.0- 60.0 AS ABOVE,

60.0- 65.0 DOLO-SILT, DARK GREENISH GRAY, 08% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, CLAY CEMENT, DOLOMITE CEMENT, MICRITE CEMENT, 10% CLAY, 05% MICRITE, 02% SILT, 02% PHOSPHATIC SAND, ECHINOID, OSTRACODS, MOLLUSKS, FOSSIL FRAGMENTS,

* Note, this unit is included as part of the Hawthorn Formation in this report.

LITHOLOGIC LOG
W-LE024 . LEE CO. T43S, R20E, SEC 26AD

65.0- 75.0 LIMESTONE, VERY LIGHT ORANGE, 18% POROSITY, INTERGRANULAR, VUGULAR, MOLDIC, GRAIN TYPE: BIOGENIC, INTRACLASTS, MICRITE, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, 01% QUARTZ SAND, 01% PHOSPHATIC SAND, ECHINOID, MOLLUSKS, OSTRACODS, FOSSIL FRAGMENTS, FOSSIL MOLDS,

75.0- 350.0 NO SAMPLE,

350.0- 360.0 LIMESTONE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 08% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: CRYSTALS, INTRACLASTS, MICRITE, 50% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MEDIUM TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, SILIC CEMENT, 03% QUARTZ, 05% HEMATITE, GRANULAR, HIGH RECRYSTALIZATION, BENTHONIC FORAMINIFERA, MOLLUSKS, OSTRACODS, FOSSIL FRAGMENTS, FOSSIL MOLDS,

360.0- 370.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, INTRACLASTS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MEDIUM TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, CHALKY, BRYOZOA, BENTHONIC FORAMINIFERA, CORAL, CRUSTACEA, MOLLUSKS,

370.0- 380.0 AS ABOVE,

380.0- 390.0 LIMESTONE, VERY LIGHT ORANGE, 05% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, 02% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, ECHINOID, BENTHONIC FORAMINIFERA, MOLLUSKS,

390.0- 400.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, INTRACLASTS, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, 02% PHOSPHATIC SAND, ECHINOID, BENTHONIC FORAMINIFERA, MOLLUSKS,

400.0- 410.0 LIMESTONE, VERY LIGHT GRAY, 05% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% DOLOMITE, 05% PHOSPHATIC SAND, ECHINOID, BENTHONIC FORAMINIFERA, MOLLUSKS,

LITHOLOGIC LOG
W-LE024 . LEE CO. T43S, R20E, SEC 26AD

410.0- 420.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 05% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, INTRACLASTS, MICRITE, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, 05% PHOSPHATIC SAND, HIGH RECRYSTALIZATION, ECHINOID, BENTHONIC FORAMINIFERA, MOLLUSKS, CRUSTACEA, FOSSIL MOLDS,

420.0- 430.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 05% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, INTRACLASTS, MICRITE, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, 05% QUARTZ SAND, 05% PHOSPHATIC SAND, ECHINOID, BENTHONIC FORAMINIFERA, MOLLUSKS, OSTRACODS, FOSSIL MOLDS,

430.0- 480.0 SAMPLES AT 440,450,460,470,AND 480 AS ABOVE.

480.0- 490.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 15% POROSITY, INTERGRANULAR, MOLDIC, VUGULAR, GRAIN TYPE: BIOGENIC, INTRACLASTS, MICRITE, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 10% QUARTZ SAND, 10% DOLOMITE, 10% PHOSPHATIC SAND, HIGH RECRYSTALIZATION, ECHINOID, BENTHONIC FORAMINIFERA, MOLLUSKS, OSTRACODS, FOSSIL MOLDS,

490.0- 500.0 AS ABOVE,

500.0- 510.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, INTRACLASTS, MICRITE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 05% QUARTZ SAND, 10% PHOSPHATIC SAND, BRYOZOA, ECHINOID, BENTHONIC FORAMINIFERA, MOLLUSKS, OSTRACODS,

510.0- 520.0 AS ABOVE,

520.0- 530.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, INTRACLASTS, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 10% DOLOMITE, 10% PHOSPHATIC SAND, 10% QUARTZ SAND, HIGH RECRYSTALIZATION, BRYOZOA, ECHINOID, BENTHONIC FORAMINIFERA, MOLLUSKS, OSTRACODS,

530.0- 540.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, INTRACLASTS, MICRITE, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% DOLOMITE, 10% PHOSPHATIC SAND, 10% QUARTZ SAND, BRYOZOA, ECHINOID, BENTHONIC FORAMINIFERA, MOLLUSKS, OSTRACODS,

540.0- 550.0 AS ABOVE,

LITHOLOGIC LOG
W-LE024 . LEE CO. T43S, R20E, SEC 26AD

550.0- 560.0 NO SAMPLE,

560.0- 570.0 LIMESTONE, VERY LIGHT ORANGE TO VERY LIGHT GRAY, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, INTRACLASTS, MICRITE, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% DOLOMITE, 10% PHOSPHATIC SAND, 10% QUARTZ SAND, BRYOZOA, ECHINOID, BENTHONIC FORAMINIFERA, MOLLUSKS, OSTRACODS,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE025

LEE CO. T44S R27E SEC 29 N W
TOTAL DEPTH- FT. ELEV.- 25 FT. 37 SAMPLES- 0- 1100 FT.
COMPLETED- . . DEPTH WORKED FT.

WELL NAME-
EXXON CON TOM 29-3.
REMARKS-
WORKED BY MIKE KNAPP,11-19-81,QUAL.FAIR.

HYDROGEOLOGIC UNITS

0.0-	30.0	SURFICIAL AQUIFER
30.0-	60.0	UPPER HAWTHORN CONFINING ZONE
60.0-	180.0	SANDSTONE AQUIFER (QUEST.THICKNESS DUE TO SAMP.INTERVAL)
180.0-	240.0	MID-HAWTHORN CONFINING ZONE
240.0-	290.0	MID-HAWTHORN AQUIFER
290.0-	680.0	LOWER HAWTHORN/TAMPA PRODUCING ZONE
680.0	1030.0	SUWANNEE AQUIFER
1030.0	1100.0	DEEPER AQUIFER

STRATIGRAPHIC FORMATIONS -

0.0-	30.0	TAMIAMI FORMATION
30.0-	560.0	HAWTHORN FORMATION
560.0-	680.0	TAMPA LIMESTONE *
680.0-	1030.0	SUWANNEE LIMESTONE
1030.0-	1100.0	CRYSTAL RIVER FORMATION

LITHOLOGIC LOG
W-LE025 . LEE CO. T44S, R27E, SEC 29

0.0-	30.0	LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: OOLITE, CRYSTALS, GOOD INDURATION, MICRITE CEMENT, 10% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,
30.0-	60.0	DOLO-SILT, LIGHT OLIVE GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 03% PHOSPHATIC SAND, 10% QUARTZ SAND, MOLLUSKS,
		L/S INTERMIXED
60.0-	90.0	DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 05% QUARTZ SAND, 02% PHOSPHATIC SAND, MOLLUSKS, FOSSIL MOLDS,

* Note, this unit is included as part of the Hawthorn Formation in this report.

LITHOLOGIC LOG
W-LE025 . LEE CO. T44S, R27E, SEC 29

90.0- 120.0 SANDSTONE, WHITE TO LIGHT GRAY, 13% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, ROUNDED, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% MICRITE, 25% DOLOMITE, MOLLUSKS,

120.0- 150.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH BROWN, 18% POROSITY, INTERGRANULAR, MOLDIC, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, 05% QUARTZ SAND, MOLLUSKS, ECHINOID, FOSSIL MOLDS,

APPEARS REWORKED AND RXSTAL.

150.0- 180.0 AS ABOVE,

180.0- 210.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% DOLOMITE, 10% QUARTZ SAND, 10% PHOSPHATIC SAND, MOLLUSKS, FOSSIL MOLDS,

OCALA BUGS IN SAMPLE,DOLO-SILT PRESENT.

210.0- 240.0 DOLO-SILT, LIGHT OLIVE GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, 05% PHOSPHATIC SAND, 10% QUARTZ SAND, 04% PHOSPHATIC GRAVEL, MOLLUSKS,

240.0- 260.0 LIMESTONE, VERY LIGHT ORANGE, 15% POROSITY, INTERGRANULAR, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% DOLOMITE, 01% PHOSPHATIC SAND, 10% QUARTZ SAND, CORAL, MOLLUSKS, FOSSIL MOLDS,

260.0- 290.0 AS ABOVE,

V.C.PHOS. IN SAMPLE (CAVINGS)

290.0- 320.0 DOLO-SILT, LIGHT OLIVE GRAY, 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, 10% PHOSPHATIC SAND, 25% QUARTZ SAND, MOLLUSKS,

320.0- 350.0 AS ABOVE,

350.0- 380.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 35% DOLOMITE, 05% PHOSPHATIC SAND, 05% QUARTZ SAND,

LITHOLOGIC LOG
W-LE025 . LEE CO. T44S, R27E, SEC 29

380.0- 410.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 12% POROSITY, INTERGRANULAR, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, MODERATE INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, CLAY CEMENT, 25% MICRITE, 04% CLAY, 10% PHOSPHATIC SAND, 05% QUARTZ SAND,

410.0- 440.0 AS ABOVE,

440.0- 470.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 10% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 40% DOLOMITE, 01% PHOSPHATIC SAND, 05% QUARTZ SAND, MOLLUSKS, FOSSIL MOLDS,

470.0- 500.0 AS ABOVE WITH SOME HIGHLY RXSTL.DOLOMITE
500.0- 530.0 LIMESTONE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 20% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 10% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS,

SOKITES

530.0- 560.0 AS ABOVE,

560.0- 590.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO FINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 10% DOLOMITE, 15% QUARTZ SAND, 01% PHOSPHATIC SAND, MOLLUSKS, BENTHONIC FORAMINIFERA, MILIOLIDS,

590.0- 620.0 AS ABOVE,

620.0- 660.0 LIMESTONE, WHITE, 14% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, CRYSTALS, 35% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, 15% QUARTZ SAND, MOLLUSKS, BENTHONIC FORAMINIFERA,

660.0- 680.0 AS ABOVE,

680.0- 710.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 16% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 55% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: FINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, 05% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, FOSSIL MOLDS,

710.0- 740.0 AS ABOVE,

LITHOLOGIC LOG
W-LE025 . LEE CO. T44S, R27E, SEC 29

740.0- 770.0 AS ABOVE,

770.0- 800.0 LIMESTONE, VERY LIGHT ORANGE, 16% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA, FOSSIL MOLDS, ECHINOID, BRYOZOA, CORAL,

800.0- 820.0 AS ABOVE WITH MORE SAND (8%).

820.0- 850.0 AS ABOVE,

850.0- 880.0 LIMESTONE, VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 45% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 02% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS, ECHINOID, BRYOZOA,

880.0- 910.0 AS ABOVE,

910.0- 940.0 AS ABOVE WITH MORE SAND (8%)

940.0- 970.0 LIMESTONE, VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 10% QUARTZ SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID,

970.0- 1000.0 AS ABOVE,

1000.0- 1030.0 LIMESTONE, VERY LIGHT ORANGE, 10% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, CRYSTALS, BIOGENIC, 05% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO VERY FINE, MODERATE INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 01% CHERT, BENTHONIC FORAMINIFERA, MOLLUSKS,

1030.0- 1060.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 11% POROSITY, INTERGRANULAR, GRAIN TYPE: MICRITE, BIOGENIC, SKELETAL, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, CORAL,

LEPIDOCYCLINA OCALANA, HETERESTEGINA SP.,OPERCS.

1060.0- 1100.0 AS ABOVE,

SOUTH FLORIDA WMD - LITHO LOG PRINTOUT

W-LE026

LEE CO. T46S R21E SEC N W
TOTAL DEPTH- 635 FT. ELEV.- 2 FT. 64 SAMPLES- 0- 635 FT.
COMPLETED- . . DEPTH WORKED 635 FT.

WELL NAME-
BUREAU OF GEOLOGY W14011
REMARKS-
WORKED BY MIKE KNAPP (11-10-81),QUAL. (GOOD)

HYDROGEOLOGIC UNITS

0.0- 85.0 SURFICIAL AQUIFER
85.0- 230.0 UPPER HAWTHORN CONFINING ZONE
230.0- 305.0 NO SAMPLE
305.0- 355.0 MID-HAWTHORN CONFINING ZONE
590.0 635.0 LOWER HAWTHORN/TAMPA PRODUCING ZONE

STRATIGRAPHIC FORMATIONS -

0.0- 85.0 UNDIFFERENTIATED SAND AND CLAY
85.0- 590.0 HAWTHORN FORMATION
590.0- 635.0 TAMPA LIMESTONE *

LITHOLOGIC LOG
W-LE026 . LEE CO. T46S, R21E, SEC

0.0- 5.0 SHELL BED, VERY LIGHT ORANGE TO LIGHT YELLOWISH ORANGE, 30% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, UNCONSOLIDATED, 01% QUARTZ SAND, 15% LIMESTONE, MOLLUSKS,

5.0- 10.0 AS ABOVE,

10.0- 20.0 AS ABOVE WITH SOME SANDSTONE (10%)

20.0- 30.0 SANDSTONE, LIGHT GRAY, 12% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 25% MICRITE, FOSSIL MOLDS,

MUCH SHELL IN SAMPLE

30.0- 40.0 SANDSTONE, LIGHT GRAY TO MODERATE GRAY, 12% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, DOLOMITE CEMENT, 20% MICRITE, 20% DOLOMITE,

40.0- 50.0 AS ABOVE WITH SOME WELL DEVEL. CALCITE XSTALS.

50.0- 60.0 AS ABOVE,

* Note, this unit is included as part of the Hawthorn Formation in this report

LITHOLOGIC LOG
W-LE026 . LEE CO. T46S, R21E, SEC

60.0- 70.0 SANDSTONE, WHITE TO MODERATE GRAY, 14% POROSITY, INTERGRANULAR, GRAIN SIZE: FINE, RANGE: VERY FINE TO MEDIUM, SUB-ANGULAR, MEDIUM SPHERICITY, MODERATE INDURATION, MICRITE CEMENT, FOSSIL MOLDS,

70.0- 75.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, MODERATE INDURATION, MICRITE CEMENT, 15% QUARTZ SAND, FOSSIL MOLDS, ECHINOID, MOLLUSKS, CORAL,

75.0- 85.0 AS ABOVE,

85.0- 100.0 DOLO-SILT, GRAYISH OLIVE, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, CLAY CEMENT, MICRITE CEMENT, 10% QUARTZ SAND, 05% PHOSPHATIC SAND, 10% MICRITE, 03% CLAY, MOLLUSKS,

DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 12% POROSITY, INTERGRANULAR, PIN POINT VUGS, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, 08% QUARTZ SAND, 04% PHOSPHATIC SAND,

100.0- 110.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 30% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: VERY FINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 25% DOLOMITE, 10% QUARTZ SAND, 03% PHOSPHATIC SAND, FOSSIL MOLDS, ECHINOID, MOLLUSKS, CORAL,

110.0- 120.0 DOLOMITE, VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, PIN POINT VUGS, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 20% MICRITE, 15% QUARTZ SAND, 03% PHOSPHATIC SAND,

120.0- 130.0 AS ABOVE,

130.0- 140.0 DOLO-SILT, GRAYISH OLIVE, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% MICRITE, 10% CLAY, 03% QUARTZ SAND, 03% PHOSPHATIC SAND,

140.0- 150.0 DOLO-SILT, GRAYISH OLIVE, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 15% CLAY, 05% SILT, 02% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, PLANKTONIC FORAMINIFERA,

LITHOLOGIC LOG
W-LE026 . LEE CO. T46S, R21E, SEC

150.0- 160.0 DOLO-SILT, GRAYISH OLIVE, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 15% CLAY, 02% MICRITE, 05% SILT, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, PLANKTONIC FORAMINIFERA, DIATOMS, OSTRACODS, SPICULES,

160.0- 170.0 AS ABOVE,

170.0- 180.0 AS ABOVE,

180.0- 190.0 DOLO-SILT, GRAYISH OLIVE, 09% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 03% MICRITE, 15% CLAY, 05% SILT, 02% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, PLANKTONIC FORAMINIFERA, DIATOMS,

190.0- 200.0 AS ABOVE,

200.0- 210.0 AS ABOVE,

210.0- 220.0 AS ABOVE,

220.0- 230.0 AS ABOVE,

230.0- 300.0 NO SAMPLE,

300.0- 305.0 DOLOMITE, VERY LIGHT ORANGE, 11% POROSITY, INTERGRANULAR, MOLDIC, PIN POINT VUGS, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 30% MICRITE, 03% PHOSPHATIC SAND, 05% QUARTZ SAND, HIGH RECRYSTALIZATION, FOSSIL MOLDS, MOLLUSKS,

305.0- 310.0 AS ABOVE,

310.0- 315.0 PHOSPHATE, DARK GRAY TO BLACK, 30% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, UNCONSOLIDATED, 10% QUARTZ SAND, SHARK TEETH, MOLLUSKS, VERTBRATE,

315.0- 320.0 SAND, LIGHT GRAY TO MODERATE GRAY, 30% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, GRAIN SIZE: MEDIUM, RANGE: VERY FINE TO COARSE, SUB-ANGULAR, MEDIUM SPHERICITY, UNCONSOLIDATED, 10% DOLOMITE, 10% PHOSPHATIC SAND, SHARK TEETH, MOLLUSKS, VERTBRATE,

320.0- 325.0 LIMESTONE, VERY LIGHT GRAY TO LIGHT GRAY, 11% POROSITY, INTERGRANULAR, PIN POINT VUGS, GRAIN TYPE: MICRITE, CRYSTALS, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, 40% DOLOMITE, 02% PHOSPHATIC SAND, 02% QUARTZ SAND,

325.0- 335.0 PHOSPHATE, MODERATE GRAY TO BLACK, 30% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, UNCONSOLIDATED, 20% QUARTZ SAND, 05% DOLOMITE,

LITHOLOGIC LOG
W-LE026 . LEE CO. T46S, R21E, SEC

REWORKED ZONE,ROUNDED PELLETS OF PHOS.DOLOMITE

335.0- 345.0

345.0- 350.0 DOLO-SILT, GREENISH GRAY, 10% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 02% CLAY, 03% PHOSPHATIC SAND, 03% QUARTZ SAND, 10% MICRITE,

350.0- 355.0 AS ABOVE,

355.0- 360.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 12% POROSITY, INTERGRANULAR, PIN POINT VUGS, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 11% MICRITE, 08% PHOSPHATIC SAND, 20% QUARTZ SAND,

360.0- 370.0 AS ABOVE,

370.0- 380.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 14% POROSITY, INTERGRANULAR, MOLDIC, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 15% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO MEDIUM, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 05% QUARTZ SAND, 06% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS, ECHINOID,

380.0- 390.0 AS ABOVE,

390.0- 400.0 AS ABOVE WITH MORE SAND(25%)

400.0- 410.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 15% POROSITY, INTERGRANULAR, MOLDIC, POSSIBLY HIGH PERMEABILITY, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, DOLOMITE CEMENT, SPARRY CALCITE CEMENT, 15% DOLOMITE, 03% QUARTZ SAND, 02% PHOSPHATIC SAND, MOLLUSKS, BRYOZOA, ECHINOID, FOSSIL MOLDS,

410.0- 420.0 AS ABOVE,

420.0- 430.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, HIGH RECRYSTALIZATION, FOSSIL MOLDS,

430.0- 440.0 DOLO-SILT, GRAYISH OLIVE, 07% POROSITY, INTERGRANULAR, LOW PERMEABILITY, POOR INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, CLAY CEMENT, 10% CLAY, 10% MICRITE, 01% PHOSPHATIC SAND, 01% QUARTZ SAND, BENTHONIC FORAMINIFERA,

LITHOLOGIC LOG
W-LE026 . LEE CO. T46S, R21E, SEC

440.0- 450.0 LIMESTONE, VERY LIGHT ORANGE TO WHITE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, CRYSTALS, 25% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 20% DOLOMITE, 02% PHOSPHATIC SAND, 10% QUARTZ SAND, BENTHONIC FORAMINIFERA, ECHINOID, BRYOZOA, CORAL, MOLLUSKS,

450.0- 460.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 10% POROSITY, INTERGRANULAR, INTERCRYSTALLINE, POSSIBLY HIGH PERMEABILITY, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, SPARRY CALCITE CEMENT, 25% MICRITE, 08% QUARTZ SAND, 02% PHOSPHATIC SAND, FOSSIL MOLDS, MOLLUSKS,

460.0- 470.0 AS ABOVE,

470.0- 480.0 SOME FRAGS HAVE GOOD MOLDIC POROSITY

480.0- 490.0 DOLOMITE, VERY LIGHT GRAY TO VERY LIGHT ORANGE, 13% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 25% MICRITE, 04% PHOSPHATIC SAND, 04% QUARTZ SAND, FOSSIL MOLDS, MOLLUSKS, ECHINOID,

490.0- 500.0 AS ABOVE WITH MORE PHOS.(08%)

500.0- 510.0 AS ABOVE,

510.0- 520.0 AS ABOVE,

520.0- 530.0 DOLOMITE, VERY LIGHT ORANGE TO GRAYISH ORANGE, 10% POROSITY, INTERGRANULAR, MOLDIC, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: VERY FINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 15% MICRITE, 06% PHOSPHATIC SAND, 04% QUARTZ SAND,

530.0- 540.0 AS ABOVE WITH SOME VERY DENSE DOLOMITE

540.0- 550.0 AS ABOVE,

550.0- 560.0 AS ABOVE,

560.0- 590.0 DOLOMITE, VERY LIGHT ORANGE TO MODERATE LIGHT GRAY, 06% POROSITY, INTERCRYSTALLINE, INTERGRANULAR, PIN POINT VUGS, 50-90% ALTERED, EUHEDRAL, GRAIN SIZE: MICROCRYSTALLINE, RANGE: VERY FINE TO MICROCRYSTALLINE, GOOD INDURATION, DOLOMITE CEMENT, MICRITE CEMENT, 10% MICRITE, 03% PHOSPHATIC SAND, 10% QUARTZ SAND, HIGH RECRYSTALIZATION,

LITHOLOGIC LOG
W-LE026 . LEE CO. T46S, R21E, SEC

590.0- 600.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 12% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, 04% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, BRYOZOA, CORAL,

SORITES

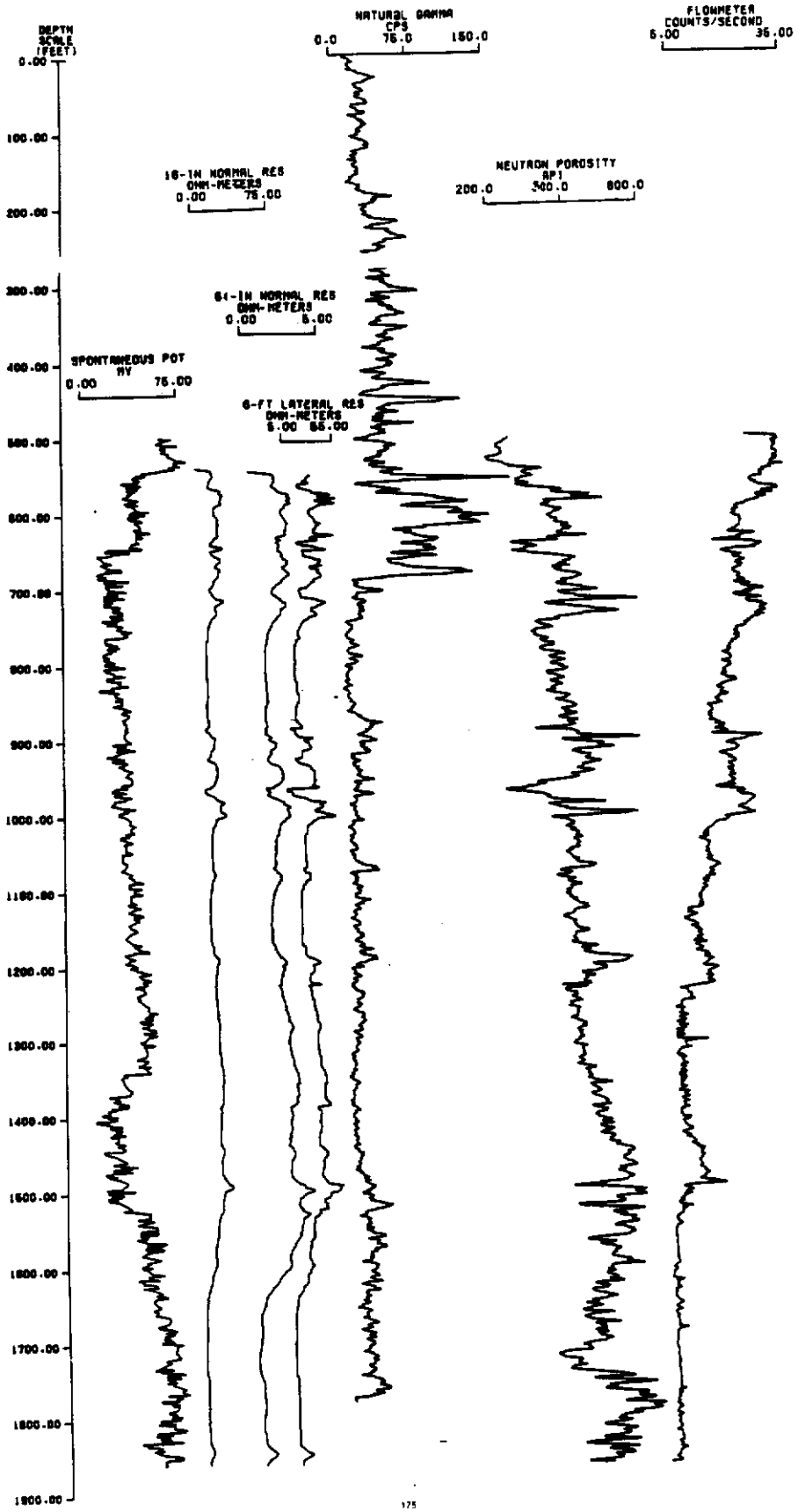
600.0- 610.0 AS ABOVE,

610.0- 635.0 LIMESTONE, WHITE TO VERY LIGHT ORANGE, 14% POROSITY, INTERGRANULAR, MOLDIC, GRAIN TYPE: BIOGENIC, MICRITE, SKELETAL, 40% ALLOCHEMICAL CONSTITUENTS, GRAIN SIZE: MICROCRYSTALLINE, RANGE: MICROCRYSTALLINE TO COARSE, GOOD INDURATION, MICRITE CEMENT, SPARRY CALCITE CEMENT, 02% QUARTZ SAND, 01% PHOSPHATIC SAND, BENTHONIC FORAMINIFERA, MOLLUSKS, ECHINOID, FOSSIL MOLDS, BRYOZOA,

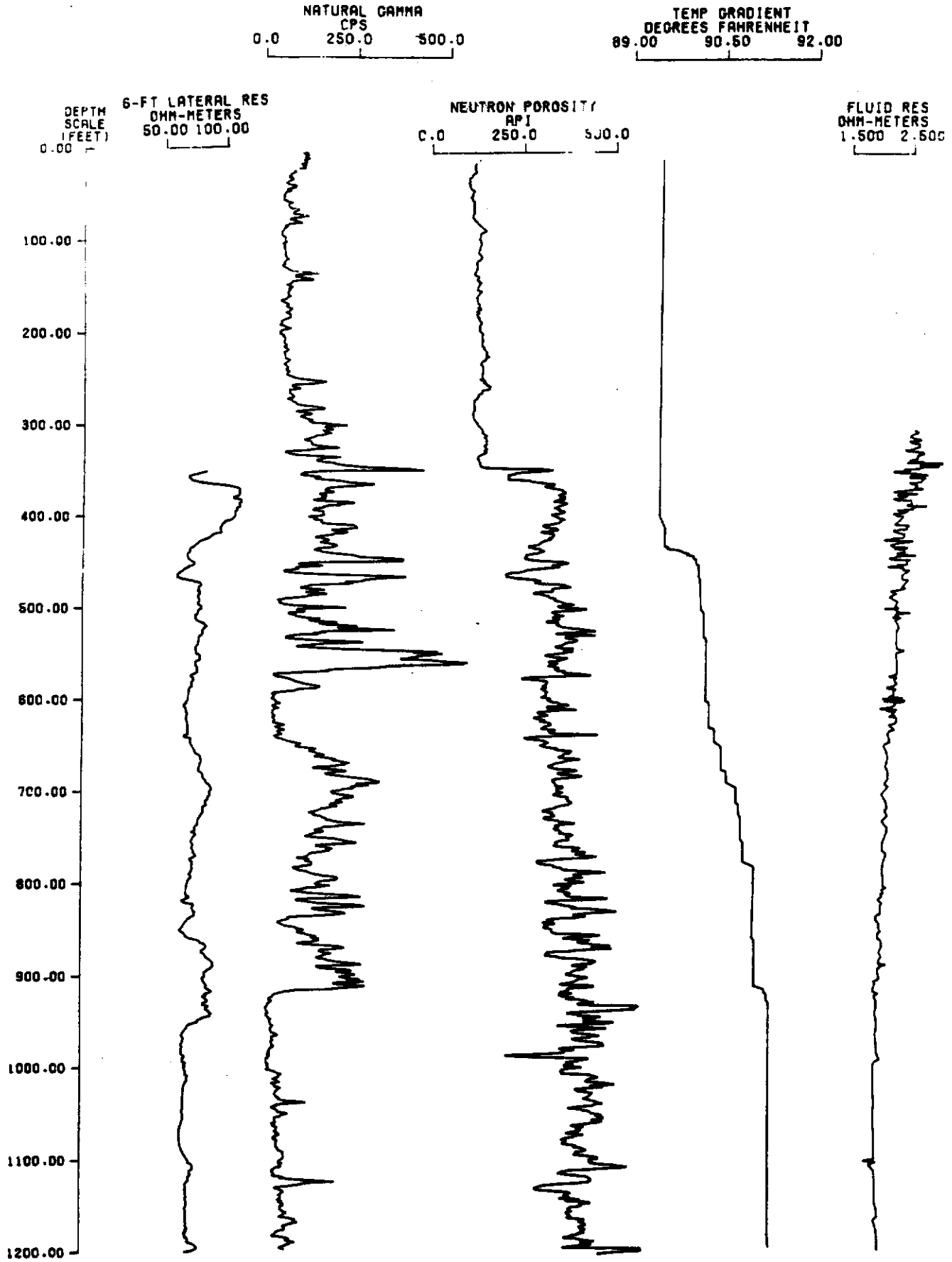
APPENDIX 2

Geophysical Logs

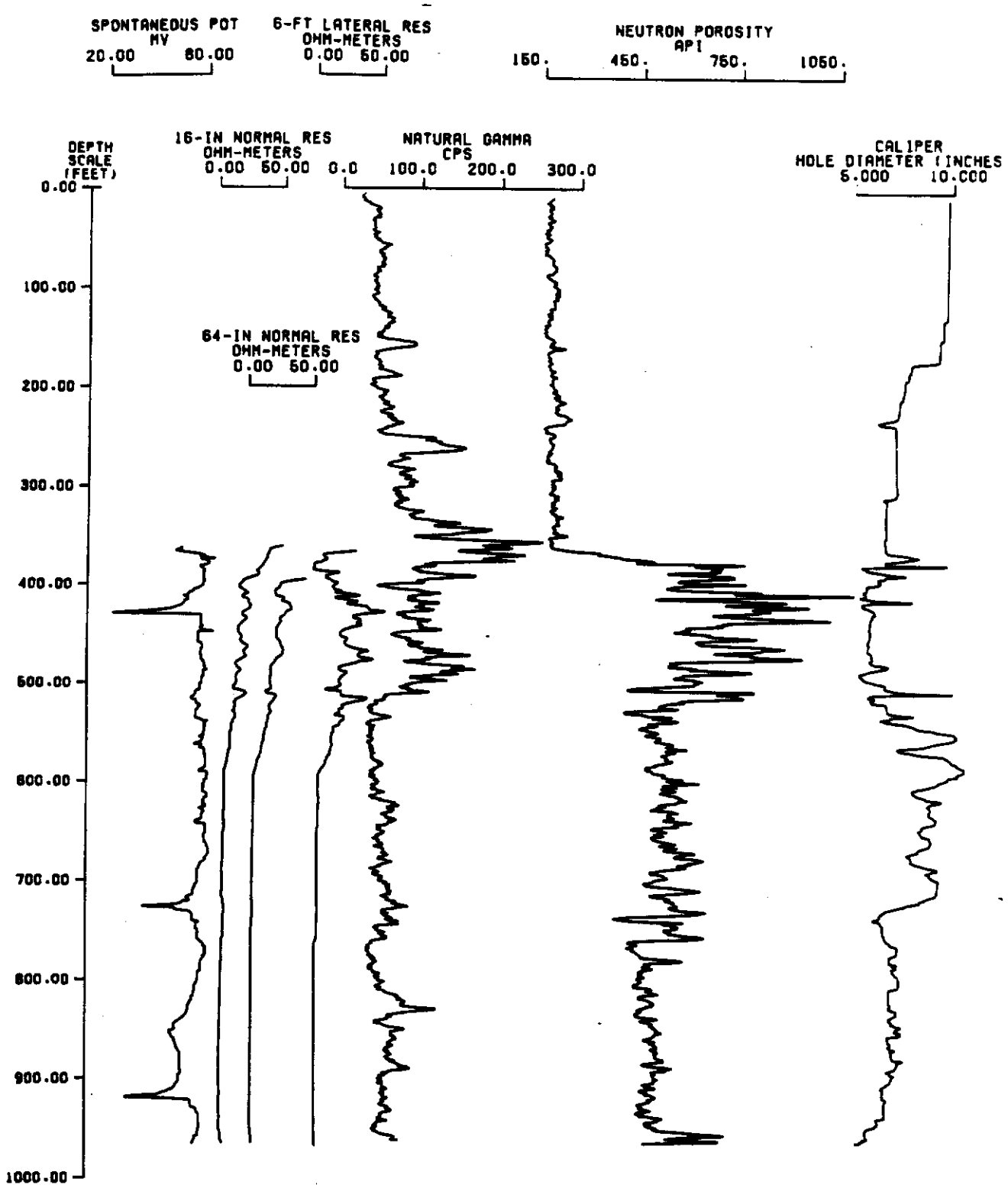
WELL No. 12, LE007



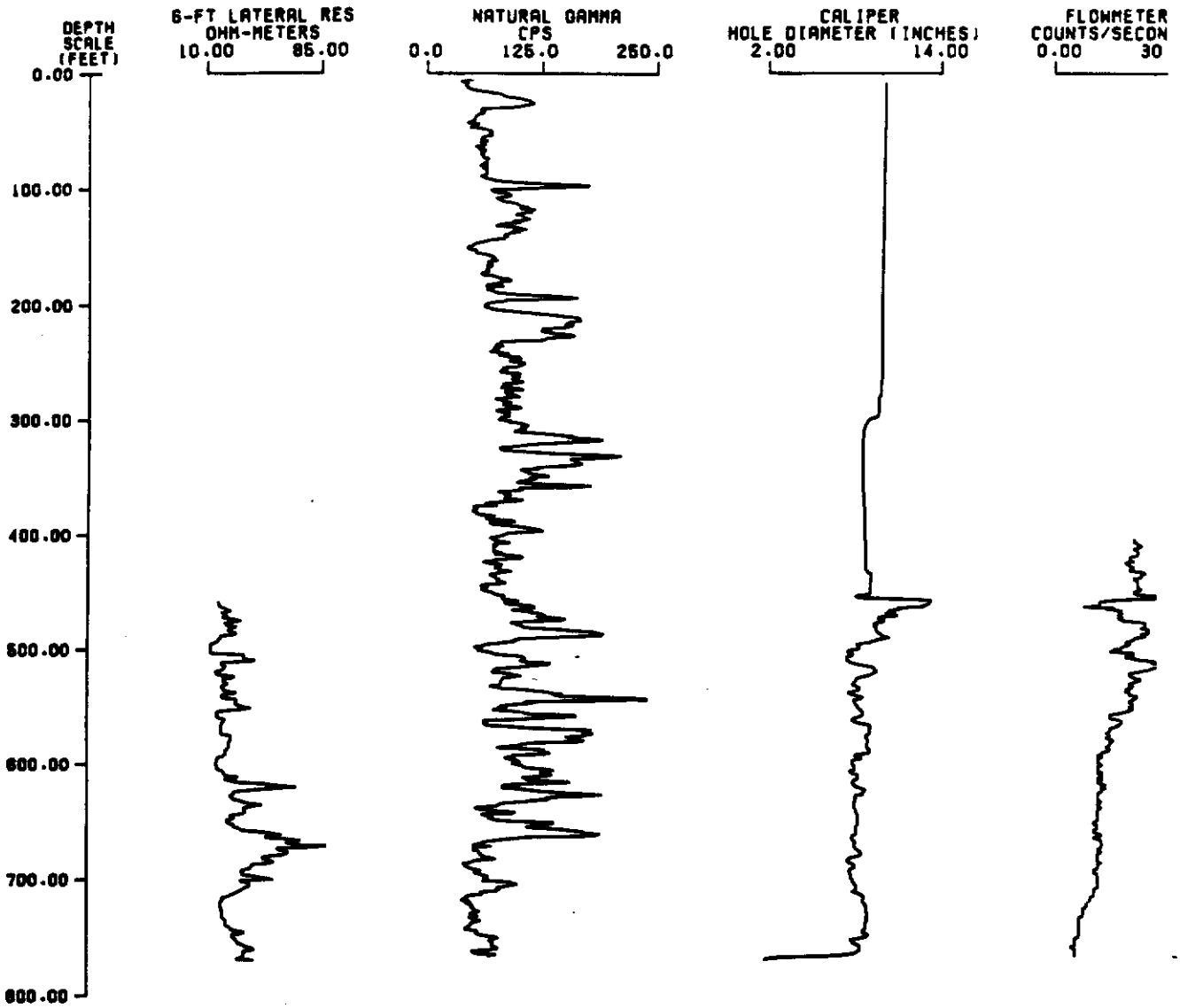
WELL No. 17, LE022



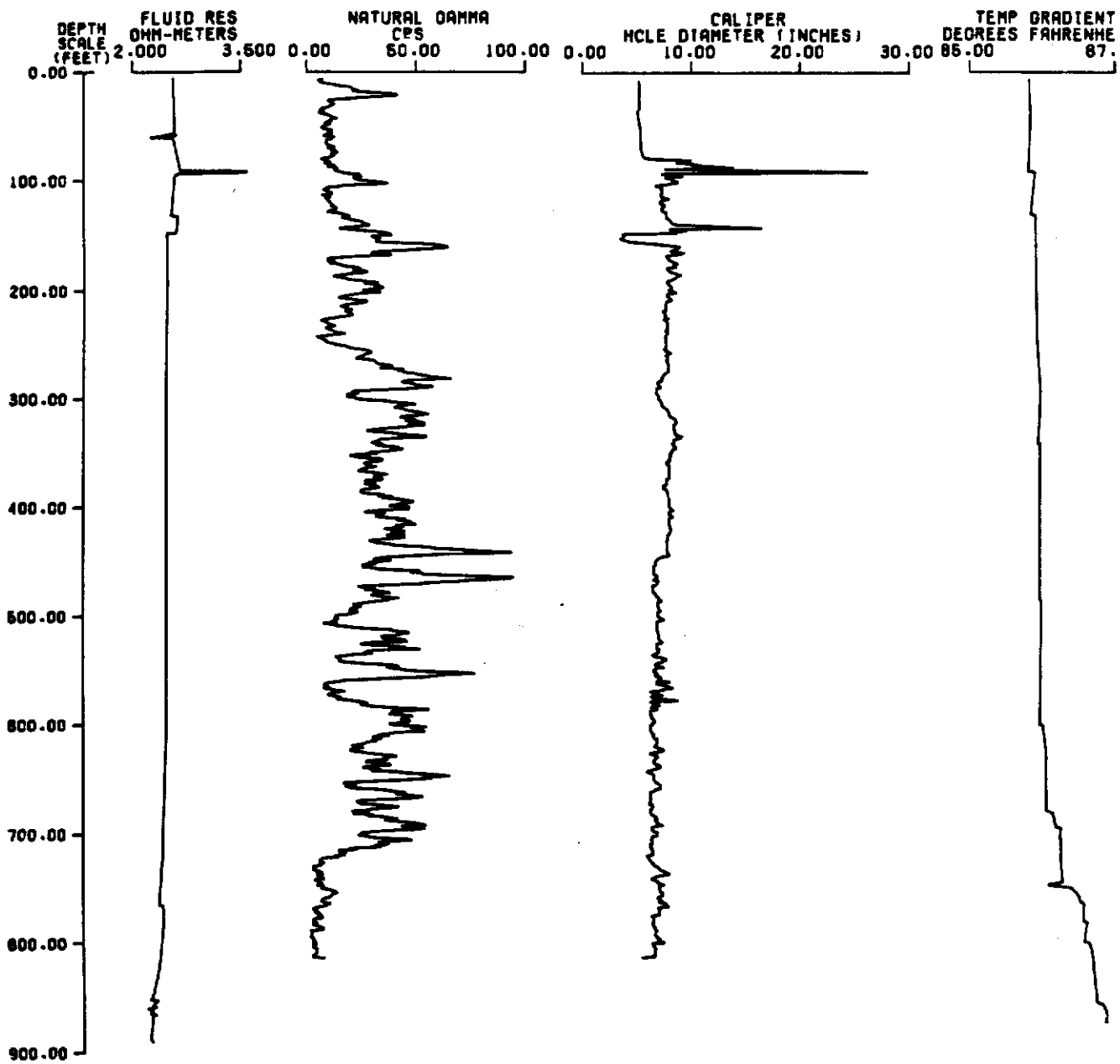
WELL No. 20, LE014



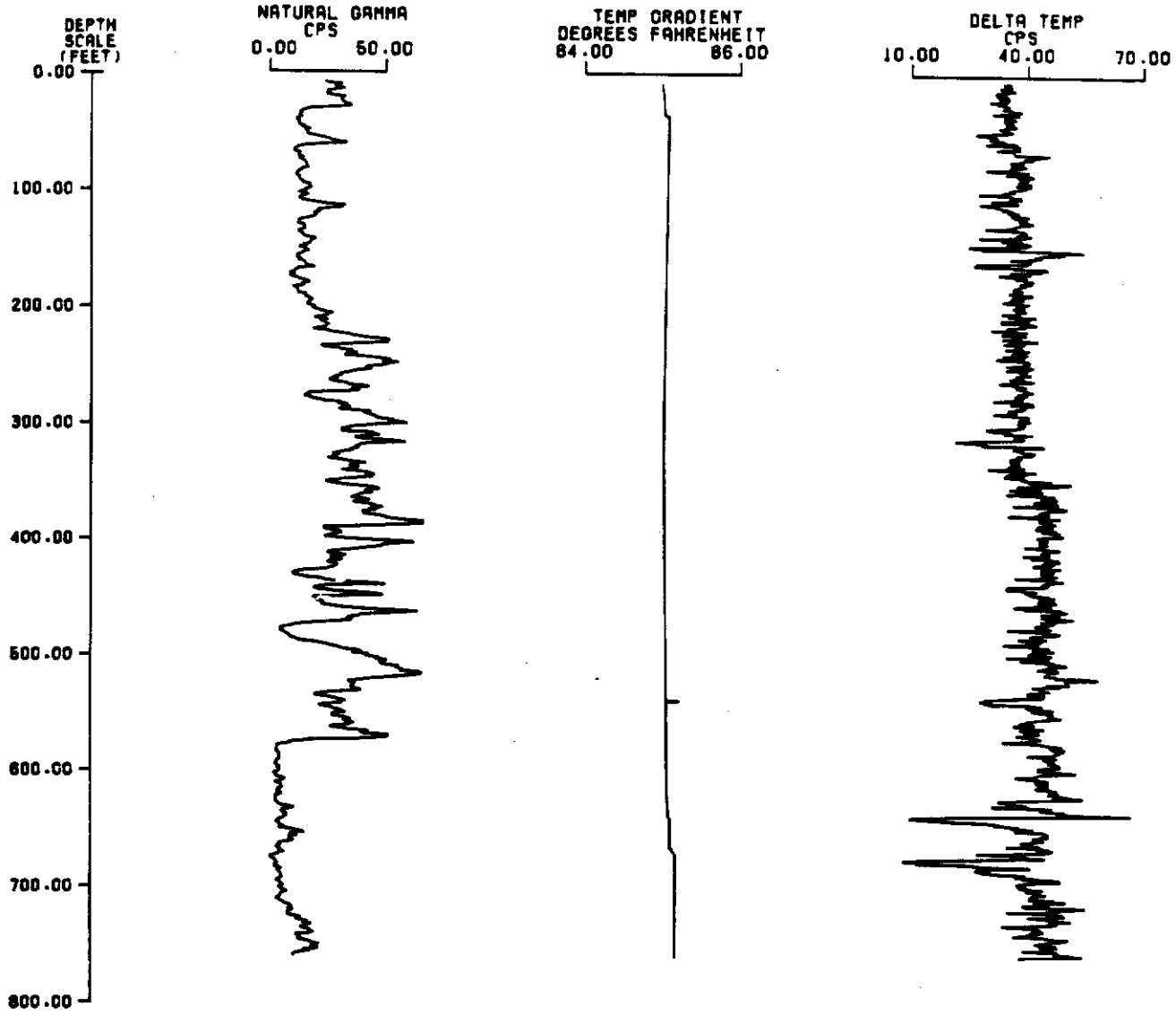
WELL No. 22, L-3004D



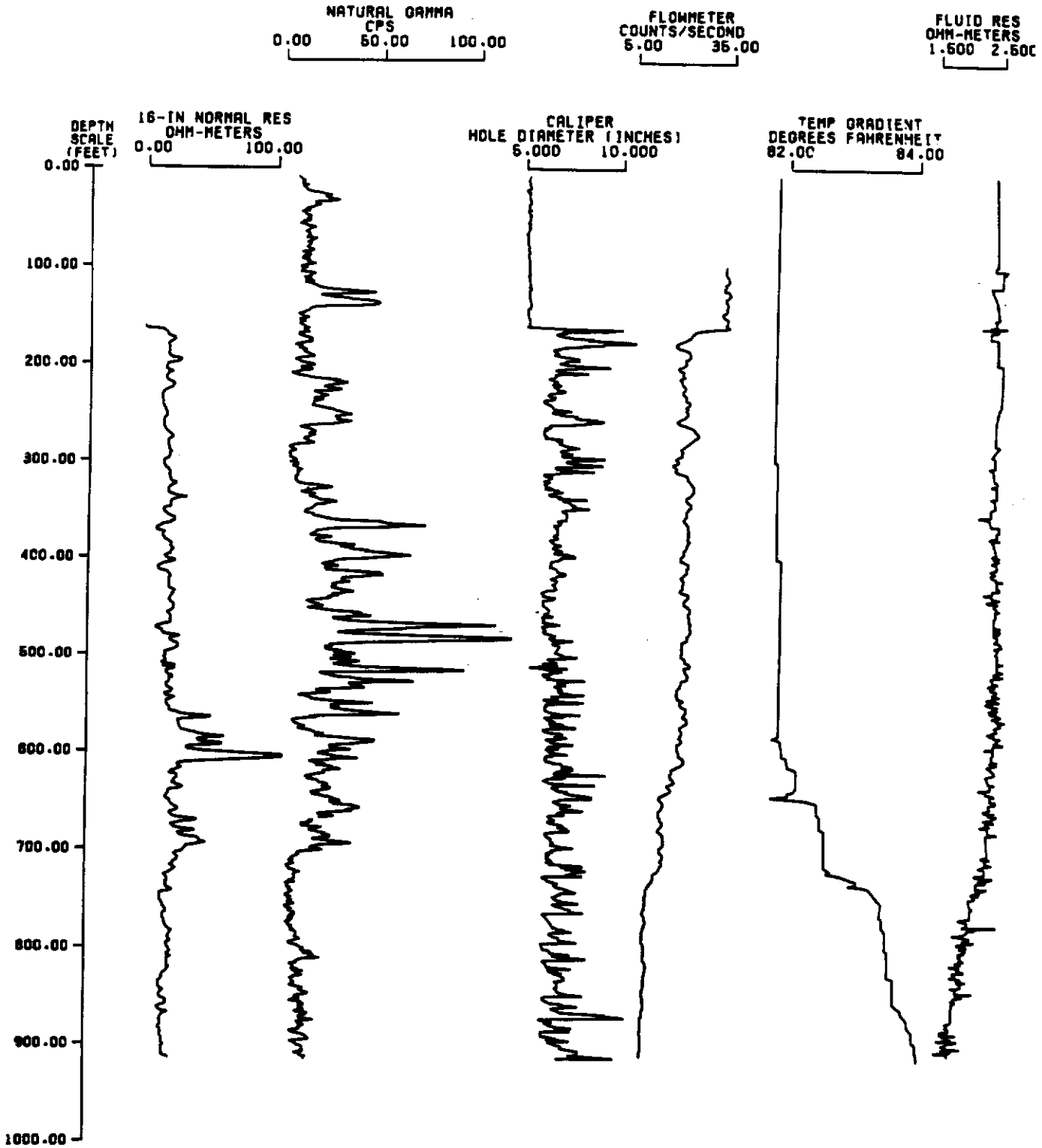
WELL No. 28, WA-129



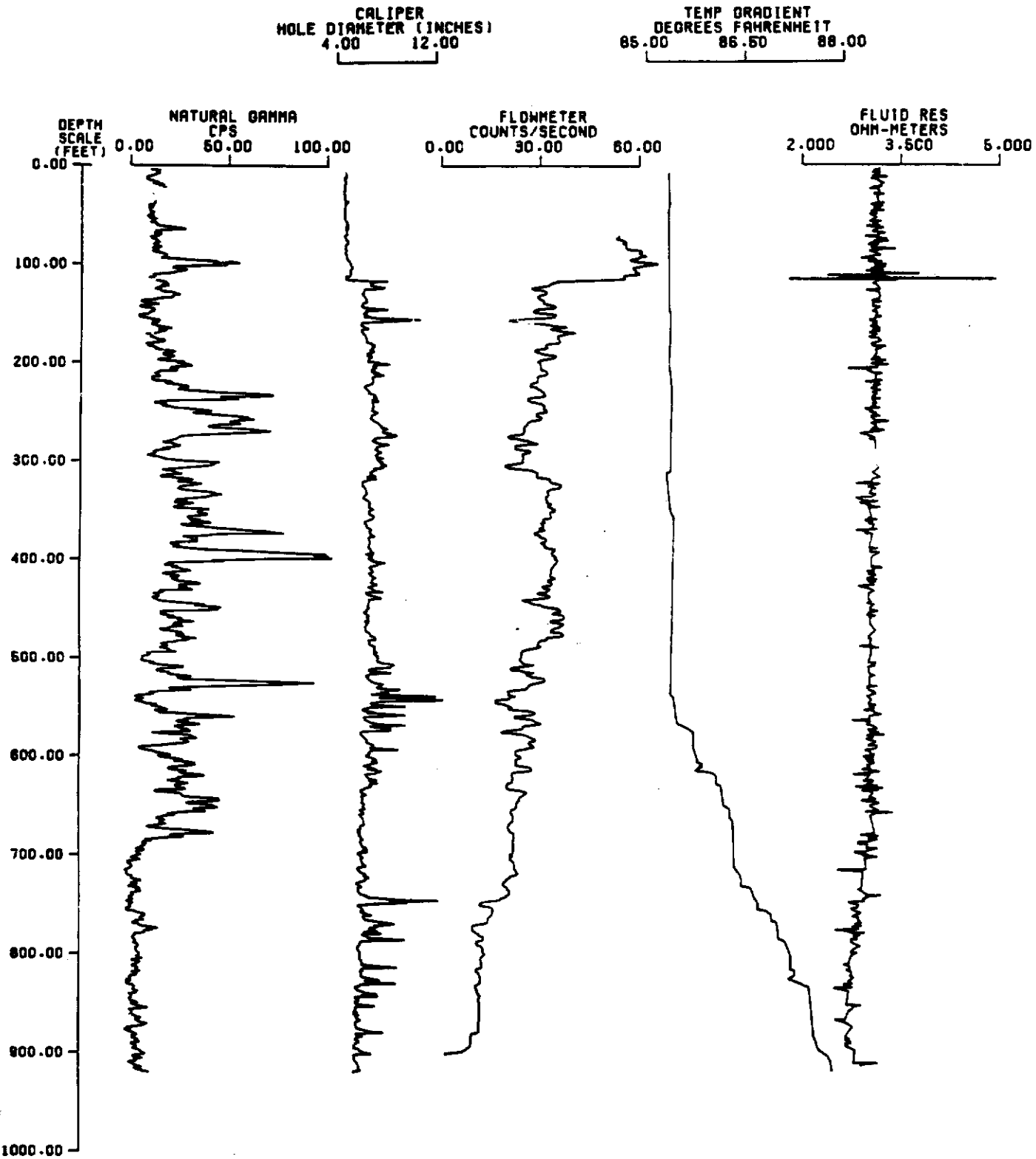
WELL No. 37, WA-12



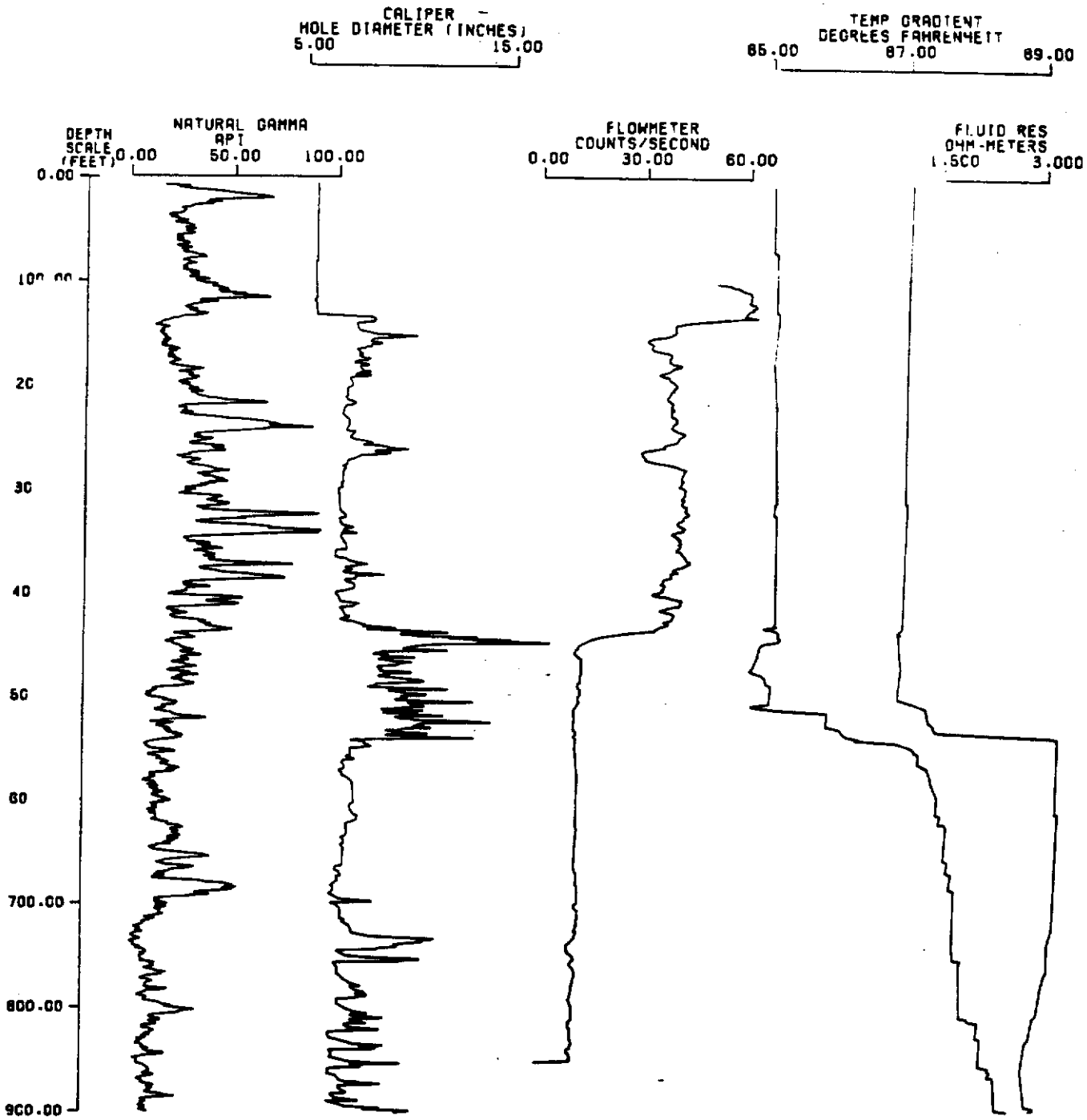
WELL No. 41, WA-85



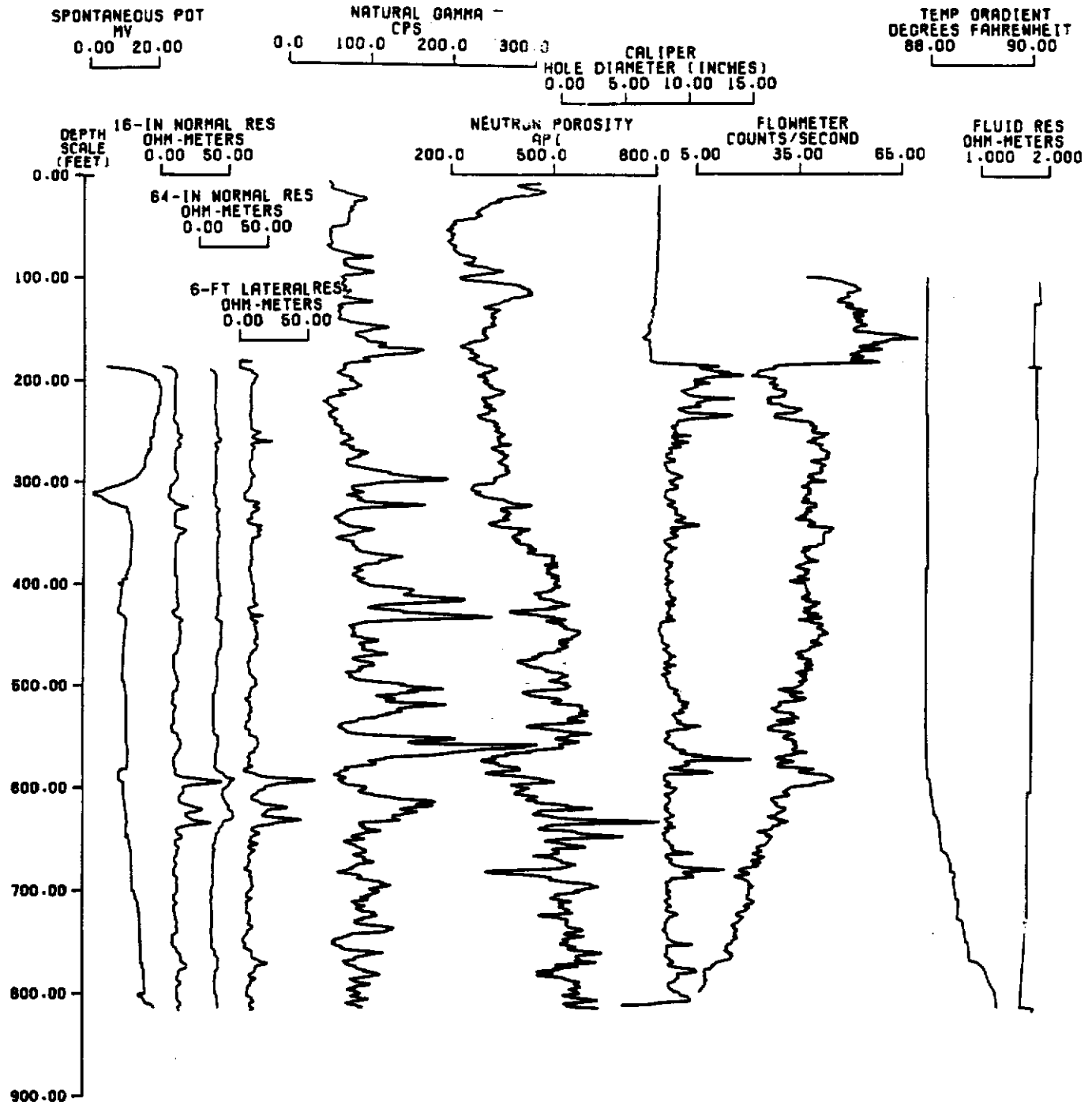
WELL No. 45, WA-98



WELL No. 46, WA-111



WELL No. 63, L-3001D



APPENDIX 3

Water Level Data

APPENDIX 3-1: WATER LEVEL DATA, SURFICIAL AQUIFER, LEE COUNTY.

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	WELL USE	1979 WATER LEVELS (FT. NGVD)		
						WET SEASON (SEPT.)	DRY SEASON (MAR.)	DIFFERENCE
L-246	26°38'02"N	81°49'35"W	28	19	Obs.	19.16	16.34	2.82
L-721*	26°41'53"N	82°02'23"W	18	9	Obs.	4.33	2.44	1.89
L-726*	26°44'25"N	81°45'40"W	19	14	Obs.	14.60	12.40	2.20
L-728*	26°37'12"N	81°46'12"W	19	18	Obs.	21.44	18.96	2.48
L-730*	26°31'27"N	81°35'16"W	19	18.7	Obs.	29.05	25.95	3.10
L-739*	26°26'57"N	81°44'35"W	20	18	Obs.	18.67	15.76	2.91
L-954	26°39'03"N	81°55'04"W	14	-	Obs.	6.99	-0.06	7.05
L-1136*	26°35'32"N	81°59'22"W	20	15	Obs.	6.09	4.54	1.55
L-1137*	26°39'50"N	81°35'54"W	20	15	Obs.	21.01	17.86	3.15
L-1138	26°27'03"N	81°34'02"W	20	15	Obs.	22.77	21.98	0.79
L-1403	26°25'49"N	82°03'53"W	12	3	Obs.	2.89	1.46	1.43
L-1456	26°26'22"N	82°02'20"W	33	32	Obs.	2.47	2.02	0.45
L-1457	26°26'22"N	82°02'20"W	8.7	-	Obs.	2.89	0.89	2.00
L-1964*	26°33'44"N	81°36'17"W	24	14	Obs.	27.49	23.90	3.59
L-1976*	26°43'59"N	81°42'47"W	15	5	Obs.	13.12	10.73	2.39
L-1978*	26°43'20"N	81°36'57"W	17	7	Obs.	14.87	13.60	1.27
L-1985*	26°27'13"N	81°41'47"W	50	43	Obs.	19.65	16.71	2.94
L-1992	26°33'53"N	81°33'58"W	29	19	Obs.	23.41	21.44	1.97
L-1995*	26°33'51"N	81°45'28"W	24	14	Obs.	25.26	22.45	2.81
L-1997*	26°19'54"N	81°41'01"W	16.5	10	Obs.	15.55	12.71	2.84
L-1999*	26°30'41"N	81°43'31"W	21	16	Obs.	25.55	22.94	2.61
L-2191	26°41'44"N	81°52'03"W	26	15	Obs.	12.05	8.78	3.27
L-2195	26°19'57"N	81°43'22"W	15	14	Obs.	14.15	10.12	4.03

APPENDIX 3-1: WATER LEVEL DATA, SURFICIAL AQUIFER, LEE COUNTY (Continued)

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	WELL USE	1979 WATER LEVELS (FT. NGVD)		
						WET SEASON (SEPT.)	DRY SEASON (MAR.)	DIFFERENCE
L-2202	26°43'29"N	81°34'04"W	19	7	Obs.	15.64	13.93	1.71
L-2204*	26°33'29"N	81°39'43"W	26	23	Obs.	29.44	26.79	2.65
L-2217	26°46'08"N	81°45'41"W	18	10	Obs.	26.48	24.06	2.42
L-2308	26°25'52"N	81°48'47"W	20	12	Obs.	14.36	12.38	1.98
L-2549	26°39'55"N	82°08'31"W	80	58	Obs.	7.70	6.19	1.51

*Water quality data also available.

APPENDIX 3-2: WATER LEVEL DATA, SANDSTONE AQUIFER, LEE COUNTY

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	WELL USE	1979 WATER LEVELS (FT. NGVD)		
						WET SEASON (SEPT.)	DRY SEASON (MAR.)	DIFFERENCE
L-727*	26°39'50"N	81°35'54"W	68	67	Obs.	18.06	15.72	2.34
L-729*	26°33'35"N	81°39'43"W	103	81	Obs.	25.11	20.87	4.24
L-731*	26°27'03"N	81°34'02"W	243	165	Obs.	22.53	12.48	10.05
L-738*	26°20'22"N	81°46'42"W	75	61	Obs.	7.31	3.00	4.31
L-741	26°25'52"N	81°48'57"W	119	102	Obs.	11.70	10.20	1.50
L-1418*	26°36'30"N	81°37'53"W	62	55	Obs.	21.95	15.96	5.99
L-1691*	26°20'42"N	81°45'50"W	69	58	Obs.	10.96	3.41	7.54
L-1853*	26°27'06"N	81°43'54"W	150	130	Obs.	12.85	9.24	3.61
L-1907*	26°43'08"N	81°41'00"W	57	55	Obs.	13.50	12.20	1.30
L-1963*	26°33'44"N	81°36'17"W	274	68	Obs.	25.35	20.64	4.71
L-1965*	26°33'53"N	81°33'58"W	218	50	Obs.	26.05	21.35	4.70
L-1968*	26°38'07"N	81°43'03"W	146	70	Obs.	21.01	17.95	3.06
L-1974*	26°37'18"N	81°48'50"W	134	85	Obs.	18.53	16.82	1.71
L-1975*	26°43'59"N	81°42'47"W	168	102	Obs.	15.72	15.54	0.18
L-1977*	26°43'20"N	81°36'57"W	151	65	Obs.	13.53	12.39	1.14
L-1984*	26°27'13"N	81°41'46"W	288	206	Obs.	16.85	12.71	4.14
L-1994*	26°32'51"N	81°45'28"W	155	70	Obs.	22.99	18.02	4.97
L-1996*	26°19'54"N	81°41'01"W	198	65	Obs.	12.95	5.42	7.53
L-1998*	26°30'41"N	81°43'31"W	160	100	Obs.	15.99	-4.93	20.92
L-2184*	26°22'47"N	81°50'17"W	110	75	Obs.	8.66	6.63	2.03
L-2186*	26°33'44"N	81°36'17"W	160	133	Obs.	25.30	19.87	5.43
L-2190*	26°41'44"N	81°52'03"W	105	71	Obs.	10.20	5.24	4.96

APPENDIX 3-2: WATER LEVEL DATA, SANDSTONE AQUIFER, LEE COUNTY (Continued)

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	WELL USE	1979 WATER LEVELS (FT. NGVD)		
						WET SEASON (SEPT.)	DRY SEASON (MAR.)	DIFFERENCE
L-2192*	26°26'59"N	81°38'25"W	184	155	Obs.	18.56	14.73	3.83
L-2194	26°19'57"N	81°43'22"W	137	81	Obs.	12.67	4.51	8.16
L-2200*	26°43'29"N	81°34'04"W	166	122	Obs.	14.07	13.02	1.05
L-2215*	26°31'27"N	81°35'16"W	126	99	Obs.	25.61	21.25	4.36
L-2216*	26°46'08"N	81°45'41"W	153	130	Obs.	20.42	19.12	1.30

*Water quality data also available.

APPENDIX 3-3: WATER LEVEL DATA, MID-HAWTHORN AQUIFER, LEE COUNTY

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	WELL USE	1979 WATER LEVELS (FT. NGVD)		
						WET SEASON (SEPT.)	DRY SEASON (MAR.)	DIFFERENCE
L-434*	26°37'38"N	82°04'31"W	210	-	-	12.40	-	-
L-439	26°27'02"N	81°56'54"W	210	190	-	4.15	2.40	1.75
L-581*	26°35'32"N	81°59'22"W	177	-	Obs.	-10.00	-16.99	6.99
L-735	26°38'39"N	81°50'31"W	270	223	Obs.	15.50	13.90	1.60
L-742	26°33'23"N	81°52'24"W	225	138	Obs.	-38.57	-62.48	23.91
L-781*	26°38'24"N	82°00'53"W	290	82	Obs.	-0.50	-14.40	13.90
L-1059*	26°45'17"N	82°02'21"W	189	156	Obs.	16.50	14.60	1.90
L-1106*	26°40'54"N	81°59'26"W	229	143	-	12.93	13.32	-0.39
L-1107*	26°41'46"N	81°59'23"W	225	137	-	13.51	13.61	-0.10
L-1108*	26°41'44"N	81°58'26"W	225	137	-	12.53	13.03	-0.50
L-1109*	26°40'55"N	81°58'31"W	230	84	-	10.93	11.53	-0.60
L-1110*	26°42'41"N	81°58'24"W	241	147	-	17.38	13.32	4.06
L-1113*	26°41'42"N	82°02'21"W	230	126	-	15.15	15.03	0.12
L-1116*	26°26'33"N	82°00'27"W	205	106	-	-11.00	-15.60	4.60
L-1120*	26°40'55"N	81°57'27"W	230	126	-	1.33	5.27	3.94
L-1598	26°32'33"N	81°55'03"W	176	137	Obs.	5.62	-8.31	13.93
L-1973*	26°37'18"N	81°48'50"W	225	172	Obs.	18.72	16.88	1.84
L-1983	26°30'41"N	81°43'31"W	345	321	Obs.	33.20	32.00	1.20
L-1993*	26°32'51"N	81°45'28"W	242	190	Obs.	26.30	25.48	0.82
L-2640*	26°38'13"N	81°55'28"W	180	128	Obs.	-2.36	-5.43	3.07
L-2642*	26"32'57"N	81°58'57"W	160	108	Obs.	-0.70	-19.84	19.14

APPENDIX 3-3: WATER LEVEL DATA, MID-HAWTHORN AQUIFER, LEE COUNTY

NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	WELL USE	1979 WATER LEVELS (FT. NGVD)		
						WET SEASON (SEPT.)	DRY SEASON (MAR.)	DIFFERENCE
L-2643*	26°32'53"N	82°01'42"W	200	141	-	10.23	8.14	2.09
L-2644*	26°34'40"N	82°02'20"W	180	128	-	8.33	7.38	0.95
L-2645*	26°37'43"N	82°04'12"W	210	160	Obs.	16.40	14.80	1.60
L-2646*	26°45'37"N	81°55'22"W	220	170	Obs.	23.20	22.62	0.58
L-2700*	26°40'02"N	82°01'28"W	167	165	Obs.	14.00	13.00	1.00
L-2701*	26°38'19"N	81°58'58"W	210	175	-	-10.18	-7.90	-2.28
L-2702*	26°36'21"N	81°56'37"W	160	120	-	-9.62	-18.94	9.32
L-2703*	26°33'57"N	81°57'56"W	160	120	Obs.	-1.49	-20.10	18.61
L-2820*	26°39'55"N	82°08'31"W	241	192	Obs.	16.90	16.10	0.80
L-2821	26°31'17"N	82°05'10"W	340	290	Obs.	15.10	14.20	0.90

*Water quality data also available.

APPENDIX 3-4: WATER LEVEL DATA, LOWER HAWTHORN AQUIFER, LEE COUNTY

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	WELL USE	1979 WATER LEVELS (FT. NGVD)		
						WET SEASON (SEPT.)	DRY SEASON (MAR.)	DIFFERENCE
L-585	26°27'10"N	82°01'08"W	475	335	-	27.50	25.60	1.90
L-588*	26°25'38"N	82°04'57"W	557	403	Obs.	18.20	9.30	8.90
L-652*	26°41'01"N	81°44'30"W	598	188	Obs.	43.60	40.60	3.00
L-706	26°39'43"N	81°35'18"W	595	140	Obs.	50.40	49.50	0.90
L-1635	26°24'35"N	81°53'50"W	620	360	Obs.	17.70	15.80	1.90
L-2292*	26°37'18"N	81°48'50"W	616	302		38.50	37.00	1.50
L-2293*	26°32'47"N	81°50'17"W	643	329	Obs.	39.60	38.60	1.00
L-2295*	26°25'52"N	81°48'57"W	610	300	Obs.	36.20	34.60	1.60
L-2310*	26°20'22"N	81°46'42"W	550	396	-	35.60	-	-
L-2311*	26°33'44"N	81°36'17"W	625	300	-	53.00	-	-
L-2313*	26°27'03"N	81°34'02"W	670	400	-	26.40	26.00	0.40
L-2319*	26°27'13"N	81°41'44"W	750	492	Obs.	48.20	47.60	0.60
L-2328*	26°46'08"N	81°45'41"W	600	300	-	52.00	50.90	1.10
L-2341	26°45'17"N	81°51'32"W	585	300	Obs.	48.60	47.50	1.10
L-2434*	26°35'26"N	82°01'02"W	700	353	Obs.	19.70	23.40	-3.70
L-2435*	26°33'07"N	81°55'59"W	704	352	Obs.	29.80	27.10	2.70
L-2524*	26°26'22"N	82°07'41"W	625	512	Obs.	15.80	15.20	0.60
L-2525*	26°31'17"N	82°05'10"W	645	405	Obs.	32.70	31.60	1.10
L-2526*	26°45'17"N	82°02'21"W	605	300	Obs.	41.90	41.20	0.70
L-2527*	26°39'55"N	82°08'31"W	605	360	Obs.	26.30	25.30	1.00
L-2528*	26°39'07"N	81°59'27"W	625	420	Obs.	36.70	35.80	0.90

APPENDIX 3-4: WATER LEVEL DATA, LOWER HAWTHORN AQUIFER, LEE COUNTY

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	WELL USE	1979 WATER LEVELS (FT. NGVD)		
						WET SEASON (SEPT.)	DRY SEASON (MAR.)	DIFFERENCE
L-2529*	26°29'13"N	81°56'08"W	545	304	Obs.	23.00	21.70	1.30
L-2530*	26°43'08"N	81°40'54"W	614	475	Obs.	43.10	43.70	-0.60
L-2531*	26°44'27"N	81°36'26"W	605	345	Obs.	31.60	30.40	1.20

*Water quality data also available.

APPENDIX 4

Water Quality Data

APPENDIX 4-1: WATER QUALITY DATA, SURFICIAL AQUIFER, LEE COUNTY

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO_4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-576	26°42'53"N	81°36'54"W	11	-	APR '74	43	240	0.06	686
L-707	26°42'35"N	81°37'53"W	21	18	APR '74	59	87	0.92	543
L-721*	26°41'53"N	82°02'23"W	18	9	OCT '76	52	67	0.84	502
L-726*	26°44'25"N	81°45'40"W	19	14	APR '74	0.0	6.7	0.03	255
L-728*	26°37'12"N	81°46'12"W	19	18	NOV '75	2.1	31	0.00	333
L-730*	26°31'27"N	81°35'16"W	19	19	NOV '75	3.6	4.6	1.00	228
L-739*	26°26'57"N	81°44'35"W	20	18	NOV '75	0.7	23	1.80	326
L-774	26°38'59"N	81°55'04"W	48	-	MAR '75	24	29	0.02	403
L-806	26°19'51"N	81°45'58"W	33	20	NOV '75	36	65	0.24	432
L-1136*	26°35'32"N	81°59'22"W	20	15	NOV '75	110	65	1.00	634
L-1137*	26°39'50"N	81°35'54"W	20	15	JUN '76	140	340	0.03	1,090
L-1171	26°37'14"N	81°45'06"W	18	13	JUN '75	59	8.8	1.00	342
L-1175	26°27'36"N	81°45'33"W	16	-	JAN '74	190	290	8.40	1,460
L-1458	26°26'11"N	82°02'58"W	36	32	APR '77	130	2,200	0.00	4,030
L-1459	26°26'11"N	82°02'58"W	10	-	APR '77	200	460	0.00	1,400
L-1475	26°26'18"N	82°05'38"W	32	32	APR '77	4,000	30,000	0.14	54,600
L-1476	26°26'18"N	82°05'38"W	11.3	9.8	APR '77	1,200	9,100	0.72	17,300
L-1479	26°26'51"N	82°07'12"W	29	29	APR '77	3,300	27,000	0.26	46,000
L-1480	26°26'51"N	82°07'12"W	7.9	5.9	APR '77	570	5,900	0.49	10,900
L-1486	26°28'54"N	82°09'54"W	11.2	9.7	APR '77	2,200	16,000	0.26	29,800
L-1491	26°27'38"N	82°09'10"W	30	29	APR '77	2,400	20,000	0.11	33,600
L-1498	26°25'48"N	82°06'30"W	33	31	APR '77	1,300	13,000	0.02	22,200
L-1576	26°37'43"N	81°45'33"W	12	-	JAN '74	100	78	4.00	586

APPENDIX 4-1: WATER QUALITY DATA, SURFICIAL AQUIFER, LEE COUNTY (Continued)

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO_4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-1577	26°37'50"N	81°45'25"W	13	-	OCT '74	45	23	1.80	382
L-1827	26°38'04"N	81°46'05"W	7	4	JUN '75	37	87	0.36	422
L-1829	26°37'57"N	81°46'32"W	8	4	JAN '75	59	56	2.56	524
L-1831	26°38'05"N	81°45'36"W	8	8	JAN '75	30	18	0.08	362
L-1833	26°38'30"N	81°46'04"W	11	10	JAN '75	7.7	13	4.00	204
L-1835	26°38'30"N	81°46'32"W	10	7	MAY '74	100	84	4.80	580
L-1942	26°42'50"N	81°52'03"W	32	-	NOV '75	0.4	52	3.50	524
L-1964*	26°33'44"N	81°36'17"W	24	14	NOV '75	29	4.6	2.30	464
L-1976*	26°43'59"N	81°42'47"W	15	5	OCT '75	280	200	21.60	1,170
L-1978*	26°43'20"N	81°36'57"W	17	7	MAY '75	2.6	7.9	0.01	279
L-1982	26"37'37"N	81°45'33"W	17	7	NOV '75	110	140	2.90	750
L-1985*	26°27'13"N	81°41'47"W	50	43	NOV '75	0.4?	22	1.80	342
L-1995*	26°32'51"N	81°45'28"W	24	14	NOV '75	3	59	0.53	388
L-1997*	26°19'54"N	81°41'01"W	17	10	JAN '75	5	38	0.55	396
L-1999*	26°30'41"N	81°43'31"W	21	16	DEC '74	2.2	150	5.00	618
L-2068	26°41'03"N	81°37'23"W	20.6	-	JUL '76	10	82	3.20	580
L-2069	26°40'40"N	81°37'11"W	21.2	-	JUL '76	11	56	3.00	456
L-2093	26°37'47"N	81°48'55"W	36	-	MAR '75	39	140	1.50	594
L-2095	26°37'37"N	81°49'11"W	43	28	MAR '75	43	170	2.70	614
L-2204*	26°33'29"N	81°39'43"W	26	23	SEP '75	1.3	30	2.50	360
L-2239	26°40'52"N	81°38'08"W	18.4	-	JUL '76	35	23	3.70	428
L-2240	26°40'23"N	81°37'15"W	9.9	-	JUL '76	23	23	2.90	354

APPENDIX 4-1: WATER QUALITY DATA, SURFICIAL AQUIFER, LEE COUNTY (Continued)

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO_4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-2241	26°40'40"N	81°36'49"W	20.0	-	JUN '76	23	180	3.60	718
L-2242	26°40'46"N	81°37'06"W	16.9	-	JUL '76	57	180	4.20	841
L-2243	26°40'27"N	81°38'20"W	18.2	-	JUL '76	4.5	29	3.70	394
L-2277	26°37'19"N	81°52'42"W	26	25	APR '76	130	160	1.20	692

*Water level data also available.

APPENDIX 4-2: WATER QUALITY DATA, SANDSTONE AQUIFER, LEE COUNTY.

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO_4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-414	26°38'24"N	81°43'16"W	94	60	APR '74	0.5	59	0.74	566
L-725	26°44'16"N	81°51'05"W	116	81	JUN '76	3.5	200	0.15	1,170
L-727*	26°38'50"N	81°36'54"W	68	67	JUN '76	130	200	0.03	834
L-729*	26°33'35"N	81°39'43"W	103	81	APR '76	22	67	0.04	450
L-731*	26°27'03"N	81°34'02"W	243	165	APR '76	24	47	0.08	361
L-738*	26°20'22"N	81°46'42"W	76	61	MAR '76	66	130	0.03	596
L-1418*	26°36'30"N	81°37'53"W	62	55	APR '76	83	300	0.12	913
L-1510	26°26'07"N	81°46'22"W	161	57	JUN '76	83	370	0.05	976
L-1691*	26°20'42"N	81°45'50"W	69	58	JUN '76	53	76	0.15	502
L-1853*	26°27'06"N	81°43'54"W	150	130	JUN '76	200	310	0.00	1,010
L-1907*	26°43'08"N	81°41'00"W	57	55	JUN '76	76	190	0.30	718
L-1908	26°43'08"N	81°40'54"W	55.5	-	JUN '76	57	200	0.01	696
L-1936	26°42'51"N	81°52'04"W	85	42	NOV '75	70	100	0.20	646
L-1961	26°30'44"N	81°43'05"W	157	99	AUG '74	43	50	0.05	418
L-1963*	26°33'44"N	81°36'17"W	274	68	APR '76	59	86	0.02	559
L-1965*	26°33'53"N	81°33'58"W	218	50	APR '76	95	310	0.04	878
L-1968*	26°38'07"N	81°43'03"W	146	70	APR '76	31	76	0.03	480
L-1974*	26°37'18"N	81°48'50"W	134	85	APR '76	11	87	0.04	360
L-1975*	26°43'59"N	81°42'47"W	168	102	APR '76	18	130	0.03	470
L-1977*	26°43'20"N	81°36'57"W	305?	65	APR '76	410	1,000	0.04	2,250
L-1981	26°37'37"N	81°45'33"W	106	75	APR '76	82	180	0.08	785
L-1984*	26°27'13"N	81°41'46"W	288	206	MAR '76	35	35	0.03	402
L-1994*	26°32'51"N	81°45'28"W	155	70	MAR '76	43	77	0.02	481

APPENDIX 4-2: WATER QUALITY DATA, SANDSTONE AQUIFER, LEE COUNTY (Continued)

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO_4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-1996*	26°19'54"N	81°41'01"W	198	65	JUN '76	12	45	2.60	461
L-1998*	26°30'41"N	81°43'31"W	160	100	JUN '76	39	62	0.04	424
L-2075	26°33'19"N	81°51'46"W	82	63	MAR '75	30	66	0.00	492
L-2184*	26°32'47"N	81°50'14"W	110	75	JUN '76	68	76	0.00	648
L-2185	26°33'44"N	81°36'15"W	106	69	JUN '76	120	260	0.01	924
L-2186	26°33'44"N	81°36'17"W	160	133	JUN '76	62	140	0.02	558
L-2187	26°39'50"N	81°35'54"W	154	136	JAN '77	130	-	0.03	1,020
L-2190*	26°41'44"N	81°52'03"W	105	71	JUN '76	69	230	0.00	852
L-2192*	26°26'59"N	81°38'25"W	184	155	JUN '76	82	120	0.05	771
L-2198	26°19'54"N	81°43'22"W	137	80	JUN '76	71	71	0.02	531
L-2200*	26°43'29"N	81°34'04"W	166	122	JUN '76	250	970	0.04	2,260
L-2215*	26°31'27"N	81°35'16"W	126	99	JUN '76	80	46	0.10	514
L-2216*	26°46'08"N	81°45'41"W	153	130	JUN '76	31	220	0.05	682
L-2418	26°41'20"N	81°47'25"W	127	75	JAN '77	38	52	0.03	444
L-2419	26°41'33"N	81°47'43"W	115	73	JAN '77	44	98	0.00	497
L-2420	26°41'32"N	81°47'37"W	110	78	JAN '77	43	75	0.05	472

*Water level data also available.

APPENDIX 4-3: WATER QUALITY DATA, MID-HAWTHORN AQUIFER, LEE COUNTY

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO_4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-434*	26°37'28"N	82°04'31"W	210	-	MAR '74	76	1,000	1.6	2,010
L-581*	26°35'32"N	81°59'22"W	177	-	MAY '79	14	250	0.03	717
L-781*	26°38'34"N	82°00'53"W	290	82	MAY '79	65	440	0.02	1,040
L-790	26°37'04"N	81°59'30"W	185	95	MAR '75	10	69	0.00	319
L-791	26°36'58"N	81°59'29"W	185	95	MAR '75	18	110	0.01	442
L-794	26°36'45"N	81°59'29"W	183	112	AUG '78	26	320	-	869
L-797	26°36'47"N	81°58'26"W	270	102	AUG '78	20	110	-	489
L-798	26°37'10"N	81°58'26"W	280	114	AUG '78	23	110	-	485
L-799	26°37'26"N	81°58'26"W	270	113	AUG '78	24	99	-	459
L-800	26°37'18"N	81°58'55"W	280	114	AUG '78	29	120	-	528
L-1055	26°45'08"N	81°55'21"W	200	160	APR '74	12	55	0.01	319
L-1058	26°38'14"N	82°02'07"W	146	95	MAY '79	120	580	0.01	1,350
L-1059*	26°45'17"N	82°02'21"W	189	156	MAY '79	15	440	0.01	1,110
L-1098	26°40'53"N	81°56'30"W	225	126	JUN '75	10	61	-	378
L-1099	26°40'53"N	81°56'32"W	241	126	JUN '75	12	72	0.03	393
L-1106*	26°40'54"N	81°59'26"W	229	143	MAY '79	40	200	0.07	683
L-1107*	26°41'46"N	81°59'23"W	225	137	MAY '79	17	190	0.0	581
L-1108*	26°41'44"N	81°58'26"W	225	137	MAY '79	14	260	0.0	720
L-1109*	26°40'55"N	81°58'31"W	230	84	MAY '79	24	88	0.09	448
L-1110*	26°42'41"N	81°58'24"W	241	147	MAY '79	30	380	0.0	1,030
L-1111	26°41'47"N	81°56'27"W	166	-	MAY '79	21	240	0.02	729
L-1113*	26°41'20"N	82°02'21"W	230	126	MAY '79	230	1,100	0.03	2,460
L-1114	26°37'20"N	82°57'31"W	235	126	MAY '79	69	340	0.0	936

APPENDIX 4-3: WATER QUALITY DATA, MID-HAWTHORN AQUIFER, LEE COUNTY (Continued)

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO_4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-1115	26°39"05"N	81°57'28"W	230	147	MAY '79	14	260	0.03	772
L-1116*	26°26'33"N	82°00'27"W	205	106	APR '78	19	95	-	432
L-1117	26°34'38"N	81°56'32"W	250	-	MAY '79	31	89	0.0	385
L-1118	26°34'04"N	81°57'58"W	215	126	MAY '79	64	360	0.01	922
L-1119	26°33'47"N	82°00'26"W	225	42	MAY '79	17	170	0.02	865
L-1120*	26°40'55"N	81°57'27"W	230	126	MAY '79	31	87	0.03	457
L-1163	26°32'44"N	81°55'06"W	190	147	DEC '74	330	1,300	0.04	2,890
L-1608	26°32'42"N	81°55'20"W	206	148	JAN '75	15	240	0.05	616
L-1614	26°32'42"N	81°55'25"W	210	-	MAR '74	12	110	0.01	391
L-1625	26°33'29"N	81°39'43"W	218	162	SEP '75	23	79	0.041	468
L-1790	26°32'43"N	81°55'36"W	231	-	DEC '74	10	69	0.0	319
L-1906	26°36'12"N	81°56'18"W	180	-	MAR '74	21	94	0.02	414
L-1973*	26°37'18"N	81°48'50"W	225	172	DEC '74	31	180	0.0	603
L-1993*	26°32'51"N	81°45'28"W	242	190	NOV '74	12	130	0.01	489
L-2180	26°40'52"N	82°12'53"W	200	117	MAY '75	150	2,500	0.05	4,960
L-2226	26°37'48"N	81°58'28"W	241	120	AUG '78	28	78	-	401
L-2244	26°32'40"N	82°02'40"W	210	150	MAY '79	40	430	0.04	999
L-2640*	26°38'13"N	81°55'28"W	180	128	MAY '79	40	200	0.02	587
L-2641	26°35'33"N	81°57'34"W	170	118	MAY '79	12	140	0.06	508
L-2642*	26°32'57"N	81°58'57"W	160	108	MAY '79	33	280	0.0	740
L-2643*	26°32'53"N	82°01'42"W	200	141	MAY '78	190	1,100	-	2,400
L-2644*	26°34'40"N	82°02'20"W	180	128	MAY '79	210	980	0.11	2,240

APPENDIX 4-3: WATER QUALITY DATA, MID-HAWTHORN AQUIFER, LEE COUNTY (Continued)

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO_4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-2645*	26°37'43"N	82°04'12"W	210	160	MAY '79	66	450	0.0	1,110
L-2646*	26°45'37"N	81°55'22"W	220	170	MAY '79	17	85	0.08	409
L-2700*	26°40'02"N	82°01'28"W	205	165	MAY '79	260	980	0.01	2,270
L-2701*	26°38'19"N	81°58'58"W	206	175	MAY '79	12	50	0.02	309
L-2702*	26°36'21"N	81°56'37"W	155	120	MAY '79	63	230	0.0	693
L-2703*	26°33'57"N	81°57'56"W	159	120	MAY '79	74	420	0.0	1,020
L-2820*	26°39'55"N	82°08'31"W	250	192	MAY '79	28	650	0.0	1,480

*Water level data also available

APPENDIX 4-4: WATER QUALITY DATA, LOWER HAWTHORN AQUIFER, LEE COUNTY

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO_4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-468	26°30'28"N	82°11'18"W	689	438	JUN '77	360	740	0.032	1,970
L-469	26°28'29"N	82°10'15"W	400	370	NOV '77	440	730	-	2,120
L-546	26°30'19"N	81°56'39"W	600	-	DEC '76	360	1,500	0.031	3,250
L-585	26°27'08"N	82°00'54"W	475	335	JUL '78	260	1,400	-	3,340
L-587	26°32'45"N	82°11'43"W	456	437	JUN '77	100	190	0.027	721
L-588*	26°25'38"N	82°04'51"W	557	403	MAR '75	320	910	0.06	2,350
L-652*	26°41'01"N	81°44'30"W	598	188	MAR '74	310	720	0.21	1,880
L-1000	26°33'09"N	81°55'13"W	582	136	DEC '74	410	2,200	0.05	4,500
L-1196	26°28'33"N	82°09'40"W	600?	-	JAN '77	700	1,100	0.04	2,990
L-1197	26°26'05"N	82°04'47"W	500	480	NOV '77	520	600	-	2,000
L-1597	26°26'26"N	82°06'18"W	575	503	MAR '75	360	1,900	0.13	3,800
L-1644	26°28'51"N	82°10'26"W	335	319	NOV '77	180	240	-	931
L-1645	26°29'28"N	82°10'18"W	540	442	JAN '77	890?	340	0.045	2,290
L-1646	26°28'53"N	82°10'02"W	673	382	JAN '77	470	825	0.042	2,350
L-1680	26°25'24"N	82°05'10"W	700^{+}_{-}	-	DEC '77	330	1,200	0.024	2,730
L-2003	26°34'48"N	81°50'34"W	685	240	DEC '74	320	1,300	0.02	2,820
L-2065	26°26'26"N	82°05'52"W	627	501	JAN '77	450	550	0.039	1,750
L-2115	26°32'59"N	81°55'16"W	750	610	JUN '75	290	720	0.01	1,690
L-2233	26°26'17"N	82°05'24"W	600	500	JAN '77	350	800	0.035	2,090
L-2268	26°25'53"N	82°03'28"W	565	465	DEC '76	300	2,200	0.016	4,130
L-2276	26°27'10"N	82°00'55"W	472	354	DEC '76	300	880	0.009	2,010
L-2282	26°26'08"N	82°07'27"W	600	-	FEB '77	81	331	0.03	844
L-2290	26°34'12"N	81°56'00"W	390	300	JUN '78	300	940	-	2,320

APPENDIX 4-4: WATER QUALITY DATA, LOWER HAWTHORN AQUIFER, LEE COUNTY (Continued)

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-2292*	26°37'18"N	81°48'50"W	616	302	JUN '78	300	720	-	1,870
L-2293*	26°32'47"N	81°50'17"W	643	329	JUN '78	300	420	-	1,400
L-2295*	26°25'52"N	81°48'57"W	610	300	JUN '78	860	2,900	-	6,330
L-2310*	26°20'22"N	81°46"42"W	550	396	JUN '78	550	1,200	-	3,190
L-2311*	26°33'44"N	81°36'17"W	625	300	JUN '77	550	1,000	-	2,790
L-2313*	26°27'03"N	81°34'02"W	670	400	JUN '78	240	410	-	1,250
L-2319*	26°27'13'N	81°41'44"W	750	492	NOV '77	260	680	-	1,720
L-2320	26°30'57"N	82°11'28"W	416	372	JUN '78	320	1,100	-	2,560
L-2328*	26°46'08"N	81°45'41"W	600	300	DEC '76	610	4,300	0.017	8,600
L-2397	26°35'04"N	81°56'22"W	464	263	DEC '76	36	360	0.036	814
L-2399	26°32'36"N	81°57'15"W	470	260	JAN '77	20	200	0.018	437
L-2400	26°34'41"N	81°56'00"W	405	300	NOV '77	250	1,350	-	2,900
L-2401	26°27'04"N	82°01'05"W	591	470	DEC '76	260	690	0.017	1,650
L-2403	26°39'04"N	81°54'37"W	629	124	JAN '77	120	460	0.013	1,090
L-2426	26°35'15"N	81°56'23"W	665	385	FEB '77	310	870	0.013	1,980
L-2433	26°40'11"N	81°44'23"W	700	?	JUN '78	130	400	-	1,200
L-2434*	26°35'39"N	82°00'48"W	700	353	JUL '78	320	1,300	-	3,010
L-2435*	26°33'07"N	81°55'59"W	704	352	AUG '77	390	960	0.016	2,400
L-2457	26°35'32"N	81°37'58"W	518	98	OCT '77	490	440	-	1,700
L-2524*	26°26'22"N	82°07'44"W	625	512	NOV '77	280	440	-	1,230
L-2525*	26°31'17"N	82°05'10"W	645	405	DEC '77	150	580	-	1,420
L-2526*	26°45'20"N	82°02'28"W	605	300	DEC '77	290	2,000	-	3,660
L-2527*	26°40'09"N	82°08'50"W	605	360	JUN '78	240	920	-	2,220

APPENDIX 4-4: WATER QUALITY DATA, LOWER HAWTHORN AQUIFER, LEE COUNTY (Continued)

WELL NUMBER	LATITUDE	LONGITUDE	TOTAL DEPTH (FT.)	CASING DEPTH (FT.)	DATE	SO_4 (mg/l)	Cl (mg/l)	Fe (mg/l)	TDS (mg/l)
L-2528*	26°39'07"N	81°59'27"W	625	420	JUN '78	500	2,400	-	5,120
L-2529*	26°29'13"N	81°56'25"W	545	304	JUN '78	340	580	-	1,590
L-2530*	26°43'08"N	81°40'54"W	614	475	JUN '78	410	730	-	2,150

*Water level data also available

APPENDIX 4-5: WATER QUALITY DATA, LOWER HAWTHORN/TAMPA PRODUCING ZONE AND SUWANNEE AQUIFER

WELL ABANDONMENT NUMBER	USGS NUMBER	LATITUDE LONGITUDE	TOTAL DEPTH	AQUIFER MONITORED*	SURVEYS RUN**
WA-10	L-2002	26°41'41"N 81°55'30"W	555'	LH/T	TG, DT, FR, C, G, 16" 64", SP
WA-12	L-2460	26°39'31"N 81°35'47"W	760'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-19	L-599	26°40'35"N 81°44'19"W	832'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-21	L-4817	26°38'15"N 81°44'40"W	780'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-25	L-1688	26°35'54"N 81°37'54"W	966'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-26	L-2459	26°39'43" 81°36'18"	470'	LH/T	TG, DT, FR, C, G, 16" 64", SP
WA-33	L-914	26°42'18" 80°35'56"	508'	LH/T	TG, DT, FR, C, F
WA-35	L-1358	26°40'01" 81°45'14"	742'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-36	L-4863	26°34'03" 81°40'12"	590'	LH/T	TG, DT, FR, C, G, 16" 64", SP
WA-38	L-905	26°41'31" 81°36'10"	441'	LH/T	TG, DT, FR, C, G, 16" 64", SP
WA-39	L-4851	26°36'51" 81°50'49"	481'	LH/T	TG, DT, FR, C, G, 16" 64", SP
WA-41	L-4827	26°40'28" 81°43'52"	479'	LH/T	TG, DT, FR, C, G, 16" 64", SP
WA-44	L-3275	26°41'03" 81°47'55"	390'	LH/T	TG, DT, FR, C, G, F
WA-45	L-426	26°37'51" 81°47'35"	518'	LH/T	TG, DT, FR, C, G, F, 16" 64", SP
WA-48	L-4841	26°29'38" 81°56'21"	706'	LH/T, S	TG, DT, FR, C, G, F, 16" 64", SP
WA-49	L-4842	26°29'20" 81°56'21"	630'	LH/T	TG, DT, FR, C, G, 16" 64", SP

APPENDIX 4-5: WATER QUALITY DATA, LOWER HAWTHORN/TAMPA PRODUCING ZONE AND SUWANNEE AQUIFER (Continued)

WELL AGANDONMENT NUMBER	USGS NUMBER	LATITUDE LONGITUDE	TOTAL DEPTH	AQUIFER MONITORED *	SURVEYS RUN **
WA-51	L-4887	26°27'35" 82°00'50"	823'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-53	L-4889	26°37'31" 82°00'50"	610'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-56	L-1042	26°44'24" 81°54'06"	571'	LH/T	TG, DT, FR, C, G, 16" 64", SP
WA-60	L-4870	26°35'40" 81°53'03"	796'	LH/T, S	TG, DT, FR, C, G, F, 16" 64", SP
WA-64	L-1044	26°44'07" 81°54'41"	769'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-68	L-4846	26°39'29" 81°54'58"	1012'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-70	L-1396	26°38'36" 81°49'21"	857'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-77	L-1903	26°42'52" 81°40'51"	669'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-85	L-2657	26°30'57" 81°57'23"	916'	LH/T, S	TG, DT, FR, C, F, 16" 64", SP, PS
WA-87	L-2197	26°36'37" 81°45'34"	604'	LH/T	TG, DT, FR, C, G, 16" 64", SP
WA-90	L-2357	26°34'43" 81°52'58"	472'	LH/T	TG, DT, FR, C, G, 16", 64", F, SP
WA-95	L-4900	26°33'22" 81°55'17"	453'	LH/T	TG, DT, FR, C, G, 16", 64", F, SP
WA-101	L-3267	26°31'48" 81°55'13"	874'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-104	L-458	26°26'12" 81°47'46"	818'	LH/T, S	TG, DT, FR, C, G, N, F, 16" 64", SP, PS
WA-111	L-1715	26°33'03" 81°53'26"	901'	LH/T, S	TG, DT, FR, C, G, F, 16" 64", SP, PS
WA-118	L-2293	26°32'47" 81°50'17"	635'	LH/T	TG, DT, FR, C, G

APPENDIX 4-5: WATER QUALITY DATA, LOWER HAWTHORN/TAMPA RPODUCING ZONE AND SUWANNEE AQUIFER

WELL ABANDONMENT NUMBER	USGS NUMBER	LATITUDE LONGITUDE	TOTAL DEPTH	AQUIFER MONITORED*	SURVEYS RUN**
WA-123	-	26°41'11" 81°45'06"	458'	LH/T	TG, DT, FR, C, G, F, 16" 64", SP
WA-125	L-907	26°44'34" 81°36'05"	997'	LH/T, S	TG, DT, FR, C, G, F, 16" 64", SP
WA-126	L-1086	26°38'11" 81°55'25"	379'	LH/T	TG, DT, FR, C, G, F, 16" 64", SP
WA-129	-	26°40'29" 81°48'02"	814'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-132	-	26°29'20" 81°54'10"	758'	LH/T, S	TG, DT, FR, C, G, F, 16" 64", SP
WA-136	L-773	26°39'25" 81°50'34"	740'	LH/T, S	TG, DT, FR, C, G, F, 16" 64" SP
WA-143	L-1569	26°24'27" 81°49'11"	772'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
WA-144	L-566	26°30'02" 81°54'40"	486'	LH/T	TG, DT, FR, C, G, 16" 64", SP
WA-147	L-724	26°43'13" 82°02'20"	792'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
LE-014	-	26°40'02" 82°11'00"	963'	LH/T, S	TG, DT, FR, C, G, 16" 64", SP
LE-007	-	26°45'27" 81°44'20"	2105'	LH/T, S, D	TG, DT, FR, C, G, F, N, 16" 64", SP, PS
-	L-1634	26°24'35" 81°53'51"	950'	S	well cased to Suwannee
-	L-1157	26°33'06" 81°52'23"	740'	S	well cased to Suwannee
-	L-912	26°42'23" 81°35'53"	850'	S	well cased to Suwannee

*LH/T = Lower Hawthorn/Tampa Producing Zone; S = Suwannee Aquifer.

**TG = Temperature Gradient; DT = Differential Temperature; FR = Fluid Resistivity; C = Caliper; G = Gamma; 16" = Resistivity; 64" = Resistivity SP = Spontaneous Potential; F = Flowmeter; N = Neutron; PS = Point Sample

APPENDIX 5

Data on Municipal Water Supply Wellfields in Lee County

APPENDIX 5: DATA ON MUNICIPAL WATER SUPPLY WELLFIELDS IN LEE COUNTY, FLORIDA

PERMIT NO.	PERMITTEE	NAME OF WELLFIELD	AREA SERVED	NO. OF WELLS	AQUIFER	PLANT CAPACITY (MGD)	PERMITTED USE		WATER USE 80-81	
							MAX DAILY (MG)[1]	ANNUAL (BGY)[2]	AUG-JUL (MG)[1]	MON.MAX (MG)[1]
36-00003-W 7/81 to 6/88	Lee Co. Util. P.O. Box 311 Ft. Myers, FL	Lee Co. Util. South	3,400 acres Ft. Myers	10 6	Surficial Sandstone	72.00 30.20	10.22	1.830	-	-
36-00008-W to 10/88	Bonita Springs Water System P.O. Drawer 640 Bonita Springs, FL	Bonita Springs Water System	35,000 acres Bonita Springs	6 existing 6 proposed	Sandstone	2.16	2.25	0.548	316	34.17 (4/81)
36-00034-W 11/80 to 11/90	Island Water Assoc. P.O. Box H Sanibel, FL	Island Water Association	Sanibel and Captiva Isles	2 R.O.[3] 8 E.D.[4]	Suwannee L.Hawthorn/ Tampa	1.60 R.O.[3] 1.80 E.D.[4]	2.67	1.240	392	45.921 (4/81)
36-00035-W 10/77 to 10/87	City of Ft. Myers P.O. Drawer 2217 Ft. Myers, FL	City of Ft. Myers	15,630 acres City of Ft. Myers	18	Surficial	13.00	12.10	2.760	-	-
36-00045-W 4/78 to 4/83	Greater Pine Is. Water Association P.O. Box 528A Pine Island, FL	Greater Pine Island	30,000 acres Pine Island and adjacent Isles	11 2	Mid-Haw. L.Hawthorn/ Tampa & Suwannee	4.61	.97 1.00	0.237 0.257	237	32.12 (4/81)
36-00046-W 4/78 to 4/83	City of Cape Coral 900 Nicholas Pkwy. Cape Coral, FL	Cape Coral Skyline Cape Coral Santa Barbara Cape Coral Golf C. Cape Coral R.O.	66,000 acres Cape Coral	15 6	Mid-Haw. L.Hawthorn/ Tampa & Suwannee	4.26 8.10	2.00 6.00	0.657 1.040	473	54.12 (4/81)
36-00081-W 1/79 to 1/89	Lake Fairway P.O. Box 4535 N. Ft. Myers, FL	Indian Pines	200 acres Mobile Home Pk.	2	Mid-Haw.	0.58	0.50	.091	-	-
36-00122-W 5/81 to 5/91	San Carlos Util. Rt. 11, Box 100-A Ft. Myers, FL	San Carlos Util.	6860 acres	10	Surficial	0.40	4.42	1.110	148	18.94 (4/81)
36-00152-W	Florida Cities Water Co. P.O. Box 5846 Sarasota, FL	N. Cape Coral Waterway Estates	2,700 acres N. Cape Coral Waterway Estates	4 6 4	Mid-Haw. Surficial Mid-Haw.	1.00 1.10	1.00 0.75	0.300 0.270	175 -	19.30 (5/81)
36-00166-W 12/79 to 12/81	Lehigh Acres Dev. 201 E. Joel Blvd. Lehigh Acres, FL	Lehigh Acres	60,160 acres Lehigh Acres	10	Sandstone	2.45	1.80	0.479	307	29.20 (1/81)
36-00178-W	Lee Co. Util. P.O. Box 398 Ft. Myers, FL	Lee County Utilities North	34,000 acres N. Ft. Myers	1 7	Mid-Haw. Sandstone	0.55	0.50	0.182	-	-
36-00191 4/80 to 4/90	Sunland Center P.O. Box 2369 Ft. Myers, FL	Sunland Center	350 acres Bonita area	4	Sandstone	.52	0.29	0.061	41	3.77 (1/81)
36-00208 10/80 to 10/90	Trost Interna- tional Rt. 5, Citrus Pk. Bonita Springs, FL	Trost Interna- tional	960 acres	2	Surficial	0.13	0.47	0.078	-	-
36-00150 2/80 to 2/90	Florida Cities Water Co. P.O. Box 5846 Sarasota, FL	Green Meadows Cypress Lakes	17,500 acres	4 18	Sandstone Mid-Haw.	4.03 3.37	6.00 1.50	1.095 0.547	880 492	115.623 (4/81) 44.200 (4/81)

[1]million gallons

[2]billion gallons per year

[3]reverse osmosis

[4]electrodialysis