

GEOLOGIC LOG
OF
MONITOR WELL ADJACENT
TO INJECTION WELL 6
WEST PALM BEACH, FLORIDA

<u>Sample Description</u>	<u>Depth Interval (feet)</u>	<u>Thickness (feet)</u>
ORGANICS AND SHELL - Organics, 80%, dark brown, woody; Shell, 20%, white to pinkish gray, whole shells and fragments; Sand, trace.	0 - 5	5
SHELL, ORGANICS AND SAND - Shell, 75%, white to pinkish gray, whole shells and fragments; Organic, 15%, dark brown, woody; Sand, 10%, clear, quartz, fine- to medium-grained, sub-rounded.	5 - 10	5
SAND AND SHELL - Sand, 60%, clear, quartz, fine- to medium-grained, sub-rounded; Shell, 40%, white to pinkish gray, whole shells and fragments; Organics, trace.	10 - 30	20
SANDSTONE AND SHELL - Sandstone, 80%, light olive gray, quartz, fine- to medium-grained, poorly cemented; Shell, 20%, white to pinkish gray, fragments.	30 - 40	10
SHELL AND SANDSTONE - Shell, 80%, white to light olive gray, fragments; Sandstone, 20%, light olive gray, fine- to medium-grained, poorly cemented; Organics, trace; Sand, trace, phosphatic.	40 - 60	20
SAND AND SHELL - Sand, 70%, clear, quartz and phosphatic, fine-grained, sub-rounded; Shell, 30%, white to light olive gray, fragments; Sandstone, trace; Sand, trace, phosphatic.	60 - 110	50
SAND, SANDSTONE AND SHELL - Sand, 70%, clear to light olive gray, quartz and phosphatic, fine-grained, sub-angular; Sandstone, 20%, light olive gray, fine- to medium-grained, moderately well cemented; Shell, 10%, white to light olive gray, fragments.	110 - 120	10

<u>Sample Description</u>	<u>Depth Interval (feet)</u>	<u>Thickness (feet)</u>
SANDSTONE AND SHELL - Sandstone, 75%, light olive gray, fine- to medium-grained, moderately well cemented; Shell, 25%, white to dusky yellow, fragments; Sand, trace, black phosphatic.	120 - 200	80
LIMESTONE AND SHELL - Limestone, 60%, light olive gray to medium light gray, moderately hard; Shell, 40%, white to dusky yellow, fragments.	200 - 210	10
LIMESTONE - Limestone, 80%, light olive gray, moderately hard; Shell, 20%, white to dusky yellow, fragments.	210 - 220	10
LIMESTONE, SAND AND SHELL - Limestone, 60%, light olive gray, sparite, moderately hard; Sand, 20%, clear, quartz, sub-rounded; Shell, 20%, white to pinkish gray, fragments; Organics, trace; Sand, trace, phosphatic.	220 - 240	20
LIMESTONE, SHELL AND SAND - Limestone, 60%, light olive gray, biosparite, poorly cemented; Shell, 30%, very pale orange, fragments; Sand, 10%, clear, quartz, fine-grained, sub-rounded; Peat, trace; Organics, trace; Clay, trace; Sand, trace, phosphatic.	240 - 260	20
CLAY, LIMESTONE, SAND AND SHELL - Clay, 50%, light olive gray, soft, plastic; Limestone, 30%, light olive gray, biosparite, poorly cemented; Sand, 10%, clear, quartz; Shell, 10%, very pale orange, light olive gray; Organics, trace; Sand, trace, phosphatic	260 - 280	20
CLAY AND LIMESTONE - Clay, 80%, light olive gray; Limestone, 15%, light olive gray, sparite, poorly cemented; Sand, 5%, clear, quartz, fine-grained; Shells, trace; Sand, trace, phosphatic.	280 - 300	20

<u>Sample Description</u>	<u>Depth Interval (feet)</u>	<u>Thickness (feet)</u>
CLAY AND SAND - Clay, 80%, grayish olive, semi-indurated in places, mostly plastic; Sand, 20%, clear and black, quartz and phosphatic, fine-grained; Shells, trace; Organics, trace.	300 - 370	70
CLAY AND LIMESTONE - Clay, 70%, grayish olive, plastic; Limestone, 25%, light olive gray, micrite, poorly cemented; Shells, 5%, pinkish gray, fragments; Organics, trace, peat.	370 - 410	40
CLAY - Clay, 100%, grayish olive, plastic; Sand, trace, phosphatic; Shell, trace.	410 - 460	50
CLAY AND SAND - Clay, 90%, grayish olive, plastic; Sand, 10%, clear and black, quartz and phosphatic, fine-grained; Shell, trace, fragments; Limestone, trace, yellowish gray.	460 - 690	230
SANDY CLAY - Clay, 45%, grayish olive, calcareous, semi-indurated to plastic; Clay, 45%, light olive gray, plastic; Sand, 10%, clear and black, quartz and phosphatic, very fine-grained.	690 - 720	30
CLAY AND SAND - Clay, 85%, grayish olive, semi-indurated to plastic, calcareous; Sand, 15%, very fine-grained, clear, quartz; Chert, trace.	720 - 750	30
CLAY - Clay, 100%, dusky olive, calcareous, plastic; Shells, trace, fragments; Phosphate, trace, black.	750 - 780	30
CLAY AND CHERT - Clay, 85%, pale olive, calcareous, plastic; Chert, 15%, grayish olive, very hard; Limestone, trace, yellowish gray; Shell, trace, white, fragments.	780 - 820	40

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CLAY AND LIMESTONE - Clay, 60%, pale olive, calcareous; Limestone, 40%, yellowish gray, micrite, soft, solution cavities; Chert, trace, grayish olive; Shell, trace, fragments.	820 - 830	10
SILTY CLAY, SHELL, MARL AND LIMESTONE - Clay, 30%, light olive gray, semi-indurated to plastic; Shell, 30%, pinkish gray, fragments; Marl, 20%, yellowish gray, plastic, calcareous; Limestone, 20%, yellowish gray, micrite, soft; Chert, trace; Sand, trace, phosphate.	830 - 890	60
CLAY, SHELL AND SAND - Clay, 45%, light olive gray, plastic, calcareous; Shell, 30%, white to light brown, fragments; Sand, 10%, clear, quartz, fine-grained, sub-angular; Marl, 5%, yellowish gray, plastic; Phosphate, trace.	890 - 960	70
SILTY CLAY AND LIMESTONE - Clay, 60%, light olive gray, plastic, calcareous; Limestone, 35%, very pale orange to pale blue, micrite, hard; Shell, trace, fragments; Sand, trace, phosphate, fine-grained; Chert, trace.	960 - 964	4
LIMESTONE, CLAY, SHELL AND MARL - Limestone, 60%, very pale orange to pale blue, micrite, hard; Clay, 15%, grayish olive, plastic, sandy; Shell, 15%, white, fragments; Marl, 10%, yellowish gray, plastic, calcareous.	964 - 993	29
LIMESTONE, MARL AND SHELL - Limestone, 70%, very pale orange to pale blue, micrite, hard; Marl, 20%, yellowish gray, calcareous; Shell, 10%, fragments; Chert, trace, black; Phosphate, trace, black.	993 - 998	5
LIMESTONE AND MARL - Limestone, 85%, very pale orange, micrite with some sparite crystals, moderately hard; Marl, 20%, yellowish gray; Clay, trace, grayish olive, plastic; Shell, trace, fragments.	998 - 1010	12

<u>Sample Description</u>	<u>Depth Interval (feet)</u>	<u>Thickness (feet)</u>
LIMESTONE - Limestone, 100%, very light gray, medium bluish gray to medium dark gray, micrite, moderately-well cemented; Shell, trace; Oolites, trace.	1010 - 1040	30
LIMESTONE, MARL AND SAND - Limestone, 80%, yellowish gray to olive gray, micrite, moderately-well cemented; Marl, 10%, light olive to dusky yellow gray, plastic; Sand, 10%, clear and black, quartz and phosphatic, fine-grained; Shell, trace.	1040 - 1050	10
LIMESTONE AND SAND - Limestone, 75%, very light gray to medium gray, moderately well cemented; Sand, 25%, clear and black, quartz and phosphatic, sub-angular to sub-rounded; Shell, trace.	1050 - 1060	10
SAND AND LIMESTONE - Sand, 70%, clear and black, quartz and phosphatic, fine-grained, sub-angular to sub-rounded; Limestone, 30%, very pale yellow to white, micrite, well cemented; Shell, trace.	1060 - 1080	20
LIMESTONE - Limestone, 100%, very pale yellow to bluish white, sparite, hard; Shell, trace.	1080 - 1140	60
SAND AND LIMESTONE - Sand, 50%, clear, quartz, sub-angular to sub-rounded, fine - to medium-grained; Limestone, 25%, very pale yellow to gray, sparite, hard; Limestone, 25%, very pale yellow to gray, micrite; Shell, trace.	1140 - 1150	10
LIMESTONE - Limestone, 100%, very pale yellow to bluish white, micrite, well cemented, some solution cavities.	1150 - 1200	50
LIMESTONE - Limestone, 100%, very pale orange to pale yellowish brown, sparite, hard; Limestone, trace, micrite.	1200 - 1300	100

<u>Sample Description</u>	<u>Depth Interval (feet)</u>	<u>Thickness (feet)</u>
LIMESTONE - Limestone, 100%, very pale orange, sparite, well cemented; Limestone, trace, micrite; Foraminifera, trace.	1300 - 1370	70
LIMESTONE - Limestone, 60%, very pale orange, biomicrite, well cemented; Limestone, 40%, very pale orange, sparite, hard; Shell, trace, foraminifera.	1370 - 1380	10
LIMESTONE - Limestone, 100%, very pale orange, sparite, well cemented; Shell, trace, foraminifera; Limestone, trace, micrite.	1380 - 1390	10
LIMESTONE - Limestone, 60%, very pale orange, sparite, hard, some solution cavities; Limestone, 40%, very pale orange to white, biomicrite, well cemented, many foraminifera in matrix, some solution cavities.	1390 - 1420	30
LIMESTONE - Limestone, 100%, grayish orange to very pale orange, micrite, moderately well cemented, solution cavities.	1420 - 1430	10
LIMESTONE - Limestone, 90%, grayish orange to yellowish gray, biomicrite; Limestone, 10%, olive gray, biosparite, soft to moderately hard; Shell, trace, foraminifera, bivalves.	1430 - 1520	90
LIMESTONE - Limestone, 80%, very pale orange to bluish white, biosparite, moderately hard; Limestone, 20%, olive gray, biomicrite, hard; Shell, trace.	1520 - 1580	60
LIMESTONE - Limestone, 70%, very pale orange, biosparite, hard, occasional solution cavities; Limestone, 30%, very pale orange to bluish white, biomicrite, well cemented, occasional solution cavities; Foraminifera, trace.	1580 - 1610	30

<u>Sample Description</u>	<u>Depth Interval (feet)</u>	<u>Thickness (feet)</u>
LIMESTONE - Limestone, 50%, very pale orange to bluish white, biosparite, hard, occasional solution cavities; Limestone, 50%, very pale orange to bluish white, well cemented, occasional solution cavities; Foraminifera, trace.	1610 - 1670	60
LIMESTONE - Limestone, 80%, very pale orange to bluish white, micrite, well cemented; Limestone, 20%, very pale orange to bluish white, sparite, well cemented; Foraminifera, trace.	1670 - 1700	30
LIMESTONE - Limestone, 80%, very pale orange to bluish white, biomicrite, well cemented; Limestone, 20%, very pale orange to bluish white, sparite, well cemented; Foraminifera, trace.	1700 - 1770	70
LIMESTONE - Limestone, 65%, very pale orange, biomicrite, well cemented; Limestone, 35%, very pale orange, biosparite, hard; Foraminifera, trace.	1770 - 1820	50
LIMESTONE - Limestone, 100%, very pale orange, biomicrite, hard; Limestone, trace, biosparite; Dolomite, trace, dark yellowish brown, hard, sucrosic; Foraminifera, trace.	1820 - 1850	30
LIMESTONE - Limestone, 60%, very pale orange, biomicrite, hard; Limestone, 40%, very pale orange, biosparite, hard; Dolomite, trace, dark yellowish brown, hard, sucrosic.	1850 - 1910	60
LIMESTONE AND DOLOMITE - Limestone, 85%, very pale orange to olive gray, biomicrite, hard; Dolomite, 15%, dark yellowish brown, finely crystalline, sucrosic, hard.	1910 - 1970	60

<u>Sample Description</u>	<u>Depth Interval (feet)</u>	<u>Thickness (feet)</u>
DOLOMITE AND LIMESTONE - Dolomite, 80%, pale yellowish orange, finely crystalline, hard, sucrosic, vuggy; Limestone, 20%, very pale orange to bluish white, biosparite.	1970 - 1980	10
LIMESTONE AND DOLOMITE - Dolomite, 40%, pale yellowish orange, finely crystalline, hard, sucrosic, vuggy; Limestone, 35%, very pale orange to bluish white, biosparite, hard; Limestone, 25%, very pale orange to bluish white, biomicrite, well cemented; Foraminifera, trace.	1980 - 1990	10
LIMESTONE - Limestone, 50%, very pale orange to bluish white, biosparite, hard; Limestone, 50%, very pale orange to bluish white, biomicrite, well cemented; Foraminifera, trace.	1990 - 2000	10
DOLOMITE AND LIMESTONE - Dolomite, 50%, pale yellowish orange, finely crystalline, hard, sucrosic; Limestone, 25%, very pale orange to bluish white, biosparite, hard; Limestone, 25%, very pale orange to bluish white, biomicrite, well cemented; Foraminifera, trace.	2000 - 2010	10
LIMESTONE - Limestone, 50%, very pale orange to bluish white, biosparite, hard; Limestone, 50%, very pale orange to bluish white, biomicrite, well cemented; Dolomite, trace, pale yellowish orange, finely crystalline, hard, sucrosic.	2010 - 2040	30
LIMESTONE AND DOLOMITE - Limestone, 40%, very pale orange to bluish white, biosparite, hard; Limestone, 40%, very pale orange to bluish white, biomicrite, well cemented; Dolomite, 20%, pale yellowish orange, finely crystalline, hard, sucrosic.	2040 - 2080	40

Sample Description

Depth
Interval
(feet)

Thickness
(feet)

LIMESTONE - Limestone, 75%, very pale orange to bluish white, biosparite, hard, solution cavities; Limestone, 25%, very pale orange to bluish white, biomicrite, well cemented, chalky; Foraminifera, trace.

2080 - 2100 20+

TOTAL DEPTH: 2100