

Fort Pierce Utilities W.T.P. Dual Zone Monitoring Well (DMW-1)

Lithologic Sample Descriptions

FPUA RO WTP DMW-1

LITHOLOGIC DESCRIPTIONS FROM PILOT HOLE CUTTINGS

Depth Logged (ft-bpl)		Observer's Description
From	To	
0	10	SAND, pale yellowish brown (10YR 6/2), medium grained
10	20	SAND, dark yellowish brown (10YR 4/2), medium grained
20	30	SAND, moderate yellowish brown (10YR 5/4), medium grained
30	40	SANDY CLAY, olive black (5Y 2/1), stiff
40	50	SHELL FRAGMENTS, pale yellowish brown (10YR 6/2), moderately consolidated
50	60	Same as above
60	70	SHELL FRAGMENTS, medium bluish gray (5B 5/1), moderately consolidated
70	80	SHELL FRAGMENTS (60%), pale yellowish brown (10YR 6/2) and medium bluish gray (5B 5/1); SANDY LIMESTONE (40%), light olive gray (5Y 6/1), fine sand grained, moderately consolidated
80	90	Same as above
90	100	Same as above
100	110	Same as above, decrease in sandy limestone to 20%
110	120	Same as above
120	130	CLAY, olive gray (5Y 4/1), medium plasticity, trace of shell fragments
130	140	Same as above
140	150	Same as above
150	160	Same as above
160	170	CLAY, dark greenish gray (5G 4/1), low plasticity, soft and sticky
170	180	Same as above
180	190	Same as above
190	200	Same as above
200	210	Same as above
210	220	Same as above
220	230	Same as above
230	240	Same as above
240	250	Same as above
250	260	Same as above
260	270	CLAY, olive gray (5Y 3/2), low plasticity, soft and sticky
270	280	Same as above
280	290	Same as above
290	300	Same as above
300	310	CLAY, olive gray (5Y 3/2), medium plasticity, sticky
310	320	Same as above, trace of shell fragments
320	330	Same as above

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From	To	
330	340	CLAY, olive gray (5Y 3/2), low plasticity, soft and sticky
340	350	Same as above
350	360	Same as above, trace of shell fragments
360	370	Same as above, no shell fragments
370	380	Same as above
380	390	Same as above
390	400	Same as above
400	410	CLAY, olive gray (5Y 3/2), medium plasticity, sticky
410	420	CLAY, dark greenish gray (5G 4/1), medium plasticity, sticky; trace of limestone
420	430	CLAY, dark greenish gray (5G 4/1), high plasticity, stiff
430	440	Same as above
440	450	Same as above
450	460	Same as above
460	470	CLAY, light olive gray (5Y 5/2), medium plasticity, sticky, high phosphates
470	480	CLAY, dark greenish gray (5G 4/1), high plasticity, stiff
480	490	Same as above
490	500	Same as above, high phosphates, trace of limestone
500	510	LIMESTONE, yellowish gray (5Y 7/2), very fine grained, small fragments, well consolidated
510	520	CLAY (70%), dark greenish gray (5G 4/1); LIMESTONE (30%), yellowish gray (5Y 7/2), medium fragments
520	530	Same as above, increase in limestone to 50%
530	540	LIMESTONE, yellowish gray (5Y 7/2), fine sand grained, medium fragments, moderately consolidated
540	550	CLAY, dark greenish gray (5G 4/1), medium plasticity, sticky; trace of limestone
550	560	LIMESTONE, light gray (N7), fine sand grained, large fragments, well consolidated
560	570	LIMESTONE, medium light gray (N6), fine sand grained, large fragments, well consolidated
570	580	LIMESTONE, light gray (N7) and very pale orange (10YR 8/2), fine sand grained, large fragments, poorly consolidated; chert fragments, grayish black (N2), fractured, dense
580	590	Same as above, no chert
590	600	Same as above
600	610	LIMESTONE, yellowish gray (5Y 7/2), fine sand grained, small to medium fragments, poorly consolidated, foraminifera present
610	620	Same as above
620	630	Same as above
630	640	Same as above
640	650	Same as above

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From	To	
650	660	LIMESTONE, yellowish gray (5Y 7/2), medium sand grained, medium fragments, moderately consolidated
660	670	Same as above
670	680	Same as above
680	690	Same as above
690	700	Same as above
700	710	Same as above, small fragments
710	720	LIMESTONE, yellowish gray (5Y 8/1), fine to medium sand grained, medium fragments, moderately consolidated
720	730	Same as above
730	740	Same as above
740	750	Same as above
750	760	Same as above
760	770	Same as above, trace of clay
770	780	Same as above
780	790	Same as above
790	800	LIMESTONE (50%), yellowish gray (5Y 8/1), fine sand grained, small to medium fragments, well consolidated; CLAY (50%), yellowish gray (5Y 8/1), medium plasticity, stiff
800	810	Same as above
810	820	Same as above, increase in clay to 70%
820	830	LIMESTONE, yellowish gray (5Y 8/1), medium sand grained, small to medium fragments, well consolidated
830	840	Same as above
840	850	Same as above
850	860	Same as above
860	870	Same as above, medium fragments
870	880	LIMESTONE, medium gray (N5), fine sand grained, medium to large fragments, well consolidated, dense
880	890	Same as above
890	900	CLAY, yellowish gray (5Y 8/1), low plasticity, soft
900	910	LIMESTONE, yellowish gray (5Y 8/1), fine sand grained, medium fragments, well consolidated
910	920	LIMESTONE, yellowish gray (5Y 7/2), fine sand grained, small to medium fragments, poorly consolidated
920	930	LIMESTONE, yellowish gray (5Y 7/2), fine sand grained, small fragments, poorly consolidated, foraminifera present
930	940	Same as above
940	950	LIMESTONE, yellowish gray (5Y 7/2) and grayish orange, (10YR 7/4), small to medium fragments, poorly consolidated, dense, trace of olive gray (5Y 3/2) clay
950	960	Same as above

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From	To	
960	970	Same as above, no clay
970	980	Same as above, poorly consolidated
980	990	Same as above
990	1000	LIMESTONE, yellowish gray (5Y 7/2) and dark gray (N3), fine sand grained, small to medium fragments, poorly consolidated, dense
1000	1010	Same as above
1010	1020	LIMESTONE, yellowish gray (5Y 8/1), fine sand grained, small to medium fragments, poorly consolidated, trace of moderate yellowish brown (10YR 5/4) dolomite
1020	1030	Same as above
1030	1040	DOLOMITE (80%), moderate yellowish brown (10YR 5/4), small to medium fragments, moderately consolidated; LIMESTONE (20%), yellowish gray (5Y 8/1), small fragments, moderately consolidated, trace of foraminifera
1040	1050	Same as above
1050	1060	Same as above, increase in LIMESTONE to 80%, increase in foraminifera
1060	1070	DOLOMITE, yellowish gray (5Y 7/2) and dark gray (N3), small fragments, poorly consolidated, trace of limestone
1070	1080	Same as above
1080	1090	Same as above, increase in LIMESTONE to 50%
1090	1100	LIMESTONE, yellowish gray (5Y 8/1), fine sand grained, very small fragments, poorly consolidated, trace of dark yellowish brown (10YR 4/2) dolomite, vuggy
1100	1110	DOLOMITE, pale yellowish brown (10YR 6/2), fine sand grained, large fragments, well consolidated
1110	1120	LIMESTONE, yellowish gray (5Y 8/1), fine sand grained, very small fragments, poorly consolidated, trace of dark yellowish brown (10YR 4/2) dolomite
1120	1130	Same as above
1130	1140	DOLOMITE, dark yellowish brown (10YR 4/2), fine sand grained, very small fragments, poorly consolidated, trace of limestone
1140	1150	Same as above
1150	1160	Same as above
1160	1170	Same as above, medium fragments, dense
1170	1180	Same as above
1180	1190	LIMESTONE, pale yellowish brown (10YR 6/2), fine sand grained, medium fragments, well consolidated, dense
1190	1200	CLAY, dusky yellowish brown (10YR 2/2), medium plasticity, stiff, trace of limestone
1200	1210	LIMESTONE, pale yellowish brown (10YR 6/2), fine sand grained, very small fragments, moderately consolidated, friable, trace of foraminifera
1210	1220	Same as above
1220	1230	Same as above
1230	1240	Same as above, poorly consolidated

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Depth Logged (ft-bpl)		Observer's Description
From	To	
1240	1250	LIMESTONE, dark yellowish brown(10YR 4/2), fine sand grained, small fragments, poorly consolidated
1250	1260	LIMESTONE, pale yellowish brown (10YR 6/2), fine sand grained, very small fragments, moderately consolidated, friable
1260	1270	Same as above
1270	1280	Same as above
1280	1290	Same as above
1290	1300	LIMESTONE, pale yellowish brown (10YR 6/2), fine sand grained, small to medium fragments, poorly consolidated, trace of dolomite
1300	1310	LIMESTONE, yellowish gray (5Y 7/2), fine sand grained, large fragments, well consolidated
1310	1320	Same as above, small fragments, moderately consolidated
1320	1330	Same as above
1330	1340	Same as above, friable
1340	1350	Same as above
1350	1360	Same as above
1360	1370	Same as above
1370	1380	Same as above
1380	1390	Same as above
1390	1400	Same as above
1400	1410	LIMESTONE, yellowish gray, (5Y 7/2), fine sand grained, small to medium fragments, moderately consolidated
1410	1420	Same as above
1420	1430	Same as above
1430	1440	Same as above
1440	1450	Same as above
1450	1460	LIMESTONE, yellowish gray (5Y 7/2), fine sand grained, very small fragments, moderately consolidated, friable
1460	1470	Same as above
1470	1480	Same as above
1480	1490	Same as above
1490	1500	Same as above
1500	1510	Same as above, small to medium fragments
1510	1520	Same as above, very small fragments
1520	1530	Same as above
1530	1540	Same as above
1540	1550	Same as above
1550	1560	Same as above, foraminifera present
1560	1570	Same as above

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Depth Logged (ft-bpl)		Observer's Description
From	To	
1570	1580	Same as above, small to medium fragments, poorly consolidated
1580	1590	Same as above, moderately consolidated
1590	1600	Same as above, small fragments
1600	1610	Same as above, small to medium fragments, poorly consolidated
1610	1620	Same as above, small fragments, moderately consolidated
1620	1630	Same as above, poorly consolidated
1630	1640	Same as above
1640	1650	LIMESTONE, yellowish gray (5Y 7/2), medium sand grained, small to medium fragments, well consolidated, friable
1650	1660	Same as above, poorly consolidated
1660	1670	Same as above
1670	1680	LIMESTONE, yellowish gray (5Y 7/2), fine sand grained, very small fragments, moderately consolidated, friable, trace of foraminifera
1680	1690	Same as above
1690	1700	Same as above
1700	1710	Same as above
1710	1720	Same as above
1720	1730	Same as above
1730	1740	Same as above
1740	1750	Same as above
1750	1760	Same as above, small fragments
1760	1770	Same as above, poorly consolidated
1770	1780	LIMESTONE, yellowish gray (5Y 7/2), fine sand grained, very small fragments, moderately consolidated, friable, trace of foraminifera
1780	1790	Same as above
1790	1800	Same as above
1800	1810	Same as above
1810	1820	Same as above
1820	1830	Same as above, small to medium fragments, poorly consolidated
1830	1840	Same as above
1840	1850	Same as above, very small fragments, moderately consolidated
1850	1860	Same as above
1860	1870	Same as above
1870	1880	Same as above, small fragments, poorly consolidated
1880	1890	Same as above

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Depth Logged (ft-bpl)		Observer's Description
From	To	
1890	1900	LIMESTONE, yellowish gray (5Y 7/2), fine sand grained, very small fragments, moderately consolidated, friable, trace of foraminifera
1900	1910	Same as above, very soft and friable, well consolidated

Notes:

bpl = below pad level

Lithologic color designations are based on the *Rock Color Chart*, distributed by the Geological Society of America, 1984.