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|--|--|--|---------------------|----------------|
| <b>DRILLING LOG</b>  |  | <b>DIVISION</b>  | <b>INSTALLATION</b> | <b>SHEET 1</b> |
| <b>1. PROJECT</b><br>AMI 2013 Sand Search<br>Anna Maria Island, FL   |  |   |                     |                |
| <b>2. BORING DESIGNATION</b><br>AMVC-13-15   |  | <b>LOCATION COORDINATES</b><br>X = 411,934 Y = 1,162,901   |                     |                |
| <b>3. DRILLING AGENCY</b><br>Athena Technologies, Inc.   |  | <b>CONTRACTOR FILE NO.</b>   |                     |                |
| <b>4. NAME OF DRILLER</b><br>Palmer McLellan   |  | <b>9. SIZE AND TYPE OF BIT</b> 3.0 In.   |                     |                |
| <b>5. DIRECTION OF BORING</b><br><input checked="" type="checkbox"/> VERTICAL<br><input type="checkbox"/> INCLINED |  | <b>10. COORDINATE SYSTEM/DATUM</b><br>Florida State Plane West   |                     |                |
| <b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.  |  | <b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> <input type="checkbox"/> AUTO HAMMER<br>Electric <input type="checkbox"/> MANUAL HAMMER |                     |                |
| <b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.  |  | <b>12. TOTAL SAMPLES</b>   |                     |                |
| <b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.   |  | <b>13. TOTAL NUMBER CORE BOXES</b>   |                     |                |
|  |  | <b>14. ELEVATION GROUND WATER</b>  |                     |                |
|  |  | <b>15. DATE BORING</b> <b>STARTED</b> 01-24-13 13:18 <b>COMPLETED</b> 01-24-13 13:22   |                     |                |
|  |  | <b>16. ELEVATION TOP OF BORING</b> -9.9 Ft.  |                     |                |
|  |  | <b>17. TOTAL RECOVERY FOR BORING</b> 17.2 Ft.  |                     |                |
|  |  | <b>18. SIGNATURE AND TITLE OF INSPECTOR</b><br>LC  |                     |                |

| ELEV.<br>(ft) | DEPTH<br>(ft) | LEGEND | CLASSIFICATION OF MATERIALS<br>Depths and elevations based on measured values  | %<br>REC. | BOX OR<br>SAMPLE | REMARKS   |
|---------------|---------------|--------|--|-----------|------------------|---|
| -9.9          | 0.0           |        |  |           |                  | Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.                   |
| -11.0         | 1.1           |        | SAND, fine grained, quartz, some shell hash, trace whole shell, whole shells up to 0.75", (2.0"x1.0") pocket of shell frags @ 1.0', light gray (2.5Y-7/1), (SW).   |           | 1                | Sample #1, Depth = 0.6'<br>Mean (mm): 0.32, Phi Sorting: 1.52<br>Fines (230): 1.13% (SW)  |
| -12.0         | 2.1           |        | SAND, fine grained, quartz, little shell hash, trace shell fragments, shell frags up to 0.5", light gray (5Y-7/1), (SW).   |           | 2                | Sample #2, Depth = 1.6'<br>Mean (mm): 0.30, Phi Sorting: 1.72<br>Fines (230): 1.32% (SW)  |
| -12.6         | 2.7           |        |  |           | 3                | Sample #3, Depth = 2.4'<br>Mean (mm): 0.99, Phi Sorting: 2.27<br>Fines (230): 1.12% (SW)  |
| -12.9         | 3.0           |        |  |           | 2                | Sample #4, Depth = 3.3'<br>Mean (mm): 0.48, Phi Sorting: 1.99<br>Fines (230): 0.95% (SW)  |
| -13.4         | 3.5           |        | Sandy SHELL HASH, trace shell fragments, trace whole shell, shell frags up to 1.0", whole shells up to 0.25", (3.0"x1.0") clayey pocket @ 2.2', light gray (2.5Y-7/2), (SW).   |           | 4                | Sample #5, Depth = 4.5'<br>Mean (mm): 0.17, Phi Sorting: 0.41<br>Fines (230): 1.24% (SP)  |
| -16.2         | 6.3           |        | SAND, fine grained, quartz, little shell hash, light gray (5Y-7/1), (SW).  |           | 5                | Sample #6, Depth = 6.7'<br>Mean (mm): 0.70, Phi Sorting: 1.92<br>Fines (230): 1.82% (SW)  |
| -17.0         | 7.1           |        | Shelly SAND, fine grained, quartz, shell component is shell hash and shell frags up to 1.0", light gray (2.5Y-7/2), (SW).  |           | 6                |   |
|               |               |        | SAND, fine grained, quartz, trace clay, trace shell fragments, trace shell hash, shell frags up to 1.5", (1.0"x0.25") clay pocket @ 3.7', light gray (5Y-7/1), (SP).   |           | 5                |   |
|               |               |        | SHELL HASH, some sand, trace shell fragments, trace silt, trace whole shell, shell frags up to 1.0", whole shells up to 0.75", gray (2.5Y-6/1), (SW).  |           |                  |   |
| -21.7         | 11.8          |        | SAND, fine grained, quartz, trace clay, trace shell fragments, trace shell hash, shell frags up to 1.0", clay typically distributed in pockets up to 0.25", (3.0"x2.0") pocket of shell hash and shell frags up to 2.0" @ 7.8", (3.0"x1.5") pocket of clayey shell frags up to 2.0" @ 8.6', (3.0"x1.0") clayey pocket @ 9.0', light gray (5Y-7/1), (SP). |           | 7                | Sample #7, Depth = 13.3'<br>Mean (mm): 1.09, Phi Sorting: 1.59<br>Fines (230): 1.09% (SW) |
| -24.3         | 14.4          |        |  |           | 8                | Sample #8, Depth = 14.5'<br>Mean (mm): 0.68, Phi Sorting: 1.90<br>Fines (230): 2.89% (SW) |
| -24.6         | 14.7          |        | Sandy SHELL HASH, trace shell fragments, trace silt, trace whole shell, shell frags up to 1.0", whole shells up to 0.75", (1.0"x0.25") coral frag @ 12.5', gray (2.5Y-6/1), (SW).  |           |                  |   |
| -27.1         | 17.2          |        | Sandy SHELL HASH, trace organics, trace silt, gray (5Y-5/1), (SW).   |           |                  |   |
| -29.9         | 20.0          |        | SAND, fine grained, quartz, little rock fragments, trace shell fragments, trace shell hash, rock frags up to 4.0", shell frags up to 0.25", light gray (2.5Y-7/1), (GP).   |           |                  |   |
|               |               |        | No Recovery.   |           |                  |   |
|               |               |        | End of Boring  |           |                  |   |

FLORIDA DEP ROSS AMVC-13.GPJ FL DEP ROSS.GDT 4/26/13