

MACTEC Engineering and Consulting 3200 Town Point Dr, Suite 100 Kennesaw, GA 30144

## FIELD BOREHOLE LOG

BOREHOLE NO.: MW-143

TOTAL DEPTH: 106

| PROJECT IN       | FORMATION               | DRILLING INFORMATION                       |               |  |  |
|------------------|-------------------------|--|---------------|--|--|
| PROJECT:         | DDMT                    | DRILLING CO.:                              | ProSonic      |  |  |
| SITE LOCATION:   | Memphis, TN             | DRILLER:                                   | Adam Marshall |  |  |
| JOB NO.:         | 6301-04-0002            | RIG TYPE:                                  | RotoSonic     |  |  |
| LOGGED BY:       | Kevin Arnold/Bill Payne | TOP OF CASING                              | 290.56'       |  |  |
| PROJECT MANAGER: | Tom Holmes              | ELEVATION:<br>GROUND SURFACE<br>ELEVATION: |               |  |  |
| DATE DRILLED:    | 5/12/04                 |  | 290.74'       |  |  |

NOTES:

1) Drilling technique: 0 to 106 ft, bgs 6-inch diameter borehole with rotosonic.

2) Well construction: 2-inch diameter schedule 40 PVC casing set to 93.8 ft, bgs with 20 ft of 0.01-inch slot well screen.

3) Well screens the fluvial aquifer.

4)  $\checkmark$  Stabilized water level measured on 6/25/04

| DEPTH           | SOIL<br>SYMBOLS                    | USCS          | SOIL DESCRIPTION  | FID<br>ppm | WELL<br>COMPLETION | WELL<br>DESCRIPTION |
|-----------------|------------------------------------|---------------|---|------------|--------------------|---------------------|
|                 |                                    | Fill          | coarse GRAVEL and trace coarse SAND, fill   | 0.0        |                    | Grouted Annulus     |
| -5-             |                                    | CL            | brown to yellowish orange silty CLAY, medium stiff, low plasticity  |            |                    |                     |
| -5-             |                                    | ML            | light brown to yellowish orange clayey SILT, medium stiff, low plasticity   | 0.0        |                    |                     |
| -10             |                                    |               |   | 0.0        |                    |                     |
| -15 -           |                                    |               |   | 0.0        |                    |                     |
| -20 -           |                                    | CL            | light brown, yellowish orange silty CLAY, low to medium plasticity, medium stiff  | 0.0        |                    |                     |
| -25 -           | -ZZZ2                              |               |   | 0.0        |                    |                     |
| -30 -           |                                    | SP            | yellowish orange, brown, fine grain SAND with coarse size chert nodules   | 0.0        |                    |                     |
| -35 -           |                                    | ML<br>SP      | fine sandy SILT trace clay with rounded chert nodules,<br>medium stiff   yellowish orange, brown, fine grain SAND trace rounded<br>chert nodules, loose | 0.0        |                    |                     |
| -40 -           |                                    |               |   | 0.0        |                    |                     |
| Create<br>Check | ed by: AMC 08/2<br>ked by: RNQ 09/ | 1/04<br>02/04 |   |            |                    | Page 1 of 2         |

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| DEPTH  | SOIL<br>SYMBOLS | USCS     | SOIL DESCRIPTION   | FID<br>ppm | WELL<br>COMPLETI | ON | WELL<br>DESCRIPTIO                               |
|--------|-----------------|----------|--|------------|------------------|----|--|
|        |                 |          |  |            |                  |    | ,  |
| -45    |                 |          |  | 0.0        |                  |    |  |
| -50 -  |                 |          |  | 0.0        |                  |    |  |
| -55 —  |                 | SP       | vellowish orange brown fine grain SAND with fine to  | 0.0        |                  |    |  |
| -60 -  |                 |          | yellowish orange, brown fine grain SAND with fine to<br>coarse gravel-sized chert nodules  | 0.0        |                  |    |  |
| -65 —  |                 |          |  | 0.0        |                  |    |  |
|        |                 | SW       | brown, fine to coarse grain SAND with some chert   |            |                  |    |  |
| -70    |                 | SW<br>SW | brown, fine to coarse grain SAND with some clay<br>yellowish-brown, fine to coarse grain SAND with fine<br>quartz gravel; interbedded clay lenses 73.2'-73.4' and 80-<br>80.5' | 0.0        |                  |    |  |
| -75 -  |                 |          |  | 0.0        |                  |    | Bentonite Seal<br>Sand Pack /<br>Screened Interv |
| -80 -  |                 |          |  | 0.0        |                  |    |  |
| -85 -  |                 |          |  | 0.0        |                  |    |  |
| -90 -  |                 | SP       | brown to very light brown, fine grain SAND with some fine gravel   |            |                  |    |  |
|        |                 | SW<br>CH | brown, fine to coarse grain SAND and some fine to<br>coarse gravel<br>dark gray CLAY with some reddish brown streaks from<br>92.5' to 95.5'                                    | NA         |                  |    |  |
| -95    |                 | СН       | dark gray CLAY with some reddish brown streaks from 92.5' to 95.5'   | NA         |                  |    | Bentonite Plug                                   |
| -100   |                 | СН       |  | NA         |                  |    |  |
| -105 - |                 |          | dark gray silty CLAY   | NA         |                  |    |  |