



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

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-163

TOTAL DEPTH: 86'


PROJECT INFORMATION

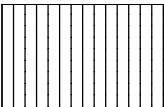
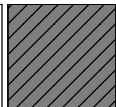
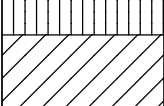
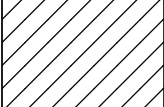


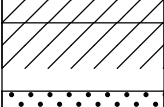
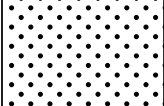
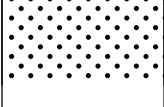

PROJECT: **DDMT**
SITE LOCATION: **Memphis, TN**
JOB NO.: **6301-04-0019**
LOGGED BY: **Kevin Arnold**
PROJECT MANAGER: **Tom Holmes**
DATE DRILLED: **10/07/04**

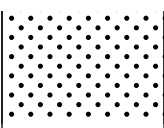
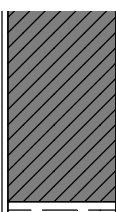
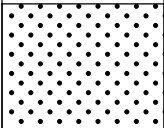
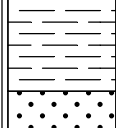


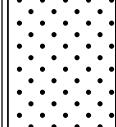
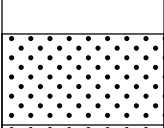
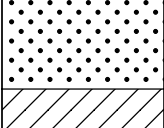
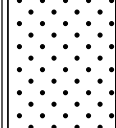
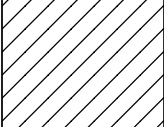
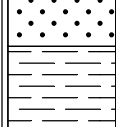

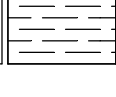


DRILLING INFORMATION

DRILLING CO.: **ProSonic**
DRILLER: **David Wilcox**
RIG TYPE: **RotoSonic**
TOP OF CASING
ELEVATION: **290.63**
GROUND SURFACE
ELEVATION: **290.81**

NOTES:

- 1) Drilling technique: 0 to 86.0 ft, bgs 6-inch diameter borehole with roto sonic.
- 2) Well construction: 2-inch diameter schedule 40 PVC casing set to 76.51ft, bgs with 20 ft of 0.01-inch slot well screen.
- 3) Well screens the fluvial aquifer.
- 4)  Stabilized water level measured on 10/08/04

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	FID ppm	WELL COMPLETION	WELL DESCRIPTION
0		ML	strong brown (7.5 YR 5/6) clayey SILT, non-plastic, soft, loose			Grouted Annulus
-5		CL	strong brown (7.5 YR 5/6) silty CLAY, low to medium plasticity, medium stiff, moist	0.0		
-10			No Recovery	0.0		
-15		CL	strong brown (7.5 YR 5/6) silty CLAY, low to medium plasticity, medium stiff, moist	0.0		
-20			No Recovery	0.0		
-25		CL	strong brown (7.5 YR 5/8) silty CLAY, with trace coarse sand, slightly plastic, medium stiff to stiff, moist	0.0		
-30		SP	red (2.5 YR 5/8) slightly clayey, fine to coarse, rounded to subrounded gravelly, fine grain SAND, well sorted, loose	0.0		
-35			No Recovery	0.0		
-40			No Recovery			

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	FID ppm	WELL COMPLETION	WELL DESCRIPTION
-45		SP	yellow (10 YR 7/6) fine to medium grain SAND with trace fine gravel, loose	7.0		
			No Recovery			
-50		SP	yellow (10 YR 7/8) fine grain SAND, with trace coarse gravel, loose	0.4		Bentonite Seal
-55			No Recovery	0.0		
-60		SP	reddish yellow (7.5 YR 6/8) fine to medium grain SAND, with trace fine to coarse, well rounded gravel, loose			Sand Pack / Screened Interval
-65			No Recovery			
-70		SP	reddish yellow (7.5 YR 6/8) fine to medium grain SAND, with trace fine to coarse, well rounded, gravel, loose			
-75		SP	strong brown (7.5 YR 5/6) fine to medium grain SAND, well sorted, very loose			
-80		CL	strong brown (7.5 YR 5/6) to gray (7.5 YR 6/1) slightly silty CLAY, highly plastic, hard			Bentonite Plug
-85		CL	gray (7.5 YR 6/1) slightly silty CLAY, highly plastic, hard			
Boring Terminated at 86 ft, bgs						