



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


# FIELD BOREHOLE LOG

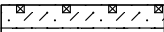
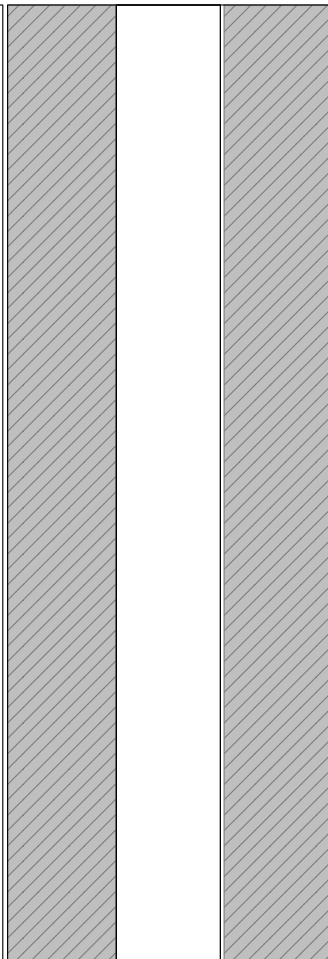
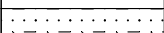
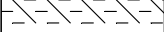

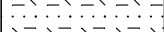
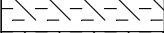
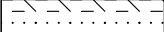
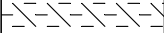

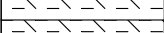
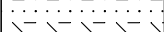
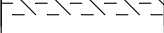
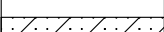
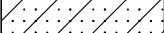
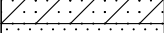

BOREHOLE NO.: **DR1-7**

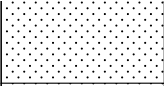

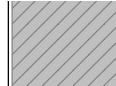


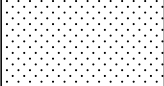

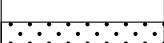
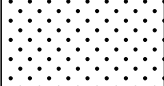
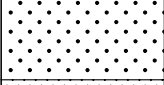
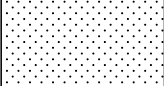

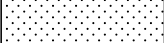
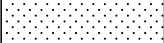
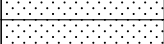
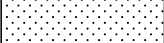
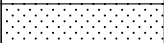
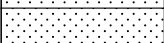
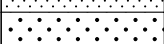
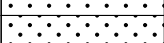


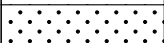
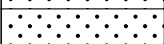


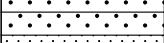


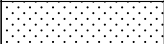


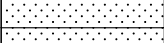
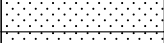
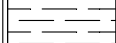
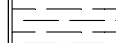
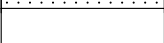
TOTAL DEPTH: **146**

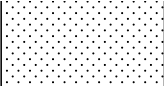


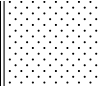
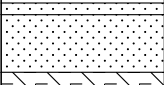








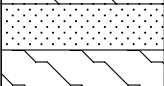


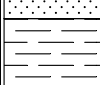



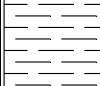



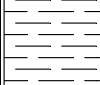
PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	<b>DDMT</b>	DRILLING CO.:	<b>ProSonic</b>
SITE LOCATION:	<b>Memphis, TN</b>	DRILLER:	<b>David Wilcox</b>
JOB NO.:	<b>6301-04-0002</b>	RIG TYPE:	<b>RotoSonic</b>
LOGGED BY:	<b>Amy Callaway</b>	TOP OF CASING ELEVATION:	<b>289.15'</b>
PROJECT MANAGER:	<b>Tom Holmes</b>	GROUND SURFACE ELEVATION:	<b>289.46'</b>
DATE DRILLED:	<b>6/18/04</b>		

## NOTES:

- 1) Drilling technique: 0 to 146 ft, bgs 6-inch diameter borehole with roto sonic.
- 2) Well construction: 2-inch diameter schedule 40 PVC casing set to 129 ft, bgs with 20 ft of 0.01-inch slot well screen.
- 3) Well screens the fluvial aquifer.
- 4)  Stabilized water level measured on 6/25/04

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	FID ppm	WELL COMPLETION		WELL DESCRIPTION
0		GC	dark yellowish brown (10YR 4/6) clayey GRAVEL	0.0			Grouted Annulus
		ML	dark yellowish brown (10YR 4/4) SILT				
-5		CL	dark yellowish brown (10YR 4/4) silty CLAY	0.0			
-10		CL	strong brown (7.5YR 4/6) CLAY with some silt	0.0			
-15		CL	strong brown (7.5YR 5/8) and light brownish gray (10YR 6/2) CLAY	0.0			
		NR	No recovery	0.0			
-20		SC	strong brown (7.5YR 4/6) very clayey fine grain SAND	0.0			
		SP	yellowish red (5YR 4/6) fine to medium grain SAND with some clay	0.0			
-25		SC	dark red (10R 3/6) and reddish gray (10R 6/1) and strong brown (7.5YR 5/6) clayey fine grain SAND	0.0			
		NR	No recovery	0.0			
-30		SP	red (2.5YR 4/8) fine grain SAND	0.0			
		SP	red (2.5YR 4/8) fine grain SAND with gravel	0.0			
-35		CL	brownish yellow (10YR 6/6) CLAY	0.0			
		SP	yellowish red (5YR 5/8) fine grain SAND with some gravel	0.0			
-40		NR	No recovery				
		SW	yellowish red (5YR 5/8) gravelly, well-graded SAND	3.7			

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	FID ppm	WELL COMPLETION		WELL DESCRIPTION
-45		SP	reddish yellow (5YR 6/8) fine grain SAND				
		SP	brownish yellow (10YR 6/8) fine grain SAND	0.0			
		CL	red (2.5YR 4/8) and pink (5YR 7/3) CLAY with trace of sand				
-50		SP	brownish yellow (10YR 6/8) gravelly coarse grain SAND	0.0			
-55				0.0			
		NR	No recovery				
-60		SW	brownish yellow (10YR 6/8) gravelly well graded SAND	0.0			
-65		SP	yellowish brown (10YR 5/8) medium grain SAND	1.1			
-70		SP	yellowish brown (10YR 5/8) very gravelly, coarse grain SAND, wet	0.0			
-75				5.1			
-80		SP	brownish yellow (10YR 6/8) fine grain SAND				
		SP	yellow (2.5Y 7/6) fine grain SAND	0.0			
		SP	brownish yellow (10YR 6/8) gravelly coarse grain SAND				
-85		SW	yellow (2.5Y 7/6) gravelly well graded SAND	0.0			
		SW	yellowish brown (10YR 5/6) gravelly, medium to coarse grain SAND				
-90				0.0			
		SW	yellowish brown (10YR 5/8) gravelly fine grain SAND, moist				
-95		SW	olive yellow (2.5Y 6/6) gravelly, fine grain SAND, moist				
		SW	olive yellow (2.5Y 6/6) gravelly, fine grain SAND, with some clay, moist	0.0			
		SP	pale yellow (2.5Y 8/2) fine grain SAND, wet				
-100		SP	pale yellow (2.5Y 8/2) gravelly medium grain SAND, wet	NA			
-105		SP	pale yellow (2.5Y 7/4) fine to medium grain SAND, wet				
		SP	pale yellow (2.5Y 7/4) gravelly, medium grain SAND, wet	NA			Bentonite Seal
		CL	light gray (2.5Y 7/2) and reddish yellow (7.5YR 6/8) CLAY				
-110		NR	no recovery				
		SP	pale yellow (2.5Y 7/4) to yellowish brown (10YR 5/6) gravelly, coarse grain SAND, wet	NA			
-115			yellowish red (5YR 5/6) gravelly coarse grain SAND with some cobbles, wet				
		SP	no recovery	NA			
		SP	yellowish red (5YR 5/6) gravelly coarse grain SAND				Sand Pack / Screened Interval

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	FID ppm	WELL COMPLETION	WELL DESCRIPTION
-120		SP	with some cobbles, wet	NA	  	Bentonite Plug
-125			reddish yellow (7.5YR 6/8) fine grain SAND, wet	NA		
		CL	reddish yellow (7.5YR 6/8) gravelly coarse grain SAND, with trace of clay and some cobbles, wet	NA	  	
-130		CH	reddish yellow (7.5YR 6/8) and reddish gray (10YR 6/8) and red (10R 5/6) very fine sandy CLAY	NA	  	
-135		SP	dark gray (5YR 4/1) fat CLAY	NA	  	
-140		CH	yellowish red (5YR 5/8) and reddish gray (10R 6/1) fine grain SAND with trace of clay	NA	  	
-145			dark gray (5YR 4/1) fat CLAY	NA	  	
			Boring Terminated at 146 feet bgs	NA	