



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

# FIELD BOREHOLE LOG

BOREHOLE NO.: **DR1-1**

TOTAL DEPTH: **156.00**


## PROJECT INFORMATION

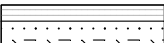
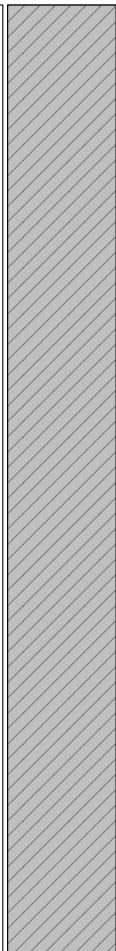

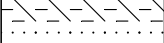
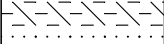
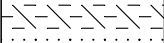
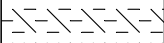
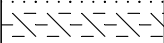
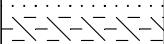

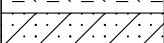
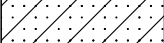
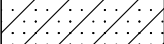
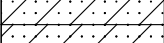
PROJECT: **DDMT**  
SITE LOCATION: **Memphis, TN**  
JOB NO.: **6301-04-0002**  
LOGGED BY: **Kevin Arnold**  
PROJECT MANAGER: **Tom Holmes**  
DATE DRILLED: **5/10/04**

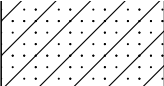
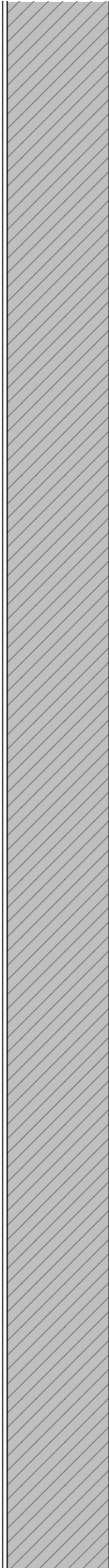

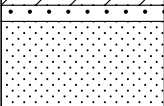
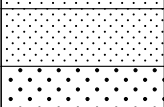
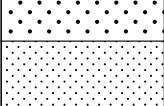
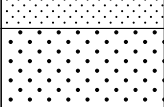
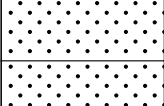
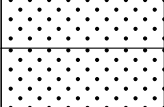
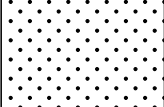
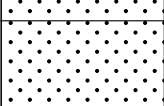
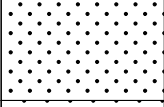
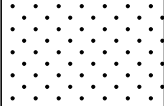
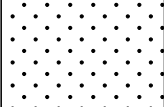
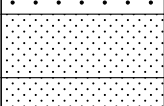
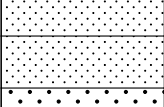
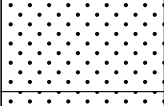
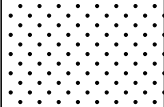
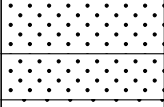

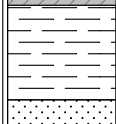
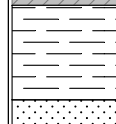
## DRILLING INFORMATION

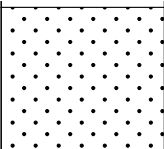
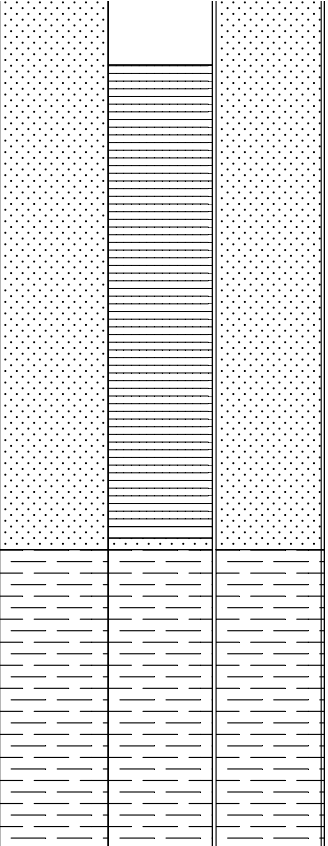
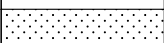
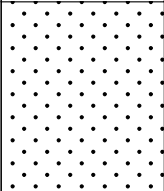
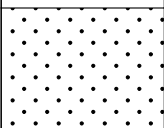
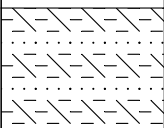
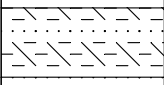
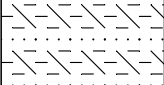
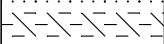
DRILLING CO.: **PROSONIC**  
DRILLER: **David Wilcox**  
RIG TYPE: **RotoSonic**  
TOP OF CASING  
ELEVATION: **293.09'**  
GROUND SURFACE  
ELEVATION: **293.26'**

### 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 142 ft, bgs with 20 ft of 0.01-inch slot well screen.
- 3) Well screens the fluvial aquifer.
- 4)  Stabilized water level measured on 6/24/04

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	FID ppm	WELL COMPLETION			WELL DESCRIPTION
0		ASPHALT CL	Asphalt and road base	0.0				Grouted Annulus
-5			brown (2.5 YR 5/4) with black, orange and gray mottles, slightly sandy, silty CLAY and some well rounded quartz gravel, cohesive, some plasticity, moderately soft	0.0				
-10				0.0				
-15		SC	brownish-yellow (10YR 6/6-6/3) with light gray (10YR 7/1) mottled, silty, clayey, rounded, very fine to medium grain SAND, trace of very coarse SAND and pebbles, loose, moist	0.0				
-20				0.0				
-25		SC	red (2.5YR 4/3) mottled with white (2.5YR 8/1) and reddish yellow (7.5YR 7/8), silty, clayey, very fine to medium SAND, dense, stiff	0.0				
-30				0.0				
-35		SC	brownish-yellow (10YR 6/8) round to subrounded, fine to medium grain SAND, loose, moderately well sorted, dry	0.0				
-40				0.0				
		SM	yellow (10YR 7/6) mottled with yellowish red (5YR 5/6) clayey, silty, very fine to medium SAND, moderately dense, slightly plastic, moist	0.0				
				0.0				
		SC	red (2.5YR 4/8) mottled with strong brown (7.5YR 5/8) and white (7.5YR 8/1) clayey very fine to fine SAND,	0.0				

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	FID ppm	WELL COMPLETION		WELL DESCRIPTION
-45		SW SP	stiff, dense, some cohesiveness, friable, moist	10.8/0.0			
			yellowish brown (10YR 5/6) gravelly, round to subrounded, fine to coarse grain SAND, loose				
-50		SP	very pale brown (10YR 7/3 - 7/4) slightly silty, very fine to medium grain SAND, trace subrounded quartz pebbles, loose, dry	0.0			
-55		SW	yellow (10YR 7/6) gravelly, rounded, fine to medium grain SAND, moderately loose, moderately well sorted	0.0			
		SP	yellow (10YR 7/6) slightly silty, very fine to medium grain SAND, trace chert granules and pebbles, trace rounded coarse to very coarse SAND, poorly sorted, loose, very dry	6.1/0.0			
-60		SW	rounded slightly silty, fine to very coarse SAND, trace rounded to subrounded, chert gravel and pebbles, some fossil clasts	0.0			
-65		SW	dark yellowish-brown (10YR 4/6) slightly silty fine to very coarse SAND	3.0/0.0			
-70		SW	yellowish brown (10YR 5/4) well rounded to subangular gravelly, very fine to very coarse SAND, trace of silt, moderately loose, very poorly sorted, slightly moist	6.6/0.0			
-75		SW	dark yellowish brown (10YR 4/4) angular gravelly, very fine to very coarse SAND, very poorly sorted, moist	0.1/0.0			
-80		SM	olive yellow (2.5Y 6/6) well rounded very gravelly, silty, very fine to medium grain SAND, very poorly sorted, with trace of well rounded very large chert clasts, loose, dry	0.0			
-85		SP	pale yellow (2.5Y 7/4) medium grain SAND, trace dark heavy minerals, loose, moderately well sorted, wet	1.0/0.0			
-90		SP	olive yellow (2.5Y 6/8) slightly silty, very fine to medium grain SAND, trace dark heavy minerals, moderately well sorted, moderately loose, wet	0.0			
-95		SP	pale yellow (2.5Y 7/4) very fine to medium grain SAND, trace dark minerals, trace mica, moderately loose, wet	0.3/0.0			
-100		SW	light olive brown (2.5Y 5/4) with gray (2.5Y 5/1) mottles, well rounded, gravelly, very fine to very coarse SAND, loose, very poorly sorted, wet	0.0			
-105		SW	light yellowish brown (2.5Y 6/4) and pale yellow (2.5Y 7/4) rounded to well rounded gravelly very fine to very coarse SAND	0.0			
-110		SW	yellowish-orange, rounded, fine to coarse grain SAND, very loose	0.0			
-115		SM	yellowish-orange, silty fine grain SAND				
							Bentonite Plug

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	FID ppm	WELL COMPLETION	WELL DESCRIPTION
-120		SM	reddish-brown CLAY lense, medium stiff, medium plasticity	NA		Sand Pack / Screened Interval
-125		SP	yellowish-orange, light brown, silty fine grain SAND, loose to medium dense	NA		
-130		SM	light brown, light gray, silty, fine grain SAND, trace clay, medium dense, highly plastic	NA		
-135		SM	yellowish-orange, light brown, light gray, silty fine grain SAND, loose, poorly to medium well graded	NA		
-140		CH	yellowish-orange (10 YR 7/6 and 7/8) to brownish yellow (10 YR 6/8), hard, dense, tough, CLAY, plastic, moist	NA		Back - filled with bentonite
-145			gray (10 YR 7/1) to yellow (10 YR 8/8), hard, dense, tough, CLAY, plastic, moist	NA		
-150			gray (2.5 YR 5/1) to gray (5 Y 5/1), massive, very stiff, CLAY, plastic, moist	NA		
-155			Boring Terminated at 156 ft, bgs	NA		