



MACTEC Engineering and Consulting  
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# FIELD BOREHOLE LOG


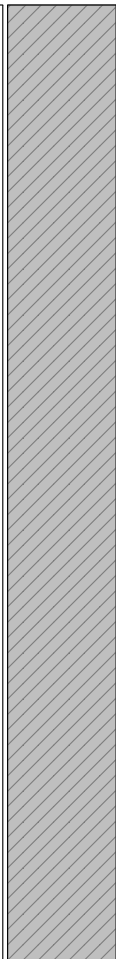



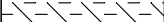
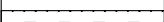
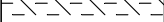




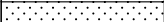



BOREHOLE NO.: **DR1-5A**


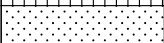
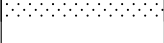
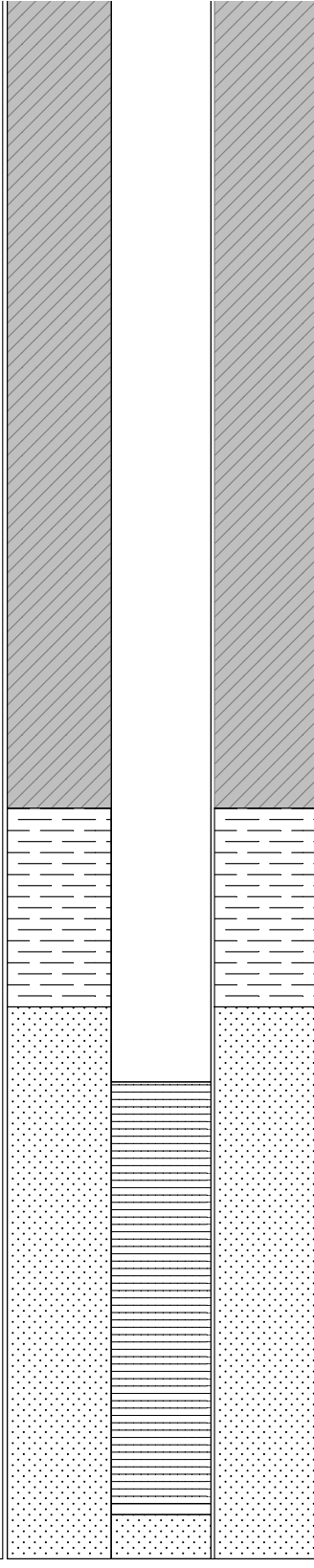
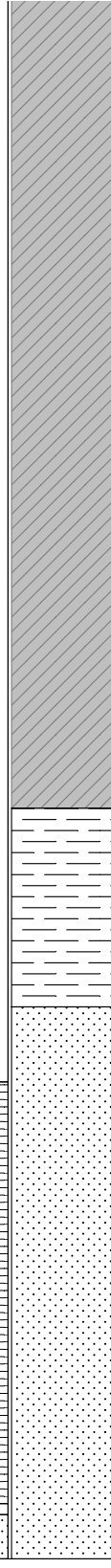

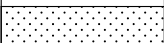

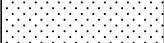
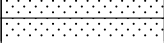
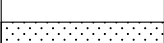

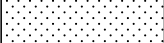


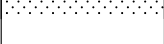

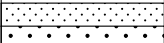




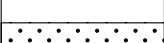


TOTAL DEPTH: **112**

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>Kevin Arnold</b>	TOP OF CASING ELEVATION:	<b>294.61'</b>
PROJECT MANAGER:	<b>Tom Holmes</b>	GROUND SURFACE ELEVATION:	<b>294.88'</b>
DATE DRILLED:	<b>5/23/04</b>		

## NOTES:

- 1) Drilling technique: 0 to 112 ft, bgs 6-inch diameter borehole with roto sonic.
- 2) Well construction: 2-inch diameter schedule 40 PVC casing set to 110.8 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		FILL	coarse to cobble size gravel with clay, fill	NR				Grouted Annulus
		CL	dark brown silty CLAY, medium to low plasticity, stiff					
-5		NR	no recovery	NR				
		CL	dark brown, light gray silty CLAY, low plasticity, medium stiff to stiff	NR				
-15		ML	reddish brown well sorted, fine sandy SILT and trace clay, non-plastic	NR				
-20				NR				
-25				NR				
		NR	no recovery	NR				
		SM	reddish brown silty, fine grain SAND, medium dense, trace rounded to subrounded, coarse to medium size chert fragments	NR				
-30		SP	light brown, yellow fine grain SAND, medium to coarse size chert nodules, loose	NR				
-35		SP	light brown, yellow fine grain SAND, medium to coarse size chert nodules, loose, with 2% cobble size chert fragments	NR				
		NR	no recovery	NR				
-40		SM	light brown, yellow fine grain SAND, medium to coarse size chert nodules, loose, with 2% cobble size chert fragments	NR				

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	FID ppm	WELL COMPLETION		WELL DESCRIPTION
-45	  	ML ML SP	brownish orange clayey SILT, low plasticity, medium stiff to stiff fine sandy SILT with rounded coarse size chert nodules	NR			
		NR	silty fine grain SAND with clay no recovery				
-50		SP	yellowish brown fine grain SAND, very loose with rounded to subrounded chert nodules - medium to coarse size (chert fragments 5-15%)	NR			
-55	 	SP NR	yellowish brown fine grain SAND, very loose with rounded to subrounded chert nodules - medium to coarse size (chert fragments 5-15%), with cobble size chert (<5%) no recovery	NR			
-60	 	SP NR	rounded to very rounded, fine grain SAND, trace medium grain sand (25%) with well sorted, coarse size chert nodules, loose no recovery	NR			
-65		NR	no recovery	NR			
-70	 	SP SW	reddish brown fine grain SAND rounded medium size chert nodules fine grain SAND with rounded to very rounded, well graded, medium to cobble size chert nodules (50%)	NR			
-75	 	SP NR	light gray fine grain SAND, very soft yellowish brown, well graded, fine to coarse SAND no recovery	NR			
-80		SW	fine to coarse grain SAND with trace rounded to subrounded coarse to cobble size chert fragments, loose to very loose	NR			
-85		NR	no recovery	NR			
-90		SW	fine to coarse grain SAND with trace rounded to subrounded coarse to cobble size, chert fragments, loose to very loose, moist	NR			
-95		NR	no recovery	NR			
-100		SP	yellowish orange fine grain SAND with 25% rounded to very rounded coarse size chert nodules, wet	NR			
-105	  	SP NR SP	yellowish orange fine grain SAND, wet no recovery yellowish orange fine grain SAND with very rounded coarse size chert fragments (15-25%), wet	NR			
-110		SP	yellowish orange fine grain SAND, very loose, wet	NR			
			Boring Terminated at 112 ft, bgs				

Bentonite Seal

Sand Pack /  
Screened Interval