



FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A

TOTAL DEPTH: 171 ft.

PROJECT INFORMATION

PROJECT: DDMT - Main Installation, New Plume Wells

PROJECT NO.: 3202-019

SITE LOCATION: MI

PROJECT MANAGER: T. Holmes

FIELD STAFF: E. Van Schaik

BOREHOLE STARTED: 8/7/2006 10:45:00 AM

BOREHOLE FINISHED: 8/7/2006 4:55:00 PM

DRILLING INFORMATION

DRILLING CO.: Prosonic

DRILLER: A. Marshall

DRILLING METHOD/RIG: Sonic

BOREHOLE DIAMETER: 6-in.

GROUND SURFACE ELEVATION: 301.84 (ft, msl)

WATER DEPTH/ DATE: 108.52 ft.toc - 8/14/06

BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Asphalt and gravel		Grouted Annulus
10		CL Clay - brown (7.5YR 4/4) low to medium plasticity, dry		
20		CL Clay - brown (7.5YR 4/4) medium plasticity, dry		
30		CL Clay - red (2.5YR 5/6) medium plasticity, dry		
		CL Sandy clay - yellowish red (5YR 5/8) very fine grained sand, medium plasticity, dry		

Created By: WTR

Checked By: EVS



FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A

TOTAL DEPTH: 171 ft.

Depth	Soil Symbol	Soil Description	Well Completion		Well Description
		SC Clayey sand - reddish yellow (5YR 6/6) very fine grained, dry			
		SC Clayey sand - yellowish red (5YR 5/8) fine grained, dry			
40					
		CL Gravelly Clay - yellowish red (5YR 5/6) fine gravel sub angular to sub rounded, dry			
		SW Gravelly sand - strong brown (7YR 4/6) fine gravel, fine grained, dry			
50		SP Sand - reddish yellow (5YR 6/8) fine to medium grained, dry			
		SP Sand - yellowish red (5YR 4/6) fine grained, dry			
60					

Created By: WTR

Checked By: EVS

PAGE: 2 of 6



FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A

TOTAL DEPTH: 171 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravelly sand - reddish yellow (5YR 6/8) fine to medium gravel, dry		
		SW Gravelly sand - yellow (10YR 7/6) medium grained, fine to medium gravel, sub angular to sub rounded, dry		
70		SW Gravelly sand - brownish yellow (10YR 6/8) medium grained, fine to medium gravel, sub angular to sub rounded, dry		
		SW Gravelly sand - reddish yellow (7.5YR 6/8) fine to medium grained, fine gravel, dry		
80		SW Gravelly sand - strong brown (7.5YR 5/8) fine to medium gravel, very silty, dry		
		SW Gravelly sand - reddish yellow (7.5YR 6/8) fine grained, fine to medium gravel, dry		
90		SW Gravelly sand - strong brown (7.5YR 5/8) fine grained, fine gravel, sub angular to sub rounded, dry		

Created By: WTR

Checked By: EVS

PAGE: 3 of 6



FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A

TOTAL DEPTH: 171 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
100		SP Sand - reddish yellow (5YR 7/6) 4-5-in. pink clay (5YR 7/6) at 95-ft.		
		CL Clay - light gray (7.5YR 7/1) highly plastic, moist		
		SP Gravelly sand - reddish yellow (7.5YR 6/8) fine grained, moist		
		SW Gravelly sand - yellow gravelly (10YR 7/6) very fine to fine grained sand, fine gravel, sub angular to sub rounded, moist		
		SW Gravelly sand - yellowish brown (10YR 5/8) medium grained, fine gravel, A/A, moist		
110		SW Gravelly sand - strong brown (7.5YR 5/8) medium grained, fine to coarse gravel, A/A, moist		
		SW Gravelly sand - brownish yellow (10YR 6/8) fine to medium grained, fine to coarse gravel, A/A, moist		
120				

108.52

Created By: WTR

Checked By: EVS








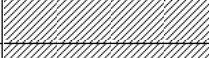







PAGE: 4 of 6



FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A

TOTAL DEPTH: 171 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
130		CL Sandy clay - gray (10 YR 5/1) very fine grained sand, moist	 	
		CL Sandy clay - gray (10 YR 5/1) very fine grained sand, moist		
		CL Sandy clay - gray (10 YR 5/1) low plasticity, moist		
		CL Clay - dark grey (10YR 4/1) A/A, moist		
		SC Clayey sand - light brownish gray (10YR 6/2) very fine grained, moist		
140		CL Clay - light brownish gray (10YR 6/2) moist	 	Bentonite Plug
		SP Sand - pale brown (10YR 6/3) very fine grained, moist		
		SP Sand - pale brown (10YR 7/3) very fine grained, moist		
150			 	Sand Pack

Created By: WTR

Checked By: EVS



FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A

TOTAL DEPTH: 171 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Sand Pack
		SP Sand - light gray (10 YR 7/1) very fine grained, moist		Screened Interval
		SP Sand - gray (10 YR 5/1) fine grained, moist		
160		CL Clay - gray (10 YR 5/1) sandy, very fine grained, low plasticity, moist		
		CL Clay - gray (10 YR 5/1) low plasticity (stiff), moist		Bentonite Backfill
170				
		End of Log		
180				

Created By: WTR

Checked By: EVS

PAGE: 6 of 6