APPENDIX B

BORING LOGS AND WELL CONSTRUCTION LOGS

BORING LOGS

Boring Log Report Form

Boring No. SI17-GWS01 Page 1 of 2

Client USACE
Site Location SI17
ESE Field Crew Leader: Rich Hill
Date Start 7-21-98 Finish 7-21-98
Contractor: Graves Services
Boring Depth 25' Diameter 2"
Boring Location See Map

ESE Project FTMC-SI
ESE Project No. 3196314G
ESE Project Manager William Elliott
Drill Type Geoprobe
Driller Josh Tonry
Geologist: ~~Rich Hill~~ Rich

Depth (ft)	Sample Interval	Sample #	Sample Type	Blows per 6 Inches	Soil Headspace	Breathing Zone	DESCRIPTION	USCS Classification	REMARKS
1							Silty sand w/ ~30% silt in fine sand; Dk. Brown (7.5 YR 3/2) to 6" to Brown (10YR 5/3); Non-plastic; loose; sl. moist. (0-3')	SM	
2									
3							Clayey sand w/ ~35% clay; Yellow Red (5YR 4/6); Low to mod. plastic; firm; sl. moist - few pieces of rhodish, cherty gravel at top (3-10')	SC	
4									
5									
6							Shale (~1") shale lense at 5 1/2'		
7							Shale (2-3") lenses of gray rock (SS?) @ 11.5 + 12'		
8									
9							Reamed from 12-25' w/ no samples - drilled like rock/clay w/ no water		
10									
11							Total Depth 25'		

Boring Log Report Form

Boring No. SI17-GWS02 Page 1 of 2

Client USACE
Site Location SI 17
ESE Field Crew Leader: Rich Hill
Date Start 7-21-98 Finish 7-21-98
Contractor: Graves Services
Boring Depth 12' Diameter 2"
Boring Location SEE MAP

ESE Project FTMC-SI
ESE Project No. 3196314G
ESE Project Manager William Elliott
Drill Type Geoprobe
Driller Josh Towry
Geologist: ~~Rich Hill~~ REH

Depth (ft)	Sample Interval	Sample #	Sample Type	Blows per 6 Inches	Soil Headspace	Breathing Zone	DESCRIPTION	USCS Classification	REMARKS
1							SILTY SAND w/ ~30% SILT; BROWN (10YR 5/3) ~~[illegible]~~ ~~THIN~~ NON-PLASTIC; LOOSE; SL. MOIST. (0-3')	SM	
2									
3							CLAYEY SAND w/ ~30% CLAY: YELLOW BRO (5YR 4/6); LOW PLASTIC; FIRM; SL. MOIST (3-12')	SC	
4									
5									
6							SHALE (3-4") LENSES OR ROCK (SS) AT ~ 8' + 9' + 11' ROCK IS GRAY + GRAINY w/ BLOCKY FRACTURE		
7									
8									
9									
10									
11							TOTAL DEPTH 12'		

Boring Log Report Form

Boring No. SI17-GWS03 Page 1 of 2

Client USACE
Site Location SI17
ESE Field Crew Leader: Rich Hill
Date Start 7-21-97 Finish 7-21-97
Contractor: Graves Services
Boring Depth 12' Diameter 2"
Boring Location See Map

ESE Project FTMC-SI
ESE Project No. 3196314G
ESE Project Manager William Elliott
Drill Type Geoprobe
Driller Josh Tonks
Geologist: ~~Rich Hill~~ RCW

Depth (ft)	Sample Interval	Sample #	Sample Type	Blows per 6 Inches	Soil Headspace	Breathing Zone	DESCRIPTION	USCS Classification	REMARKS
1							Silty sand w/ ~70% silt & fine sand; brown (10YR 5/3); non-plastic; loose; v. sl. moist; rarely gravel. (0-1)	SM	Collected sample SS03A (EFM 38 # 47) from 0-1'
2							Coal chunks to black gravel (10YR 6/1) (1-3')		
3							Coal chunks to reddish brown (5YR 4/4) + some clay (3-4')		Collected sample SS03B (EFM 38 # 48) from 3-4'
4								SC	
5							Clayey sand w/ ~40% clay w/ fine sand + some coarse grains; red (2.5YR 4/6); low to med. plastic; stiff; sl. moist - some small (1-2") shale chunks at 7', 8', 10' & 11' -		
6									
7									
8									
9							Grades to sl. more clay at 11-12'		
10									
11									
							TOTAL DEPTH 12'		

Boring Log Report Form

Boring No. SI17-GWS04 Page 1 of 2

Client USACE
Site Location SI 17
ESE Field Crew Leader: Rich Hill
Date Start 7-21-98 Finish 7-21-98
Contractor: Graves Services
Boring Depth 12' Diameter 2"
Boring Location SEE MAP

ESE Project FTMC-SI
ESE Project No. 3196314G
ESE Project Manager William Elliott
Drill Type Geoprobe
Driller JOSH TONAY
Geologist: ~~Rich Hill~~ RCH

Depth (ft)	Sample Interval	Sample #	Sample Type	Blows per 6 Inches	Soil Headspace	Breathing Zone	DESCRIPTION	USCS Classification	REMARKS
							CLAYEY SAND w/~35% CLAY; PRD (2.5YR 4/6); MOD PLASTIC; FIRM; SL MOIST (0-5')	SC	CONCRETE SAMPLE 8808 (EFM 38*54) FROM 0-1'
							~~PX~~ SMAL- LENSE (~6") OF GRAY, VERY WEATHERED ROCK (LST) (5-5.5)		
							CLAYEY SAND w/~40% CLAY; MOTTLED YELLOW-BROWN (10YR 5/6); MOD PLASTIC; STIFF; SL. MOIST (5.5-12')	PX SC	
							COLOR CHANGE @ ~9' TO MOTTLED LT. GRAY (10YR 7/1) - ALSO GRADES TO MORE CLAY + HIGHER PLASTIC		
							MOTTLING CONTINUES TO DEPTH		
							TOTAL DEPTH 12'		

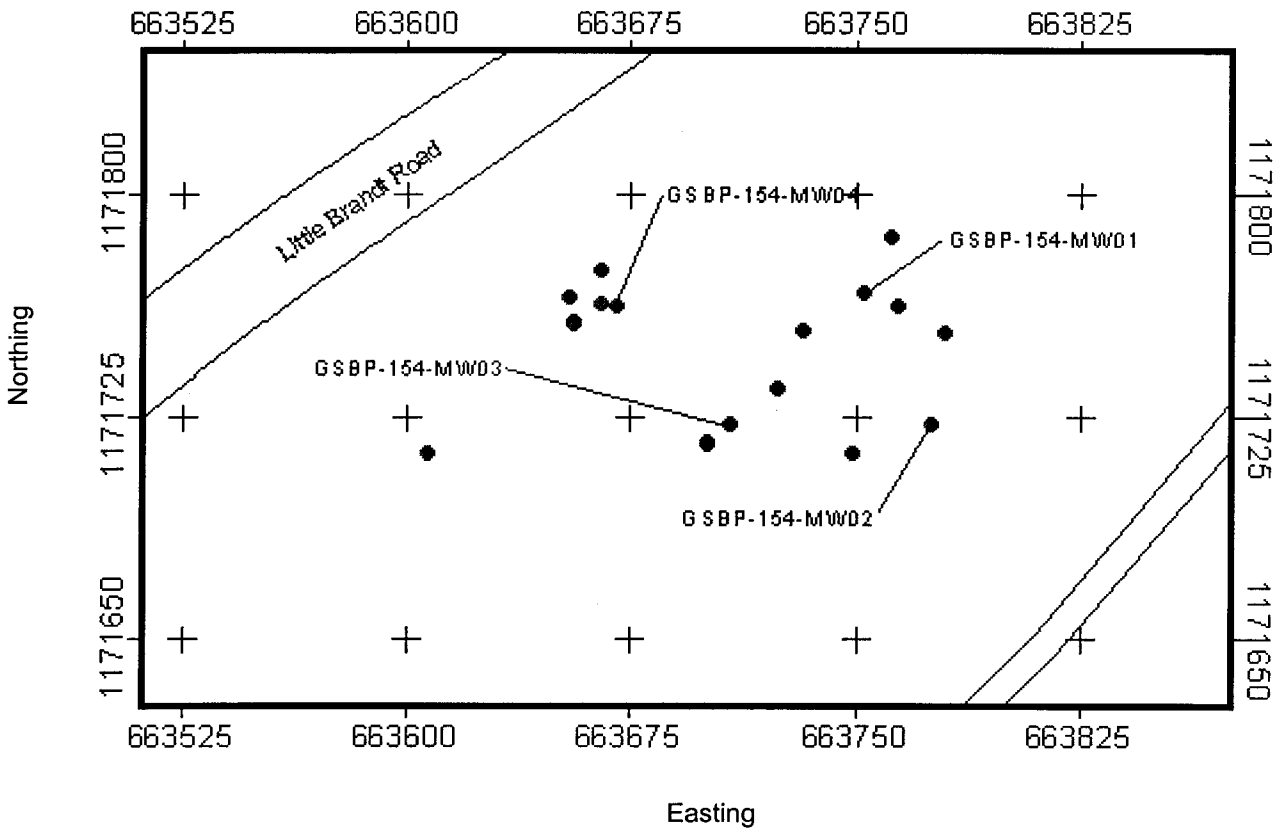
HTRW DRILLING LOG

District: **Mobile USACE**		HOLE NUMBER GSBP-154-MW01
1. Company name: **IT Corporation**	2. Drill Subcontractor: MILLER DRILLING	Sheet 1 of 12 sheets

3. Project: Fort McClellan	4. Location: **Calhoun County, Alabama**
5. Name of driller: Ken Gobell	6. Mfr. designation of drill: CME-550
7. Sizes and types of drilling and sampling equipment: Hollow Stem Auger 5'x4" Auger, 2'x2" Split Spoon	8. Hole location: Ground Scars/Trenches, Parcel 154 9. Surface elevation (feet above mean sea level): 872.02 10. Date started: 10/13/99 — 11. Date completed: 10/14/99
12. Overburden thickness (feet bgs): 105	15. Depth groundwater encountered (feet bgs): 92
13. Depth drilled into rock (feet bgs): 0	16. Depth to water and elapsed time after drilling completed (feet bgs): NA
14. Total depth of hole (feet bgs): 105	17. Other water level measurements (specify): NA

18. Geotechnical samples:	Collected:	Disturbed:	Undisturbed:	19. Total no. of core boxes: NA		
	X					
20. Samples for chemical analysis:	VOC	Metals	Other (specify)	Other (specify)	Other (specify)	21. Total core recovery:
	X	X	SVOC	Pesticides	PCB, Exp.	NA
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
		X		JAMES DENDY		

LOCATION SKETCH/COMMENTS:



bgs= below ground surface
NA = Not applicable

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 2 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	0	ml: Orange SILT, some coarse Sand.			Organic Vapor = 0ppm				
	1								
870	2								
	3								
	4		ml		Organic Vapor = 0ppm			5 13 16 20	Rec 2.0'/2.0'
	5								
	6				Organic Vapor = 0ppm				
865	7								
	8								
	9	ml: Orange SILT, some gray Clay.			Organic Vapor = 0ppm			6 13 15 27	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 3 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	10		ml						
	11	ml: Orange SILT, some Clay.							
860	12								
			ml						
	13								
	14	ml: Orange SILT, some gray Clay, little coarse Gravel.			Organic Vapor = 0ppm			7 15 20 24	Rec 2.0'/2.0'
	15								
	16				Organic Vapor = 0ppm				
			ml						
855	17								
	18								
	19	ml: Orange SILT, some Clay, little Gravel, little coarse Sand.			Organic Vapor = 0ppm			7 13 17 25	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 4 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	20		ml						
	21	ml: Orange SILT, some Clay, little Gravel, little coarse Sand. Gravel is subangular, Quartzite, and coarse. Sand is coarse Quartzite.			Organic Vapor = 0ppm				
850	22								
			ml						
	23								
	24	ml: Orange SILT, some Clay, little Gravel, little coarse Sand. Gravel is subangular, coarse, Quartzite. Sand is coarse Quartzite.			Organic Vapor = 0ppm			11 30 22 29	Rec 2.0'/2.0'
	25								
	26				Organic Vapor = 0ppm				
			ml						
845	27								
	28								
	29	cl-ml: Orange SILT and CLAY, little Gravel, little coarse Sand. Gravel is subangular coarse and Quartzite.			Organic Vapor = 0ppm			7 11 9 12	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 5 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	30		cl-ml						
	31	cl-ml: Orange SILT and CLAY, little Gravel, little Sand. Gravel is subangular Quartzite and coarse. Sand is subangular Quartzite and coarse.			Organic Vapor = 0ppm				
840	32								
	33								
	34				Organic Vapor = 0ppm			9 10 15 16	Rec 2.0'/2.0'
	35								
	36		cl-ml		Organic Vapor = 0ppm				
835	37								
	38								
	39				Organic Vapor = 0ppm			10 13 16 19	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 6 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	40								
	41	cl-ml: Orange SILT and CLAY, little Gravel, little Sand. Gravel is coarse, subangular and Quartzite.			Organic Vapor = 0ppm				
830	42								
	43								
	44				Organic Vapor = 0ppm			9 14 15 18	Rec 2.0'/2.0'
	45								
	46		cl-ml		Organic Vapor = 0ppm				
825	47								
	48								
	49				Organic Vapor = 0ppm			6 13 18 22	Rec 1.4/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 7 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	50								
	51	cl-ml: Orange SILT and CLAY, little Sand. Sand is subangular, coarse and Quartzite.			Organic Vapor = 0ppm				
820	52								
	53								
	54				Organic Vapor = 0ppm			8 15 19 30	Rec 2.0'/2.0'
	55								
	56		cl-ml		Organic Vapor = 0ppm				Descriptions from auger cuttings 56.0'-64.0'.
815	57								
	58								
	59								
	60								

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 8 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	61	cl-ml: Orange SILT and CLAY, little Sand. Sand is coarse, subangular, and Quartzite.			Organic Vapor = 0ppm				
810	62		cl-ml						
	63								
	64	cl-ml: Orange SILT and CLAY, little Sand. Sand is coarse, Quartzite and subangular.			Organic Vapor = 0ppm			10 17 19 30	Rec 2.0'/2.0'
	65								
	66		cl-ml		Organic Vapor = 0ppm				
805	67								
	68								
	69	cl-ml: Orange SILT and CLAY, little Sand, little Gravel. Sand and Gravel are subangular, coarse and Quartzite.			Organic Vapor = 0ppm			12 14 17 14	Rec 2.0'/2.0'
	70								

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 9 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
			cl-ml						
	71	cl-ml: Orange SILT and CLAY, little Sand, little Gravel. Sand is subangular, coarse and Quartzite. Gravel is subangular, coarse and Quartzite.			Organic Vapor = 0ppm				
800	72								
	73								
	74				Organic Vapor = 0ppm			13 15 16 14	Rec 2.0'/2.0'
	75		cl-ml						
	76				Organic Vapor = 0ppm				
795	77								
	78								
	79	cl-ml: Orange SILT and CLAY, little Sand. Sand is coarse, Quartzite and subangular.			Organic Vapor = 0ppm			12 14 13 18	Rec 2.0'/2.0'
	80		cl-						

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 10 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
			ml						
	81	cl-ml: Orange SILT and CLAY, little Sand. Sand is subangular, coarse, Quartzite.			Organic Vapor = 0ppm				
790	82								
	83								
	84				Organic Vapor = 0ppm			15 16 18 20	Rec 2.0'/2.0'
	85		cl-ml						
	86				Organic Vapor = 0ppm				
785	87								
	88								
	89	cl-ml: Orange SILT and CLAY, little Sand. Sand is coarse, subangular, Quartzite.			Organic Vapor = 0ppm			16 18 20 22	Rec 2.0'/2.0'
	90		cl-						

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 11 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
			ml						
	91	cl-ml: Orange SILT and CLAY, little coarse Sand. Sand is subangular, Quartzite.							
780	92								Water encountered at 92.0' bgs.
			cl-ml						
	93								
	94	cl-ml: Orange SILT and CLAY, little Sand. Sand is coarse, subangular, and Quartzite.			Organic Vapor = 0ppm			16 17 19 21	Rec 2.0'/2.0'
	95								
	96				Organic Vapor = 0ppm				Descriptions from auger cuttings 96.0'-105.0'.
775	97								
	98								
	99								
			cl-ml						
	100				Organic				

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW01

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 12 of 12 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
					Vapor = 0ppm				
	101								101
770	102								102
	103								103
	104								104
									Bottom of borehole at 105.0'.
	105								105

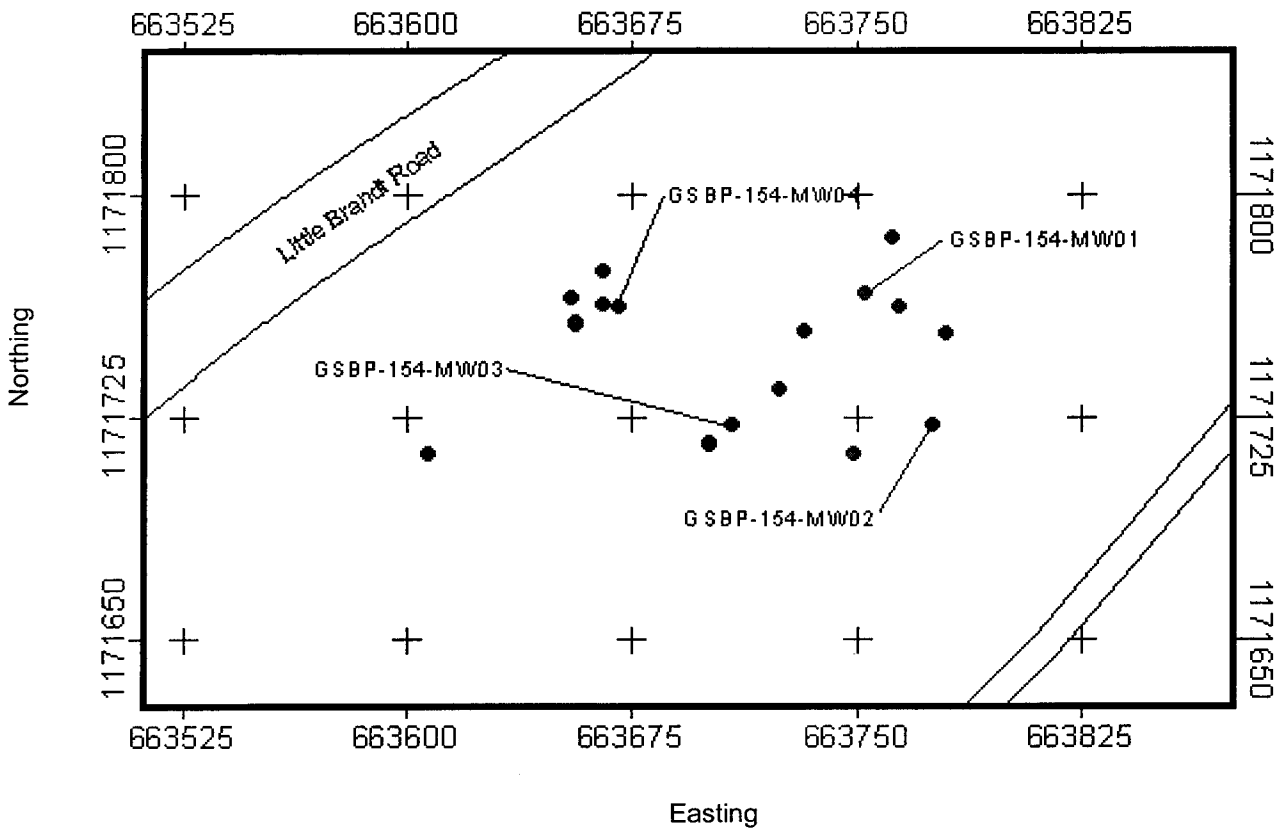
HTRW DRILLING LOG

District: **Mobile USACE**		HOLE NUMBER GSBP-154-MW02
1. Company name: **IT Corporation**	2. Drill Subcontractor: MILLER DRILLING	Sheet 1 of 11 sheets

3. Project: Fort McClellan	4. Location: **Calhoun County, Alabama**
5. Name of driller: Ken Gobell	6. Mfr. designation of drill: CME-550
7. Sizes and types of drilling and sampling equipment: Hollow Stem Auger 5'x4" Auger, 2'x2" Split Spoons	8. Hole location: Ground Scars/Trenches, Parcel 154 9. Surface elevation (feet above mean sea level): 873.14 10. Date started: 10/06/99 — 11. Date completed: 10/12/99
12. Overburden thickness (feet bgs): 100	15. Depth groundwater encountered (feet bgs): 91
13. Depth drilled into rock (feet bgs): 0	16. Depth to water and elapsed time after drilling completed (feet bgs): NA
14. Total depth of hole (feet bgs): 100	17. Other water level measurements (specify): NA

18. Geotechnical samples:	Collected:	Disturbed:	Undisturbed:	19. Total no. of core boxes: NA		
	X					
20. Samples for chemical analysis:	VOC	Metals	Other (specify)	Other (specify)	Other (specify)	21. Total core recovery:
	X	X	SVOC	Pest, Herb	PCB, Exp.	NA
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
		X		JAMES DENDY		

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan

bgs= below ground surface
NA = Not applicable

Hole no.: GSBP-154-MW02

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW02

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 2 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	0	ml: Orange SILT, some coarse Sand, little organics.	ml		Organic Vapor = 0ppm			2 1 1 1	Rec 1.1'/2.0'
	1								
	2	ml: Orange stiff SILT, little coarse Sand.	ml		Organic Vapor = 0ppm			5 16 31 36	Rec1.6'/2.0'
870	3								
	4	ml: Orange SILT, some coarse Sand.	ml		Organic Vapor = 0ppm			5 13 20 25	Rec 2.0'/2.0'
	5								
	6	ml: Orange SILT, some white Silt, little Gravel. Gravel is quartz rich and subangular.	ml		Organic Vapor = 0ppm			10 21 36 50/0.4'	Rec 1.6'/1.9'
	7								
865	8	ml: Orange SILT, some Clay.			Organic Vapor = 0ppm				
	9								

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW02

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 3 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	10				Organic Vapor = 0ppm				
	11								
	12								
860	13		ml						
	14								
	15								
	16								
	17								
855	18								
	19	ml: Orange SILT, some Clay.						13 12 11 10	Rec 0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW02

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 4 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	20		ml						
	21	ml: Orange SILT, some Clay, little Gravel			Organic Vapor = 0ppm				
	22		ml						
850	23								
	24	ml: Orange SILT, some Clay, little Gravel			Organic Vapor = 0ppm			14 16 18 13	Rec 1.4'/2.0'
	25								
	26		ml		Organic Vapor = 0ppm				
	27								
845	28								
	29	ml: Orange SILT, some Clay, some Gravel. Gravel is subangular, coarse Quartzite.			Organic Vapor = 0ppm			14 36 13 16	Rec 1.6'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW02

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 5 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	30		ml						
	31	ml: Orange SILT, some Clay, some Gravel. Gravel is subangular and coarse.			Organic Vapor = 0ppm				
	32		ml						
840	33								
	34	ml: Orange SILT, some Clay.			Organic Vapor = 0ppm			15 34 16 18	
	35								
	36		ml		Organic Vapor = 0ppm				
	37								
835	38								
	39	ml: Orange SILT, some Clay, some Gravel. Gravel is angular Quartz.			Organic Vapor = 0ppm			11 13 14 50/0.3'	Rec 1.8'/1.8'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW02

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 6 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	40		ml						
	41	cl-ml: Orange SILT and CLAY, little Gravel. Gravel is coarse, Quartz-rich and subangular.			Organic Vapor = 0ppm				Descriptions from auger cuttings 41.0'-69.0'.
	42								
830	43								
	44								
	45								
	46								
	47								
825	48								
	49								

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW02

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 7 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	50				Organic Vapor = 0ppm				
	51								51
	52								52
820	53								53
	54								54
	55								55
	56								56
	57								57
815	58								58
	59								59
	60								60

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW02

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 8 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
					Organic Vapor = 0ppm				
	61								
	62								
810	63								
	64								
	65								
	66								
	67								
805	68								
	69				Organic Vapor = 0ppm			13 20 22 35	Rec 1.6'/2.0'
	70								

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW02

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 9 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
			cl-ml						
	71				Organic Vapor = 0ppm				Descriptions from auger cuttings 71.0'-79.0'.
	72								
800	73								
	74								
	75								
	76								
	77								
795	78								
	79				Organic Vapor = 0ppm			14 19 25 34	Rec 1.6'/2.0'
	80								

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW02

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 10 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	81				Organic Vapor = 0ppm				Descriptions from auger cuttings 81.0'-100.0'.
	82								
790	83								
	84								
	85								
	86								
	87								
785	88								
	89								
	90				Organic				

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW02

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 11 of 11 sheets

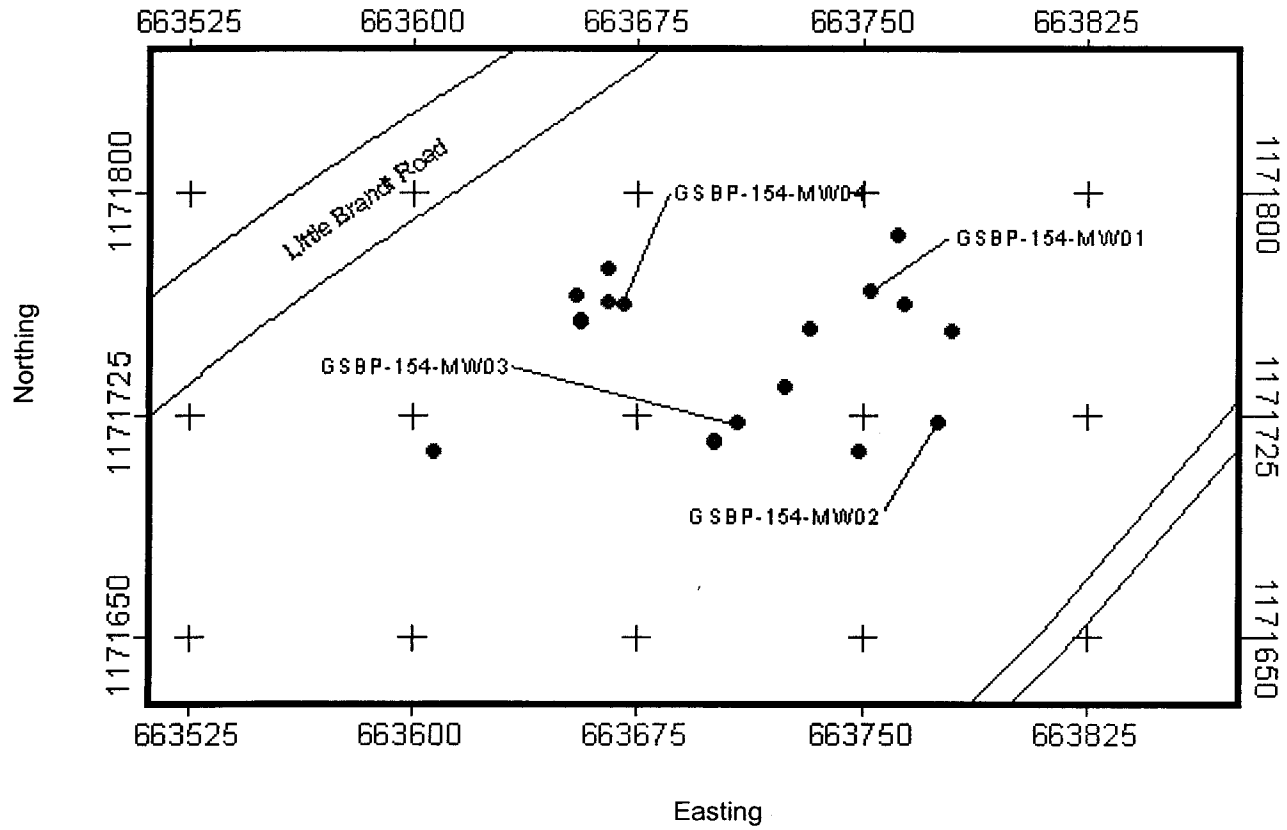
Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
					Vapor = 0ppm				
	91								91
	92								92
780	93								93
	94								Water during drilling at 94.0'. 94
	95								95
	96								96
	97								97
775	98								98
	99								99
	100								Bottom of borehole at 100.0' 100

HTRW DRILLING LOG

District: **Mobile USACE**		HOLE NUMBER GSBP-154-MW03
1. Company name: **IT Corporation**	2. Drill Subcontractor: MILLER DRILLING	Sheet 1 of 11 sheets
3. Project: Fort McClellan	4. Location: **Calhoun County, Alabama**	
5. Name of driller: Ken Gobell	6. Mfr. designation of drill: CME-550	
7. Sizes and types of drilling and sampling equipment: Hollow Stem Auger; 5'x4" Auger. 2'x2" Split Spoons	8. Hole location: Ground Scars/Trenches, Parcel 154	
	9. Surface elevation (feet above mean sea level): 866.33	
	10. Date started: 10/06/99	11. Date completed: 10/15/99
12. Overburden thickness (feet bgs): 100	15. Depth groundwater encountered (feet bgs): 95	
13. Depth drilled into rock (feet bgs): 0	16. Depth to water and elapsed time after drilling completed (feet bgs): NA	
14. Total depth of hole (feet bgs): 100	17. Other water level measurements (specify): NA	

18. Geotechnical samples:	Collected:	Disturbed:	Undisturbed:	19. Total no. of core boxes: NA		
	X					
20. Samples for chemical analysis:	VOC	Metals	Other (specify)	Other (specify)	Other (specify)	21. Total core recovery:
	X	X	SVOC	Pest, Herb	PCB, Exp.	NA
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
		X		JAMES DENDY		

LOCATION SKETCH/COMMENTS:



bgs= below ground surface
NA = Not applicable

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW03

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 2 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	0	ml: Brown SILT, little Gravel. Gravel is subangular 5mm-30mm.	ml		Organic Vapor = 0ppm			2 2 8 13	Rec 1.3'/2.0'
865	1								
	2	ml: Brown SILT, turning to orange SILT at 3'.	ml		Organic Vapor = 0ppm			7 8 11 12	Rec 1.4'/2.0'
	3								
	4	ml: Orange SILT. At 4.5' angular Quartzite Gravel in shoe of split-spoon, 5-40mm in diameter.	ml		Organic Vapor = 0ppm			7 10 14 50/0.5'	Rec 2.0'/2.0'
	5								
860	6				Organic Vapor = 0ppm				
	7								
	8	cl-ml: Gray CLAY, some orange SILT.	cl-ml		Organic Vapor = 0ppm			8 12 16 24	Rec 2.0'/2.0'
	9	ml: Orange stiff SILT, some yellowish-orange Silt.	ml						

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW03

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 3 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	10	ml: Orange stiff SILT, some yellowish-orange Silt, some coarse to medium Sand, little coarse Gravel.			Organic Vapor = 0ppm			10 18 40 30	Rec 2.0'/2.0'
855	11								
	12		ml		Organic Vapor = 0ppm				
	13								
	14	ml: Orange SILT and yellow orange SILT, little coarse Sand. Coarse Sand is 1" thick at 15'. The layer is coarse Sand and orange Silt.			Organic Vapor = 0ppm			8 10 12 16	Rec 1.0'/2.0'
	15		ml						
850	16	ml: Orange SILT.			Organic Vapor = 0ppm				
	17		ml						
	18								
	19	ml: Orange SILT, little Cobbles, little coarse Sand.			Organic Vapor = 0ppm			11 12 14 18	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW03

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 4 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	20		ml						
845	21	ml: Orange SILT.			Organic Vapor = 0ppm				
	22		ml						
	23								
	24	ml: Orange SILT, some coarse Sand.			Organic Vapor = 0ppm			6 7 10 12	Rec 1.1'/2.0'
	25								
840	26		ml		Organic Vapor = 0ppm				
	27								
	28								
	29	ml: Orange SILT, little Cobble, some coarse Sand. Cobble is subrounded Quartzite.			Organic Vapor = 0ppm			8 12 17 18	Rec 0.8'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW03

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 5 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	30		ml						
835	31	ml: Orange SILT, some coarse Sand.			Organic Vapor = 0ppm				
	32		ml						
	33								
	34	ml: Orange stiff SILT, some Clay, some coarse Sand.			Organic Vapor = 0ppm			8 10 12 16	Rec 2.0'/2.0'
	35		ml						
830	36	ml: Orange SILT, some Clay, some coarse Sand.			Organic Vapor = 0ppm				Descriptions from auger cuttings 36.0'-44.0'.
	37		ml						
	38								
	39	cl-ml: Orange SILT and CLAY.							

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW03

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 6 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	40				Organic Vapor = 0ppm				
825	41		cl-ml						
	42								
	43								
	44	ml: Orange SILT, some Clay, some coarse Sand, little Cobble. Cobble is subrounded Quartz rich.			Organic Vapor = 0ppm			5 6 7 8	Rec 1.5'/2.0'
	45		ml						
820	46	cl-ml: Orange SILT and CLAY.			Organic Vapor = 0ppm				
	47		cl-ml						
	48								
	49	cl-ml: Orange SILT and CLAY, some coarse Sand.			Organic Vapor = 0ppm			4 6 8 10	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW03

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 7 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	50		cl-ml						
	51	cl-ml: Orange SILT and CLAY.			Organic Vapor = 0ppm				
815									
	52		cl-ml						
	53								
	54	sm-ml: Orange SILT and SAND, little Cobble. Cobble in shoe of split spoon is Quartz rich and subangular.			Organic Vapor = 0ppm			8 11 50/0.4'	Rec 1.4'/1.4'
	55		sm-ml						
		cl-ml: Orange SILT and CLAY.							
	56				Organic Vapor = 0ppm				Descriptions from auger cuttings 56.0'-100.0'.
810									
	57								
	58								
	59								
	60								

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW03

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 8 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
					Organic Vapor = 0ppm				
	61								61
805									
	62								62
	63								63
	64								64
	65								65
	66								66
800									
	67								67
	68								68
	69								69
	70								70

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW03

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 9 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
					Organic Vapor = 0ppm				
	71								71
795									
	72								72
	73								73
	74								74
	75								75
	76								76
790									
	77								77
	78		cl-ml						78
	79								79
	80				Organic				80

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW03

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 10 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
					Vapor = 0ppm				
	81								81
785									
	82								82
	83								83
	84								84
	85								85
	86								86
780									
	87								87
	88								88
	89								89
	90								90

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW03

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 11 of 11 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	91								
775									
	92								
	93								
	94								
	95								Water at 95.0'.
	96								
770									
	97								
	98								
	99								
	100								Bottom of borehole is 100.0'.

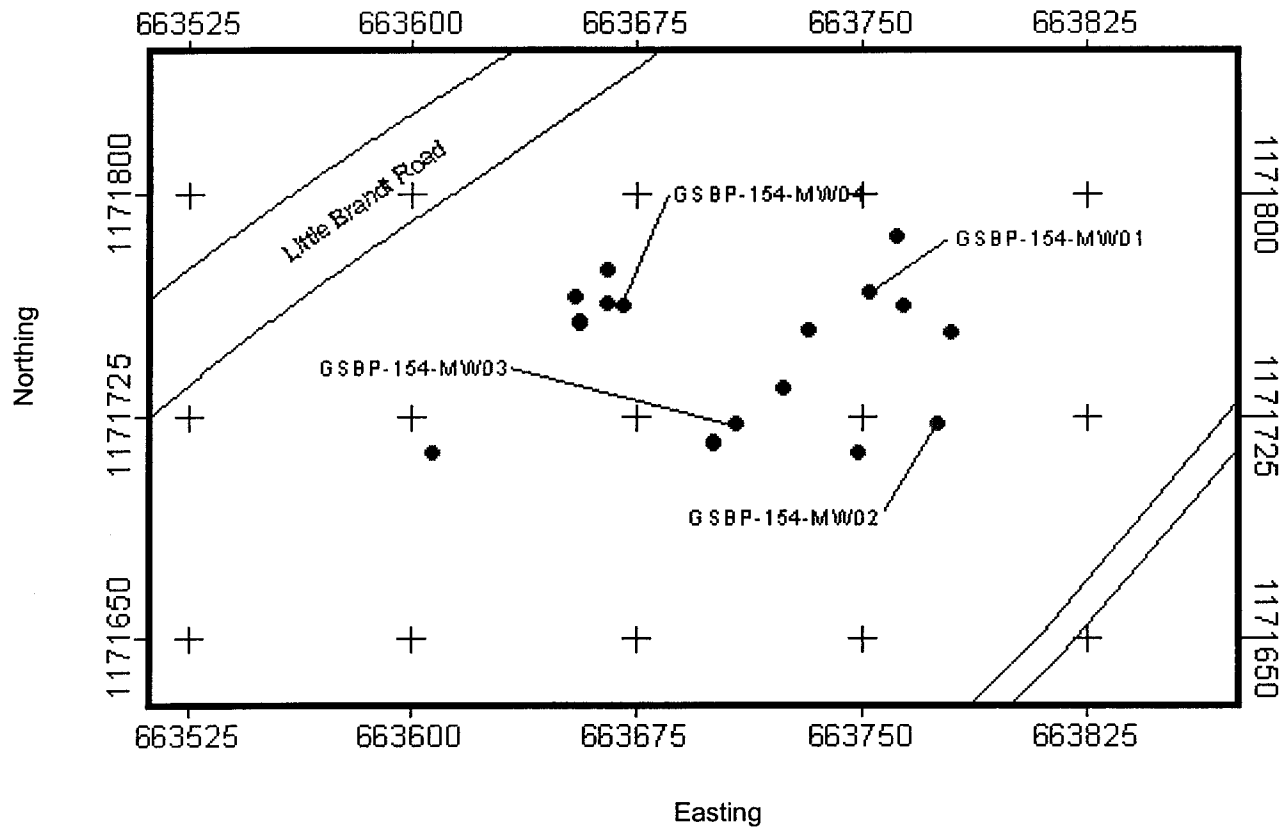
HTRW DRILLING LOG

District: **Mobile USACE**		HOLE NUMBER GSBP-154-MW04
1. Company name: **IT Corporation**	2. Drill Subcontractor: MILLER DRILLING	Sheet 1 of 10 sheets

3. Project: Fort McClellan	4. Location: **Calhoun County, Alabama**
5. Name of driller: Ken Gobell	6. Mfr. designation of drill: CME-550
7. Sizes and types of drilling and sampling equipment: Hollow Stem Auger 5'x4" Auger, 2'x2" Split Spoons	8. Hole location: Ground Scars/Trenches, Parcel 154 9. Surface elevation (feet above mean sea level): 856.79 10. Date started: 10/18/99 — 11. Date completed: 10/19/99
12. Overburden thickness (feet bgs): 90	15. Depth groundwater encountered (feet bgs): 78
13. Depth drilled into rock (feet bgs): 0	16. Depth to water and elapsed time after drilling completed (feet bgs): NA
14. Total depth of hole (feet bgs): 90	17. Other water level measurements (specify): NA

18. Geotechnical samples:	Collected:	Disturbed:	Undisturbed:	19. Total no. of core boxes: NA		
	X					
20. Samples for chemical analysis:	VOC	Metals	Other (specify)	Other (specify)	Other (specify)	21. Total core recovery:
	X	X	SVOC	Pest, Herb	PCB, Exp.	NA
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
		X		JAMES DENDY		

LOCATION SKETCH/COMMENTS:



bgs= below ground surface
NA = Not applicable

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW04

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 2 of 10 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	0	ml: Orange SILT, some CLAY, little coarse Sand. Sand is subangular Quartz-rich.			Organic Vapor = 0ppm				
	1								
855	2								
	3								
	4		ml		Organic Vapor = 0ppm			7 11 22 29	Rec 2.0'/2.0'
	5								
	6				Organic Vapor = 0ppm				
850	7								
	8								
	9	ml: Orange SILT, some CLAY, little coarse Sand. Sand is subangular Quartz.			Organic Vapor = 0ppm			4 15 18 24	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW04

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 3 of 10 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	10		ml						
	11	ml: Orange SILT, some CLAY, little coarse Gravel, little coarse Sand. Gravel is subangular Quartz-rich. Sand is subangular Quartz-rich.			Organic Vapor = 0ppm				
845									
	12								
	13								
	14				Organic Vapor = 0ppm			8 12 17 25	Rec 2.0'/2.0'
	15		ml						
	16				Organic Vapor = 0ppm				
840									
	17								
	18								
	19	cl-ml: Orange SILT and CLAY, little coarse Sand, little coarse Gravel. Gravel is subangular Quartz. Sand is subangular Quartz.			Organic Vapor = 0ppm			5 8 10 20	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW04

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 4 of 10 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	20		cl-ml						
	21	cl-ml: Orange SILT and CLAY, little coarse Sand. Sand is subanbular Quartz-rich.			Organic Vapor = 0ppm				
835	22								
	23								
	24				Organic Vapor = 0ppm			4 6 7 9	Rec 2.0'/2.0'
	25		cl-ml						
	26				Organic Vapor = 0ppm				
830	27								
	28								
	29	cl-ml: Orange SILT and CLAY, little coarse Sand, little fine Gravel. Gravel is subangular Quartz. Sand is subangular Quartz.			Organic Vapor = 0ppm			4 6 8 12	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW04

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 5 of 10 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	30		cl-ml						
	31	cl-ml: Orange SILT and CLAY, some coarse Sand. Sand is subangular and Quartz-rich.			Organic Vapor = 0ppm				
825	32								
	33								
	34				Organic Vapor = 0ppm			6 9 13 18	Rec 2.0'/2.0'
	35		cl-ml						
	36				Organic Vapor = 0ppm				
820	37								
	38								
	39	cl-ml: Orange SILT and CLAY, little coarse Sand. Sand is subangular, Quartz-rich.			Organic Vapor = 0ppm			6 12 16 20	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW04

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 6 of 10 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	40								
	41				Organic Vapor = 0ppm				
815									
	42								
	43								
	44		cl-ml		Organic Vapor = 0ppm			8 10 14 17	Rec 2.0'/2.0'
	45								
	46				Organic Vapor = 0ppm				
810									
	47								
	48								
	49	ml: Orange SILT, some coarse Sand, some coarse Gravel. Gravel is subangular Quartz-rich. Sand is subangular Quartz- rich.			Organic Vapor = 0ppm			20 12 13 16	Rec 0.33'/2.0'
	50								

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW04

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 7 of 10 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
	50		ml						
	51	cl-ml: Orange SILT and CLAY, some coarse Sand.			Organic Vapor = 0ppm				
805	52								
	53								
	54				Organic Vapor = 0ppm			19 22 14 16	Rec 2.0'/2.0'
	55		cl-ml						
	56								
800	57								
	58								
	59	cl-ml: Orange SILT and CLAY, some coarse Gravel. Gravel is subangular Quartz-rich.			Organic Vapor = 0ppm			6 50/0.5'	Rec 0.5'/1.0'
	60								

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW04

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 8 of 10 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
		cl-ml: Orange SILT and CLAY, little coarse Sand, little coarse Gravel. Sand is subangular Quartz-rich. Gravel is subangular Quartz-rich.	cl-ml						Description from auger cuttings 60.0'-90.0'.
	61								61
795	62								62
	63								63
	64								64
	65								65
	66								66
790	67								67
	68								68
	69								69
	70								70

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW04

Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 9 of 10 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
			cl-ml		Organic Vapor = 0ppm				
	71								71
785	72								72
	73								73
	74								74
	75								75
	76								76
780	77								77
	78								Water at 78.0'. 78
	79								79
	80	cl-ml: Orange SILT and CLAY, little coarse			Organic				80

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: GSBP-154-MW04

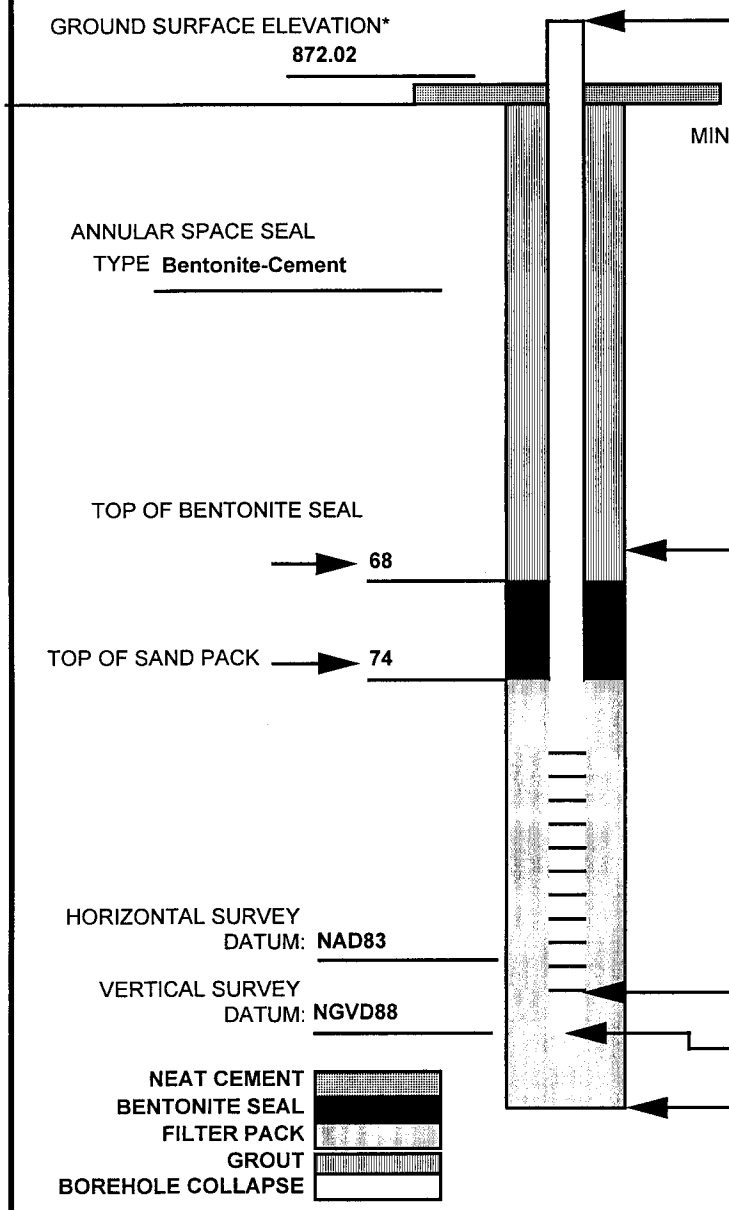
Project: Fort McClellan | Geologist: JAMES DENDY | Sheet 10 of 10 sheets

Elev. (a)	Depth (b)	Description of Materials (c)	USCS / Lithology	Graphic	Field screening results (d)	Geotech sample or core box no. (e)	Analytical sample no. (f)	Blow counts (g)	Remarks (h)
		Sand, little coarse Gravel.			Vapor = 0ppm				
	81								81
775	82								82
	83								83
	84								84
	85		cl-ml						85
	86								86
770	87								87
	88								88
	89								89
	90								Bottom of borehole at 90.0' 90

WELL CONSTRUCTION LOGS

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	**WELL NO:** GSBP-154-MW01
LOCATION Anniston, AL	**DRILLING METHOD:** Hollow Stem Auger
CLIENT: USACE Mobile District	**INSTALLATION DATE** 10/14/99
CONTRACTOR MILLER DRILLING	**NORTHING:** 1171766.27
DRILLER: KEN GOBELL	**EASTING:** 663752.24
IT FIELD REPRESENTATIVE: JAMES DENDY	**JOB NO:** 774645A



GROUND SURFACE ELEVATION*
872.02

TOP of WELL CASING or RISER PIPE
EL* 873.99 STICKUP 1.97

TYPE of SURFACE SEAL Concrete

MINIMUM THICKNESS of SURFACE SEAL 4 inches

ANNULAR SPACE SEAL
TYPE Bentonite-Cement

TYPE of RISER MATERIAL (Flush Threaded) PVC SCH 40

INSIDE DIAMETER of RISER (inches) 2

TOP OF BENTONITE SEAL
68

APPROXIMATE DIAMETER of BOREHOLE (inches) 8

TOP OF SAND PACK 74

TOP OF SCREENED INTERVAL
EL* 792.02 DEPTH 80

TYPE of SCREEN MATERIAL PVC SCH 40

SLOT SIZE (inches) 0.010

INSIDE DIAMETER (inches) 2

TYPE of SAND PACK AROUND SCREEN Sand No 1

HORIZONTAL SURVEY DATUM: NAD83

VERTICAL SURVEY DATUM: NGVD88

BOTTOM of SCREENED INTERVAL
EL* 772.02 DEPTH 100

BOTTOM of SUMP and WELL
EL* 767.02 DEPTH 105

BOTTOM of BOREHOLE
EL* 767.02 DEPTH 105

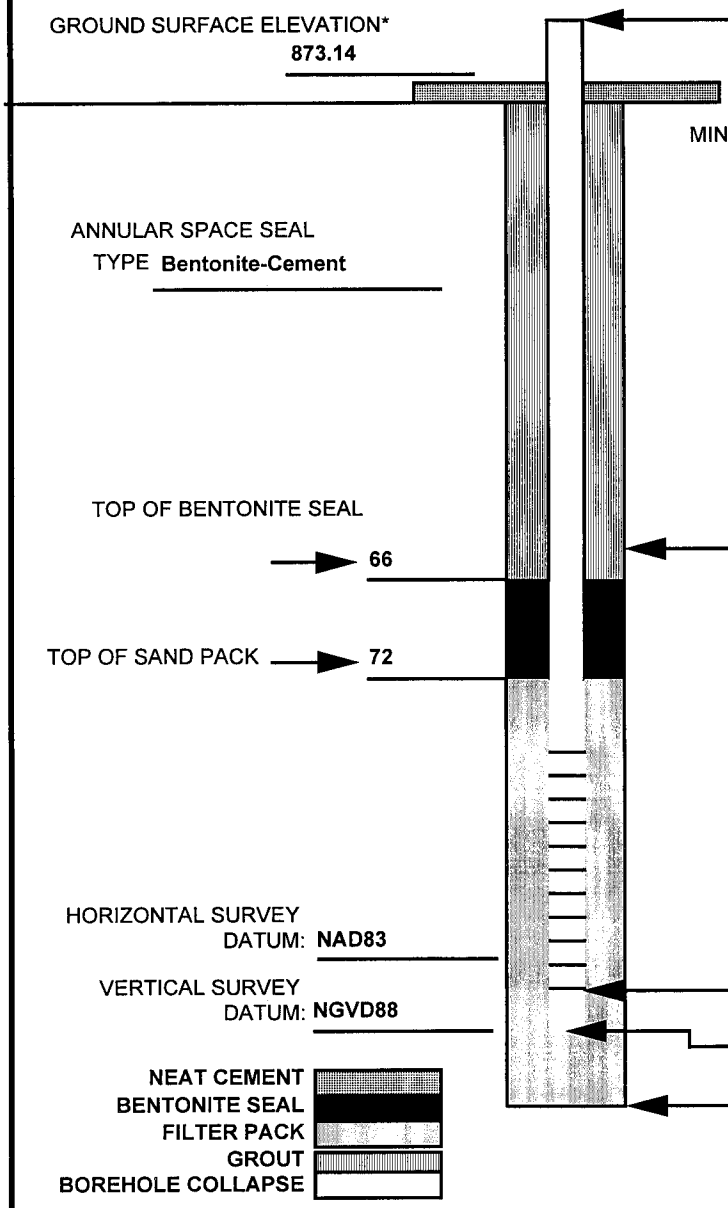
NEAT CEMENT
BENTONITE SEAL
FILTER PACK
GROUT
BOREHOLE COLLAPSE

*All elevations (EL) are referenced to MSL.

All depths and heights are given in feet and are referenced to the ground surface.

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: GSBP-154-MW02
LOCATION Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE 10/12/99
CONTRACTOR MILLER DRILLING	NORTHING: 1171722.03
DRILLER: KEN GOBELL	EASTING: 663775.25
IT FIELD REPRESENTATIVE: JAMES DENDY	JOB NO: 774645A



GROUND SURFACE ELEVATION*
873.14

TOP of WELL CASING or RISER PIPE
EL* 875.26 STICKUP 2.12

TYPE of SURFACE SEAL Concrete

MINIMUM THICKNESS of SURFACE SEAL 4 inches

ANNULAR SPACE SEAL
TYPE Bentonite-Cement

TYPE of RISER MATERIAL (Flush Threaded) PVC SCH 40

INSIDE DIAMETER of RISER (inches) 2

TOP OF BENTONITE SEAL
66

APPROXIMATE DIAMETER of BOREHOLE (inches) 8

TOP OF SAND PACK 72

TOP OF SCREENED INTERVAL
EL* 793.14 DEPTH 80

TYPE of SCREEN MATERIAL PVC SCH 40

SLOT SIZE (inches) 0.010

INSIDE DIAMETER (inches) 2

TYPE of SAND PACK AROUND SCREEN Sand No 1

HORIZONTAL SURVEY DATUM: NAD83

VERTICAL SURVEY DATUM: NGVD88

BOTTOM of SCREENED INTERVAL
EL* 773.14 DEPTH 100

BOTTOM of SUMP and WELL
EL* 773.14 DEPTH 100

BOTTOM of BOREHOLE
EL* 773.14 DEPTH 100

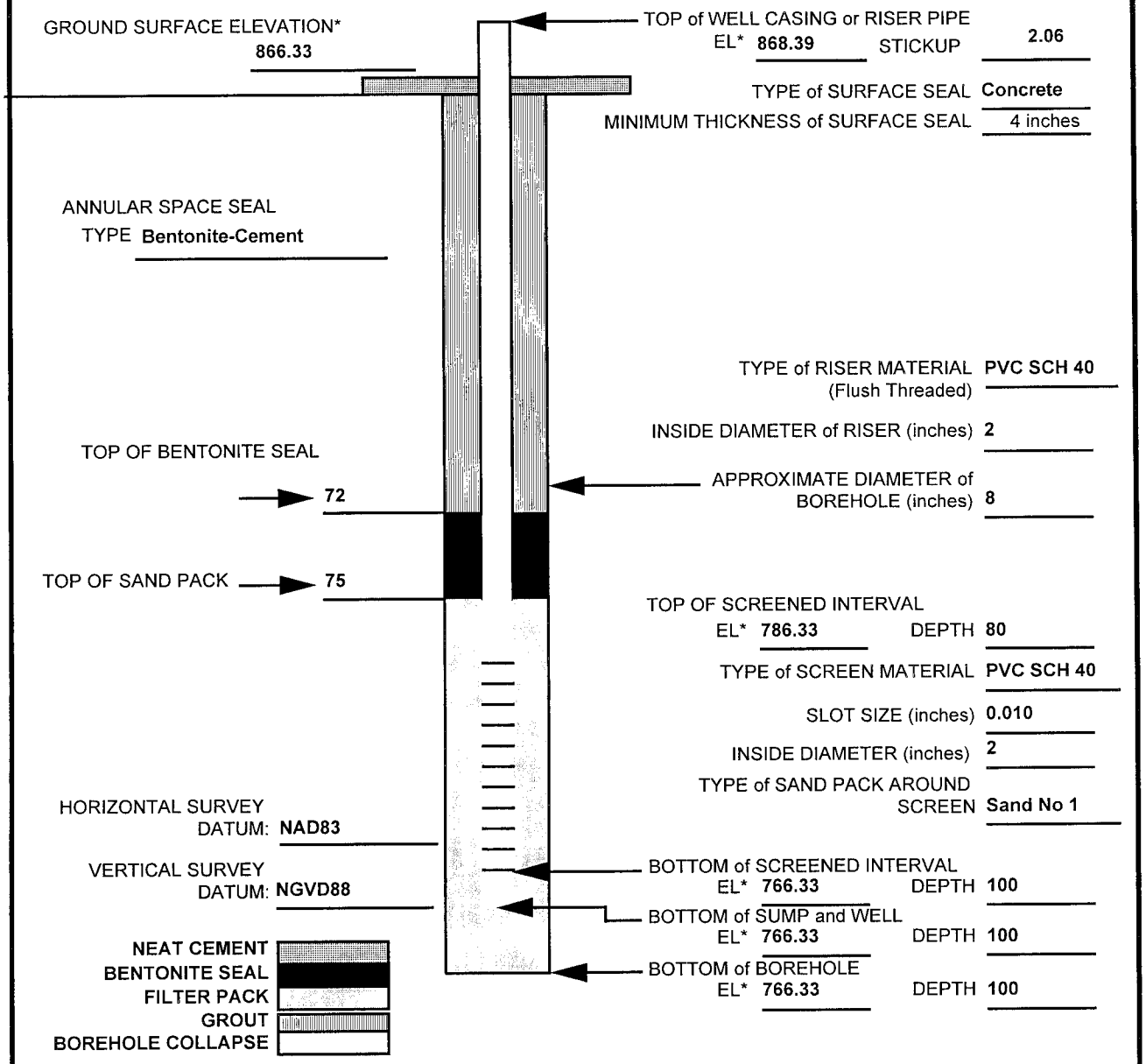
NEAT CEMENT
BENTONITE SEAL
FILTER PACK
GROUT
BOREHOLE COLLAPSE

*All elevations (EL) are referenced to MSL.

All depths and heights are given in feet and are referenced to the ground surface.

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	**WELL NO:** GSBP-154-MW03
LOCATION Anniston, AL	**DRILLING METHOD:** Hollow Stem Auger
CLIENT: USACE Mobile District	**INSTALLATION DATE** 10/15/99
CONTRACTOR MILLER DRILLING	**NORTHING:** 1171721.66
DRILLER: KEN GOBELL	**EASTING:** 663707.37
IT FIELD REPRESENTATIVE: JAMES DENDY	**JOB NO:** 774645A

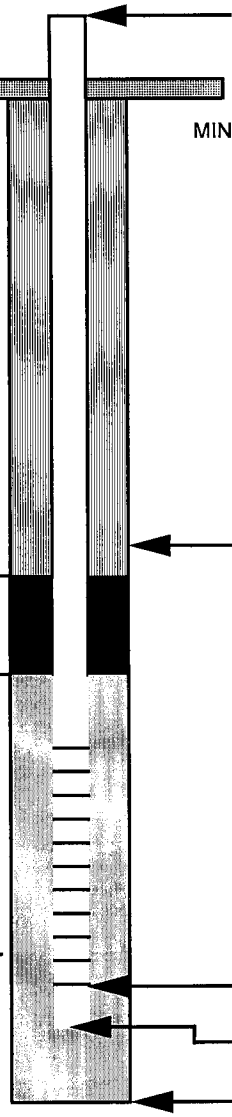


*All elevations (EL) are referenced to MSL.

All depths and heights are given in feet and are referenced to the ground surface.

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	**WELL NO:** GSBP-154-MW04
LOCATION Anniston, AL	**DRILLING METHOD:** Hollow Stem Auger
CLIENT: USACE Mobile District	**INSTALLATION DATE** 10/19/99
CONTRACTOR MILLER DRILLING	**NORTHING:** 1171761.29
DRILLER: KEN GOBELL	**EASTING:** 663669.89
IT FIELD REPRESENTATIVE: JAMES DENDY	**JOB NO:** 774645A



GROUND SURFACE ELEVATION*
856.79

TOP of WELL CASING or RISER PIPE
EL* 859 STICKUP 2.21

TYPE of SURFACE SEAL Concrete

MINIMUM THICKNESS of SURFACE SEAL 4 inches

ANNULAR SPACE SEAL
TYPE Bentonite-Cement

TYPE of RISER MATERIAL (Flush Threaded) PVC SCH 40

INSIDE DIAMETER of RISER (inches) 2

TOP OF BENTONITE SEAL
55

APPROXIMATE DIAMETER of BOREHOLE (inches) 8

TOP OF SAND PACK 61

TOP OF SCREENED INTERVAL
EL* 789.79 DEPTH 67

TYPE of SCREEN MATERIAL PVC SCH 40

SLOT SIZE (inches) 0.010

INSIDE DIAMETER (inches) 2

TYPE of SAND PACK AROUND SCREEN Sand No 1

HORIZONTAL SURVEY DATUM: NAD83

VERTICAL SURVEY DATUM: NGVD88

BOTTOM of SCREENED INTERVAL
EL* 769.79 DEPTH 87

BOTTOM of SUMP and WELL
EL* 766.79 DEPTH 90

BOTTOM of BOREHOLE
EL* 766.79 DEPTH 90

NEAT CEMENT
BENTONITE SEAL
FILTER PACK
GROUT
BOREHOLE COLLAPSE

*All elevations (EL) are referenced to MSL.

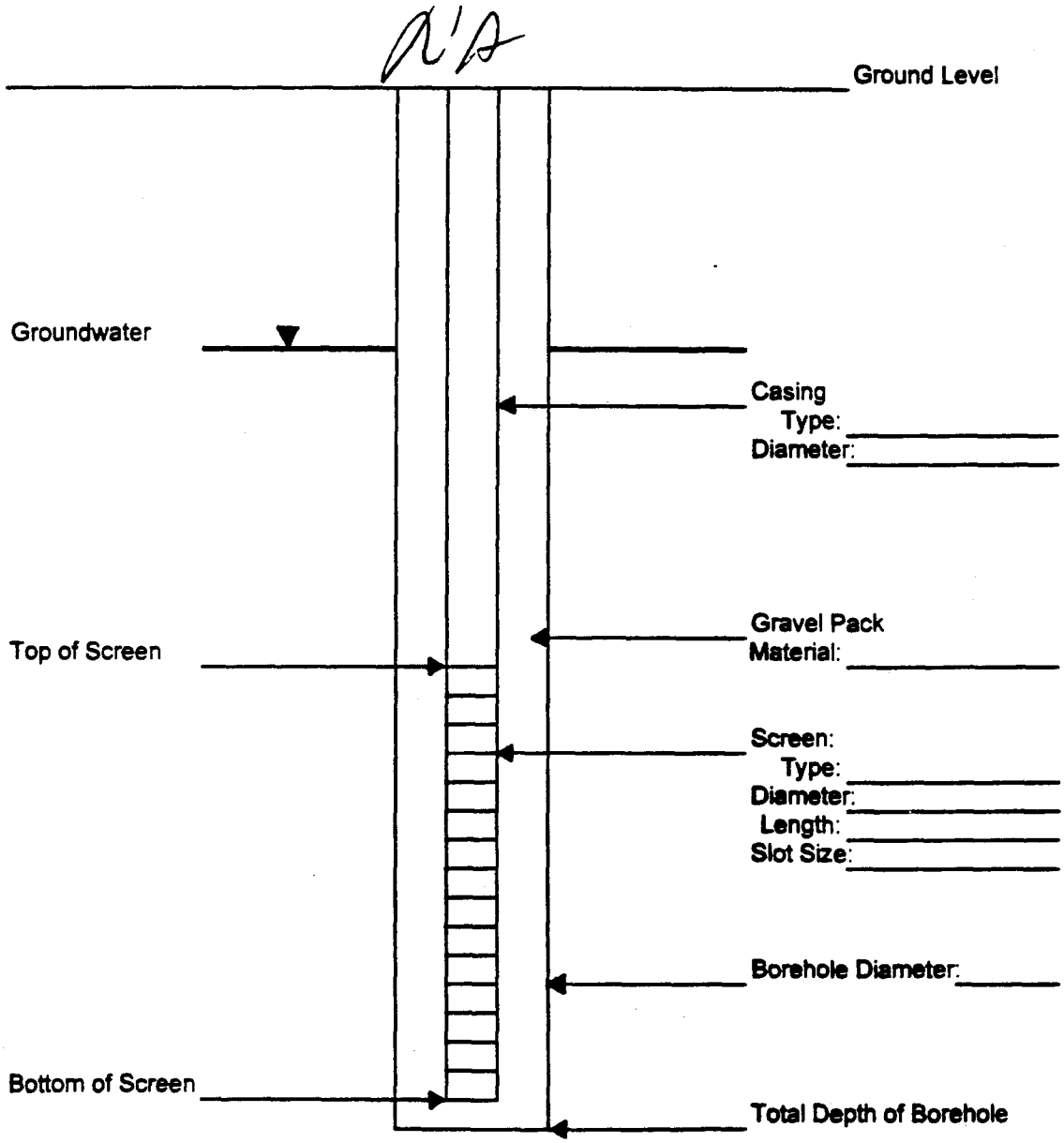
All depths and heights are given in feet and are referenced to the ground surface.

Temporary Monitor Well Construction Log

Well ID:	SI17-GW501	Project #:	3196314G
Logged By:	RLH	Client:	USACE
Drilling Contractor:	GRAVES	Start Date/Time:	7-21-98
Driller's Name:	JOSH TONRY	Finish Date/Time:	7-21-98

Comments: DID NOT SET - PROBED TO 25' + HIT NO WATER

Depths are in Reference to Ground Level



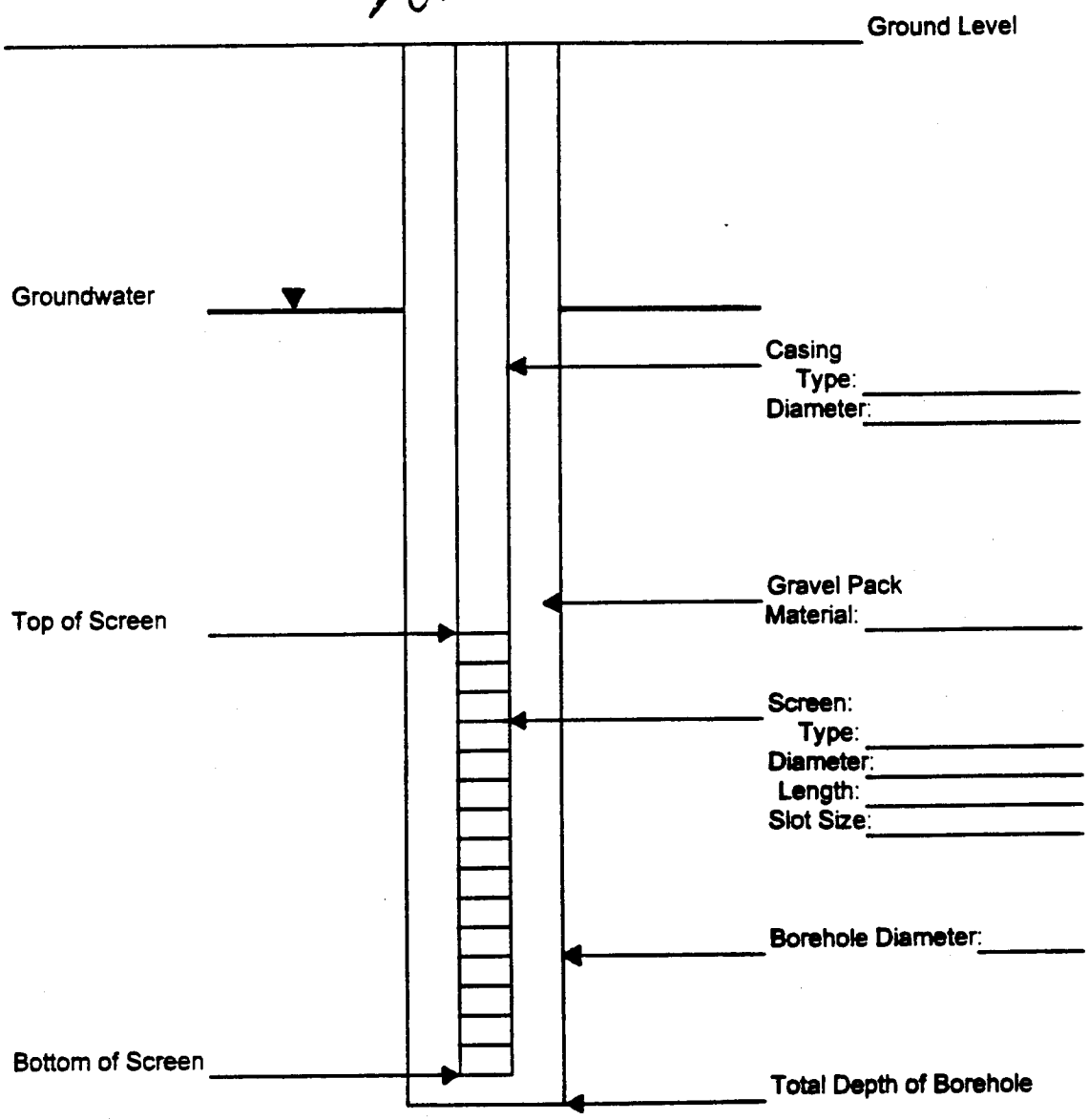
Temporary Monitor Well Construction Log

Well ID:	SI17-GWS02	Project #:	3196314G
Logged By:	REB	Client:	USACE
Drilling Contractor:	GRAVES	Start Date/Time:	7-21-98
Driller's Name:	JOSH TONRY	Finish Date/Time:	7-21-98

Comments: DID NOT SET - REFUSAL @ 12' IN CLAY

Depths are in Reference to Ground Level

NA



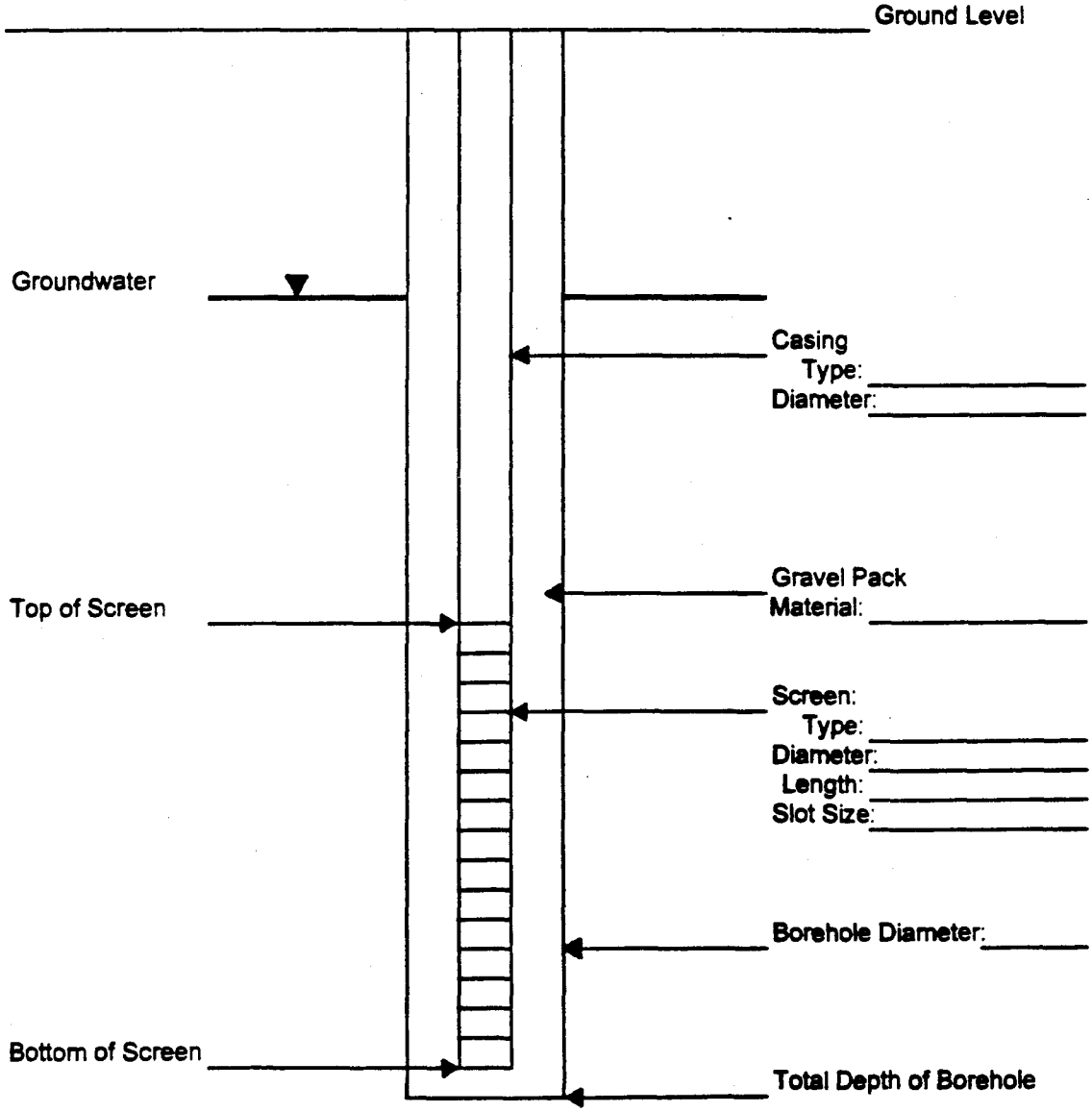
Temporary Monitor Well Construction Log

Well ID:	SI17-GWS03	Project #:	3196314G
Logged By:	RLA	Client:	USACE
Drilling Contractor:	GRAVES	Start Date/Time:	7-21-98
Driller's Name:	JOSIA TONKY	Finish Date/Time:	7-21-98

Comments: DID NOT SET - REFUSAL @ 12' IN CLAY

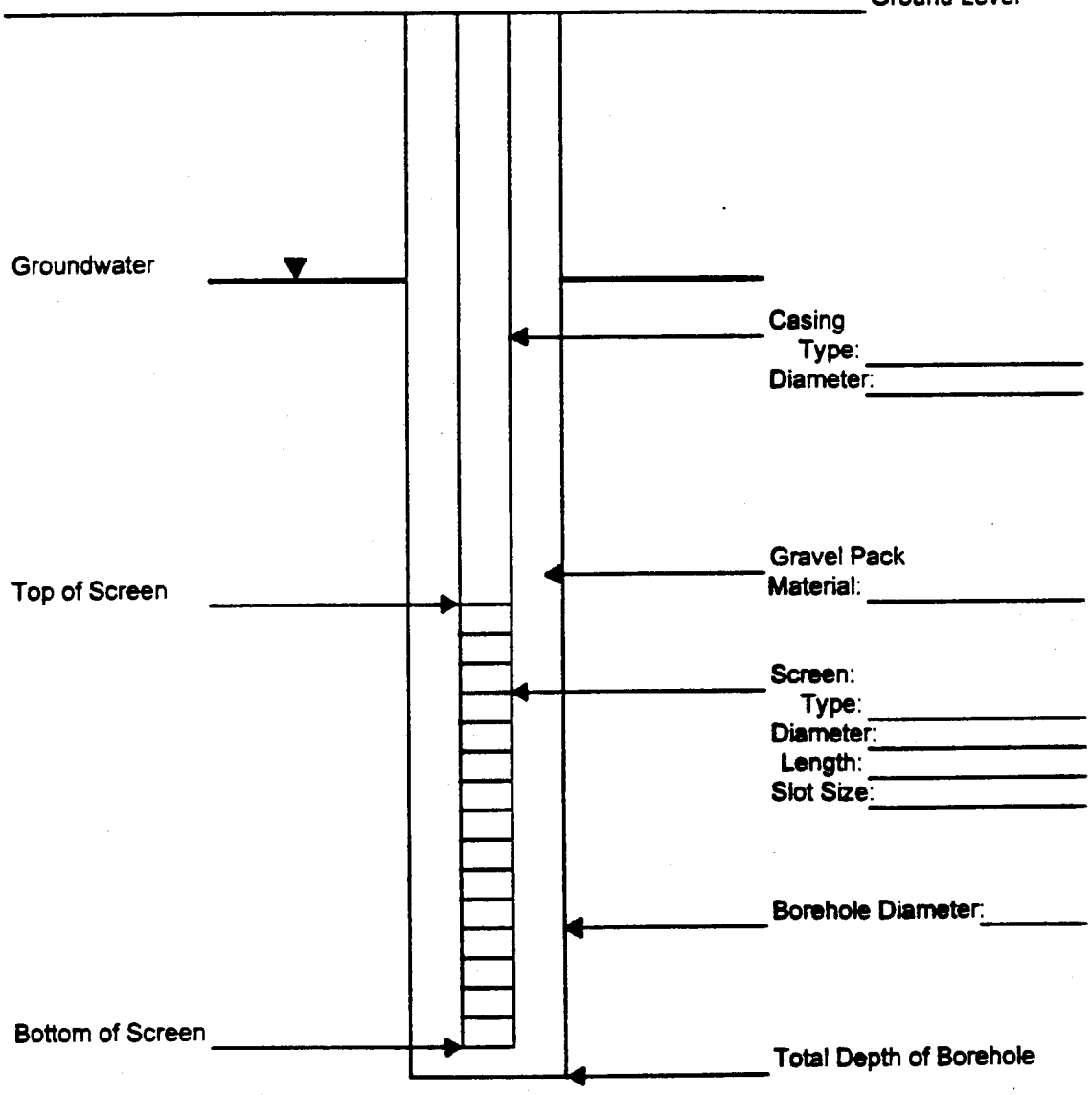
Depths are in Reference to Ground Level

NA



Temporary Monitor Well Construction Log

Well ID:	BI17-GW804	Project #:	3196314G
Logged By:	RLY	Client:	USACE
Drilling Contractor:	CLAUS	Start Date/Time:	7-21-98
Driller's Name:	Jose Tony	Finish Date/Time:	7-21-98
Comments:	DID NOT SET - ABANDONED IN CLAY		

Depths are in Reference to Ground Level

NA