APPENDIX C

BORING LOGS AND WELL CONSTRUCTION LOGS

BORING LOGS

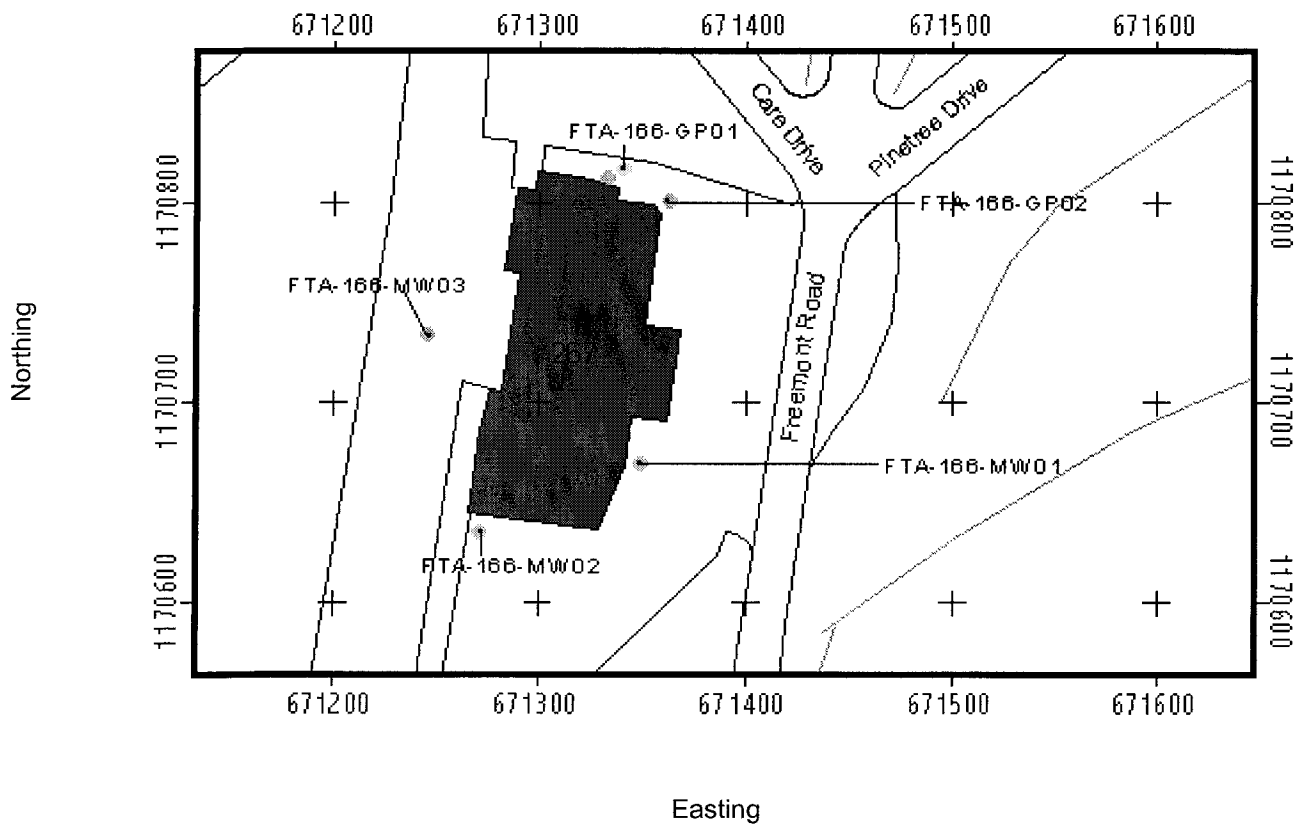
HTRW DRILLING LOG

District: **Mobile USACE**		HOLE NUMBER FTA-166-GP01
1. Company name: **IT Corporation**	2. Drill Subcontractor: TEG & MILLER DRILLING	Sheet 1 of 3 sheets

3. Project: Fort McClellan	4. Location: **Calhoun County, Alabama**
5. Name of driller: Sammy McDaniel/Darrell Hunter	6. Mfr. designation of drill: Geoprobe/CME-75
7. Sizes and types of drilling and sampling equipment: Direct Push, Hollow Stem Auger DP - 2'x2" Acetate-Lined Sampler HSA - 5'x8.25" OD Augers, 2'x2" Steel Split Spoons	8. Hole location: Training Aids Building, Parcel 166 9. Surface elevation (feet above mean sea level): 767.92 10. Date started: 10/27/98 — 11. Date completed:
12. Overburden thickness (feet bgs): 14.4'	15. Depth groundwater encountered (feet bgs): 13'
13. Depth drilled into rock (feet bgs): 0	16. Depth to water and elapsed time after drilling completed (feet bgs):
14. Total depth of hole (feet bgs): 14.4'	17. Other water level measurements (specify):

18. Geotechnical samples:	Collected:	Disturbed:	Undisturbed:	19. Total no. of core boxes: N/A		
20. Samples for chemical analysis:	VOC	Metals	Other (specify)	Other (specify)	Other (specify)	21. Total core recovery:
	X	X	SVOCs			N/A
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
		Temporary		C. SHORT & T. LECALVEZ		

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan

bgs= below ground surface
NA = Not applicable

Hole no.: FTA-166-GP01

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-GP01

Project: Fort McClellan | Geologist: C. SHORT & T. LECALVEZ | Sheet 2 of 3 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	cl: Damp, stiff, slightly plastic, CLAY, grayish-brown, yellowish-brown, reddish-yellow, some Gravel, flat, angular.	cl		Organic Vapor = 0.2ppm		EL0001		Rec 1.0'
	1	sh: Gray SHALE, hard	sh		Organic Vapor = 0.0ppm				Direct Push refusal at 1'
	2	sh: Gray SHALE, dry			Organic Vapor = 0.0ppm				
765	3				Organic Vapor = 0.0ppm				
	4				Organic Vapor = 0.0ppm				
	5		sh		Organic Vapor = 0.0ppm		EL0002		
	6				Organic Vapor = 0.0ppm				
	7				Organic Vapor = 0.0ppm				
760	8	sh: Gray SHALE			Organic Vapor = 0.0ppm				
	9		sh						

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-GP01

Project: Fort McClellan | Geologist: C. SHORT & T. LECALVEZ | Sheet 3 of 3 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		sh		Organic Vapor = 0.0ppm				10
	11	sh: weathered, dark gray SHALE, wet			Organic Vapor = 0.0ppm				11
	12		sh						12
755	13	sh: weathered, dark gray SHALE, saturated			Organic Vapor = 0.0ppm				13 Groundwater encountered at 13'
					Organic Vapor = 0.0ppm				
	14	sh: dark gray SHALE, dry							14

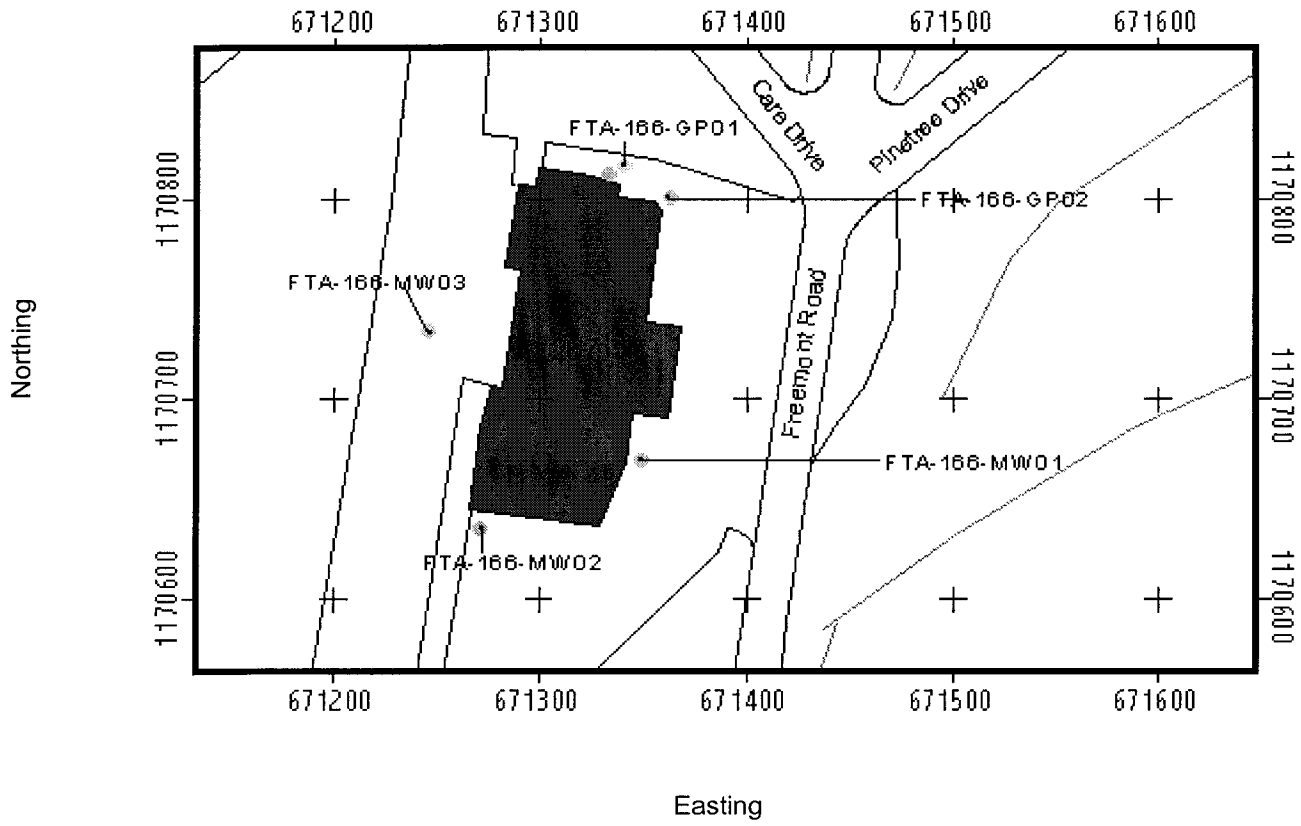
HTRW DRILLING LOG

District: **Mobile USACE**		HOLE NUMBER FTA-166-GP02
1. Company name: **IT Corporation**	2. Drill Subcontractor: TEG & MILLER DRILLING	Sheet 1 of 3 sheets

3. Project: Fort McClellan	4. Location: **Calhoun County, Alabama**
5. Name of driller: Sammy McDaniel/Darrell Hunter	6. Mfr. designation of drill: Geoprobe/CME-75
7. Sizes and types of drilling and sampling equipment: Direct Push, Hollow Stem Auger DP - 2'x2" Acetate-Lined Sampler HSA - 5'x8.25" OD Augers, 2'x2" Steel Split Spoons	8. Hole location: Training Aids Building, Parcel 166 9. Surface elevation (feet above mean sea level): 768.06 10. Date started: 10/12/98 — 11. Date completed: 01/07/99
12. Overburden thickness (feet bgs): >14.2'	15. Depth groundwater encountered (feet bgs): 13'
13. Depth drilled into rock (feet bgs): 0	16. Depth to water and elapsed time after drilling completed (feet bgs):
14. Total depth of hole (feet bgs): 14.2'	17. Other water level measurements (specify):

18. Geotechnical samples:	Collected:	Disturbed:	Undisturbed:	19. Total no. of core boxes: N/A		
20. Samples for chemical analysis:	VOC	Metals	Other (specify)	Other (specify)	Other (specify)	21. Total core recovery:
	X	X	SVOCs			N/A
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
		Temporary		D. PETERMAN & T. LECALVEZ		

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan

bgs= below ground surface
NA = Not applicable

Hole no.: FTA-166-GP02

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-GP02

Project: Fort McClellan | Geologist: D. PETERMAN & T. LECALVEZ | Sheet 2 of 3 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	cl: CLAY, some Silt, silty Sand 20%, low plasticity, loose, dry, reddish-brown, minor asphalt cuttings.	cl		Organic Vapor = 0.1ppm		EL0003 EL0004 EL0005		Rec 12"
	1	cl: CLAY, some Silt, brown to reddish-brown, Shaley, friable.	cl		Organic Vapor = 0ppm				Rec 48"
	2				Organic Vapor = 0ppm				
		ch: CLAY, some Silt, mottled gray, highly friable, Shaley, medium to high plasticity.							
765	3		ch		Organic Vapor = 0ppm		EL0006		
	4				Organic Vapor = 0ppm				
	5	sh: dark gray SHALE, dry.	sh		Organic Vapor = 0ppm				Direct Push refusal at 5'
	6	sh: dark gray SHALE, dry			Organic Vapor = 0ppm			50/4"	No recovery logged
	7		sh						
760	8	sh: gray SHALE, dry			Organic Vapor = 0ppm				
	9		sh		Organic Vapor = 0ppm				

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-GP02

Project: Fort McClellan | Geologist: D. PETERMAN & T. LECALVEZ | Sheet 3 of 3 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								10
	11	sh: gray SHALE, wet	sh		Organic Vapor = 0ppm				11
	12								12
755	13	sh: gray SHALE, saturated	sh		Organic Vapor = 0ppm Organic Vapor = 0ppm				Groundwater encountered at 13' 13
	14								14

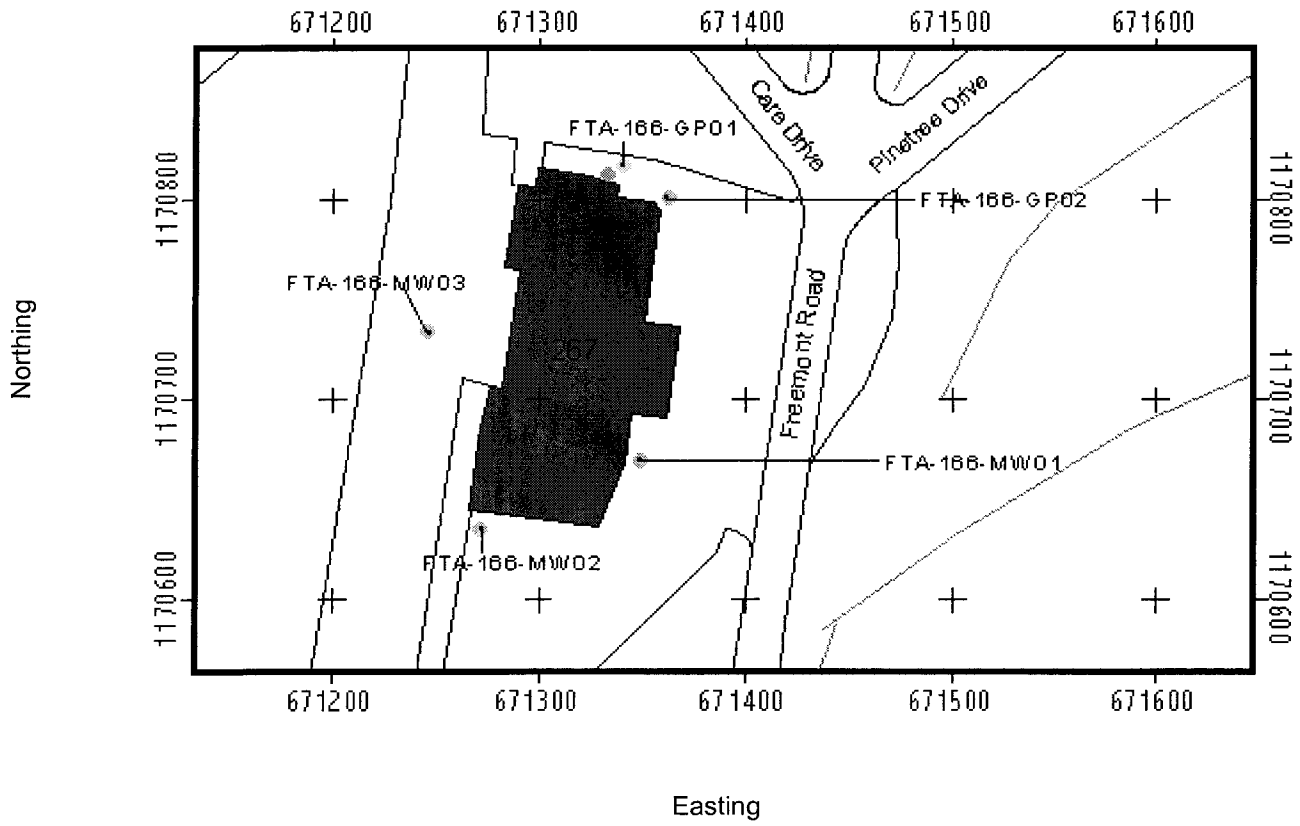
HTRW DRILLING LOG

District: **Mobile USACE**		HOLE NUMBER FTA-166-MW01
1. Company name: **IT Corporation**	2. Drill Subcontractor: Miller Drilling Co.	Sheet 1 of 3 sheets

3. Project: Fort McClellan	4. Location: **Calhoun County, Alabama**
5. Name of driller: Todd Neil	6. Mfr. designation of drill: CME-550
7. Sizes and types of drilling and sampling equipment: Hollow Stem Auger HSA - 5'x4.25" OD Augers, 2'x2" Steel Split Spoons	8. Hole location: Training Aids Building, Parcel 166 9. Surface elevation (feet above mean sea level): 767.98 10. Date started: 02/27/01 — 11. Date completed: 03/01/01
12. Overburden thickness (feet bgs): >15.4'	15. Depth groundwater encountered (feet bgs): 6'
13. Depth drilled into rock (feet bgs): 0	16. Depth to water and elapsed time after drilling completed (feet bgs): 2.2' bgs after 24 hours 2/28/01
14. Total depth of hole (feet bgs): 15.4'	17. Other water level measurements (specify):

18. Geotechnical samples:	Collected:	Disturbed:	Undisturbed:	19. Total no. of core boxes: N/A		
20. Samples for chemical analysis:	VOC	Metals	Other (specify)	Other (specify)	Other (specify)	21. Total core recovery:
	X	X	PCBs, Cyanide	SVOCs	Pest./Herb.	N/A
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
		Permanent		Dennis Mayton		

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan

bgs= below ground surface
NA = Not applicable

Hole no.: FTA-166-MW01

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-MW01

Project: Fort McClellan | Geologist: Dennis Mayton | Sheet 2 of 3 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	0	NA: ASPHALT.	NA		Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings
		ml: Dry, light brown SILT.			Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings
	1		ml						
	2								
	3	cl-ml: Lightly moist, light brown SILT and CLAY, highly weathered, Shale fragments present.			Organic Vapor = 0ppm			11 29 14 28	rec 1.5'/2'
	4		cl-ml						
5	5	cl-ml: Moist, light brown SILT and CLAY.			Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings
			cl-ml						
	6	sh: Moist, black SHALE.			Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings Groundwater encountered at 6'
	7		sh						
	8	sh: Moist, black SHALE.	sh		Organic Vapor = 0ppm			50/6"	
		sh: Moist, black SHALE.							Description from Hollow Stem Auger cuttings
	9		sh		Organic Vapor = 0ppm				
		sh: Black SHALE.			Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-MW01

Project: Fort McClellan | Geologist: Dennis Mayton | Sheet 3 of 3 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	10								10
	11								11
	12								12
			sh						
	13								13
	14								14
15	15								15 Auger refusal at 15.4' Bottom of borehole at 15.4'

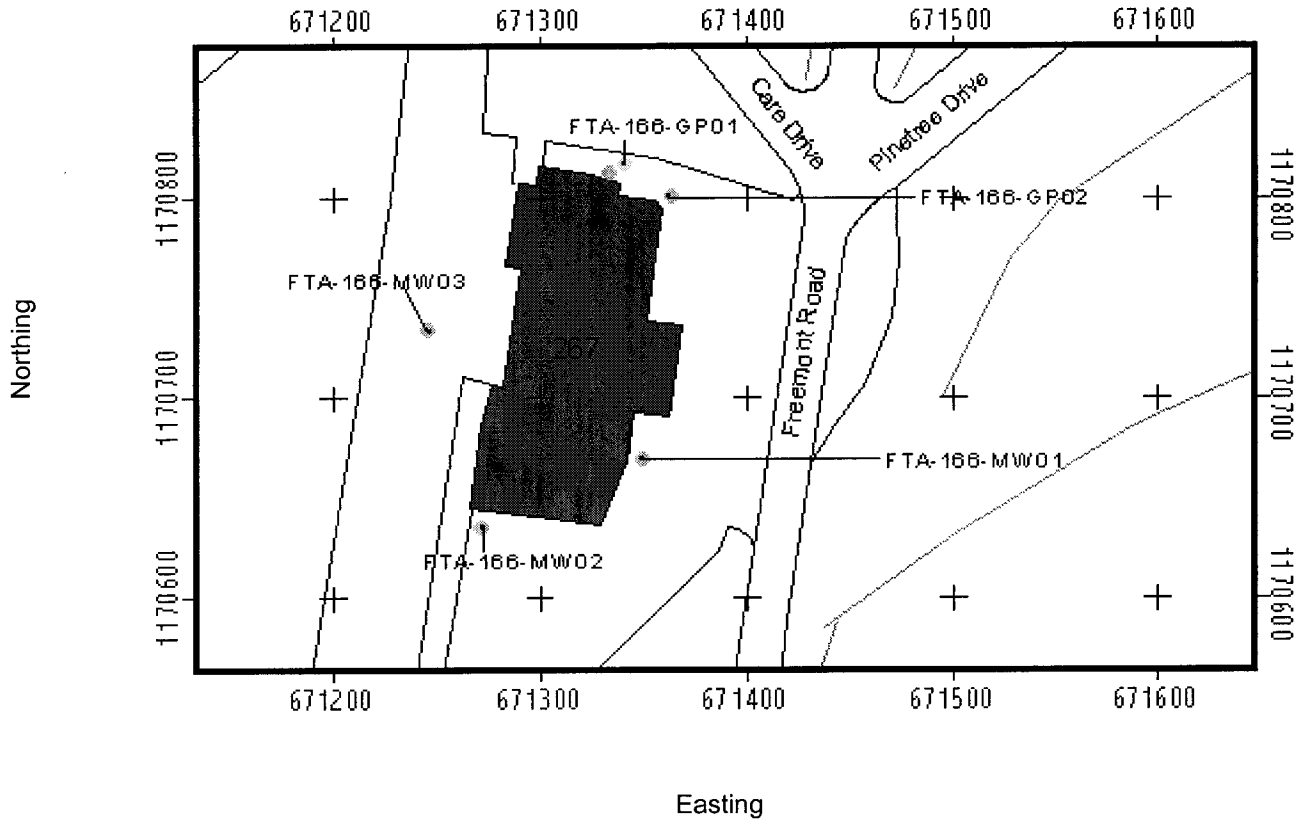
HTRW DRILLING LOG

District: **Mobile USACE**		HOLE NUMBER FTA-166-MW02
1. Company name: **IT Corporation**	2. Drill Subcontractor: Miller Drilling Co.	Sheet 1 of 3 sheets

3. Project: Fort McClellan	4. Location: **Calhoun County, Alabama**
5. Name of driller: Todd Neil	6. Mfr. designation of drill: CME-550
7. Sizes and types of drilling and sampling equipment: Hollow Stem Auger HSA - 5'x4.25" OD Augers, 2'x2" Steel Split Spoons	8. Hole location: Training Aid Building, Parcel 166 9. Surface elevation (feet above mean sea level): 767.83 10. Date started: 02/27/01 11. Date completed: 03/01/01
12. Overburden thickness (feet bgs): >16.5'	15. Depth groundwater encountered (feet bgs): 8.9'
13. Depth drilled into rock (feet bgs): 0	16. Depth to water and elapsed time after drilling completed (feet bgs): 3.2' 2/28/01
14. Total depth of hole (feet bgs): 16.5'	17. Other water level measurements (specify):

18. Geotechnical samples:	Collected:	Disturbed:	Undisturbed:	19. Total no. of core boxes: N/A		
20. Samples for chemical analysis:	VOC	Metals	Other (specify)	Other (specify)	Other (specify)	21. Total core recovery:
	X	X	PCBs, Cyanide	SVOCs	Pest./Herb.	N/A
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
		Permanent		Dennis Mayton		

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan

bgs= below ground surface
NA = Not applicable

Hole no.: FTA-166-MW02

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-MW02

Project: Fort McClellan | Geologist: Dennis Mayton | Sheet 2 of 3 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	0	NA: ASPHALT.	NA		Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings
		ml: Lightly moist, brown SILT, some fine Sand, little subangular quartz-rich Gravel.	ml		Organic Vapor = 0ppm				
	1	ml: Dry, light brown Silt, little Clay.			Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings
	2		ml						
	3	ml: Lightly moist, light brown SILT, little Clay, highly weathered Shale fragments.			Organic Vapor = 0ppm			20 28 30 31	rec 2'/2'
	4		ml						
5	5	ml: Dry, light brown SILT.			Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings
	6		ml						
	7	sh: Dry, dark gray SHALE.			Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings
			sh						
	8	sh: Wet, light black SHALE.			Organic Vapor = 0ppm			10 14 50/5"	rec 1.4'/1.4'
			sh						
	9								Groundwater encountered at 8.9'
		sh: Light black SHALE.	sh		Organic Vapor				Description from Hollow Stem Auger cuttings

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-MW02

Project: Fort McClellan | Geologist: Dennis Mayton | Sheet 3 of 3 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	10				= 0ppm				10
	11		sh						11
	12								12
	13	sh: Wet, black SHALE.	sh		Organic Vapor = 0ppm			50/5"	rec 0.4'/0.4' 13
		sh: Wet, black SHALE.			Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings
	14								14
			sh						
15	15								15
	16								16 Auger refusal at 16.5' Bottom of borehole at 16.5'

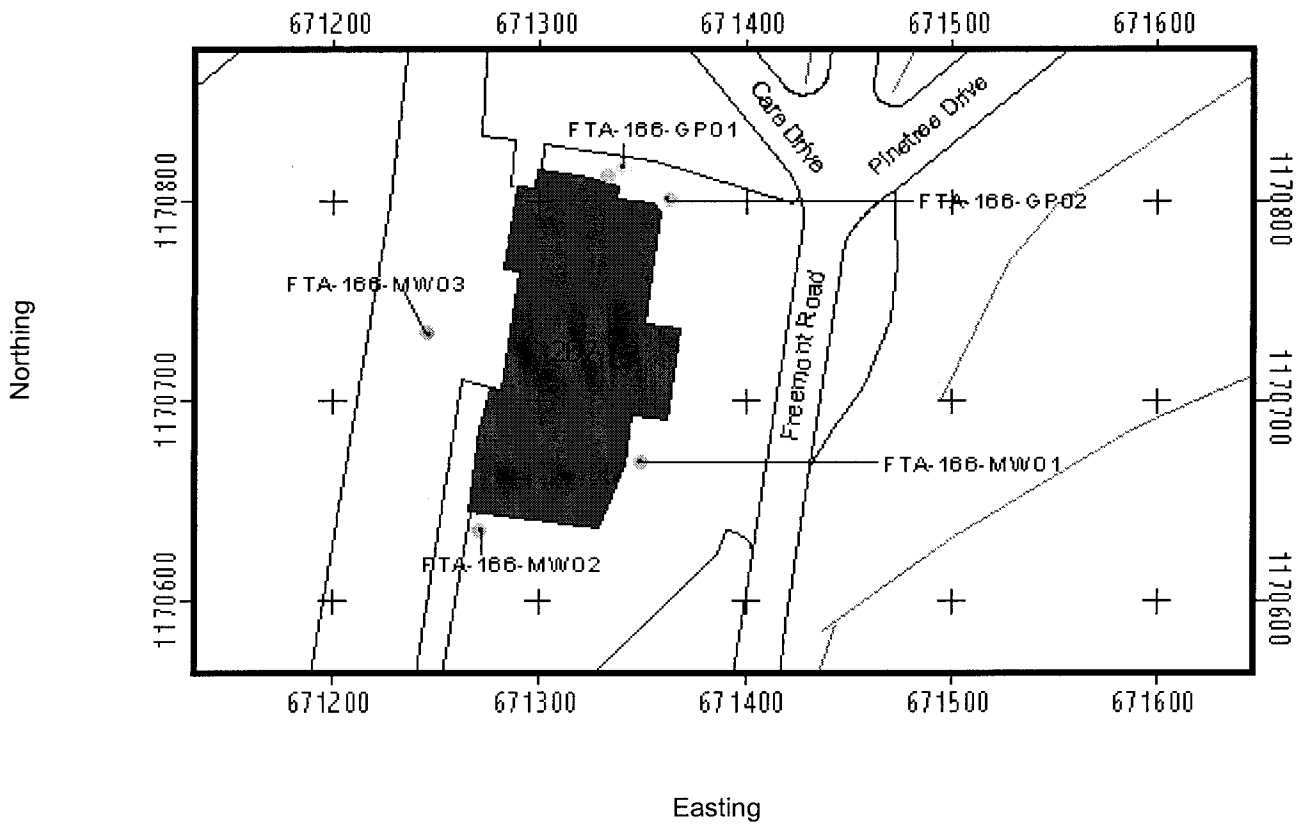
HTRW DRILLING LOG

District: **Mobile USACE**		HOLE NUMBER FTA-166-MW03
1. Company name: **IT Corporation**	2. Drill Subcontractor: Miller Drilling Co.	Sheet 1 of 4 sheets

3. Project: Fort McClellan	4. Location: **Calhoun County, Alabama**
5. Name of driller: Todd Neil	6. Mfr. designation of drill: CME-550
7. Sizes and types of drilling and sampling equipment: Hollow Stem Auger HSA - 5'x4.25" OD Augers, 2'x2" Steel Split Spoons	8. Hole location: Training Aids Building, Parcel 166 9. Surface elevation (feet above mean sea level): 772.0 10. Date started: 02/27/01 11. Date completed: 03/01/01
12. Overburden thickness (feet bgs): >20.5'	15. Depth groundwater encountered (feet bgs): 11'
13. Depth drilled into rock (feet bgs): 0	16. Depth to water and elapsed time after drilling completed (feet bgs): 4.25' 2/28/01
14. Total depth of hole (feet bgs): 20.5'	17. Other water level measurements (specify):

18. Geotechnical samples:	Collected:	Disturbed:	Undisturbed:	19. Total no. of core boxes: N/A		
20. Samples for chemical analysis:	VOC	Metals	Other (specify)	Other (specify)	Other (specify)	21. Total core recovery:
	X	X	PCBs, Cyanide	SVOCs	Pest./Herb.	N/A
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
		Permanent		Dennis Mayton		

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan

bgs= below ground surface
NA = Not applicable

Hole no.: FTA-166-MW03

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-MW03

Project: Fort McClellan | Geologist: Dennis Mayton | Sheet 2 of 4 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	0	NA: ASPHALT.	NA		Organic Vapor = 0ppm				
		cl-ml: Dry, light brown SILT and CLAY.	cl-ml		Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings
	1								
	2								
	3	sh: Lightly moist, light brown to gray, weathered SHALE.	sh		Organic Vapor = 0ppm			10 16 40 50/4"	rec 1.8'/1.8'
	4								
		sh: Light brown to light black SHALE.							Description from Hollow Stem Auger cuttings
5	5				Organic Vapor = 0ppm				
	6		sh						
	7								
	8	sh: Moist, black SHALE.	sh		Organic Vapor = 0ppm			50/4"	rec 0.3'/0.3'
		sh: Black SHALE.			Organic Vapor = 0ppm				Description from Hollow Stem Auger cuttings
	9		sh						

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-MW03

Project: Fort McClellan | Geologist: Dennis Mayton | Sheet 3 of 4 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	10								10
	11								Groundwater encountered at 11' 11
	12								12
	13								13
	14		sh						14
15	15								15
	16								16
	17								17
	18								18
	19								19

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-166-MW03

Project: Fort McClellan

Geologist: Dennis Mayton

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	20		sh						Auger refusal at 20.5' 20 Bottom of borehole at 20.5'

WELL CONSTRUCTION LOGS

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan	**WELL NO:** FTA-166-GP01
LOCATION Anniston, AL	**DRILLING METHOD:** Hollow Stem Auger
CLIENT: USACE Mobile District	**INSTALLATION DATE** 01/07/99
CONTRACTOR MILLER DRILLING	**NORTHING:** 1170824.4
DRILLER: D. HUNTER	**EASTING:** 671336.78
IT FIELD REPRESENTATIVE: T. LECALVER	**JOB NO:** 796887

GROUND SURFACE ELEVATION*
767.92

TOP of WELL CASING or RISER PIPE
EL* 768.38 STICKUP 0.46

TYPE of SURFACE SEAL Temporary

TEMPORARY SURFACE SEAL

ANNULAR SPACE SEAL
TYPE N/A

TYPE of RISER MATERIAL (Flush Threaded) PVC SCH 40

INSIDE DIAMETER of RISER (inches) 2

TOP OF BENTONITE SEAL
1.5

APPROXIMATE DIAMETER of BOREHOLE (inches) 8.25

TOP OF SAND PACK 2.5

TOP OF SCREENED INTERVAL
EL* 764.67 DEPTH 3.25

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* 754.67 DEPTH 13.25

BOTTOM of SUMP and WELL
EL* 754.42 DEPTH 13.5

BOTTOM of BOREHOLE
EL* 754.42 DEPTH 13.5

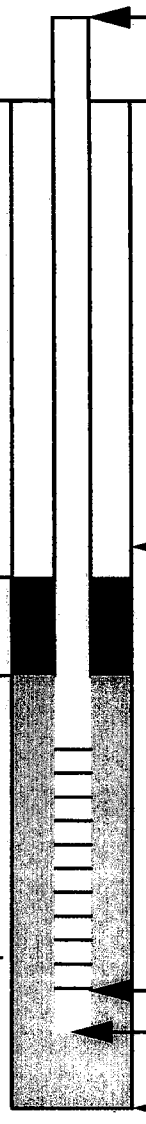
NEAT CEMENT
BENTONITE SEAL
FILTER PACK
GROUT
BOREHOLE COLLAPSE

*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	**WELL NO:** FTA-166-GP02
LOCATION Anniston, AL	**DRILLING METHOD:** Hollow Stem Auger
CLIENT: USACE Mobile District	**INSTALLATION DATE** 01/06/99
CONTRACTOR MILLER DRILLING	**NORTHING:** 1170806.38
DRILLER: D. HUNTER	**EASTING:** 671360.96
IT FIELD REPRESENTATIVE: T. LECALVER	**JOB NO:** 796887



GROUND SURFACE ELEVATION*
768.06

TOP of WELL CASING or RISER PIPE
EL* 767.92 STICKUP N/A

TYPE of SURFACE SEAL Temporary

TEMPORARY SURFACE SEAL

ANNULAR SPACE SEAL
TYPE N/A

TYPE of RISER MATERIAL (Flush Threaded) PVC SCH 40

INSIDE DIAMETER of RISER (inches) 2

TOP OF BENTONITE SEAL
2

APPROXIMATE DIAMETER of BOREHOLE (inches) 8.25

TOP OF SAND PACK 3.25

TOP OF SCREENED INTERVAL
EL* 763.81 DEPTH 4.25

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* 753.81 DEPTH 14.25

BOTTOM of SUMP and WELL
EL* 753.56 DEPTH 14.5

BOTTOM of BOREHOLE
EL* 753.56 DEPTH 14.5

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	**WELL NO:** FTA-166-MW01
LOCATION Anniston, AL	**DRILLING METHOD:** Hollow Stem Auger
CLIENT: USACE Mobile District	**INSTALLATION DATE** 02/27/01
CONTRACTOR Miller Drilling Co.	**NORTHING:** 1170663.48
DRILLER: Todd Neil	**EASTING:** 671346.48
IT FIELD REPRESENTATIVE: Dennis Mayton	**JOB NO:** 796887

GROUND SURFACE ELEVATION*
767.98

TOP of WELL CASING or RISER PIPE
EL* 767.64 STICKUP N/A

TYPE of SURFACE SEAL Concrete

MINIMUM THICKNESS of SURFACE SEAL 4 inches

ANNULAR SPACE SEAL
TYPE Grout

TYPE of RISER MATERIAL (Flush Threaded) PVC SCH 40

INSIDE DIAMETER of RISER (inches) 2

TOP OF BENTONITE SEAL
1.5

APPROXIMATE DIAMETER of BOREHOLE (inches) 8

TOP OF SAND PACK 3.5

TOP OF SCREENED INTERVAL
EL* 762.88 DEPTH 5.1

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* 752.88 DEPTH 15.1

BOTTOM of SUMP and WELL
EL* 752.58 DEPTH 15.4

BOTTOM of BOREHOLE
EL* 752.58 DEPTH 15.4

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	**WELL NO:** FTA-166-MW02
LOCATION Anniston, AL	**DRILLING METHOD:** Hollow Stem Auger
CLIENT: USACE Mobile District	**INSTALLATION DATE** 02/27/01
CONTRACTOR Miller Drilling Co.	**NORTHING:** 1170626.72
DRILLER: Todd Neil	**EASTING:** 671261.87
IT FIELD REPRESENTATIVE: Dennis Mayton	**JOB NO:** 796887

GROUND SURFACE ELEVATION*
767.83

TOP of WELL CASING or RISER PIPE
EL* 766.89 STICKUP N/A

TYPE of SURFACE SEAL Concrete

MINIMUM THICKNESS of SURFACE SEAL 4 inches

ANNULAR SPACE SEAL
TYPE Grout

TYPE of RISER MATERIAL (Flush Threaded) PVC SCH 40

INSIDE DIAMETER of RISER (inches) 2

TOP OF BENTONITE SEAL
1.5

APPROXIMATE DIAMETER of BOREHOLE (inches) 8

TOP OF SAND PACK 3.8

TOP OF SCREENED INTERVAL
EL* 761.63 DEPTH 6.2

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* 751.63 DEPTH 16.2

BOTTOM of SUMP and WELL
EL* 751.33 DEPTH 16.5

BOTTOM of BOREHOLE
EL* 751.33 DEPTH 16.5

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	**WELL NO:** FTA-166-MW03
LOCATION Anniston, AL	**DRILLING METHOD:** Hollow Stem Auger
CLIENT: USACE Mobile District	**INSTALLATION DATE** 02/27/01
CONTRACTOR Miller Drilling Co.	**NORTHING:** 1170733.37
DRILLER: Todd Neil	**EASTING:** 671234.12
IT FIELD REPRESENTATIVE: Dennis Mayton	**JOB NO:** 796887

GROUND SURFACE ELEVATION*
772

TOP of WELL CASING or RISER PIPE
EL* 771.36 STICKUP N/A

TYPE of SURFACE SEAL Concrete

MINIMUM THICKNESS of SURFACE SEAL 4 inches

ANNULAR SPACE SEAL
TYPE Grout

TYPE of RISER MATERIAL (Flush Threaded) PVC SCH 40

INSIDE DIAMETER of RISER (inches) 2

TOP OF BENTONITE SEAL
1.3

APPROXIMATE DIAMETER of BOREHOLE (inches) 8

TOP OF SAND PACK 3.3

TOP OF SCREENED INTERVAL
EL* 766.8 DEPTH 5.2

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* 751.8 DEPTH 20.2

BOTTOM of SUMP and WELL
EL* 751.5 DEPTH 20.5

BOTTOM of BOREHOLE
EL* 751.5 DEPTH 20.5

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.