

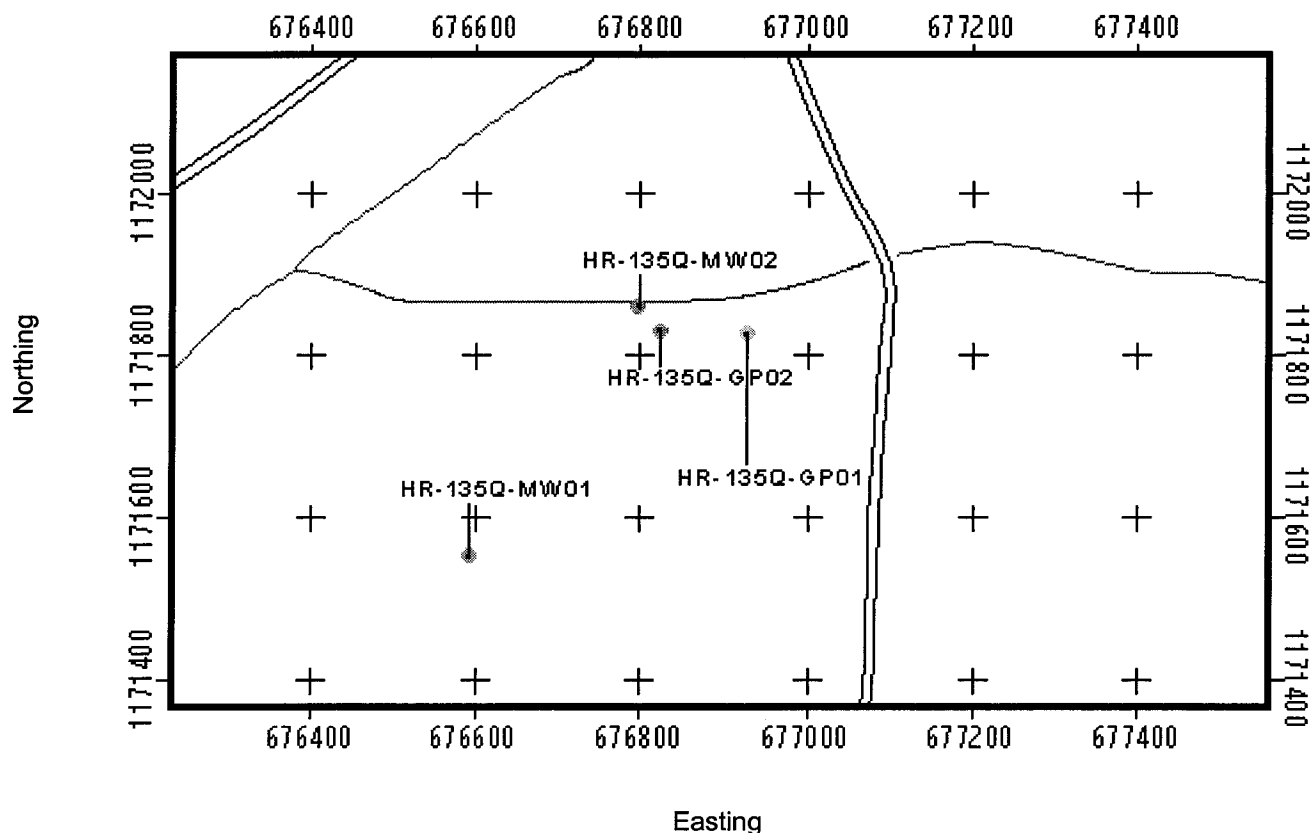
APPENDIX B

BORING LOGS AND WELL CONSTRUCTION LOGS

BORING LOGS

HTRW DRILLING LOG			District: Mobile USACE		HOLE NUMBER HR-135Q-GP01	
1. Company name: IT Corporation			2. Drill Subcontractor: ESN		Sheet 1 of 2 sheets	
3. Project: Fort McClellan			4. Location: Calhoun County, Alabama			
5. Name of driller: Sammy McDaniel			6. Mfr. designation of drill: Thunder Probe			
7. Sizes and types of drilling and sampling equipment: Direct Push DP - 2"x2" Acetate-Lined Sampler			8. Hole location: Impact Area Near Stump Dump, Parcel 135Q-X			
			9. Surface elevation (feet above mean sea level): 0			
			10. Date started: 10/04/00		11. Date completed: 10/04/00	
12. Overburden thickness (feet bgs): >5			15. Depth groundwater encountered (feet bgs): N/A			
13. Depth drilled into rock (feet bgs): N/A			16. Depth to water and elapsed time after drilling completed (feet bgs): N/A			
14. Total depth of hole (feet bgs): 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)	21. Total core recovery:
		X	Explosives		Perchlorate	N/A
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)		Geologist:	
			grout		Dennis Mayton	

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
NA = Not applicable

Hole no.: **HR-135Q-GP01**

(Continuation Sheet)

HOLE NUMBER: HR-135Q-GP01

Project: Fort McClellan

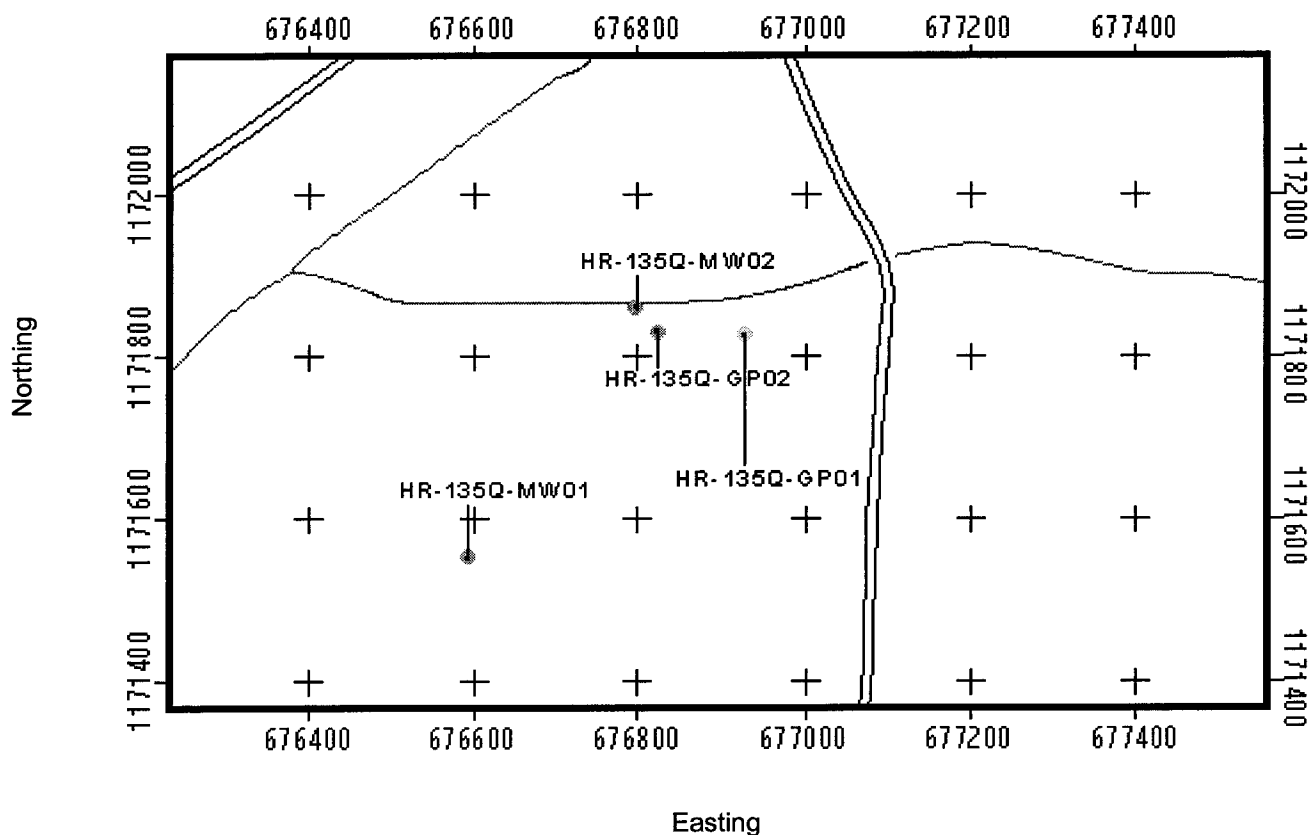
Geologist: Dennis Mayton

Sheet 2 of 2 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	ml: Moist brown SILT, some quartz-rich subangular coarse Gravel, little subrounded medium to fine Sand, trace roots.	ml				YR0005		Rec 12"/12"
1	1	ml: Dry yellowish orange SILT, some quartz-rich subangular coarse Gravel, little subrounded medium to fine Sand.			Organic Vapor = 1.0ppm				Rec 48"/48"
2	2								
3	3		ml						
4	4						YR0008		
5	5								Bottom of borehole at 6 ft

HTRW DRILLING LOG		District: Mobile USACE		HOLE NUMBER HR-135Q-GP02		
1. Company name: IT Corporation		2. Drill Subcontractor: ESN		Sheet 1 of 2 sheets		
3. Project: Fort McClellan			4. Location: Calhoun County, Alabama			
5. Name of driller: Sammy McDaniel			6. Mfr. designation of drill: Thunder Probe			
7. Sizes and types of drilling and sampling equipment: Direct Push DP - 2"x2" Acetate-Lined Sampler			8. Hole location: Impact Area Near Stump Dump, Parcel 135Q-X			
			9. Surface elevation (feet above mean sea level): 0			
			10. Date started: 10/03/00	11. Date completed: 10/03/00		
12. Overburden thickness (feet bgs): >7			15. Depth groundwater encountered (feet bgs): N/A			
13. Depth drilled into rock (feet bgs): N/A			16. Depth to water and elapsed time after drilling completed (feet bgs): N/A			
14. Total depth of hole (feet bgs): 7			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	Explosives	Perchlorate		N/A
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
			grout	Leslie O'Hare		

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
NA = Not applicable

Hole no.: **HR-135Q-GP02**

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: HR-135Q-GP02

Project: Fort McClellan

Geologist: Leslie O'Hare

Sheet 2 of 2 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	ml: Dark brown SILT, some Sand, some quartz-rich coarse Gravel.	ml				YR0009		Rec 36"/48"
1	1	ml: Yellowish orange to orange brown SILT, some Sand, some quartz-rich coarse Gravel.							
2	2		ml						
3	3								
4	4	ml: Orange brown to yellowish orange SILT, some Sand, little pink colored quartz-rich Gravel.	ml		Organic Vapor = 1.0ppm				Rec 36"/36"
5	5								
6	6		ml				YR0010		
7	7								Bottom of borehole at 7 ft

HTRW DRILLING LOGDistrict: **Mobile USACE****HOLE NUMBER**

HR-135Q-MW01

1. Company name: **IT Corporation**2. Drill Subcontractor: **ESN/Miller Drilling**

Sheet 1 of 5 sheets

3. Project: **Fort McClellan**4. Location: **Calhoun County, Alabama**5. Name of driller: **Ken Gobell**6. Mfr. designation of drill: **CME 750**

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: **Impact Area Near Stump Dump, Parcel 135Q-X**9. Surface elevation (feet above mean sea level): **905.34**10. Date started: **09/19/00**11. Date completed: **10/03/00**12. Overburden thickness (feet bgs): **>39**15. Depth groundwater encountered (feet bgs): **29**

13. Depth drilled into rock (feet bgs):

16. Depth to water and elapsed
time after drilling completed (feet bgs): **21.51' bgs on 09/21/00**14. Total depth of hole (feet bgs): **39**

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

Explosives

Perchlorate

N/A

22. Disposition of hole:

Backfilled

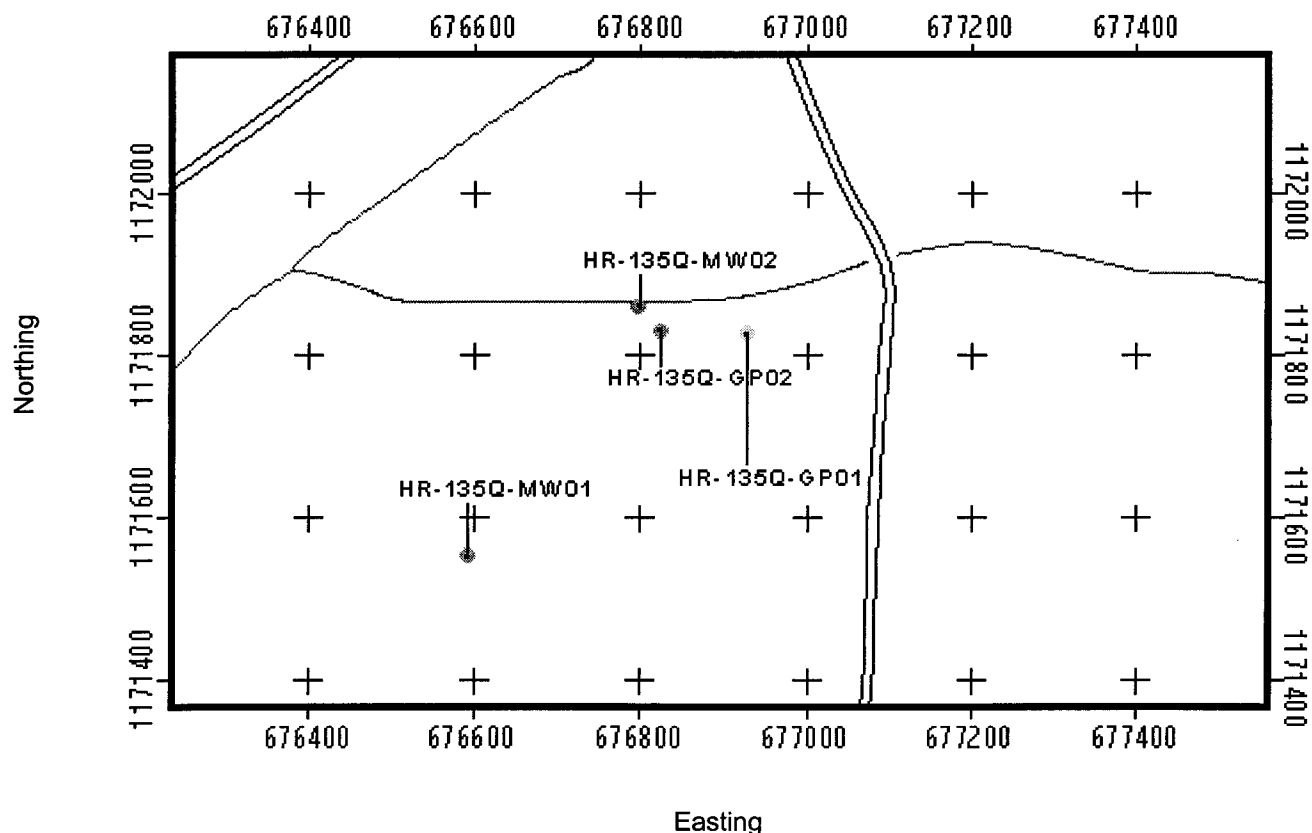
Monitoring well

Other (specify)

Geologist:

Permanent

Leslie O'Hare

LOCATION SKETCH/COMMENTS:Project: **Fort McClellan**bgs= below ground surface
NA = Not applicableHole no.: **HR-135Q-MW01**

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: HR-135Q-MW01

Project: Fort McClellan

Geologist: Leslie O'Hare

Sheet 2 of 5 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: Dark brown SILT, some Clay, trace Sand, little coarse Gravel.	ml				YR0001		Rec 4.0'/4.0'
905	1	ml: Orange brown SILT, some Clay, trace Sand, trace quartz-rich coarse Gravel.	ml						
	2		ml						
	3		ml						
	4	ml: Orange brown SILT, some Clay, trace Sand.	ml		Organic Vapor = 0.0ppm				Rec 3.9'/4.0'
	5		ml						
900	6	cl: Yellowish orange to light gray CLAY and weathered Shale.	cl						
	7		cl						
	8	cl: Orange brown, Yellowish orange CLAY and light gray weathered Shale.	cl		Organic Vapor = 0.0ppm				Rec 4.0'/4.0'
	9		cl						

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: HR-135Q-MW01

Project: Fort McClellan

Geologist: Leslie O'Hare

Sheet 3 of 5 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)
895	10		cl						
	11						YR0002		
	12	cl: Yellowish orange to light gray CLAY, little Silt.			Organic Vapor = 0.0ppm				Bottom of direct push borehole at 12'
	13		cl						Description from HSA drill cuttings
	14	sh: Purple medium stiff friable weathered layered SHALE.			Organic Vapor = 0.0ppm			10 16 29 36	Rec 1.5'/2.0'
	15		sh						
890	16	sh: Olive gray friable weathered SHALE. sh: Purple to gray friable weathered SHALE.	sh		Organic Vapor = 0.0ppm				Description from HSA drill cuttings
	17								
	18		sh						
	19	sh: Purple to dark gray fissile friable SHALE. Orange oxidation, Silt in oxidized areas.	sh		Organic Vapor = 0.0ppm			6 7 9 12	Rec 1.5'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: HR-135Q-MW01

Project: Fort McClellan

Geologist: Leslie O'Hare

Sheet 4 of 5 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)
885	20		sh						
	21	sh: Purple to dark gray SHALE.			Organic Vapor = 0.0ppm				Description from HSA drill cuttings
	22		sh						
	23								
	24	sh: Purple fissile friable SHALE. Orange oxidation (moist).			Organic Vapor = 0.0ppm			8 10 22 28	Rec 1.9'/2.0'
	25		sh						
880	26	sh: Purple to dark brown SHALE.			Organic Vapor = 0.0ppm				Description from HSA drill cuttings
	27		sh						
	28								
	29	sh: Purple to dark gray fissile friable SHALE. Hit moisture zone at 29.0'	sh		Organic Vapor = 0.0ppm			14 14 27 50/0.5'	Rec 1.4'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: HR-135Q-MW01

Project: Fort McClellan

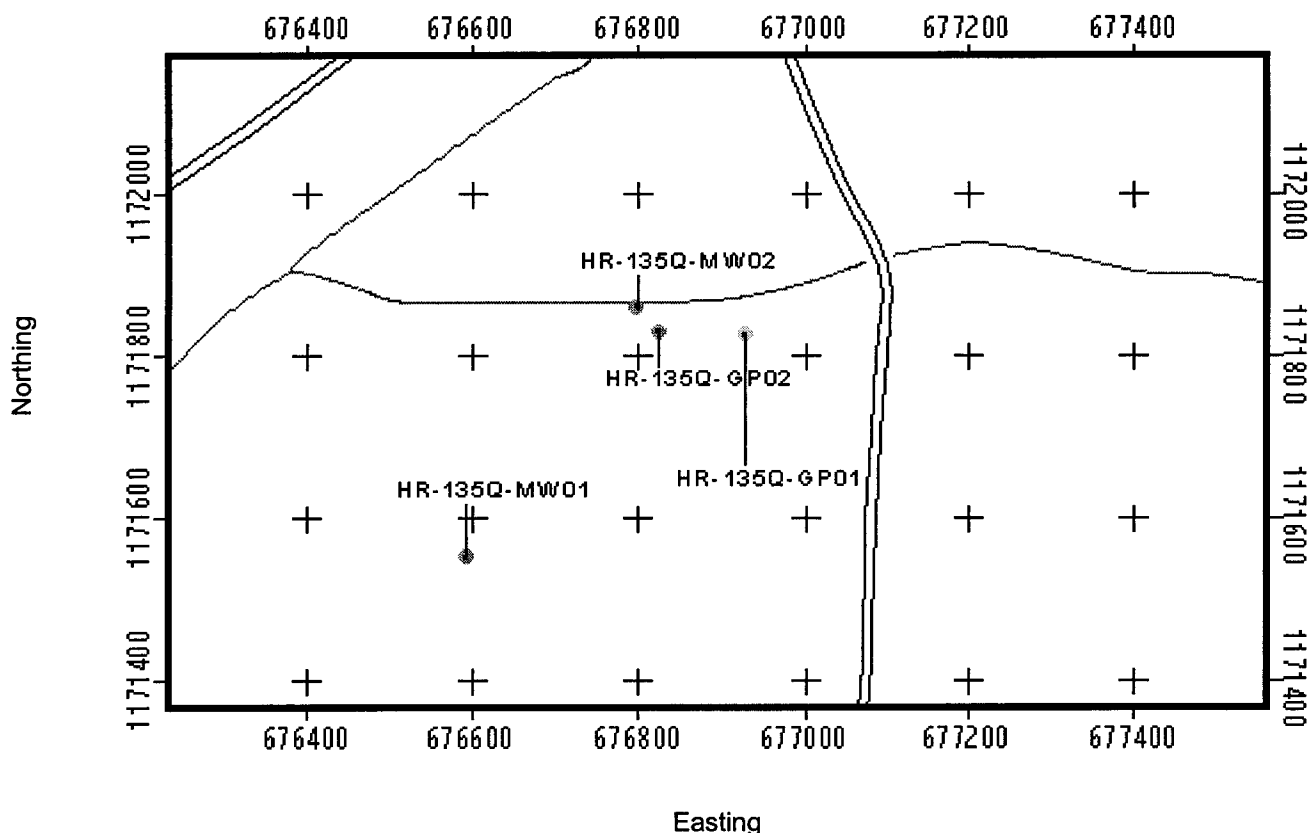
Geologist: Leslie O'Hare

Sheet 5 of 5 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			sh						
875	31	sh: Purple SHALE.			Organic Vapor = 0.0ppm				Description from HSA drill cuttings
	32		sh						
	33								
	34	sh: Purple fissile friable wet SHALE.			Organic Vapor = 0.0ppm			8 10 17 22	Rec 1.6'/2.0'
	35		sh						
870	36	sh: Purple wet SHALE.			Organic Vapor = 0.0ppm				Description from HSA drill cuttings
	37								
	38		sh						
	39								Bottom of borehole at 39.0'

HTRW DRILLING LOG			District: Mobile USACE		HOLE NUMBER HR-135Q-MW02	
1. Company name: IT Corporation			2. Drill Subcontractor: ESN/Miller Drilling		Sheet 1 of 5 sheets	
3. Project: Fort McClellan			4. Location: Calhoun County, Alabama			
5. Name of driller: Ken Gobell			6. Mfr. designation of drill: CME 750			
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: Impact Area Near Stump Dump, Parcel 135Q-X			
			9. Surface elevation (feet above mean sea level): 922.83			
			10. Date started: 09/20/00		11. Date completed: 10/04/00	
12. Overburden thickness (feet bgs): >39			15. Depth groundwater encountered (feet bgs): 26			
13. Depth drilled into rock (feet bgs):			16. Depth to water and elapsed time after drilling completed (feet bgs): 16.19' bgs			
14. Total depth of hole (feet bgs): 39			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)	21. Total core recovery:
		X	Explosives		Perchlorate	N/A
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)		Geologist:	
		Permanent			L. O'Hare/D. Mayton/J. Dendy	

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
NA = Not applicable

Hole no.: **HR-135Q-MW02**

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: HR-135Q-MW02

Project: Fort McClellan

Geologist: L. O'Hare/D. Mayton/J. Dendy

Sheet 2 of 5 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: Dry brown SILT, little subangular quartz-rich Gravel, little roots.	ml				YR0003		Rec 2.6'/4.0'
	1	ml: Dry yellowish orange SILT, little quartz-rich subangular Gravel, little subrounded Sand.	ml						
	2		ml						
920	3		ml						
	4	ml: Dry brown SILT, some quartz-rich subangular coarse Gravel, trace subrounded fine Sand.	ml		Organic Vapor = 0.0ppm				Rec 1.6'/2.0'
	5	ml: Dry yellowish orange SILT, some quartz-rich subangular coarse Gravel, trace subrounded fine Sand.	ml				YR0004		
	6	ml: Yellowish orange to light brown soft SILT, little quartz- rich subrounded fine Gravel, little fine Sand, little Clay.	ml		Organic Vapor = 0.0ppm				Direct push refusal at 6.0' Description from HSA drill cuttings
	7		ml						
915	8	ml: Yellowish orange to light brown soft SILT, little fine Sand, little Clay.	ml		Organic Vapor = 0.0ppm			4 3 5 7	Rec 2.0'/2.0'
	9	cl: Yellowish orange to light gray soft CLAY, some Silt, trace fine Sand.	cl						

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: HR-135Q-MW02

Project: Fort McClellan

Geologist: L. O'Hare/D. Mayton/J. Dendy

Sheet 3 of 5 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	cl: Yellowish orange, soft CLAY, some Silt.			Organic Vapor = 0.0ppm				Description from HSA drill cuttings
	11								
	12		cl						
910	13								
	14	cl: Yellowish orange soft CLAY, some Silt, trace fine Sand, trace quartz-rich subrounded fine Gravel.	cl		Organic Vapor = 0.0ppm			3 4 5 7	Rec 2.0'/2.0'
	15	cl: Yellowish orange to light gray soft CLAY, some fine medium Sand, some Silt, moist.	cl						
	16	cl: Yellowish orange soft CLAY, little Silt, moist Silt is near top of cuttings.			Organic Vapor = 0.0ppm				Description from HSA drill cuttings
	17								
	18		cl						
905	19	cl: Yellowish orange soft CLAY, little Silt, little quartz-rich subrounded fine Gravel.	cl		Organic Vapor = 0.0ppm			10 15 12 18	Rec 2.0'/2.0'

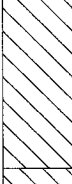
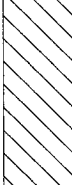
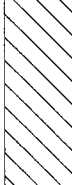
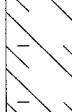
HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: HR-135Q-MW02

Project: Fort McClellan

Geologist: L. O'Hare/D. Mayton/J. Dendy

Sheet 4 of 5 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)
900	20	cl: Yellowish orange to red soft CLAY, some Silt.	cl		Organic Vapor = 0.0ppm				
	21	cl: Yellowish orange soft CLAY, some Silt.	cl		Organic Vapor = 0.0ppm				Description from HSA drill cuttings
	22		cl						
	23	cl: Yellowish orange to light red CLAY, some Silt.	cl		Organic Vapor = 0.0ppm				
	24	cl: Yellowish orange soft CLAY, some Silt, some subrounded fine to coarse Gravel. Wet at 26 ft.	cl		Organic Vapor = 0.0ppm			6 15 11 15	Rec 1.6'/2.0'
	25		cl						
	26	cl: Yellowish orange soft CLAY, some Silt.	cl		Organic Vapor = 0.0ppm				Description from HSA drill cuttings. Groundwater encountered at 26'.
	27		cl						
895	28		cl						
	29	cl-m: Yellowish orange to light gray soft SILT and Clay, some subrounded coarse Gravel, little fine Sand.	cl-m		Organic Vapor = 0.0ppm			7 7 11 17	Rec 2.0'/2.0'

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: HR-135Q-MW02

Project: Fort McClellan

Geologist: L. O'Hare/D. Mayton/J. Dendy

Sheet 5 of 5 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		ml: Yellowish orange soft SILT, some Clay.			Organic Vapor = 0.0ppm				Description from HSA drill cuttings
32			ml						
890									
33									
34		cl-ml: Yellowish orange to red soft SILT and CLAY, some subrounded fine to coarse Gravel, wet.			Organic Vapor = 0.0ppm			7 13 19 20	Rec 2.0'/2.0'
35			cl-ml						
36		cl-ml: Yellowish orange soft SILT and CLAY, wet.			Organic Vapor = 0.0ppm				Description from HSA drill cuttings
37									
885			cl-ml						
38									
39									Bottom of borehole at 39.0'

WELL CONSTRUCTION LOGS

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan

LOCATION Anniston, AL

CLIENT: USACE Mobile District

CONTRACTOR Miller Drilling

DRILLER: Ken Gobell

IT FIELD REPRESENTATIVE: L. Ohare/D. Mayton/J. Dendy

WELL NO: HR-135Q-MW01

DRILLING METHOD:

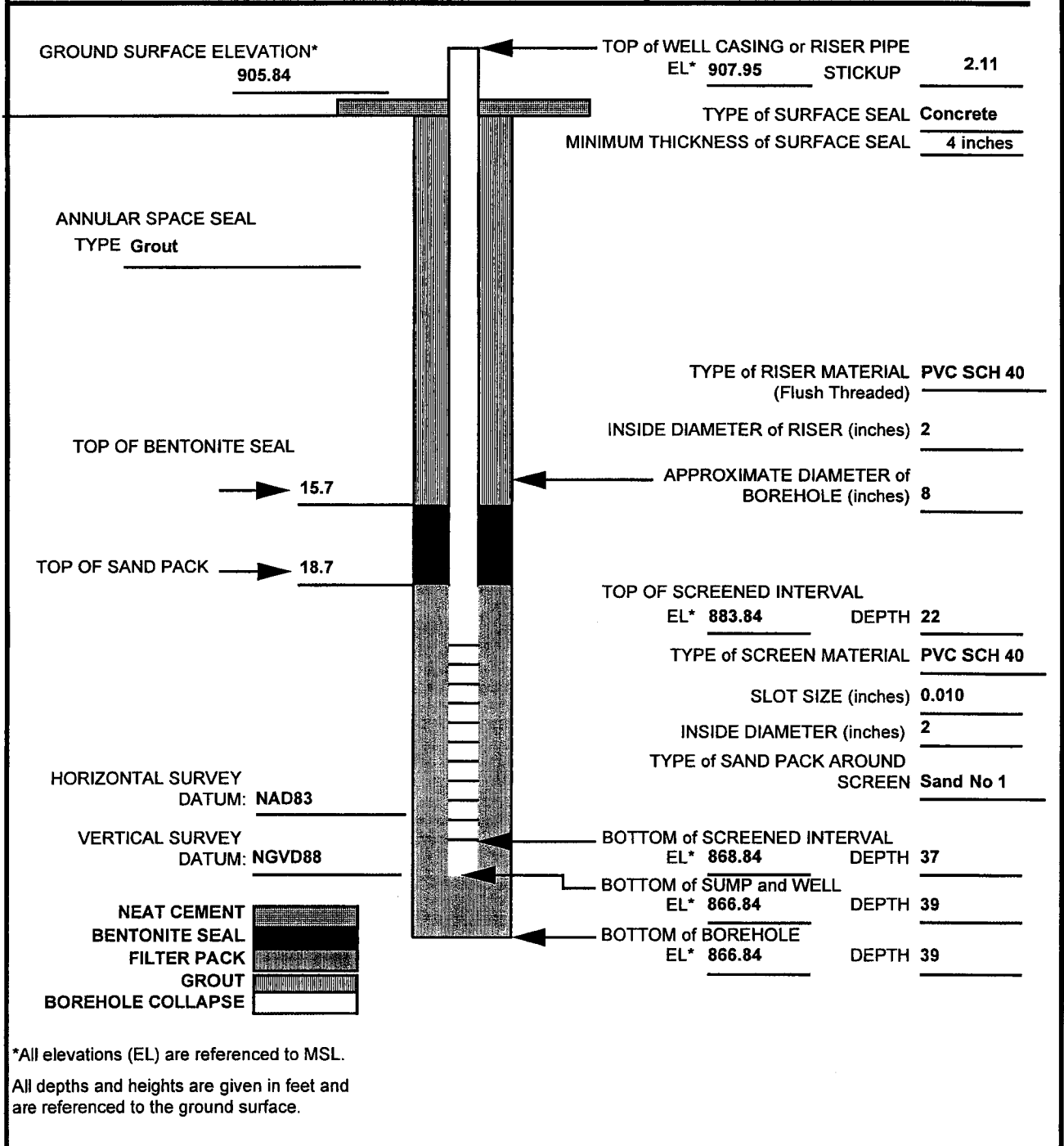
Hollow Stem Auger

INSTALLATION DATE 09/19/00

NORTHING: 1171551.11

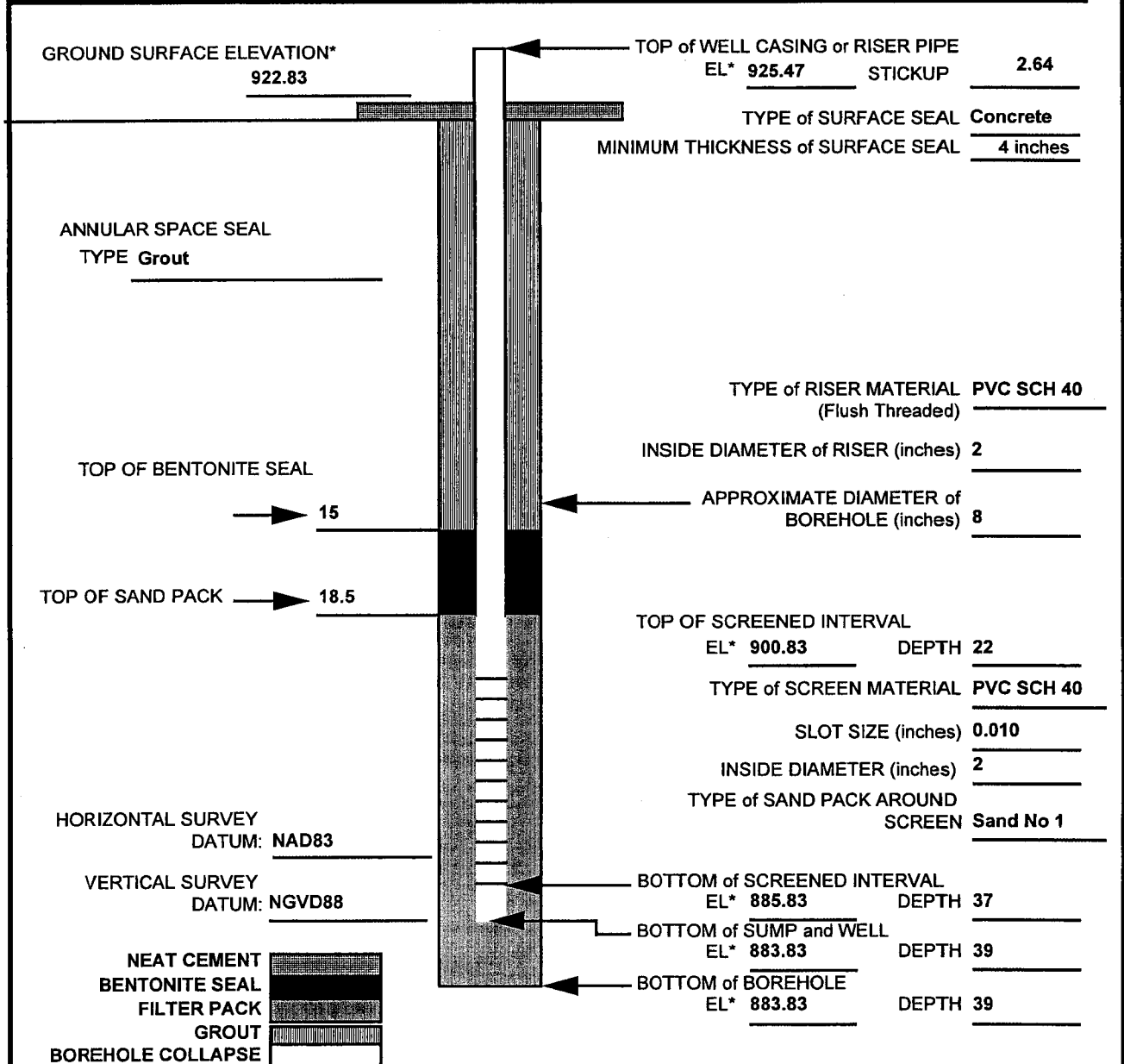
EASTING: 676592.72

JOB NO: 796887



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan	WELL NO: HR-135Q-MW02
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 09/20/00
CONTRACTOR: Miller Drilling	NORTHING: 1171858.09
DRILLER: Ken Gobell	EASTING: 676797.01
IT FIELD REPRESENTATIVE: L. Ohare/D. Mayton/J. Dendy	JOB NO: 796887



*All elevations (EL) are referenced to MSL.

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