

APPENDIX B

BORING LOGS AND WELL CONSTRUCTION LOGS

APPENDIX B

BORING LOGS AND WELL CONSTRUCTION LOGS

BORING LOGS

HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP01

1. Company name: **IT Corporation**

2. Drill Subcontractor: **TEG & MILLER DRILLING**

Sheet 1 of 4 sheets

3. Project: **Fort McClellan**

4. Location: **Former Motor Pool Area 3100**

5. Name of driller: **Troy White/Doug Bishop**

6. Mfr designation of drill: **Geoprobe/CME-85**

7. Sizes and types of drilling and sampling equipment:

Direct Push, Hollow Stem Auger

DP- 4' x 2" acetate-lined sampler

HSA- 5' x 8"od augers, 2' x 2" steel split spoons

8. Hole location **FTA-147-GP01**

9. Surface elevation (feet above mean sea level): **794.62**

10. Date started: **10/15/98**

11. Date completed: **01/12/99**

12. Overburden thickness (feet bgs): **>22**

15. Depth groundwater encountered (feet bgs): **20 Ft**

13. Depth drilled into rock (feet bgs):

16. Depth to water and elapsed time after drilling completed (feet bgs):

14. Total depth of hole (feet bgs): **22**

17. Other water level measurements (specify):

18. Geotechnical samples:

Disturbed:

Undisturbed:

19. Total no. of core boxes:

20. Samples for chemical analysis:

VOC

Metals

Other (specify)

Other (specify)

Other (specify)

21. Total core recovery:

X

X

TCL VOCs

TCL SVOCs

TAL Metals

N/A

22. Disposition of hole:

Backfilled

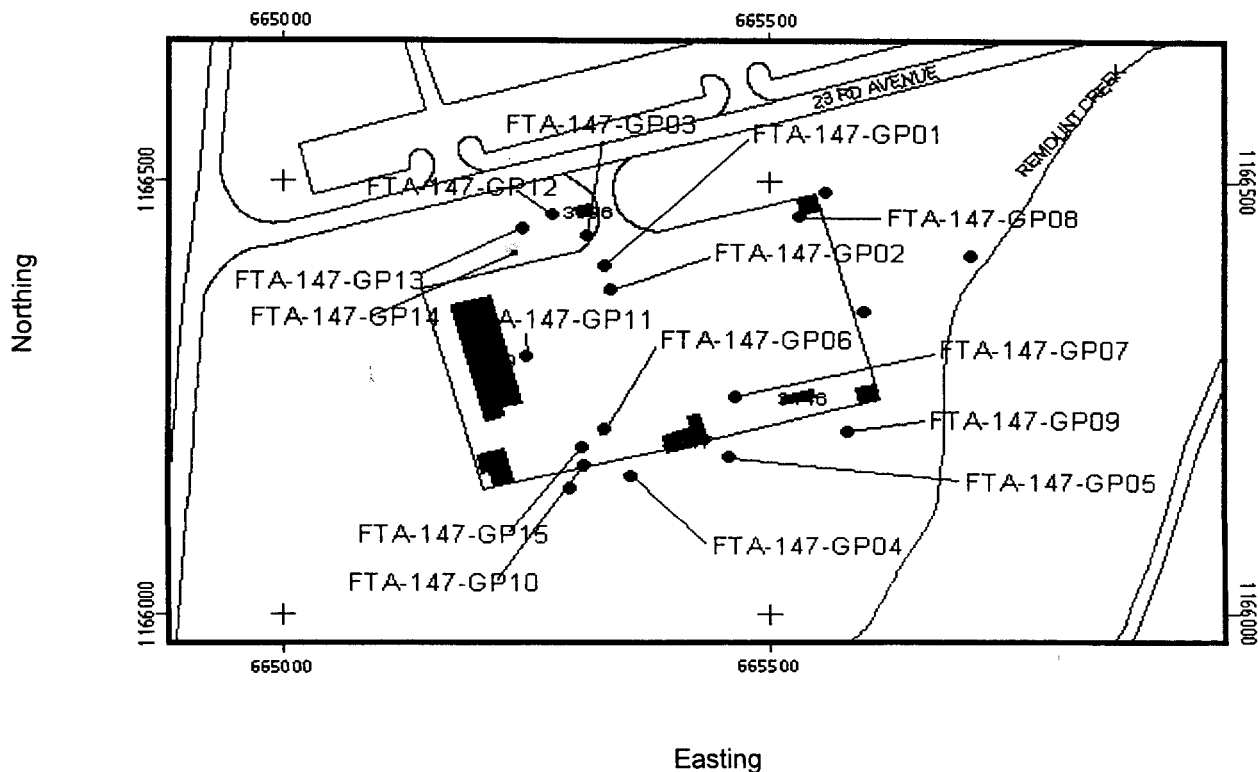
Monitoring well

Other (specify)

Geologist:

D. PETERMAN & SOPHIA HSU

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
NA = Not applicable

Hole no.: **FTA-147-GP01**

HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP02

1. Company name: **IT Corporation**

2. Drill Subcontractor: **TEG & MILLER DRILLING**

Sheet 1 of 3 sheets

3. Project: **Fort McClellan**

4. Location: **Motor Pool Area 3100**

5. Name of driller: **Troy White/ Ken Gobble**

6. Mfr designation of drill: **Geoprobe/CME-550**

7. Sizes and types of drilling and sampling equipment:

Direct Push, Hollow Stem Auger
 DP- 4' x 2" acetate-lined sampler
 HSA- 5' x 8"od augers, 2' x 2" steel split spoons

8. Hole location **FTA-147-GP02**

9. Surface elevation (feet above mean sea level): **794.84**

10. Date started: **10/15/98**

11. Date completed: **01/12/99**

12. Overburden thickness (feet bgs): **>20**

15. Depth groundwater encountered (feet bgs): **7.0'**

13. Depth drilled into rock (feet bgs):

16. Depth to water and elapsed time after drilling completed (feet bgs):

14. Total depth of hole (feet bgs): **20**

17. Other water level measurements (specify):

18. Geotechnical samples:

Disturbed:

Undisturbed:

19. Total no. of core boxes:

20. Samples for chemical analysis:

VOC

Metals

Other (specify)

Other (specify)

Other (specify)

21. Total core recovery:

X

X

TCL VOCs

TCL SVOCs

TAL Metals

N/A

22. Disposition of hole:

Backfilled

Monitoring well

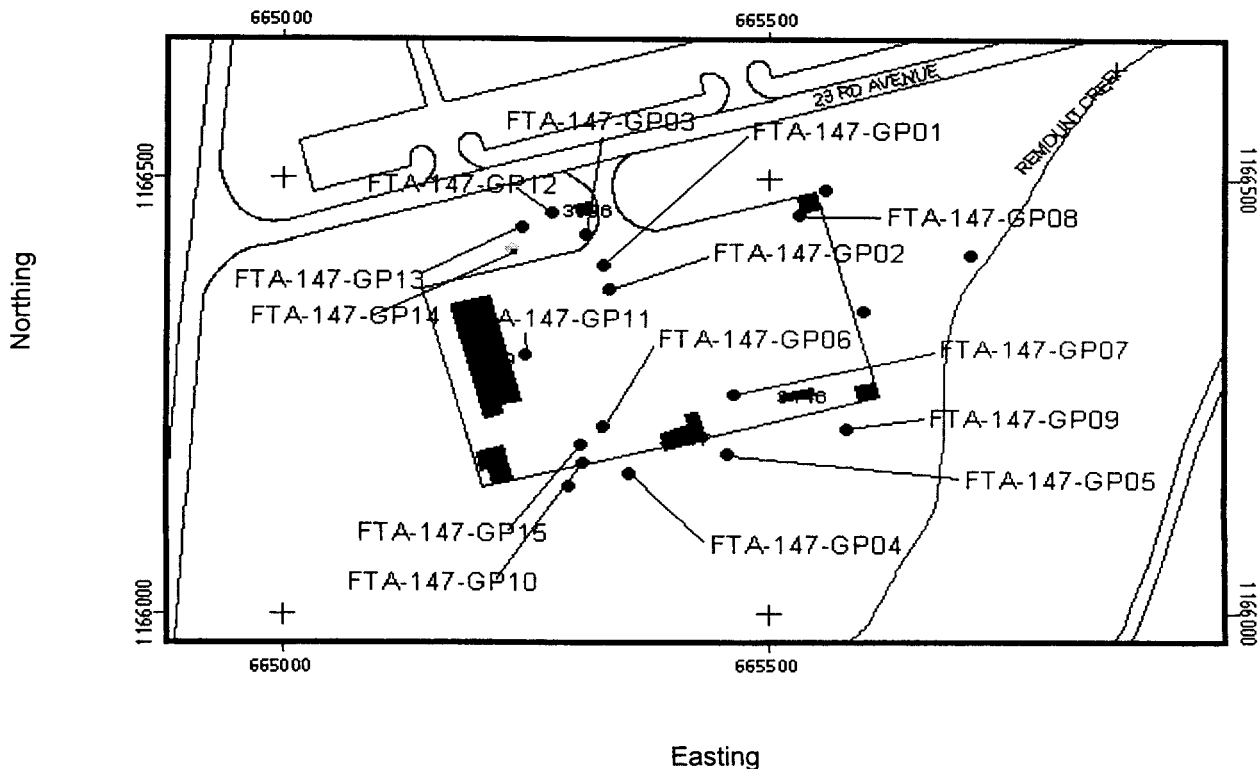
Other (specify)

Geologist:

Temp. well

D. PETERMAN & C. SHORT

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
 NA = Not applicable

Hole no.: **FTA-147-GP02**

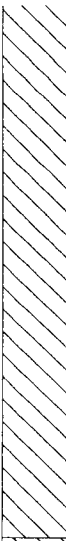

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP02

Project: Fort McClellan

Geologist: D.PETERMAN & C.SHORT

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 count (g)	Remarks (h)
	10								Rec 24" (100%)
	11		cl				EG0004		
	12				Organic Vapor = 0.0ppm				Rec 12" (100%)
	13	cl: CLAY, damp to wet, firm to soft, plastic, mottled black, pale yellow, dark yellowish brown, reddish brown, grayish brown.							Blow 8 11 13 17 Rec 24", Direct push refusal at 13.0'.
	14								
780	15								
	16								
	17		cl						
	18								
	19								
775	20								Set well at 20.0'. Bottom of borehole. is 20.0'.

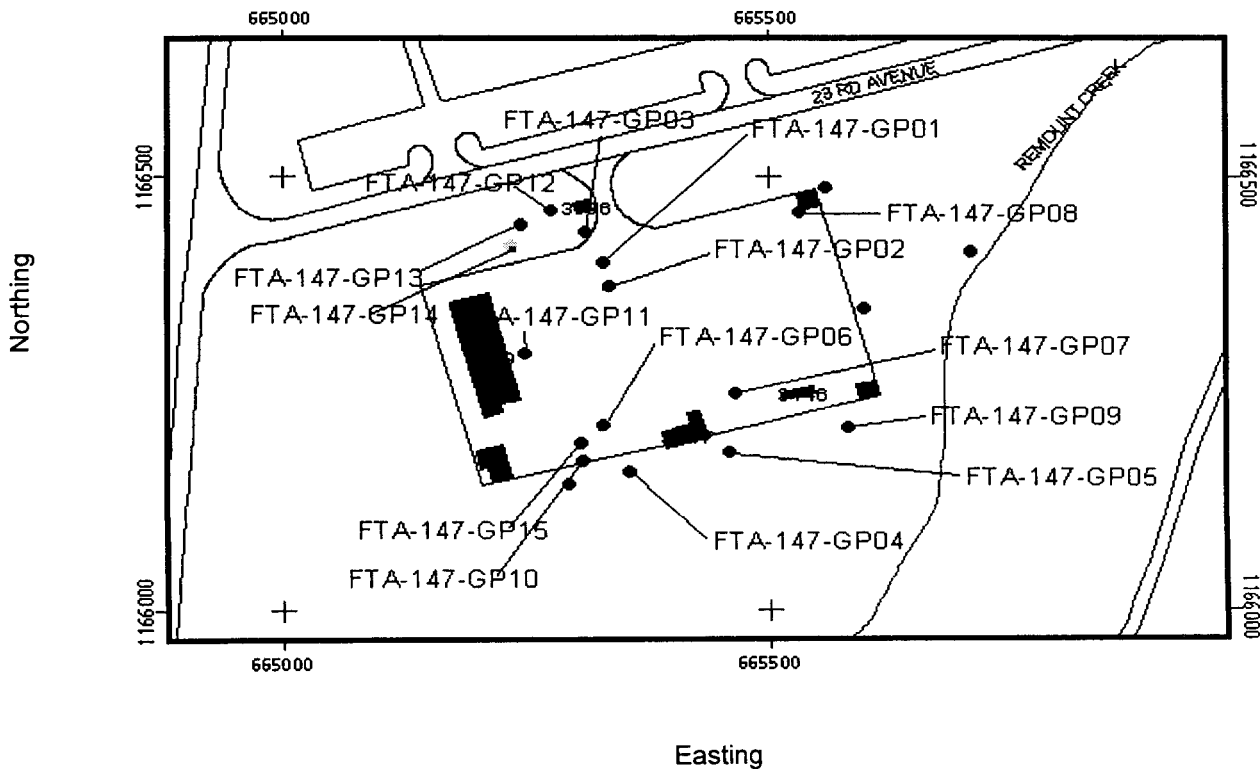
HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP03

1. Company name: IT Corporation		2. Drill Subcontractor: TEG		Sheet 1 of 2 sheets	
3. Project: Fort McClellan		4. Location: Former Motor Pool Area 3100			
5. Name of driller: Troy White		6. Mfr designation of drill: Geoprobe			
7. Sizes and types of drilling and sampling equipment: Direct Push 4' x 2" acetate-lined sampler		8. Hole location FTA-147-GP03			
		9. Surface elevation (feet above mean sea level): 795.001			
		10. Date started: 10/14/98		11. Date completed: 10/14/98	
12. Overburden thickness (feet bgs): >5		15. Depth groundwater encountered (feet bgs):			
13. Depth drilled into rock (feet bgs):		16. Depth to water and elapsed time after drilling completed (feet bgs):			
14. Total depth of hole (feet bgs): 5		17. Other water level measurements (specify):			
18. Geotechnical samples:		Disturbed:		Undisturbed:	
20. Samples for chemical analysis:		VOC	Metals	Other (specify)	19. Total no. of core boxes:
		X	X	TCL VOCs	Other (specify) Other (specify)
					TCL SVOCs TAL Metals 21. Total core recovery:
					N/A
22. Disposition of hole:		Backfilled	Monitoring well	Other (specify)	Geologist:
		X			DAN PETERMAN

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan	bgs= below ground surface NA = Not applicable	Hole no.: FTA-147-GP03
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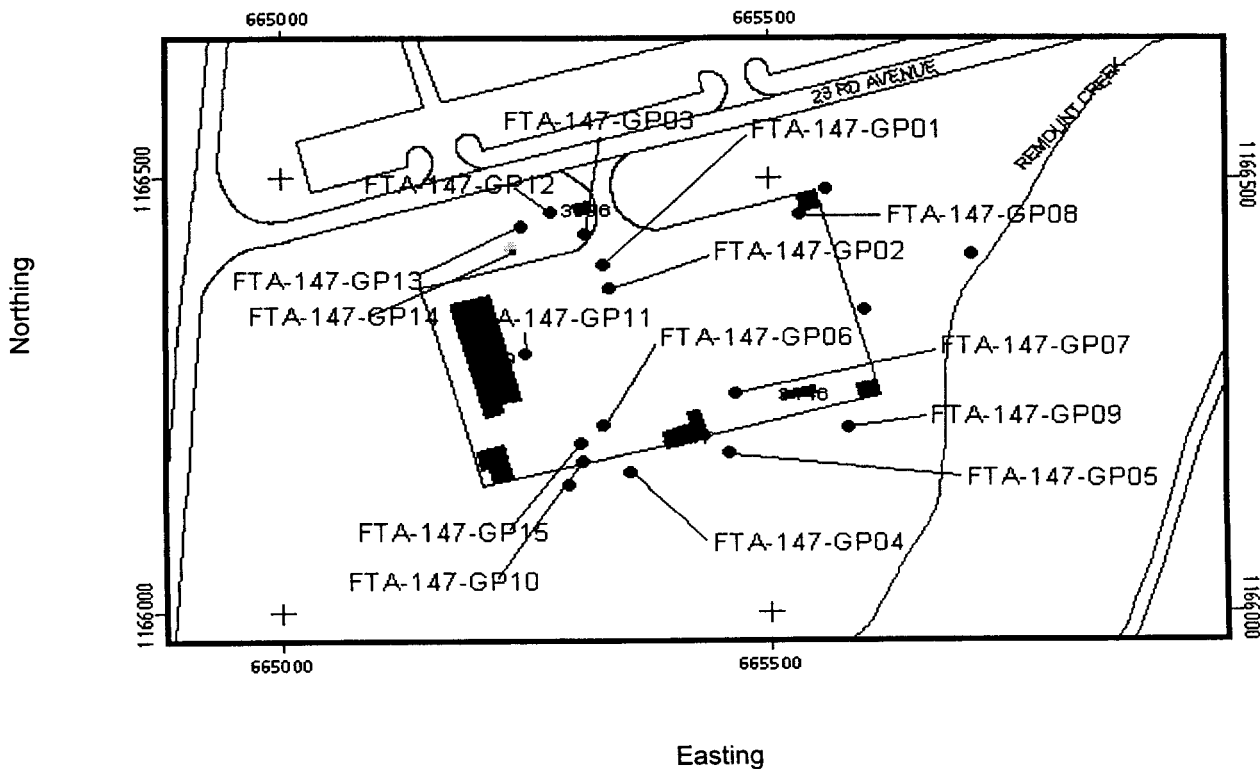
HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP04

1. Company name: IT Corporation		2. Drill Subcontractor: TEG & MILLER DRILLING		Sheet 1 of 3 sheets	
3. Project: Fort McClellan			4. Location: Former Motor Pool Area 3100		
5. Name of driller: Sammy McDaniels/ Ken Gobble			6. Mfr designation of drill: Geoprobe/CME-550		
7. Sizes and types of drilling and sampling equipment: Direct Push, Hollow Stem Auger DP- 4' x 2" acetate-lined sampler HSA- 5' x 8 "od augers, 2' x 2" steel split spoons			8. Hole location FTA-147-GP04		
			9. Surface elevation (feet above mean sea level): 793.90		
12. Overburden thickness (feet bgs): >15			15. Depth groundwater encountered (feet bgs):		
13. Depth drilled into rock (feet bgs):			16. Depth to water and elapsed time after drilling completed (feet bgs):		
14. Total depth of hole (feet bgs): 15			17. Other water level measurements (specify):		
18. Geotechnical samples:		Disturbed:		Undisturbed:	
19. Total no. of core boxes:		20. Samples for chemical analysis:		21. Total core recovery:	
		VOC	Metals	Other (specify)	Other (specify)
		X	X	TCL VOCs	TCL SVOCs
					TAL Metals
					N/A
22. Disposition of hole:		Backfilled	Monitoring well	Geologist:	
			Temp. well	CAROLYN SHORT	

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan

bgs= below ground surface
NA = Not applicable

Hole no.: FTA-147-GP04

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP04

Project: Fort McClellan

Geologist: CAROLYN SHORT

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 count (g)	Remarks (h)
	10								
	11								
	12		cl						
	13								
780	14				Organic Vapor = 0.0ppm				Blow 4 6 10 10 Rec 24"
	15								Bottom of borehole is 15.0'. Set well at 15.0'.

HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP05

1. Company name: **IT Corporation**

2. Drill Subcontractor: **TEG & MILLER DRILLING**

Sheet 1 of 3 sheets

3. Project: **Fort McClellan**

4. Location: **Former Motor Pool Area 3100**

5. Name of driller: **Sammy McDaniels/ Ken Gobble**

6. Mfr designation of drill: **Geoprobe/ CME-550**

7. Sizes and types of drilling and sampling equipment:

Direct Push, Hollow Stem Auger

DP- 4' x 2" acetate-lined sampler

HSA- 5' x 8"od augers, 2' x 2" steel split spoons

8. Hole location **FTA-147-GP05**

9. Surface elevation (feet above mean sea level): **792.96**

10. Date started: **10/29/98**

11. Date completed: **01/13/99**

12. Overburden thickness (feet bgs): **>14.5**

15. Depth groundwater encountered (feet bgs): **11 Ft**

13. Depth drilled into rock (feet bgs):

16. Depth to water and elapsed time after drilling completed (feet bgs):

14. Total depth of hole (feet bgs): **14.5**

17. Other water level measurements (specify):

18. Geotechnical samples:

Disturbed:

Undisturbed:

19. Total no. of core boxes:

20. Samples for chemical analysis:

VOC

Metals

Other (specify)

Other (specify)

Other (specify)

21. Total core recovery:

X

X

TCL VOCs

TCL SVOCs

TAL Metals

N/A

22. Disposition of hole:

Backfilled

Monitoring well

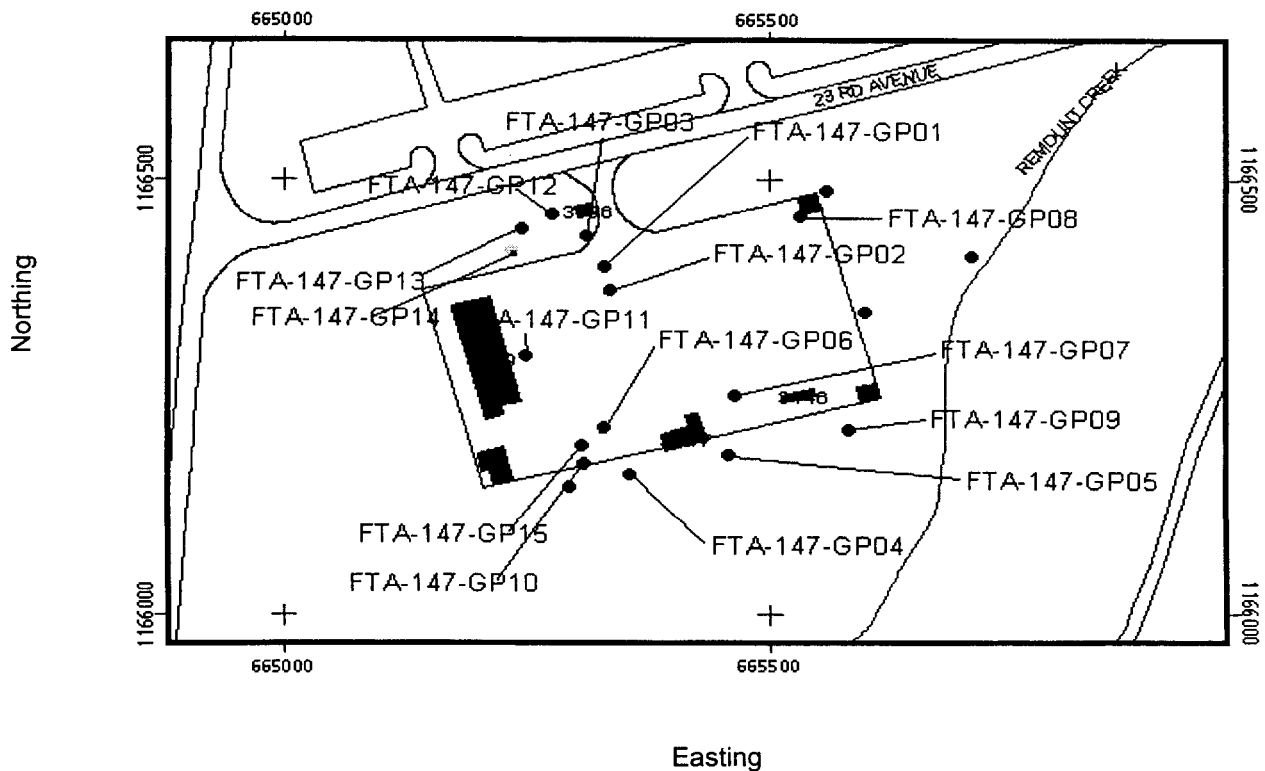
Other (specify)

Geologist:

Temp. well

CAROLYN SHORT

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
NA = Not applicable

Hole no.: **FTA-147-GP05**

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP05

Project: Fort McClellan

Geologist: CAROLYN SHORT

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 count (g)	Remarks (h)
	0	sm-ml: SILT, dry, soft, some Sand, dark brown, 7 inch mark - broken Chert fragments, white, small.	sm-ml		Organic Vapor = 2.6ppm		EG0010		Rec 1.0'
	1	ml: SILT, dry, soft, some Sand, dark brown to mottled dark yellowish red, dark red, pinkish, light gray, broken Sandstone at bottom, white.	ml						
	2	sm: SAND, dry, soft, some Silt, Clay, dark brown to very dark red, broken Sandstone throughout, yellowish white, pinkish red.	sm		Organic Vapor = 0.4ppm				Rec 1.0'
790	3		sm						
	4	sm: SAND, dry, soft, some Silt, dark brown, pinkish brown, dark red, reddish brown, broken Sandstone and rounded Gravel, large to small.	sm		Organic Vapor = 0.0ppm		EG0011		
	5	cl: CLAY, some Sand, damp, stiff, dark reddish brown, dark brown, dark red, yellowish brown, pinkish gray, light gray, yellowish red, plastic.	cl						Blow 18 20 7 8 Rec 18", direct push refusal at 5.0'
	6		cl						
785	8		cl						
	9	cl: CLAY, damp to wet, stiff to soft, plastic yellowish brown, dark reddish brown, pale yellow, little Sand, color change at 8", interval from dark to light then to mottled.	cl		Organic Vapor = 0.0ppm				Blow 5 9 10 16 Rec 24"

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP05

Project: Fort McClellan

Geologist: CAROLYN SHORT

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 count (g)	Remarks (h)
	10								
	11								
	12								
780	13		cl						
	14				Organic Vapor =				Blow 6 7 9 14 Rec 24"

HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP07

1. Company name: **IT Corporation**

2. Drill Subcontractor: **TEG & MILLER DRILLING**

Sheet 1 of 4 sheets

3. Project: **Fort McClellan**

4. Location: **Former Motor Pool Area 3100**

5. Name of driller: **Troy White/ Doug Bishop**

6. Mfr designation of drill: **Geoprobe/CME-75**

7. Sizes and types of drilling and sampling equipment:

Direct Push, Hollow Stem Auger

DP- 4' x 2" acetate-lined sampler

HSA- 5' x 8" od augers, 2' x 2" steel split spoons

8. Hole location **FTA-147-GP07**

9. Surface elevation (feet above mean sea level): **794.39**

10. Date started: **10/14/98**

11. Date completed: **01/11/99**

12. Overburden thickness (feet bgs): **>28**

15. Depth groundwater encountered (feet bgs): **19.4 Ft**

13. Depth drilled into rock (feet bgs):

16. Depth to water and elapsed time after drilling completed (feet bgs):

14. Total depth of hole (feet bgs): **28**

17. Other water level measurements (specify):

18. Geotechnical samples:

Disturbed:

Undisturbed:

19. Total no. of core boxes:

20. Samples for chemical analysis:

VOC

Metals

Other (specify)

Other (specify)

Other (specify)

21. Total core recovery:

X

X

TCL VOCs

TCL SVOCs

TAL Metals

N/A

22. Disposition of hole:

Backfilled

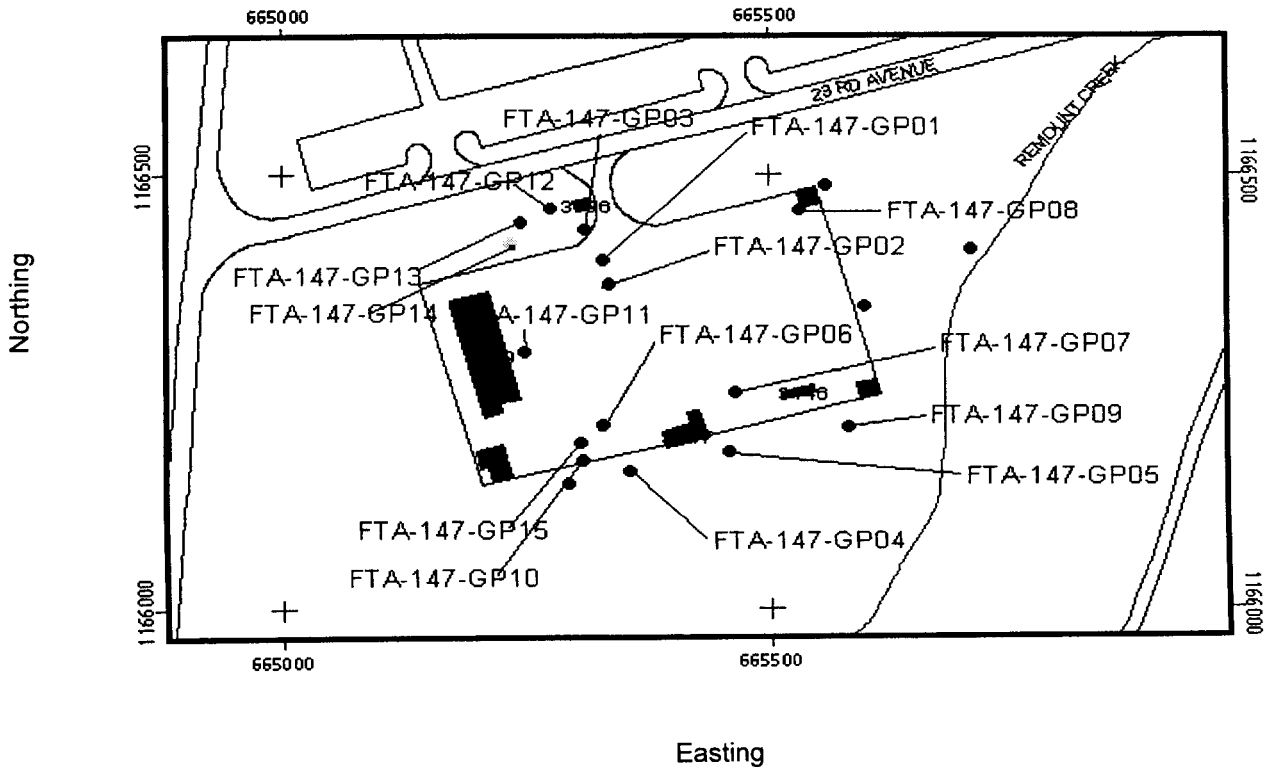
Monitoring well

Other (specify)

Geologist:

D. PETERMAN & SOPHIA HSU

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
NA = Not applicable

Hole no.: **FTA-147-GP07**

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP07

Project: Fort McClellan

Geologist: D.PETERMAN & SOPHIA HSU

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 count (g)	Remarks (h)
0		NA: Asphalt.	NA		Organic Vapor = 0.0ppm		EG0013		
1	1	cl: CLAY, some Silt, brown, medium plasticity, dry, soft gray mottling at 1.4'.	cl		Organic Vapor = 0.0ppm				Rec 15"
2	2	ch: CLAY, gray, high plasticity, slightly damp, very soft.	ch		Organic Vapor = 0.0ppm				Rec 16"
3									
4	4	cl: CLAY, yellowish brown, soft, slightly damp, low plasticity, weathered Quartzite and Shale, interbedded.	cl		Organic Vapor = 0.0ppm				Rec 24" (100%)
5							EG0014		
6	6	cl-sm: Brown soft CLAY with Silt, yellow orange SAND, some Silt, yellow orange, soft, CLAY.	cl-sm		Organic Vapor = 0.0ppm				Blow 11 11 8 6 Rec 24", Direct push refusal at 6.0'.
7									
8		cl: Yellow, orange, soft, CLAY.	cl						
9									

790

785

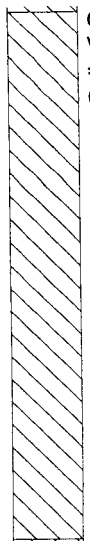
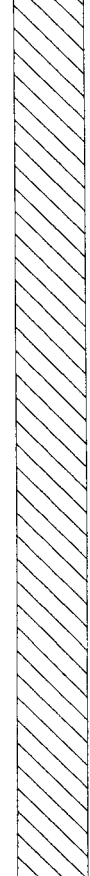
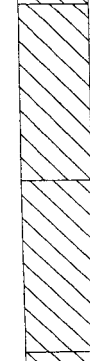
HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP07

Project: Fort McClellan

Geologist: D.PETERMAN & SOPHIA HSU

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 count (g)	Remarks (h)
	10	cl: Yellow and orange with white mottling, CLAY, with medium plasticity, soft.							Blow 4 9 11 12 Rec 24"
	11		cl		Organic Vapor = 0.0ppm				
	12								
	13	cl: Yellow and orange mottled, CLAY, with low plasticity, dry and crumbles to touch.							Blow 4 10 12 18 Rec 24"
	14								
780	15		cl		Organic Vapor = 0.0ppm				
	16								
	17								
	18	cl: Orange yellow and brown, soft, mottled, CLAY with low plasticity.							Blow 6, 8, 12, 15 Rec 24"
	19	cl: Orange yellow, soft, mottled, CLAY with a few black Pebbles.							
775	20		cl						

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP07

Project: Fort McClellan

Geologist: D.PETERMAN & SOPHIA HSU

Sheet 4 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 count (g)	Remarks (h)
		cl: Pink and yellow mottled, CLAY, soft and dry.							
21			cl						
22									
23		cl: Yellow orange, soft, mottled, CLAY, with low plasticity, medium stiff Clay.	cl		Organic Vapor = 0.0ppm				Rec 24"
24		cl: Yellow orange, CLAY, some Silt, layer with medium plasticity (24.5' to 24.75').							
770									
25									
26			cl						
27									
28									Total depth is 28'. Bottom of borehole.

HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP08

1. Company name: **IT Corporation**

2. Drill Subcontractor: **TEG & MILLER DRILLING**

Sheet 1 of 4 sheets

3. Project: **Fort McClellan**

4. Location: **Former Motor Pool Area 3100**

5. Name of driller: **Troy White/ Doug Bishop**

6. Mfr designation of drill: **Geoprobe/ CME-75**

7. Sizes and types of drilling and sampling equipment:

Direct Push, Hollow Stem Auger
 DP- 4' x 2" acetate-lined sampler
 HSA- 5' x 8"od augers, 2' x 2" steel split spoons

8. Hole location **FTA-147-GP08**

9. Surface elevation (feet above mean sea level): **791.91**

10. Date started: **10/14/98**

11. Date completed: **01/12/99**

12. Overburden thickness (feet bgs): **>22**

15. Depth groundwater encountered (feet bgs): **20 Ft**

13. Depth drilled into rock (feet bgs):

16. Depth to water and elapsed time after drilling completed (feet bgs):

14. Total depth of hole (feet bgs): **22**

17. Other water level measurements (specify):

18. Geotechnical samples:

Disturbed:

Undisturbed:

19. Total no. of core boxes:

20. Samples for chemical analysis:

VOC

Metals

Other (specify)

Other (specify)

Other (specify)

21. Total core recovery:

X

X

TCL VOCs

TCL SVOCs

TAL Metals

N/A

22. Disposition of hole:

Backfilled

Monitoring well

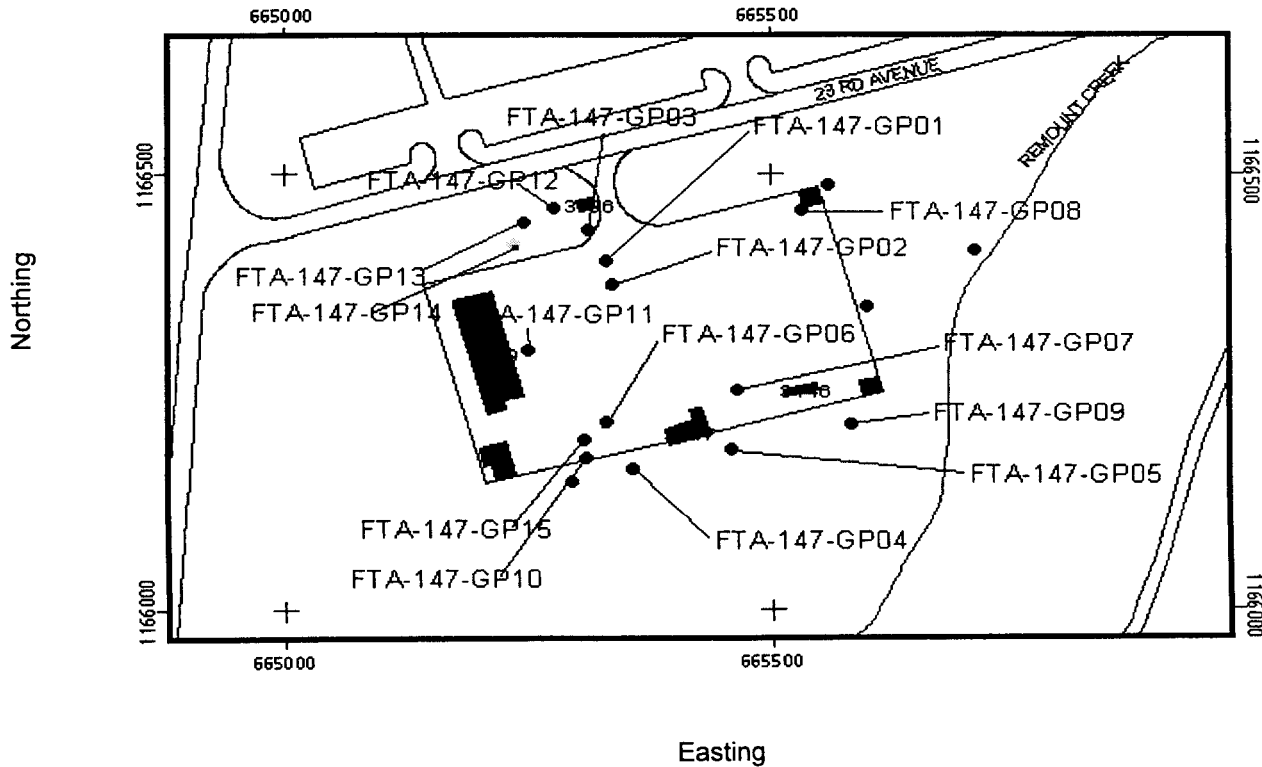
Other (specify)

Geologist:

Temp. well

D. PETERMAN & SOPHIA HSU

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
 NA = Not applicable

Hole no.: **FTA-147-GP08**

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP08

Project: Fort McClellan

Geologist: D.PETERMAN & SOPHIA HSU

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 count (g)	Remarks (h)
	0	cl: CLAY, some Silt, yellowish brown, medium to high plasticity, dry, fine Pebbles, soft.	cl		Organic Vapor = 0.0ppm		EG0015		Rec (100%)
	1	cl: CLAY, mottled, gray brown to yellowish brown, black organic nodules.	cl		Organic Vapor = 0.3ppm				Rec (100%)
790	2	cl: CLAY, some Silt, brown to gray, medium plasticity, coarse Quartz grains interbedded.	cl						
	3		cl						
	4	cl: CLAY, mottled yellowish brown to gray, Quartzite fragments, medium to high plasticity, orange red staining.	cl						Rec 16"
	5		cl				EG0016		
	6	n/a: No Recovery.			Organic Vapor = 0.0ppm				Blow 3 3 4 9 Rec 10"
785	7	ch: Dark brown, soft, CLAY, with high plasticity, pink Quartz and red Sandstone, Gravel (<5%).	ch						
	8	ch: Dark brown, soft, CLAY, with high plasticity.	ch		Organic Vapor = 0.0ppm				Blow 11 35 34 35 Rec 24"
	9	cl: Orange, gray mottled, CLAY, with low plasticity, very stiff.	cl						Direct push refusal at 8.5'.


HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP08

Project: Fort McClellan

Geologist: D.PETERMAN & SOPHIA HSU

Sheet 4 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 count (g)	Remarks (h)
770	21	cl: Gray, orange mottled CLAY, with low plasticity, very stiff.	cl						Rec 10"
22	Blow 20 50 (4)								
									Bottom of borehole is 22.0'. Total depth is 22.0'.

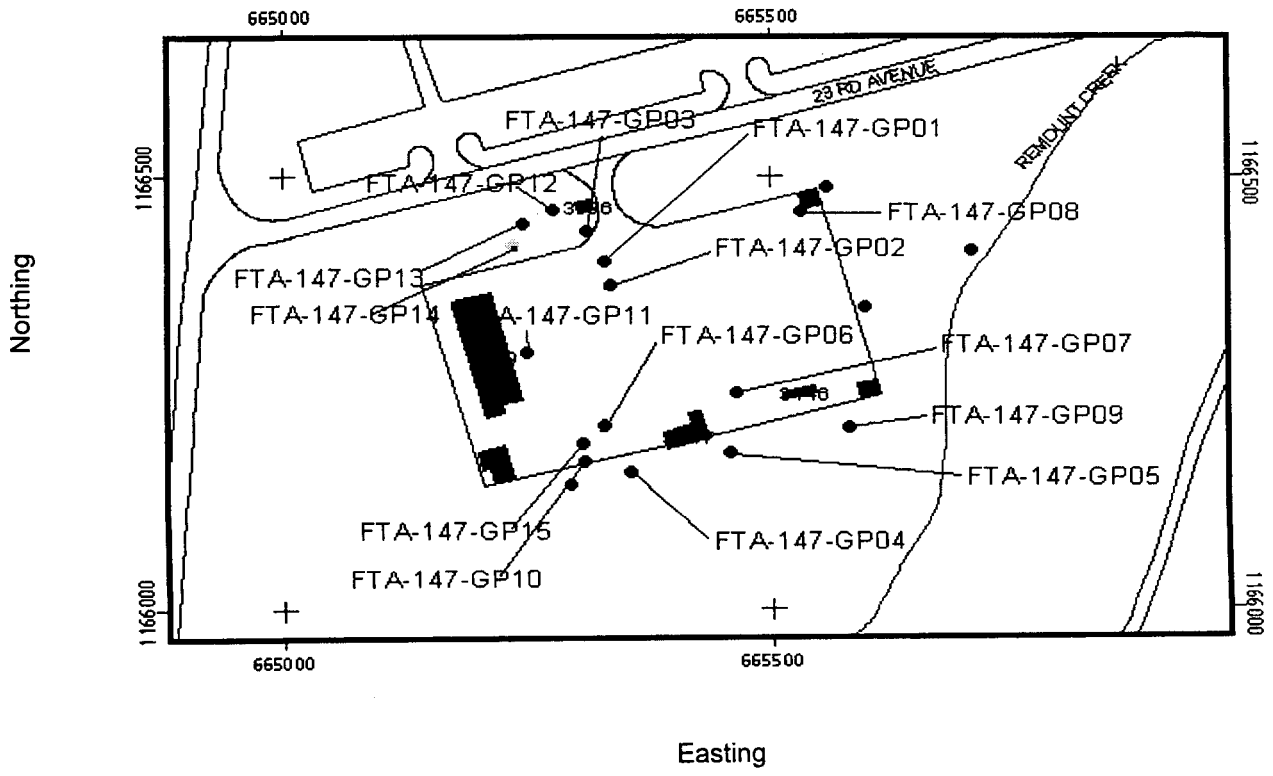
HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP09

1. Company name: IT Corporation		2. Drill Subcontractor: TEG & MILLER DRILLING		Sheet 1 of 4 sheets	
3. Project: Fort McClellan			4. Location: Former Motor Pool Area 3100		
5. Name of driller: Sammy McDaniels/ Ken Gobble			6. Mfr designation of drill: Geoprobe/ CME-550		
7. Sizes and types of drilling and sampling equipment: Direct Push, Hollow Stem Auger DP- 4' x 2" acetate-lined sampler. HSA- 5' x 8"od augers, 2' x 2" steel split spoons.			8. Hole location FTA-147-GP09		
			9. Surface elevation (feet above mean sea level): 790.87		
			10. Date started: 10/29/98		11. Date completed: 01/15/99
12. Overburden thickness (feet bgs): >25			15. Depth groundwater encountered (feet bgs): 24.5 Ft		
13. Depth drilled into rock (feet bgs):			16. Depth to water and elapsed time after drilling completed (feet bgs):		
14. Total depth of hole (feet bgs): 25			17. Other water level measurements (specify):		
18. Geotechnical samples:		Disturbed:		Undisturbed:	
19. Total no. of core boxes:		20. Samples for chemical analysis:		21. Total core recovery:	
		VOC		Metals	
		X		X	
		Other (specify)		Other (specify)	
		TCL VOCs		TCL SVOCs	
				TAL Metals	
				N/A	
22. Disposition of hole:		Backfilled		Monitoring well	
				Other (specify)	
		Temp. well			
				Geologist:	
				CAROLYN SHORT	

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan bgs= below ground surface Hole no.: FTA-147-GP09
 NA = Not applicable

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP09

Project: Fort McClellan

Geologist: CAROLYN SHORT

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 count (g)	Remarks (h)
790	0	ml: SILT, damp, soft, some Clay, dark brown, broken Sandstone at 9-12", gray to white, large to small, some Sand, coarse to fine, few mottles, yellowish, orange, dark red.	ml		Organic Vapor = 0.4ppm		EG0017		Rec 1.0'
	1	ml: SILT, damp, soft, some Clay, dark brown, broken Sandstone at 9-12", gray to white, large to small, some Sand, coarse to fine, few mottles, yellowish, orange, dark red.	ml		Organic Vapor = 0.4ppm				Rec 1.0"
	2	ml: SILT, moist to damp, some Clay, dark yellow brown, dark red, grayish yellow, some large broken Sandstone.	ml		Organic Vapor = 0.4ppm				Rec 1.0'
	3		ml						
	4	ml: SILT, dry to damp, some Sand, very mottle, dark red, yellow brown, yellowish, pinkish red, dk brick red, black, pale yellowish, abundant broken fragments Sandstone, Quartzite.	ml		Organic Vapor = 0.4ppm				Rec 21"
	5		ml						
785	6	ml: SILT, dry to damp, some Sand, very mottle, dark red, yellow brown, yellowish, pinkish red, dark brick red, black, pale yellowish, abundant broken fragments Sandstone, Quartzite.	ml		Organic Vapor = 1.4ppm				Rec 24"
	7		ml						
	8	cl: CLAY, damp, hard, some Sand, mottled dark red, yellow brown, yellowish, pinkish red, dark brick red, black, pale yellowish, some broken Sandstone, pale yellowish white.	cl		Organic Vapor = 0.4ppm		EG0018		Rec 24"
	9		cl						


HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP09

Project: Fort McClellan

Geologist: CAROLYN SHORT

Sheet 4 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 count (g)	Remarks (h)
770	21	cl: CLAY, damp, stiff yellowish brown, mottled dark red, black, slightly softer than previous interval.	cl		Organic Vapor = 0.0ppm				Blow 4 8 9 14 Rec 24"
	22								
	23								
	24								
	25								Blow 6 18 4 3 No Rec. Set well at 25.0'. Bottom of borehole is 25.0'.

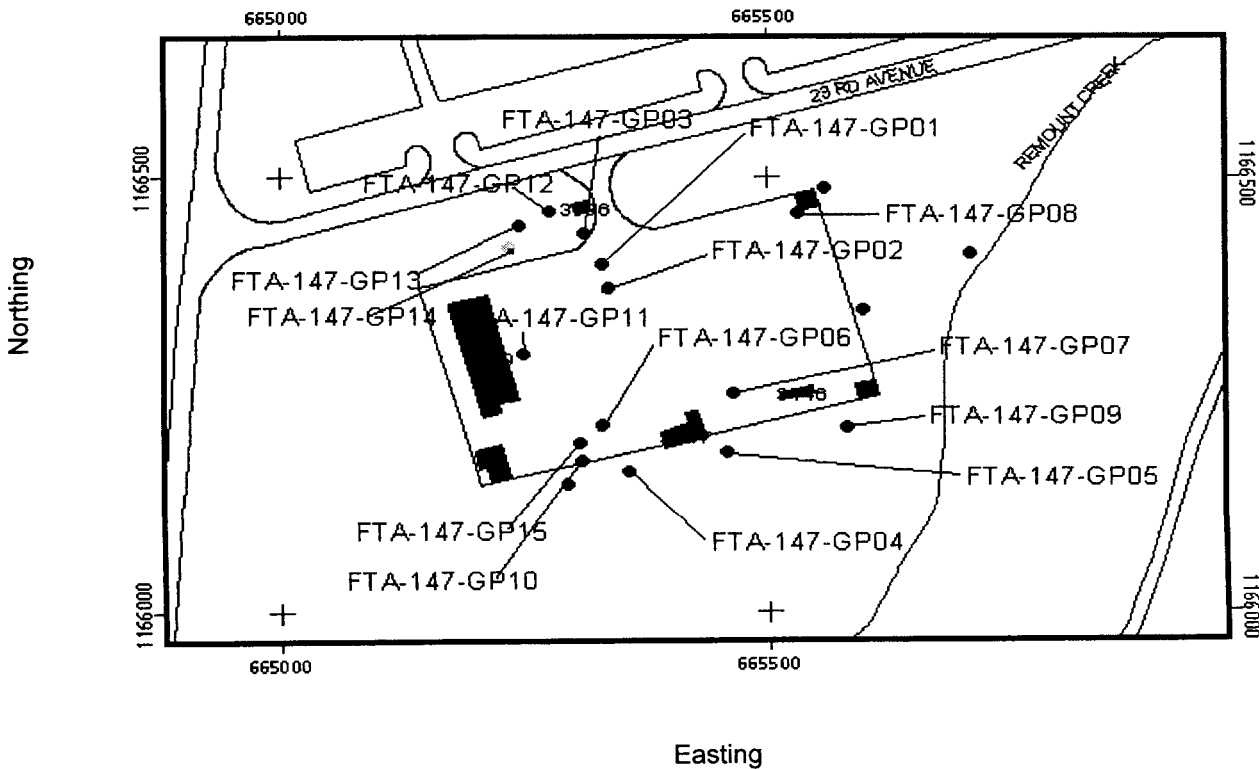
HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP10

1. Company name: IT Corporation		2. Drill Subcontractor: TEG & MILLER DRILLING		Sheet 1 of 4 sheets	
3. Project: Fort McClellan			4. Location: Former Motor Pool Area 3100		
5. Name of driller: Troy White/ Ken Gobble			6. Mfr designation of drill: Geoprobe/CME-550		
7. Sizes and types of drilling and sampling equipment: Direct Push, Hollow Stem Auger DP- 4' x 2" acetate-lined sampler HSA- 5' x 8"od augers, 2' x 2" steel split spoons			8. Hole location FTA-147-GP10		
			9. Surface elevation (feet above mean sea level): 795.32		
12. Overburden thickness (feet bgs): >28			15. Depth groundwater encountered (feet bgs): 19 Ft		
13. Depth drilled into rock (feet bgs):			16. Depth to water and elapsed time after drilling completed (feet bgs):		
14. Total depth of hole (feet bgs): 28			17. Other water level measurements (specify):		
18. Geotechnical samples:		Disturbed:		Undisturbed:	
19. Total no. of core boxes:		20. Samples for chemical analysis:		21. Total core recovery:	
		VOC	Metals	Other (specify)	Other (specify)
		X	X	TCL VOCs	TLC SVOCs TAL Metals N/A
22. Disposition of hole:		Backfilled	Monitoring well	Geologist:	
			Temp. well	D. PETERMAN & C. SHORT	

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
NA = Not applicable

Hole no.: **FTA-147-GP10**



HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP10

Project: Fort McClellan

Geologist: D.PETERMAN & C.SHORT

Sheet 4 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 count (g)	Remarks (h)
775									
	21								
	22								
	23	cl: CLAY, trace Sand, damp, stiff, mottled black, yellowish brown, reddish yellow, pale yellow, pale gray, gray, softer at bottom.	cl		Organic Vapor = 0.0ppm				Blow 6 9 8 9 Rec 24"
	24								
	25								
770									
	26		cl						
	27								
	28								Set well at 28.0'. Bottom of borehole is 28.0'.

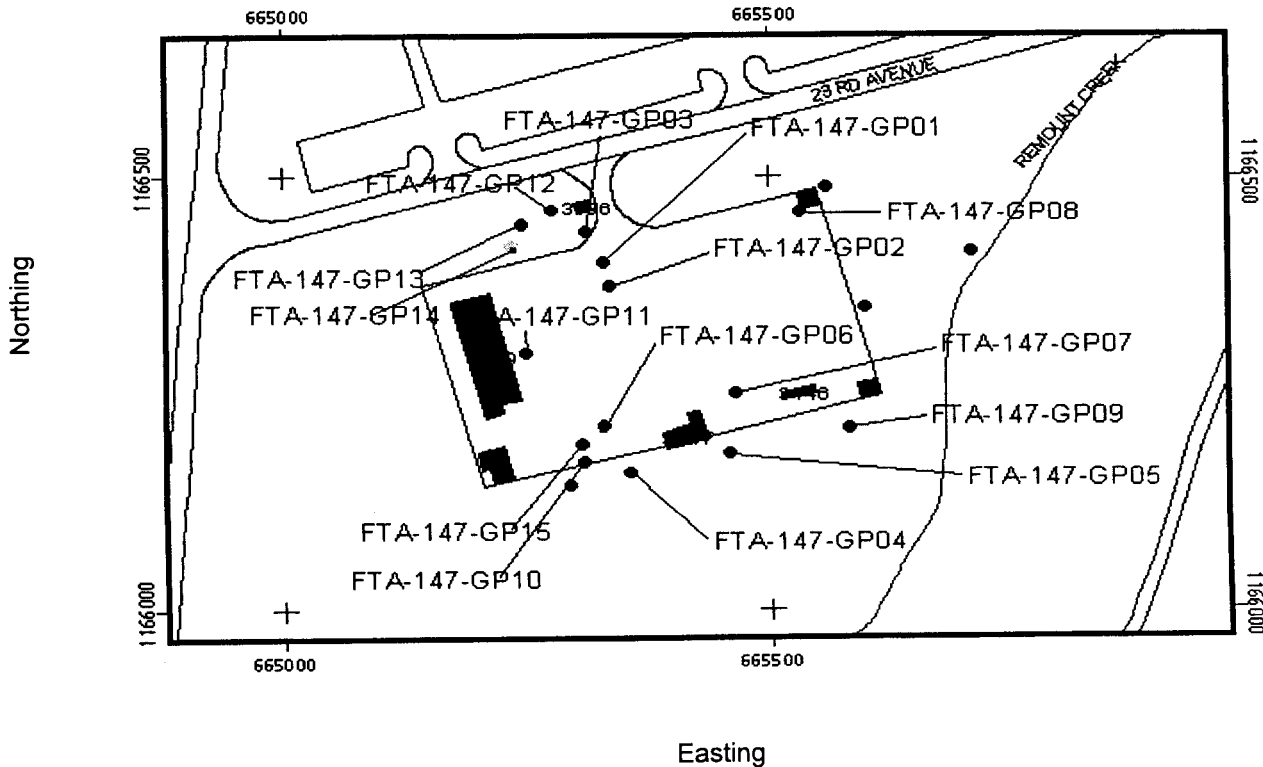
HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP11

1. Company name: IT Corporation		2. Drill Subcontractor: TEG & MILLER DRILLING		Sheet 1 of 4 sheets	
3. Project: Fort McClellan			4. Location: Former Motor Pool Area 3100		
5. Name of driller: Troy White/ Ken Gobble			6. Mfr designation of drill: Geoprobe/ CME-550		
7. Sizes and types of drilling and sampling equipment: Direct Push, Hollow Stem Auger DP- 4' x 2" acetate-lined sampler HSA- 5' x 8"od augers, 2' x 2" steel split spoons			8. Hole location FTA-147-GP11		
			9. Surface elevation (feet above mean sea level): 796.45		
12. Overburden thickness (feet bgs): >22			15. Depth groundwater encountered (feet bgs): 19 Ft		
13. Depth drilled into rock (feet bgs):			16. Depth to water and elapsed time after drilling completed (feet bgs):		
14. Total depth of hole (feet bgs): 22			17. Other water level measurements (specify):		
18. Geotechnical samples:		Disturbed:		Undisturbed:	
20. Samples for chemical analysis:		VOC	Metals	Other (specify)	19. Total no. of core boxes:
		X	X	TCL VOCs	Other (specify) Other (specify) 21. Total core recovery:
					TCL SVOCs TAL Metals N/A
22. Disposition of hole:		Backfilled	Monitoring well	Other (specify)	Geologist: D.PETERMAN & C.SHORT
			Temp. well		

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan bgs= below ground surface Hole no.: FTA-147-GP11
 NA = Not applicable

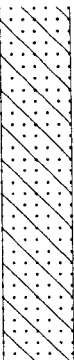
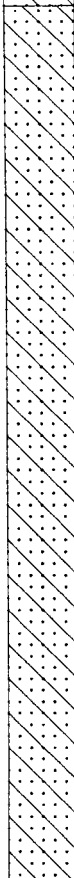
HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP11

Project: Fort McClellan

Geologist: D.PETERMAN & C.SHORT

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 count (g)	Remarks (h)
	10								
	11								
785	12	cl-sc: CLAY, some Sand, medium to fine, few broken Sandstone, damp, stiff to hard, mottled dark red, dark reddish brown, gray, pale gray, black, yellowish brown, reddish yellow.							Blow 9 10 11 14 Rec 24"
	13								
	14								
	15		cl-sc						
	16								
780	17	cl-sc: CLAY, damp to wet, stiff to soft, some Sand throughout, coarse to fine, mottled dark red, dark reddish brown, gray, pale gray, black, yellowish brown, reddish yellow. First sign of water.							Blow 3 9 11 12 Rec 12"
	18								
	19								
	20		cl-sc						

HTRW DRILLING LOG

HOLE NUMBER
FTA-147-GP12

1. Company name: **IT Corporation**

2. Drill Subcontractor: **TEG**

Sheet 1 of 3 sheets

3. Project: **Fort McClellan**

4. Location: **Former Motor Pool Area 3100**

5. Name of driller: **Troy White**

6. Mfr designation of drill: **Geoprobe**

7. Sizes and types of drilling and sampling equipment:

Direct Push

8. Hole location **FTA-147-GP12**

4' x 2" acetate-lined sampler

9. Surface elevation (feet above mean sea level): **794.399**

10. Date started: **10/14/98**

11. Date completed: **10/14/98**

12. Overburden thickness (feet bgs): **>11**

15. Depth groundwater encountered (feet bgs):

13. Depth drilled into rock (feet bgs):

16. Depth to water and elapsed time after drilling completed (feet bgs):

14. Total depth of hole (feet bgs): **11**

17. Other water level measurements (specify):

18. Geotechnical samples:

Disturbed:

Undisturbed:

19. Total no. of core boxes:

20. Samples for chemical analysis:

VOC

Metals

Other (specify)

Other (specify)

Other (specify)

21. Total core recovery:

X

X

TCL VOCs

TCL SVOCs

TAL Metals

N/A

22. Disposition of hole:

Backfilled

Monitoring well

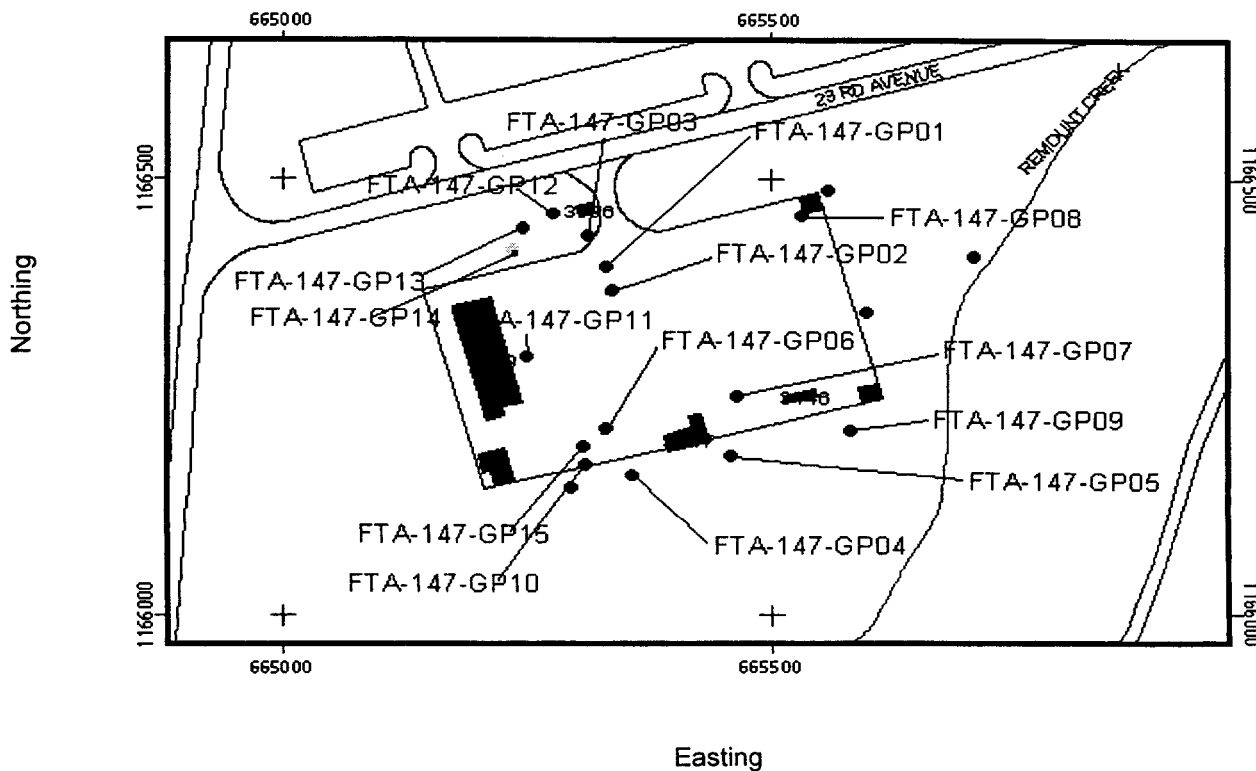
Other (specify)

Geologist:

X

DAN PETERMAN

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
NA = Not applicable

Hole no.: **FTA-147-GP12**

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP12

Project: Fort McClellan

Geologist: DAN PETERMAN

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 count (g)	Remarks (h)
10	11		cl				EG0023		Total depth is 11.0'. Bottom of borehole is 11.0'.

HTRW DRILLING LOG

HOLE NUMBER
FTA-147-GP13

1. Company name: **IT Corporation**

2. Drill Subcontractor: **TEG**

Sheet 1 of 3 sheets

3. Project: **Fort McClellan**

4. Location: **Former Motor Pool Area 3100**

5. Name of driller: **Troy White**

6. Mfr designation of drill: **Geoprobe**

7. Sizes and types of drilling and sampling equipment:
Direct Push

8. Hole location **FTA-147-GP13**

4' x 2" acetate-lined sampler

9. Surface elevation (feet above mean sea level): **795.751**

10. Date started: **10/13/98**

11. Date completed: **10/13/98**

12. Overburden thickness (feet bgs): **>12**

15. Depth groundwater encountered (feet bgs):

13. Depth drilled into rock (feet bgs):

16. Depth to water and elapsed time after drilling completed (feet bgs):

14. Total depth of hole (feet bgs): **12**

17. Other water level measurements (specify):

18. Geotechnical samples:

Disturbed:

Undisturbed:

19. Total no. of core boxes:

20. Samples for chemical analysis:

VOC

Metals

Other (specify)

Other (specify)

Other (specify)

21. Total core recovery:

X

X

TCL VOCs

TCL SVOCs

TAL Metals

N/A

22. Disposition of hole:

Backfilled

Monitoring well

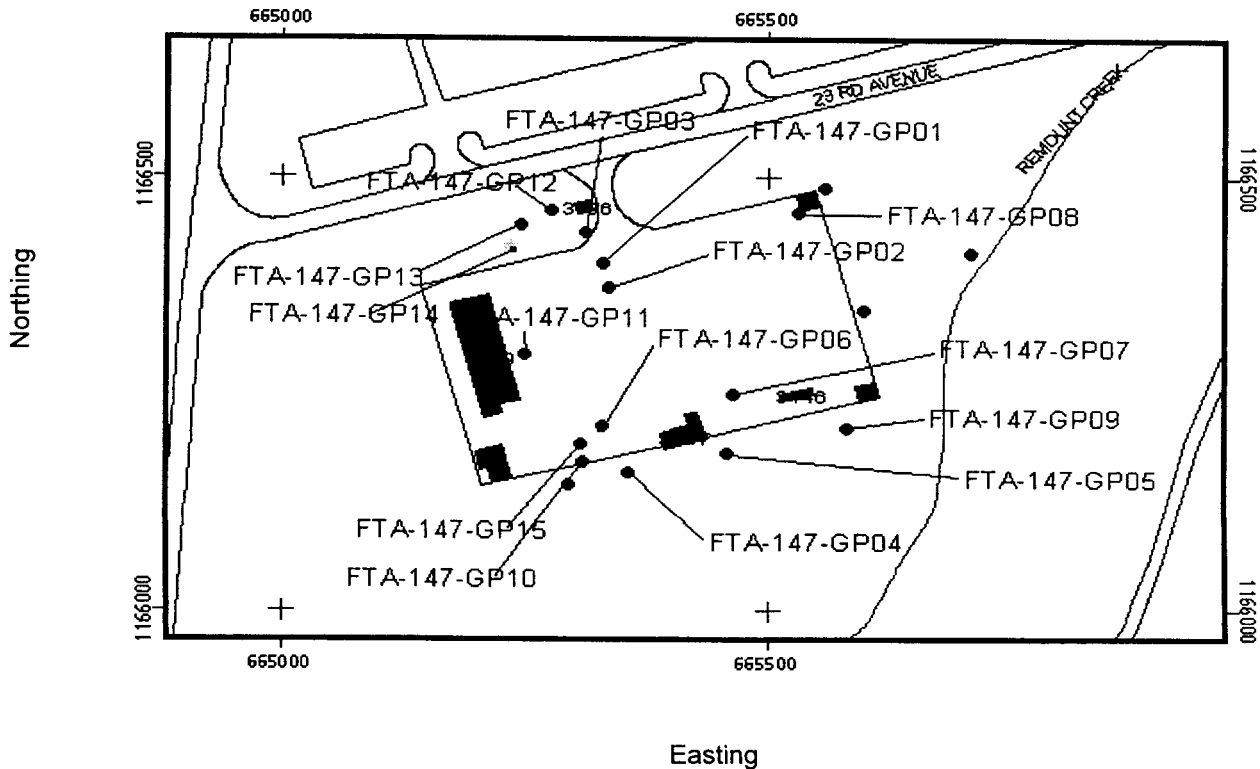
Other (specify)

Geologist:

X

DAN PETERMAN

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
NA = Not applicable

Hole no.: **FTA-147-GP13**

HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP13

Project: Fort McClellan

Geologist: DAN PETERMAN

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 count (g)	Remarks (h)
795	0	cl: CLAY, some Silt, friable, dry, gray to reddish brown mottled, soft, Quartzite and Shale fragments.			Organic Vapor = 0.1ppm				Rec 24" (100%)
	1		cl		Organic Vapor = 0.1ppm				
	2	cl: CLAY, mottled, stiff, black organic precipitate, slightly friable, low plasticity, weathered, Quartzite fragments.			Organic Vapor = 0.3ppm				Rec 16" (66%)
	3		cl		Organic Vapor = 0.3ppm				
	4	cl: CLAY, mottled, stiff, black organic precipitate, slightly friable, low plasticity, weathered, Quartzite fragments.			Organic Vapor = 1.5ppm				Rec 5" (20%)
	5		cl		Organic Vapor = 1.5ppm				
790	6	cl: CLAY brown to yellowish brown, shaley, friable.			Organic Vapor = 0.2ppm				Rec 18" (75%)
	7		cl		Organic Vapor = 0.2ppm				
	8	cl: CLAY yellowish brown to gray, medium-high plasticity, soft-very soft, dry, slightly damp, organic precipitate, minor Quartzite fragments.			Organic Vapor = 0.1ppm				Rec 22" (91%)
	9		cl		Organic Vapor = 0.2ppm				

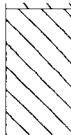


HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP13

Project: Fort McClellan

Geologist: DAN PETERMAN

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 count (g)	Remarks (h)
10		cl: CLAY mottled yellowish brown to gray, medium-high plasticity, soft- medium stiff, dry.			Organic Vapor = 21.2ppm				Rec 24" (100%)
785	11		cl		Organic Vapor = 21.2ppm		EG0024		
		cl: CLAY, gray, high plasticity.							Total depth is 12.0'. Bottom of borehole is 12.0'.
12	12		cl						

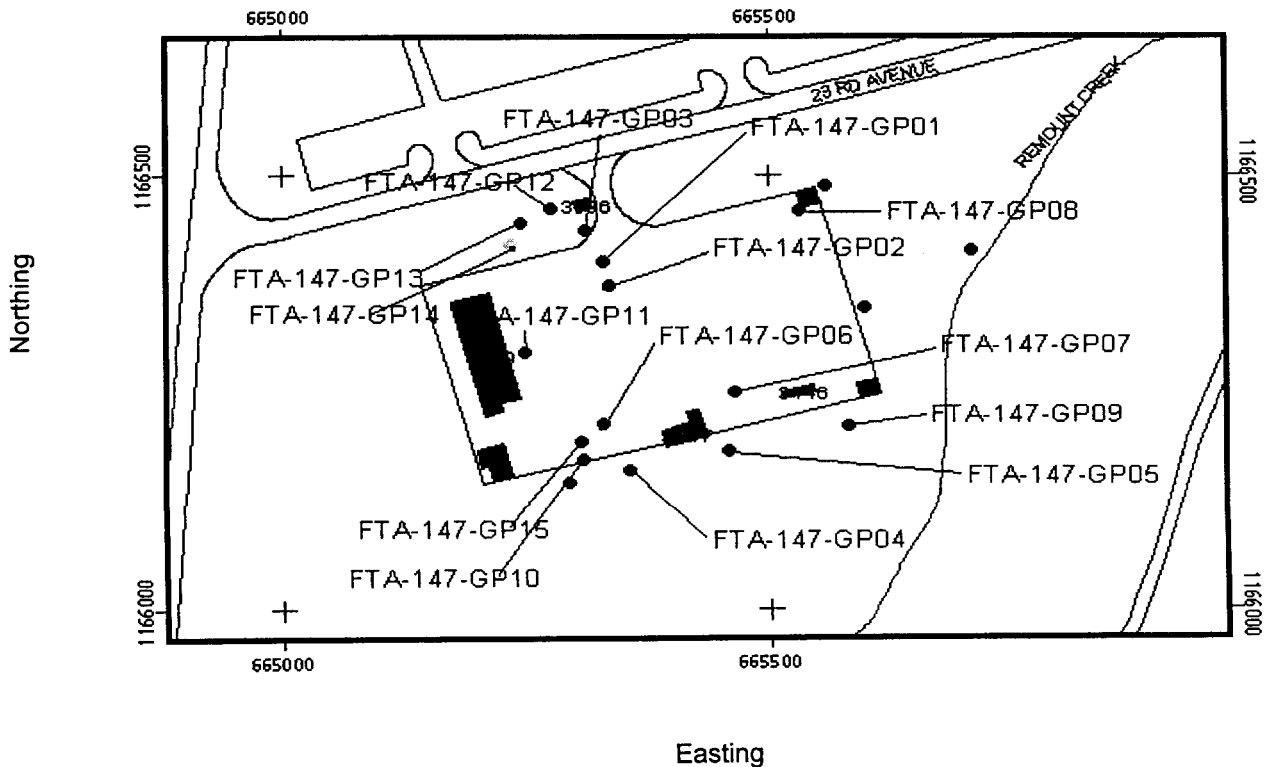
HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP14

1. Company name: IT Corporation		2. Drill Subcontractor: TEG		Sheet 1 of 2 sheets		
3. Project: Fort McClellan			4. Location: Former Motor Pool Area 3100			
5. Name of driller: Troy White			6. Mfr designation of drill: Geoprobe			
7. Sizes and types of drilling and sampling equipment: Direct Push 4' x 2" acetate-lined sampler			8. Hole location FTA-147-GP14			
			9. Surface elevation (feet above mean sea level): 796.247			
12. Overburden thickness (feet bgs): >5			15. Depth groundwater encountered (feet bgs):			
13. Depth drilled into rock (feet bgs):			16. Depth to water and elapsed time after drilling completed (feet bgs):			
14. Total depth of hole (feet bgs): 5			17. Other water level measurements (specify):			
18. Geotechnical samples:	Disturbed:		Undisturbed:		19. Total no. of core boxes:	
20. Samples for chemical analysis:	VOC	Metals	Other (specify)	Other (specify)	Other (specify)	21. Total core recovery:
	X	X	TCL VOCs	TCL SVOCs	TAL Metals	N/A
22. Disposition of hole:	Backfilled	Monitoring well	Other (specify)	Geologist:		
	X			DAN PETERMAN		

LOCATION SKETCH/COMMENTS:



Project: Fort McClellan

bgs= below ground surface
NA = Not applicable

Hole no.: FTA-147-GP14






HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP14

Project: Fort McClellan

Geologist: DAN PETERMAN

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 count (g)	Remarks (h)
	0	cl: CLAY, some Silt, low plasticity, dry, mottled brown to yellowish brown, friable, Shale, Quartzite fragments.			Organic Vapor = 0.0ppm				Rec 18" (75%)
	1		cl		Organic Vapor = 0.0ppm				
795	2	cl: CLAY, some Silt, low plasticity, dry, mottled brown to yellowish brown, friable, Shale, Quartzite fragments.			Organic Vapor = 0.0ppm				Rec 18" (66%)
	3		cl		Organic Vapor = 0.0ppm				
	4				Organic Vapor = 0.0ppm		EG0025		Rec 11" (45%)
	5								Total depth is 5.0'. Bottom of borehole is 5.0'.

HTRW DRILLING LOG

HOLE NUMBER

FTA-147-GP15

1. Company name: **IT Corporation**

2. Drill Subcontractor: **TEG**

Sheet 1 of 2 sheets

3. Project: **Fort McClellan**

4. Location: **Former Motor Pool Area 3100**

5. Name of driller: **Troy White**

6. Mfr designation of drill: **Geoprobe**

7. Sizes and types of drilling and sampling equipment:

Direct Push

8. Hole location **FTA-147-GP15**

4' x 2" acetate-lined sampler

9. Surface elevation (feet above mean sea level): **795.786**

10. Date started: **10/14/98**

11. Date completed: **10/14/98**

12. Overburden thickness (feet bgs): **>6**

15. Depth groundwater encountered (feet bgs):

13. Depth drilled into rock (feet bgs):

16. Depth to water and elapsed time after drilling completed (feet bgs):

14. Total depth of hole (feet bgs): **6**

17. Other water level measurements (specify):

18. Geotechnical samples:

Disturbed:

Undisturbed:

19. Total no. of core boxes:

20. Samples for chemical analysis:

VOC

Metals

Other (specify)

Other (specify)

Other (specify)

21. Total core recovery:

X

X

TCL VOCs

TCL SVOCs

TAL Metals

N/A

22. Disposition of hole:

Backfilled

Monitoring well

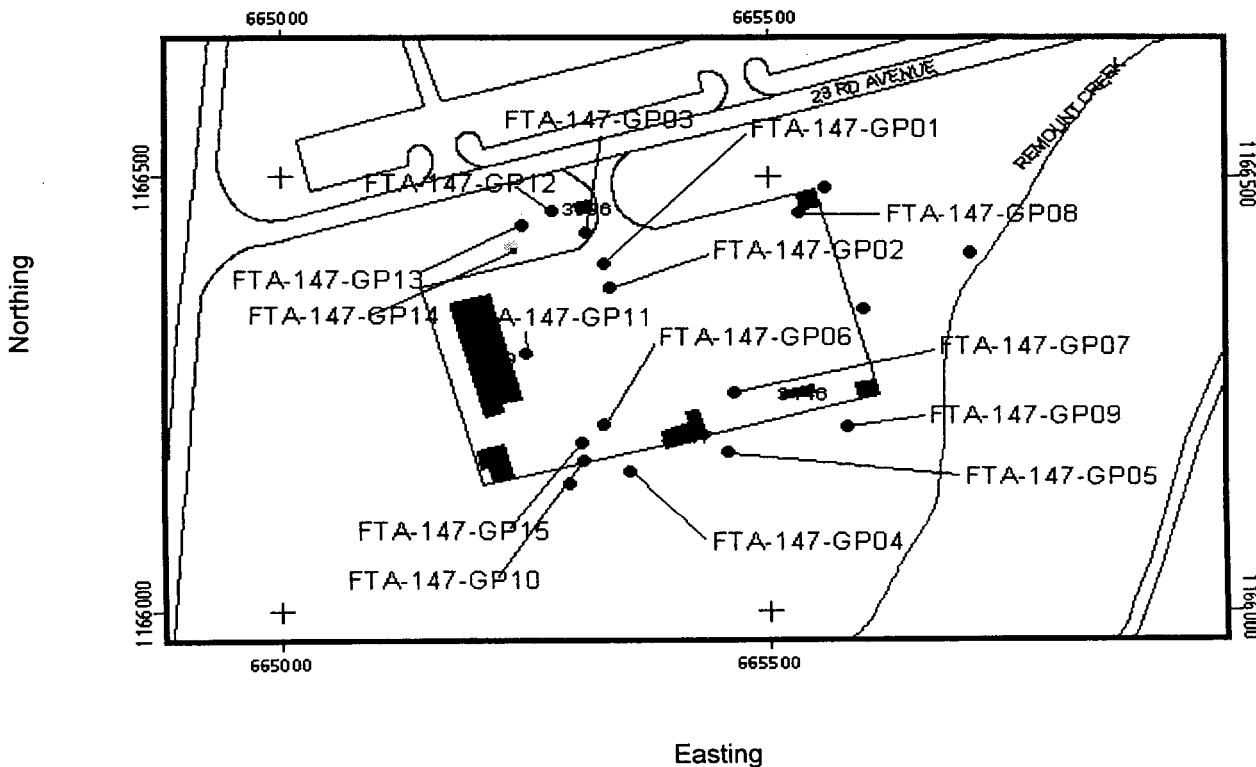
Other (specify)

Geologist:

X

DAN PETERMAN

LOCATION SKETCH/COMMENTS:



Project: **Fort McClellan**

bgs= below ground surface
NA = Not applicable

Hole no.: **FTA-147-GP15**

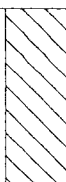
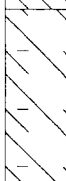
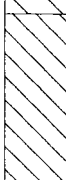
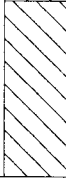
HTRW DRILLING LOG (Continuation Sheet)

HOLE NUMBER: FTA-147-GP15

Project: Fort McClellan

Geologist: DAN PETERMAN

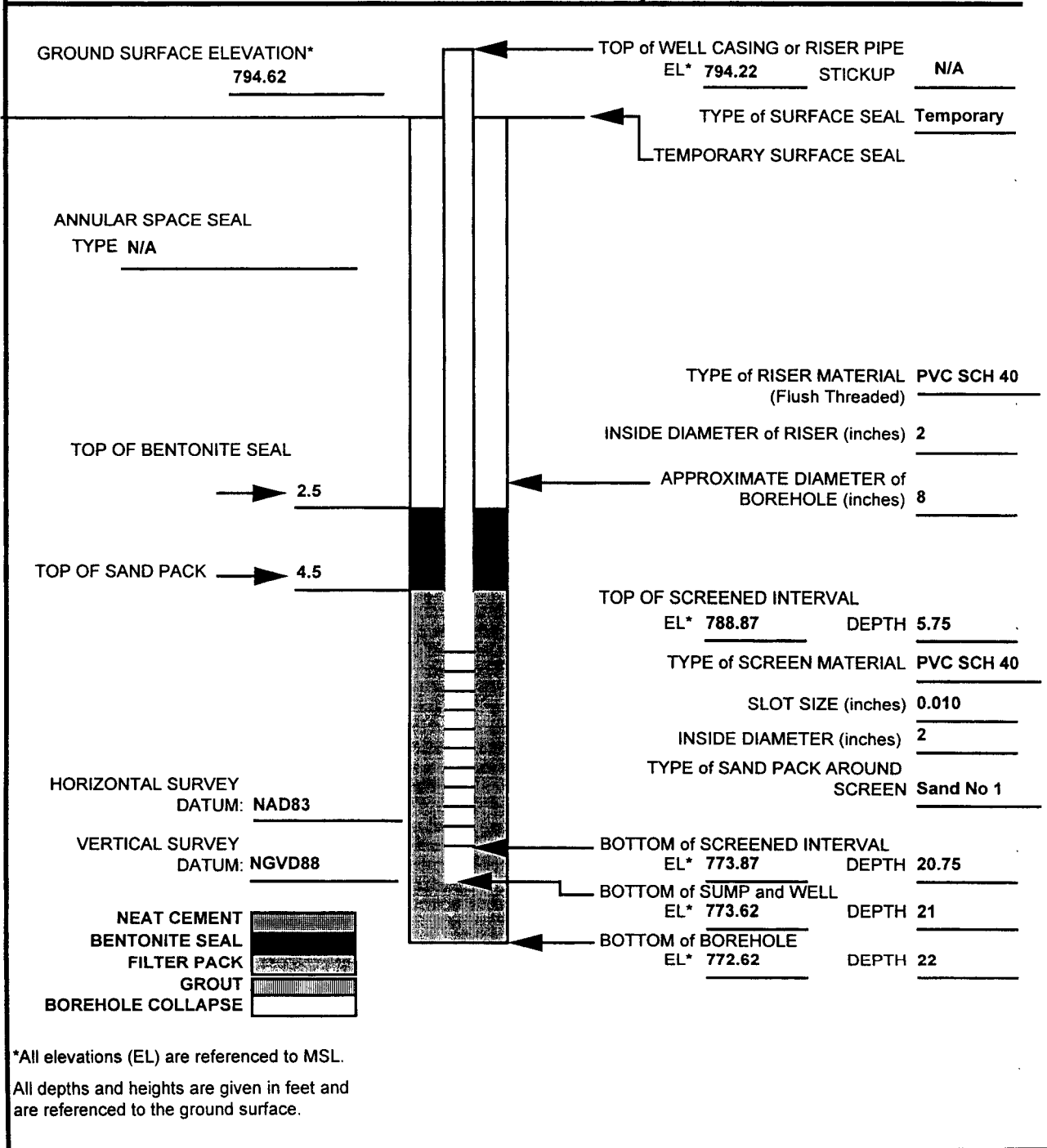
Sheet 2 of 2 sheets

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 count (g)	Remarks (h)
0	0	cl: CLAY, some Silt, dark brown to gray, low plasticity, Quartzite fragments, soft, dry, friable at 2'.							Rec 18"
795	1		cl		Organic Vapor = 0.0ppm				
	2	cl-ml: SILT and fine-medium Sand, interbedded Clay, Quartzite fragments (+20mm), loose, yellowish brown to brown.							Rec 17"
	3		cl-ml		Organic Vapor = 0.0ppm				
	4	cl: CLAY, friable, yellowish brown to reddish brown.							Rec 8"
	5		cl		Organic Vapor = 0.0ppm				
	5	cl: CLAY, medium plasticity, slightly friable.					EG0026		Rec 8"
790	6		cl						Total depth is 6.0'. Bottom of borehole is 6.0'.

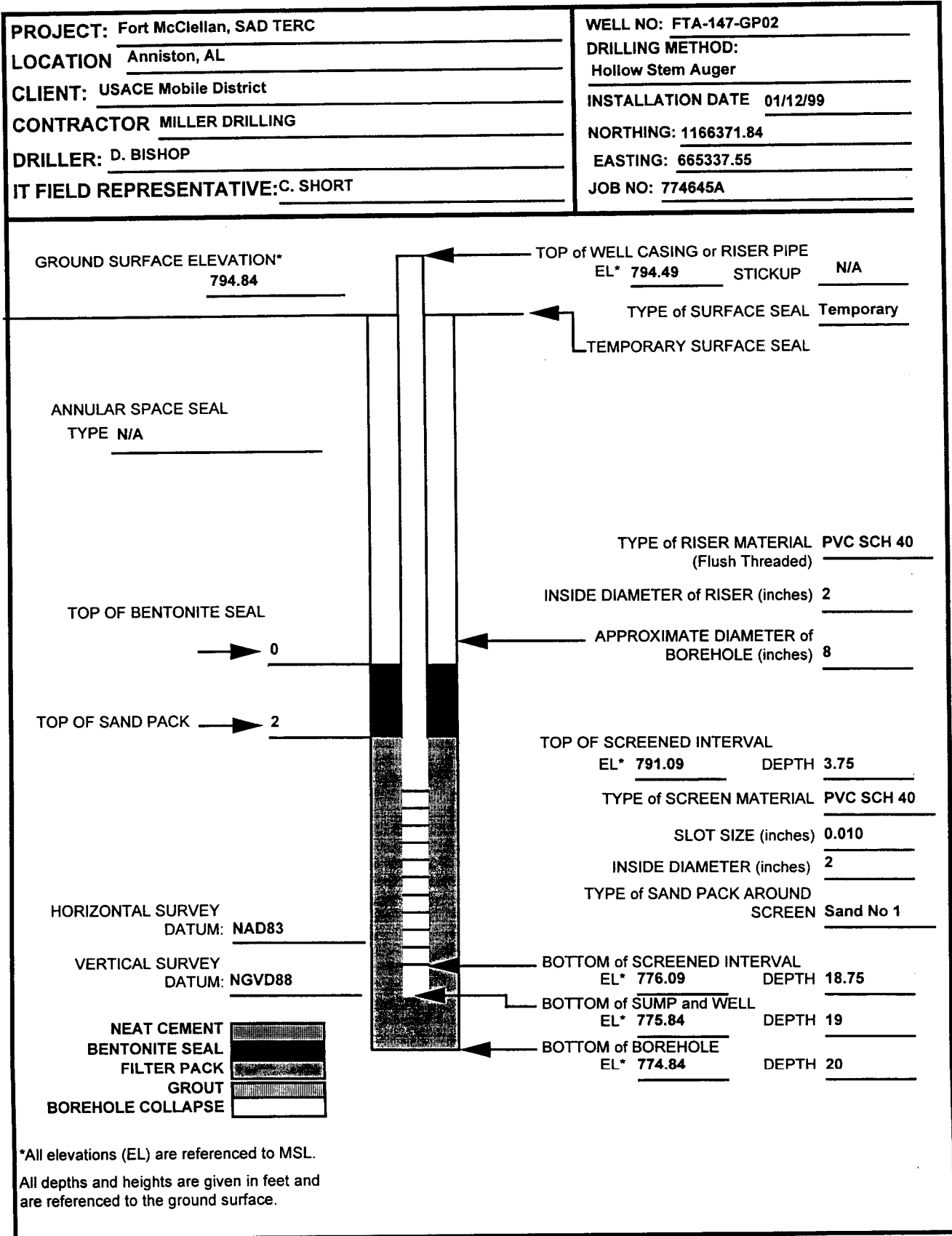
WELL CONSTRUCTION LOGS

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: FTA-147-GP01
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 01/12/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1166397.91
DRILLER: D. BISHOP	EASTING: 665330.96
IT FIELD REPRESENTATIVE: S. HSU	JOB NO: 774645A



MONITORING WELL INSTALLATION DETAIL



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC

LOCATION: Anniston, AL

CLIENT: USACE Mobile District

CONTRACTOR: MILLER DRILLING

DRILLER: K. GOBLE

IT FIELD REPRESENTATIVE: C. SHORT

WELL NO: FTA-147-GP04

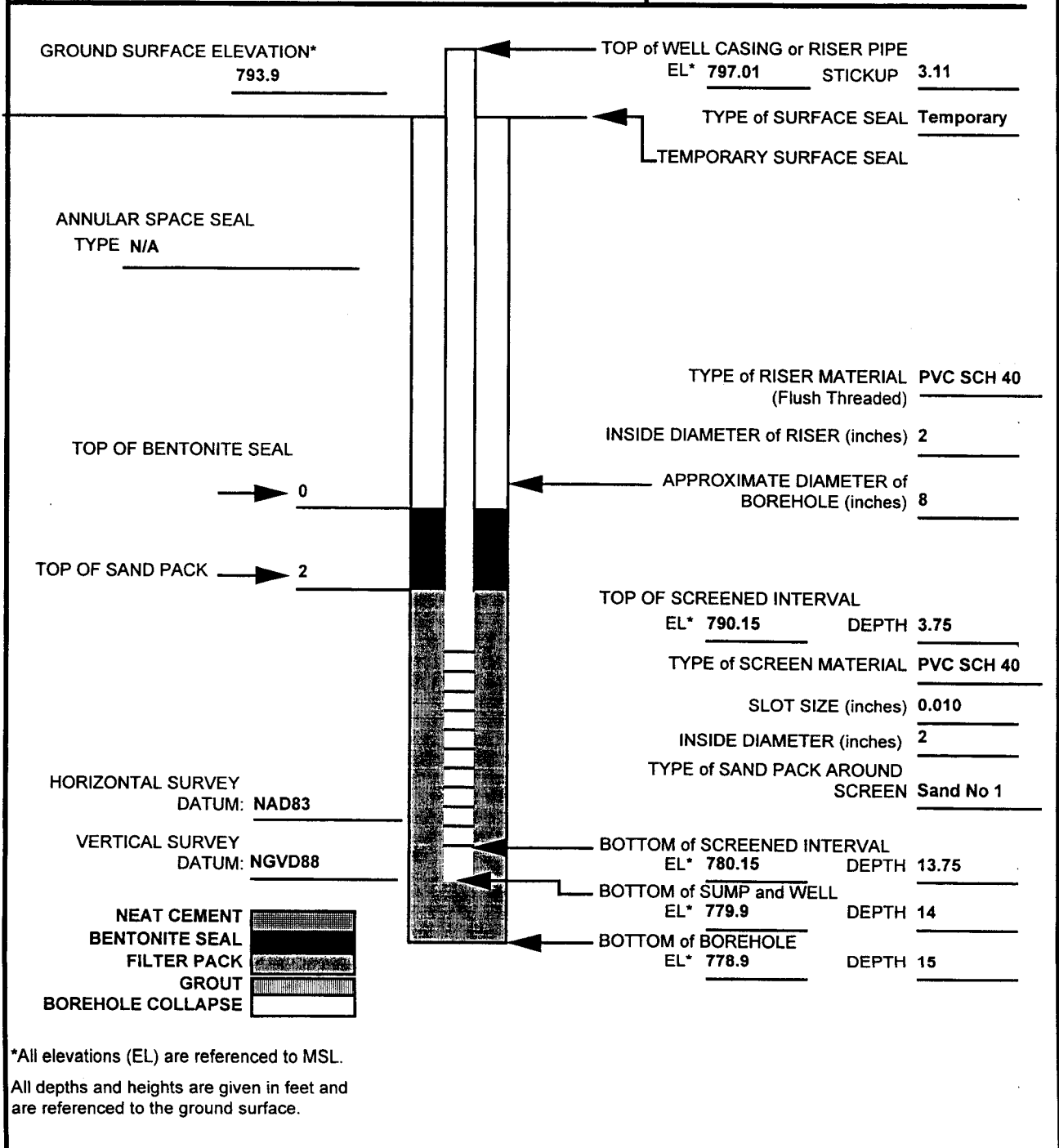
DRILLING METHOD:
Hollow Stem Auger

INSTALLATION DATE: 01/13/99

NORTHING: 1166160.16

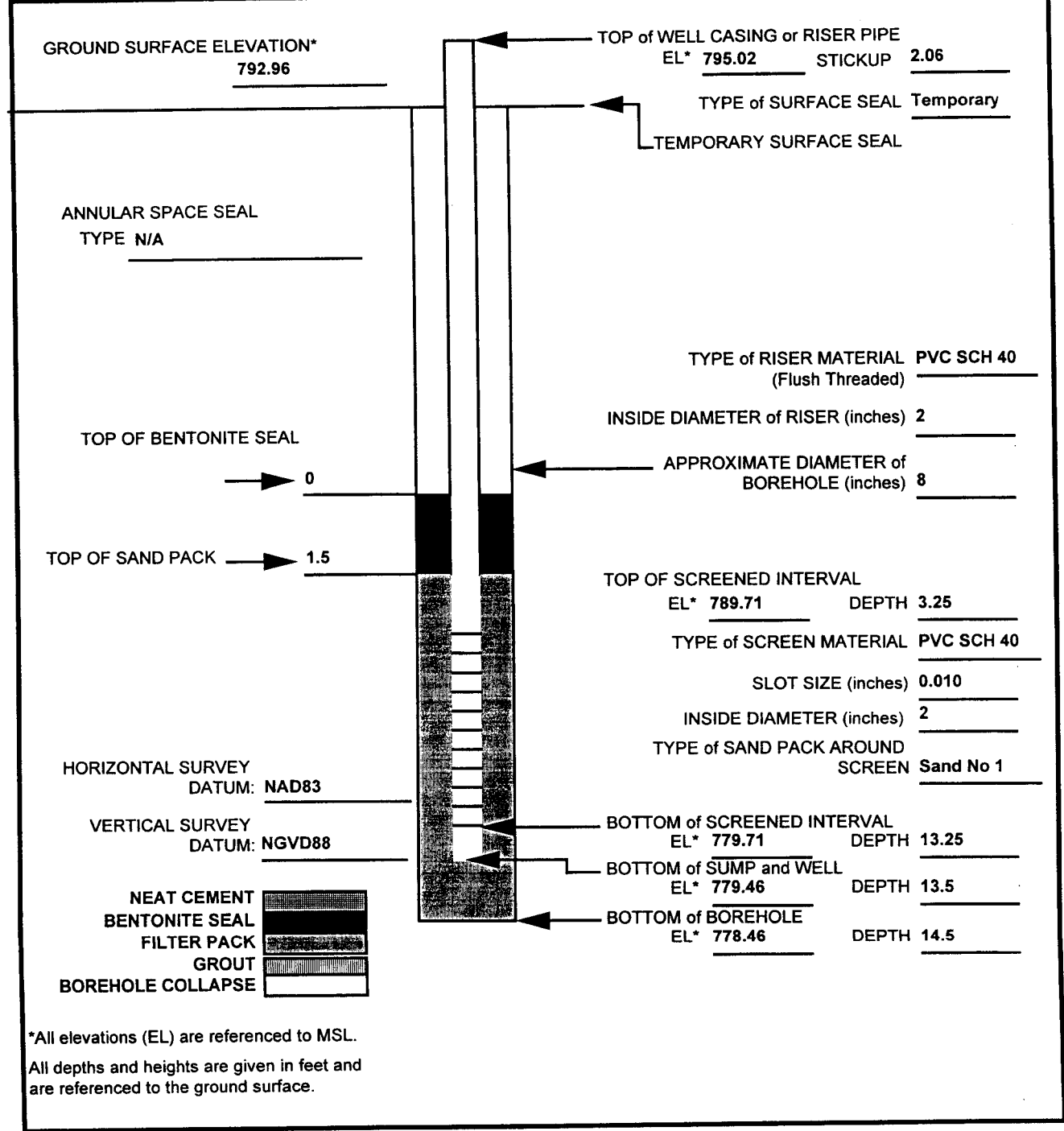
EASTING: 665358.99

JOB NO: 774645A



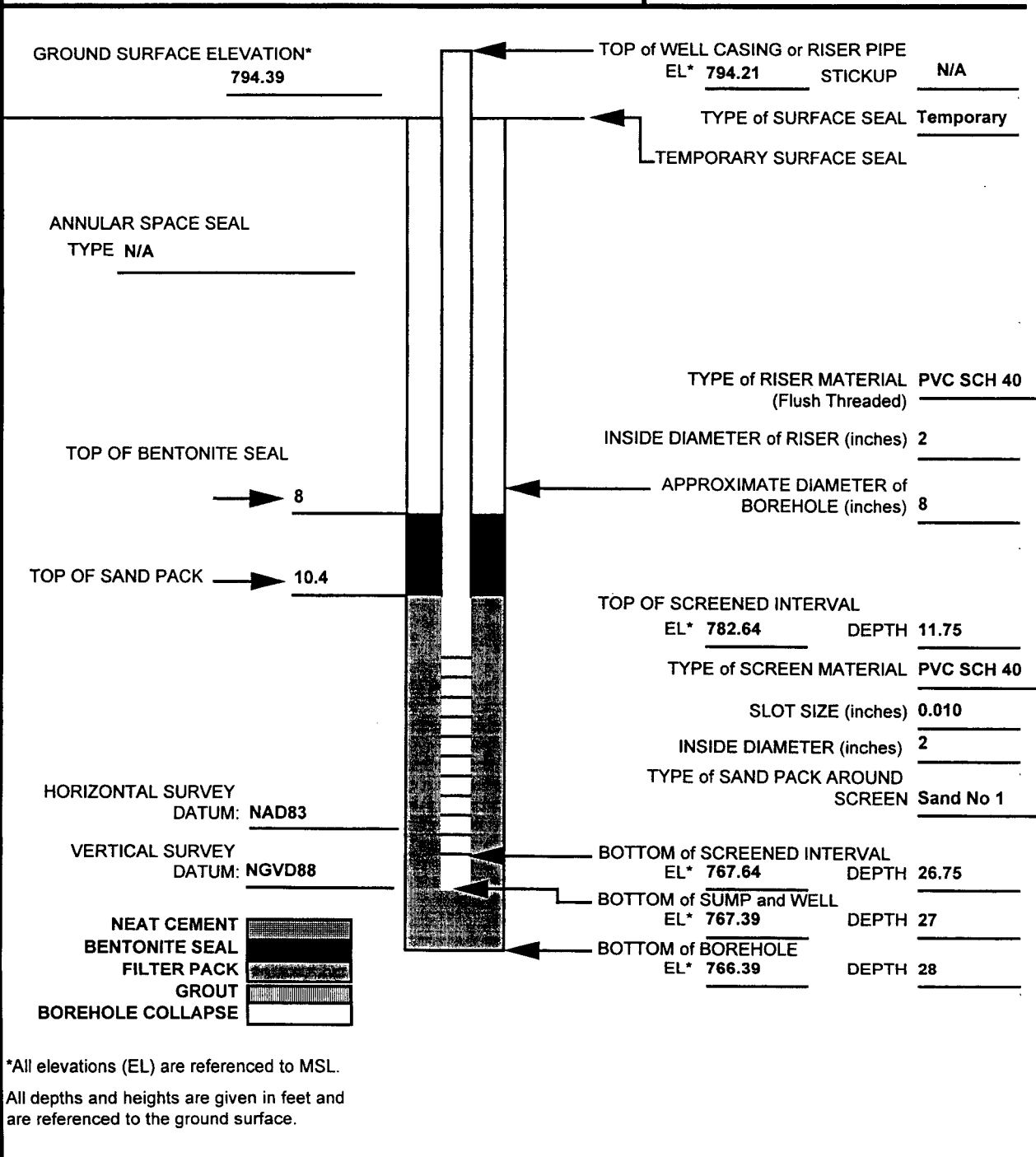
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: FTA-147-GP05
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 01/13/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1166182.83
DRILLER: K. GOBLE	EASTING: 665457.57
IT FIELD REPRESENTATIVE: C. SHORT	JOB NO: 774645A



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: FTA-147-GP07
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 01/11/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1166251.93
DRILLER: D. BISHOP	EASTING: 665463.69
IT FIELD REPRESENTATIVE: S. HSU	JOB NO: 774645A



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC

LOCATION Anniston, AL

CLIENT: USACE Mobile District

CONTRACTOR MILLER DRILLING

DRILLER: D. BISHOP

IT FIELD REPRESENTATIVE: S. HSU

WELL NO: FTA-147-GP08

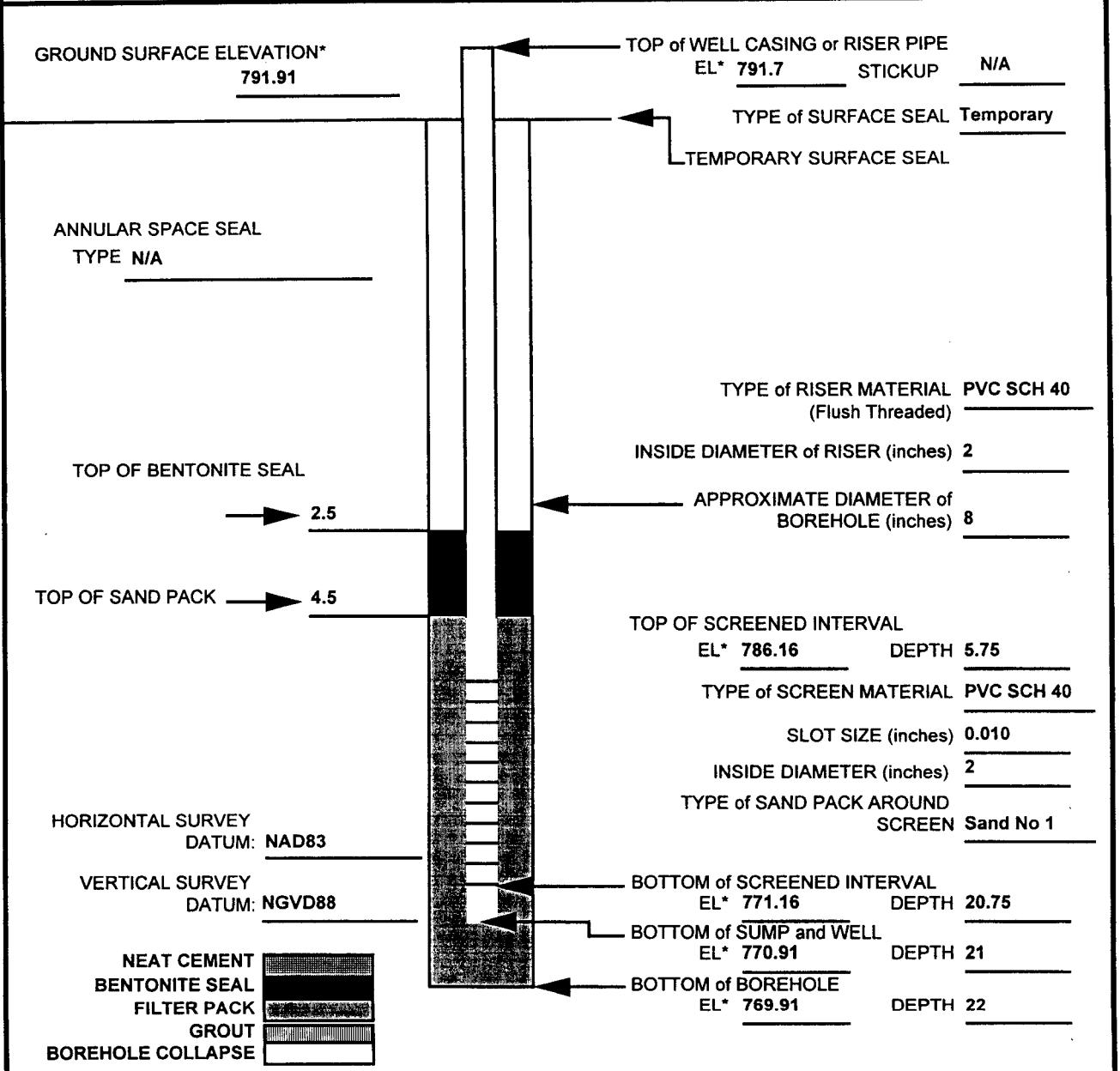
DRILLING METHOD:
Hollow Stem Auger

INSTALLATION DATE 01/12/99

NORTHING: 1166456.31

EASTING: 665531.13

JOB NO: 774645A

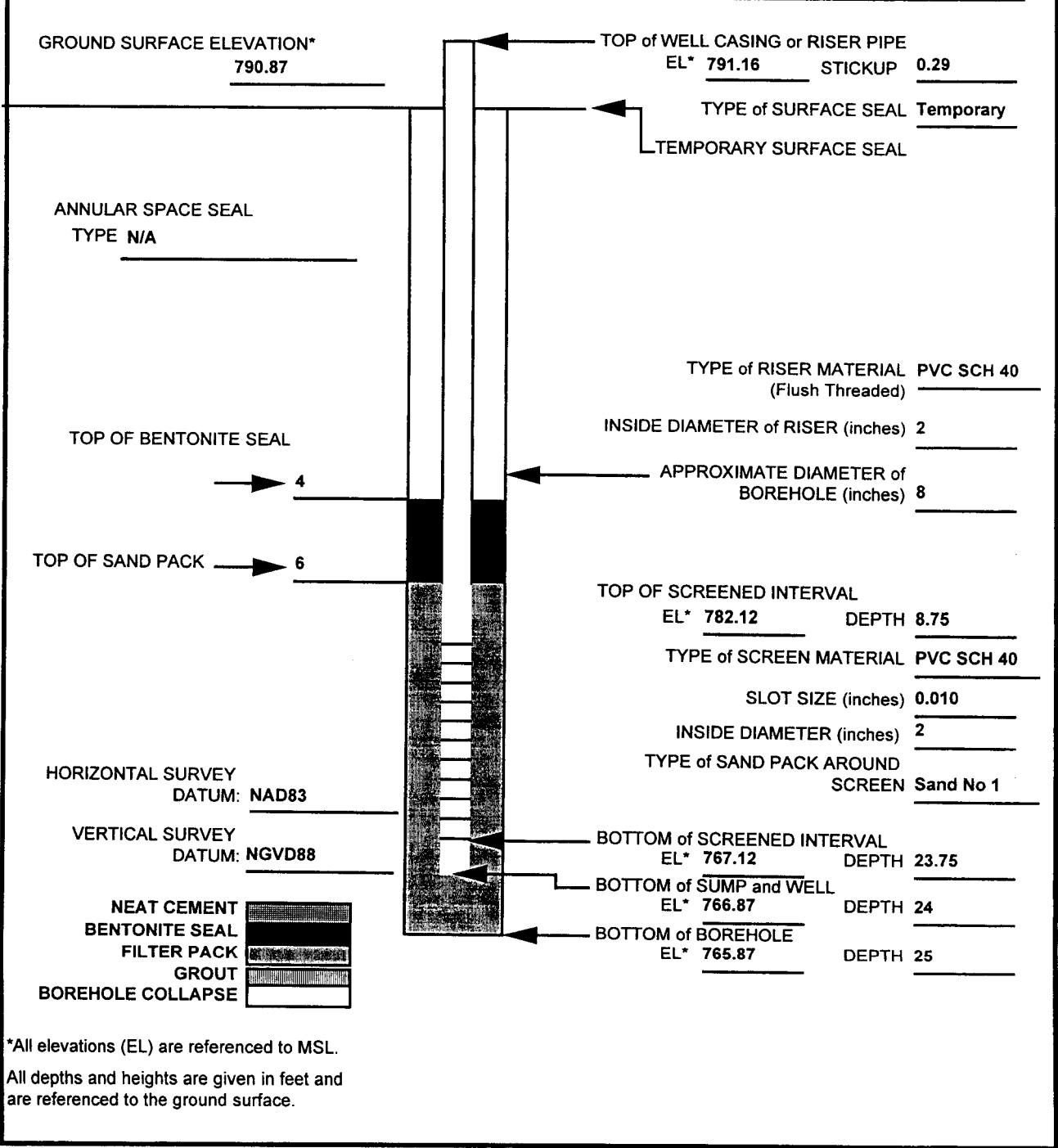


*All elevations (EL) are referenced to MSL.

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

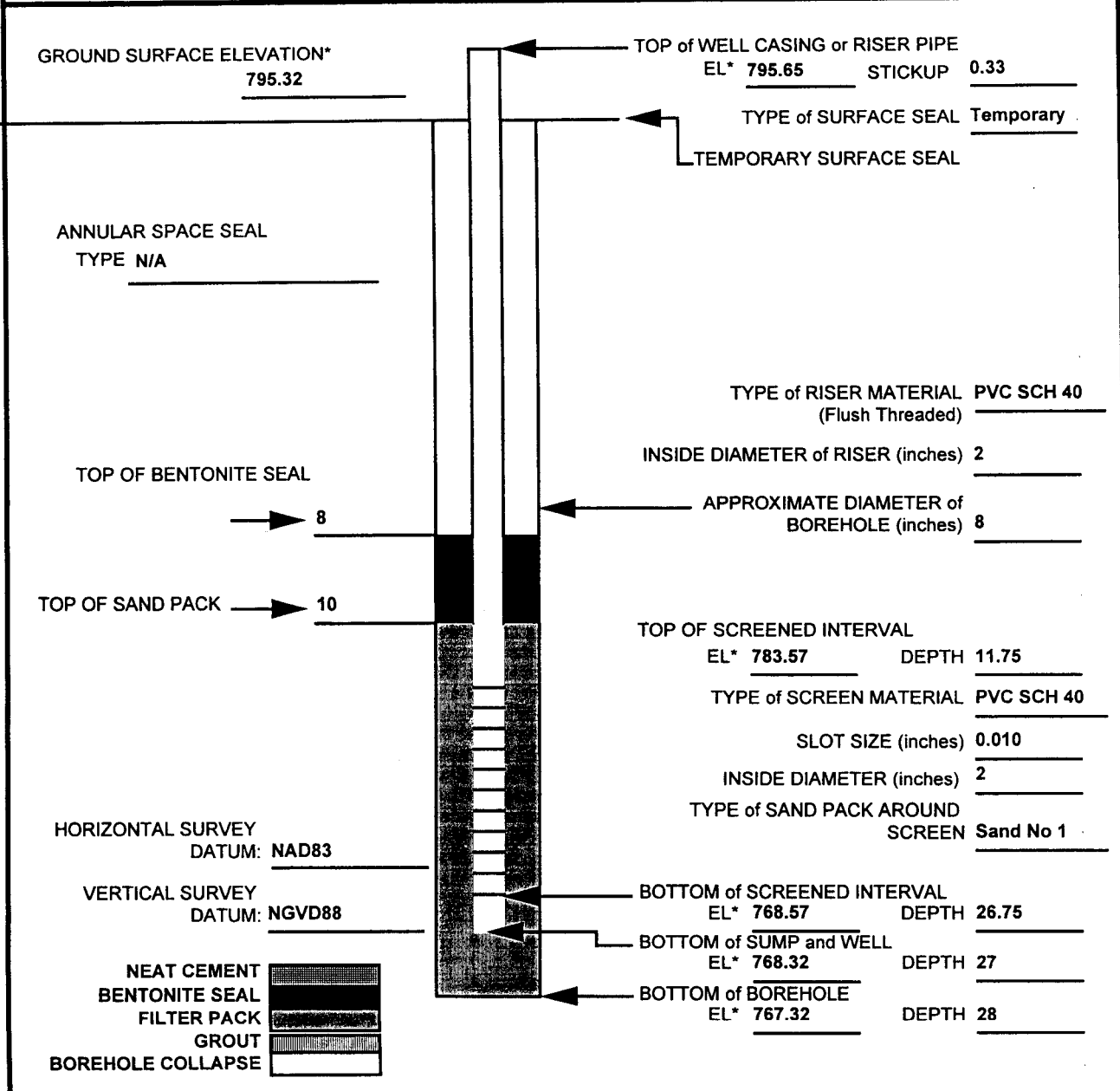
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: FTA-147-GP09
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 01/15/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1166212.41
DRILLER: K. GOBLE	EASTING: 665580.37
IT FIELD REPRESENTATIVE: C. SHORT	JOB NO: 774645A



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: FTA-147-GP10
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 01/11/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1166172.21
DRILLER: K. GOBLE	EASTING: 665311.24
IT FIELD REPRESENTATIVE: C. SHORT	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: FTA-147-GP11
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 01/12/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1166296.07
DRILLER: K. GOBLE	EASTING: 665251.09
IT FIELD REPRESENTATIVE: C. SHORT	JOB NO: 774645A

