

APPENDIX A
BORING LOGS

FORT McCLELLAN

Historical Boring Logs (FL-78)
Lithology (Borings and Wells)

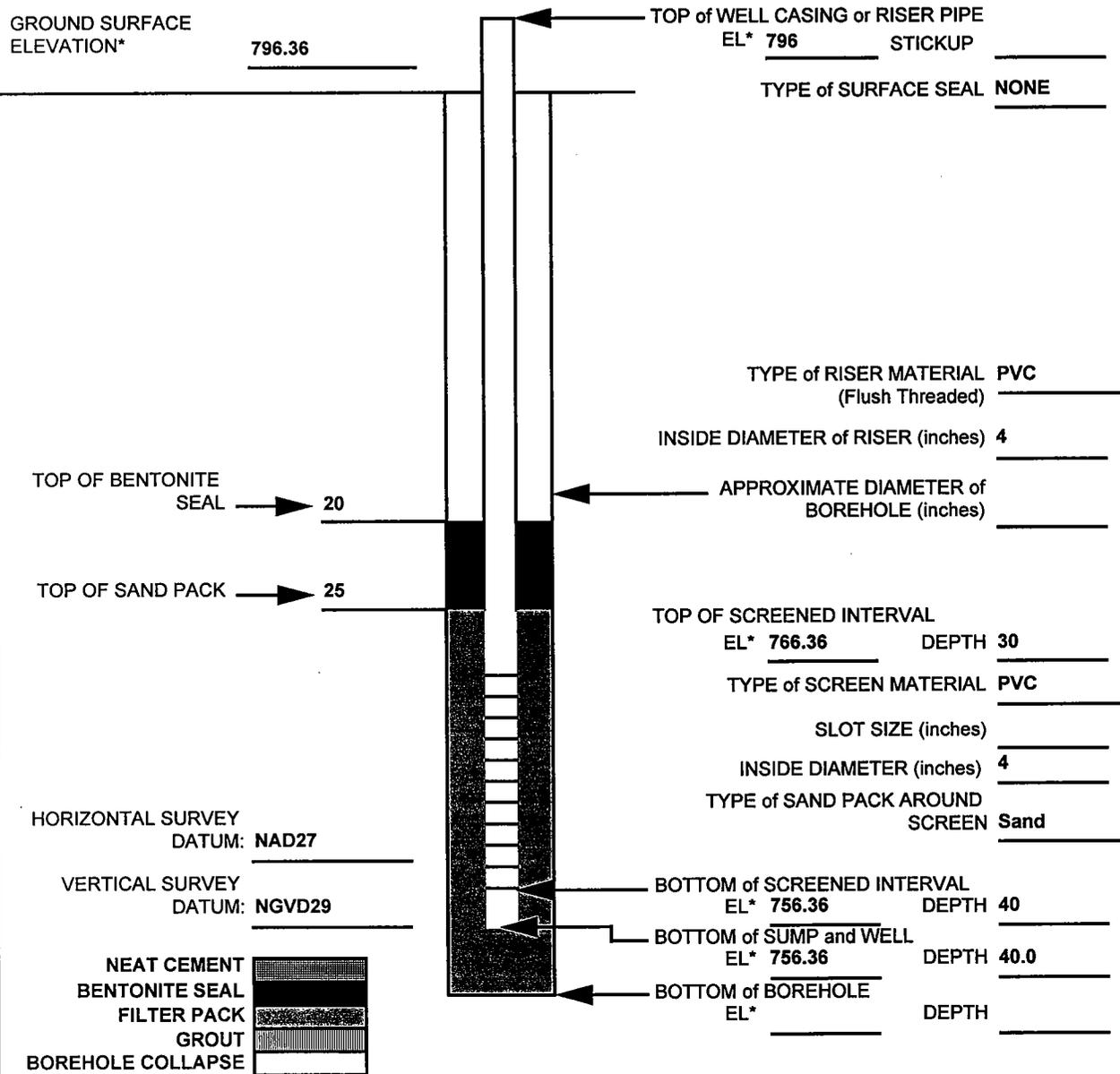
Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
LF1-G01	.0	.5				Grass fill.
	.5	3.0	cl		DRY	CLAY, 30-40% Silt, <10% Gravels (<2mm). 7.5YR6/6 reddish yellow; firm; dry.
	3.0	10.0	ml		DRY	SILT, 10-30% Clay, <10% Gravels (<2mm). 10YR6/4 light brown; firm; dry; slight cementation.
	10.0	28.0		sh	DRY	Weathered SHALE, <10% Gravels, bedding intact; 10YR6/6 brownish yellow; hard; decomposed; dry; iron stainings.
	28.0	40.0		sh		Weathered SHALE/ QUARTZ content, 10-20% Silt, <10%Clays, granular sized Sands (fine-med), increasing in gravity; partial cementation.
	40.0	41.5		sh	DRY	SHALE. 2.5YR4/0 dark gray; friable; some rust staining; serpentine; gloss; waxy feel; dry. Bottom of borehole 41.5'.
LF1-G02	.0	3.0	cl		MOIST	CLAY, 4% organic/ root, 1% Gravels. 7.5YR6/6 reddish yellow, varigated light gray; moderate plasticity; stiff; moist; subangular.
	3.0	7.0	cl			CLAY, 6-25% organics, 1% Gravels. 7.5YR6/6 reddish yellow, varigated light gray; moderate plasticity; no structure.
	7.0	10.0	cl		MOIST	CLAY, 15-25% fine to medium Sand. 7.5YR7/1 light gray, varigated reddish yellow; moderate plasticity; stiff; moist; subangular; no structure.
	10.0	12.0	cl		MOIST	Sandy CLAY, 25% fine Sand. Gley5B5/1 greenish gray varigated reddish yellow; moderate plasticity; stiff; moist; subangular; no structure.
	12.0	15.0		sh		SHALE. 10YR4/2 dark grayish brown; soft; moderately cemented; friable; weathered; highly fractured; fissle.
	15.0	16.0		sh		SHALE, increasing Quartz granules (5%). 10YR4/2 dark grayish brown; hard; friable; slightly weathered; moderate primary permeability; moderate fractured; iron staining; hard. Bottom of borehole 16.0'.
LF1-G03	1.0	3.0	cl		MOIST	CLAY, 40% Silt. 5Y5/4 olive; soft; moist.
	3.0	3.5	cl		MOIST	CLAY, 20% Silt, <10% coarse Sand to Gravels. 5Y4/4 olive; soft; moist.
	3.5	4.0	ml		MOIST	SILT, 20-30% Gravels to coarse Sands. 5Y3/2 dark olive gray; soft; slightly moist; parital cementation; fissle.

FORT McCLELLAN
 Historical Boring Logs (FL-78)
 Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
LF1-G03	4.0	5.0	cl		MOIST	CLAY, 20% silt, <10% red chert Gravel. 5Y5/6 olive; plastic; firm; moist.
	5.0	7.5	cl		MOIST	CLAY, 10-30% silt with Organics (roots). 5Y5/6 olive; moderate plasticity; moist.
	7.5	9.0	ml		DRY	SILT, 10-30% fine to coarse Sand, <10% Clay. 7.5YR3/0 very dark gray; hard; dry.
	9.0	19.5		sh	MOIST	Bedrock- SHALE. 5YR5/2 reddish gray; consolidated; waxy texture; fissile; weathered; dry to slightly moist; easily broken with fingers.
	19.5	20.0		sh	MOIST	Less weathered SHALE, more competent. 2.5YR3/0 very dark gray. Bottom of borehole 20.0'.
LF1-G04	.5	3.5	gc		MOIST	GRAVEL, Pebbles (10-35mm), with Clay. Poorly sorted; firm; slightly moist.
	3.5	4.5	cl		MOIST	CLAY, 20-30% silt. 5Y6/1 gray; low plasticity; firm; slightly moist.
	4.5	5.0	ml		MOIST	SILT, <10% Clay. 10YR5/4 yellowish brown; firm; slightly moist.
	5.0	7.5	ml		MOIST	SILT, Clay, <10% Gravel (6-10 mm). 5YR6/1 gray; firm ; moist; angular.
	7.5	15.0		sh	WET	Weathered SHALE, fine Sand and silt. 10YR5/4 yellowish brown to 10YR5/3; partial cementation; friable; decomposed material; some iron staining at 13.0'; wet at 13.0-14.0'.
	15.0	24.0		sh		SHALE. 10YR2/1 black; friable; iron staining. Bottom of borehole 24.0'.

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: Environmental Exploration Inc. DRILLER: K. Bray FIELD REPRESENTATIVE: C. Houck	WELL NO: LF1-G01 DRILLING METHOD: Hollow Stem Auger INSTALLATION DATE: 04/28/94 NORTHING: 1170252.89 EASTING: 5080707.95 JOB NO: 774645A
--	---

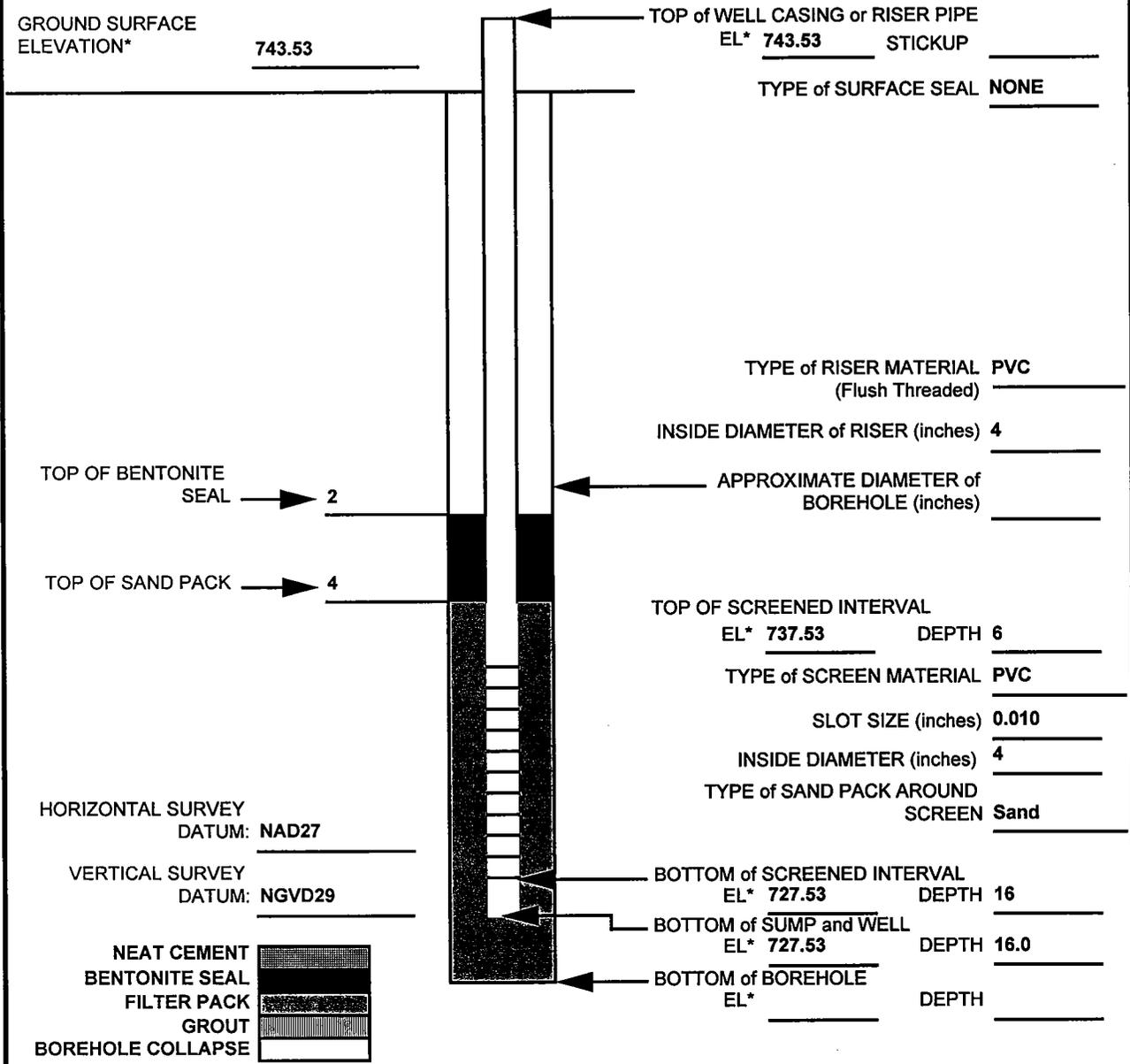


*All elevations (EL) are referenced to MSL.

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

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: Environmental Exploration Inc DRILLER: K. Bray FIELD REPRESENTATIVE: B. Baker	WELL NO: LF1-G02 DRILLING METHOD: Hollow Stem Auger INSTALLATION DATE: 04/29/94 NORTHING: 1170088.91 EASTING: 509407.03 JOB NO: 774645A
---	--

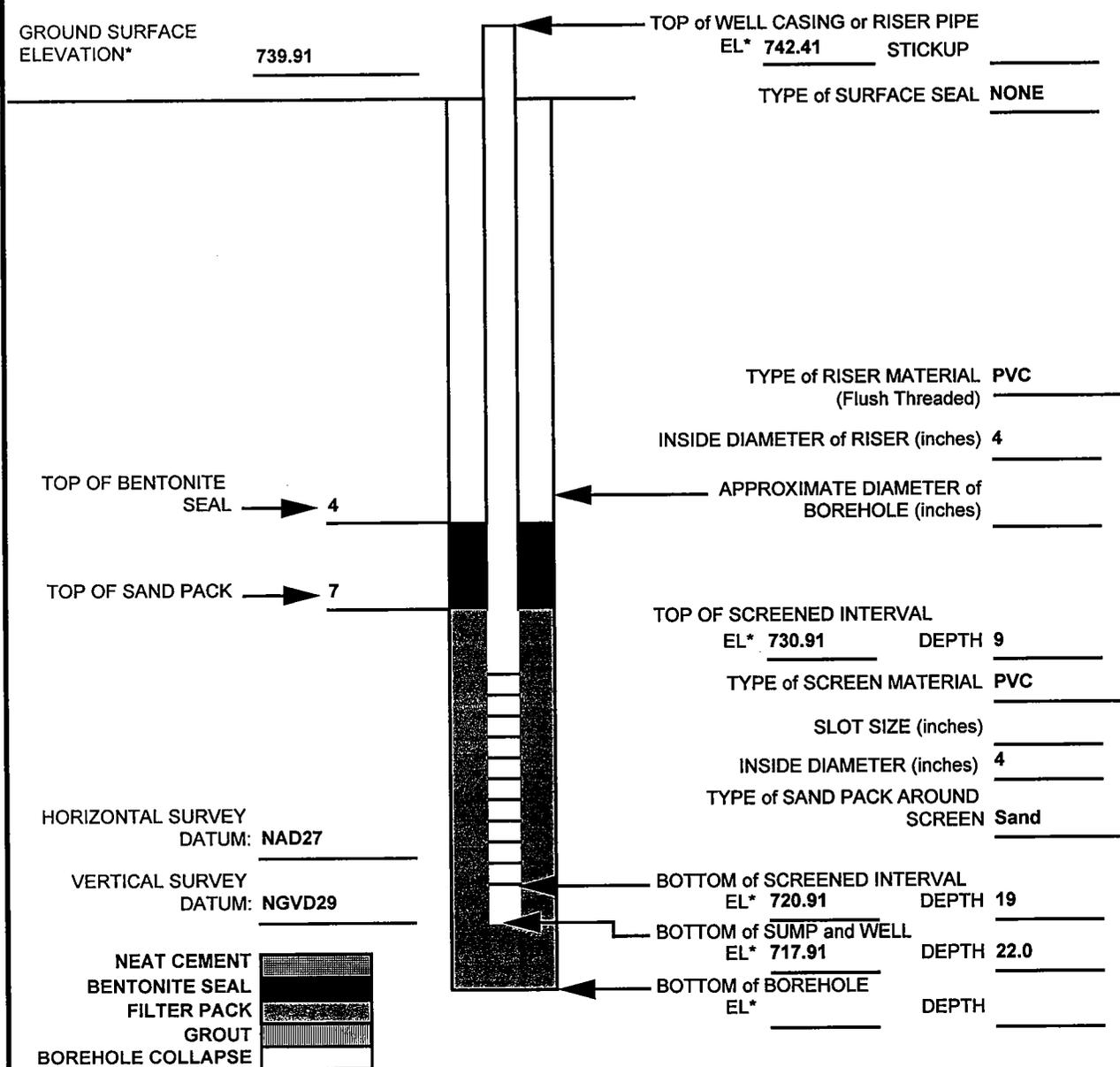


*All elevations (EL) are referenced to MSL.

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: LF1-G03
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 04/19/94
CONTRACTOR: Environmental Exploration Inc	NORTHING: 1169686.95
DRILLER: K. Bray	EASTING: 509162.01
FIELD REPRESENTATIVE: C. Houck	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.

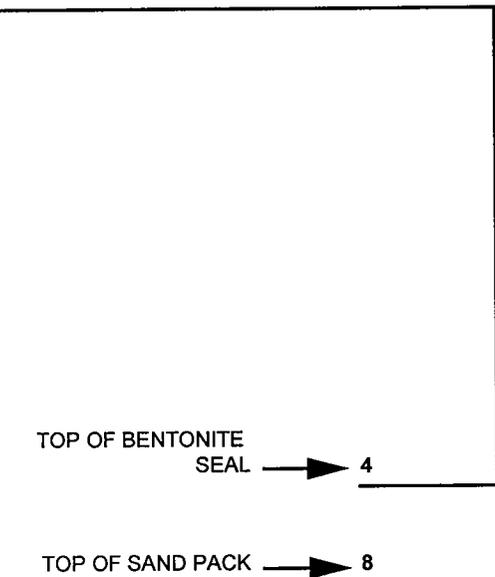
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: Environmental Exploration Inc DRILLER: K. Bray FIELD REPRESENTATIVE: C. Houck	WELL NO: LF1-G04 DRILLING METHOD: Hollow Stem Auger INSTALLATION DATE: 04/26/94 NORTHING: 1169934.65 EASTING: 509412.54 JOB NO: 774645A
---	--

GROUND SURFACE ELEVATION* 737.22

TOP of WELL CASING or RISER PIPE
EL* 739.64 STICKUP _____

TYPE of SURFACE SEAL NONE



TYPE of RISER MATERIAL PVC
(Flush Threaded)

INSIDE DIAMETER of RISER (inches) 4

APPROXIMATE DIAMETER of BOREHOLE (inches) _____

TOP OF BENTONITE SEAL → 4

TOP OF SAND PACK → 8

TOP OF SCREENED INTERVAL
EL* 726.22 DEPTH 11

TYPE of SCREEN MATERIAL PVC

SLOT SIZE (inches) _____

INSIDE DIAMETER (inches) 4

TYPE of SAND PACK AROUND SCREEN Sand

HORIZONTAL SURVEY DATUM: NAD27

VERTICAL SURVEY DATUM: NGVD29

BOTTOM of SCREENED INTERVAL
EL* 716.22 DEPTH 21

BOTTOM of SUMP and WELL
EL* 715.22 DEPTH 22.0

BOTTOM of BOREHOLE
EL* _____ DEPTH _____

- 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.

FORT McCLELLAN

Historical Boring Logs (FL-79)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
LF2-G01	.0	.5	cl		SLIGHTLY DAMP	CLAY, 30-40% Silt, 10% very fine Sand, <5% medium to coarse Sand. 5YR4/4 reddish brown; soft to stiff; very slightly plastic; dry to very slightly moist.
	.5	2.0	sw		MOIST	Very fine to coarse SAND, 20-30% Pebbles up to 40mm. 10YR4/4 dark yellowish brown; loose; non-plastic; dry to moist; discolored soil between ~1.8-2.0'; soil has shiny appearance and color is 5Y2.5/1 black.
	5.0	7.0	cl		DRY	CLAY, 40% Silt, <5% coarse Sand. 10YR5/6 yellowish brown, stiff, very slightly plastic; dry.
	10.0	12.0	cl		MOIST	CLAY, 30- 40% Silt. 7.5YR5/8 strong brown and 5Y7/1 light gray clay bands; stiff to firm; non to low plasticity; dry to slightly moist.
	15.0	17.0	cl		MOIST	CLAY, 30- 40% Silt. 7.5YR5/8 strong brown and 2.5Y7/0 light gray instead of white clay bands; stiff to firm; non to low plasticity; dry to slightly moist.
	20.0	22.0	cl		MOIST	CLAY, 30- 40% Silt. 7.5YR5/8 strong brown and 2.5Y7/0 light gray instead of white clay bands; stiff to firm; non to low plasticity; dry to slightly moist.
	25.0	27.0	ml		MOIST	SILT, 30% Clay, 10% very fine Sand. 10YR5/3 brown; dense; non to very slightly plastic; dry to slightly moist.
LF2-G02	.0	.3	cl		MOIST	CLAY, 20% very fine to coarse Sand, 20% Silt. 10YR2/2 dark brown; soft; slight to plastic; moist.
	.3	2.0	cl		MOIST	CLAY, 20% very fine to coarse Sand, 20% Silt, <5% Granules. 10YR6/4 light yellowish brown; soft; slight to plastic; dry to slightly moist.
	5.0	7.0	cl		MOIST	CLAY, 30-40% Silt. 7.5YR5/8 strong brown and 5Y7/1 light gray thin bedded Clay; stiff and firm; non to low plasticity; dry to moist.
	10.0	12.0	ml		DRY	SILT, 20% Clay. 10YR5/3 brown; very dense; non to low plastic; dry.
	15.0	17.0	ml		DRY	SILT, <10% Pebbles (up to 10mm), 20% Clay. 10YR5/4 yellowish brown very dense; dry; non plastic. Bottom: .5' Silt/ Clay; moderately hard; badly weathered; horizontal bedding; iron staining; solid; 10YR4/0 dark gray.
LF2-G03	2.5	4.5	sw		MOIST	Very fine to coarse SAND, 10-20% Gravel (Pebbles up to 50mm). 10YR5/6 yellowish brown; loose; non-plastic; moist; iron staining.

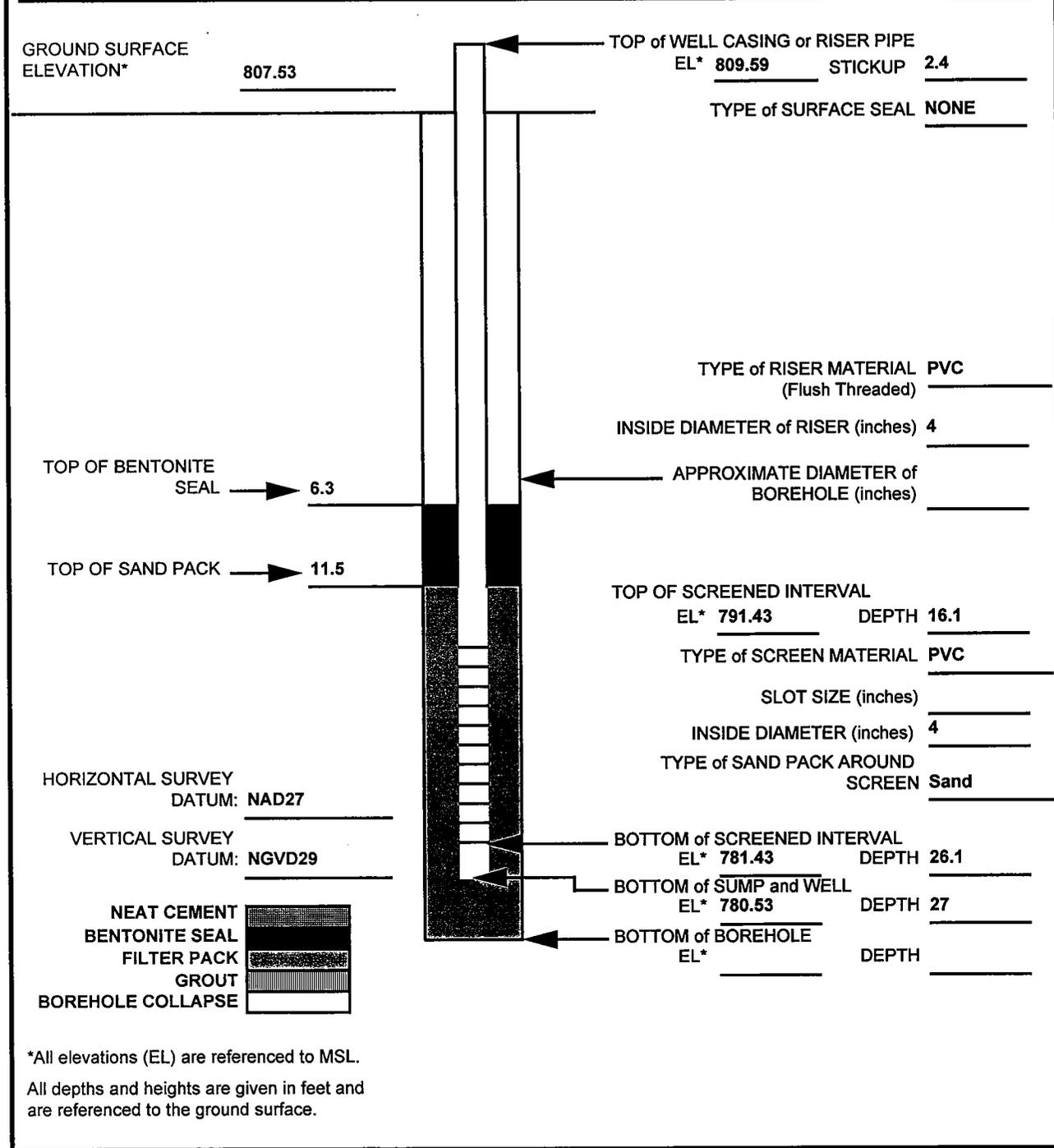
FORT McCLELLAN

Historical Boring Logs (FL-79)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
LF2-G03	5.0	7.0	ml		MOIST	SILT, interbedded with light gray 5Y7/1 Clay, Rock fragments, Silt, 10YR4/3 brown; dense; non to plastic; dry to moist.
	7.5	9.5	ml		MOIST	SILT, interbedded with light gray 5Y7/1 Clay, Rock fragments, Silt, 10YR4/3 brown; dense; non to plastic; dry to moist.

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: LF2-G01
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 05/04/92
CONTRACTOR: Environmental Exploration	NORTHING: 1175402.57
DRILLER: S. Turner	EASTING: 516723.95
FIELD REPRESENTATIVE: Wayne Stoner	JOB NO: 774645A



MONITORING WELL INSTALLATION DETAIL

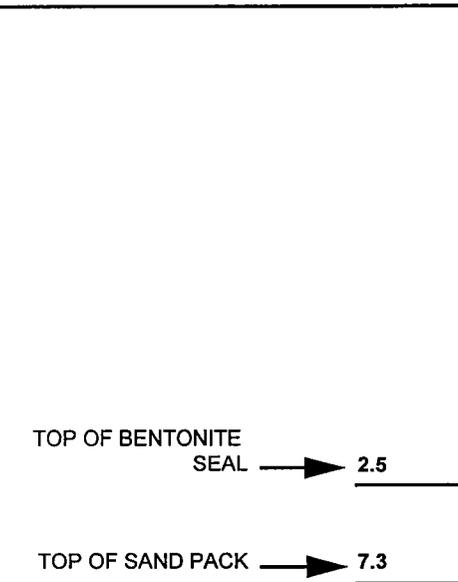
PROJECT: Fort McClellan, SAD TERC
LOCATION: Anniston, AL
CLIENT: USACE Mobile District
CONTRACTOR: Environmental Exploration
DRILLER: S. Turner
FIELD REPRESENTATIVE: Wayne Stoner

WELL NO: LF2-G02
DRILLING METHOD: Hollow Stem Auger
INSTALLATION DATE: 05/05/92
NORTHING: 1175099.16
EASTING: 516586.17
JOB NO: 774645A

GROUND SURFACE ELEVATION* 791.66

TOP of WELL CASING or RISER PIPE
EL* 793.89 **STICKUP** 2.6

TYPE of SURFACE SEAL NONE



TYPE of RISER MATERIAL PVC
 (Flush Threaded)

INSIDE DIAMETER of RISER (inches) 4

TOP OF BENTONITE SEAL → 2.5

APPROXIMATE DIAMETER of BOREHOLE (inches) _____

TOP OF SAND PACK → 7.3

TOP OF SCREENED INTERVAL
EL* 779.26 **DEPTH** 12.4

TYPE of SCREEN MATERIAL PVC

SLOT SIZE (inches) _____

INSIDE DIAMETER (inches) 4

HORIZONTAL SURVEY DATUM: NAD27

TYPE of SAND PACK AROUND SCREEN Sand

VERTICAL SURVEY DATUM: NGVD29

BOTTOM of SCREENED INTERVAL
EL* 769.26 **DEPTH** 22.4

BOTTOM of SUMP and WELL
EL* 768.66 **DEPTH** 23

BOTTOM of BOREHOLE
EL* _____ **DEPTH** _____

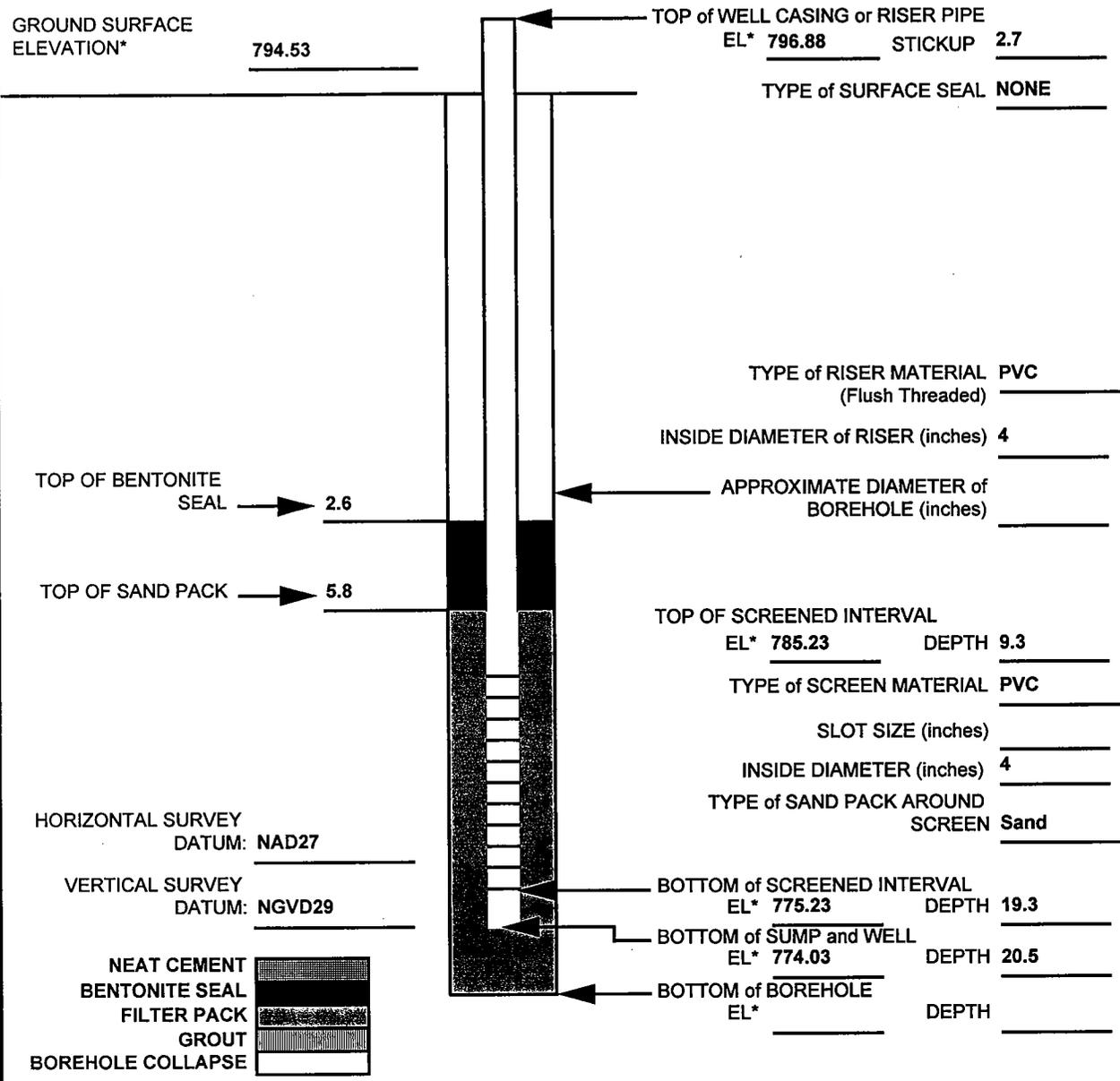
- NEAT CEMENT**
- BENTONITE SEAL**
- FILTER PACK**
- GROUT**
- BOREHOLE COLLAPSE**

*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: LF2-G03
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 05/06/92
CONTRACTOR: Environmental Exploration	NORTHING: 1175177.36
DRILLER: S. Turner	EASTING: 516947.59
FIELD REPRESENTATIVE: Wayne Stoner	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.

FORT McCLELLAN

Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
OLF-G01	.0	1.5	gm-ml		DRY	Light tan to light brown silty soil with some rock fragments and pine needles.
	1.5	7.5	ml-sp		DRY	Light gray to tan silty soil. Powdery and dry.
	7.5	10.5	cl-ml		MOIST	Light brown to slightly reddish brown silty CLAY with a white to light gray silty Clay layer or layers. Slightly moist and starting to form ball when squeezed.
	10.5	14.0	cl-ml		MOIST	Light tan to slightly reddish brown silty CLAY. More moist than above. Moist, plastic.
	14.0	17.0	cl-ch		WET	Light tan to light brown CLAY. Damp to wet, plastic. Some zones are light orange in color. There is a 15 degree (from vertical) fracture in sample. Rusty iron stains occur on both sides.
	17.0	20.0	cl-ml		WET	Light tan to light brown silty CLAY (more CLAY than SILT). Moist to wet and very plastic. Wetter than above sample.
	20.0	26.1	cl-ml		WET	Light tan to light brown silty CLAY (more CLAY than SILT). Moist to wet and very plastic. Wetter than above sample.
	26.1	35.0	cl-ml		WET	Light tan to light brown silty CLAY (more CLAY than SILT). Moist to wet and very plastic. Wetter than above sample.
	35.0	40.0	cl-ml		WET	Light tan to light brown silty CLAY. Almost vertical fractures of bedding with black and reddish-orange to rusty colored layers of Limonite and / or Hematite. Damp to wet, but not very plastic.
	40.0	49.0	cl-ml		WET	Light tan to light brown silty CLAY. Almost vertical fractures of bedding with black and reddish-orange to rusty colored layers of Limonite and / or Hematite. Damp to wet, but not very plastic.
49.0	50.9	cl-ch		WET	Rusty-red CLAY with some Silt. Wet, very plastic, almost sticky. Contains vertical layers of rusty CLAY, reddish-brown and medium tan to dark brown CLAY with white Gypsum or Calcite crystals. Bottom of borehole.	
OLF-G02	.0	3.0	gp			BOULDERS, GRAVEL, PEBBLES and SAND. (Road bed material).
	3.0	9.0	ch-sm		MOIST	Light to medium gray to rusty colored sandy, silty CLAY. Contains white and gray to rusty red colored Chert fragments. Dry to moist, forms balls from auger hole. Slightly plastic beginning at 3 feet, but becoming wet and sticky with depth. Very plastic.
	9.0	18.0	cl-sm		MOIST	Light to medium gray with rusty colored zones, but more gray to grayish-rusty colored than above. Contains some Chert fragments. Not quite as wet as above, plastic.

FORT McCLELLAN

Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
OLF-G02	18.0	23.0	cl-sc		WET	Light tan to light reddish-brown sandy CLAY. Contains some white CHERT. Moist to wet, plastic.
	23.0	26.5	cl-sm		WET	Light gray to light brown sandy and silty CLAY with rusty layers, and some Chert fragments. Moist, but not as wet as above, plastic.
	26.5	30.0	ch-sm		WET	Light tan to light brown sandy and silty CLAY. Moist to wet. More wet than above and very plastic.
	30.0	32.0	ch-sm		WET	Light tan to light brown sandy and silty CLAY. Moist to wet. Not quite as wet. Very plastic.
	32.0	35.0	ch-sm		WET	Light tan to light brown sandy and silty CLAY. Very wet and plastic.
	35.0	44.0	ch-sm		WET	Light tan to light brown sandy and silty CLAY. Very wet and plastic.
	44.0	45.0	ch-sm			Hit LIMESTONE or CHERT layer.
	45.0	50.6	ch-sc		SATURATED	At about 49 feet, auger returned light tan, sand CLAY. Saturated and very sticky. Plastic. Bottom of borehole is 50.6.
OLF-G03	.0	1.0	gm-ml			Light tan to light brown soil mixed with GRAVEL and SAND.
	1.0	6.0	sc-sm		MOIST	Light to medium gray-brown silty sandy CLAY. Dry to moist, somewhat plastic.
	6.0	20.0	cl-ml		MOIST	Light tan to light brown silty CLAY. Moist, plastic and sticky.
	20.0	22.8	cl-ml		MOIST	Light brown to light purple-gray mottled with light to dark gray, with white and rusty-colored silty CLAY. Material coming from augered hole looks the same as above. Dry to moist, slightly plastic.
	30.0	33.0	cl-ml		WET	Near contact between material from above and light tan to brown silty CLAY, which is mottled with rusty colored areas. Contains layer of Siltstone. Top part dry to damp, not plastic. Bottom part moist to wet.
	33.0	45.0	ch-sm		WET	Tan to medium brown silty CLAY, with some rusty areas. Wet and sticky, very plastic.
	45.0	50.3	ch-sm		WET	Hit LIMESTONE or CHERT layer. Tan to medium brown silty CLAY, with some rusty areas. Wet and sticky, very plastic. Bottom of borehole 50.3
OLF-G04	.0	2.0	ml-ol		DRY	Dark brick-red to rusty colored silty soil. Dry.
	2.0	8.0	cl-sm		DRY	Light tan to light brown CLAY with some Silt and Sand. Dry.

FORT McCLELLAN
Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
OLF-G04	8.0	12.0	cl-sm		MOIST	Light tan to light grayish-tan CLAY. Dry to slightly moist, not too plastic. Material from auger is rusty colored.
	12.0	13.5			MOIST	Light purple to tan CLAYSTONE. Dry to moist, not too plastic.
	13.5	19.0			MOIST	Light purple to light tan CLAYSTONE, with rusty colored areas. Darker than above. Dry to moist.
	19.0	23.0	NA		MOIST	Light tan to gray and light brown silty CLAYSTONE mixed with rusty colored areas. Dry to moist and not too plastic.
	23.0	30.0	cl-sm		WET	Light to medium brown silty, sandy CLAY. Moist to wet. Plastic, forms balls from auger.
	30.0	34.0	cl-sm		MOIST	Light gray and dark rusty colored (salt and pepper) silty and sandy CLAY with Chert layer on top. Light tan to light brown CLAY with a few rusty colored layers (about 1mm thick) on bottom. Dry to moist and not too plastic.
	34.0	38.0	cl-ml		WET	Light to medium brown silty CLAY. Moist to wet, plastic.
	38.0	52.0	cl-sm		MOIST	Light to medium gray CLAYSTONE and light to medium brown sandy, silty CLAY. Dry to moist, not too plastic. Contains rusty colored layers about 1 mm thick.
	52.0	54.0	cl-ml		MOIST	Brownish-purple silty CLAYSTONE. Dry to moist, not too plastic.
	54.0	56.0		sh	SATURATED	Light to medium tan silty SHALE. Saturated and sticky.
	56.0	60.5				Unknown material. Bottom of borehole is 60.5'.
OLF-G05	.0	4.0	cl-sm		DRY	Light gray to light tan silty, sandy CLAY soil, intermixed with rusty colored areas. Dry.
	4.0	10.0	cl-ml		MOIST	Reddish-brown to rusty brown silty CLAY. Dry to moist, somewhat plastic.
	10.0	15.0	cl-ml		MOIST	Yellowish-brown silty CLAY. Moist, plastic.
	15.0	25.0	cl-ml		MOIST	Yellowish-brown silty CLAY. More rusty colored. Moist, moisture increasing with depth, plastic.
	25.0	30.0	cl-ml		MOIST	Yellowish-brown silty CLAY. More rusty colored silty CLAYSTONE appearing. Moist, plastic.
	30.0	33.0		sh	MOIST	Vertical to near vertical beds or fractures. Grayish-brown to rusty brown silty SHALE and silty CLAYSTONE . Some fractures have black to rusty Iron deposits. Dry to moist, not plastic.

FORT McCLELLAN
Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
OLF-G05	33.0	35.0	cl-ml		MOIST	Reddish-brown silty CLAY. Moist, plastic.
	35.0	40.3	cl-ml		DRY	Reddish-brown silty CLAY. Dry, plastic.
	40.3	45.0	cl-ml		DRY	Reddish-brown silty CLAY. Dry, plastic.
	45.0	47.0	cl-ml		MOIST	Reddish-brown silty CLAY. Dry to moist, somewhat plastic.
	47.0	50.0	cl-ml		MOIST	Reddish-brown silty CLAY. Dry to moist, somewhat plastic.
	50.0	60.4	sc-sm		SATURATED	Reddish-brown to dark rusty brown sandy, and silty CLAY. Saturated.
OLF-G06	.0	2.0	ml		MOIST	SILT, 20-30% Clay. 5YR4/6 yellowish red; loose; very low plasticity; moist to dry.
	5.0	7.0	cl		MOIST	CLAY, 40% Silt. 2.5YR3/4 dark reddish brown; firm; low plasticity; dry to very slightly moist.
	10.0	12.0	sm		DRY	Very fine SAND, 30-40% Silt, 5-10% Clay. 5YR5/3 reddish brown; low dense; non-plastic; dry.
	15.0	17.0	cl		MOIST	CLAY, 40% Silt. 2.5YR3/4 reddish brown; firm; low plasticity; dry to slightly moist.
	20.0	22.0	ml		DRY	SILT, 20-30% very fine Sand, >5% Clay. 7.5YR7/6 reddish yellow; low dense; non-plastic; dry.
	25.0	27.0	ml		DRY	SILT, 10-30% very fine Sand, >10% Clay. 2.5YR4/4 reddish brown mottled with 10YR6/8 brownish yellow; low dense; non-plastic; dry; silt/ clay Stone present in sample.
	30.0	32.0	ml		DRY	SILT, 20-30% very fine Sand, >5% Clay. 7.5YR5/4 brown; medium dense; non-plastic; dry; silt/ clay Stone present in sample.
	35.0	37.0	ml		DRY	SILT, 20-30% very fine Sand, >5% Clay. 7.5YR6/6 reddish yellow; medium dense; non-plastic; dry; silt/ clay Stone present in sample.
	40.0	42.0	cl		DRY	CLAY, 40% Silt. 2.5YR5/3 reddish brown; very firm; non-plastic; dry.
	45.0	47.0	cl		DRY	CLAY, 40% Silt. 2.5YR5/3 reddish brown; very firm; non-plastic; dry.
50.0	52.0	cl		DRY	CLAY, 40% Silt. 2.5YR5/3 reddish brown; very firm; non-plastic; dry.	
55.0	57.0	cl			CLAY, Stone, laminated. 10R5/3 weak red; hard; well cemented; fine grained horizontal bedding; badly weathered and vertically fractured; porous to very porous; iron staining in pores.	

FORT McCLELLAN

Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
OLF-G06	65.0	70.0	cl			CLAY, Stone, laminated. 10R5/3 weak red; hard; well cemented; fine grained horizontal bedding; very badly weathered and vertically fractured; porous to very porous; iron staining in pores.
OLF-G07	.0	.5	ml		MOIST	SILT, 20% very fine to fine Sand, 10% medium Sand. 10YR4/2 dark grayish brown; low dense; very slightly plastic; moist.
	.5	2.0	ml		MOIST	SILT, 10% very fine to fine Sand, 10-20% Clay. 10YR5/8 yellowish brown; low to medium dense; low plastic; moist.
	2.5	4.5	ml		MOIST	SILT, 20% very fine to fine Sand, 10-20% Clay. 10YR5/8 yellowish brown; low dense; non to low plastic; moist to dry.
	5.0	7.0	ml		MOIST	SILT, 20% very fine to fine Sand, 10-20% Clay. 10YR4/2 yellowish brown; medium dense to dense; low plasticity; moist to dry; 7.5YR N7/0 light gray Clay; a piece of Quartz was in the spoon.
	7.5	8.5	ml		MOIST	SILT, 20% very fine to fine Sand, 10-20% Clay. 10YR4/2 yellowish brown; medium dense to dense; low plasticity; moist to dry; 7.5YR, N7/0 light gray Clay; a piece of Quartz was in the spoon.
	8.5	9.2	sm		DRY	SAND, very fine to fine, 20-30% Silt, <5% Clay. 7.5YR4/6 strong brown; medium dense; non-plastic; dry.
	9.2	9.5	ml		DRY	SILT, 10-20% very fine Sand, 5% Clay. 7.5YR6/8 reddish brown and 7.5YR4/4 dark brown; medium dense; non-plastic; dry.
	10.0	12.0	sm		DRY	SAND, very fine to fine; Silt 20%; 5YR5/2 reddish gray; low dense; non-plastic; dry.
	12.5	14.5	sm		DRY	SAND, very fine to fine; Silt 20%; 5YR5/2 reddish gray; low dense; non-plastic; dry.
	15.5	16.0	sm		DRY	Silty Clay; 20-30% Silt; 10YR5/8 yellowish brown and 10YR7/2 light gray; medium dense; low plasticity; dry; silty partings.
	16.0	17.0	sm		DRY	SAND, very fine to fine; Silt 20%; 5YR5/2 reddish gray; low dense; non-plastic; dry.
	17.5	19.5	ml		DRY	SILT, Clay 30%; 10R4/2 weak red; loose to dense; non-plastic; dry.
	20.0	22.0	sm		DRY	SAND, very fine to fine; Silt 30%; 5YR5/2 reddish gray; low to medium dense; non-plastic; dry.
	22.5	24.5	sm		DRY	SAND, very fine to fine; Silt 30%; 5YR5/2 reddish gray; low to medium dense; non-plastic;

FORT McCLELLAN
 Historical Boring Logs (FL-80)
 Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
						dry.
OLF-G07	25.0	27.0	ml		DRY	SILT, very fine Sand 30%; 5YR5/2 reddish gray; non-plastic; dry; Claystone present in sample.
	27.5	28.4	ml			CLAYSTONE; 10R4/2 weak red; laminated; soft; poorly cemented; fine grained; badly weathered.
	31.0	32.1	ml			CLAYSTONE; 10R4/2 weak red; laminated; soft; poorly cemented; fine grained; badly weathered.
	36.5	40.5	ml			CLAYSTONE; laminated; 10R5/3 weak red; hard; well cemented; fine grained; horizontal bedding; badly weathered; porous; very fractured. NOTE: the 36.5-40.5' interval yielded about 1.5' of recovery because of fracturing and weathering of the looser material was washed out. It is very difficult to determine an interval or intervals of lost coring.
	40.5	45.5	ml			CLAYSTONE; laminated; 10R5/3 weak red; hard; well cemented; fine grained; horizontal bedding; badly weathered; porous; very fractured.
	45.5	50.5	ml			CLAYSTONE; laminated; 10R5/3 weak red; hard; well cemented; fine grained; horizontal bedding; badly weathered; porous; very fractured.
	50.5	60.5	ml			CLAYSTONE; laminated; 10R5/3 weak red; hard; well cemented; fine grained; horizontal bedding; badly weathered; very porous; very fractured.
OLF-G08	5.0	7.0	ml		MOIST	SILT; 20-30% Clay; 20% very fine Sand; 10YR6/3 pale gray; soft; slight plastic to plastic; moist.
	10.0	12.0	cl		MOIST	CLAY; 10-20% silt; 10YR6/8 brownish yellow mottled with gray; iron staining; stiff; plastic; moist; top of shellby.
	15.0	17.0	ml		DRY	SILT; 30% Clay; 10YR6/8 brownish yellow; dense; very slightky plastic; dry.
	20.0	22.0	ml			Geo-technical sample not collected due to low recovery from Claystone layer; no visible bedding; 10YR7/4 very pale brown; hard; well cemented; very fine grained; semi-weathered; solid.
	25.0	27.0	ml		MOIST	SILT; 10-15% Clay; 10% very fine Sand; 10YR6/8 brownish yellow; dense; slight plastic; moist; Claystone layer; no visible bedding; very pale brown; hard; well cemented; very fine grained; semi-weathered; solid.

FORT McCLELLAN

Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
OLF-G08	30.0	32.0	sm		WET	Very fine SAND; 20-30% Silt; 20% Clay; dense; very slightly plastic; very moist to wet; Siltstone; 10YR6/6 brownish yellow stained with 2.5Y3/0 dark gray; thinly bedded; moderately hard; well cemented; fine grained; medium weathered; solid; horizontal fractures.
	35.0	37.0	sm		WET	Very fine to very coarse SAND; 20-30% Silt; 20% Clay; brownish yellow mottled with very dark gray dense; very slightly plastic; moist to wet; Siltstone; 10YR6/6 brownish yellow stained with 2.5YR3/0 dark gray; thinly bedded; moderately hard; well cemented; fine grained; medium weathered; solid; horizontal fractures.
	39.0	41.0	ml		WET	SILT; 20-30% very fine Sand; 10YR4/2 weak red; dense; non to slight plastic; moist to wet.
	45.0	47.0	ml		WET	SILT; 20-30% very fine Sand; 10YR4/2 weak red mottled with 7.5YR4/6 strong brown; dense; non to slight plastic; moist to wet.
	50.0	52.0	ml		MOIST	SILT; 10-15% very fine Sand; 10YR4/2 weak red mottled with strong brown; dense; non to slightly plastic; dry to moist.
OLF-G09	.0	2.0	cl		MOIST	CLAY; 30% Silt; >5% coarse to very coarse Sand; 7.5YR5/8 strong brown; stiff; low plasticity; dry to very slightly moist.
	5.0	7.0	cl		MOIST	CLAY; 30% Silt; >5% coarse to very coarse Sand; strong brown 7.5YR5/8 with interbedded 10YR8/1 white Clay; soft; plastic; slightly moist.
	10.0	12.0	cl		MOIST	CLAY; 30% Silt; >5% coarse to very coarse Sand; 10% very fine Sand;; 7.5YR5/8 strong brown with interbedded 10YR8/1 white Clay; soft; plastic; slightly moist.
	15.0	17.0	cl		MOIST	CLAY; 30% Silt; >5% coarse to very coarse Sand; 10% very fine Sand; interbedded white 10YR8/1 and reddish brown 5YR5/4 Clay; strong brown; soft; plastic; slightly moist.
	20.0	22.0	cl		WET	CLAY; 20% Silt; >10% very fine to medium Sand; 2.5YR4/6 red; soft; plastic; moist to wet.
	25.0	27.0	ml		DRY	SILT; 20-30% Clay; >10% very fine Sand; 2.5YR5/3 reddish brown; dense to very dense; non-plastic; very dry; iron staining.
	30.0	32.0	cl		DRY	CLAY; 30% Silt; 10% very fine to very coarse Sand; 10YR5/6 yellowish brown; firm; non to slightly plastic; dry.
	35.0	37.0	cl		DRY	CLAY; 30% Silt; 10% very fine to very coarse Sand; 10YR5/6 yellowish brown; firm; non to slightly plastic; dry; recovery 1.4'; also had a piece of silt/ clay Stone; thinly bedded;

FORT McCLELLAN

Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
						weak red 2.5 4/2; moderately hard; well cemented; fine grained; horizontal bedding; slightly weathered; solid; iron stained.
OLF-G10	.0	2.0	ml		MOIST	SILT; 20-30% Clay; 7YR4/6 strong brown; low dense; low plasticity; slightly moist.
	5.0	7.0	ml		DRY	SILT; 20% Clay; 5Y6/2 olive gray; dense; non to slight plasticity; dry.
	10.0	12.5				No descriptive sample was collected. Pushed tube 2.5'.
	15.0	17.0	ml		MOIST	SILT; 20-30% Clay; 10YR6/8 brownish yellow; low dense; slightly to low plasticity; dry to moist.
	17.0	19.0				No descriptive sample was collected. Pushed tube 2.0'.
	20.0	22.0	ml		DRY	SILT; 20-30% Clay. 2.5YR4/8 red mottled with 10YR5/6 yellowish brown and 2.5Y6/4 light yellowish brown; very dense; non to slight plasticity; dry. Silt/ Claystone; moderately cemented; moderately hard; badly weathered; 10YR5/6 yellowish brown and 2.5Y6/4 light yellowish brown.
	24.0	27.0	cl		DRY	CLAY; 40% Silt; >5% very fine Sand; 7.5YR5/4 brown; stiff; non-plastic; dry; Silt/ Claystone; moderately cemented; moderately hard; badly weathered; 5Y5/2 olive gray.
OLF-G11	.5	1.5	gc		MOIST	GRAVEL, 10-30% Clay and Silt, <10% fine Sand. Loose; moderately sorted; slightly moist; well rounded.
	1.5	8.0	ml		MOIST	SILT, 30% Clay. 7.5YR5/4 brown to 7.5YR4/6 strong brown; firm; slightly moist.
	8.0	9.5	cl		MOIST	CLAY, 20% Silt. 10YR6/8 brownish yellow; firm; moist.
	9.5	13.0	ml		DRY	SILT. 2.5Y6/4 light reddish brown; dry; partial cementation; organics; fissle characteristics.
	13.0	13.3	ml		MOIST	SILT, 40% Clay. 7.5YR4/6 strong brown; stiff; moist.
	13.3	13.5	cl		MOIST	CLAY, 20% Silt. 7.5YR5/6 strong brown; stiff; moist.
	13.5	18.5	ml		DRY	SILT, 10% Clay. 2.5R5/2 grayish brown mottled; firm; dry.
	18.5	19.0		sh		SHALE. 5Y5/1 gray; fissle; hard; weathered.
	19.0	23.0	ml		MOIST	SILT, 10% Clay. 7.5YR6/6 reddish yellow; firm to hard; moist; partially cement.
	23.0	23.5		sh	DRY	SHALE. 5Y5/1 gray; fractured; highly decomposed; weathered; dry.
	23.5	23.8	cl		MOIST	CLAY, 20% Silt. 7.5YR6/2 pinkish gray; firm; moist.

FORT McCLELLAN

Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
OLF-G11	23.8	24.0	ml		MOIST	SILT, <10% fine Sand. 7.5YR5/4 brown; soft; slightly moist.
	24.0	24.5	cl			CLAY, 20% Silt. 7.5YR5/4 brown; firm.
	24.5	25.0		sh		SHALE. Weathered highly decomposed Silt matrix.
	25.0	25.5	ml		DRY	SILT, <10% Clay. Firm; dry.
	25.5	28.0	cl		MOIST	CLAY, 20% Silt, <10% Gravel. 7.5YR5/4 brown; soft; moist; angular.
	28.0	28.5	gc		MOIST	GRAVEL, fine to coarse Sand, with Clay. 7.5YR6/0 gray; firm; slightly moist.
	28.5	29.0	ml			SILT, <10% Clay. 10YR6/8 brownish yellow; soft
	29.0	30.0	ml		DRY	SILT. Partial cementation; hard; dry. Bottom of borehole 30.0'.
OLF-G12	5.0	10.0	ml		MOIST	SILT, 20% very fine Sand. 10R3/6 dark red; very dense; moist; low plasticity; trace of light brownish yellow Sand; subrounded; slightly fissile.
	10.0	15.0	ml		MOIST	SILT, 20% very fine Sand. 10R3/6 dark red; very dense; moist; low plasticity; trace of light gray very fine Sand; subrounded; slightly fissile.
	15.0	20.0	ml		MOIST	Sandy SILT, 35% very fine Sand. 10R3/6 dark red; very dense; moist; low plasticity interbeds of light brownish yellow very fine Sand; subrounded; fissile.
	20.0	25.0	ml		WET	Sandy SILT, 35% very fine Sand. 10YR7/4 very pale brown; very dense; moist; low to moderate plasticity; bottom 4" of sample is wet, trace of light gray Clay, subrounded.
	25.0	30.0	ml		DRY	Sandy SILT, 40% very fine Sand. 10YR7/4 very pale brown; very dense; dry; low plasticity; fissile; subrounded.
	30.0	35.0	ml		MOIST	Sandy SILT, 25% very fine Sand. 10YR3/6 dark red; very dense; moist; low plasticity; fissile with a trace of white and brownish yellow Sand; subrounded.
	35.0	45.0	ml		MOIST	SILT, 20% very fine Sand. 10YR3/6 dark red; very dense; moist; low plasticity; fissile with a trace of light brownish yellow Sand; subrounded.
	45.0	55.0	ml		MOIST	SILT, 15% very fine Sand. 10YR3/6 dark red; very dense; moist; low plasticity; trace of light brownish yellow Silt; subrounded. At 47.0' below ground surface cuttings began balling up with moisture.
55.0	60.0	ml		MOIST	Sandy SILT, 30% very fine Sand, 5% coarse Sand. 10YR3/6 dark red; very dense; moist; low plasticity; slightly fissile; subrounded.	

FORT McCLELLAN

Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
OLF-G12	60.0	65.0	ml		MOIST	Top .6'= SILT, 15% very fine Sand. 10YR3/6 dark red; very dense; moist; low plasticity; slightly fissile; subrounded; Bottom 1'= Silt. 10YR7/8 yellow, MnO2 veining/ filled fractures, subrounded.
	65.0	67.0		sh		SHALE. 5Y6/2 light olive gray; very hard; thinly bedded, moderately cemented, texture very fine; fissile; moderately weathered; fracture.
	67.0	72.0	sm		MOIST	Silty SAND, very fine, 40% Silt. 2.5YR6/4 weak red ; very dense; moist; low plasticity; thinly bedded light red, gray subrounded silty Sand; Sandstone fragments present <5%.
	72.0	87.0	sm		MOIST	Silty SAND, 40% Silt, 10% Gravel. 2.5YR6/4 weak red; very dense; moist; low plasticity. Bottom of borehole 87.0'.
OLF-G13	1.5	3.0	cl			Silty CLAY, 20% Silt. 7.5YR4/4 dark brown; soft.
	3.0	4.0	cl		MOIST	Sandy CLAY, 10-30% Gravel. 7.5YR6/0 gray; soft; moist.
	4.0	4.5	cl		MOIST	Silty CLAY, 20% Silt. 7.5YR3/0 very dark gray; soft; moist.
	4.5	5.0	sm		WET	61% Silty SAND, 37% Clay, 2% Gravel. 7.5YR6/0 gray; soft; wet.
	5.0	9.0	sc		MOIST	CLAY, 10-30% fine Sand, <10% Silt. 10YR7/1 light gray; increasing sand gradient; moist.
	9.0	9.5	sp		MOIST	Clayey SAND, 10-30% fine Sand, <10% Gravels. 10YR7/2 light gray; moist.
	9.5	10.0	cl			Fine SAND, <10% Clay. 5YR8/1 white.
	10.0	14.0	ml			Sandy CLAY. 10YR8/1 white.
	14.0	16.0	ml			SILT, <10% Clay. 10YR4/2 weak red. Bottom of borehole 16.0'.
OLF-G15	.0	1.0	ml		MOIST	SILT. 5YR3/4 dark reddish brown; soft; slightly moist.
	1.0	2.0	cl		MOIST	CLAY, 20% Silt. 5YR5/8 yellowish red; slight plasticity; soft; moist.
	2.0	6.0	cl		MOIST	CLAY, 40% Silt. 5YR5/8 yellowish red; soft; slightly moist.
	6.0	7.5	cl		MOIST	CLAY, 20% Silt, <10% Gravel (10-20cm). 7.5YR5/8 strong brown; firm; slightly moist; angular.
	7.5	8.5	ml		MOIST	SILT, 10-30% Clay. 7.5YR6/6 yeddish yellow; firm; slight plasticity; moist.
	8.5	9.5	cl		MOIST	CLAY, 20% Silt. 10YR6/8 brownish yellow; firm; slight plasticity; moist.
	9.5	11.5	cl		MOIST	CLAY, <10% Silt. 10YR7/8 yellow; firm; some plasticity; moist.

FORT McCLELLAN

Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
OLF-G15	11.5	13.0	cl		MOIST	CLAY, 10-30% Silt. 5YR5/4 reddish brown; firm; moist; slight cementation; interbedded laminates of organics (decomposed).
	13.0	17.0	cl		MOIST	CLAY, 10-30% Silt. 7.5YR5/8 strong brown; no plasticity; soft; slightly moist.
	17.0	17.5	ml			SILT, 10-30% Clay and fine Sands. 7.5YR6/8 reddish yellow; soft; laminates of alternating silt and sand; soft.
	17.5	18.5	cl			CLAY, <10% Silt. Soft; plastic; laminates of partial cemented silts.
	18.5	21.0	cl		WET	CLAY, 40% Gravel (20-30mm). 5YR4/6 yellowish red with 10YR6/8 brownish yellow Gravel; soft; plastic; moist to wet; angular; Quartzite.
	21.0	26.0	ml		MOIST	SILT, 10-30% Clay. 10YR7/6 yellow; soft; moist; partial cementation.
	26.0	28.0	cl		MOIST	CLAY, 10-30% Silt. 10YR7/6 yellow; firm; slightly moist; laminates of partially cemented organic material (black) and silts. Bottom of borehole 28.0'.
OLF-G16	1.0	1.5	ml		MOIST	SILT. 7.5YR3/2 dark brown; soft; moist; some organics; roots.
	1.5	10.0	ml		MOIST	SILT, 40% Clay. 7.5YR5/8 strong brown; firm; slightly moist.
	10.0	11.0	cl		MOIST	CLAY, 40% Silt. 7.5YR4/6 strong brown; firm; moist.
	11.0	20.0	ml		DRY	SILT, <10% fine Sands. 5R4/3 reddish brown; dry; slight cementation.
	20.0	21.0	ml		MOIST	SILT, <10% Clay and Gravel (<2cm). 10YR4/3 dark brown; soft; moist.
	21.0	30.0	ml		DRY	SILT. 10R3/4 weak red; hard; dry; slight cementation.
	30.0	36.0	ml		MOIST	SILT, <10% Clay. 2.5YR3/4 reddish brown; soft; moist.
	36.0	37.0	ml		DRY	SILT, <20% Clay. 7.5R4/2 reddish brown; firm; dry; partial cementation; fractures with black organics in fractures; fissle. Bottom of borehole 37.0'.
OLF-G18	5.0	10.0	cl		MOIST	Sandy CLAY, 30% SAND: 20% coarse, 10% medium, 5% Roots. 10YR5/8 yellowish brown; moderate plasticity; medium; moist; no apparent bedding; subangular; road gravel at bottom of spoon- 2%.
	10.0	15.0	cl		MOIST	Silty CLAY, 30% Silt, Sand: 15% medium, 5% granular. 10YR3/6 dark red; varigated light brownish yellow and light gray; moderate plasticity; stiff; moist; no apparent bedding; subrounded.
	15.0	25.0	ml		MOIST	SILT, 20% medium Sand. 10YR3/4 dusky red; best fit color actually a purplish red varigated orange, light gray; low plasticity; dense to very dense; moist; fissle;

FORT McCLELLAN

Historical Boring Logs (FL-80)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
						subrounded.
OLF-G18	25.0	30.0	ml		MOIST	SILT, 20% Sand with very fine grained Sand interbeds. 10YR3/4 dusky red; best fit color actually a purplish red varigated orange, light gray; low plasticity; very dense; moist; fissle; subrounded.
	30.0	40.0	ml		MOIST	SILT, 20% Sand with very fine grained Sand interbeds. 10YR3/4 dusky red; best fit color actually a purplish red varigated white; low plasticity; very dense; moist; fissle; subrounded.
	40.0	45.0	ml		MOIST	SILT, 20% Sand with very fine grained Sand interbeds. 10YR3/4 dusky red; best fit color actually a purplish red, banded yellowish; low plasticity; very dense; moist; fissle; subrounded.
	45.0	58.5	ml		MOIST	SILT, 20% Sand with very fine grained Sand interbeds. 10YR3/4 dusky red; best fit color actually a purplish red, banded tan; low plasticity; very dense; moist; fissle; subrounded. Bottom of borehole 58.5'.
OLF-G19	.0	71.0				No samples collected. Geology similar to other wells in area. Bottom of borehole is 71'.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 18 June 1986

LOCATION Northwest side of old land-fill between monitoring wells 4 and 5

DRILLERS Richard Kestner-driller USA, David Bayha-geologist, USAEHA, Irene Lats and Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch hollow stem auger

BORE HOLE Well No. 1

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
1.5		Light tan to light brown silty soil with some rock fragments and pine needles. Dry	Area was bulldozed to create road for vehicle and drill rig access. Bag sample No. 1 at 0 to 1.5 feet
5		Light gray to tan silty soil. Powdery and Dry	Easy drilling Bag sample No. 2 at 1.5 to 7.5 feet
7.5			stiff drilling
10		Light brown to slightly reddish-brown silty clay with a white to light gray silty clay layer or layers. Slightly moist and starting to form ball when squeezed	Bag sample No. 3 at 7.5 to 10.5 feet.
10.5			
14		Light tan to slightly reddish-brown silty clay. More moist than above. Moist, plastic.	Bag sample No. 4 at 10.5 to 14 feet.
15			stiff drilling
			Split-spoon sample No.5 at 14 to 17 feet

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, 1 Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26*0912-87
PROJECT Fort McClellan, AL

DATE 18 June 1986

LOCATION Northwest side of old land-
fill between monitoring wells 4 and 5

DRILLERS Richard Kestner-driller USAEHA
David Bayha-geologist, USAEHA, Irene Latsch
and Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow stem auger

BORE HOLE Well No. 1

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
15		Light tan to light brown clay. Damp to wet, plastic. Some zones are light orange in color. There is a 15° (from vertical) fracture in sample. Rusty iron stains occur on both sides.	Split-spoon sample No. 5 at 14 to 17-feet
17			stiff drilling
		Light tan to light brown silty clay (More clay than silt) Moist to wet and very plastic. Wetter than above sample.	Bag sample No. 6 at 17 to 19 feet.
20		same as above	stiff drilling
			- no sample collected
			Very little returns Soil and rock are sticking to auger.
25			
26.1		▽	stiff drilling
		same as above	- no sample collected
30			

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, 1 Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 18 June 1986

LOCATION Northwest side of old land-fill between monitoring wells 4 and 5

DRILLERS Richard Kestner-driller, USAE
David Bayha-geologist, USAEHA, Irene Lat
and Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch hollow stem auger

BORE HOLE Well No. 1

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
30		same as above	- no sample collected
35		Light tan to light brown silty clay. Almost vertical fractures or bedding with black and reddish-orange to rusty colored layers of limonite and/or hematite. Damp to wet, but not very plastic.	hard drilling Split-spoon sample No. 7 at 35 to 35.6 feet
40		same as above	hard drilling - no sample collected
45			

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, 1 Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87

PROJECT Fort McClellan, AL

DATE 18 June 1986

LOCATION Northwest side of old land-fill between monitoring wells 4 and 5

DRILLERS Richard Kestner-driller USAE
David Bayha-geologist, USAEHA, Irene Latso
and Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch hollow stem auger

BORE HOLE Well No. 1

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
45		same as above	- no sample collected
50		Rusty-red clay with some silt. Wet, very plastic, almost sticky. Contains vertical layers of rusty clay reddish-brown and medium tan to dark brown clay with white gypsum or calcite crystals.	Split-spoon sample No. 8 at 49 to 50.6 feet
50.9			
		20.3-feet solid pipe 30.0-feet screen 3.0-feet solid pipe for sand trap Total depth of well is 53.3-feet below top of PVC well casing which is 2.4-feet above cement. Used 3.5 - 100 lb. bags of 20 grit sand (sand-blasting sand) Top of sand at 17-feet below ground. Used 1 - 80 lb. bucket of bentonite. Top of dry bentonite at 11-feet below ground. Used 3 - 100 lb. bags of cement and installed 6-inch diameter protective steel casing (5-feet long) around 4-inch diameter PVC well casing.	BOTTOM of HOLE

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, 1 Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 18 June 1986

LOCATION Southeast side of old land-
fill. Upgradient well

DRILLERS Richard Kestner-driller USA
David Bayha-geologist, USAEHA; Irene Latt
& Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 2

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
3		Boulders, gravel, pebbles, and sand. (Road bed material)	no sample collected hard drilling
5		Light to medium gray to rusty colored sandy, silty clay. Contains white and gray to rusty red colored chert fragments. Dry to moist, forms balls from auger hole. Slightly plastic beginning at 3 feet, but becoming wet and sticky with depth. Very plastic.	Bag sample No. 1 at 3 to 9 feet. hard drilling
10		Light to medium gray with rusty-colored zones, but more gray to grayish-rusty colored than above. Contains some chert fragments. Not quite as wet as above, plastic.	Bag sample No. 2 at 9 to 18 feet
15			stiff drilling

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, 1 Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 18 June 1986

LOCATION Southeast side of old land-
fill. Upgradient well

DRILLERS: Richard Kestner-driller USAEHA
David Bayha-geologist, USAEHA; Irene Lats
& Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 2

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
15		Same as above	
18		Light tan to light reddish-brown sandy clay. Contains some white chert. Moist to wet, plastic.	stiff drilling Bag sample No. 3 at 18 to 23 feet.
20			stiff drilling
23		Light gray to light brown sandy and silty clay with rusty layers, and some chert fragments. Moist, but not as wet as above, plastic.	Bag sample No. 4 at 23 to 26.5 feet.
25			stiff drilling
26.5		Light tan to light brown	
27.6		<div style="text-align: center;">▽</div> sandy and silty clay. Moist to wet. More wet than above and very plastic.	Bag sample No. 5 at 26.5 to 32 feet.
30			stiff drilling

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, Jun 30, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 18 June 1986

LOCATION Southeast side of old land-fill. Upgradient well

DRILLERS: Richard Kestner-driller USA
David Bayha-geologist, USAEHA; Irene Lat
& Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch hollow-stem auger

BORE HOLE Well No. 2

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
30		Same as above, but not quite as wet.	No sample collected stiff drilling
32		Same as above, but wetter	No sample collected stiff drilling
35		Same as above	No sample collected
40		Same as above	Harder drilling but fewer returns
44			Hard drilling
45		Hit limestone or chert layer	No sample collected

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, 1 Jun 30, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 18 June 1986

LOCATION Southeast side of old land-fill. Upgradient well

DRILLERS: Richard Kestner-driller USAEHA; David Bayha-geologist, USAEHA; Irene Latz & Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch hollow-stem auger

BORE HOLE Well No. 2

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
45 <hr/> <hr/> <hr/> 49 <hr/> 50 <hr/> 50.6		At about 49 feet, auger returned light tan, sandy clay. Saturated and very sticky. Plastic	Hard drilling, but easier than above. Apparently through rock layer. Few returns. Bag sample No. 6 at about 49 feet.
		BOTTOM of HOLE	
		20-foot solid pipe 30-foot screen 2.2-foot solid pipe for sand trap Total depth of well is 52.2 feet below top of PVC well casing which is 1.6-foot above cement . Used 4.5-100 lb. bags of 20 grit sand (sand-blasting sand). Top of sand at 5-feet below ground. Used 0.5-80 lb. bucket of bentonite. Top of dry bentonite at 2.5 feet below ground. Used 2-100 lb. bags of cement and installed 6-inch diameter protective steel casing (5-feet long) around 4-inch diameter PVC well casing.	

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, Jun 30, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 19 June 1986

LOCATION Northeast side of old land-fill about 10 feet Northwest of asphalt road

DRILLERS Richard Kestner-driller, USAE; David Bayna-geologist, USAEHA; Irene Lat & Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch hollow-stem auger

BORE HOLE Well No. 3

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN		
1		Light tan to light brown soil mixed with gravel and sand.	stiff drilling
5		Light to medium gray-brown silty sandy clay. Dry to moist, somewhat plastic.	Bag sample No.1 at 1 10 6 feet.
6			stiff drilling
10		Light tan to light brown silty clay. Moist, plastic and sticky.	Bag sample No.2 at 6 to 20 feet
15			stiff drilling

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, 1 Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 19 June 1986

LOCATION Northeast side of old land-
fill about 10 feet Northwest of asphalt
road

DRILLERS Richard Kestner-driller, USAE
David Bayha-geologist, USAEHA; Irene Lat
& Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 3

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
15		Same as above	
20			<i>stiff drilling</i>
22.8		Light brown to light purple-gray mottled with light to dark gray, with white and rusty-colored silty clay. Material coming from augered hole looks the same as above. Dry to moist, slightly plastic. ▽	Split-spoon sample 3 at 20 to 21 feet
25			
30			<i>stiff drilling</i>

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, 1 Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 19 June 1986

LOCATION Northeast side of old land-
fill about 10 feet Northwest of asphalt
road

DRILLERS Richard Kestner-driller, USA
David Bayha-geologist, USAEHA; Irene La
& Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 3

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
30		Near contact between material from above and light tan to brown silty clay, which is mottled with rusty colored areas. Contains layer of siltstone. Top part dry to damp, not plastic. Bottom part moist to wet.	Split-spoon sample No.4 at 30 to 33 feet
33			
35		Tan to medium brown silty clay, with some rusty areas. Wet and sticky, very plastic.	Bag sample No.5 at 33 to 50 feet
40			
45			
		Hit limestone or chert layer	Hard drilling. No sample

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, 1 Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 20 June 1986

LOCATION North end of old landfill
and North side of drainage ditch

DRILLERS Richard Kestner-driller, USAE
David Bayha-geologist, USAEHA; Irene Latsch
& Larry Hornsby-helper, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 4

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
0		Dark brick-red to rusty colored silty soil. Dry.	Bag sample No.1 at 0 to 2 feet
2			stiff drilling
2		Light tan to light brown clay with some silt and sand. Dry.	Bag sample No. 2 at 2 to 8 feet
5			
8			stiff drilling
8		Light tan to light grayish-tan clay. Dry to slightly moist, not too plastic. Material from auger is rusty colored.	Bag sample No.3 at 8 to 12 feet
10			
12			Hard drilling
12		Light purple to tan claystone. Dry to moist, not too plastic.	Bag sample No.4 at 12 to 13.5 feet
13.5			
13.5		Light purple to light tan claystone, with rusty colored areas. Darker than above. Dry to moist.	Bag sample No.5 at 13.5 to 19 feet
15			

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87

PROJECT Fort McClellan, AL

DATE 20 June 1986

LOCATION North end of old landfill

DRILLERS Richard Kestner-driller, US
David Bayha-geologist, USAEHA; Irene Lat
& Larry Hornsby-helper, Dynalectron

and North side of drainage ditch

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 4

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
15		Same as above	
19			Hard drilling
20		Light tan to gray and light brown silty claystone mixed with rusty colored areas. Dry to moist and not too plastic.	Bag sample No.6 at 19 to 23 feet
23			stiff drilling
25		Light to medium brown silty, sandy clay. Moist to wet. Plastic, forms balls from auger.	Bag sample No.7 at 23 to 30 feet
30			

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 20 June 1986

LOCATION North end of old landfill
and North side of drainage ditch

DRILLERS Richard Kestner-driller, US
David Bayha-geologist, USAEHA; Irene Lat
& Larry Hornsby-helper, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 4

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
30		Light gray and dark rusty colored (salt and pepper) silty and sandy clay with chert layer on top. Light tan to light brown clay with a few rusty colored layers (about 1 mm thick) on bottom. Dry to moist and not too plastic.	Split-spoon sample No.8 at 30 to 31 feet Color change about 31 feet
34			Hard drilling
35		Light to medium brown silty clay. Moist to wet, plastic.	Bag sample No.9 at 34 to 38 feet
38			Hard drilling
40		Light to medium gray claystone and light to medium brown sandy, silty clay. Dry to moist, not too plastic. Contains rusty colored layers about 1 mm thick.	Bag sample No.10 at 38 to 52 feet
45			

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 20 June 1986

LOCATION North end of old landfill
and North side of drainage ditch

DRILLERS Richard Kestner-driller, USA
David Bayha-geologist, USAEHA; Irene Lats
& Larry Hornsby-helper, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 4

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
45		Same as above	
49.2		▽	
50			Very hard drilling
52		Brownish-purple silty claystone. Dry to moist, not too plastic.	Bag sample No.11 at 52 to 54 feet.
54			Very soft drilling
55		Light to medium tan silty shale. Saturated and sticky.	Bag sample No.12 at 54 to 56 feet.
56			Very hard drilling
		Unknown material	No returns
60			

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 20 June 1986

LOCATION North end of old landfill
and North side of drainage ditch

DRILLERS Richard Kestner-driller, USA
David Bayha-geologist, USAEHA; Irene Lata
& Larry Hornsby-helper, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 4

DEPTH	SAMPLE TYPE BLOWS PER 6 IN.	DESCRIPTION	REMARKS
60.5		<p style="text-align: center;">Bottom of Hole</p> <p>33-feet solid pipe 30-feet screen</p> <p>Total depth of well is 63-feet below top of PVC well casing which is 2.5-feet above cement. Used 4-100 lb bags of 20 grit sand (sand-blasting sand). Top of sand at 14.7-feet below ground. Used 1.5-80 lb buckets of bentonite. Top of dry bentonite at 5 feet below ground. Used 2-100 lb bags of cement and installed 6-inch diameter protective steel casing (5-feet long) around 4-inch diameter PVC well casing.</p>	

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87

PROJECT Fort McClellan, AL

DATE 21 June 1986

LOCATION Northwest corner of old land-
fill between drainage ditch and instal-
lation fence

DRILLERS Richard Kestner-driller, USA
David Bayha-geologist, USAEHA; Irene Lat
& Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 5

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN		
4		Light gray to light tan silty, sandy clay soil, intermixed with rusty colored areas. Dry	Bag sample No.1 at 0 to 4 feet. stiff drilling
5		Redish-brown to rusty brown silty clay. Dry to moist, somewhat plastic.	Bag sample No.2 at 4 to 10 feet stiff drilling
10		Yellowish-brown silty clay. Moist, plastic.	Bag sample No.3 at 10 to 25 feet. stiff drilling
15			stiff drilling

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 78, Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87

PROJECT Fort McClellan, AL

DATE 21 June 1986

LOCATION Northwest corner of old land-

DRILLERS Richard Kestner-driller, USA
David Bayha-geologist, USAEHA; Irene Lats
& Larry Hornsby-helpers, Dynalectron

fill between drainage ditch and instal-
lation fence

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 5

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
30		Vertical to near vertical beds or fractures. Grayish-brown to rusty brown silty shale and silty claystone. Some fractures have black to rusty iron deposits. Dry to moist, not plastic.	Split-spoon sample No.5 at 30 to 33 feet.
33			Hard drilling
		Reddish-brown silty clay. Moist, plastic.	Bag sample No.6 at 33 to 35 feet.
35			Hard drilling
		Same as above, but dryer	No sample collected
40 40.3		▽	
		Same as above, dryer than above.	No sample collected
45			Hard drilling

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 73, Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87

PROJECT Fort McClellan AL

DATE 21 June 1986

LOCATION Northwest corner of old land-fill between drainage ditch and installation fence

DRILLERS Richard Kestner-driller, USAEHA; David Bayha-geologist, USAEHA; Irene Lats & Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch hollow-stem auger

BORE HOLE Well No. 5

DEPTH	SAMPLE TYPE	DESCRIPTION	REMARKS
	BLOWS PER 6 IN.		
45		Same as above, dry to moist, somewhat plastic.	No sample collected
47			Softer drilling
		Same as above	No sample collected
50			Fairly easy drilling
		Reddish-brown to dark rusty brown sandy, and silty clay. Saturated.	Very little returns
55			Bag sample No.7 at 55 feet
60			

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 73, Jun 80, which will be used.

US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

Geohydrologic Study No. 38-26-0912-87
PROJECT Fort McClellan, AL

DATE 21 June 1986

LOCATION Northwest corner of old land-
fill between drainage ditch and instal-
lation fence

DRILLERS Richard Kestner-driller, USAE
David Bayha-geologist, USAEHA; Irene Latsi
& Larry Hornsby-helpers, Dynalectron

DRILL RIG Acker AD-2 with 6-inch
hollow-stem auger

BORE HOLE Well No. 5

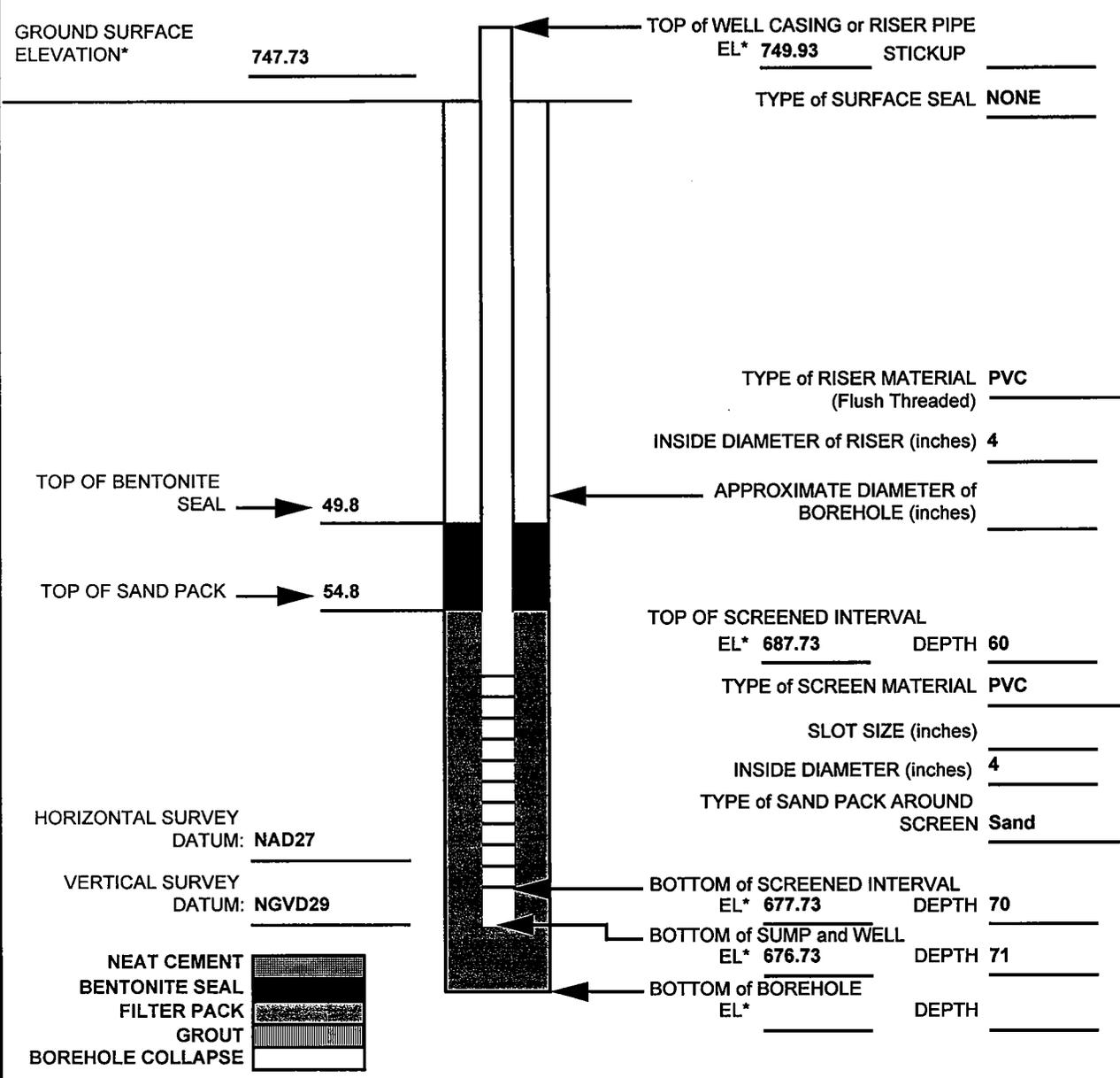
DEPTH	SAMPLE TYPE BLOWS PER 6 IN.	DESCRIPTION	REMARKS
60.4		Bottom of Hole 33-feet solid pipe 30-feet screen Total depth of well is 63-feet below top of PVC well casing which is 2.6-feet above cement. Used 4-100 lb bags of 20 grit sand (sand-blasting sand). Top of sand at 15-feet below ground. Used 1-80 lb bucket of bentonite. Top of dry bentonite at 10 feet below ground. Used 3-100 lb bags of cement and installed 6-inch diameter protective steel casing (5-feet long) around 4-inch diameter PVC well casing.	

AEHA Form 130, 1 Nov 82

Replaces HSHB Form 73, Jun 80, which will be used.

MONITORING WELL INSTALLATION DETAIL

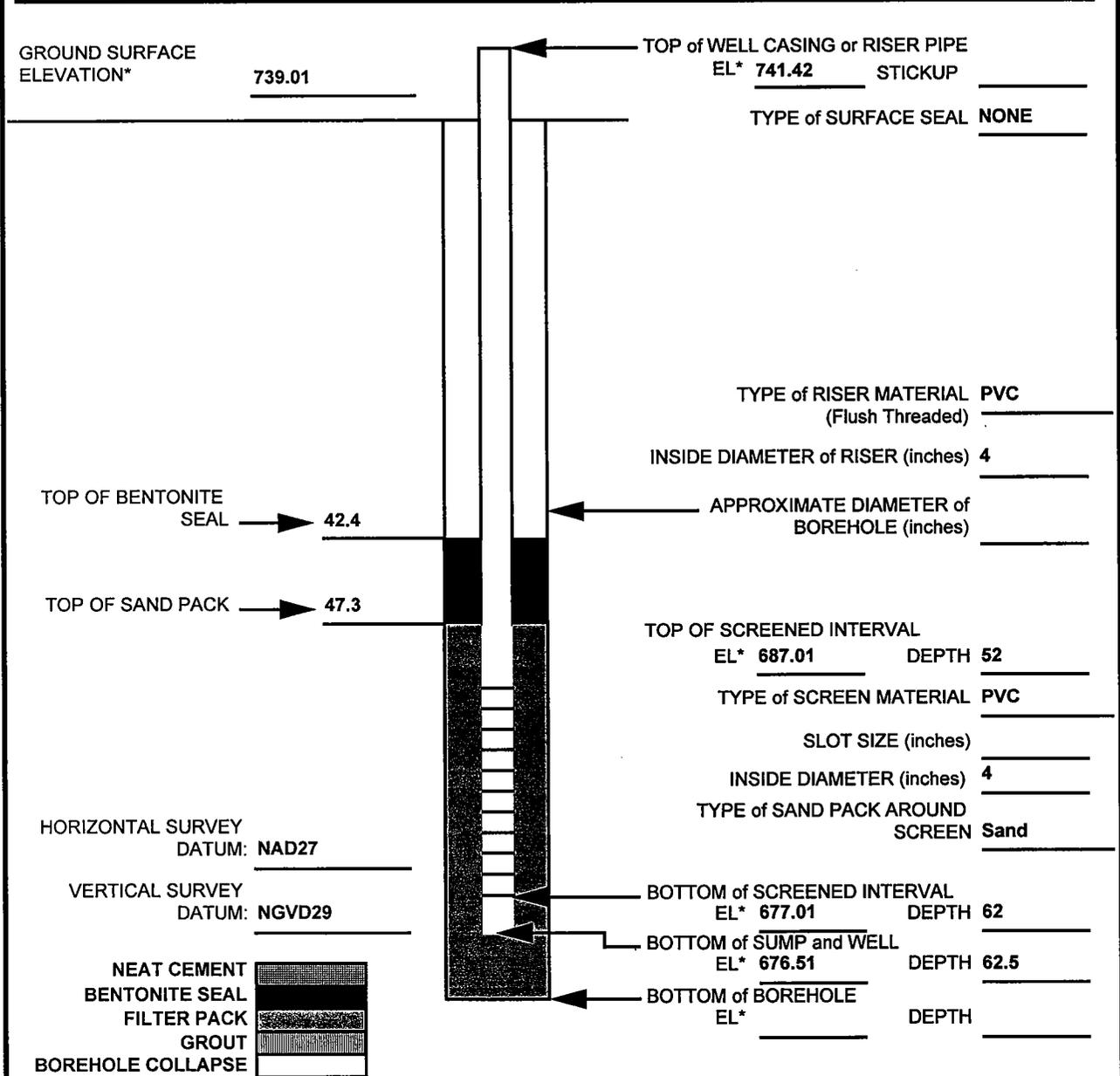
PROJECT: Fort McClellan, SAD TERC	WELL NO: OLF-G06
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 04/22/92
CONTRACTOR: Environmental Exploration	NORTHING: 1180600.56
DRILLER: S. Turner	EASTING: 512566.55
IT FIELD REPRESENTATIVE: Wayne Stoner	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

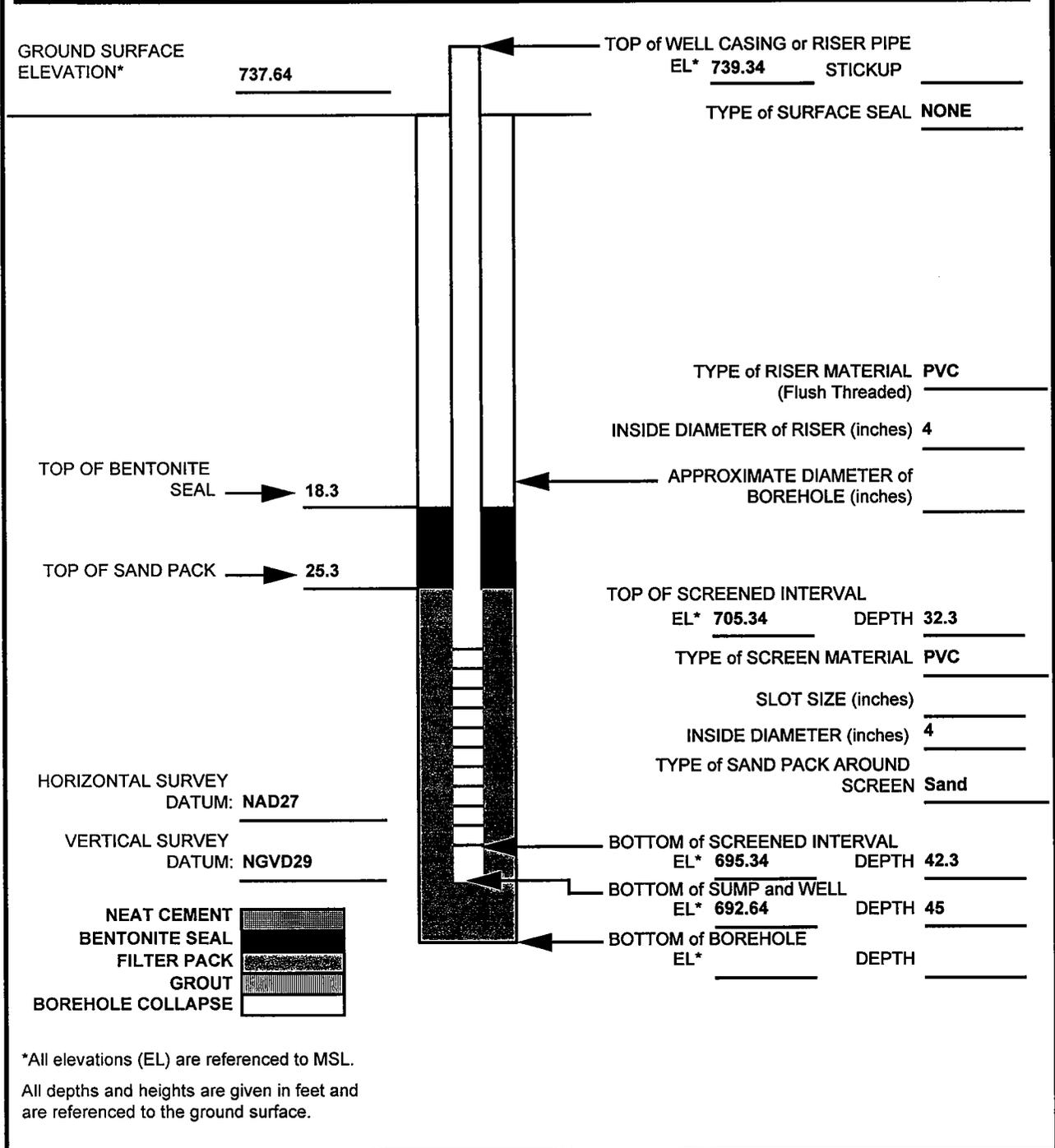
PROJECT: Fort McClellan, SAD TERC	WELL NO: OLF-G07
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 04/21/92
CONTRACTOR: Environmental Exploration	NORTHING: 1180121.87
DRILLER: S. Turner	EASTING: 512351.82
IT FIELD REPRESENTATIVE: Wayne Stoner	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.

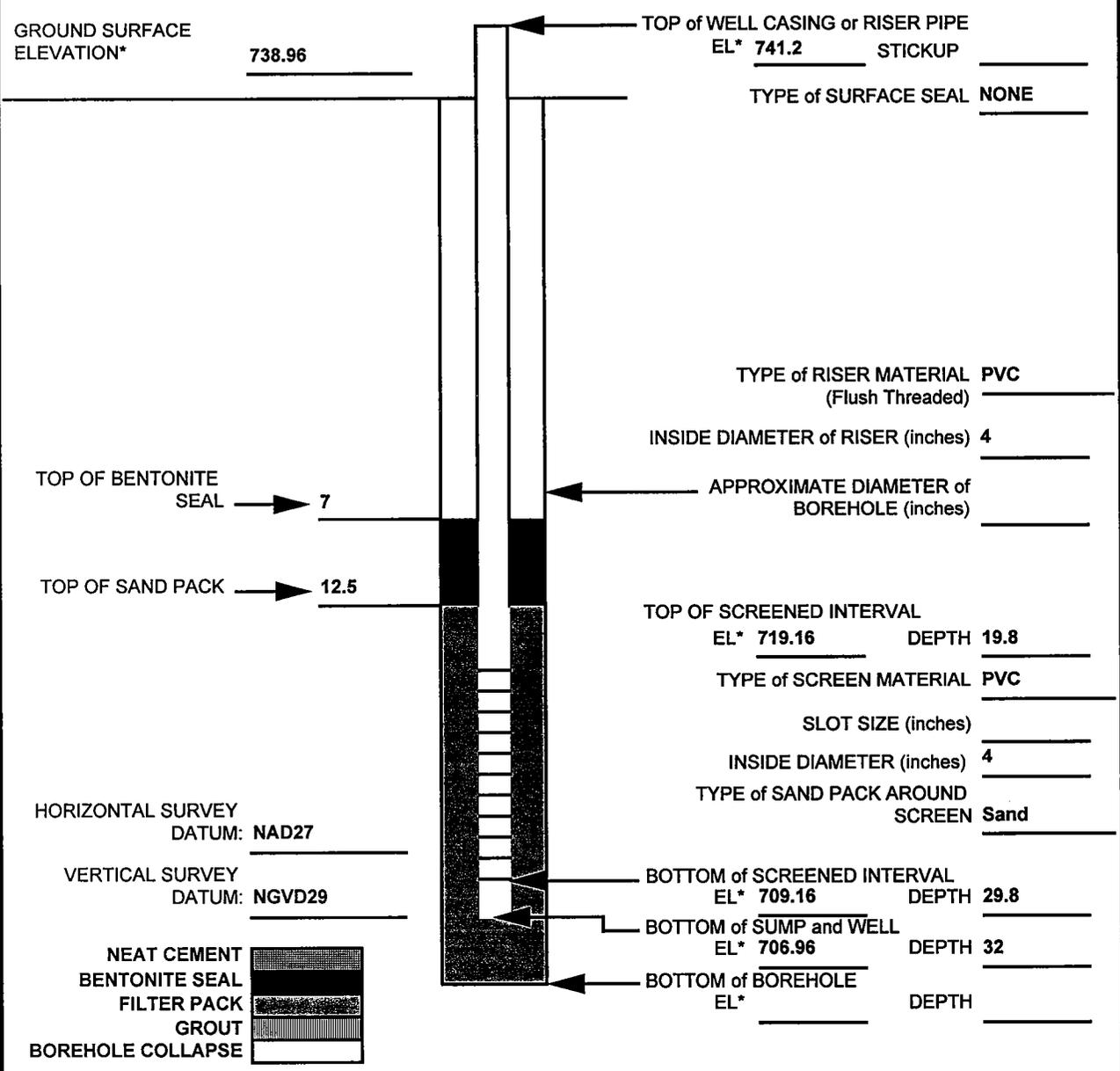
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: Environmental Exploration DRILLER: S. Turner IT FIELD REPRESENTATIVE: Wayne Stoner	WELL NO: OLF-G08 DRILLING METHOD: Hollow Stem Auger INSTALLATION DATE: 04/28/92 NORTHING: 1179918.94 EASTING: 512278.86 JOB NO: 774645A
--	--



MONITORING WELL INSTALLATION DETAIL

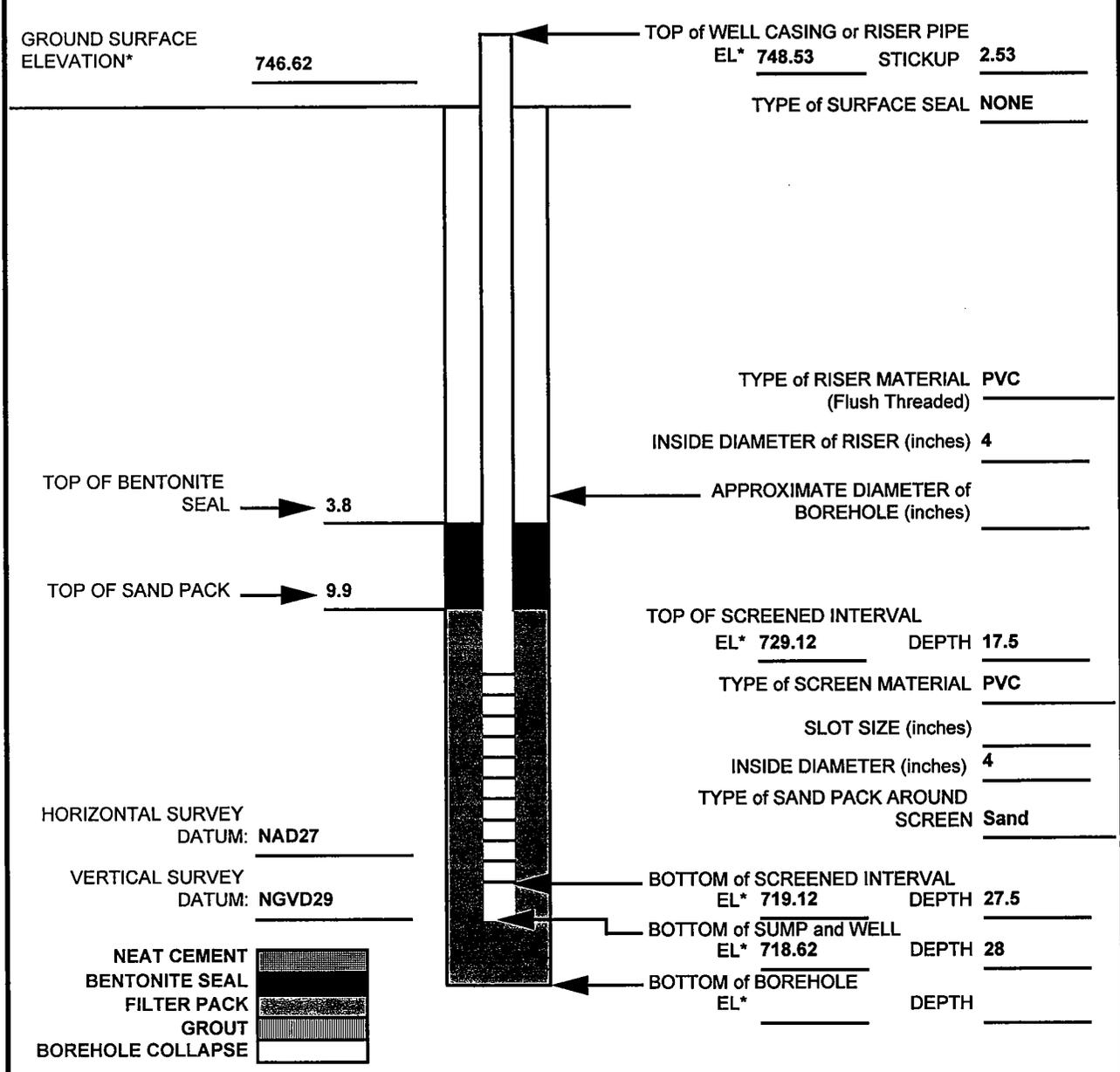
PROJECT: Fort McClellan, SAD TERC	WELL NO: OLF-G09
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 04/25/92
CONTRACTOR: Environmental Exploration	NORTHING: 1180788.97
DRILLER: S. Turner	EASTING: 513346.31
IT FIELD REPRESENTATIVE: Wayne Stoner	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

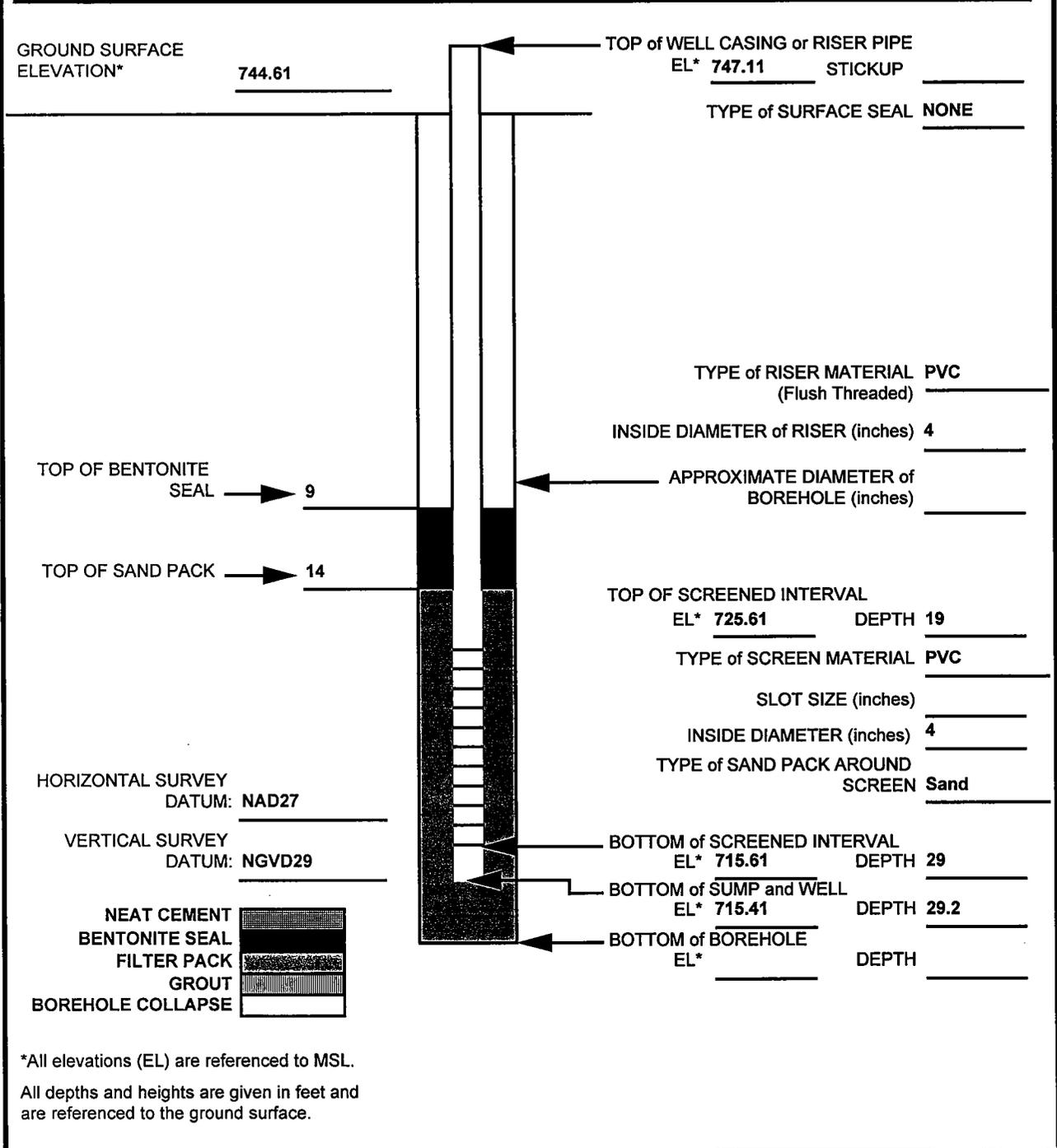
PROJECT: Fort McClellan, SAD TERC	WELL NO: OLF-G10
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 04/26/92
CONTRACTOR: Environmental Exploration	NORTHING: 1179303.45
DRILLER: S. Turner	EASTING: 512538.83
IT FIELD REPRESENTATIVE: Wayne Stoner	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.

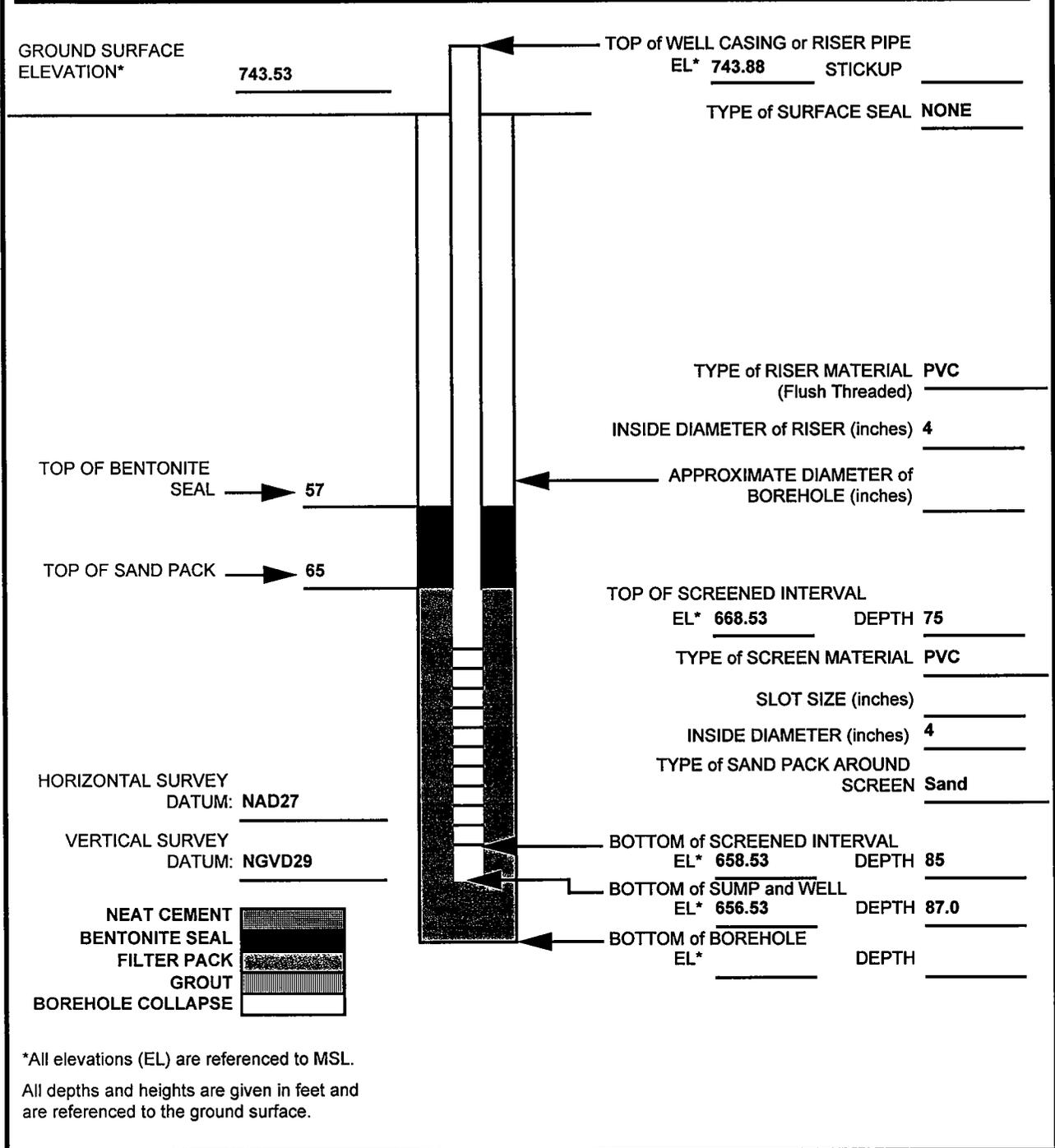
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: Environmental Exploration Inc DRILLER: K. Bray IT FIELD REPRESENTATIVE: C. Houck	WELL NO: OLF-G11 DRILLING METHOD: Hollow Stem Auger INSTALLATION DATE: 04/17/94 NORTHING: 1179291.44 EASTING: 513171.51 JOB NO: 774645A
--	--



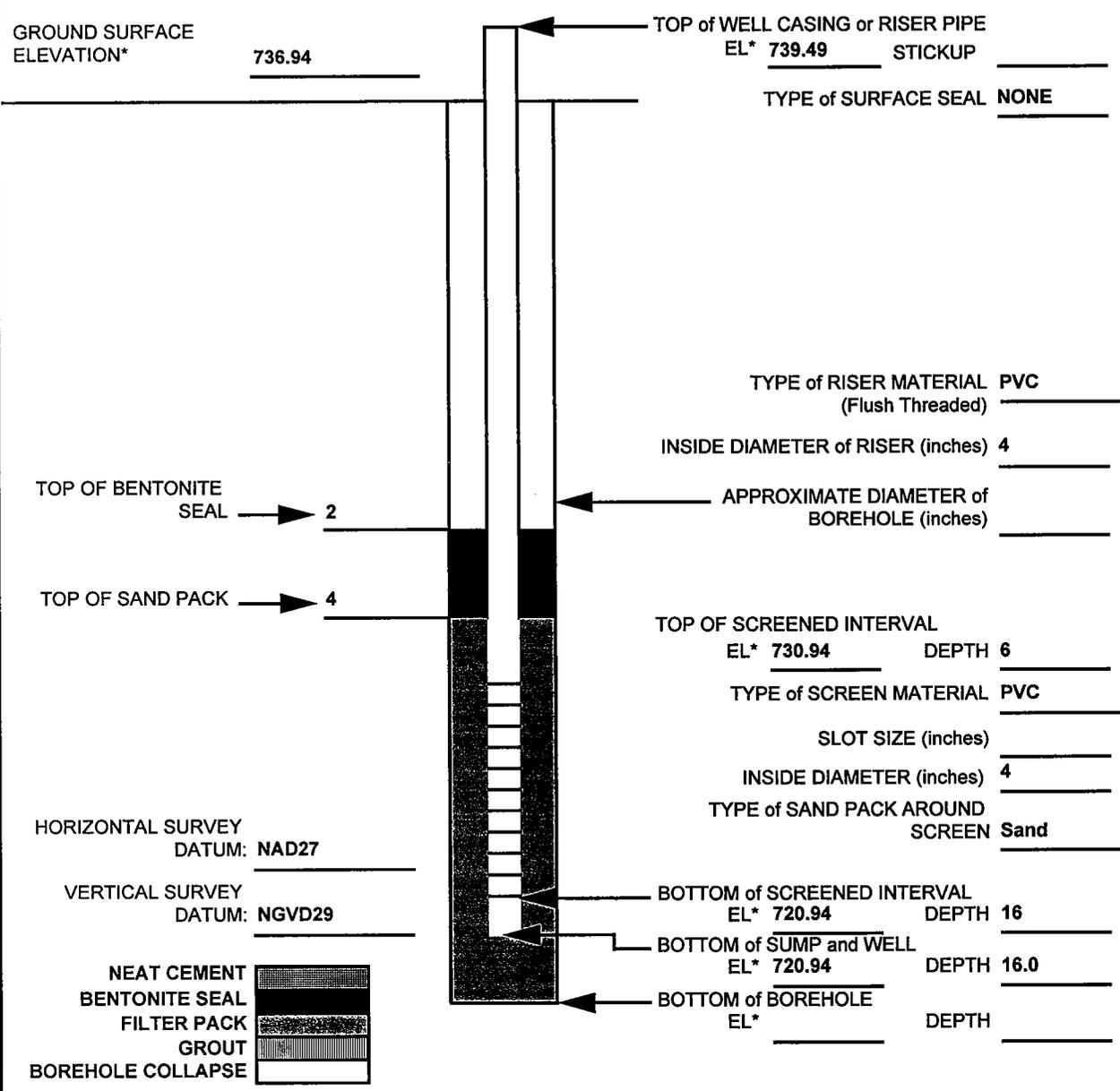
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: OLF-G12
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 04/17/95
CONTRACTOR: Christensen Boyles Brothers	NORTHING: 1180476.24
DRILLER: K. Kesty	EASTING: 512356.29
IT FIELD REPRESENTATIVE: B. Baker	JOB NO: 774645A



MONITORING WELL INSTALLATION DETAIL

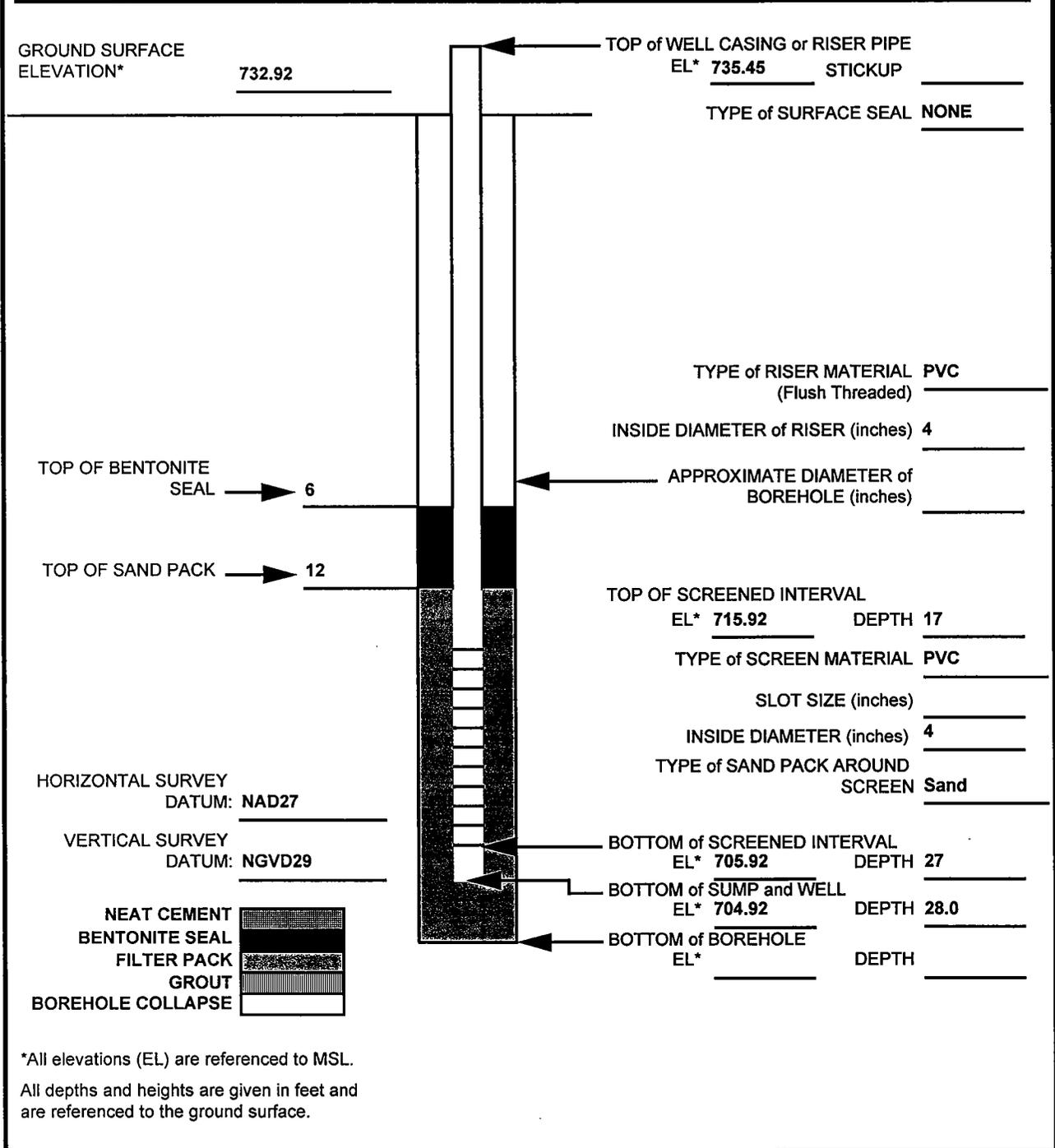
PROJECT: Fort McClellan, SAD TERC	WELL NO: OLF-G13
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 04/16/94
CONTRACTOR: Environmental Exploration Inc	NORTHING: 1180299.12
DRILLER: K. Bray	EASTING: 513477.75
IT FIELD REPRESENTATIVE: C. Houck	JOB NO: 774645A



*All elevations (EL) are referenced to MSL.
All depths and heights are given in feet and are referenced to the ground surface.

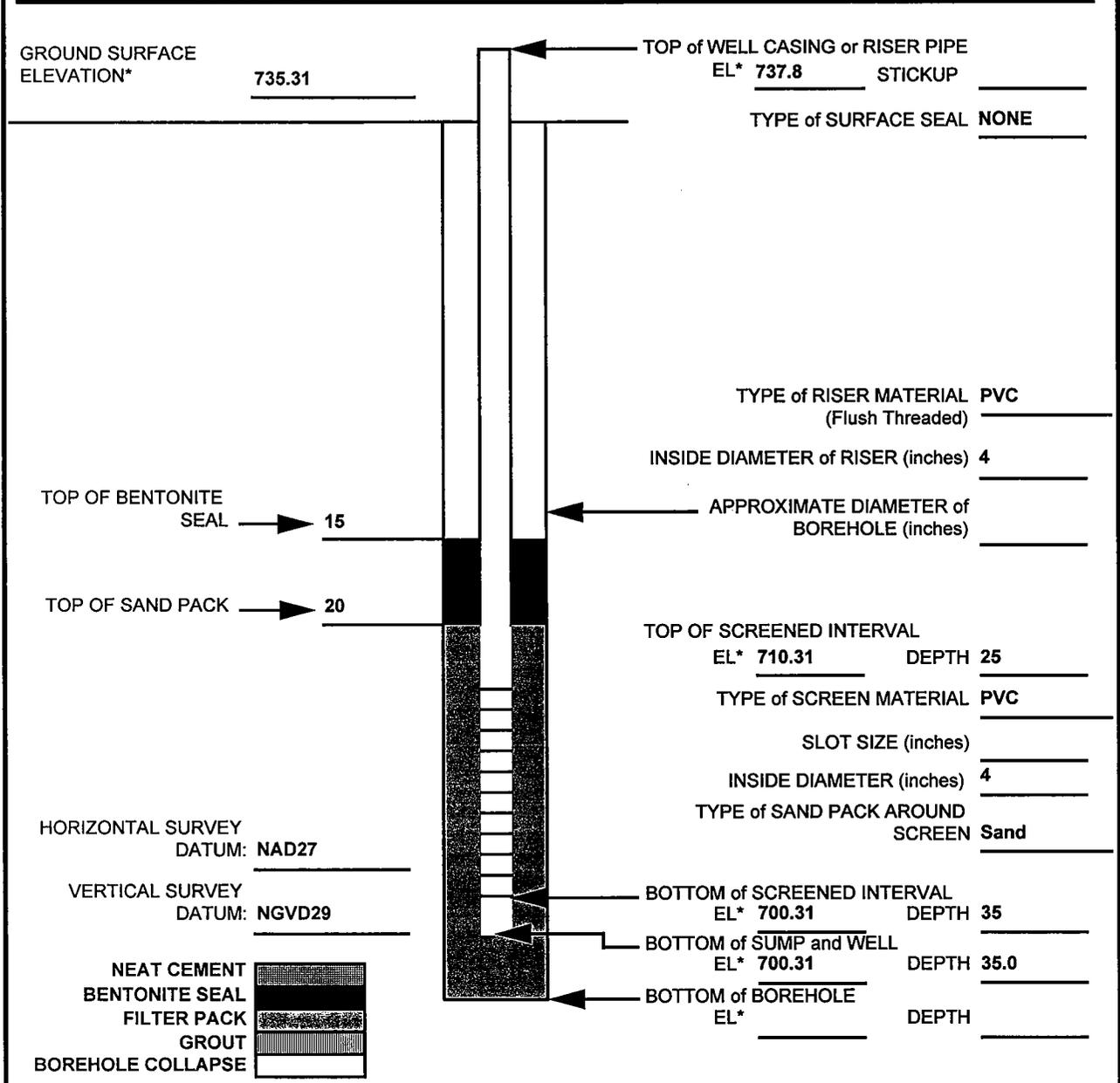
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: Environmental Exploration Inc DRILLER: K. Bray IT FIELD REPRESENTATIVE: C. Houck	WELL NO: OLF-G15 DRILLING METHOD: Hollow Stem Auger INSTALLATION DATE: 04/20/94 NORTHING: 1181158.78 EASTING: 513146.43 JOB NO: 774645A
--	--



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: Environmental Exploration Inc DRILLER: K. Bray IT FIELD REPRESENTATIVE: C. Houck	WELL NO: OLF-G16 DRILLING METHOD: Hollow Stem Auger INSTALLATION DATE: 04/18/94 NORTHING: 1180886.81 EASTING: 512694.55 JOB NO: 774645A
--	--

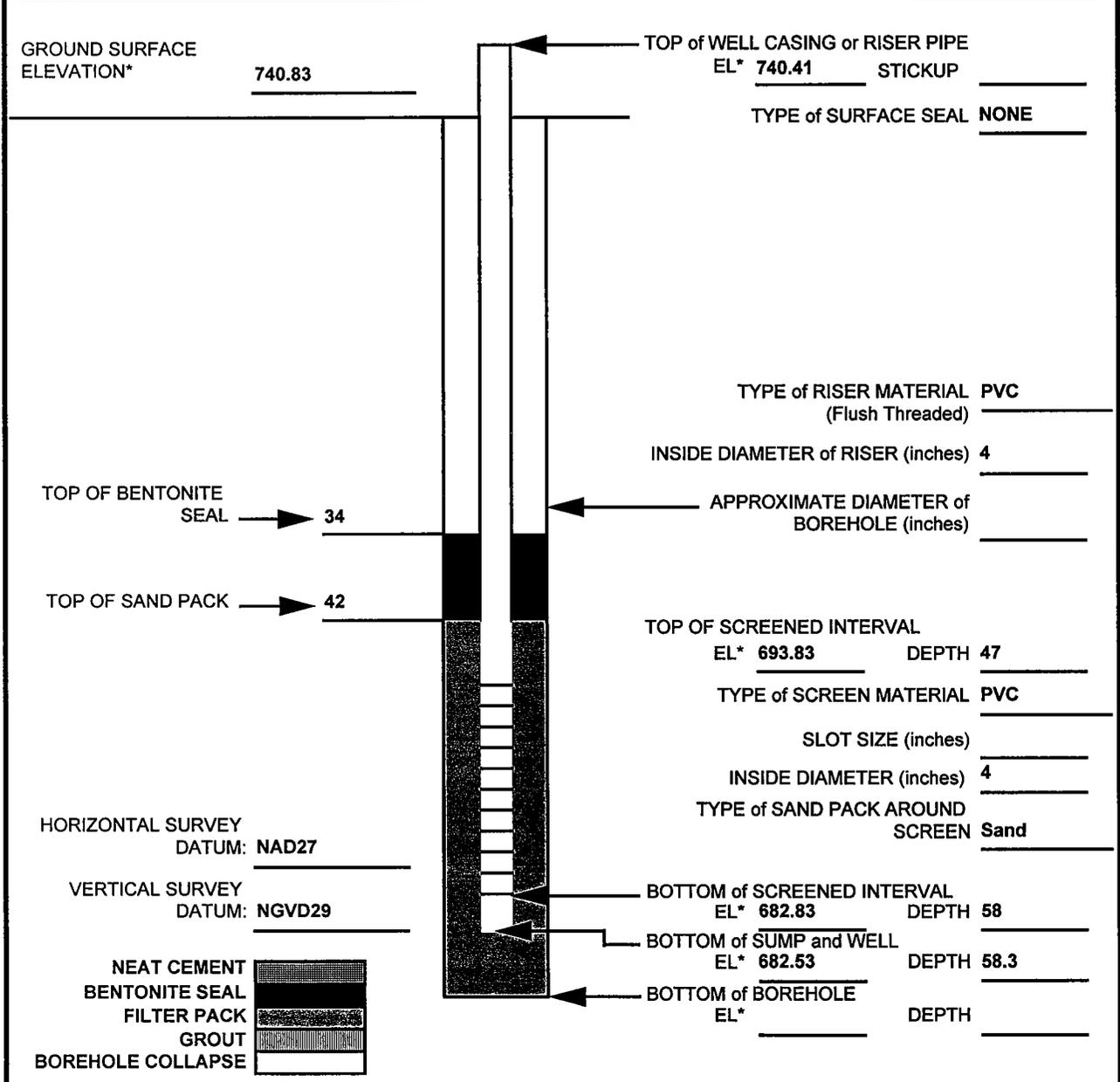


*All elevations (EL) are referenced to MSL.

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

MONITORING WELL INSTALLATION DETAIL

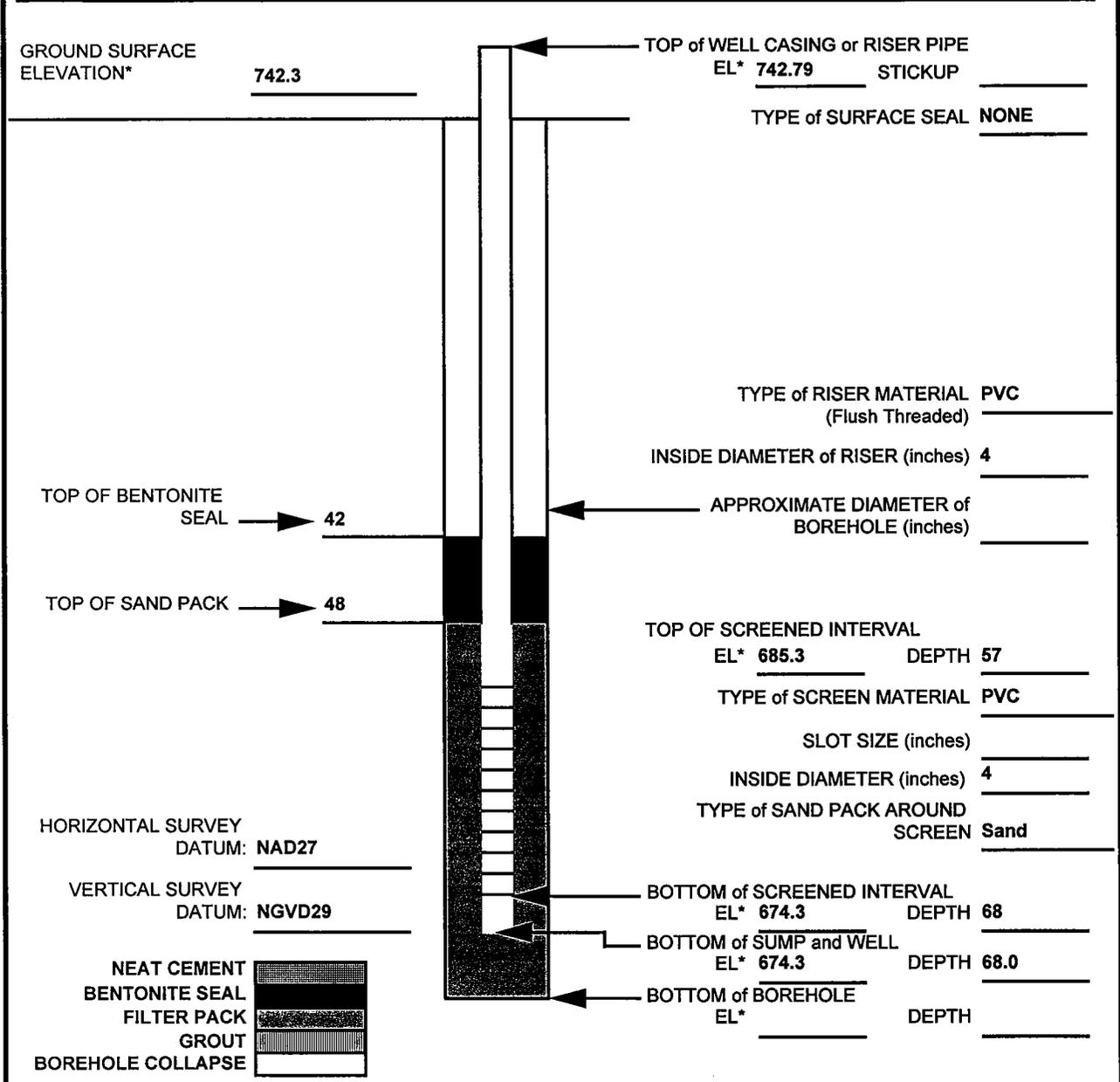
PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: Christensen Boyles Brothers DRILLER: R. Bilbrey IT FIELD REPRESENTATIVE: B. Baker	WELL NO: OLF-G18 DRILLING METHOD: Hollow Stem Auger INSTALLATION DATE: 02/21/95 NORTHING: 1179743.99 EASTING: 512044.54 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 LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: Christensen Boyles Brothers DRILLER: K. Kesty IT FIELD REPRESENTATIVE: B. Baker	WELL NO: OLF-G19 DRILLING METHOD: Hollow Stem Auger INSTALLATION DATE: 03/21/95 NORTHING: 1180087.97 EASTING: 512195.91 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.

FORT McCLELLAN

Historical Boring Logs (HILF-81)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
LF4-MW1	.0	4.0			MOIST	Medium dark gray CLAY, sandy, very slightly moist.
	4.0	6.0			DRY	Light tan sandy CLAY, dry.
	6.0	12.0			MOIST	Ocher CLAY, dense, slightly sandy, moist.
	12.0	30.0			SLIGHTLY DAMP	Yellow ocher CLAY, dense, trace Chert fragments, slightly damp.
	30.0	35.0			WET	Light gray CLAY, weathered Limestone fragments, wet.
	35.0	40.0			DRY	Ocher CLAY, dry, Limestone and Shale fragments. Total depth is 40' in bedrock. Light green SHALE appears slightly metamorphosed (Green schist facies).
LF4-MW2	.0	2.0			DRY	HUMUS, dry.
	2.0	6.0			SLIGHTLY DAMP	Medium dark gray CLAY, sandy, slightly damp.
	6.0	40.0				Light greenish gray CLAY, dense, very cohesive. Total depth is 40' in light greenish gray CLAY.
LF4-MW3	.0	12.0			DRY	Dark yellow CLAY, dry.
	12.0	14.0			WET	CLAY A/A, Gravel, wet.
	14.0	16.0				CLAY A/A, very sandy.
	16.0	31.5			WET	CLAY A/A, less sandy, wet. Total depth is 31.5' in bedrock, light gray finely crystalline Limestone.
LF4-MW4	.0	3.0				Soil and fill material.
	3.0	6.0			MOIST	Medium gray CLAY, sandy, moist.
	6.0	25.0			MOIST	Yellowish tan CLAY, sandy, moist. Total depth is 25' in bedrock, medium to dark brown SHALE, very silty, Limestone laminations.
LF4-MW5	.0	1.0				SOIL.
	1.0	7.0				Medium dark red CLAY, sandy, Chert fragments.
	7.0	17.0				Orangish red CLAY, numerous Chert fragments.
	17.0	22.0			MOIST	Tan CLAY, Chert fragments, moist.
	22.0	33.0				Light tan CLAY, dense, no Sand.
	33.0	40.0			WET	Light brown CLAY, dense, wet, Shale fragments. Total depth is 40' in light brown CLAY



BORING LOG

CLIENT: ECG, INC.

SITE: FORT McCLELLAN LANDFILL

BORING # MW1-94

DATE 3/16/94

LAB RESULTS	VISUAL	ODOR	SAMPLES		DEPTH	SYMBOL	DESCRIPTION	COMMENTS
					5		MEDIUM DARK GRAY CLAY, SANDY, V.SL. MOIST	BORING WAS ORIGINALLY ADVANCED WITH 7" AUGERS. BORING WAS REAMED TO BOTTOM WITH 10" AUGERS.
							LIGHT TAN SANDY CLAY, DRY	
					10		OCHER CLAY, DENSE, SLIGHTLY SANDY, MOIST	
					15		YELLOW OCHER CLAY, DENSE, TRACE CHERT FRAGMENTS, SLIGHTLY DAMP	15'-FIRST INDICATION OF FREE WATER
					20			
					25			
					30		LIGHT GRAY CLAY, WEATHERED LIMESTONE FRAGMENTS, WET	
					35		OCHER CLAY, DRY, LS & SH FRAGMENTS	37'-HARD DRILLING STREAK
					40		TOTAL DEPTH AT 40' IN BEDROCK, LIGHT GREEN SHALE, APPEARS SLIGHTLY METAMORPHOSED (GREENSCHIST FACIES)	BORING WAS COMPLETED AS A 4" GROUNDWATER MONITORING WELL.

DRILLER
GRAVES

TOTAL DEPTH
40'

ENVIRONMENTAL RISK ASSESSMENT SERVICES, INC.
PO BOX 361003 BIRMINGHAM, ALABAMA 35236
PHONE 205-987-3727 FAX 205-987-3266

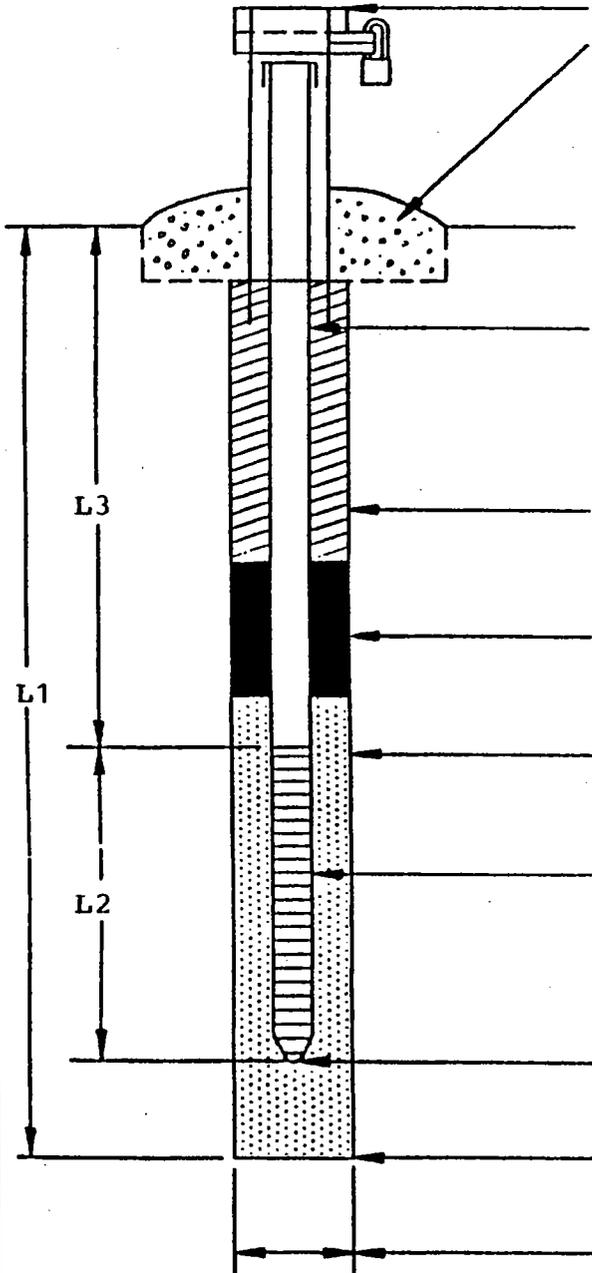
SURFACE EL.
HOLE DIA. 10"

BY
BOB WHITE

ABOVE GRADE MONITOR WELL CONSTRUCTION DIAGRAM

CLIENT ECG, INC.	SITE McCLELLAN LANDFILL	MW# 1-94	DATE INSTALLED 1/16/94
----------------------------	-----------------------------------	--------------------	----------------------------------

CROSS-SECTIONAL VIEW



LOCKING PROTECTIVE CASING AND CONCRETE PAD

CASING MATERIAL	<u>STEEL</u>
CASING DIAMETER	<u>8"</u>
CASING LENGTH	<u>5'</u>
PAD DIMENSIONS	<u>2.5' X 2.5' X 6"AVG.</u>

GROUND ELEVATION

WELL CASING

MATERIAL	<u>PVC</u>
DIAMETER	<u>4"</u>
JOINT TYPE	<u>FLUSH THREADS</u>
LENGTH	<u>17.5'</u>

BACKFILL AROUND CASING

MATERIAL	<u>GROUT</u>
THICKNESS	<u>11.5'</u>

SEAL

TYPE OF SEAL	<u>BENTONITE</u>
THICKNESS	<u>2.5'</u>

FILTER PACK

TYPE OF FILTER	<u>20/40 SAND</u>
DISTANCE ABOVE SCREEN	<u>1'</u>

WELL SCREEN

SCREEN MATERIAL	<u>SLOTTED PVC</u>
DIAMETER	<u>4"</u>
LENGTH	<u>25'</u>
SLOT SIZE	<u>0.010"</u>

DEPTH TO BOTTOM OF MONITORING WELL

40'

DEPTH TO BOTTOM OF FILTER SAND

40'

DIAMETER OF BOREHOLE

10"

L1 40' L2 25' L3 15'

CASING ELEVATION 739.39'

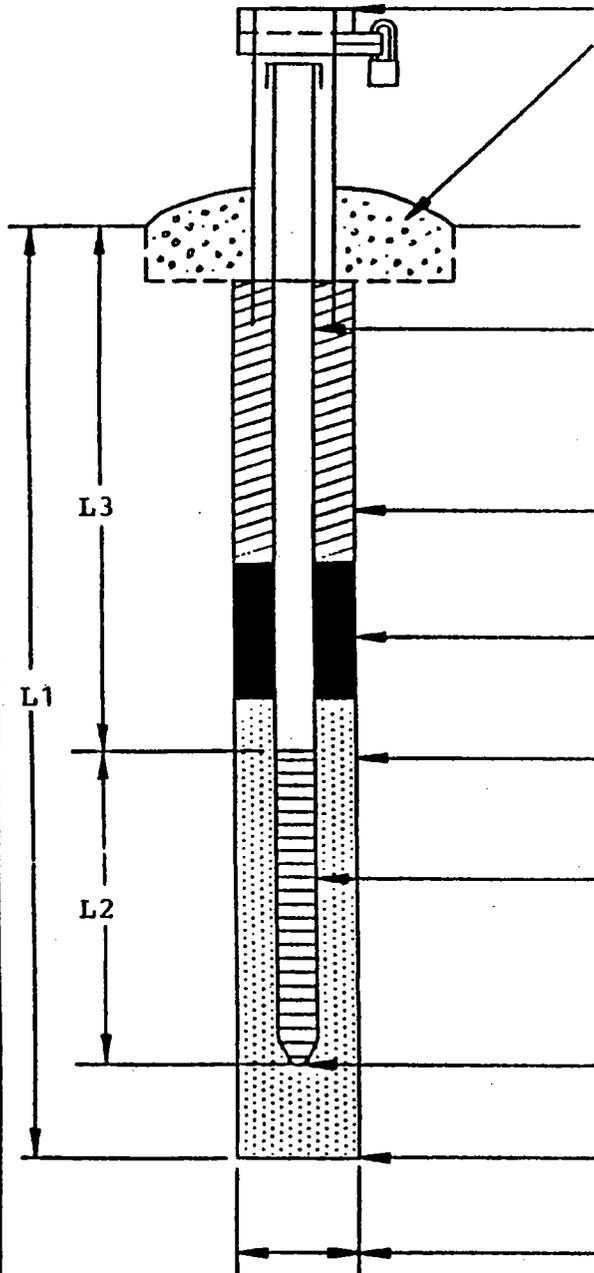
NOT DRAWN TO SCALE

DRILLER GRAVES	DRAWN BY: BOB WHITE	ENVIRONMENTAL RISK ASSESSMENT SERVICES, INC. PO BOX 361003 BIRMINGHAM, ALABAMA 35236 PHONE 205-987-3727 FAX 205-987-3266
DATE DEVELOPED: 3/23/94	STATIC WL. 13.77' (3/23/94)	

ABOVE-GRADE MONITOR WELL CONSTRUCTION DIAGRAM

CLIENT ECG, INC.	SITE FORT McCLELLAN LANDFILL	MW# 2-94	DATE INSTALLED 3/15/94
---------------------	---------------------------------	-------------	---------------------------

CROSS-SECTIONAL VIEW



LOCKING PROTECTIVE CASING AND CONCRETE PAD

CASING MATERIAL	STEEL
CASING DIAMETER	8"
CASING LENGTH	5'
PAD DIMENSIONS	2.5' X 2.5' X 6" AVG.

GROUND ELEVATION

WELL CASING MATERIAL	PVC
DIAMETER	4"
JOINT TYPE	FLUSH THREADS
LENGTH	8.5'

BACKFILL AROUND CASING

MATERIAL	GROUT
THICKNESS	2.5'

SEAL

TYPE OF SEAL	BENTONITE
THICKNESS	2.5'

FILTER PACK

TYPE OF FILTER	20/40 SAND
DISTANCE ABOVE SCREEN	1'

WELL SCREEN

SCREEN MATERIAL	SLOTTED PVC
DIAMETER	4"
LENGTH	30'
SLOT SIZE	0.010"

DEPTH TO BOTTOM OF MONITORING WELL

36'

DEPTH TO BOTTOM OF FILTER SAND

40'

DIAMETER OF BOREHOLE

0-36'=10", 36-40'=7"

L1 40' L2 30' L3 6' CASING ELEVATION 738.50'

NOT DRAWN TO SCALE

DRILLER GRAVES	DRAWN BY: BOB WHITE	ENVIRONMENTAL RISK ASSESSMENT SERVICES, INC. PO BOX 361003 BIRMINGHAM, ALABAMA 35236 PHONE 205-987-3727 FAX 205-987-3266
DATE DEVELOPED: 3/23/94	STATIC WL 16.84 (3/23/94)	
METHOD OF DEVELOPMENT PUMPING		



BORING LOG

CLIENT: ECG, INC.

SITE: FORT McCLELLAN LANDFILL

BORING # MW3-94

DATE 3/14/94

LAB RESULTS	VISUAL	ODOR	SAMPLES	DEPTH	SYMBOL	DESCRIPTION	COMMENTS
				5		DARK YELLOW CLAY, DRY	BORING WAS ORIGINALLY ADVANCED WITH 7" AUGERS. BORING WAS REAMED TO BOTTOM WITH 10" AUGERS. FIRST MOISTURE AT 12' REDUCED MOISTURE IN CLAYS
				10			
				15		CLAY A/A, GRAVEL, WET	
				15		CLAY A/A, VERY SANDY	
				20		CLAY A/A, LESS SANDY, WET	
				25			
				30			
				35		TOTAL DEPTH AT 31.5' IN BEDROCK, LIGHT GRAY FINELY CRYSTALLINE LIMESTONE.	BORING WAS COMPLETED AS A 4" GROUNDWATER MONITORING WELL. BOTTOM OF SCREEN WAS SET AT 31'.

DRILLER GRAVES

TOTAL DEPTH 31.5'

ENVIRONMENTAL RISK ASSESSMENT SERVICES, INC.
PO BOX 361003 BIRMINGHAM, ALABAMA 35236
PHONE 205-987-3727 FAX 205-987-3266

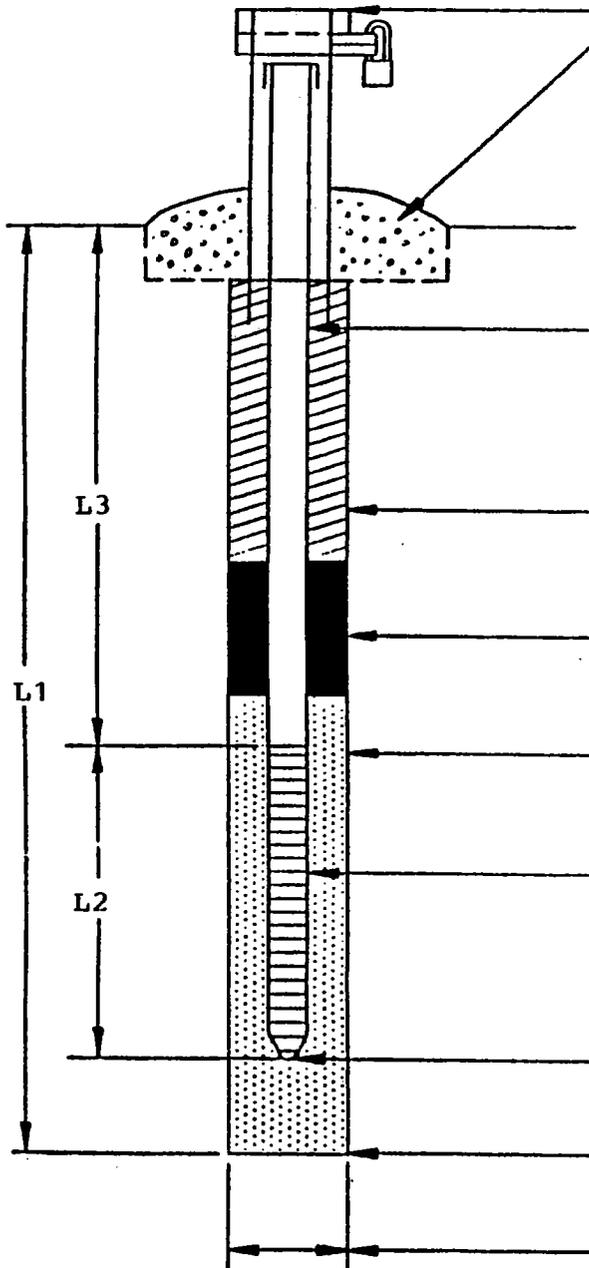
SURFACE EL. HOLE DIA. 10"

BY BOB WHITE

ABOVE GRADE MONITOR WELL CONSTRUCTION DIAGRAM

CLIENT ECG, INC.	SITE FORT McCLELLAN LANDFILL	MW# 3-94	DATE INSTALLED 3/14/94
---------------------	---------------------------------	-------------	---------------------------

CROSS-SECTIONAL VIEW



LOCKING PROTECTIVE CASING AND CONCRETE PAD

CASING MATERIAL	STEEL
CASING DIAMETER	8"
CASING LENGTH	5'
PAD DIMENSIONS	2.5' X 2.5' X 6"AVG.

GROUND ELEVATION

WELL CASING MATERIAL	PVC
DIAMETER	4"
JOINT TYPE	FLUSH THREADS
LENGTH	13.5'

BACKFILL AROUND CASING MATERIAL	GROUT
THICKNESS	7.5'

SEAL TYPE OF SEAL	BENTONITE
THICKNESS	2.5'

FILTER PACK TYPE OF FILTER	20/40 SAND
DISTANCE ABOVE SCREEN	1'

WELL SCREEN SCREEN MATERIAL	SLOTTED PVC
DIAMETER	4"
LENGTH	20'
SLOT SIZE	0.010"

DEPTH TO BOTTOM OF MONITORING WELL	31.0'
------------------------------------	-------

DEPTH TO BOTTOM OF FILTER SAND	31.5'
--------------------------------	-------

DIAMETER OF BOREHOLE	10"
----------------------	-----

L1 31.5'
L2 20'
L3 11'
CASING ELEVATION 739.78'

NOT DRAWN TO SCALE

DRILLER GRAVES	DRAWN BY: BOB WHITE	ENVIRONMENTAL RISK ASSESSMENT SERVICES, INC. <small>PO BOX 361003 BIRMINGHAM, ALABAMA 35236 PHONE 205-987-3727 FAX 205-987-3266</small>
DATE DEVELOPED: 3/23/94	STATIC WL. 11.84' (3/23/94)	



BORING LOG

CLIENT: ECG, INC.

SITE: FORT MCCLELLAN LANDFILL

BORING # MW4-94

DATE 3/17/94

LAB RESULTS	VISUAL	ODOR	SAMPLES		DEPTH	SYMBOL	DESCRIPTION	COMMENTS
							SOIL AND FILL MATERIAL	BORING WAS ORIGINALLY ADVANCED WITH 7" AUGERS. BORING WAS REAMED TO BOTTOM WITH 10" AUGERS.
					5		MEDIUM GRAY CLAY, SANDY, MOIST	
					10		YELLOWISH TAN CLAY, SANDY, MOIST	
					15			FREE WATER AT 6'
					20			
					25			
							TOTAL DEPTH AT 25' IN BEDROCK, MEDIUM TO DARK BROWN SHALE, VERY SILTY, LIMESTONE LAMINATIONS	
								AT 21' HARD DRILLING STREAKS (WEATHERED BEDROCK)
								BORING WAS COMPLETED AS A 4" GROUNDWATER MONITORING WELL. BOTTOM OF SCREEN WAS SET AT 25'.

DRILLER GRAVES

TOTAL DEPTH 25'

ENVIRONMENTAL RISK ASSESSMENT SERVICES, INC.
PO BOX 361003 BIRMINGHAM, ALABAMA 35236
PHONE 205-987-3727 FAX 205-987-3266

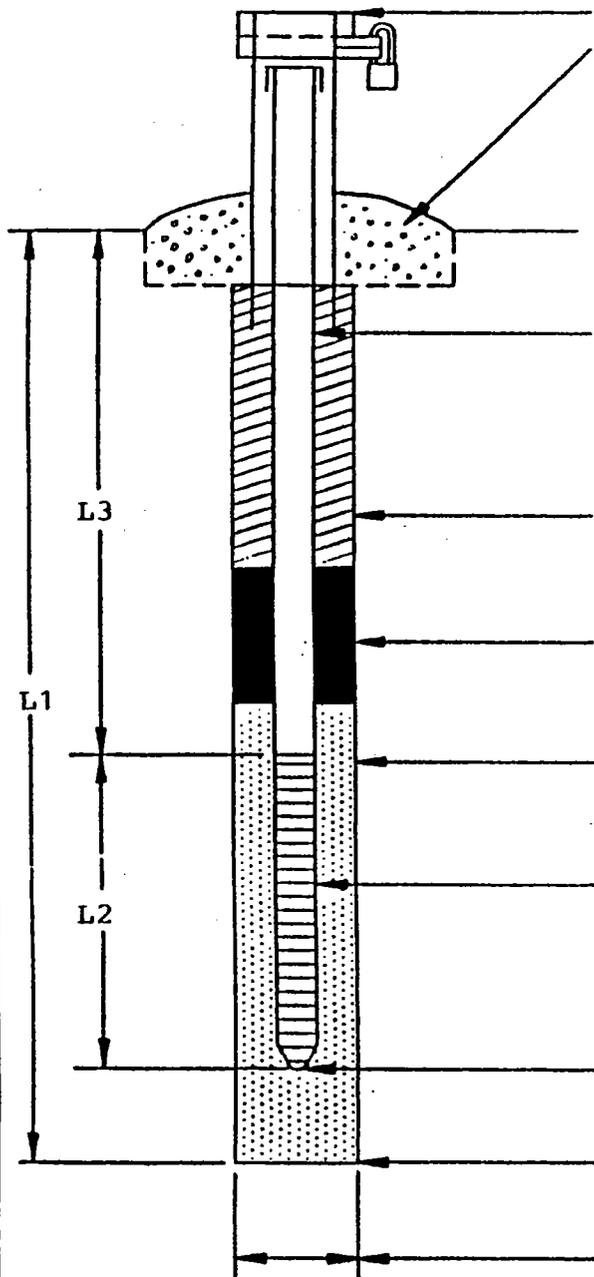
SURFACE EL. HOLE DIA. 10"

BY BOB WHITE

ABOVE GRADE MONITOR WELL CONSTRUCTION DIAGRAM

CLIENT ECG, INC.	SITE FORT McCLELLAN LANDFILL	MWH# 4-94	DATE INSTALLED 3/17/94
---------------------	---------------------------------	--------------	---------------------------

CROSS-SECTIONAL VIEW



LOCKING PROTECTIVE CASING AND CONCRETE PAD

CASING MATERIAL	STEEL
CASING DIAMETER	8"
CASING LENGTH	5'
PAD DIMENSIONS	2.5' X 2.5' X 6" AVG.

GROUND ELEVATION

WELL CASING

MATERIAL	PVC
DIAMETER	4"
JOINT TYPE	FLUSH THREAD
LENGTH	7.5'

BACKFILL AROUND CASING

MATERIAL	GROUT
THICKNESS	1.5'

SEAL

TYPE OF SEAL	BENTONITE
THICKNESS	2.5'

FILTER PACK

TYPE OF FILTER	20/40 SAND
DISTANCE ABOVE SCREEN	1'

WELL SCREEN

SCREEN MATERIAL	SLOTTED PVC
DIAMETER	4"
LENGTH	20'
SLOT SIZE	0.010"

DEPTH TO BOTTOM OF

MONITORING WELL 25'

DEPTH TO BOTTOM OF

FILTER SAND 25'

DIAMETER OF BOREHOLE

10"

L1 25'

L2 20'

L3 5'

CASING
ELEVATION 743.35'

NOT DRAWN TO SCALE

DRILLER GRAVES	DRAWN BY: BOB WHITE	ENVIRONMENTAL RISK ASSESSMENT SERVICES, INC. PO BOX 361003 BIRMINGHAM, ALABAMA 35236 PHONE 205-987-3727 FAX 205-987-3266
DATE DEVELOPED: 3/23/94	STATIC WL. 5.33' (3/23/94)	METHOD OF DEVELOPMENT pumping



BORING LOG

CLIENT: ECG, INC.

SITE: FORT McCLELLAN LANDFILL

BORING # MW5-94

DATE 3/21/94

LAB RESULTS	VISUAL	ODOR	SAMPLES		DEPTH	SYMBOL	DESCRIPTION	COMMENTS
					5		SOIL MEDIUM DARK RED CLAY, SANDY, CHERT FRAGS.	BORING WAS ORIGINALLY ADVANCED WITH 7" AUGERS TO 40'. BORING WAS REAMED TO 32" WITH 10" AUGERS WHERE THEY WERE REFUSED. 12'- FIRST FREE WATER 25' TO TOTAL DEPTH- HARD INTERMITTANT STREAKS (POSSIBLE WEATHERED BEDROCK OR HARDPANS)
					10		ORANGISH RED CLAY, NUMEROUS CHERT FRAGS.	
					15			
					20		TAN CLAY, CHERT FRAGMENTS, MOIST	
					25		LIGHT TAN CLAY, DENSE, NO SAND	
					30			
					35		LIGHT BROWN CLAY, DENSE, WET, SHALE FRAGS	
					40		TOTAL DEPTH AT 40' IN LIGHT BROWN CLAY	BORING WAS COMPLETED AS A 4" GROUNDWATER MONITORING WELL. BOTTOM OF SCREEN WAS SET AT 32'.

DRILLER GRAVES

TOTAL DEPTH 40'

ENVIRONMENTAL RISK ASSESSMENT SERVICES, INC.
PO BOX 361003 BIRMINGHAM, ALABAMA 35236
PHONE 205-987-3727 FAX 205-987-3266

SURFACE EL.

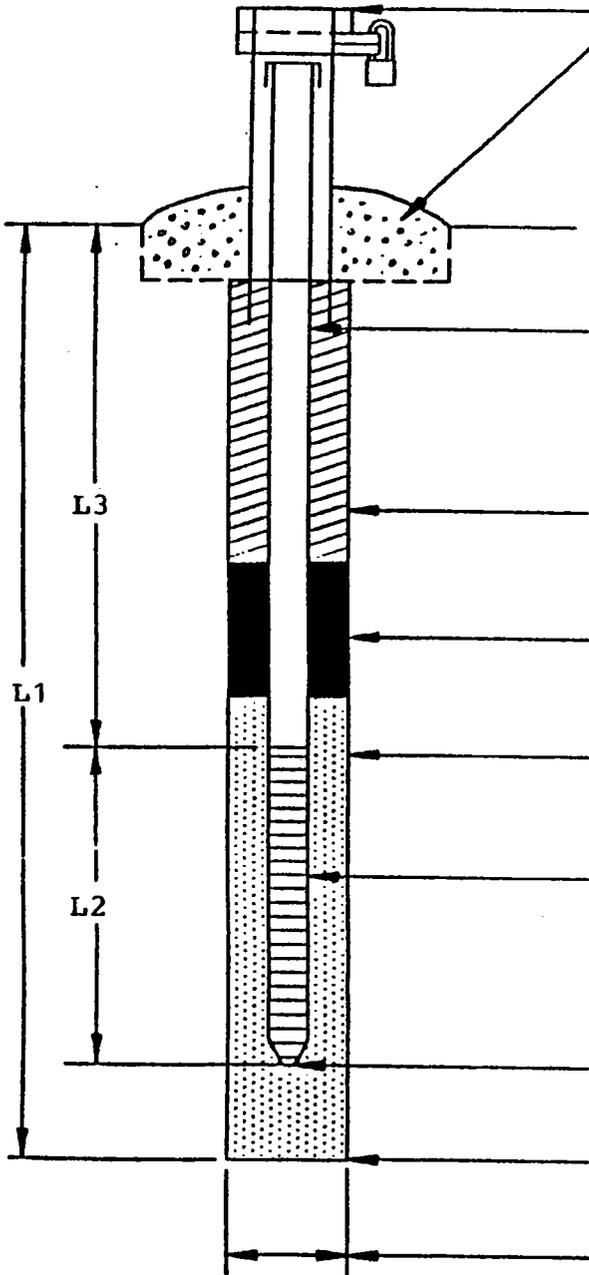
HOLE DIA. 7" & 10"

BY BOB WHITE

ABOVE GRADE MONITOR WELL CONSTRUCTION DIAGRAM

CLIENT ECG, INC.	SITE FORT McCLELLAM LANDFILL	MW# 5-94	DATE INSTALLED 3/21/94
---------------------	---------------------------------	-------------	---------------------------

CROSS-SECTIONAL VIEW



LOCKING PROTECTIVE CASING AND CONCRETE PAD

CASING MATERIAL	STEEL
CASING DIAMETER	8"
CASING LENGTH	5'
PAD DIMENSIONS	2.5' X 2.5' X 6" AVG.

GROUND ELEVATION

WELL CASING	
MATERIAL	PVC
DIAMETER	4"
JOINT TYPE	FLUSH THREADS
LENGTH	14.5'

BACKFILL AROUND CASING	
MATERIAL	GROUT
THICKNESS	6.0'

SEAL	
TYPE OF SEAL	BENTONITE
THICKNESS	3.0'

FILTER PACK	
TYPE OF FILTER	20/40 SAND
DISTANCE ABOVE SCREEN	3'

WELL SCREEN	
SCREEN MATERIAL	SLOTTED PVC
DIAMETER	4"
LENGTH	20'
SLOT SIZE	0.010"

DEPTH TO BOTTOM OF MONITORING WELL	32'
---	-----

DEPTH TO BOTTOM OF FILTER SAND	40'
---------------------------------------	-----

DIAMETER OF BOREHOLE	0-32'=10", 32-40'=7"
-----------------------------	----------------------

L1 40'	L2 20'	L3 12'	CASING ELEVATION 753.32'
--------	--------	--------	--------------------------

NOT DRAWN TO SCALE

DRILLER GRAVES	DRAWN BY: BOB WHITE	ENVIRONMENTAL RISK ASSESSMENT SERVICES, INC. PO BOX 361003 BIRMINGHAM, ALABAMA 35236 PHONE 205-987-3727 FAX 205-987-3266
DATE DEVELOPED: 3/23/94	STATIC WL. 10.31' (3/23/94)	METHOD OF DEVELOPMENT PUMPING

Tue Oct 26

FORT McCLELLAN

IT Corp Draft Boring Logs (FTA-82)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
FTA-82-MW01	.0	10.0	cl			CLAY, dark orange, brown, brittle.
	10.0	11.0		sh		Weathered SHALE, light reddish brown.
	11.0	15.0	cl			CLAY, reddish brown, stiff.
	15.0	35.0	cl			CLAY, light yellow- orange, medium stiff.
	35.0	40.0		sh		SHALE, light gray, weathered.
	40.0	55.0		sh		SHALE, bluish green. Wet at 46'. Bottom of borehole 55.0'.
FTA-82-MW02	.0	5.0	cl			Hard, orange-red, CLAY, non plastic.
	5.0	15.0	cl			Hard, reddish brown, CLAY, non plastic.
	15.0	35.0		sh	DAMP	Hard, reddish brown, SHALE, moderately severe weathering, fissile, damp.
	35.0	50.0	cl			Firm, light orange, CLAY, medium plasticity.
	50.0	65.0		sh		Hard, bluish green, SHALE, severe weathering, fissile.
	65.0	67.0		sh		Very hard, reddish brown, SHALE, severely weathered, fissile. Bottom of borehole 67.0'.
FTA-82-MW03	.0	1.0	cl		DAMP	CLAY, some Sand, Silt, damp, soft-reddish brown, trace Gravel- large, angular.
	1.0	3.0	cl		DAMP	CLAY, some Sand, Silt, Sandstone, damp, firm, reddish brown, mottled dark red, yellowish red, black, yellowish brown, Quartzite gravel, <10% broken, white.
	3.0	5.0	cl			CLAY, some Sand, Silt, Sandstone- color varies from yellowish brown to black to white to dark brown, ~ 2 inches wood at bottom of interval, looks like burned wood charcoal.
	5.0	7.0	cl			CLAY, some Sand, Silt, Sandstone- color varies from yellowish brown to black to white to dark brown, ~ 2 inches wood at bottom of interval, looks like burned wood charcoal, >% burned wood.
	7.0	9.0	cl		DAMP	CLAY, Sand, Silt, broken Sandstone, damp, firm, brownish black, slightly plastic for approximately 14 inches. Approximately 11 inches light yellowish brown, damp, soft to firm, trace broken Sandstone- white.
	9.0	11.0	sp			Broken Sandstone, Quartzite, some dark reddish brown Clay, reddish stains on broken Gravel. Sampled from 7-9' interval to get enough soil.
	11.0	13.0	sp			Broken Sandstone, Quartzite Gravel, little Clay, reddish yellow.
	13.0	15.0				~10% Quartzite gravel, rounded medium to small.

..\sql\qclth.sql

Tue Oct 26

FORT McCLELLAN

IT Corp Draft Boring Logs (FTA-82)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
FTA-82-MW03	15.0	45.0	sc		DRY	SAND, some Clay, dry, soft, medium to small gravel, yellowish red, ~50% Chert, Quartzite, increase in gravel size to approximately 2 inches (~15%), water at 47.0'. Bottom of borehole 52.0'.
	45.0	56.0			WET	Gravel, hard. Bottom of borehole is 56.0'. Hole cave-in to 52.0'.
FTA-82-MW04	.0	2.0	cl			CLAY, reddish brown, stiff, hard, low plasticity.
	2.0	4.0	cl			CLAY, reddish orange, stiff, hard, low plasticity.
	4.0	6.0	ml			SILT, light gray, very hard, pulverized.
	6.0	8.0				Unable to hammer spoon into soil. No sample.
	8.0	10.0	ml			SILT, light gray, very hard, crumbles, no plasticity.
	10.0	12.0	cl			CLAY, silty, orange brown, hard, crumbles, no plasticity.
	15.0	17.0	ml			SILT, light gray, very hard, crumbles, no plasticity.
	17.0	29.0				No recovery. Greater than 80 blows used.
	29.0	34.0	cl		DAMP	Silty CLAY, slightly damp, yellowish brown.
	34.0	39.0	sw		DRY	Into fine QUARTZITE, well sorted, greater amount dust, going to larger gravel, well sorted, angular to rounded, dry, chip color varies from clear to dark red, yellowish, larger- thumb size, angular, some are flat.
	39.0	47.0			DRY	Fewer chips, size to fines, angular, quartzite, dry.
	47.0	51.0	sw			Clean white SAND, medium to fine.
	51.0	57.0	sw			Clean white fine SAND, ground Rock.
	57.0	68.0	sw			Clean, white fine SAND, Quartzite gravel.
	68.0	123.0		ss	WET	SANDSTONE, grainy, easily broken, gray, yellowish gray, color change at 100.0' to dark yellowish red, reddish yellow.
	123.0	129.0				No recovery. Bottom of borehole 129.0'.
FTA-82-MW05	.0	3.0	cl			CLAY, orange brown, soft, low plasticity, with rock fragments (Chert).
	3.0	5.0	cl			CLAY, orange brown, stiff, non plastic, with Chert fragments.
	5.0	8.0	ml			SILT, orange brown, stiff, non plastic.
	8.0	10.0	ml			SILT, orange brown, stiff, non plastic, with Clay-red, low plasticity, soft.

Tue Oct 26

FORT McCLELLAN

IT Corp Draft Boring Logs (FTA-82)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
FTA-82-MW05	10.0	20.0	ml			SILT, orange brown, stiff, non plastic, hard.
	20.0	30.0	ml			SILT, some Clay, orange brown, stiff, non plastic, hard.
	30.0	40.0	ml			SILT, light orange brown, hard, stiff, non plastic.
	40.0	45.0	cl-ml			CLAY, Silt, orange brown, firm, non plastic, with Chert, gravel size.
	45.0	50.0				QUARTZITE, light gray, fine grain, gravel size.
	50.0	61.0	cl-ml			SILT, Clay, orange brown, interbedded with Chert/ Quartzite layers 2 inches to 1.5 feet thick.
	61.0	64.0	cl			CLAY, yellowish brown, firm, medium plasticity.
	64.0	67.0	ch			CLAY, yellow brown, soft, high plasticity.
	67.0	70.0		ss		QUARTZITE - gravel size, orange brown, light gray, fine grain.
	70.0	91.0	cl-ml			SILT, Clay, orange brown, interbedded with Chert/ Quartzite layers, gravel size. Bottom of borehole is 91.0".
FTA-82-MW06	.0	1.0	ml		DRY	SILT, some Clay, non plastic, brown to yellowish brown, some gravel, soft, dry.
	1.0	3.0	ml		DAMP	SILT, some Clay, non plastic, yellowish brown to orange, some Quartzite, possible Chert, damp to dry.
	3.0	5.0	ml		DAMP	SILT, some Clay, non plastic, damp to dry, soft, yellowish brown to yellowish red, some Quartzite gravel.
	5.0	7.0	ml		DAMP	SILT, some Clay, damp to dry, soft, yellow to red, some Sandstone, low plasticity.
	7.0	14.0	ml		DRY	SILT, some Sand, soft, dry, orange, non plastic, some Quartzite.
	14.0	34.0	ml		DAMP	SILT, some Clay, damp, soft, yellowish brown, fragments <% angular, little Sand.
	34.0	54.0	ml		DAMP	SILT, some Clay, damp, soft, yellowish brown changing to light yellowish brown at 34', fragments <% angular, little Sand.
	54.0	74.0	ml		DAMP	SILT, some Clay, damp, soft, light yellowish brown changing to dark brown at 54', some dark red Clay, fragments <% angular, little Sand.
74.0	94.0	ml		DAMP	SILT, some Clay, damp, soft, dark brown changing to very dark brown at 74', >%Clay, very soft, no gravel.	

..\sql\qclth.sql

Tue Oct 26

FORT McCLELLAN

IT Corp Draft Boring Logs (FTA-82)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
FTA-82-MW06	94.0	142.0	ml		DAMP	SILT, some Clay, damp, soft, very dark brown changing to red and yellow at 94', >%Clay, very soft, no gravel.
	142.0	147.0	ml		MOIST	SILT, some Clay, damp, soft, reddish and yellowish changing to dark brown at 142', texture change, Chert layer(?), damp to moist.
	147.0	173.0			WET	Mud from hole. Bottom of borehole is 173.0'.
FTA-82-MW07	.0	1.0	ml		DRY	SILT, some Clay, brown, non plastic, soft, dry.
	1.0	3.0	ml		DRY	SILT, some Clay, brown to brownish yellow, non plastic, Quartzite gravel throughout, dry, brittle.
	3.0	5.0	ml		DAMP	SILT, some Clay, light orange to light brown, non plastic, soft, damp to dry.
	5.0	7.0	ml		DRY	SILT, some Clay, non plastic, light orange, soft, dry, some Quartzite gravels.
	7.0	9.0	ml		DRY	SILT, some Clay, light orange, low plasticity, soft, dry, some Gravel interlayered.
	9.0	14.0	ml		DRY	SILT, some Clay, light orange, non plastic, soft, dry. Auger refusal at 14'.
	14.0	34.0	ml		DAMP	SILT, some Clay, damp to dry, soft, broken Quartzite, Sandstone ~30%, trace of Sand-yellowish red.
	34.0	54.0	ml		DAMP	SILT, greater percent Clay than 14'-34', damp to dry, soft broken Quartzite, Sandstone approximately 30%, trace of Sand, darker reddish brown. Rolls into balls when wet.
	54.0	74.0	ml		DAMP	SILT, greater percent Clay than 34'-54', slightly plastic, damp to dry, soft broken Quartzite, Sandstone approximately 30%, trace of Sand, darker reddish brown. Rolls into balls when wet.
	74.0	94.0	ml		DAMP	SILT, some Clay, slightly plastic, damp to dry with moisture increasing, soft broken Quartzite, Sandstone approximately 30%, trace of Sand, darker reddish brown. Rolls into balls when wet. Lumps, cohesive, soft, no gravel.
FTA-82-MW08	94.0	106.0	ml		DAMP	SILT, some Clay, slightly plastic, damp to dry with moisture increasing, soft broken Quartzite, Sandstone approximately 30%, trace of Sand, color changed to mixture of yellow brown and dark reddish brown. Rolls into balls when wet. Lumps, cohesive, soft, no gravel. Hit slightly harder layer just above 106'.
	106.0	118.0				SILT, some Clay. Bottom of borehole 118.0'.
	.0	1.0	cl		DAMP	CLAY, some Silt, damp, soft, slightly plastic, dark brown, yellowish brown.

..\sql\qclth.sql

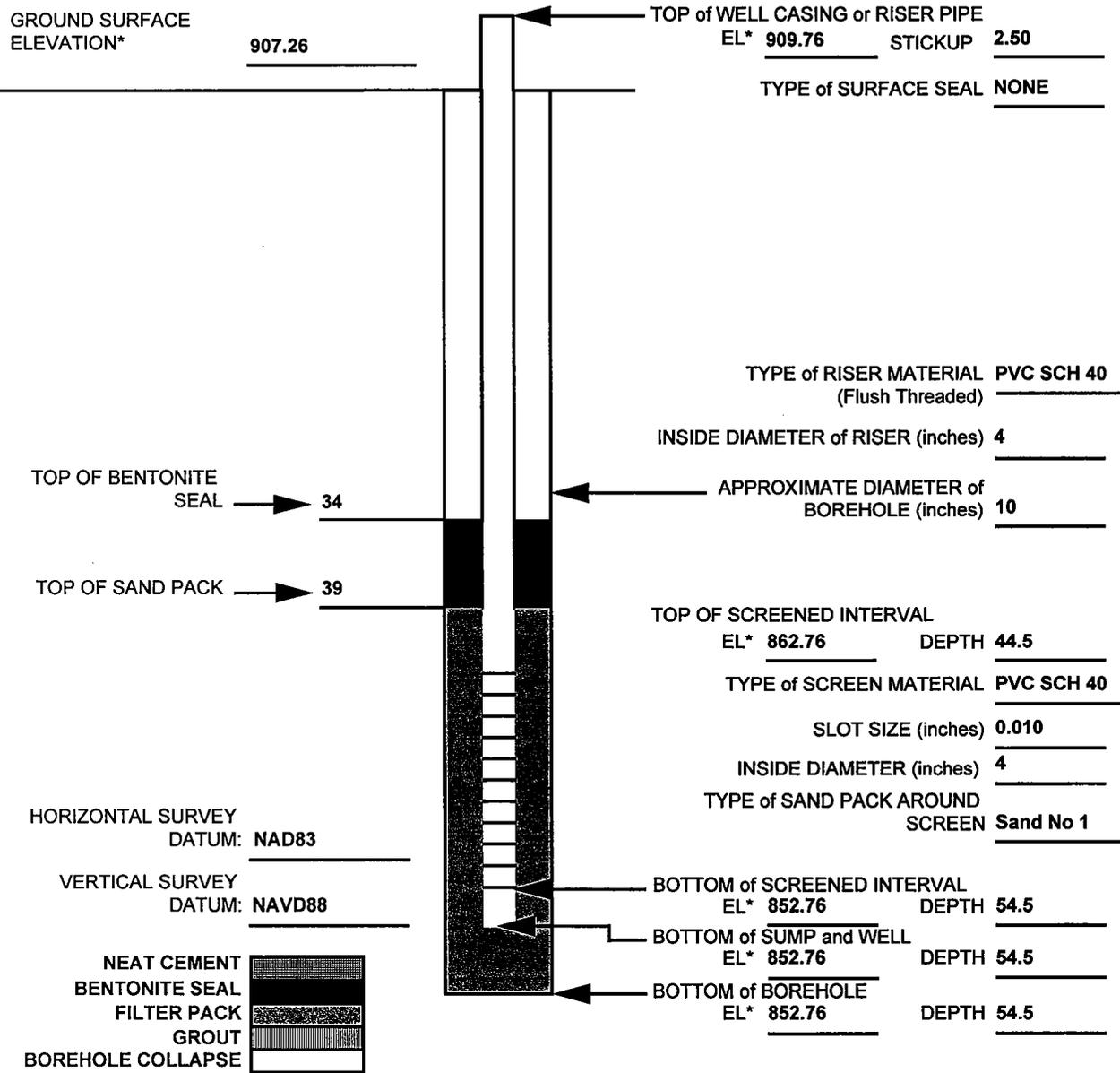
FORT McCLELLAN

IT Corp Draft Boring Logs (FTA-82)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
FTA-82-MW08	1.0	3.0	cl		DAMP	CLAY, some Silt, Sand, damp, firm, mottled yellowish brown, reddish yellow, grayish brown, dark brown, little broken Sandstone, trace Sand.
	3.0	5.0		sh	DAMP	SHALE, some Clay, highly weathered, damp, soft to firm, reddish brown, mottled grayish red, dark red, yellowish red, dark brown.
	5.0	9.0		sh	DAMP	SHALE, some Clay, highly weathered, damp, soft to firm, reddish brown, mottled >% grayish red to pinkish red, dark red, yellowish red, dark brown.
	9.0	28.0		sh	DAMP	SHALE, some Clay, highly weathered, some coarse well sorted Sand, damp, soft to firm, reddish brown, mottled >% grayish red to pinkish red, dark red, yellowish red, dark brown.
	28.0	33.0		sh	DAMP	SHALE, highly weathered, some Silt, Sand interbedded, damp, soft, brittle, dark reddish brown, dark brown.
	33.0	38.0		sh	DAMP	SHALE, highly weathered, and interbedded Silt and fine Sand, color change to yellowish brown, mottled bluish gray and pale gray, water at 33.0'.
	38.0	45.0	ch		MOIST	CLAY, moist, soft, yellowish brown, some Silt, Sand.
	45.0	50.0		sh	DAMP	SHALE, damp to almost dry, soft, brittle, dark gray, mottled reddish brown and reddish yellow, layering evident, some Silt and Sand, water at top of spoon, drilled (drove) spoon to 52.0' to verify Shale. Bottom of borehole 50.0'.

MONITORING WELL INSTALLATION DETAIL

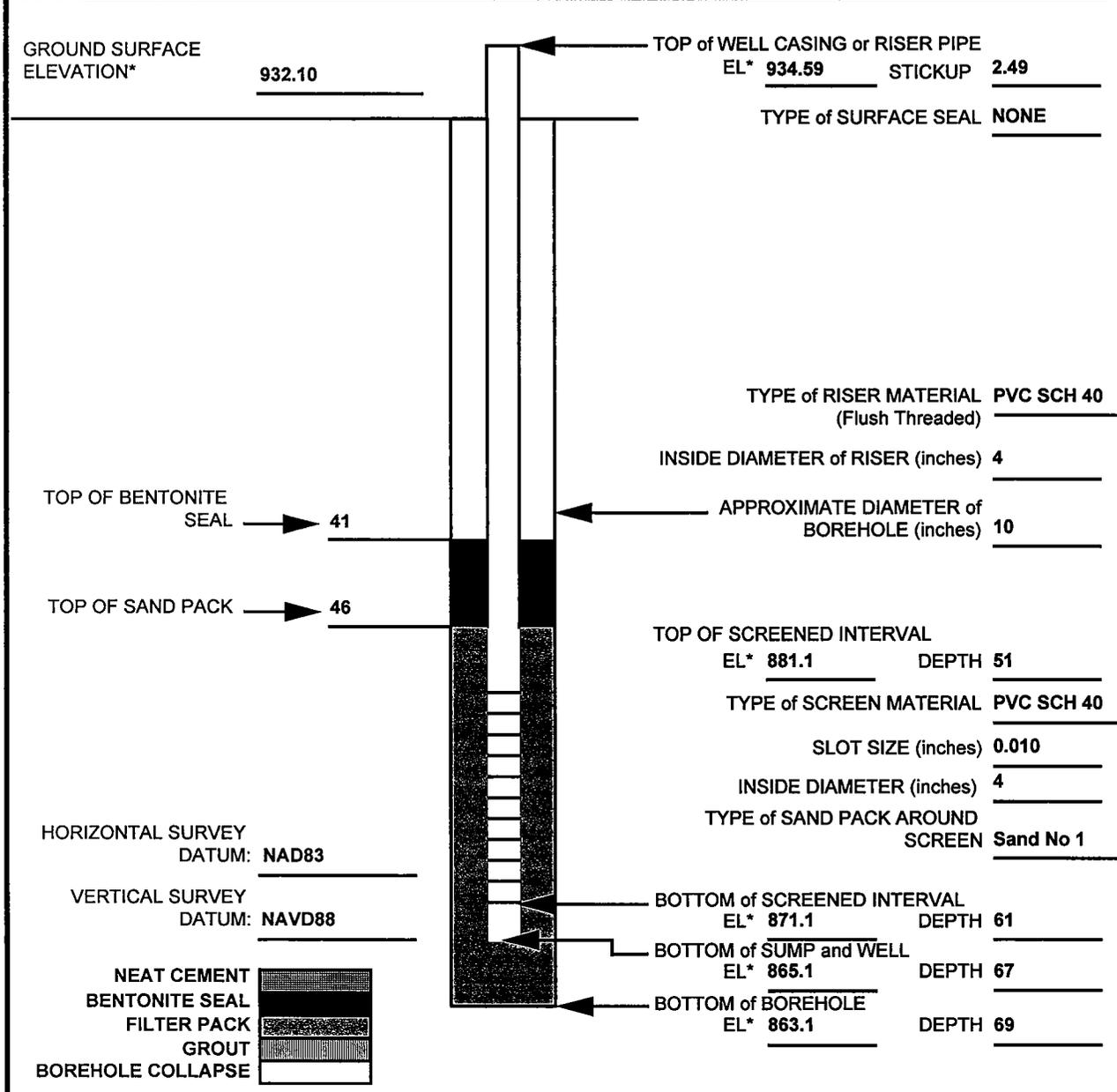
PROJECT: Fort McClellan, SAD TERC	WELL NO: FTA-82-MW01
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 11/11/98
CONTRACTOR: MILLER DRILLING	NORTHING: 1170705.270
DRILLER: J. BROWNFIELD	EASTING: 677170.470
IT FIELD REPRESENTATIVE: G. CROWE	JOB NO: 774645A



*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

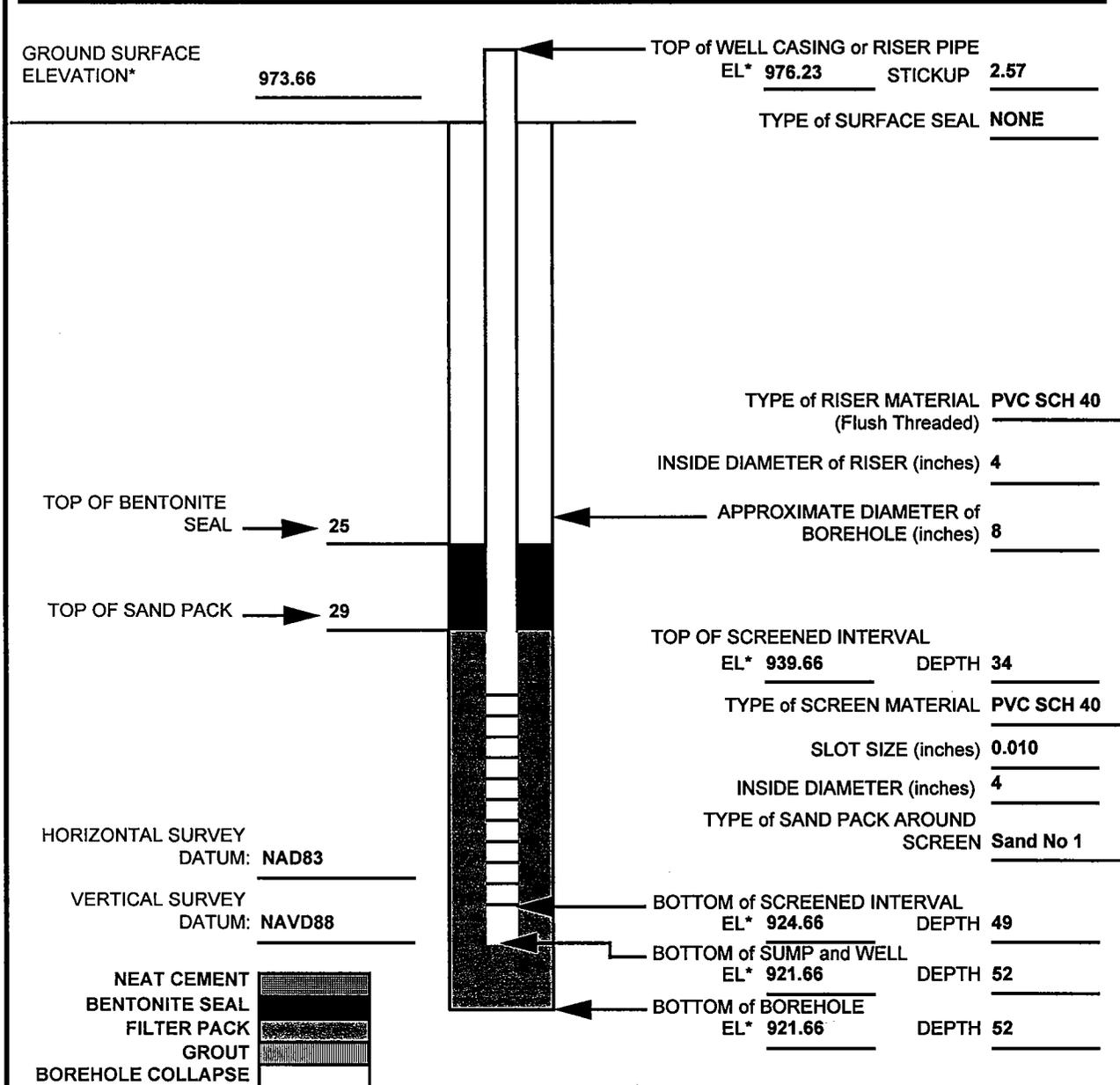
PROJECT: Fort McClellan, SAD TERC	WELL NO: FTA-82-MW02
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 11/12/98
CONTRACTOR: MILLER DRILLING	NORTHING: 1170193.680
DRILLER: J. BROWNFIELD	EASTING: 677552.220
IT FIELD REPRESENTATIVE: G. CROWE	JOB NO: 774645A



*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

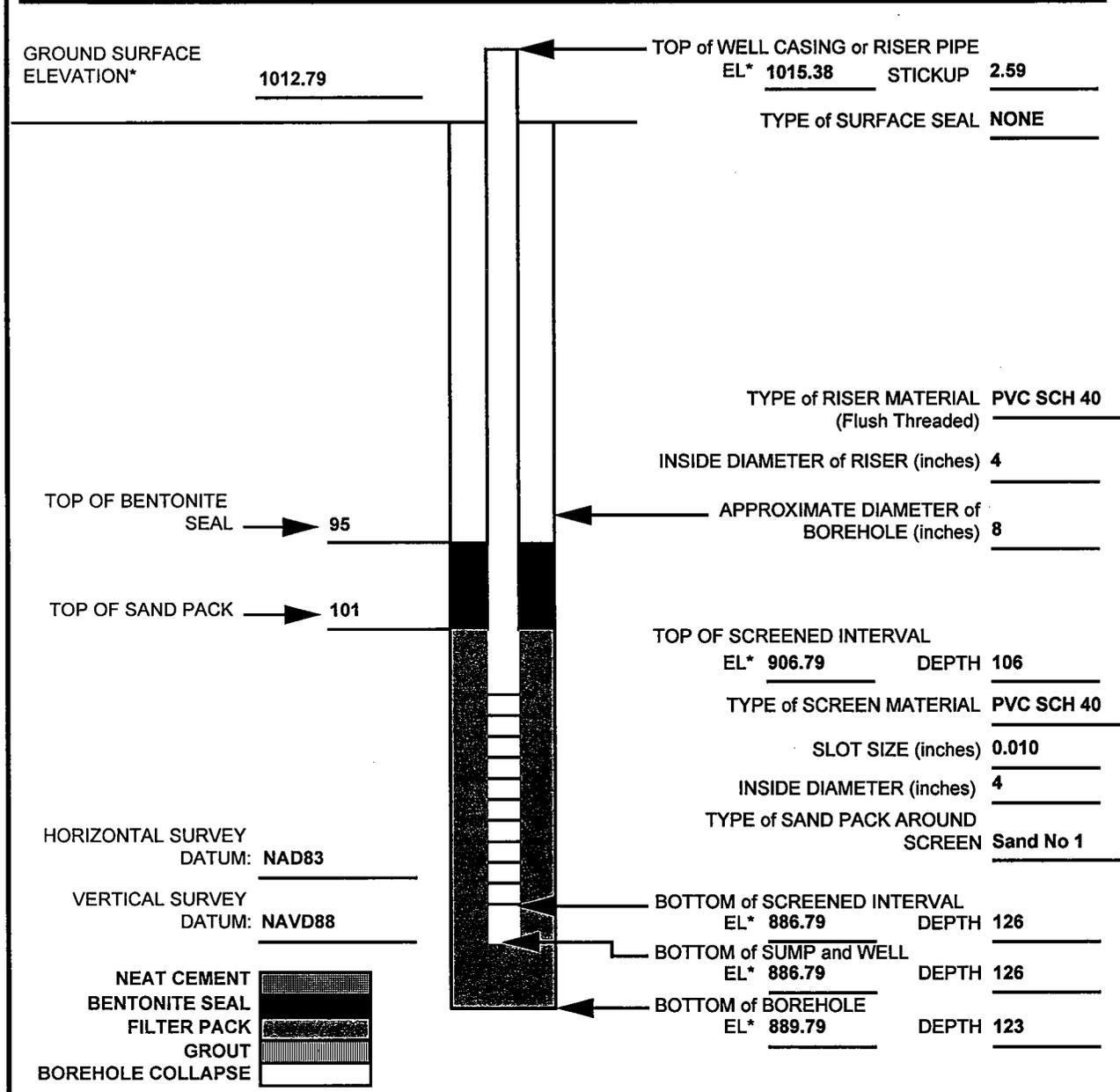
PROJECT: Fort McClellan, SAD TERC	WELL NO: FTA-82-MW03
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 12/11/98
CONTRACTOR: MILLER DRILLING	NORTHING: 1170575.250
DRILLER: ROBERT	EASTING: 678209.940
IT FIELD REPRESENTATIVE: C. SHORT	JOB NO: 774645A



*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

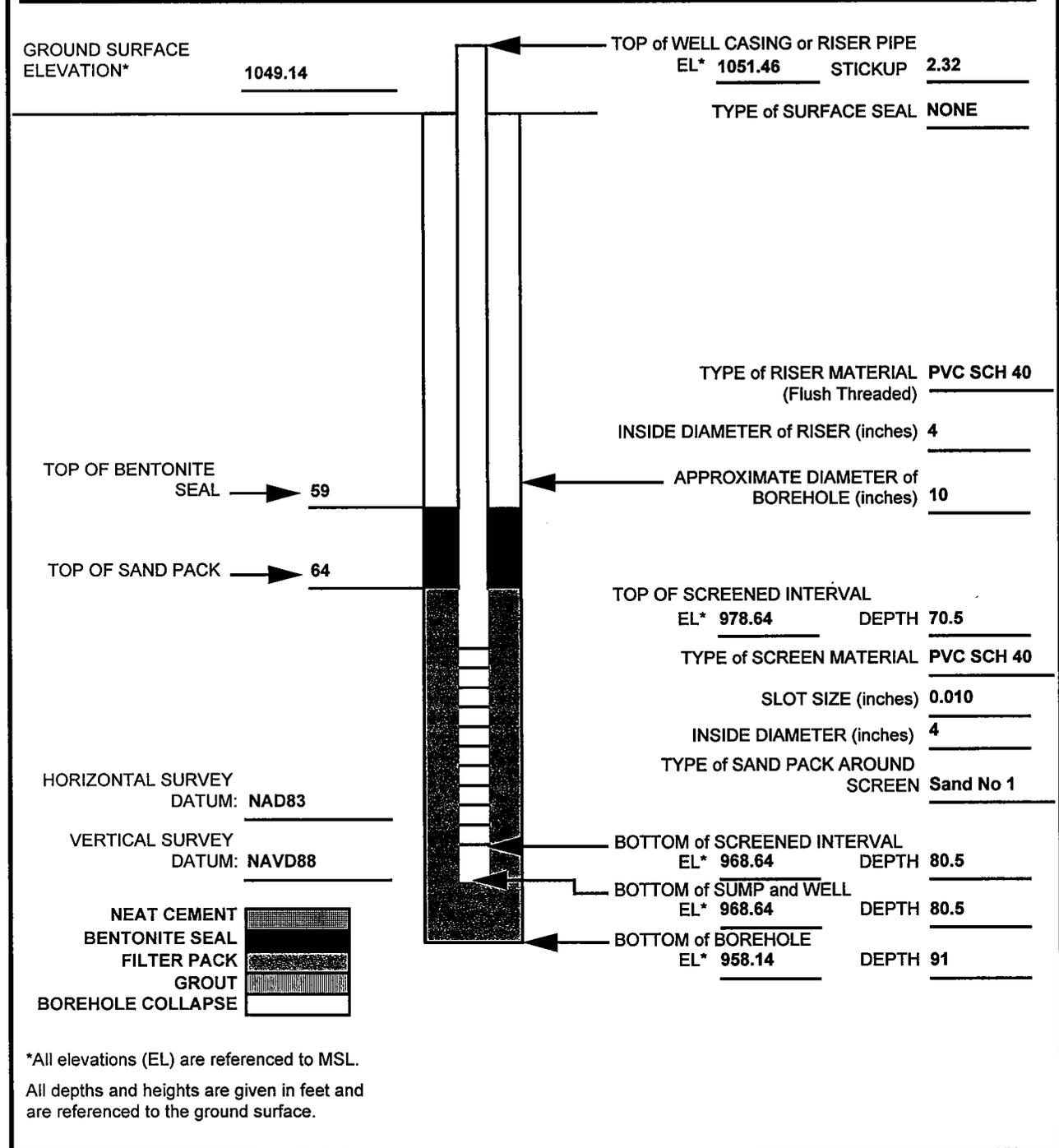
PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING DRILLER: ROBERT IT FIELD REPRESENTATIVE: C. SHORT	WELL NO: FTA-82-MW04 DRILLING METHOD: INSTALLATION DATE: 12/08/98 NORTHING: 1171081.087 EASTING: 678253.195 JOB NO: 774645A
---	--



*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 LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING DRILLER: J. BROWNFIELD IT FIELD REPRESENTATIVE: G. CROWE	WELL NO: FTA-82-MW05 DRILLING METHOD: INSTALLATION DATE: 11/19/98 NORTHING: 1171236.496 EASTING: 677806.441 JOB NO: 774645A
--	--



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC

LOCATION: Anniston, AL

CLIENT: USACE Mobile District

CONTRACTOR: MILLER DRILLING

DRILLER: J. BROWNFIELD

IT FIELD REPRESENTATIVE: C. SHORT

WELL NO: FTA-82-MW06

DRILLING METHOD:

INSTALLATION DATE: 12/10/98

NORTHING: 1171087.915

EASTING: 677795.621

JOB NO: 774645A

GROUND SURFACE ELEVATION*

1064.19

TOP of WELL CASING or RISER PIPE

EL* 1067.13 STICKUP 2.94

TYPE of SURFACE SEAL NONE

**TYPE of RISER MATERIAL PVC SCH 40
(Flush Threaded)**

INSIDE DIAMETER of RISER (inches) 4

APPROXIMATE DIAMETER of BOREHOLE (inches) 8

TOP OF BENTONITE SEAL 134

TOP OF SAND PACK 136

**TOP OF SCREENED INTERVAL
EL* 923.19 DEPTH 141**

TYPE of SCREEN MATERIAL PVC SCH 40

SLOT SIZE (inches) 0.010

INSIDE DIAMETER (inches) 4

**HORIZONTAL SURVEY
DATUM: NAD83**

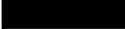
**VERTICAL SURVEY
DATUM: NAVD88**

TYPE of SAND PACK AROUND SCREEN Sand No 1

**BOTTOM of SCREENED INTERVAL
EL* 903.19 DEPTH 161**

**BOTTOM of SUMP and WELL
EL* 898.19 DEPTH 166**

**BOTTOM of BOREHOLE
EL* 891.19 DEPTH 173**

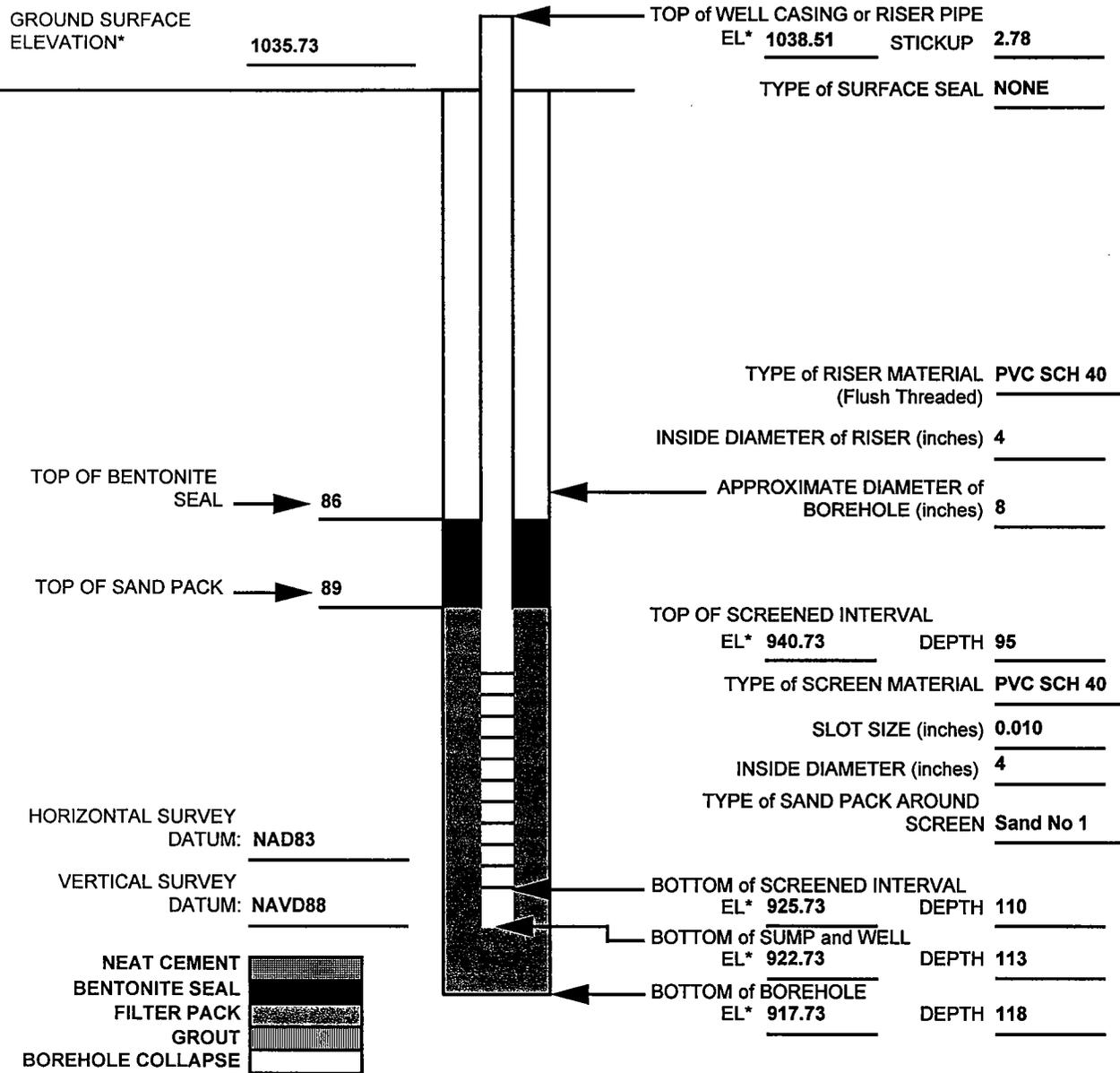
NEAT CEMENT 
BENTONITE SEAL 
FILTER PACK 
GROUT 
BOREHOLE COLLAPSE 

*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

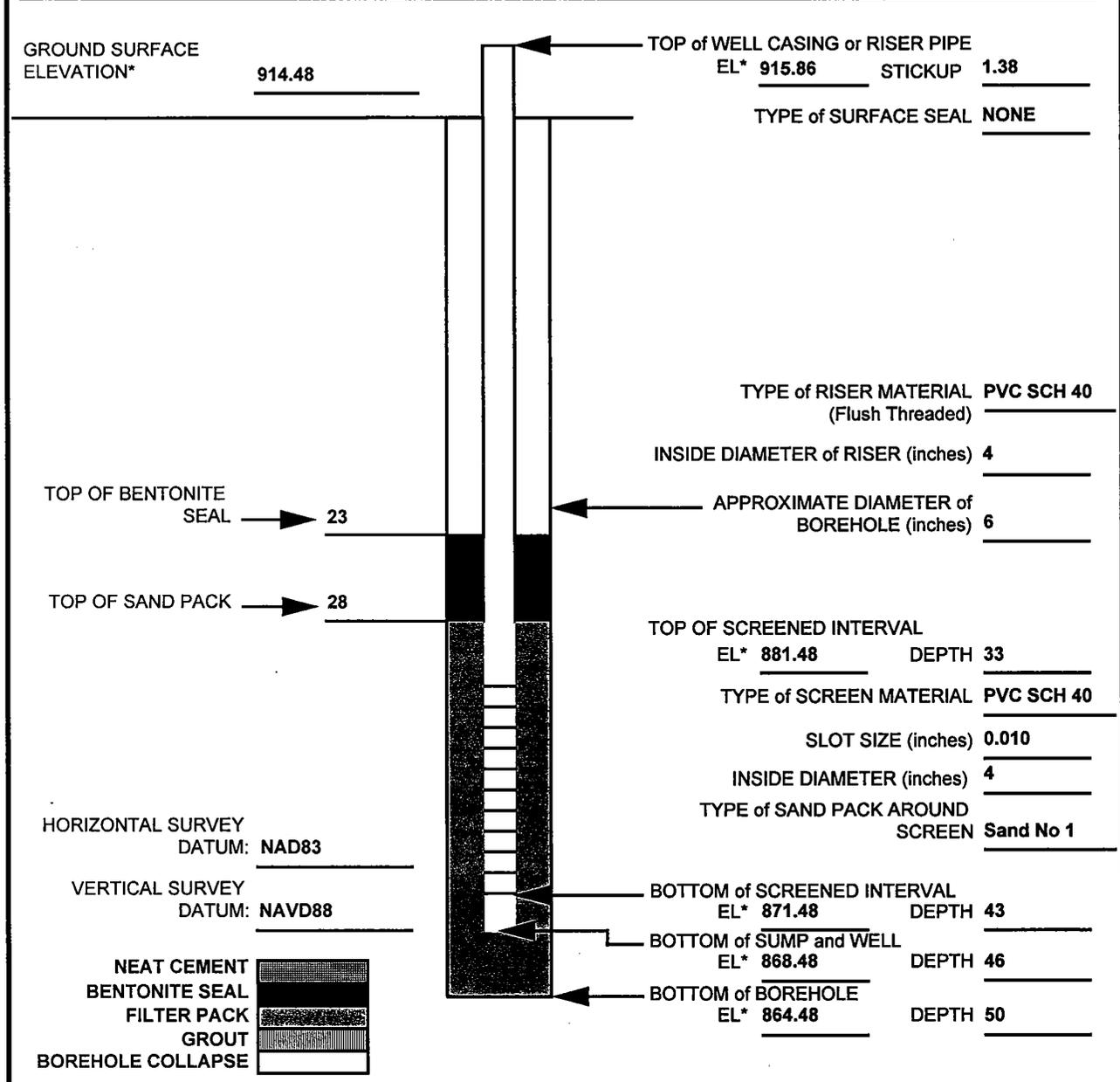
PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING DRILLER: IT FIELD REPRESENTATIVE: C. Short	WELL NO: FTA-82-MW07 DRILLING METHOD: INSTALLATION DATE: 12/10/98 NORTHING: 1170850.959 EASTING: 677755.898 JOB NO: 774645A
--	--



*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-82-MW08
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 12/02/98
CONTRACTOR: MILLER DRILLING	NORTHING: 1170891.420
DRILLER: J. BLOWFIELD	EASTING: 677221.990
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.

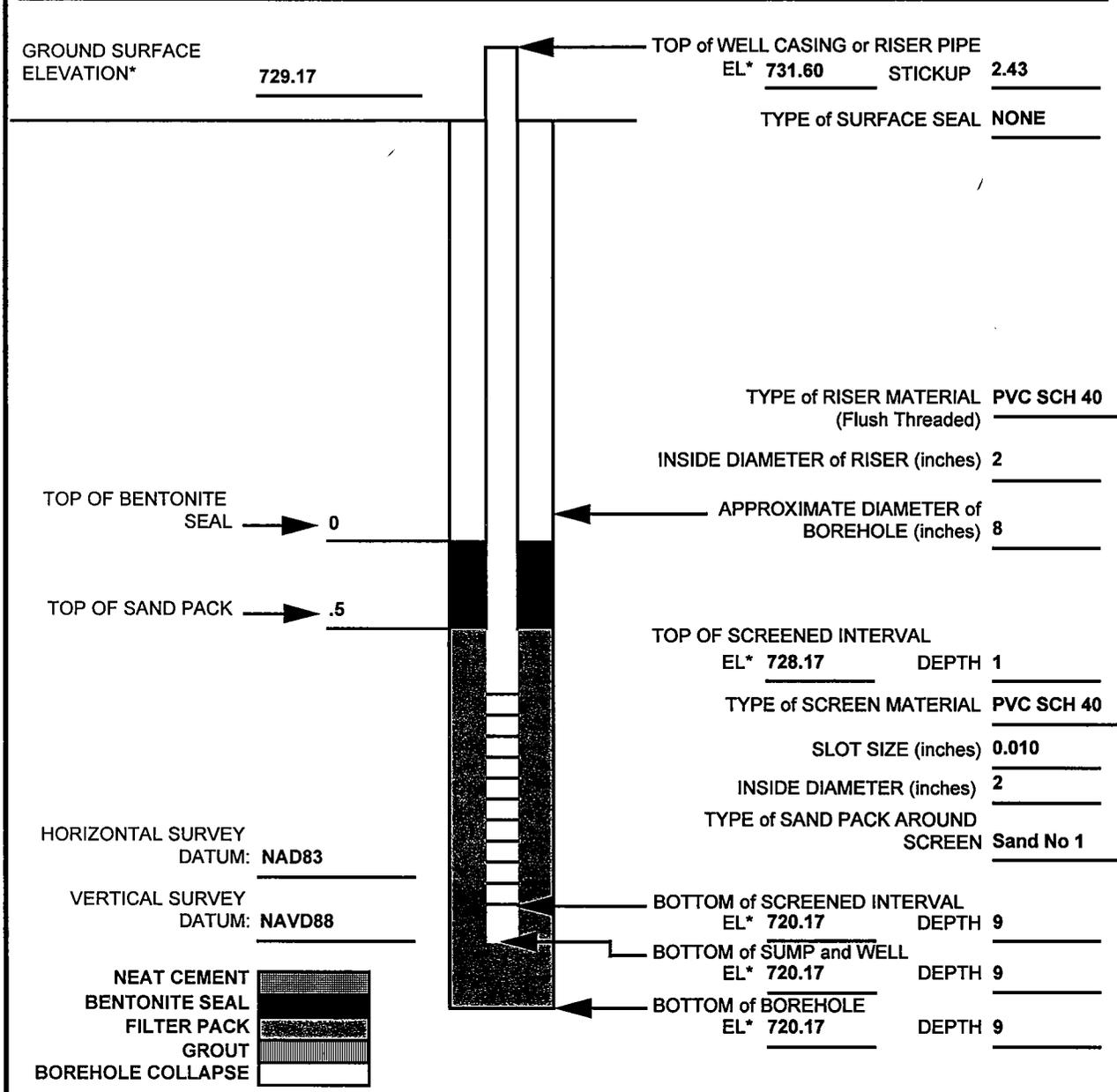
FORT McCLELLAN

IT Corp Draft Boring Logs (FTA-126)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
FTA-126-GP01	1.0	3.0	sc		MOIST	Mottled brown, red, CLAY and SAND, medium plasticity, little gray, moist.
	3.0	5.0	sc		WET	Mottled brown, red, CLAY and SAND, wet, medium plasticity.
	5.0	7.0	ch		WET	Wet, CLAY, little Silt and Sand, mottled brown, red, high plasticity.
	7.0	9.0	sc		WET	Wet, CLAY and SAND, gray, mottled brown, high plasticity. Terminate boring at 9'.
FTA-126-GP02	1.0	3.0	ch		WET	Mottled brown, CLAY, little Silt, high plasticity. Moist at 1', wet at 1.5'.
	3.0	4.0	sm		WET	SAND and SILT area, wet, Chert nodules.
	4.0	5.0	cl			Dense, CLAY, some Silt, some Chert nodules, mottled brown, red, yellow.
	5.0	7.0	sc		WET	Dense, SAND and CLAY, mottled brown, yellow, medium to high plasticity, wet.
	7.0	9.0	sm			SAND and SILT, little Clay, some Chert nodules, medium to low plasticity, orange, red, mottled brown. Terminate boring at 9'.
FTA-126-GP03	1.5	3.5	sc		MOIST	Mottled brown, black, CLAY and SAND, moist, medium plasticity.
	3.5	5.5	ch		MOIST	Red, mottled brown, fat CLAY, little Silt and Sand, black areas, high plasticity, Chert nodules, Clay is moist.
	5.5	6.5	ch			Red, black, mottled brown, CLAY, little Sand.
	6.5	7.5	sm			SAND and SILT, mottled brown, red, non-plastic.
	7.5	9.0	sm			SAND and SILT, little Clay, large Chert nodules, non-plastic, orange, mottled brown.
	9.0	9.5	cl			Dense CLAY, little Sand, mottled brown, little Chert nodules. Terminate boring at 9.5'.

MONITORING WELL INSTALLATION DETAIL

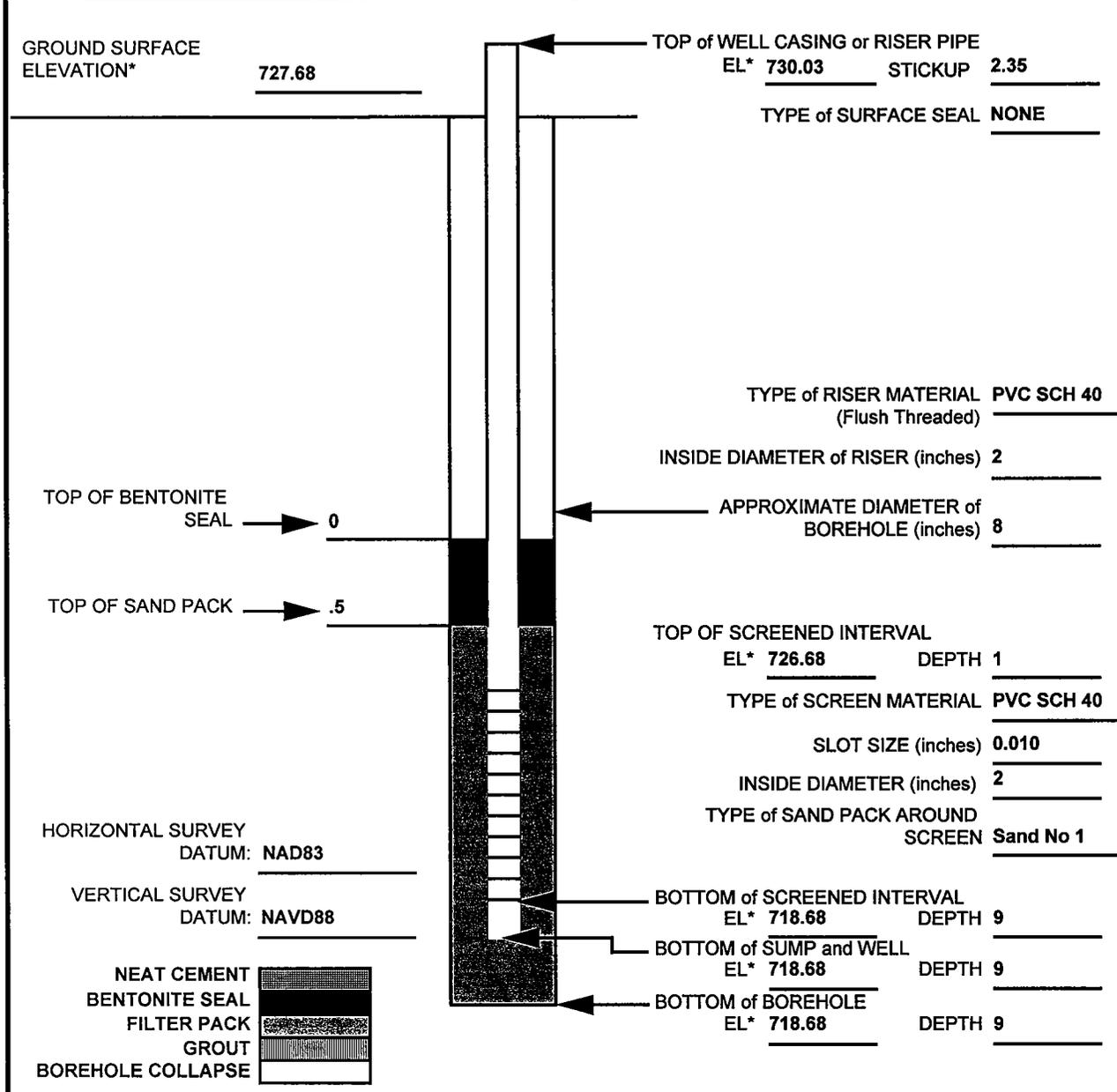
PROJECT: Fort McClellan, SAD TERC	WELL NO: FTA-126-GP01
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/23/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1181535.960
DRILLER: H. HUNTOON	EASTING: 673088.330
IT FIELD REPRESENTATIVE: K. ARNOLD	JOB 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

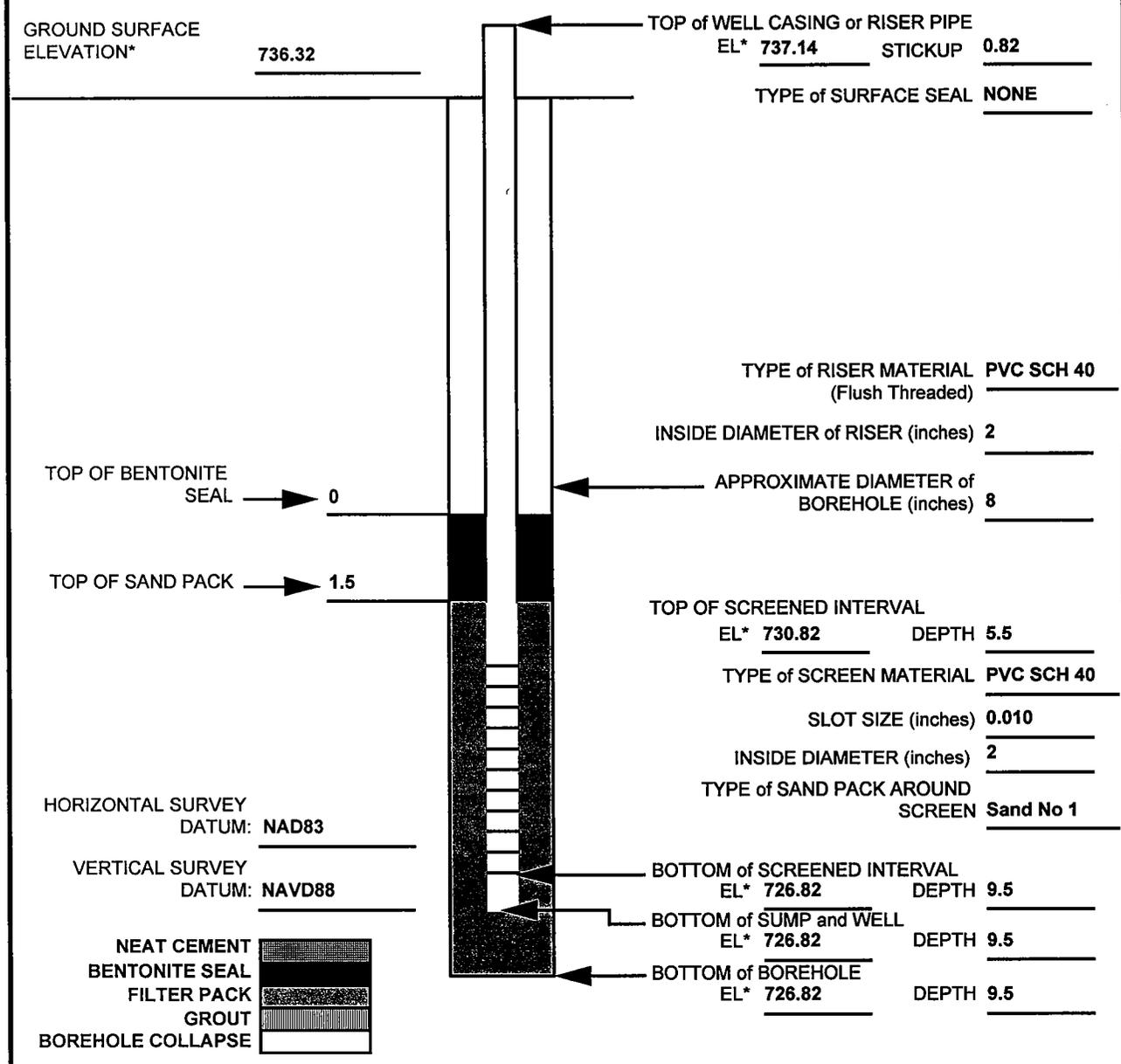
PROJECT: Fort McClellan, SAD TERC	WELL NO: FTA-126-GP02
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/23/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1181693.200
DRILLER: H. HUNTOON	EASTING: 673212.310
IT FIELD REPRESENTATIVE: K. ARNOLD	JOB 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-126-GP03
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/22/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1181455.110
DRILLER: H. HUNTOON	EASTING: 673451.490
IT FIELD REPRESENTATIVE: K. ARNOLD	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.

Tue Oct 26

FORT McCLELLAN

IT Corp Draft Boring Logs (PPMP-227)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-227-GP01	.0	1.5	sm		MOIST	Soft SAND, some Silt, medium to fine grained, moist, dark brown.
	1.5	3.5	ch		MOIST	Soft CLAY, some Silt, medium to high plasticity, dark brown, moist.
	3.5	9.5	ml		MOIST	Semi-firm SILT, low plasticity, brown to yellowish brown, slightly moist.
	9.5	11.5	sm		DRY	Semi-loose SAND, some Silt, some Gravel, medium to fine grain, yellowish brown, dry; Gravel is 1/4" to 1".
	11.5	24.0	ml		DRY	Firm to hard SILT, low plasticity, brown, dry, small tan and black specks.
	24.0	34.0	ch		WET	Firm CLAY, some Silt, medium to high plasticity, reddish brown, slightly moist to wet, small Pebbles. Bottom of borehole 34.0'.
PPMP-227-GP02	.0	8.5	ml		MOIST	Soft to semi-firm SILT, low plasticity, brown, slightly moist.
	8.5	10.0	sc		MOIST	Semi-firm SAND, some Clay and 1/4" Gravel, yellowish brown to brown, slightly moist, occasional black spots.
	10.0	25.0	ml		MOIST	Firm to very firm SILT, low plasticity, brown, slightly moist, occasional layers of Chert, black material infilling old cracks.
	25.0	30.0	ml		MOIST	Firm SILT, some Sand, medium plasticity, yellowish brown, moist, Sand is medium-grained, occasional 2" layers of Sand with Silt. Bottom of borehole 30.0'.
PPMP-227-GP03	.0	3.5	ml		MOIST	Semi-soft to firm SILT, low plasticity, moist, dark reddish brown, abundant organic matter.
	3.5	10.5	sm		DRY	Semi-consolidated SAND, some Silt, some Gravel, Sand is medium grained, reddish brown, dark reddish brown (6-7'), yellowish brown (7'), dry.
	10.5	25.0	ml		DRY	Firm SILT, low plasticity, brown, dry.
	25.0	31.0	ml			Firm SILT, interspaced with layers of Chert, Silt is low plasticity, brown, Chert is in 2-3" layer. Auger refusal at 31.0'.
PPMP-227-GP04	.0	6.5	ml			Red, SILT, some Clay.
	6.5	8.0	sm			Red SAND, some Silt and Gravel. Direct push refusal at 8.0'.
	8.0	10.0	gm		DRY	Semi-consolidated GRAVEL, some Silt, some Sand, yellowish brown, dry; Gravel is 1", angular to subangular.

..\sql\qclth.sql

Tue Oct 26

FORT McCLELLAN

IT Corp Draft Boring Logs (PPMP-227)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-227-GP04	10.0	24.0	ml		DRY	Firm SILT, some Clay, low to medium plasticity, reddish brown with tan mottling, black material infilling cracks, dry.
	24.0	25.0	gm		MOIST	Semi-consolidated GRAVEL, some Silt, reddish brown, slightly moist, Gravel is 1".
	25.0	32.0	cl		WET	Soft CLAY, some Silt, medium plasticity, reddish brown, wet. Bottom of borehole 32.0'.
PPMP-227-GP05	.0	3.5	ml			Red, SILT, some Clay.
	3.5	5.5	sm			Red, SAND, some Silt and Gravel.
	5.5	6.0				Reddish brown, GRAVEL, some Silt and Sand. Direct push refusal at 6.0'.
	8.0	10.0	ml		DRY	Firm SILT, low plasticity, yellowish brown with reddish brown and tan mottling, dry.
	10.0	22.5	ml		DRY	Firm SILT, low plasticity, yellowish brown with reddish brown mottling, dry.
	22.5	30.0	cl		MOIST	Soft to semi-firm CLAY, some Silt, medium plasticity, brown to reddish brown, dry to very moist (water at 24'). Bottom of borehole 30.0'.
PPMP-227-GP06	.0	2.0	sc		WET	CLAY, some Sand, medium plasticity, few Chert nodules, mottled brown, black, little bit of organics. Wet at 6".
	2.0	4.0	sc		WET	Moist to wet, CLAY, some Sand, wet areas have a high Sand concentration, moist areas have more Clay, mottled brown, little Silt.
	4.0	6.0	ch		WET	Wet, dense CLAY, some Sand, gray, mottled brown, high plasticity, large Chert chunks mixed with Sand.
	6.0	7.0	sc		WET	SAND, little Clay, mottled brown, red, wet.
PPMP-227-GP07	7.0	8.0	ch		MOIST	Fat CLAY, little Sand, mottled brown, red, moist, very dense. Bottom of borehole 8.0'.
	.0	2.0	cl		MOIST	Mottled brown, red, CLAY and SILT, moist from surface medium to high plasticity.
	2.0	4.0	cl		MOIST	Mottled brown, red, CLAY and SILT, medium plasticity.
	4.0	5.0	cl			Mottled brown, red, CLAY, little SILT.
	5.0	6.0				SAND and SILT between 5' - 6'.
	6.0	8.0	sm			SAND and SILT, red, low plasticity. Large Chert nodules at 8.0'.
	8.0	10.0	sm			SILT and SAND mottled brown, red, yellow, low plasticity.
10.0	14.0	sm			SILT and SAND mottled brown, red, low plasticity.	

FORT McCLELLAN
IT Corp Draft Boring Logs (PPMP-227)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-227-GP07	14.0	19.0	sm			CHERT layer at 15.0'. Mottled brown, red, SILT and SAND, low plasticity.
	19.0	24.0	cl			CLAY and SILT, mottled brown, black, medium plasticity, layered.
	24.0	29.0	cl			CLAY and SILT, mottled brown, red, black, layered, medium plasticity.
	29.0	34.0	cl			Red, mottled brown, gray, black, medium to high plasticity, CLAY some Silt.
	34.0	36.0	sm		WET	Dense, compact SILT and SAND, wet, little Clay, medium plasticity mottled brown. Boring terminated at 36.0'.
PPMP-227-GP08	.0	1.0	gm			Brown SAND, some Gravel and Silt.
	1.0	6.0	sm			Reddish brown SAND, some Silt.
	6.0	11.5	cl			Reddish brown CLAY, some Silt. Boring terminated at 11.5'.
PPMP-227-GP09	.0	5.0	ml			Dark reddish brown, SILT, some Clay.
	5.0	9.0	sm			Tan to yellowish brown, silty SAND, increasing Gravel with depth. Direct push refusal at 9.0'.
	10.0	14.0	cl			Red, mottled brown, SAND, some Clay, little to medium plasticity, fine grained Sand.
	14.0	19.0	ch			Red, mottled brown fat CLAY, Sand layer between 14.8-15.0', high plasticity, little Sand.
	19.0	24.0	ch			Red, mottled brown, CLAY, little Sand, high plasticity, black hard areas.
PPMP-227-GP10	24.0	26.0	ch		WET	Wet, red, mottled brown, fat CLAY, little Sand, high plasticity. Bottom of borehole 26.0'.
	.0	4.5	ml		MOIST	Soft to semi-firm SILT, low plasticity, dark brown, moist.
	4.5	14.0	ml		DRY	Firm SILT, low plasticity, reddish brown, dry.
	14.0	33.0	ml		DRY	Firm SILT, some Gravel, low plasticity, reddish brown, dry, Gravel is 1/2"-1", subangular, some Quartzite, thin layers of coarse grained Sand. At 24' Gravel is 1/4", wet. Bottom of borehole 33.0'.
PPMP-227-GP11	.0	6.0	ml			Red, SILT, some Clay.
	6.0	10.0	sm			Red, fine SAND, some Silt.
	10.0	12.0	sm			Light red to brown, silty, gravelly SAND. Direct push. Boring terminated at 12.0' below ground surface.
	14.0	19.0	sc			Mottled brown and orange SAND, some Clay, low to medium plasticity, Sand is in layers in some areas.

Tue Oct 26

FORT McCLELLAN
 IT Corp Draft Boring Logs (PPMP-227)
 Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-227-GP11	19.0	24.0	cl			SAND, some Clay, large Chert chunks, black areas, low to medium plasticity.
	24.0	29.0	cl			CLAY, some Sand, Chert nodules, black, mottled brown, medium plasticity.
	29.0	32.0	sc		MOIST	Moist CLAY, some Sand, moist area is mostly Sand, mottled brown, medium plasticity.
	32.0	34.0	cl			Mottled brown, CLAY, some Sand, medium plasticity. Bottom of borehole 34.0'.
PPMP-227-GP12	.0	1.0	sm			Light brown, SAND, some Silt, some pine root traces.
	1.0	4.0	ml			Red SILT, some Clay.
	4.0	11.0	sm			Light reddish brown, gravelly, silty SAND. Direct push refusal at 11.0'.
	14.0	19.0	sc			Red, mottled brown, little black areas, SAND, some Clay, low to medium plasticity, .25" Sand layers, beige to yellow.
	19.0	24.0	cl			Little LIMESTONE/ Chert, some Clay, some Sand, medium to low plasticity, red, mottled brown, small black areas.
	24.0	29.0	ch			Red, brown, CLAY, little Sand, medium to high plasticity.
	29.0	34.0	ch			Fat CLAY mixed with tiny Sand areas, some Chert nodules.
	34.0	39.0	ch		MOIST	Moist, fat CLAY, little Sand, high plasticity, black areas mottled brown.
39.0	42.5	ch		MOIST	Fat CLAY, little Shale, little Sand, moist, Chert nodules, mottled brown, red, high plasticity. Bottom of borehole 42.5'.	
PPMP-227-GP13	.0	2.0	ch		MOIST	Mottled brown, red CLAY, some Silt, little organics from surface, moist, medium to high plasticity.
	2.0	4.0	cl			Mottled brown, red CLAY, some Silt, medium plasticity, black material (asphalt?).
	4.0	6.0	sm			SAND, some Silt, little Clay, mottled brown, red, medium plasticity.
	6.0	8.0	cl			CLAY, some Silt, little Sand, mottled brown, medium plasticity.
	8.0	10.0	cl			CLAY, some Silt, little Sand, mottled brown, red.
	10.0	14.0	ml			CLAY, some Silt, some Sand, medium plasticity, mottled brown, red.
	14.0	19.0	sm			SAND, some Silt, little Clay, mottled brown, foreign looking beige Rock, medium to low plasticity.
	19.0	24.0	cl			CLAY, some Silt, little Sand, mottled brown, black, red, layered coloring.

Tue Oct 26

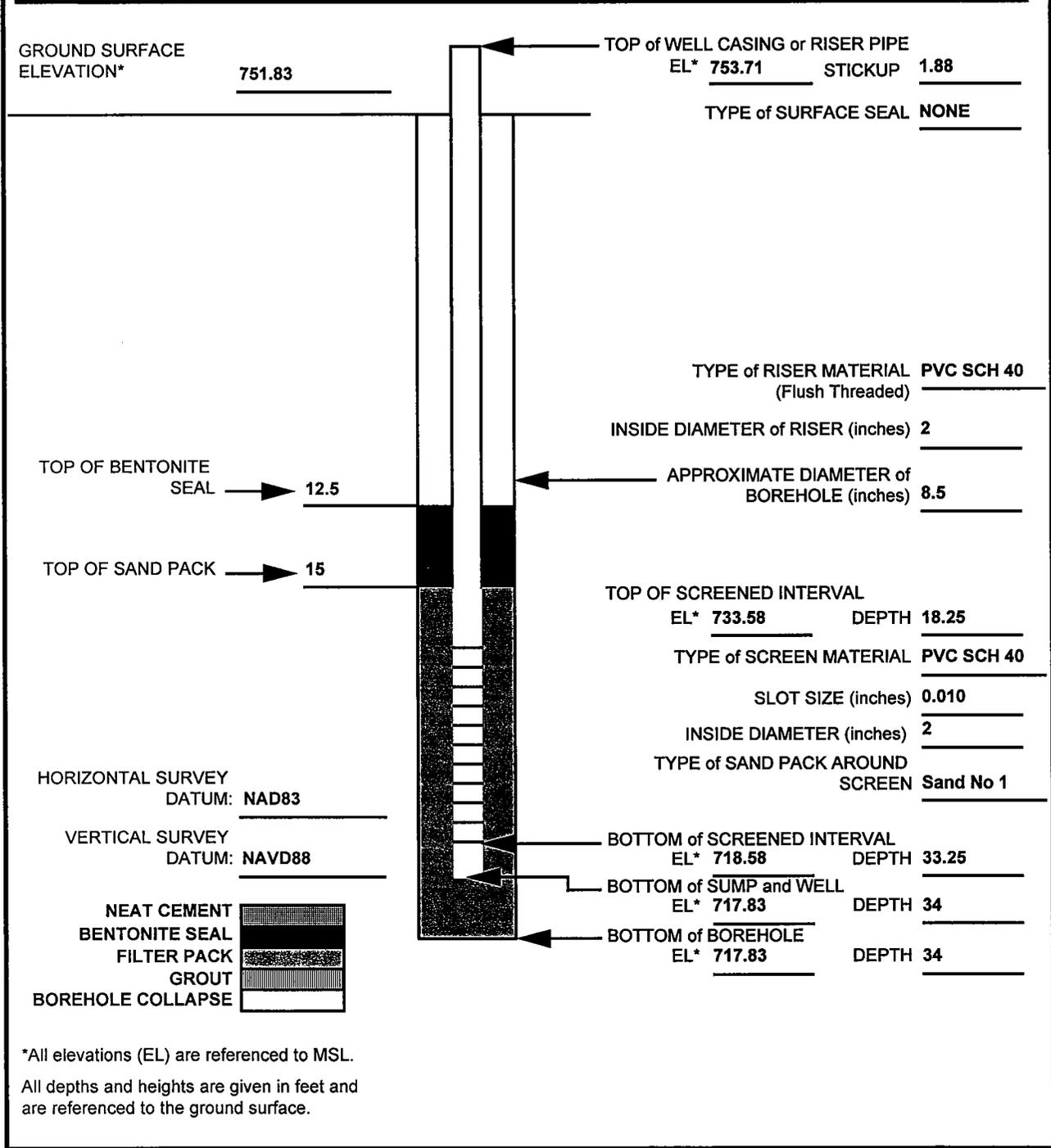
FORT McCLELLAN

IT Corp Draft Boring Logs (PPMP-227)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-227-GP13	24.0	29.0	ch		DAMP	Fat CLAY, little Silt, black, mottled brown, red, dense, high plasticity, damp.
	29.0	38.0	ch		WET	Fat CLAY, mottled brown, black, wet, very high plasticity. Bottom of borehole 38.0'.

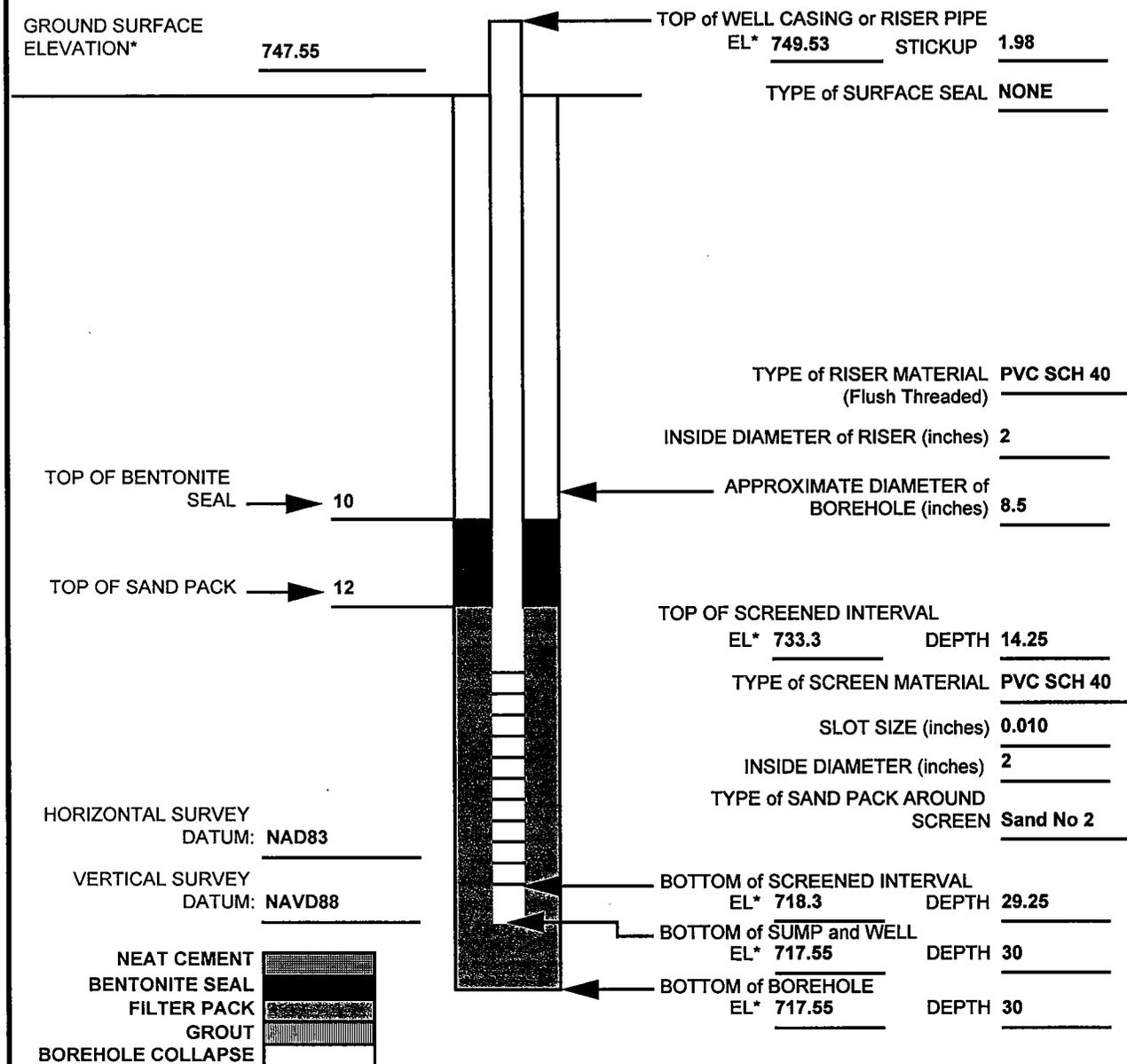
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: PPMP-227-GP01
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/08/99
CONTRACTOR: MILLER DRILLING CO.	NORTHING: 1180764.490
DRILLER: K. GOBBLE	EASTING: 673161.150
IT FIELD REPRESENTATIVE: M. GILES	JOB NO: 774645A



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: PPMP-227-GP02
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/04/99
CONTRACTOR: MILLER DRILLING CO.	NORTHING: 1180902.490
DRILLER: D. BISHOP	EASTING: 672542.590
IT FIELD REPRESENTATIVE: M. GILES	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 LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING CO. DRILLER: D. BISHOP IT FIELD REPRESENTATIVE: M. GILES	WELL NO: PPMP-227-GP03 DRILLING METHOD: INSTALLATION DATE: 02/05/99 NORTHING: 1181164.450 EASTING: 672599.450 JOB NO: 774645A
--	--

GROUND SURFACE ELEVATION* 748.60

TOP of WELL CASING or RISER PIPE
 EL* 751.43 STICKUP 2.83

TYPE of SURFACE SEAL NONE

TOP OF BENTONITE SEAL → 10.25

TOP OF SAND PACK → 12.5

TYPE of RISER MATERIAL PVC SCH 40
 (Flush Threaded)

INSIDE DIAMETER of RISER (inches) 2

APPROXIMATE DIAMETER of BOREHOLE (inches) 8.5

TOP OF SCREENED INTERVAL
 EL* 732.85 DEPTH 15.75

TYPE of SCREEN MATERIAL PVC SCH 40

SLOT SIZE (inches) 0.010

INSIDE DIAMETER (inches) 2

HORIZONTAL SURVEY DATUM: NAD83

VERTICAL SURVEY DATUM: NAVD88

TYPE of SAND PACK AROUND SCREEN Sand No 1

BOTTOM of SCREENED INTERVAL
 EL* 717.85 DEPTH 30.75

BOTTOM of SUMP and WELL
 EL* 717.6 DEPTH 31

BOTTOM of BOREHOLE
 EL* 717.6 DEPTH 31

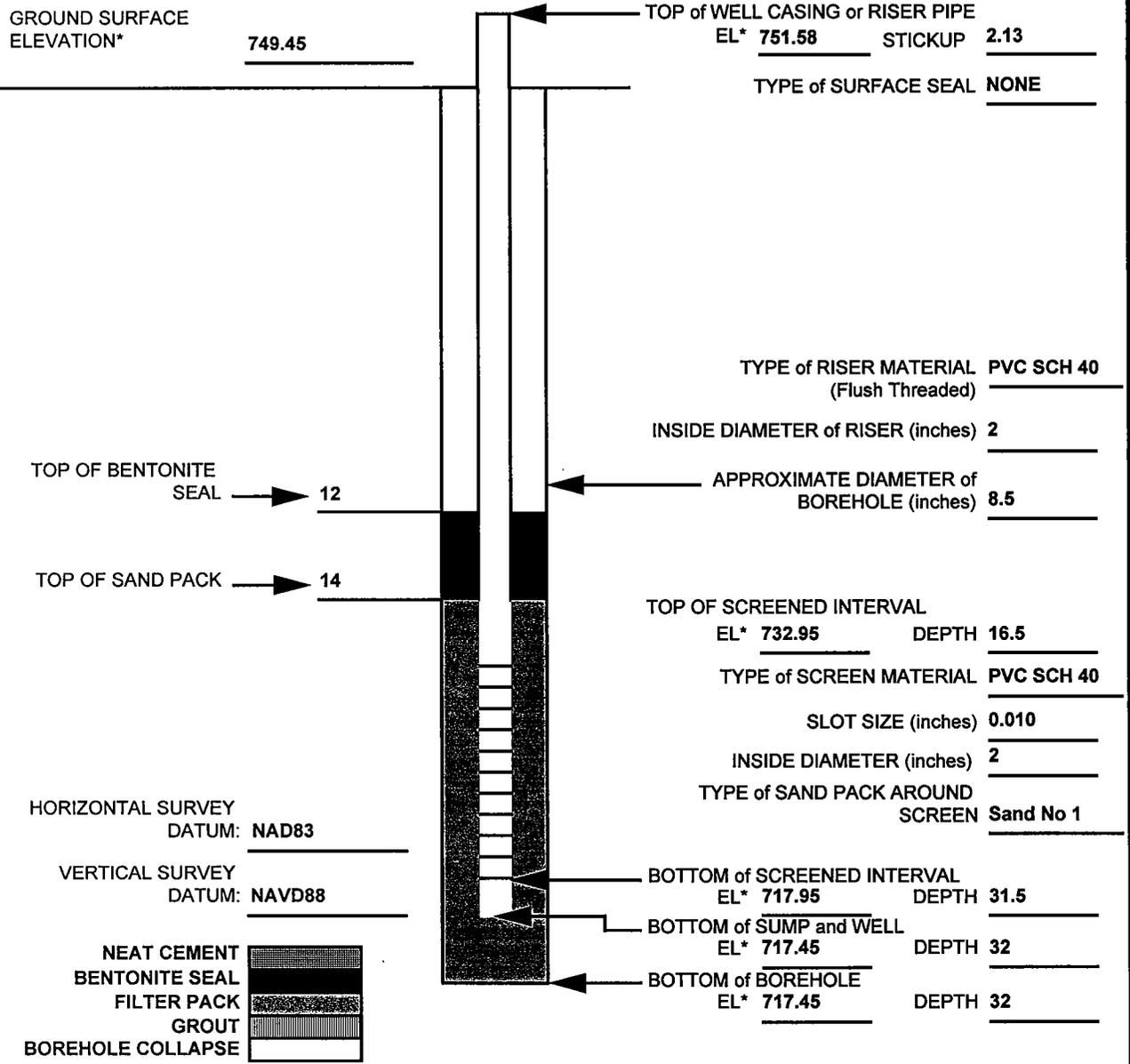


*All elevations (EL) are referenced to MSL.
 All depths and heights are given in feet and are referenced to the ground surface.

MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: TEG / MILLER DRILLING CO. DRILLER: K. GOBBLE IT FIELD REPRESENTATIVE: J. MESSER, M. GILES	WELL NO: PPMP-227-GP04 DRILLING METHOD: INSTALLATION DATE: 02/09/99 NORTHING: 1181059.820 EASTING: 672933.440 JOB NO: 774645A
---	--

GROUND SURFACE ELEVATION* 749.45



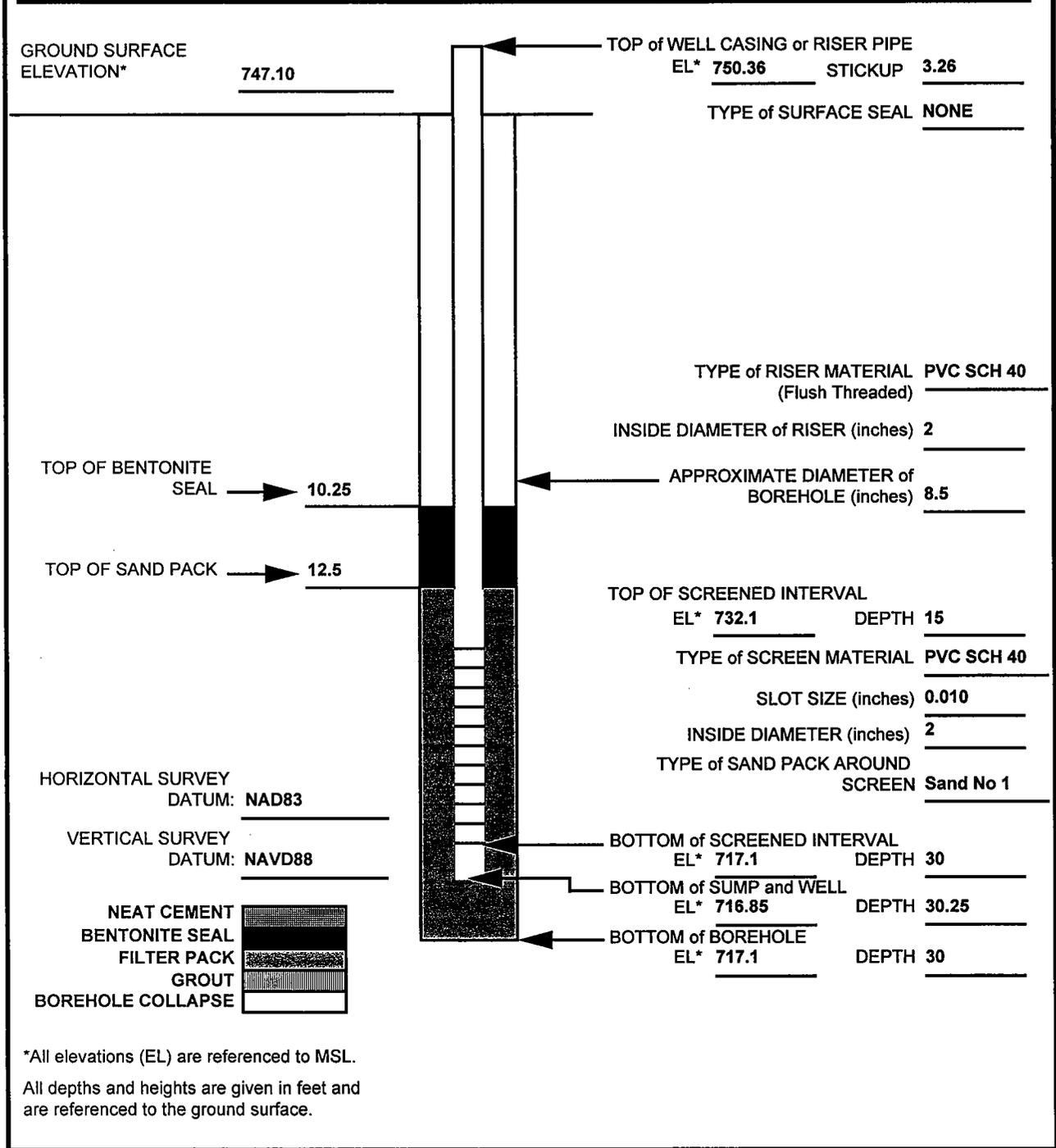
HORIZONTAL SURVEY DATUM: NAD83
 VERTICAL SURVEY DATUM: NAVD88

- 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.

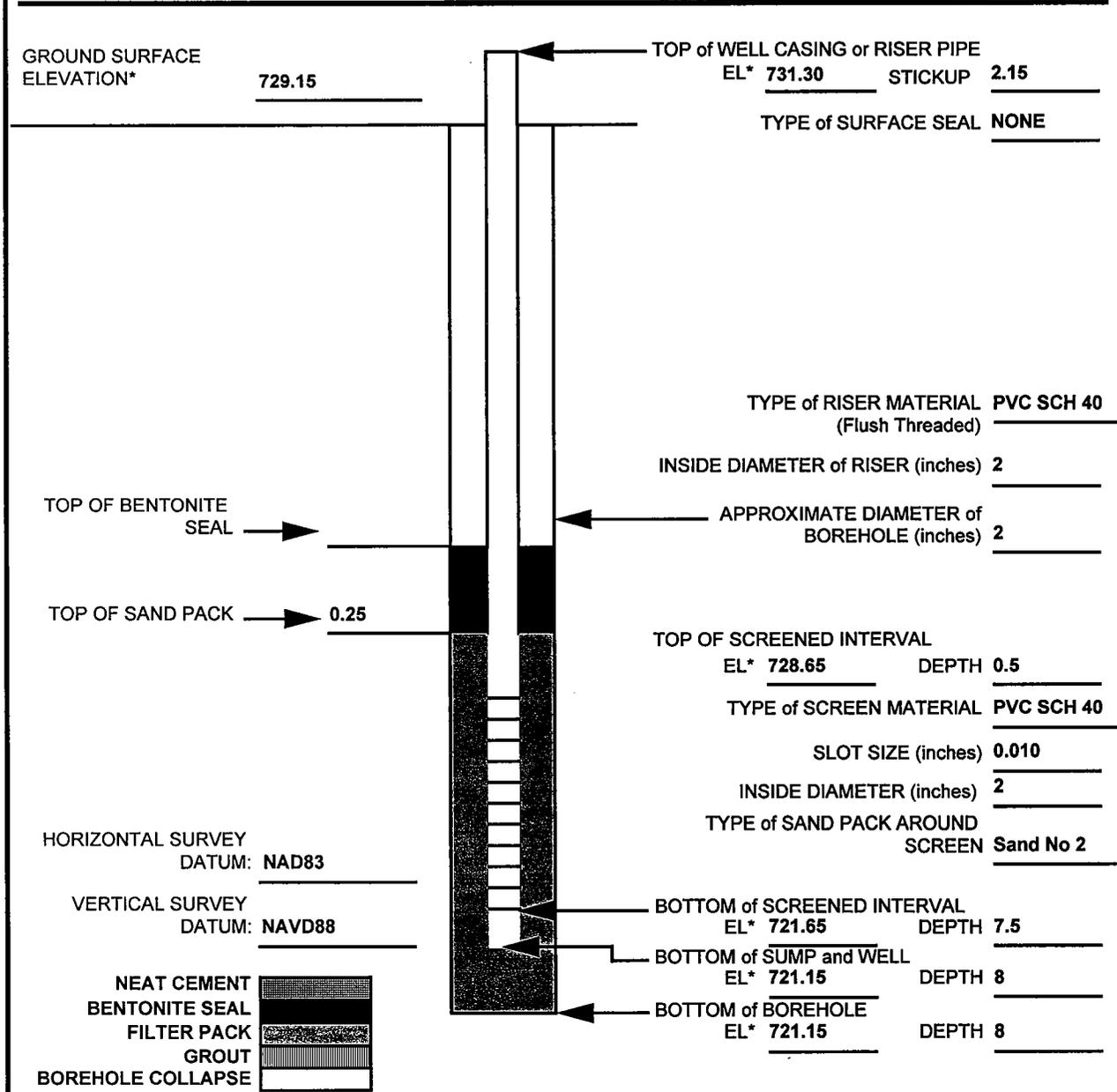
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: TEG / MILLER DRILLING CO. DRILLER: R. DAVIS IT FIELD REPRESENTATIVE: J. MESSER, M. GILES	WELL NO: PPMP-227-GP05 DRILLING METHOD: INSTALLATION DATE: 02/09/99 NORTHING: 1181317.030 EASTING: 672953.270 JOB NO: 774645A
--	--



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING CO. DRILLER: H. HUNTOON IT FIELD REPRESENTATIVE: K. ARNOLD	WELL NO: PPMP-227-GP06 DRILLING METHOD: INSTALLATION DATE: 02/22/99 NORTHING: 1181473.900 EASTING: 673323.990 JOB NO: 774645A
--	--

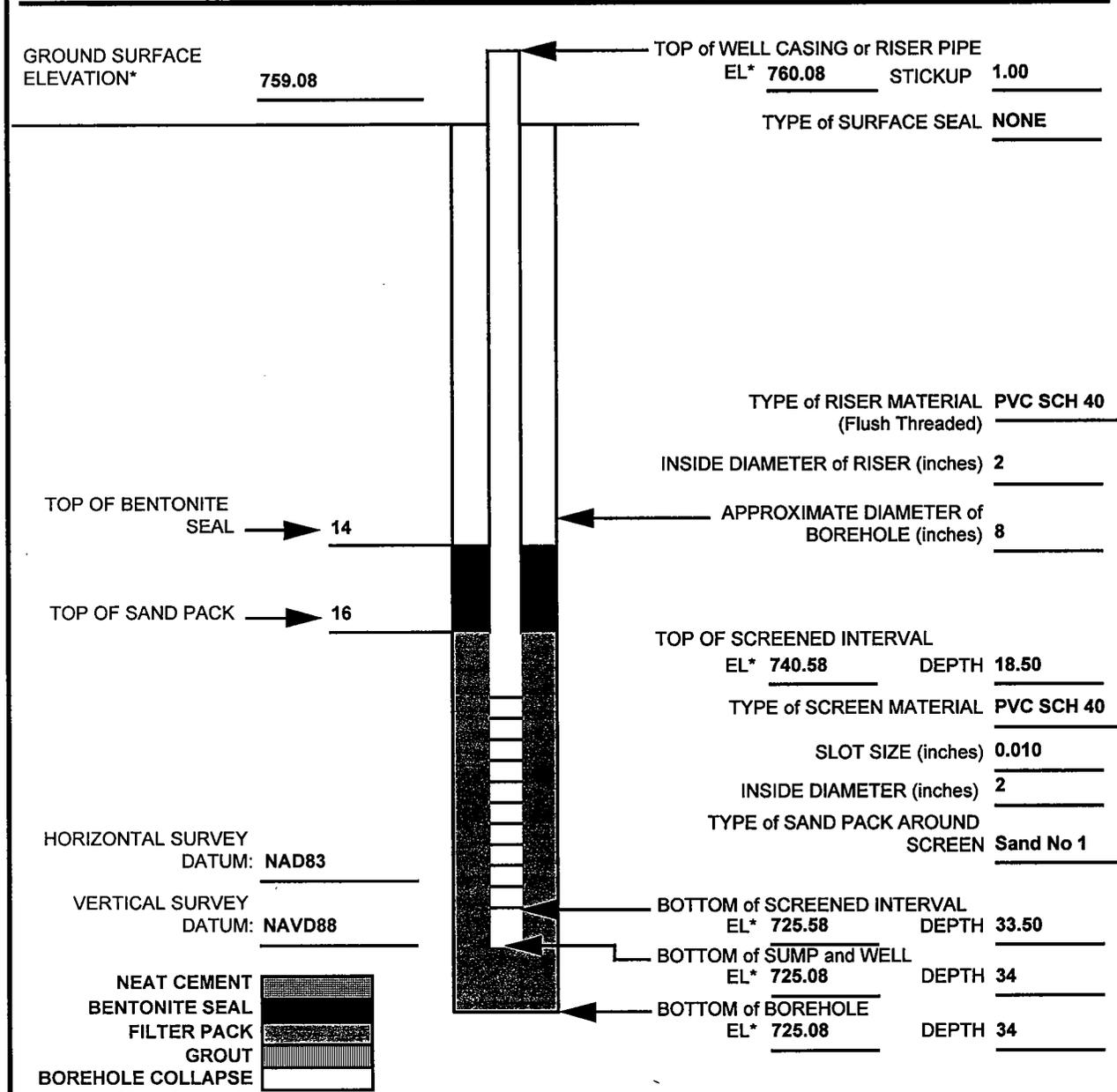


*All elevations (EL) are referenced to MSL.

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

MONITORING WELL INSTALLATION DETAIL

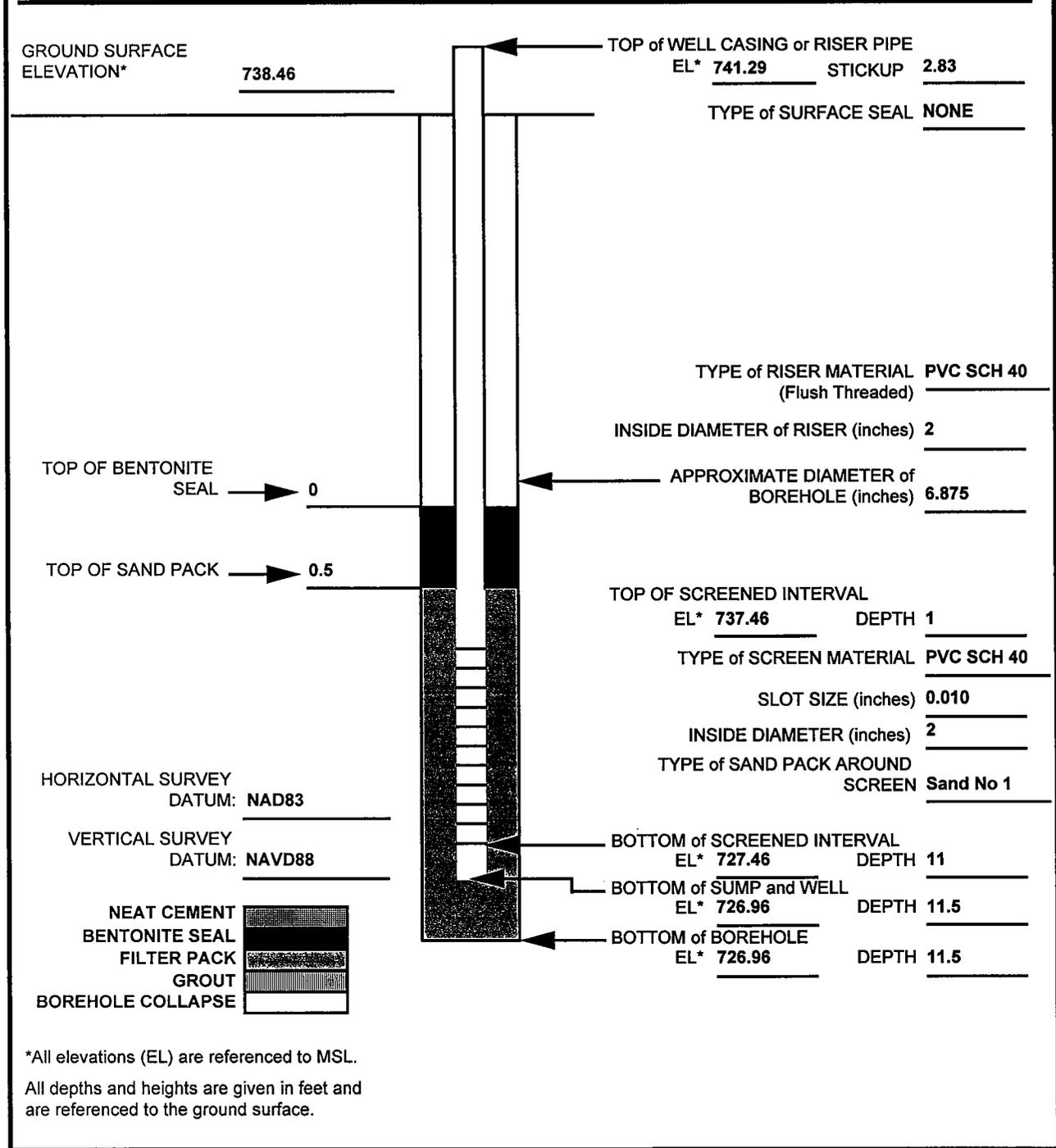
PROJECT: Fort McClellan, SAD TERC	WELL NO: PPMP-227-GP07
LOCATION: Anniston, AL	DRILLING METHOD: Hollow Stem Auger
CLIENT: USACE Mobile District	INSTALLATION DATE: 03/02/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1181247.240
DRILLER: K. GOBELL	EASTING: 673514.610
IT FIELD REPRESENTATIVE: K. ARNOLD	JOB NO: 774645A



*All elevations (EL) are referenced to MSL.
 All depths and heights are given in feet and are referenced to the ground surface.

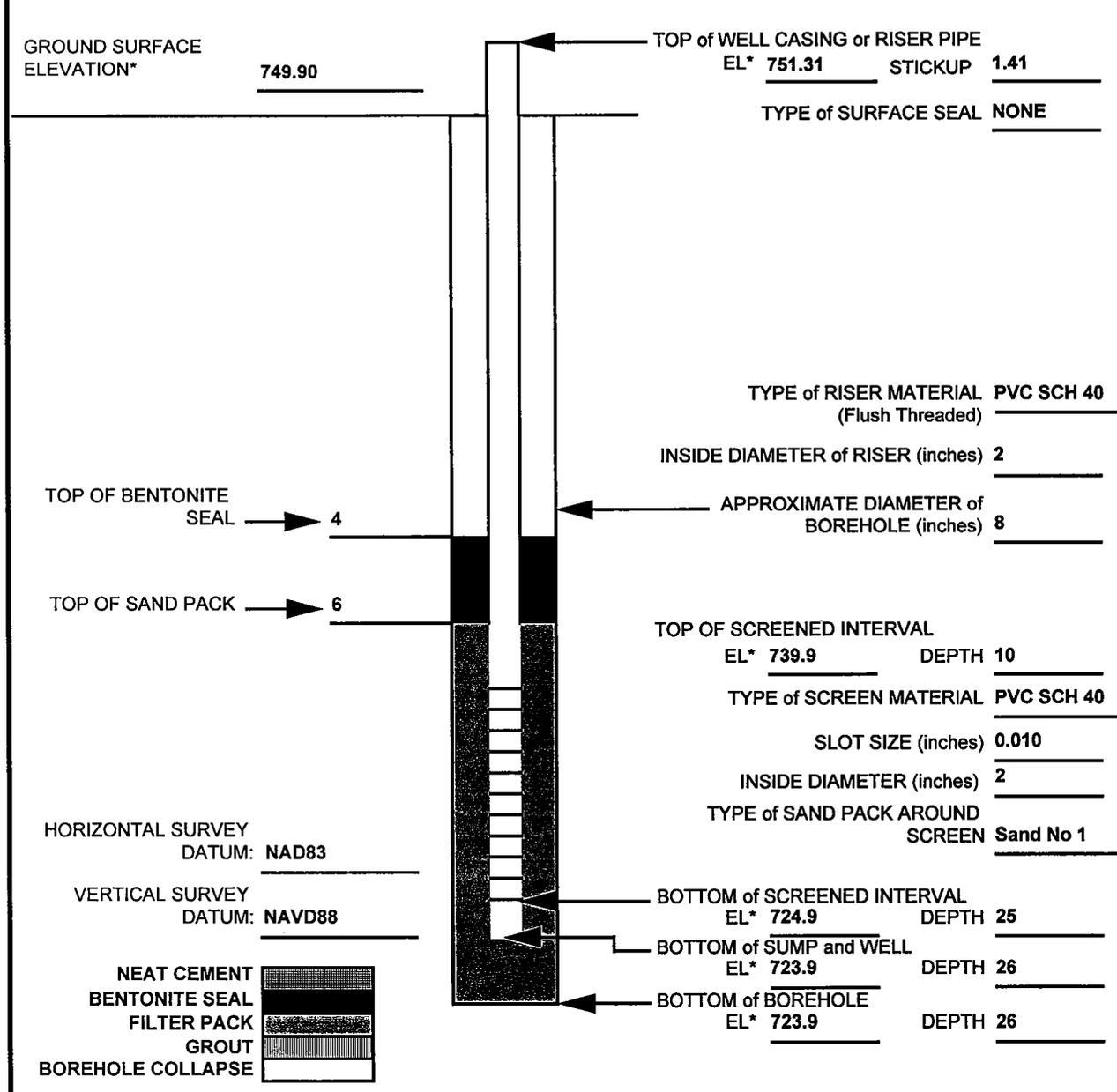
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: PPMP-227-GP08
LOCATION: Anniston, AL	DRILLING METHOD: Direct Push
CLIENT: USACE Mobile District	INSTALLATION DATE: 03/23/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1181422.850
DRILLER: H. HUNTOON	EASTING: 673999.480
IT FIELD REPRESENTATIVE: J. MESSER	JOB NO: 774645A



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC	WELL NO: PPMP-227-GP09
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/11/99
CONTRACTOR: TEG / MILLER DRILLING CO.	NORTHING: 1181345.050
DRILLER: K. GOBELL	EASTING: 674153.600
IT FIELD REPRESENTATIVE: J. MESSER, K. ARNOLD	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: PPMP-227-GP10
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/08/99
CONTRACTOR: MILLER DRILLING CO.	NORTHING: 1181047.790
DRILLER: K. GOBELL	EASTING: 674343.490
IT FIELD REPRESENTATIVE: M. GILES	JOB NO: 774645A

GROUND SURFACE ELEVATION* 760.89

TOP of WELL CASING or RISER PIPE
EL* 763.19 STICKUP 2.30

TYPE of SURFACE SEAL NONE

TOP OF BENTONITE SEAL → 12.5

TOP OF SAND PACK → 14.3

TYPE of RISER MATERIAL PVC SCH 40
(Flush Threaded)

INSIDE DIAMETER of RISER (inches) 2

APPROXIMATE DIAMETER of BOREHOLE (inches) 8.5

TOP OF SCREENED INTERVAL
EL* 743.39 DEPTH 17.5

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: NAVD88

BOTTOM of SCREENED INTERVAL
EL* 728.39 DEPTH 32.5

BOTTOM of SUMP and WELL
EL* 727.89 DEPTH 33

BOTTOM of BOREHOLE
EL* 727.89 DEPTH 33



*All elevations (EL) are referenced to MSL.
All depths and heights are given in feet and are referenced to the ground surface.

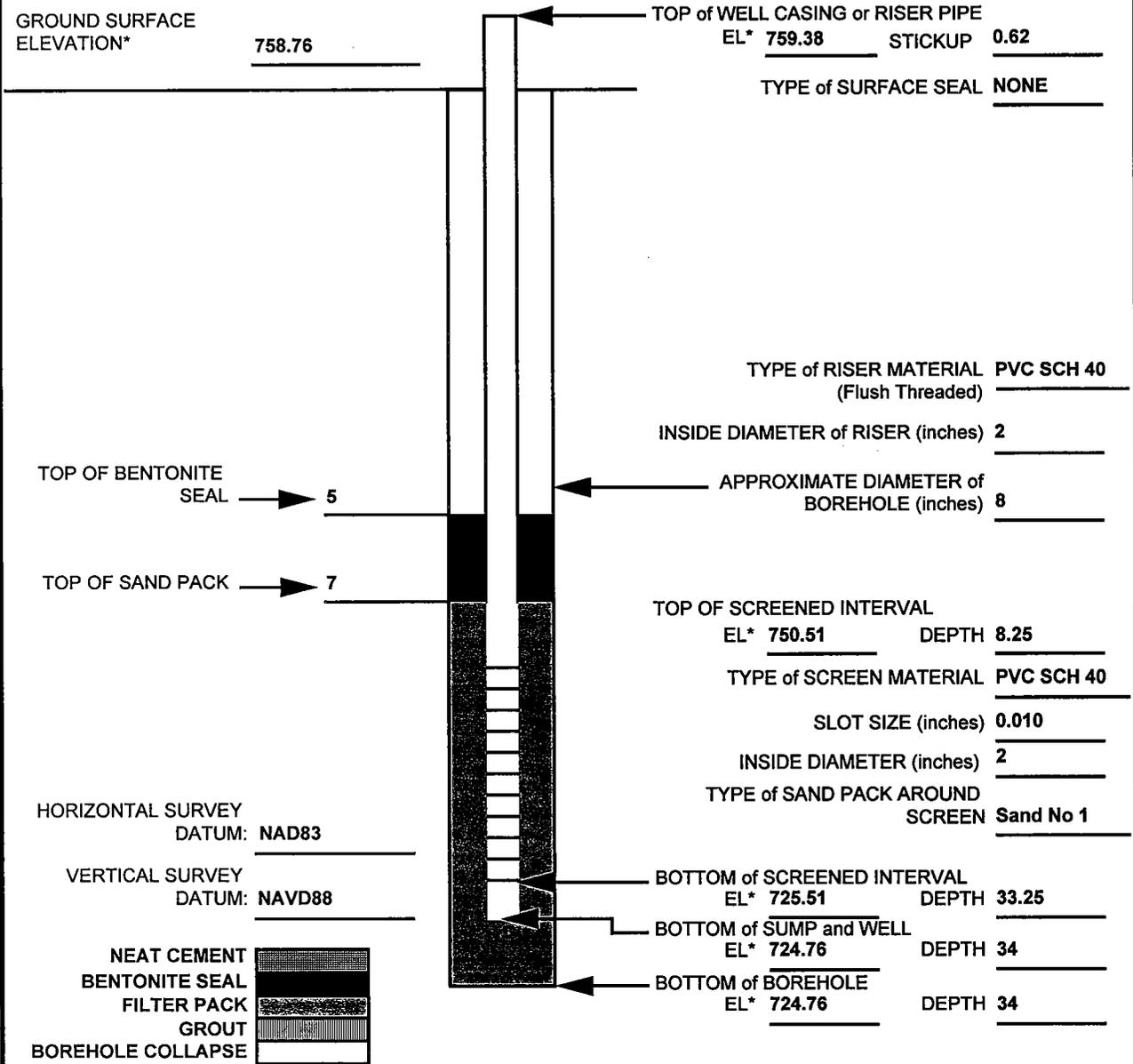
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: TEG / MILLER DRILLING CO. DRILLER: K. GOBELL IT FIELD REPRESENTATIVE: J. MESSER, K. ARNOLD	WELL NO: PPMP-227-GP11 DRILLING METHOD: INSTALLATION DATE: 02/12/99 NORTHING: 1180995.290 EASTING: 673728.390 JOB NO: 774645A
--	--

GROUND SURFACE ELEVATION* 758.76

TOP of WELL CASING or RISER PIPE
 EL* 759.38 STICKUP 0.62

TYPE of SURFACE SEAL NONE



TOP OF BENTONITE SEAL → 5

TOP OF SAND PACK → 7

HORIZONTAL SURVEY DATUM: NAD83

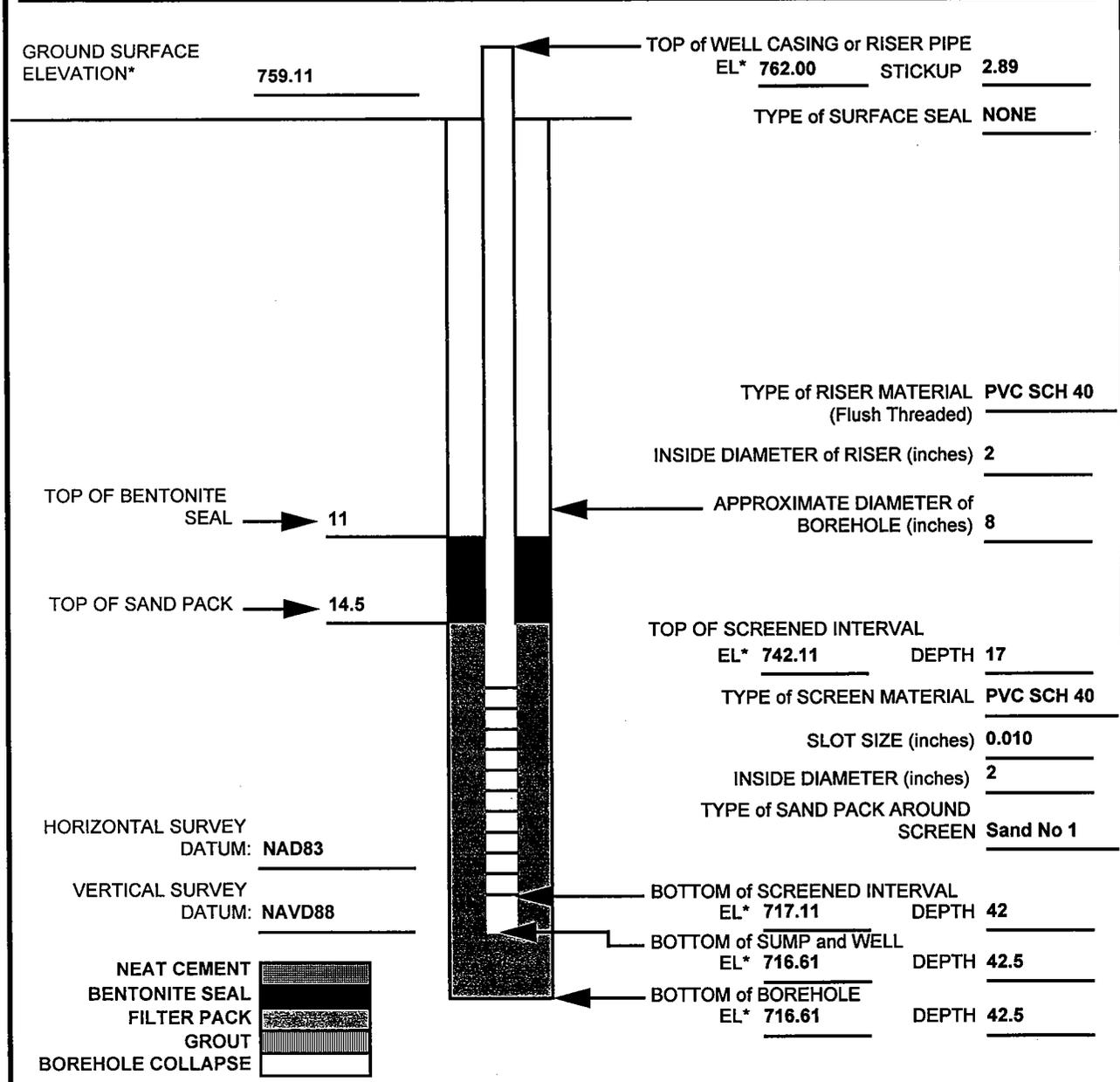
VERTICAL SURVEY DATUM: NAVD88

- 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

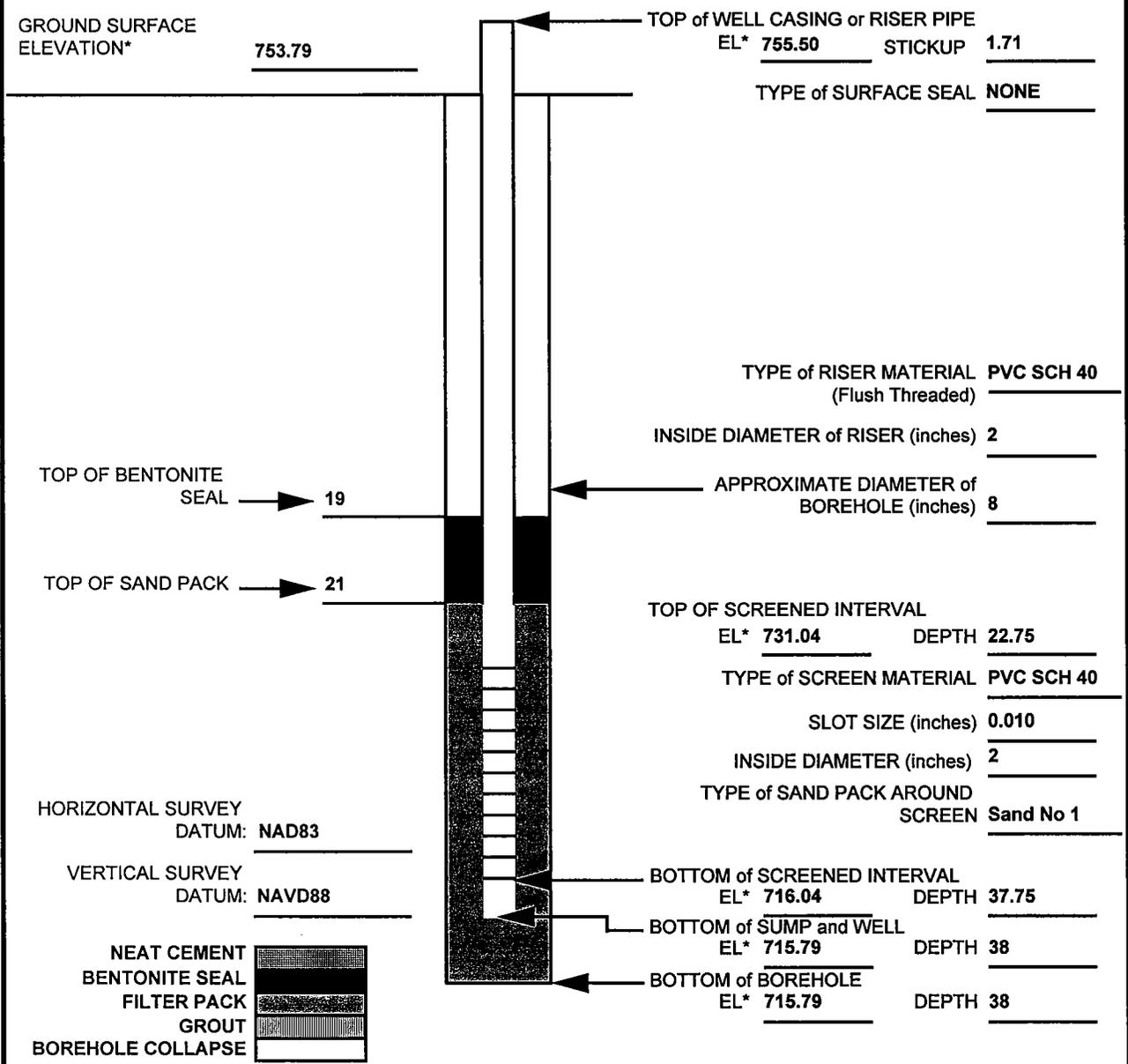
PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: TEG / MILLER DRILLING CO. DRILLER: K. GOBELL IT FIELD REPRESENTATIVE: J. MESSER, K. ARNOLD	WELL NO: PPMP-227-GP12 DRILLING METHOD: INSTALLATION DATE: 02/12/99 NORTHING: 1181111.250 EASTING: 673465.860 JOB 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 LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING DRILLER: K. GOBELL IT FIELD REPRESENTATIVE: K. ARNOLD	WELL NO: PPMP-227-GP13 DRILLING METHOD: INSTALLATION DATE: 03/01/99 NORTHING: 1180894.930 EASTING: 673377.150 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.

Tue Oct 26

FORT McCLELLAN

IT Corp Draft Boring Logs (PPMP-229)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-229-GP01	.0	4.0				Clay, mottled brown, black, moist.
	4.0	6.0	ch		MOIST	Fat CLAY, mottled brown, black, red, moist.
	6.0	8.0	ch		MOIST	Gray, mottled brown, fat, CLAY, moist, high plasticity.
	8.0	10.0	cl		MOIST	Moist, CLAY, little Silt, gray, orange, mottled brown, (something unnatural in soil, looks like brillo pad).
	10.0	18.0	cl		WET	CLAY, little Silt, yellow green, mottled brown, high plasticity, wet at 11'.
	18.0	22.0	ch		WET	Mottled brown, fat CLAY, moist to wet, high plasticity. Bottom of borehole 22.0'.
PPMP-229-GP02	.0	3.5	ml			Red SILT, some Clay.
	3.5	6.5	sm			Light brown to red, SAND, some Gravel, some Silt.
	6.5	12.0	cl			Red to light brown, mottled CLAY. Bottom of borehole 12.0'. (Direct push).
	14.0	19.0	ch		MOIST	Moist, CLAY, little Sand, medium to high plasticity, red, mottled brown.
	19.0	24.0	ch			Red, mottled brown, CLAY, little Sand, medium to high plasticity.
	24.0	29.0	cl		MOIST	CLAY, some Sand, mottled, brown, red, medium plasticity, layered, moist in areas.
	29.0	34.0	ch			Mottled brown, red CLAY, some Sand, black areas, medium to high plasticity.
	34.0	41.0	ch		WET	CLAY, little Sand, mottled brown, red, high plasticity, wet at 35', significant water, Sand layer.
PPMP-229-GP03	41.0	44.2	ch		WET	Wet, CLAY, little Sand, mottled brown, red, high plasticity. Bottom of borhole 44.20'.
	.0	3.0	ml			Red, SILT, some Clay.
	3.0	6.0	cl			Light brown to red, CLAY, some Silt.
	6.0	12.0	cl			Light brownish red mottled CLAY. Bottom of borehole ia 12'. (Direct push).
	14.0	19.0	ch			CLAY, little Sand , mottled brown, red, areas of black, high plasticity.
	19.0	24.0	ch		MOIST	Moist CLAY, little Sand, mottled brown, cream, red, areas of black, high plasticity, cream colored Clay from 19-20'.
	24.0	29.0	ch		WET	CLAY, little Sand, wet, red, mottled brown, high plasticity, brown sandy area, fat Clay from 25-26'.
	29.0	32.5	ch		WET	Wet, fat CLAY, mottled brown, plastic. Bottom of borehole at 32.5'. (Augered).

Tue Oct 26

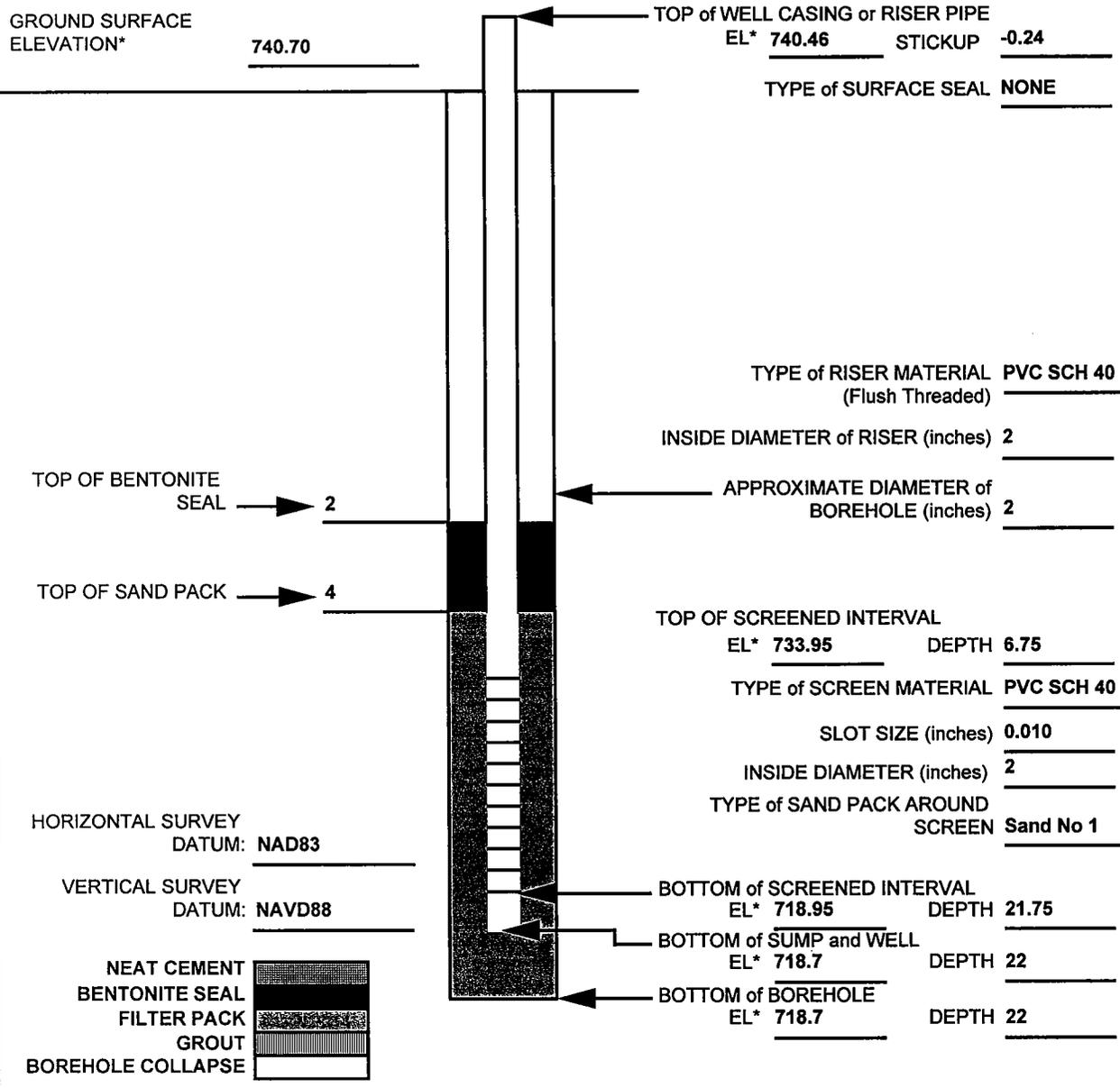
FORT McCLELLAN

IT Corp Draft Boring Logs (PPMP-229)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-229-GP04	.0	6.5	ml			Red clayey SILT, increased Gravel at approximately 1.5'.
	6.5	12.0	cl			Light brown to red mottled CLAY. Bottom of borehole 12.0'. (Direct push).
	14.0	19.0	ch		WET	Red, mottled brown, gray, white, layered, CLAY, little Sand, sample is wet at approximately 14'.
	19.0	24.0	ch		WET	Wet, CLAY, high plasticity. Bottom of borehole 23.66'.
PPMP-229-GP05	.0	2.0	ch			SILT, some Clay, mottled brown, high plasticity.
	2.0	4.0	ch			SILT, some Clay, mottled brown, red, high plasticity, little Chert nodules.
	4.0	6.0	ch			CLAY, little Silt, mottled brown, some organics.
	6.0	8.0	ch		WET	Wet at 7.0', mottled brown, black, CLAY and Silt.
	8.0	14.0	ch		WET	Fat CLAY, little Silt, yellow, mottled brown, high plasticity, wet, traces of old used wire.
PPMP-229-GP06	14.0	19.0	ch		WET	Wet, fat CLAY, mottled brown, yellow. Bottom of borehole 19.0'. (Augered).
	.0	4.5	ml			Red, SILT, some Clay.
	4.5	7.5	sc-sm			Light brown to red SAND, some Gravel, Silt and Clay.
PPMP-229-GP07	7.5	12.0	cl			Red to light brown mottled CLAY. Bottom of borehole at 12.0'. (Direct push).
	.0	7.5	cl			Light brown to red CLAY, some Gravel and Silt, decreasing Gravel to 4.5'.
	7.5	12.0	cl			Light brown to red mottled CLAY, 1st and 2nd attempts produced localized dark gray, gravelly, Silt with construction debris(wood). Boring terminated at 12.0'. (Direct push).
	14.0	19.0	ch		MOIST	Gray, mottled brown CLAY, little Sand, highly plastic, little moist.
	19.0	24.0	sc		MOIST	Gray, mottled brown, CLAY and Sand, medium plasticity, moist.
	24.0	27.5	sc			Mottled brown, gray, SAND and Clay, layered, some areas are hard like Shale, low plasticity. Bottom of borehole 27.5'.

MONITORING WELL INSTALLATION DETAIL

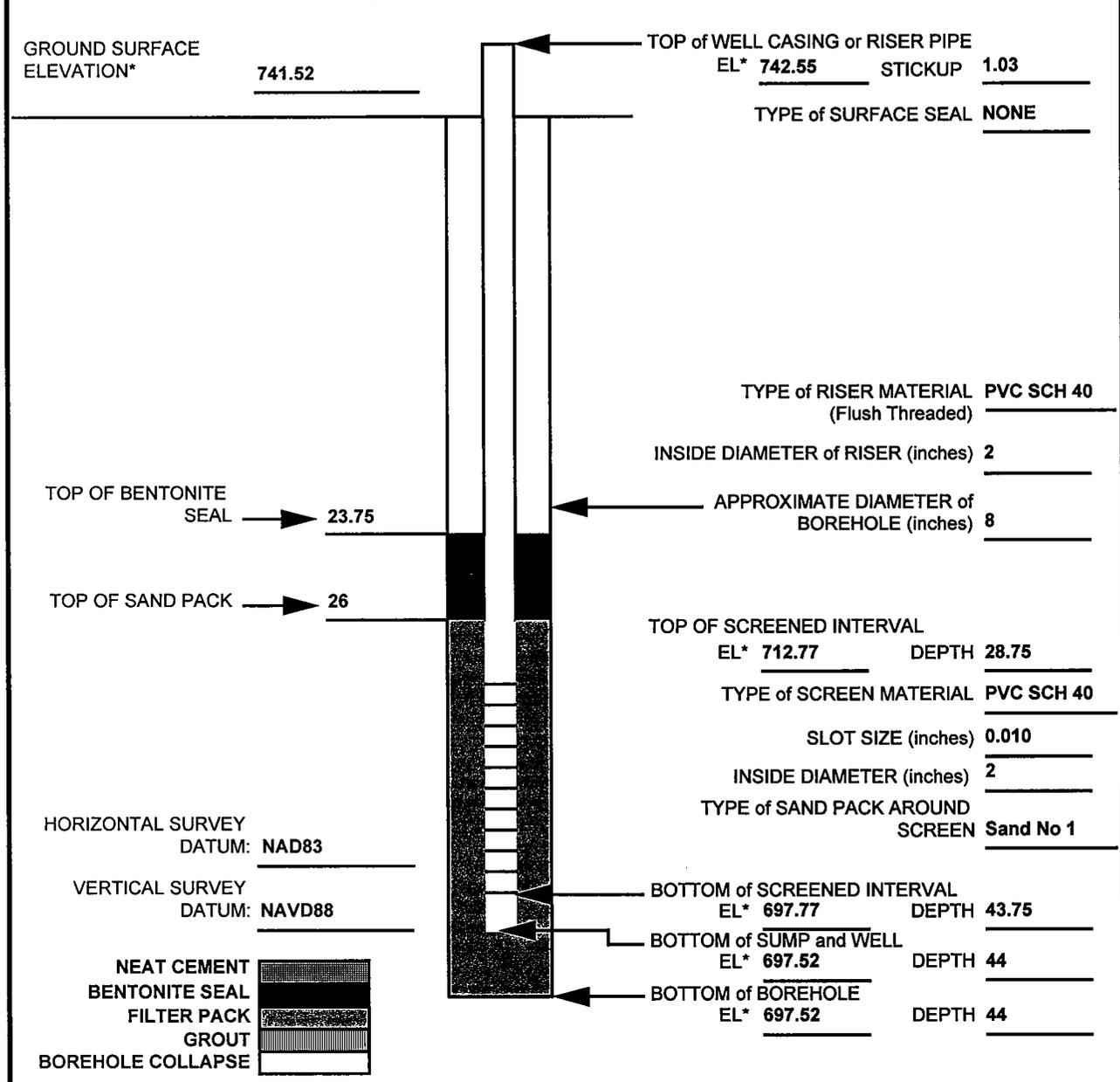
PROJECT: Fort McClellan, SAD TERC	WELL NO: PPMP-229-GP01
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/25/99
CONTRACTOR: MILLER DRILLING CO.	NORTHING: 1181164.460
DRILLER: K. GOBELL	EASTING: 670201.800
IT FIELD REPRESENTATIVE: K. ARNOLD	JOB NO: 774645A



*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

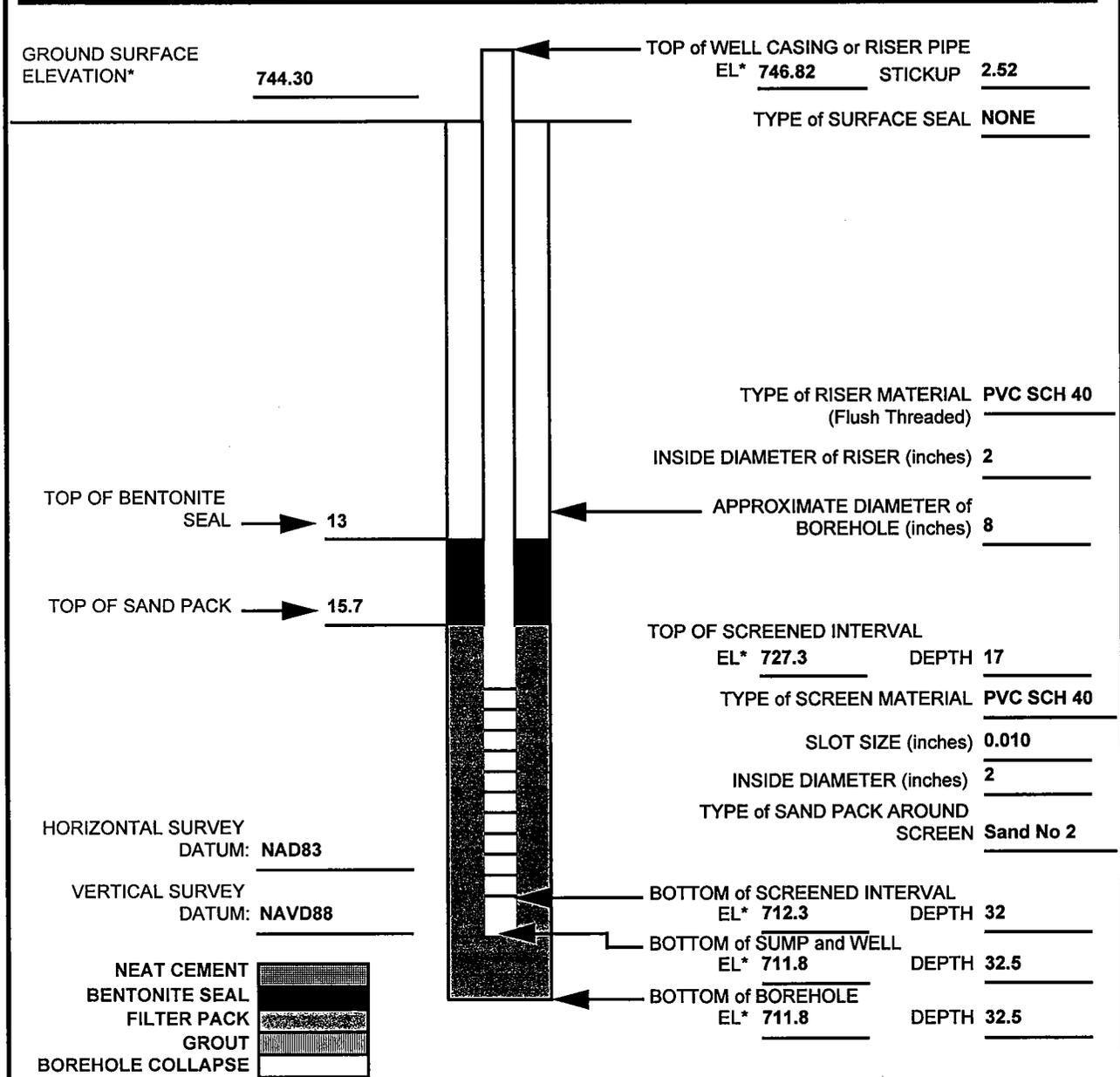
PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING CO. DRILLER: K. GOBELL IT FIELD REPRESENTATIVE: K. ARNOLD	WELL NO: PPMP-229-GP02 DRILLING METHOD: INSTALLATION DATE: 02/16/99 NORTHING: 1181036.040 EASTING: 670414.100 JOB NO: 774645A
---	--



*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

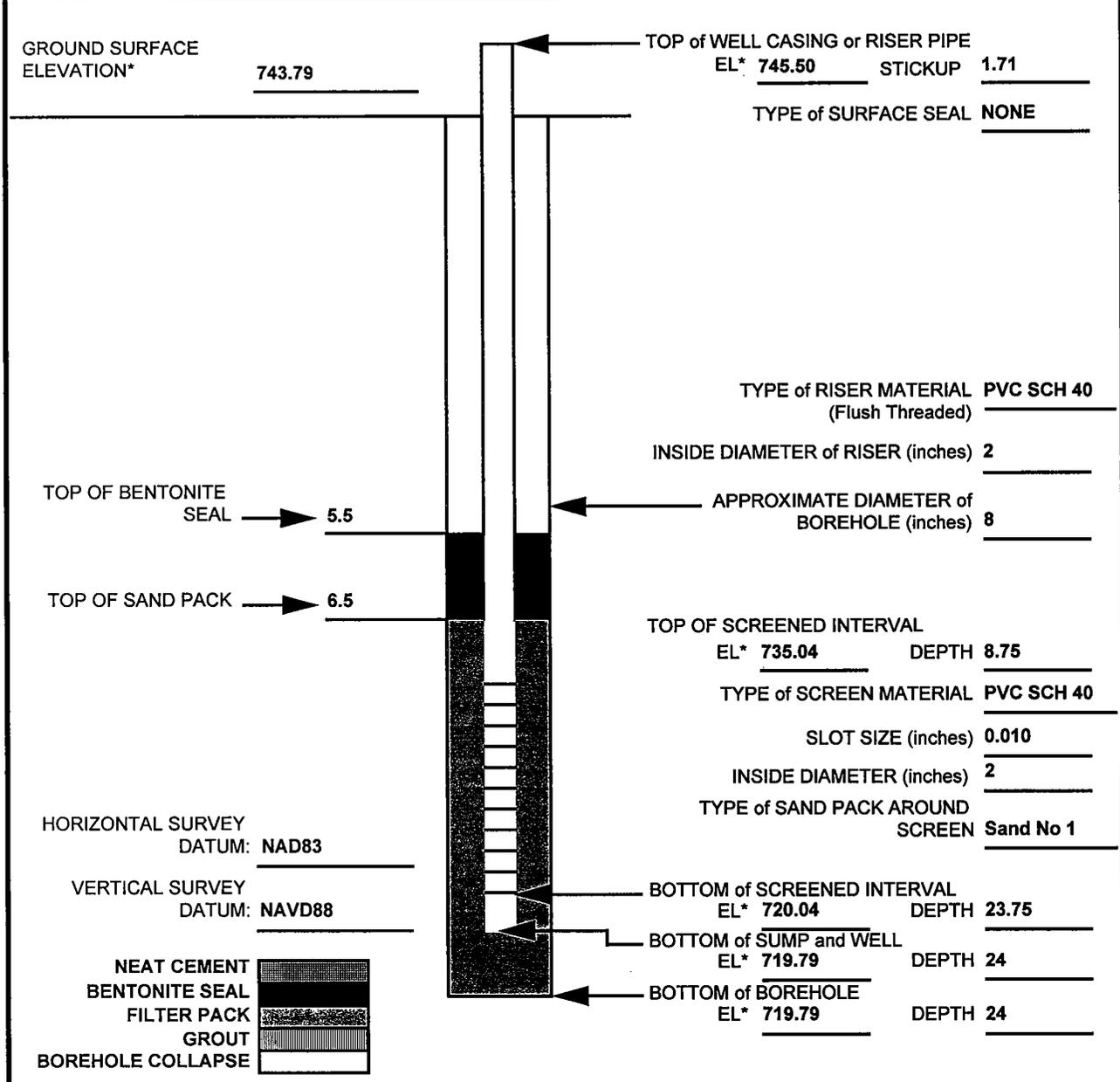
PROJECT: Fort McClellan, SAD TERC	WELL NO: PPMP-229-GP03
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/17/99
CONTRACTOR: MILLER DRILLING CO.	NORTHING: 1180875.890
DRILLER: K. GOBELL	EASTING: 670440.220
IT FIELD REPRESENTATIVE: K. ARNOLD	JOB NO: 774645A



*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

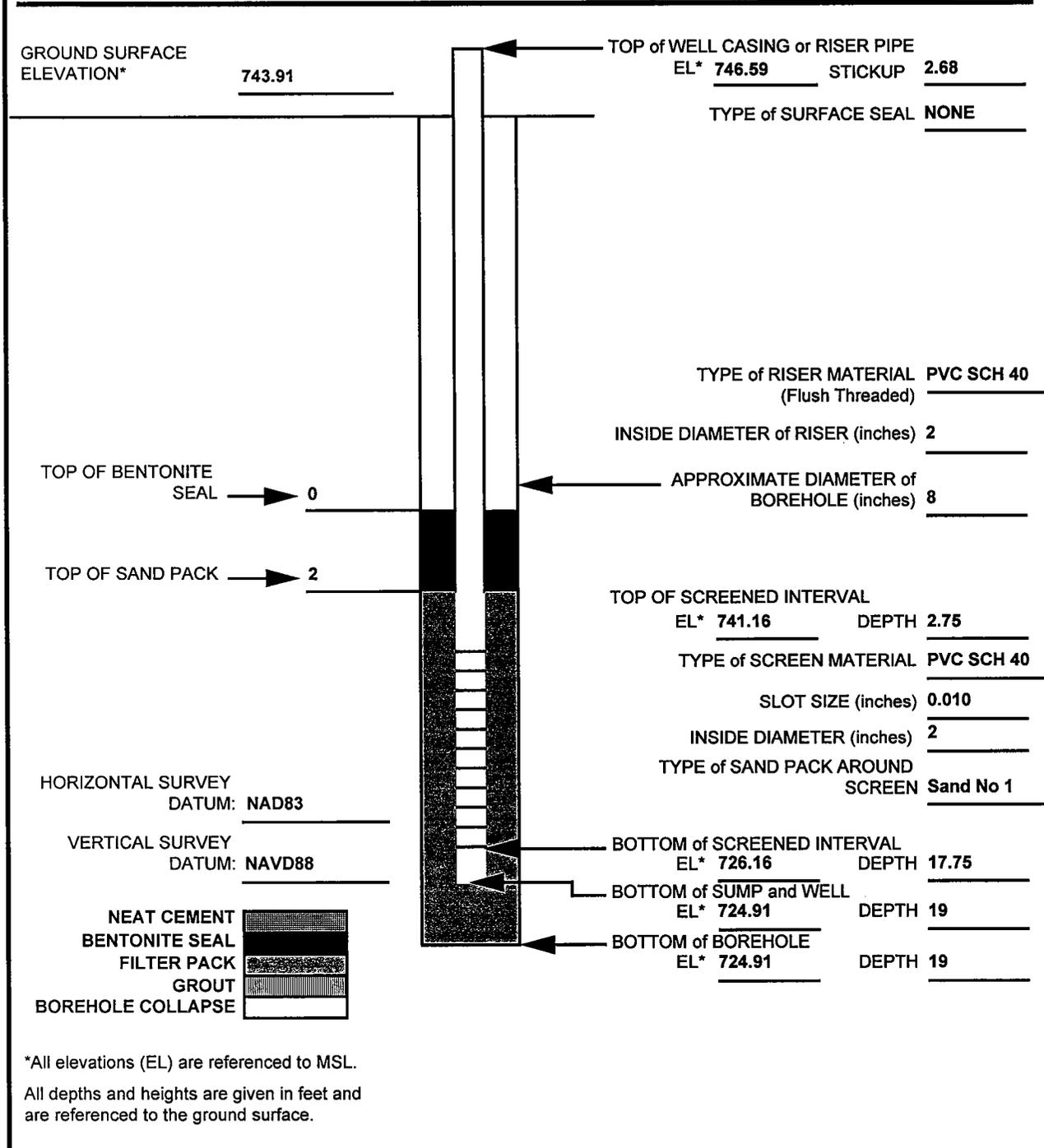
PROJECT: Fort McClellan, SAD TERC	WELL NO: PPMP-229-GP04
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/15/99
CONTRACTOR: MILLER DRILLING CO.	NORTHING: 1180897.400
DRILLER: K. GOBELL	EASTING: 669877.200
IT FIELD REPRESENTATIVE: K. ARNOLD	JOB NO: 774645A



*All elevations (EL) are referenced to MSL.
 All depths and heights are given in feet and are referenced to the ground surface.

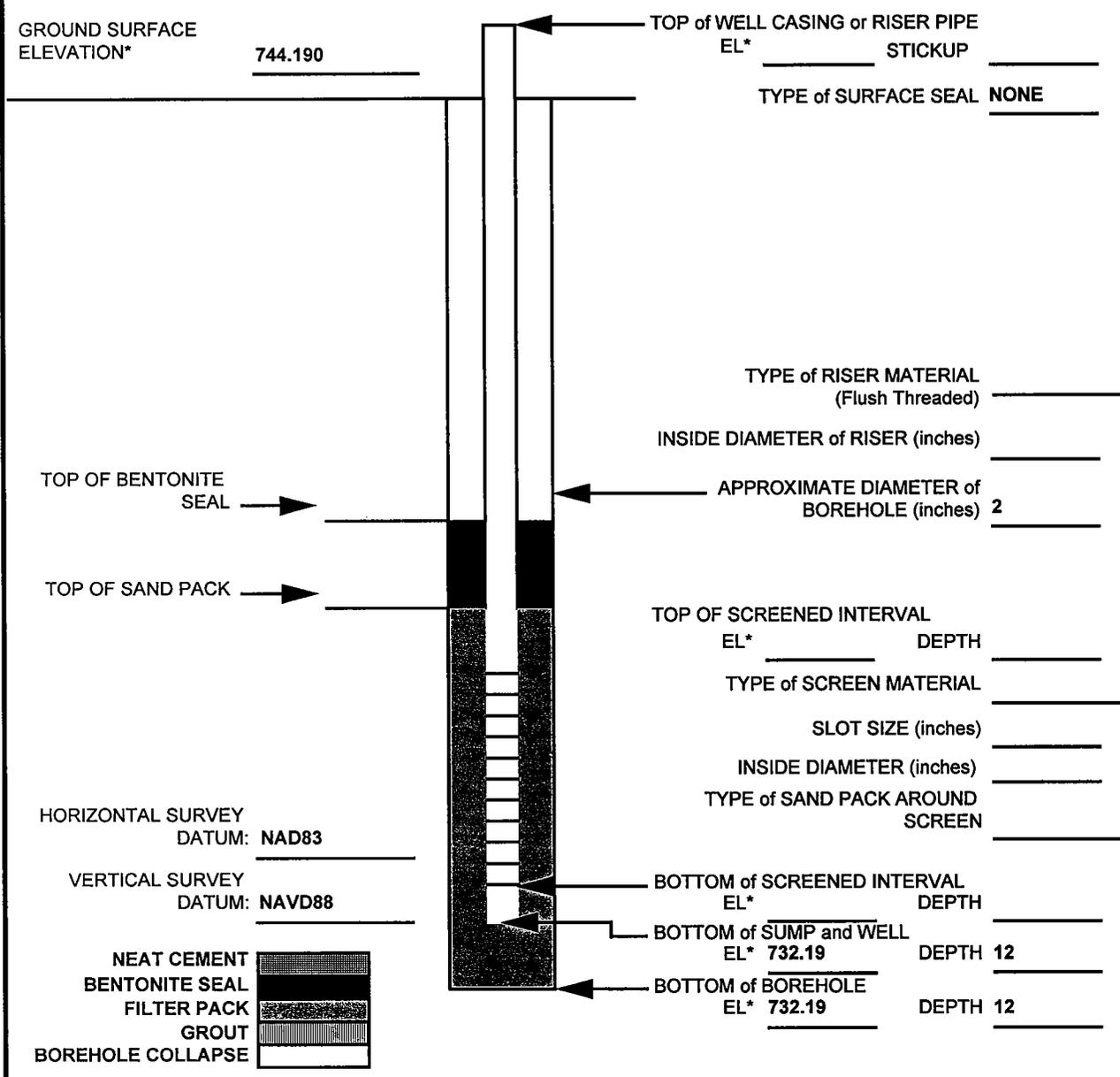
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING CO. DRILLER: K. GOBELL IT FIELD REPRESENTATIVE: K. ARNOLD	WELL NO: PPMP-229-GP05 DRILLING METHOD: INSTALLATION DATE: 02/26/99 NORTHING: 1181101.560 EASTING: 670064.510 JOB NO: 774645A
---	--



MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION Anniston, AL CLIENT: USACE Mobile District CONTRACTOR MILLER DRILLING DRILLER: _____ IT FIELD REPRESENTATIVE: J. MESSER	WELL NO: PPMP-229-GP06 DRILLING METHOD: _____ INSTALLATION DATE 02/15/99 NORTHING: 1180978.810 EASTING: 670382.480 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

LOCATION: Anniston, AL

CLIENT: USACE Mobile District

CONTRACTOR: MILLER DRILLING CO.

DRILLER: K. GOBELL

IT FIELD REPRESENTATIVE: K. ARNOLD

WELL NO: PPMP-229-GP07

DRILLING METHOD:

INSTALLATION DATE: 02/15/99

NORTHING: 1181227.660

EASTING: 669868.170

JOB NO: 774645A

GROUND SURFACE ELEVATION* 741.37

TOP of WELL CASING or RISER PIPE

EL* 744.04 STICKUP 2.67

TYPE of SURFACE SEAL NONE

TYPE of RISER MATERIAL PVC SCH 40
(Flush Threaded)

INSIDE DIAMETER of RISER (inches) 2

APPROXIMATE DIAMETER of BOREHOLE (inches) 8

TOP OF BENTONITE SEAL → 8

TOP OF SAND PACK → 10

TOP OF SCREENED INTERVAL

EL* 729.37 DEPTH 12

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: NAVD88

BOTTOM of SCREENED INTERVAL
EL* 714.12 DEPTH 27.25

BOTTOM of SUMP and WELL
EL* 713.87 DEPTH 27.5

BOTTOM of BOREHOLE
EL* 713.87 DEPTH 27.5



*All elevations (EL) are referenced to MSL.

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

Tue Oct 26

FORT McCLELLAN

IT Corp Draft Boring Logs (PPMP-230)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-230-GP01	.0	1.0	ml			Brownish gray SILT, trace roots, some Clay.
	1.0	4.0	sm		WET	Grayish brown SAND, some Silt, some Gravel, very wet at 3' BLS. Direct push refusal at 4' BLS.
	4.0	5.0	sm		WET	Gray orange, wet SAND mixed with large Chert nodules, little Silt, low plasticity. Auger refusal at 5'.
PPMP-230-GP02	.0	2.5	sm			Yellowish red to light brown SAND, with trace roots, some Silt.
	2.5	3.0	sp			Tan, poorly sorted, coarse SAND.
	3.0	6.0	sm		WET	Red to light brown SAND, some Silt, some Gravel. Direct push. Boring terminated at 6' due to 5.5' BLS water table encounter.
PPMP-230-GP03	10.0	16.0	sm		WET	Soft, SAND, some Silt, tan, wet. Auger refusal at 16'.
	.0	1.5	sm			Light gray SAND, some Silt, trace roots.
PPMP-230-GP04	1.5	6.0	sp		WET	Tan to light brown, poorly sorted SAND, coarse grained, with little to no fines, some Gravel. Direct push. Boring terminated at 6' BLS due to encountered water table at 5.5' BLS.
	6.0	9.0	sm		WET	SAND, wet, cuttings. Auger refusal at 9'.
	.0	1.0	sc			Black, mottled brown Chert, Clay and Sand.
	1.0	3.0	sc			Black, mottled brown, CHERT, CLAY, and SAND.
	3.0	5.0	ml		DRY	Black, mottled brown CLAY and SILT, dry.
PPMP-230-GP05	5.0	7.0			DRY	Black, mottled brown, large chunks of QUARTZ, Brick, dry.
	7.0	8.0	ml		WET	Backfill, SILT, some Clay, mottled brown, wet at 7.5'. Direct push refusal at 8.0'.
	.0	1.0	ml			SILT, some CLAY, mottled brown.
	1.0	3.0	ml			SILT, some Clay, mottled brown, low plasticity, large chunks of Chert.
	3.0	5.0	sm			SAND, some Silt, mottled brown, low plasticity.
PPMP-230-GP06	5.0	6.0	sm		DRY	SAND, some Silt mixed with Chert nodules, mottled brown, white, dry. Direct push refusal at 6'.
	.0	2.0	cl			CLAY, with SAND, mottled brown, black, large chunks of Chert, backfill.
	2.0	4.0	ml			SILT, some Clay and Gravel, mottled brown, red.

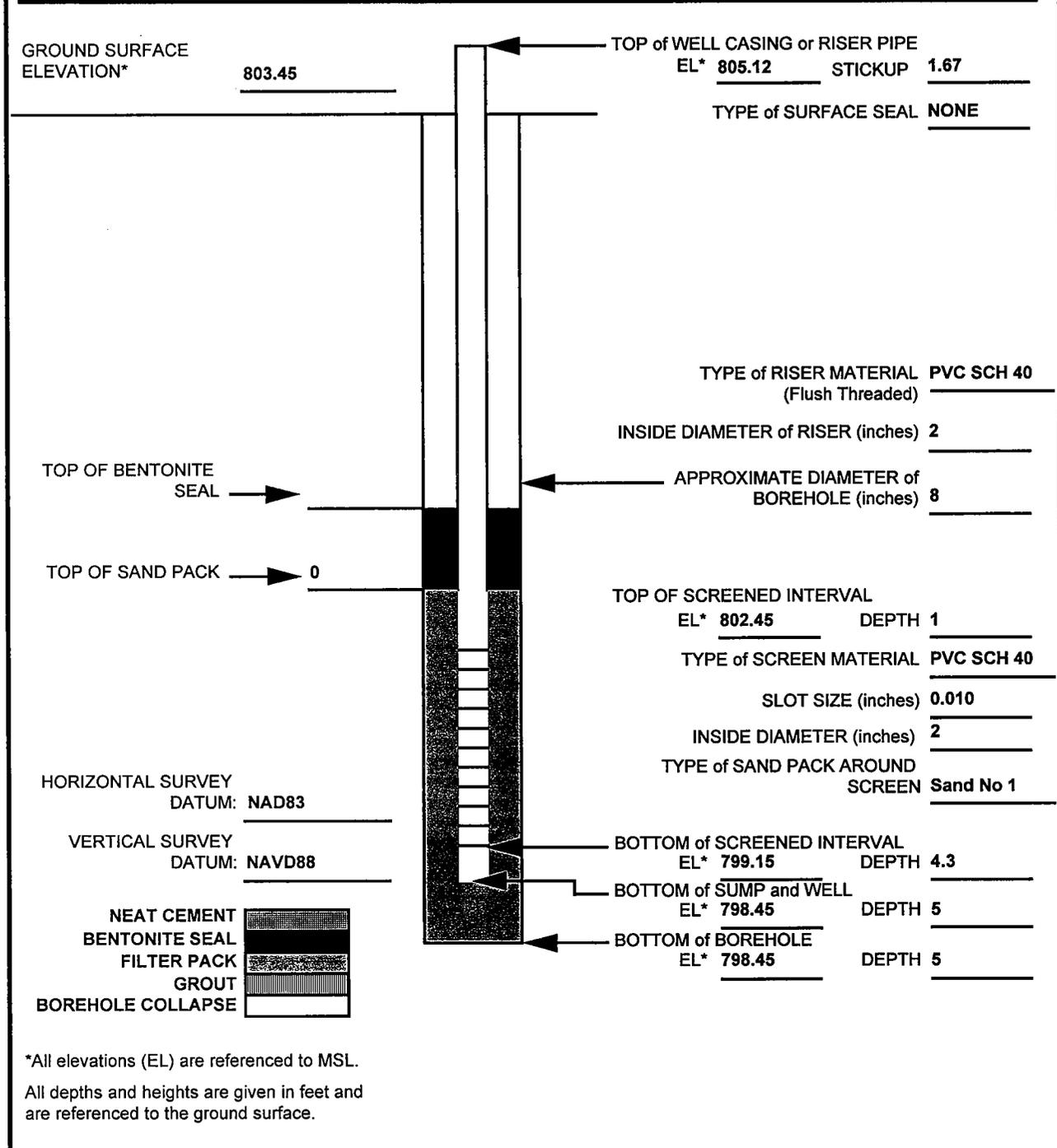
..\sql\qclth.sql

FORT McCLELLAN
 IT Corp Draft Boring Logs (PPMP-230)
 Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-230-GP06	4.0	6.0				Large chunks of QUARTZ, Granite, backfill material.
	6.0	8.0	ml			Mottled brown SILT and CLAY, backfill, little plasticity.
	8.0	10.0	ml			Mottled brown SILT and CLAY, large Chert nodules with Quartz, low plasticity.
	10.0	12.0	gm		DRY	CHERT, mottled brown, white, orange, yellow, backfill, dry. Terminated direct push at 12'.
PPMP-230-GP07	.0	1.5	sc			Red to light brown SAND, some Clay, some Gravel.
	1.5	7.0	sm			Alternating red to dark brown SAND, some Silt, some Gravel, turning dark brown at 4' and turning to a light brown with depth.
	7.0	7.5	cl			Brownish gray CLAY, some Sand.
	7.5	12.0	sm		WET	Brownish SAND, some Silt, wet at 11'. Direct push. Boring terminated at 12' BLS.

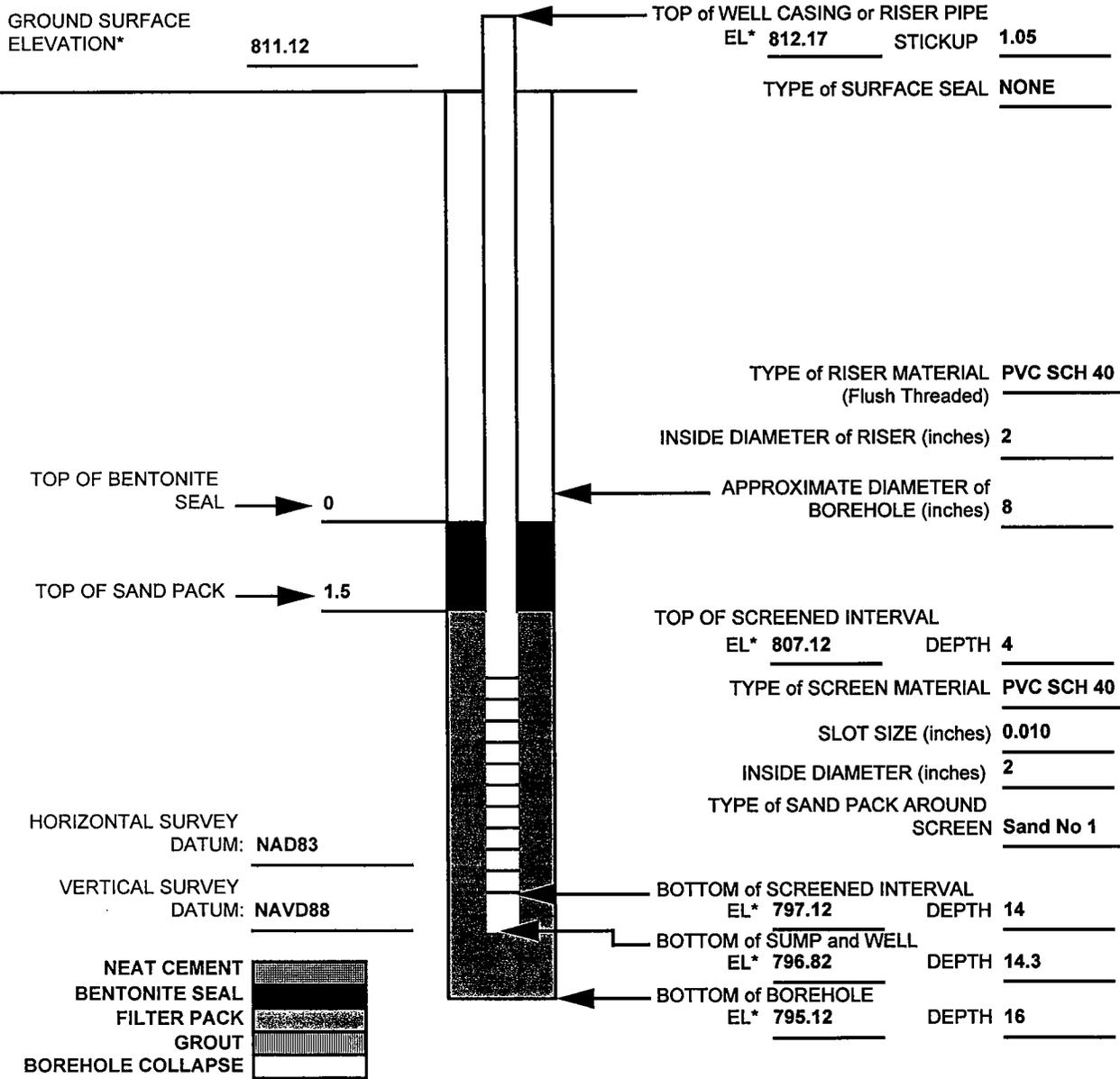
MONITORING WELL INSTALLATION DETAIL

PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING CO. DRILLER: K. GOBELL, H. HUNTON IT FIELD REPRESENTATIVE: K. ARNOLD	WELL NO: PPMP-230-GP01 DRILLING METHOD: INSTALLATION DATE: 02/25/99 NORTHING: 1175663.522 EASTING: 673754.236 JOB NO: 774645A
--	--



MONITORING WELL INSTALLATION DETAIL

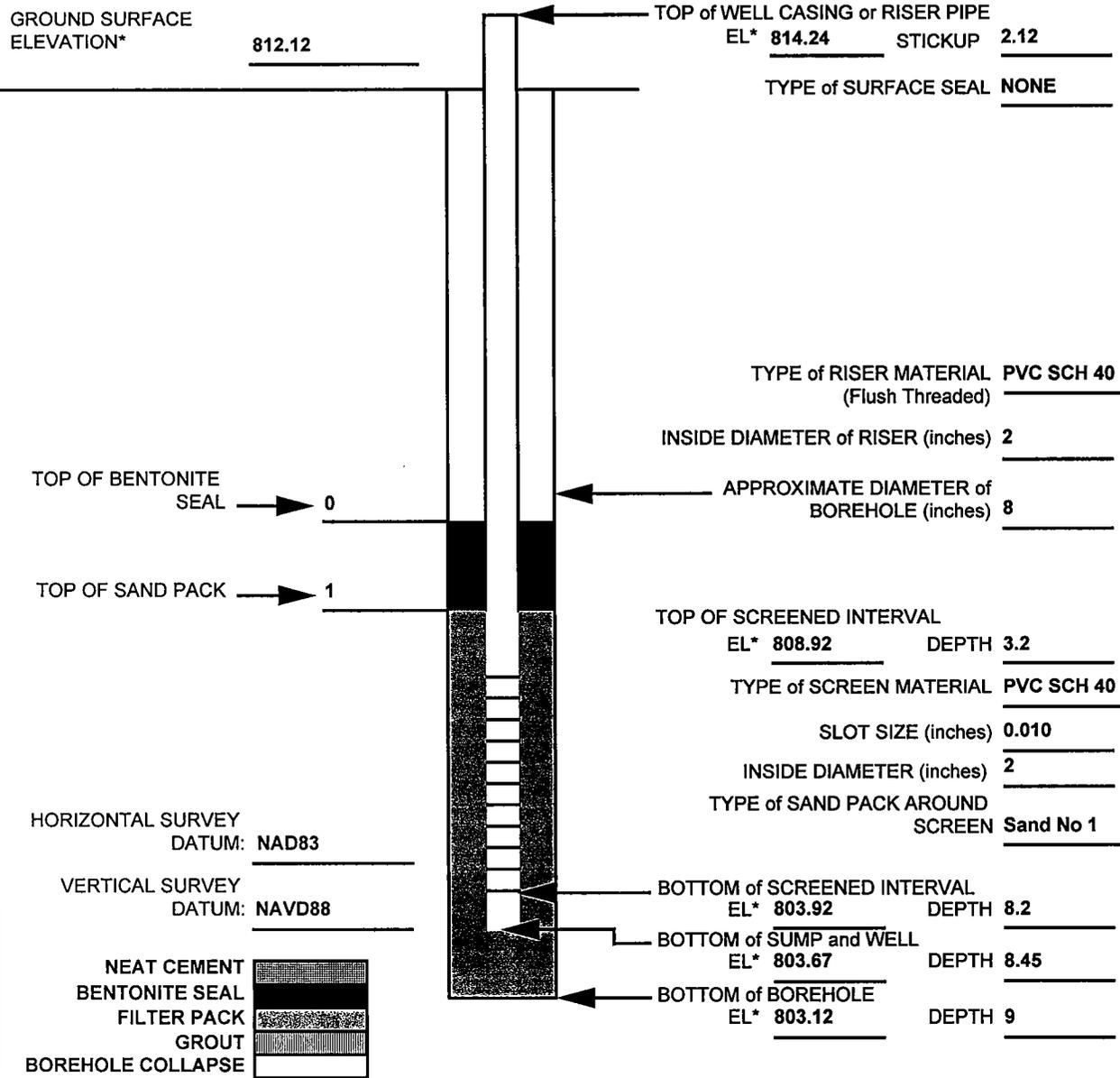
PROJECT: Fort McClellan, SAD TERC	WELL NO: PPMP-230-GP02
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 02/10/99
CONTRACTOR: MILLER DRILLING CO	NORTHING: 1176089.466
DRILLER: K. GOBELL	EASTING: 673868.044
IT FIELD REPRESENTATIVE: M. GILES	JOB NO: 774645A



*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 LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING CO. DRILLER: K. GOBELL IT FIELD REPRESENTATIVE: K. ARNOLD	WELL NO: PPMP-230-GP03 DRILLING METHOD: INSTALLATION DATE: 02/16/99 NORTHING: 1176188.642 EASTING: 673865.270 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.

Tue Oct 26

FORT McCLELLAN

IT Corp Draft Boring Logs (PPMP-231)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-231-GP01	.0	1.0	ch		MOIST	CLAY, soft to stiff, some Sand, moist, dark reddish brown, plastic, dark brown 2" interval at 14" mark on spoon.
	1.0	3.0	ch		MOIST	CLAY, stiff, moist, little Sand, reddish brown, plastic.
	3.0	5.0	ch		MOIST	CLAY, stiff, moist, little Sand, reddish brown, plastic.
	5.0	7.0	ch		MOIST	CLAY, stiff, moist, little Sand, reddish brown, little mottles, plastic.
	7.0	9.0	ch		MOIST	CLAY, stiff, moist, little Sand, reddish brown, yellow mottles, plastic.
	9.0	14.0	ch		MOIST	CLAY, firm, moist, little Sand, reddish brown, more yellow mottles, plastic.
	14.0	19.0	ch		MOIST	CLAY, firm, moist, little Sand, reddish brown, more yellow mottles, plastic.
	19.0	23.0				No recovery. Plastic jammed in spoon, clear, heavy in layers.
	23.0	29.0	ch		DAMP	CLAY, damp, stiff, yellowish red, mottled, black, dark red, pale gray, yellowish brown, plastic.
	29.0	41.0				No Recovery. Plastic plug in spoon. Bottom of borehole 41'.
PPMP-231-GP02	.0	1.0	sc		MOIST	Soft to semi-firm SAND, with Clay, brown to dark brown, moist.
	1.0	6.0	ml		MOIST	Firm SILT, with Clay, breaks easily, low plasticity, slightly moist, yellow brown.
	6.0	10.0	ml		DRY	Firm SILT, with Clay, breaks easily, low plasticity, slightly moist, yellow brown, turning a slightly reddish brown color at 6', dry.
	10.0	11.0	ml		DRY	Firm SILT, with Clay, breaks easily, low plasticity, dry, slightly reddish brown.
	11.0	14.0	ml			Firm SILT, with Sand, occasional layers of Sandstone, SILT is reddish brown, low plasticity, Sand is medium grained, off-white, occasional 1" piece of Quartzite.
	14.0	19.0	ml		MOIST	Firm SILT, with Gravel, low plasticity, reddish brown, moist, Gravel is .25" to 1", subangular, Quartzite.
	19.0	24.8	ml		DRY	Firm SILT, with Clay, low plasticity, reddish brown, with light brown mottling, dry.
PPMP-231-GP03	24.8	29.0	cl		DRY	Firm CLAY, with Sand, low plasticity, reddish brown, dry.
	29.0	35.0	cl		WET	Firm CLAY, with Sand, medium plasticity, reddish brown. Bottom of borehole 35'.
	.0	1.0	sc		MOIST	SAND, some Clay, soft, moist, yellowish red and dark red, well sorted to poorly sorted.
	1.0	3.0	sc		MOIST	SAND, some Clay, soft, moist, yellowish red and dark red, well sorted to poorly sorted.

FORT McCLELLAN

IT Corp Draft Boring Logs (PPMP-231)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-231-GP03	3.0	5.0	sc		MOIST	SAND, some Clay, soft, moist, yellowish red, poorly sorted.
	5.0	7.0	sc		MOIST	SAND, some Clay, soft, moist, yellowish red, large grains to fine.
	7.0	9.0	sc		MOIST	SAND, some Clay, very soft, moist, yellowish red with yellowish brown, mottles, trace, fine, white, soft, crystals, trace black mottles.
	9.0	11.0	sc		MOIST	SAND, with Clay, until bottom six inches, soft, moist, yellowish red with yellowish brown, mottles, trace, fine, white, soft, crystals, trace, black mottles, 6" Clay, damp, hard, yellowish brown, mottled dark red.
	11.0	16.0	sc		DAMP	SAND, some Clay, damp, firm, yellowish brown, grading to dark red, to dark reddish brown, no mottles, smooth even texture.
	16.0	18.0	sc		DAMP	SAND, some Clay, damp, firm, yellowish brown, grading to dark red, to dark reddish brown, no mottles, little broken Sandstone, more plastic Clay.
	21.0	23.0	sc		DAMP	SAND, damp, soft, some Clay, dark red, trace yellow mottles, Clay is plastic, little broken Sandstone
	26.0	28.0	sc		DAMP	SAND, some Clay, soft, damp, dark red, trace yellow mottles, Clay plastic, more broken Sandstone, about 30% stained black.
	31.0	33.0	sc		WET	SAND, little Clay, wet, soft to hard, dark reddish brown, about 50% broken Sandstone, some mottles, yellow, black, reddish yellow, Clay is plastic.
PPMP-231-GP04	35.0	37.0	sc		WET	SAND, little Clay, wet, soft, dark reddish brown to yellowish brown, about 50% broken Sandstone, some mottles, yellow, black, reddish yellow, Clay is plastic. Bottom of borehole 39'.
	.0	5.0	sm			Red SAND, some Silt.
	5.0	8.0	sm			Red fine, SAND, some Silt.
PPMP-231-GP05	8.0	12.0	sm			Red SAND, some Silt. Bottom of borehole 12'.
	.0	6.5	sm			Red, SAND, some Silt.
	6.5	10.0	cl			Red, CLAY, some Silt.
	10.0	11.5	sm			Red, SAND, some Silt.
	11.5	12.0	gc			Light brown to red, GRAVEL, some Clay. Bottom of borehole 12'.

FORT McCLELLAN

IT Corp Draft Boring Logs (PPMP-231)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-231-GP06	.0	7.0	sm			Red, SAND, some Silt, fine.
	7.0	12.0	sm			Red, SAND, some Silt, fine. Bottom of borehole is 12.0'.
PPMP-231-GP07	.0	4.2	sm			Red, SAND, some Silt, fine.
	4.2	7.0	sm			Red, SAND, some Silt, fine.
	7.0	9.0	cl			Red to brownish gray, mottled, CLAY.
	9.0	10.0	sm			Red, SAND, some Silt.
	10.0	12.0	cl			Red to gray, mottled, CLAY. Bottom of borehole is 12'.
PPMP-231-GP08	.0	3.0	sm			Red to brown, SAND, some Gravel, some Silt, grading to no Gravel.
	3.0	5.5	cl			Red, Clay, some Silt.
	5.5	7.0	sw			Red to light brown, poorly sorted, coarse, GRAVEL, Sand, with little to no fines.
	7.0	7.5	sm			Red to light brown, SAND, some Silt.
	7.5	11.0	cl			Red, CLAY, some Silt.
PPMP-231-GP09	11.0	12.0	sm			Red, SAND, some Silt, some Gravel. Bottom of borehole is 12'.
	.0	1.0	sm			Red, SAND, some Silt.
	1.0	4.5	sm			Red, fine, SAND, some Silt.
	4.5	6.5	cl			Red to brown, mottled, CLAY.
PPMP-231-GP10	6.5	7.0	sc			Red to brown, SAND, some Clay. Bottom of borehole is 7'.
	.0	3.0	sm			Red SAND, some Silt.
	3.0	7.0	sm			Red fine, SAND, some Silt.
PPMP-231-GP11	7.0	12.0	sm			Red SAND, some Silt. Bottom of borehole is 12'.
	.0	2.0	ml			Red, SILT, some Sand.
	2.0	4.0	ml			Red, SILT, some Sand.
	4.0	6.0	ch			Red, CLAY, with small amounts of Silt and high plasticity, soft.
	6.0	8.0	ch			Red, CLAY, high plasticity, soft.
	8.0	10.0	ch			Red, CLAY, high plasticity, Quartzite sand interbedded, soft.
	10.0	11.0	ch			Red, CLAY, high plasticity, soft.

Tue Oct 26

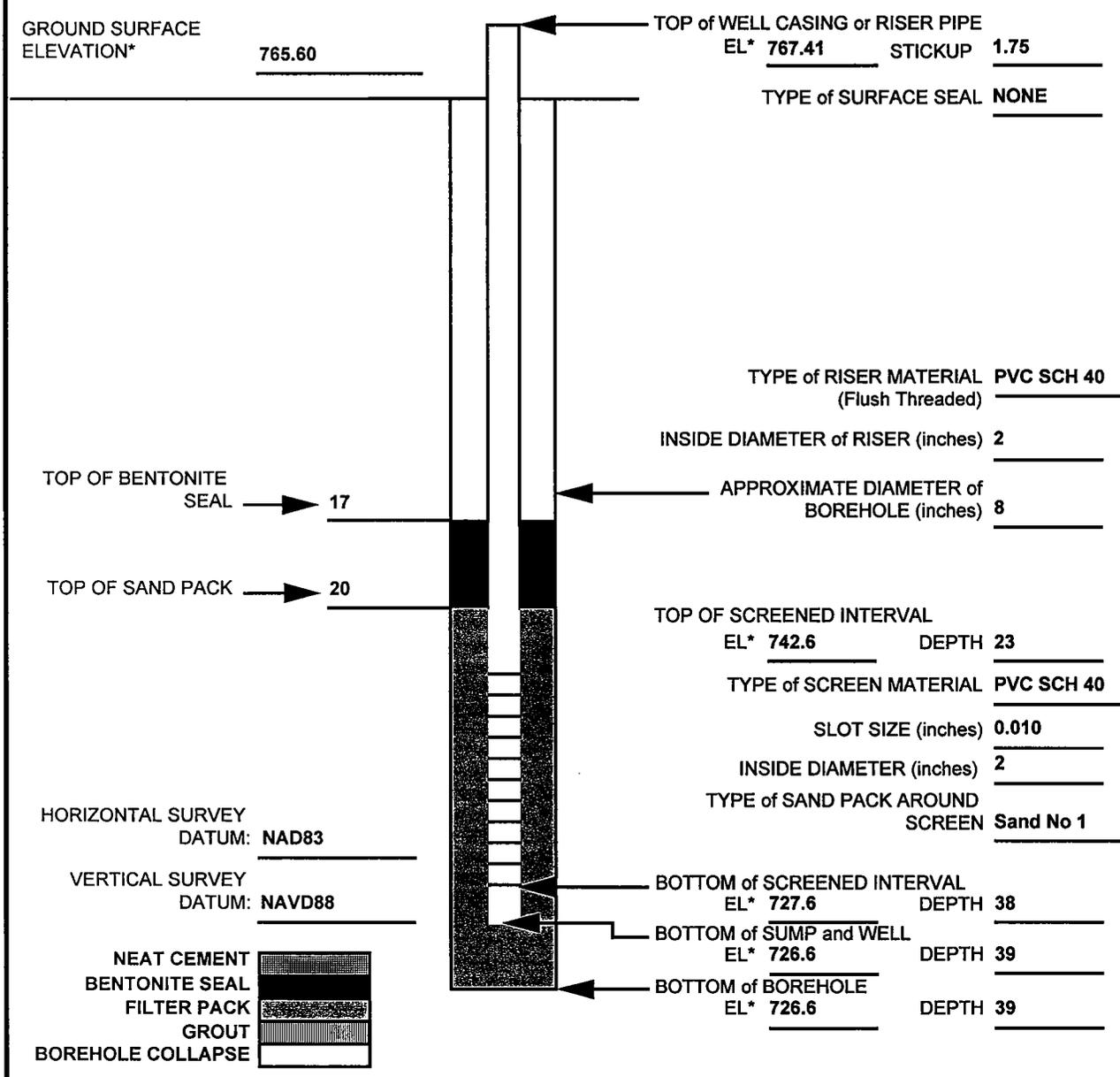
FORT McCLELLAN

IT Corp Draft Boring Logs (PPMP-231)
Lithology (Borings and Wells)

Well	Start Depth	End Depth	USCS Code	LITHO Code	Degree Moisture	Lithology Description
PPMP-231-GP11	11.0	12.0	cl			Orange, red, mottled, CLAY, medium plasticity, Sand interbedded.
	15.0	17.0	cl			Orange, yellow, mottled, CLAY, Sand interbedded, medium plasticity, stiff.
	20.0	22.0	ch			Brown, red, CLAY, Quartzite interbedded, stiff, high plasticity.
	25.0	27.0	cl			Brown, red, CLAY, Quartzite Sand, small amounts of gray CLAY, very stiff, medium plasticity.
	30.0	31.0	cl			Brown, yellow, CLAY, Quartzite sand seam, very stiff, medium plasticity.
	31.0	32.0	cl			Red CLAY, medium plasticity, very stiff.
	35.0	37.0	ml			Red, SILT, CLAY, some Sand, medium plasticity, very firm. Bottom of borehole is 40'.

MONITORING WELL INSTALLATION DETAIL

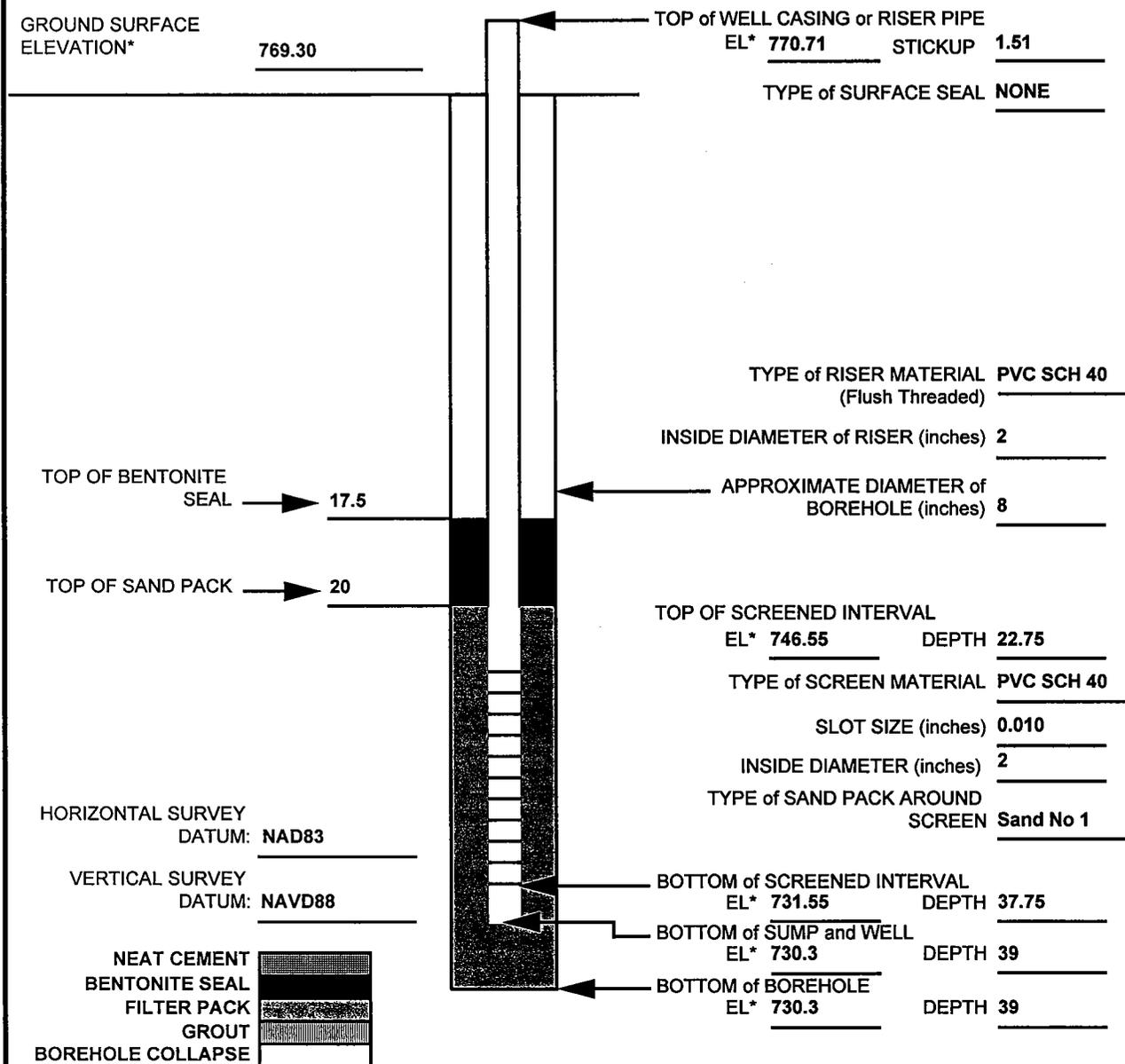
PROJECT: Fort McClellan, SAD TERC LOCATION: Anniston, AL CLIENT: USACE Mobile District CONTRACTOR: MILLER DRILLING DRILLER: K. GOBLE IT FIELD REPRESENTATIVE: C. SHORT	WELL NO: PPMP-231-GP01 DRILLING METHOD: INSTALLATION DATE: 01/27/99 NORTHING: 1180250.12 EASTING: 674902.70 JOB NO: 774645A
---	--



*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: PPMP-231-GP03
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 01/27/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1180105.56
DRILLER: K. GOBLE	EASTING: 674934.89
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: PPMP-231-GP11
LOCATION: Anniston, AL	DRILLING METHOD:
CLIENT: USACE Mobile District	INSTALLATION DATE: 01/25/99
CONTRACTOR: MILLER DRILLING	NORTHING: 1179996.19
DRILLER: D. BISHOP, E. LEE	EASTING: 674959.13
IT FIELD REPRESENTATIVE: S. HSU	JOB NO: 774645A

