APPENDIX A

BORING AND MONITORING WELL CONSTRUCTION LOGS

gai CONSULTANTS, INC.

PROJECT VEPCO/Possum Point — PROJECT NO. 87-215-30

ELEVATION ~85' BKUNTON — GWL 0 HRS — BORING NO. ED-26

DATE 6-1-87 / 5-29-87 — FIELD ENGINEER WH ROBINSON — PAGE NO. 1 OF 3

DEPTH FEET	BLOWS PER SIX INCHES OR CORE RECOVERY/RUN	SAMPLE NO., TYPE & RECOVERY OR % ROCK RECOVERY	RQD (%)	DESCRIPTION: PROFILE	DESCRIPTION: SOIL DENSITY—CONSISTENCY OR ROCK HARDNESS	DESCRIPTION: COLOR	DESCRIPTION: MATERIAL CLASSIFICATION	USCS OR ROCK BROKENNESS	REMARKS*
1	2	3	4	5	6	7	8	9	10
0.0	1 4 4	OS-1			V. STIFF	BRN	SANDY SILT W/ TRACE CLAY, TRACE GRAVEL	ML	*2.0 MOIST, FEW FINE ROOTS.
5.0	4 7 9	OS-2				BRN & GRY	SILT W/ TRACE CLAY, TRACE SAND		*3.7 SL. MOIST TO MOIST,
							-TRACE TO SOME CLAY		MOTTLED GRY & BRN, BLOCKY STRUCTURE,
10.0	4 6 9	OS-3		10.0	MED. DENSE	LT. BRN & RD-BRN	SILTY FN. TO MED. SAND, TRACE CLAY	SM	*1.8 MOIST, FE-STAIN MOTTLES.
							-LT. GRN-GRY CLAYEY SILT AND SAND SEAM 11.0-11.5'		
15.0	5 12 14	OS-4							MOIST.
20.0	9 40 23	OS-5			SOFT	LT. GRN-GRY & RD-BRN	-SOME GRAVEL / CLAYEY SILT W/ TRACE TO SOME SAND, SOME GRAVEL	ML	*0.3 V. MOIST, FE-STAIN MOTTLES, ROCK FRAGMENTS, FEW THIN SANDY LAYERS.
25.0	9 13 16	OS-6			V. STIFF TO HARD	MED TO DK GRN-GRY	SILT W/ TRACE TO SOME CLAY, TRACE V. FN. SAND		*3.2 SL. MOIST. BLOCKY STRUCTURE, VERY MICACEOUS, SOAPY FEELING.
30.0									

REMARKS** 4" I.D. HOLLOW-STEM AUGER 0.0-25.0'; 6" I.D. HOLLOW-STEM AUGER 25.0-81.0; SPT TO 82.5'. WELL SET THROUGH AUGERS. DRILLERS: J. LANG, G. DYE

R16: TRUCK-MOUNTED MOBILE B61

PROJECT NO. 87-215-30

BORING NO. ED-26

*POCKET PENETROMETER READINGS

**METHOD OF ADVANCING AND CLEANING BORING

gai CONSULTANTS, INC.

PROJECT VEPCO/Possum Point — PROJECT NO. 87-215-30

ELEVATION _____ GWL 0 HRS _____ HRS — BORING NO. ED-26

DATE 6-2-87 6-1-87 — FIELD ENGINEER W H ROBINSON — PAGE NO. 2 OF 3

DEPTH FEET	BLOWS PER SIX INCHES OR CORE RECOVERY/RUN	SAMPLE NO., TYPE & RECOVERY OR % ROCK RECOVERY	RQD (%)	DESCRIPTION: PROFILE	SOIL DENSITY—CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS OR ROCK BROKENNESS	REMARKS*
1	2	3	4	5	6	7	8	9	10
30.0	10 23 27	OS-7			V. STIFF TO HARD	DK. GRN-GRY TO GRY	SILT W/ TRACE TO SOME CLAY, TRACE V. FN. SAND	ML	*4.0 SL. MOIST, BLOCKY STRUCTURE, VERY MICACEOUS,
						DK. BLU-GRN-GRY TO GRY	— TRACE TO SOME MED. TO COARSE SAND, TR. FN. GRAVEL		FEW FE-STAINS.
35.0									
	20 45 51	OS-8		36.0	V. DENSE	GRN-GRY, LT. GRN-GRY & LT. BRN	IRREGULARLY INTERBEDDED CLAYEY SILT AND MED. TO COARSE SAND	ML TO SM	SL. MOIST TO MOIST. SOME FE-STAINS. SOME SLICKENSIDES
38.0									
	19 45 56	OS-9				LT. BRN	SILTY MED. TO COARSE SAND W/ TRACE TO SOME CLAY	SM	MOIST TO V. MOIST.
						LT. GRN-GRY			POSSIBLY STRATUM
45.0									
	29 54 59/4	OS-10							VERY MOIST
				49.0					
50.0					HARD	BLU-GRN-GRY	SILT W/ TRACE TO SOME CLAY	ML	END OF DAY 6-1-87.
	24 46 53/3	OS-11					TRACE V. FN. SAND		*5.0+ DRY TO SLIGHTLY MOIST.
							— TRACE TO SOME V. FN. SAND		A FEW THIN SANDY LAYERS. SOME FE-STAINS. MICACEOUS.
55.0									POSSIBLY STRATUM E
	22 39 30	OS-12					— SOME TO AND V. FN. SAND		*5.0+ DRY TO SLIGHTLY MOIST.
									FE-STAIN MOTTLES
					HARD TO V. DENSE	GRN-GRY	V. FN. SAND AND SILT W/ TRACE TO SOME CLAY	ML TO SM	SLIGHTLY MOIST TO MOIST.
60.0									

REMARKS** _____

PROJECT NO. 87-215-30

BORING NO. ED-26

*POCKET PENETROMETER READINGS

**METHOD OF ADVANCING AND CLEANING BORING

PROJECT VEPCO/POSSUM POINT — PROJECT NO. 87-215-30

ELEVATION _____ GWL 0 HRS _____ HRS — BORING NO. ED-26

DATE 6-3-87 / 6-2-87 — FIELD ENGINEER W H ROBINSON — PAGE NO. 3 OF 3

DEPTH FEET	BLOWS PER SIX INCHES OR CORE RECOVERY/RUN	SAMPLE NO., TYPE & RECOVERY OR % ROCK RECOVERY	RQD (%)	DESCRIPTION: PROFILE	DESCRIPTION: SOIL DENSITY—CONSISTENCY OR ROCK HARDNESS	DESCRIPTION: COLOR	DESCRIPTION: MATERIAL CLASSIFICATION	USCS OR ROCK BROKENNESS	REMARKS*
1	2	3	4	5	6	7	8	9	10
60.0	29/31/36	O S-13			VERY DENSE	GRN-GRY & BLU-GRN-GRY	VERY FN SAND AND SILT W/ TRACE TO SOME CLAY	ML TO SM	SL. MOIST TO MOIST, MICACEOUS, INTERMIXED SANDY AND
				63.0			SILTY FN TO MED. SAND W/ TRACE CLAY	SM	SILTY LAYERS.
65.0	12/28/36	O S-14		66.0					MOIST TO V. MOIST. MICACEOUS.
66.5	29/50/4	O S-15					FN. TO MED SAND, SOME TO AND SILT, TRACE CLAY	SM TO ML	BLOCKY STRUCTURE MOIST.
70.0	13/30/43	O S-16					VERY FN TO FN SAND AND SILT W/ TRACE TO SOME CLAY		MICACEOUS, SOME LAYERS MORE SAND THAN OTHERS. SL. MOIST TO MOIST, MICACEOUS.
				74.0					
75.0	14/31/43	O S-17					SILTY MED. SAND W/ TRACE CLAY	SM	MOIST TO V. MOIST. A FEW THIN SILTY LAYERS.
78.0	15/33/38	O S-18							END OF DAY 6-2-87 MOIST TO V. MOIST,
81.0	13/24/31	O S-19					IRREGULARLY INTERBEDDED SILTY MED. SAND, SILTY CLAY AND COALY CARBONACEOUS MATERIAL.	SM TO CL	MOIST
82.5							BOTTOM OF HOLE 82.5'		
							WELL INSTALLATION DETAILS:		
							SCREENED INTERVAL: 80.0 - 60.0'		
							COARSE SILICA SAND: 82.5 - 57.0'		
							BENTONITE PELLETS: 57.0 - 51.0'		
							CEMENT + 5% BENTONITE POWDER GROUT: 51.0 - 1.0'		
							CEMENT: 1.0 - 0.0'		

REMARKS** _____

PROJECT NO. 87-215-30

BORING NO. ED-26

*POCKET PENETROMETER READINGS

**METHOD OF ADVANCING AND CLEANING BORING

Soil Boring Log

Borehole Number: ED-24R

ED-24R

PROJECT INFORMATION		DRILLING INFORMATION	
ROJECT:	**Dominion - Possum Point Power Station**	DRILLING CO.:	**Parratt Wolff, Inc.**
ITE LOCATION:	**Dumfries, Virginia**	DRILLER:	**Kevin White, George Martincic**
)B NAME:	**Possum Point Well Installation**	RIG TYPE:	**Diedrich Drill Rig**
)GGED BY:	**Kevin Goerger**	METHOD OF DRILLING	**Hollow-stem Auger**
ROJECT MANAGER:	**Montgomery Bennett**	SAMPLING METHODS:	**Soil cuttings; 5 foot intervals**
ATES DRILLED:	**9/12/2006**	HAMMER:	**None**
OREHOLE NO.:	**ED-24R**	TOTAL DEPTH:	**63**

OTES: Overcast & 65 degrees F

▼ Water level in completed well NM = Not measured

EPTH	SOIL/ROCK SYMBOLS	SOIL DESCRIPTION	PID	WELL CONSTRUCTION	NOTES
0		TOPSOIL	0.0		GES hand cleared to 4 feet below ground surface
-5		Red and brown fine grained SAND with some SILT, loose, dry	0.0		Well construction: 10 feet of 2" 10-slot schedule 40 PVC and 53' of 2" schedule 40 riser. 3' stick-up protective riser with 2' diameter circular concrete well pad.
10		Red and brown fine grained SAND with some SILT, loose, dry	0.0		
15		Brown fine grained SAND with some SILT, loose, dry	0.0		
20		Brown fine grained SAND with some SILT, loose, dry to 23', wet after 23'	0.0		
25 ▼		Brown fine grained SAND and SILT, sticky, moist	0.0		
30		Brown medium grained SAND and SILT, sticky, moist	0.0		
35		Brown medium to fine grained SAND, loose, wet	0.0		
40		Brown medium to fine grained SAND, loose, wet	0.0		
45		Brown medium to fine grained SAND, loose, wet	0.0		
50		Brown medium to fine grained SAND, loose, wet	0.0		
55		Brown medium to fine grained SAND, loose, wet	0.0		
60		Brown medium to fine grained SAND, loose, wet	0.0		
		Brown CLAY, firm, wet			

Project: Dominion - Possum Point Power Station-SCR
Project Location: Dumfries, Virginia
Project Number: 21354933

Log of Borehole ED-23R

Sheet 1 of 3

Date(s) Drilled	**3/8/04-3/9/04**	Logged By	**B. Fisher**	Reviewed By	**T. Kelly**
Drilling Method	**Hollow Stem Auger**	Drilling Contractor	**Fishburne Drilling, Inc.**	Total Depth of Borehole	**62.0 feet**
Drill Rig Type	**All Terrain Truck Mounted**	Drill Bit Size/Type	**4-1/4 inch**	Ground Surface Elevation	
Groundwater Level(s)	**During drilling 24.0; Static 23.28**	Sampling Method	**24 - inch Split Spoon Sampler**	Hammer Data	**140 lbs./30-inches**
Borehole Backfill	**Cement/Bentonite grout**	Comments	**Monitoring Wells installed on corner property opposite Ash pond E**		

Elevation, feet	Downhole Depth, feet	SAMPLES Type	Number	Recovery (feet)	PID	Graphic Log	Lithologic Log (USCS Code)	MATERIAL DESCRIPTION	FIELD NOTES
	0				NR		SM	10YR 2/1 black mottled with 10YR 6/4 light yellowish brown, silty fine Sand, moist, roots, organic matter	
			1	1.0	NR			10YR 4/6 dark yellowish brown, silty fine Sand, moist, elastic, soft Not Recovered	
	2							Not Sampled	
					NR		SM	10YR 5/8 yellowish brown, silty fine Sand with trace medium sand, slightly moist, moderately elastic, soft	
	4		2	1.5	NR		SM	5Y 6/2 light olive gray mottled with 5YR 5/8 yellowish red, medium sandy Clay, slightly moist, moderately stiff, low plasticity	
								Not Recovered	
	6							Not Sampled	
	8				NR		SC	10YR 5/4 yellowish brown, clayey very fine Sand with some silt and trace medium sand, moist, loose to medium dense, low plasticity	
			3	1.0	2 ppm		SC	5Y 7/2 light gray, clayey very fine Sand with some medium sand, moist, loose to medium dense; medium sand 5YR 5/8 yellowish red	
	10							Not Sampled	
	12								
					NR		SC	10YR 5/8 yellowish brown mottled with some 10YR 2/1 black, clayey very fine Sand with trace medium sand, moist, loose, moderately plastic	
	14		4	2.0	NR		SC	7.5YR 5/8 strong brown mottled with 5Y 7/2 light gray, very fine to medium Sand with trace clay, moist, loose	
	16							Not Sampled	
	18				NR		SC	10YR 5/8 yellowish brown mottled with 5YR 5/8 yellowish red, clayey very fine to fine Sand with some medium sand, moist, low plasticity, very loose to loose	
			5	1.0	NR			Not Recovered	
	20								

Report: ENV_12AS_CLEVELAND+/-USCS; File: POSSUM POINT-SCR.GPJ; 7/30/2004 ED-23R

URS

Project: Dominion - Possum Point Power Station-SCR
Project Location: Dumfries, Virginia
Project Number: 21354933

Log of Borehole ED-23R

Elevation, feet	Downhole Depth, feet	SAMPLES Type	SAMPLES Number	SAMPLES Recovery (feet)	SAMPLES PID	Graphic Log	Lithologic Log (USCS Code)	MATERIAL DESCRIPTION	FIELD NOTES
	20							Not Sampled	
	22								
					NR				
	24		6	1.5	NR		SC	5Y 6/2 light olive gray, fine to medium Sand with some clay, wet, soft	
								Not Recovered	
	26							Not Sampled	
	28		7	1.5			SC	5Y 6/2 light olive gray mottled with 7.5YR 5/8 strong brown, very fine to fine Sand with trace clay, wet, soft	
	30							Not Recovered	
								Not Sampled	
	32								
	34		8	2.0			SP	2.5Y 5/3 light olive brown, fine to coarse Sand, wet, poorly sorted, loose to medium dense; Grades to gravelly fine to coarse sand mixture @ 34.5 ft bgs	
	36							Not Sampled	
	38		9	2.0			SP	10YR 5/8 yellowish brown mottled with 10YR 6/1 gray, fine to coarse sand, wet, medium dense; 4-inch clay layer with some sand @ 39.0 ft bgs	
	40							Not Sampled	
	42								
								Not Recovered	

Project: Dominion - Possum Point Power Station-SCR
Project Location: Dumfries, Virginia
Project Number: 21354933

Log of Borehole ED-23R

Elevation, feet / Downhole Depth, feet	SAMPLES: Type	Number	Recovery (feet)	PID	Graphic Log	Lithologic Log (USCS Code)	MATERIAL DESCRIPTION	FIELD NOTES
44								
		10	1.0			CL	Gley 1 5/5GY greenish gray, Clay, slightly moist to dry, stiff	
							Not Sampled	
46								
48							Not Recovered	
		11	1.5			CL	Gley 1 5/5GY greenish gray, Clay with trace fine sand, slightly moist to dry, stiff to very stiff; 49-49.5 ft bgs; 10YR 3/4 dark yellowish brown	
50							Not Sampled	
52								
						CL	Gley 1 4/5GY dark greenish gray, Clay, slightly moist to dry, stiff	
54		12	2.0			CL	Gley 1 6/5GY greenish gray, very fine sandy Clay, slightly moist to dry, stiff	
							Not Sampled	
56								
58								
		13	2.0			CL	Gley 1 4/5GY greenish gray, Clay, slightly moist to dry, very stiff, hard, slight plasticity	
60								
							Terminated borehole 62.0 ft bgs	
62								
64								
66								

URS

BORING LOG

PROJECT NO. C150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY CHRIS- CONNELLY DRILLING
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK.
DRILLING METHODS: 6" HSA, 2' SPT AUTO
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: JMS REVIEWED BY: _____ DATE: _____

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BORING NO. ED-22RA
SHEET 1 OF 2
DATE: START 9/21/16 END 9/22/16
ELEV: 23.78'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	Northing 6886085.83 / Easting 11827288.96 REMARKS
0.0		2						SANDY SILT, MED. BROWN	
	S-1	2	2.0	—	3.5	ML	M		
		4							
2.0		8							
2.5								2.5	
		5					M	SILTY FINE SAND, LIGHT	
	S-2	10	2.0	—	—	SP	TO	ORANGEISH BROWN	
		9					DRY		
4.5		7							
5.0								5.0	
		6						CLAYEY SILT, SOME SAND, ORANGEISH	
	S-3	7	1.4	—	<1.0	ML	M	BROWN, TO LIGHT BROWN, TO DARK	
		9						GRAYISH BROWN	
7.0		11							
7.5								7.5	
		4						SANDY CLAY- BROWNISH GRAY	
	S-4	6	2.0	—	>4.5	CL	M	TO BROWNISH ORANGE	
		13							
9.5		8							
10.0									
		5							MAY BE WET -
	S-5	5	2.0	—	>4.5	CL	M		AUGERS HOT
		6							
12.0		12							
12.5									ΔH2O LEVEL IN
		5							AUGERS: 11.0 ft.
	S-6	5	1.5	—	—	SP	M	13.5	
		12						FINE - MEDIUM SAND, LIGHT GRAY	
14.5		12						TO ORANGEISH BROWN	
15.0								15.0	
		6						CLAYEY SAND, MICACEOUS, WITH	
	S-7	6	1.5	—	—	SC	M	SOME SHELL FRAGMENTS	SPOON WET IN
		8						LIGHT BROWN.	LENSES
17.0		9							
17.5									
		5						-ORANGEISH BROWN	
	S-8	3	2.0	-	-		M		
		6						19.0	
19.5		5				SP		FINE-MEDIUM SAND, ORANGEISH BROWN	

Rev. Version 2/10/12

BORING LOG

PROJECT NO. C150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY CHRIS- CONNELLY DRILLING
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK
DRILLING METHODS: 6" HSA, 2' SPT AUTO.
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: JMS REVIEWED BY: _____ DATE: _____

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BORING NO. ED-22RA
SHEET 2 OF 2
DATE: START 9/21/16 END 9/22/16
ELEV: 23.78'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
20		5			-	SP	M	(SAND CONT.)	
	S-9	6	2.0	-				21.0	
		6			1.5	CL	M	21.5 SANDY CLAY, LIGHT GRAYISH BROWN	
22		8			-	SP		SAND & CLAYEY SAND, ORANGEISH BROWN	
22.5									
		3							
	S-10	4	2.0	-	-	SP/SC	M		
		6							
24.5		4							
25.0									
		4				SP/			
	S-11	3	2.0	-	-	/SC	M		
		3					TO		
27.0		5					W		
27.5									
		3				SP/			WET SPOON
	S-12	5	2.0	-	-	/SC	W		
		6					TO		
29.5		7				-	S		
30.0									
		2				SP/	W		
	S-13	3		-	-	/SC	TO		
		7					S		
32.0		7						32.0' END	

MONITORING WELL INSTALLATION NOTES

#20 SAND 32-31'. 5' SCHEDULE 40 PVC 10-SLOT SCREEN 31-26'. RISER PIPE FROM 26' TO 3' ABOVE SURFACE.

#20 SAND TO 21' (5' ABOVE TOP OF SCREEN), THEN BENTONITE CHIP SEAL 21'-3'. STEEL PROTECTIVE CASING CONCRETED IN PLACE. LOCKING CAP. 2x2' CONCRETE PAD INSTALLED AROUND STEEL CASING. WELL DEVELOPED ON 10/12.

Project: Dominion - Possum Point
Project Location: Possum Point , Virginia
Project Number: 49498-018-155

Key to Hollow Stem Auger Boring Log

Sheet

Elevation feet	Depth, feet	SAMPLES: Type	SAMPLES: Number	Blow Counts	% Recovery	PID (ppm)	Graphic Log	Lithologic Log (USCS Code)	MATERIAL DESCRIPTION	Well Det.	FIELD NOTES AND WELL DETAILS
1	2	3	4	5	6	7	8	9	10	11	12

COLUMN DESCRIPTIONS

1 **Elevation:** Elevation in feet referenced to mean sea level (MSL) or site datum.

2 **Depth:** Depth in feet below the ground surface.

3 **Sample Type:** Type of soil sample collected at depth interval shown; sampler symbols are explained below.

4 **Sample Number:** Sample identification number.

5 **Sampling Resistance:** Number of blows to advance driven sampler each 6-inch drive interval, or distance noted, using a 140-lb hammer with a 30-inch drop; "NA" indicates data not recorded.

6 **Recovery:** Percentage of driven sample length actually recovered in sampler; "NA" indicates data not recorded.

7 **"N" Value:** The sum of the second and third blow count values

8 **Graphic Log:** Graphic depiction of subsurface material encountered; typical symbols are explained below.

9 **USCS Code:** Unified Soil Classification System (USCS) group symbol code for associated soil strata.

10 **Material Description:** Description of material encountered; may include color, moisture, grain size, and density/consistency.

11 **Well Det.:** Schematic of well installation; materials are listed in header block and alongside well schematic; graphic symbols are explained below.

12 **Field Notes and Well Details:** Comments and observations regarding drilling or sampling made by driller or field personnel. Well construction materials and installation details are also listed in this column.

TYPICAL SOIL GRAPHIC SYMBOLS

poorly graded, SAND

SANDY CLAY

CLAYEY SAND to SANDY CLAY

SANDY SILT to SANDY CLAY

TYPICAL WELL GRAPHIC SYMBOLS

Blank casing in grout

Blank casing in bentonite

Blank casing in sandpack

Slotted screen in sandpack

TYPICAL SAMPLER GRAPHIC SYMBOLS

OTHER GRAPHIC SYMBOLS

Static water level measured after well installation.

Minor change in material properties with in a lithologic stratum

GENERAL NOTES

Report ENV_12W_CLEVELAND_W/USCS_KEY; File DOMINION-POSSUM POINT.GPJ; 11/19/2002 Boring Key

URS

Project: Dominion - Possum Point
Project Location: Possum Point , Virginia
Project Number: 49498-018-155

ED-9R2

Sheet 1 of 3

Date(s) Drilled and Installed	11-13-02 to 11-14-02	Logged By	M. Welch	Reviewer	T. LaMaskin
Drilling Method	4 1/4-inch I. D. Hollow Stem Auger	Drilling Contractor	Fishburne Drilling	Total Depth of Borehole	80.0 feet
Sampling Method	2-inch I.D. Split Spoon	Drill Bit Size/Type	NA	Top of Casing Elevation	
Size and Type of Well Casing	2-inch I.D. Schedule 40 PVC	Screen Perforation	0.010-inch	Approximate Surface Elevation	
Seal or Backfill	Bentonite Pellets/Bentonite-cement grout	Groundwater Level(s)	54.61 bgs		

Elevation feet	Depth, feet	SAMPLES Type	Number	Blow Counts	% Recovery	"N" Value	Graphic Log	Lithologic Log (USCS Code)	MATERIAL DESCRIPTION	Well Det.	FIELD NOTES AND WELL DETAILS
	0										poorly graded, SAND
			1	4-6-9-8	75	15		SC	Medium dense, 7.5YR 5/8, strong brown, fine (0.25-0.5mm), CLAYEY SAND, moist		
	5										
			2	1-3-3-5	25	6		SC	Medium stiff, 7.5YR 6/8, reddish yellow, 0.25-0.5mm, CLAYEY SAND, trace (15mm) rounded gravel, moist		
								CL	Mottled 5YR 4/4, reddish brown and 5YR 6/1, gray, fine, CLAY with sand, moist		
	10										
			3	1-4-5-7	75	9		CL	Stiff, mottled GLEY 1, 6/5GY, greenish gray, 2.5YR 4/8, red, fine, SANDY CLAY, moist		
								CL	2.5YR 3/2, dusky red, iron concretion, dry, brittle		Grout: 90% Portland/10% Bentonite
	15										
			4	5-5-7-15	100	12		CL	Stiff, mottled 2.5YR 4/4, reddish brown, and GLEY 2 6/10G, greenish gray, very fine (0.06-0.12mm), SANDY CLAY, dry/moist		
	20										
			5	3-10-12-14	100	22		CL	Very stiff, mottled 2.5YR 4/6, red and GLEY 2 5/10G, greenish gray, very fine (0.06-0.12mm), SANDY CLAY, dry		
	25										
			6	6-14-19-20	100	33		CL	Hard, mottled 2.5YR 4/4, reddish brown and GLEY 2 5/10G, greenish gray, very fine (0.06-0.12mm), SANDY CLAY, dry		
	30										

URS

Report ENV_RIC_BORING_LOG+/USCS; File: DOMINION-POSSUM POINT GPJ; 11/19/2002 ED-9R2

Project: Dominion - Possum Point
Project Location: Possum Point , Virginia
Project Number: 49498-018-155

ED-9R2

Sheet 2 of 3

Elevation feet	Depth, feet	SAMPLES: Type	Number	Blow Counts	% Recovery	"N" Value	Graphic Log	Lithologic Log (USCS Code)	MATERIAL DESCRIPTION	Well Det.	FIELD NOTES AND WELL DETAILS
	30										
			7	6-12-15-16	100	27		ML	Less stiff, mottled 5YR 4/4, reddish brown, GLEY 2 5/10G greenish gray, SANDY SILT, dry		
	35										Grout: 90% Portland/10% Bentonite
			8	10-14-17-20	100	31		ML	Hard, mottled, 5YR 4/4, reddish brown, GLEY 2 5/10G greenish gray, SANDY SILT, dry		
	40										Augers grinding
			9	9-18-23-28	100	41		ML	Hard, mottled 5YR 4/4, reddish brown, GLEY 2 5/10G greenish gray, GLEY 1 3/1, very dark greenish gray, SANDY SILT, dry		
	45										
			10	7-16-20-21	100	36		SC/CL	GLEY 1 5/5G, greenish gray, fine (0.12-0.25mm), CLAYEY SAND/SANDY CLAY, dry		
	50										3/8-inch Hydrated Bentonite Pellets
			11	5-5-12-15	100	17		SC	Medium dense, GLEY 1 6/10GY, greenish gray, fine (0.25-0.5mm), CLAYEY SAND, moist		Upper Potomac Aquifer - Cretaceous Period-Mesozoic Era
	55										No. 2 Silica Quartz Sandpack
			12	4-12-20-26	100	32		ML/CL	GLEY 1 5/5G greenish gray, SANDY SILT, dry and 5Y 5/3, olive, SANDY CLAY, dry		
								SC	5Y 7/3, pale yellow with dark red zones of oxidation, medium (0.25-1mm), CLAYEY SAND, dry		
	60							SP	5Y 6/3, pale olive, medium (0.5-1mm), poorly graded, SAND, moist		Driller noted water for first time at 10:47am
			13	8-16-19-26	100	35		SP	Dense, 5Y 6/3, pale olive, medium (0.5-1mm), subrounded grains, poorly graded, SAND, wet	▽	
	65										

Report ENV_RIC_BORING_LOG+/USCS; File: DOMINION-POSSUM POINT.GPJ; 11/19/2002 ED-9R2

URS

Project: Dominion - Possum Point
Project Location: Possum Point , Virginia
Project Number: 49498-018-155

ED-9R2

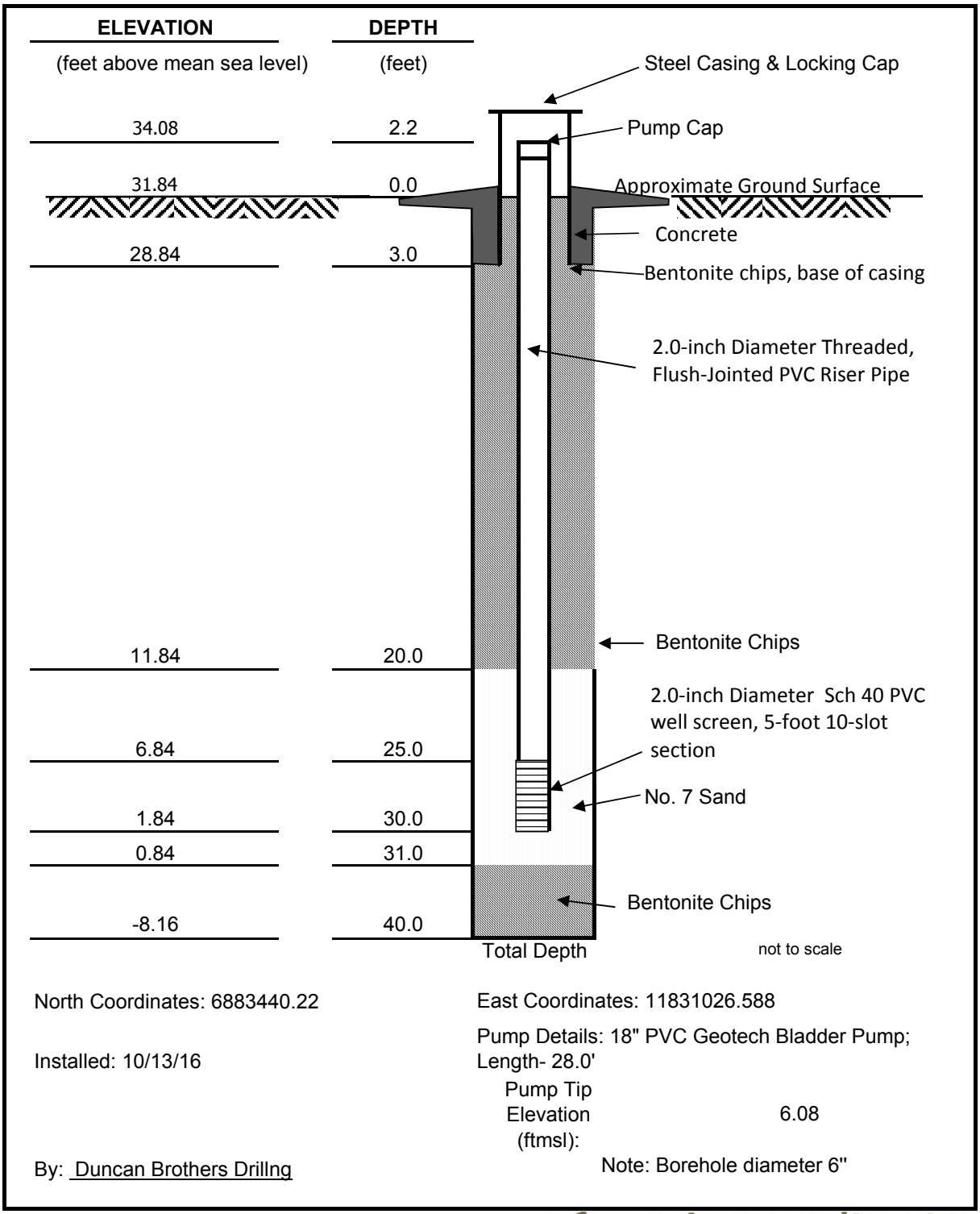
Sheet 3 of 3

Elevation feet / Depth, feet	SAMPLES: Type Number	Blow Counts	% Recovery	"N" Value	Graphic Log	Lithologic Log (USCS Code)	MATERIAL DESCRIPTION	Well Det.	FIELD NOTES AND WELL DETAILS
65									
	14	10-20-29-37	100	49		SP	Dense, 5Y 6/3, pale olive, medium (0.5-1mm), subrounded grains, poorly graded, SAND, wet		
70									←Screen: 20 feet of 0.01-inch Factory Slotted, Sch 40, 2-inch PVC
	15	12-18-20-23	100	38		SP	Dense, 5Y 6/3, pale olive, medium (0.5-1mm), subrounded grains, poorly graded, SAND, wet		
						SC	Pale olive with reddish brown zones of oxidation, fine (0.25-0.5mm), CLAYEY SAND, moist		
75									
	16	15-25-31-36	83	56		SP	Very dense, 2.5YR 7/2, light gray, medium (0.5-2mm), rounded (5mm), quartzite gravel, poorly graded SAND with gravel, wet		
80							Borehole terminated at 80 feet bgs. Groundwater well ED-9R2 constructed within borehole. Static water level 58.11 feet from top of casing on 11-13-02. 2'x2'x4" concrete well pad and 4"x4" protective steel casing constructed. Approximately 2.5-feet of PVC well pipe stick-up above the ground surface.		
85									
90									
95									
100									

Report ENV_RIC_BORING_LOG+/USCS: File: DOMINION-POSSUM POINT.GPJ; 11/25/2002 ED-9R2

URS

Monitoring Well ABC-1602
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6883440.22

East Coordinates: 11831026.588

Installed: 10/13/16

Pump Details: 18" PVC Geotech Bladder Pump; Length- 28.0'

Pump Tip Elevation (ftmsl): 6.08

By: Duncan Brothers Drillng

Note: Borehole diameter 6"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME Possum Point
PROJECT LOCATION Dumfries, VA
DRILLER NAME/COMPANY Boss/Duncan Brothers Drilling
EQUIPMENT USED: Sonic Drill SD-450 (SN: SDC 09-041)
DRILLING METHODS: Sonic Drilling with 6" outer and 4" inner and 5' runs
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: PWM REVIEWED BY: _____ DATE: _____

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BORING NO. ABC-1602
SHEET 1 OF 2
DATE: START 10/12/16 END 10/13/16
ELEV: 31.84'

Northing	Easting
6883440.22	11831026.59

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
0.0								1.0' Topsoil	
	S-1	-	3.0	60		SM	moist	Silty SAND, fine grained, light brown to tan, little orange mottling. [Alluvium]	
5.0	S-2	-	5.0	100			moist	- trace medium grained, rounded to subrounded gravel.	
10.0								10.7'	
	S-3	-	5.0	100	74.5	CH	dry	Fat CLAY, some well graded subrounded to rounded gravel, gray mottled orange.	
								13.0'	
						SC		14.6' Clayey SAND, fine grained, Orange	
15.0	S-4	-	5.0	100	74.5	CH	dry	Fat CLAY, trace fine grained sand, gray / dark green / reddish brown, Blocky, hard.	
20.0								20.0'	
	S-5	-	5.0	100		SM	damp	Silty SAND, fine grained, gray little orange mottling.	
								23.0'	
						CH		Fat CLAY, trace fine grained sand.	
25.0								25.4' Brown / gray / orange, hard.	
	S-6	-	5.0	100		SP-SM	damp	Silty SAND, Poorly graded, Fine grained, tan to gray	
30.0								30.5	
	S-7	-	5.0	100	74.5	CH	dry	Fat CLAY, homogeneous, dark gray, hard.	
35.0	S-8	-	5.0	100	74.5		dry		Very difficult to extract from barrel
40.0								40.0	

Boring Terminated @ 40.0'

BORING LOG

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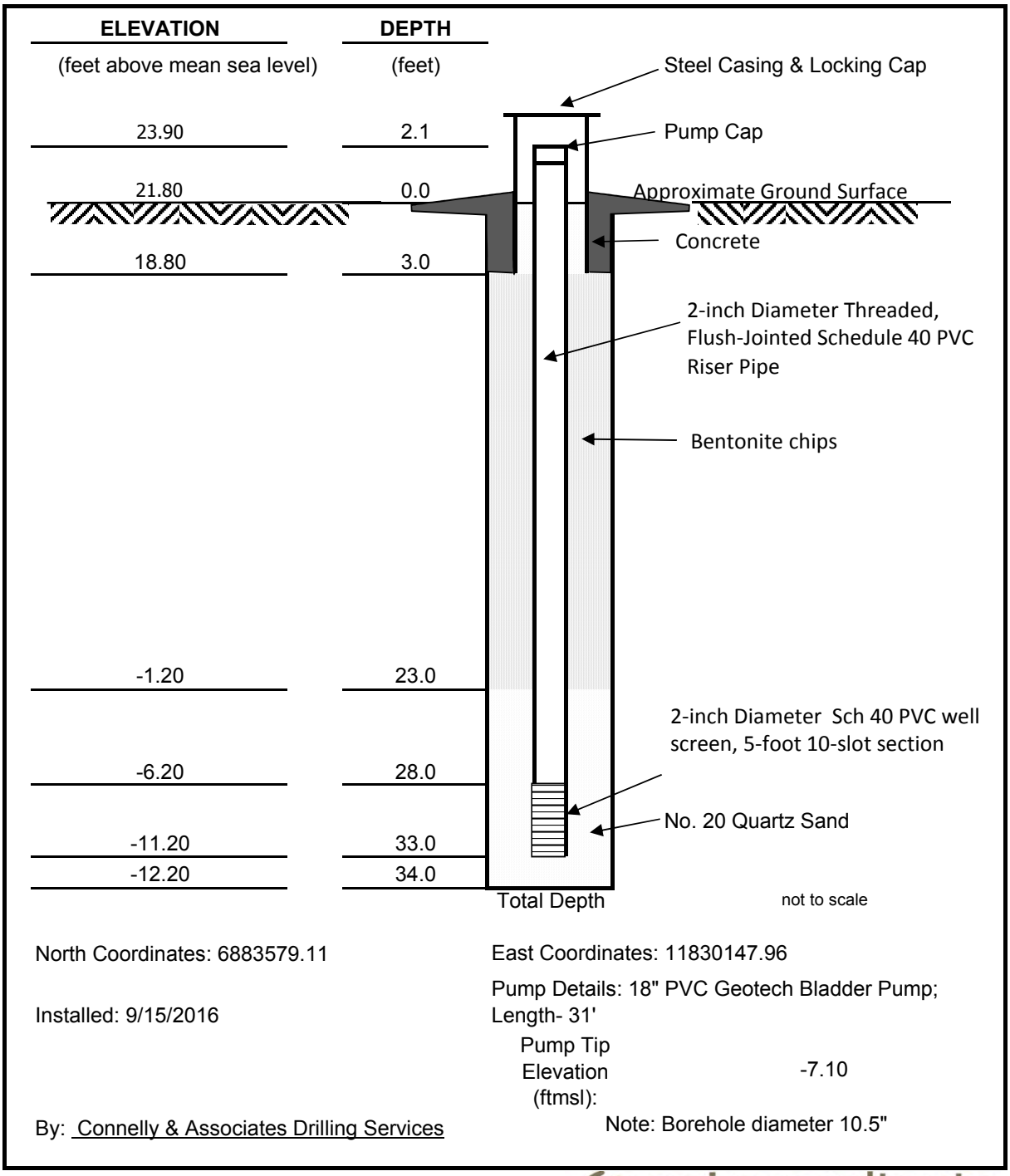
PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

BORING NO. ABC-1602
SHEET 2 OF 2
DATE: START 10/12/16 END 10/13/16
ELEV: 31.84'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
								Well Construction: #7 Sand Placed from 31' to 20.0', Well Set at 30.0' with 5.0' of SCH40 2.0" well, Screen from 30.0 to 25.0'. Bentonite Chip from 20.0 to 3.0' Bentonite plug from 40.0' to 31.0'. allowed to hydrate overnight	

ABC-1607
Possum Point Power Station
Dominion Transmission, Inc.
Record Detail



North Coordinates: 6883579.11

East Coordinates: 11830147.96

Installed: 9/15/2016

Pump Details: 18" PVC Geotech Bladder Pump; Length- 31'

Pump Tip Elevation (ftmsl): -7.10

By: Connelly & Associates Drilling Services

Note: Borehole diameter 10.5"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY CHRIS - CONNELLY DRILLING
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK
DRILLING METHODS: 6" HSA, 2' SPT AUTO.
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: JMS REVIEWED BY: _____ DATE: _____

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BORING NO. ABC-1607
SHEET 1 OF 3
DATE: START 9/15/16 END 9/15/16
ELEV: 21.8'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	Northing 6883579.11 / Easting 11830147.96 REMARKS
0		4						SANDY SILT, TAN TO DARK BROWN	
	S-1	9	1.8	—	—	ML	DRY		
		8							
2.0		10							
2.5								2.5	
		9						CLAY - SILT - SAND, TAN	
	S-2	8	2.0	—	—		DRY		
		7							
4.5		8							
5.0								5.0	
		7						CLAY, TRACE SAND, LIGHT GRAY	
	S-3	6	1.0	—	4.5	CL	M	WITH ORANGE MOTTLING	
		7							
7.0		8							
7.5								7.5	
		8				ML		SILT + V. FINE SAND, LIGHT GRAY	
	S-4	6	1.9	—	—		M	8.5	
		9						V. FINE SAND, LIGHT GRAY	
9.5		10				SP		FINE - MEDIUM SAND, LIGHT GRAY	
10.0								TO GRAYISH TAN	
		5							
	S-5	4	1.5	—	—	SP	M	- ORANGEISH BROWN	
		5							
12.0		5							
12.5									
		6				SW		MEDIUM SAND - ORANGEISH BROWN	
	S-6	4	1.5	—	—	↓	M	FINE SAND - LIGHT GRAYISH TAN	
		5						V. FINE SAND - LIGHT GRAY	
14.5		6				SC		CLAYEY V. FINE SAND - LIGHT GRAY	
15.0									
		5				SM		SILTY FINE SAND, TRACE CLAY, LIGHT TAN	
	S-7	3	2.0	—	—		M	SILTY V. FINE SAND, LIGHT GRAYISH TAN	
		3				SC		CLAYEY V. FINE SAND, LIGHT TAUPE	
17.0		13				SP		MEDIUM SAND, ORANGEISH BROWN	
17.5									
		4						18.0 SILT + SAND, TAN	
	S-8	6	1.5	—	—	SW	M	FINE TO COARSE SAND, TRACE ROUNDED GRAVEL (<0.25")	
		8							
19.5		7							

BORING LOG

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PROJECT NO. C150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY CHRIS- CONNELLY DRILLING
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK
DRILLING METHODS: 6" HSA, 2' SPT AUTO
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: JMS REVIEWED BY: _____ DATE: _____

BORING NO. ABC-1607
SHEET 2 OF 3
DATE: START 9/15/16 END 9/15/16
ELEV: 21.8'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
20.0		4					M	V. FINE TO MEDIUM SAND, LIGHT	
	S-9	4	2.0	—	—	SP	TO	GRAYISH TAN TO ORANGEISH BROWN,	
		6					W	TRACE ROUNDED GRAVEL (< ½" ϕ)	
22.0		6							
22.5									
		3							
	S-10	4	2.0	—	—	SP	S		
		5							
24.5		9							
25.0								25.0	
		3						FINE- COARSE SAND, SOME CLAY	
	S-11	4	2.0	—	—	SW/SC	W	IN POCKETS	
		5							
27.0		4							
27.5									
		5						- SOME SILT	
	S-12	4	2.0	—	—	SP	S		
		6						- 28.5 CLAY (2" THICK)	
29.5		7							
30.0									
		2							
	S-13	5	2.0	—	—	SP	S	SOME V. FINE SAND	
		4							
32.0		5							
		4							
	S-14	17	2.0	—	—	SP	S		
		15						33.5	
34.0		13				GP		COARSE GRAVEL (ROUNDED) & SAND	
								ORANGEISH BROWN, LIGHT GRAY	
								34.0	
								END 34.0'	
								(NOTES ON NEXT PAGE)	

BORING LOG

PROJECT NO. C150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY CHRIS- CONNELLY DRILLING
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK
DRILLING METHODS: 6" HSA, 2" SPT AUTO
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: JMS REVIEWED BY: _____ DATE: _____

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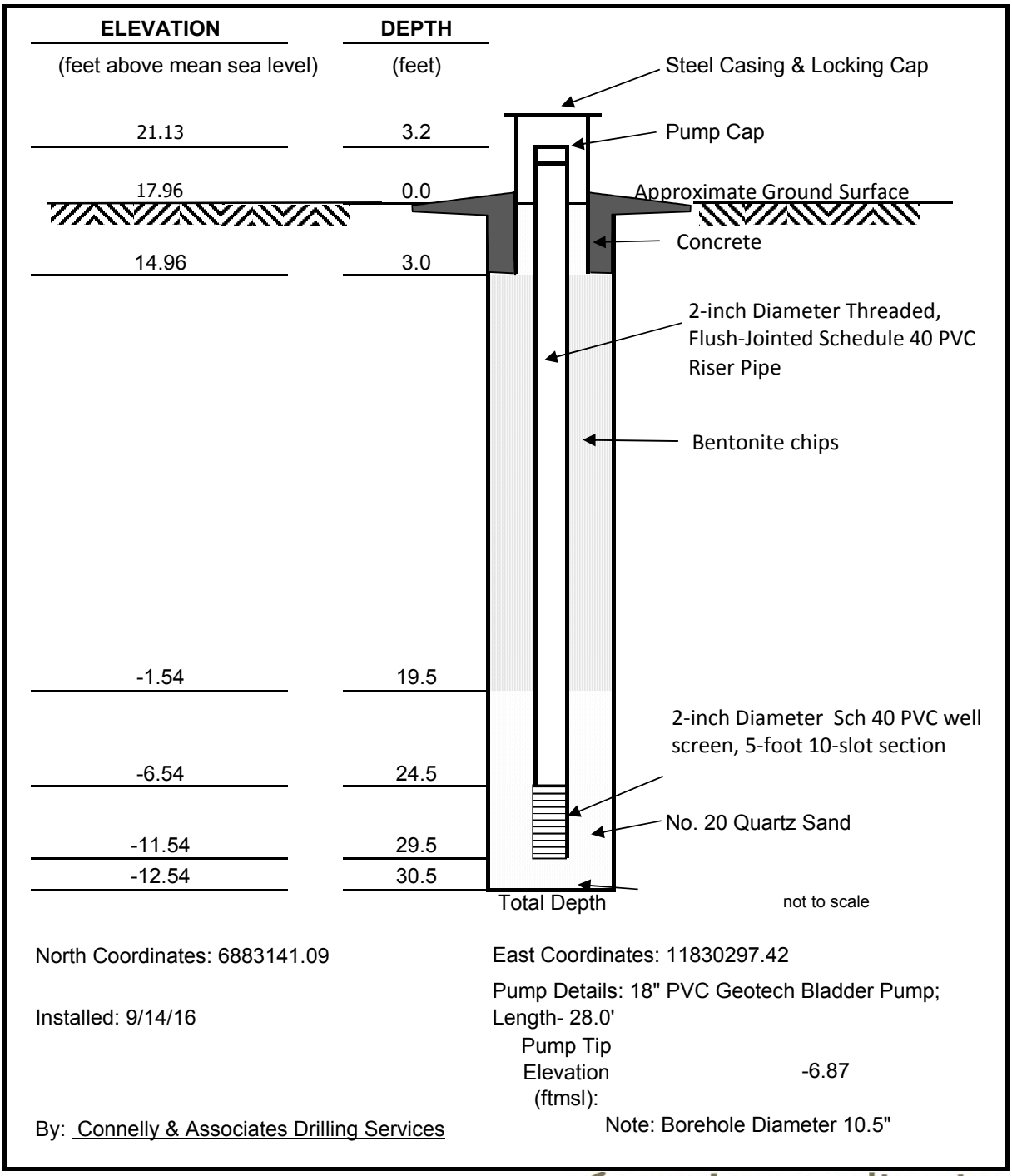
BORING NO. ABC-1607
SHEET 3 OF 3
DATE: START 9/15/10 END 9/15/10
ELEV: 21.8'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
								MONITORING WELL INSTALLATION NOTES 5 FEET OF 10-SLOT SCHEDULE 40 PVC SCREEN INSTALLED AT 33' WITH ONE FOOT OF #2.0 SAND BELOW THE SCREEN TIP FROM 33-34'. PVC RISER PIPE TO 3' ABOVE GROUND SURFACE. #20 SAND TO 5' ABOVE THE SCREEN FROM 23-34', BENTONITE CHIP SEAL FROM 3'-23'. PROTECTIVE STEEL CASING WITH LOCKING CAP INSTALLED AROUND THE PVC STICKUP AND CONCRETED INTO PLACE. 2x2' CONCRETE PAD + 4 BOLLARDS CONCRETED AT CORNERS. WELL WAS DEVELOPED ON 10/12 WITH A SUBMERSIBLE PUMP.	

ABC-1608
Possum Point Power Station
Dominion Transmission, Inc.
Record Detail



North Coordinates: 6883141.09

East Coordinates: 11830297.42

Installed: 9/14/16

Pump Details: 18" PVC Geotech Bladder Pump; Length- 28.0'

Pump Tip Elevation (ftmsl): -6.87

By: Connelly & Associates Drilling Services

Note: Borehole Diameter 10.5"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY JEREMY - CONNELLY DRILLING
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK
DRILLING METHODS: 6" HSA, 2' SPT AUTO.
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: JMS REVIEWED BY: _____ DATE: _____

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BORING NO. ABC-1608
SHEET 1 OF 2
DATE: START 9/14/16 END 9/14/16
ELEV: 17.96'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	Northing 6883141.09 / Easting 11830297.42 REMARKS
0		6						TOPSOIL 0-0.2' GRAYISH BROWN	
	S-1	7	2.0	—	>4.0	ML/CL	M-D	SILT & CLAY, SOME SAND, TAN	
		8							
2.0		8							
2.5								2.5	
								CLAY & SILT, LIGHT GRAYISH TAN	
	S-2		2.0	—	>4.0	CL	M-D		
4.5									
5.0									
		6					M-		
	S-3	8	2.0	—	>4.0	CL	D		
		11							
7.0		14							
7.5								7.5	
		8				SC		FINE SAND W/ CLAY, LIGHT	
	S-4	7	2.0	—	3.5	/CL	M	8.5 GRAY W/ ORANGE MOTTLING	
		9						CLAY, SOME SAND, GRAYISH BROWN	
9.5		13				-			
10.0								10.0	
		7			1.0	SM		SAND & SILT, LIGHT TAN TO LIGHT	
	S-12	7	2.0	—	-		M	GRAYISH BROWN, TRACE ROUNDED GRAVEL	
		9			3.5			11.5	
12.0		12				SC/CL		CLAY & SAND, DARK BROWNISH GRAY	
12.5								12.5	
		4					M	SANDY CLAY, ORANGEISH BROWN TO	
	S-13	5	2.0	—	<1.0	CL	TO	DARK GRAYISH BROWN W/ POCKETS	
		4					W	OF CLEAN FINE SAND	
14.5		5							
15.0									
		4					M	LIGHT GRAYISH TAN	
	S-14	8	2.0	—	1.0	SC			
		12						16.8	
17.0		14				SP	W	MEDIUM SAND, LIGHT BROWN	
17.5								17.5	
		4						CLAYEY SAND, LIGHT GRAYISH BROWN	
	S-15	3	2.0	—	—	SC	W		
		2						19.0	
19.5		3				SM	W	SILTY SAND, LIGHT GRAYISH BROWN	

BORING LOG

PROJECT NO. C150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRES VA
DRILLER NAME/COMPANY JEREMY - CONNELLY DRILLING
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK
DRILLING METHODS: 6" HSA, 2' SPT AUTO
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: JMS REVIEWED BY: _____ DATE: _____

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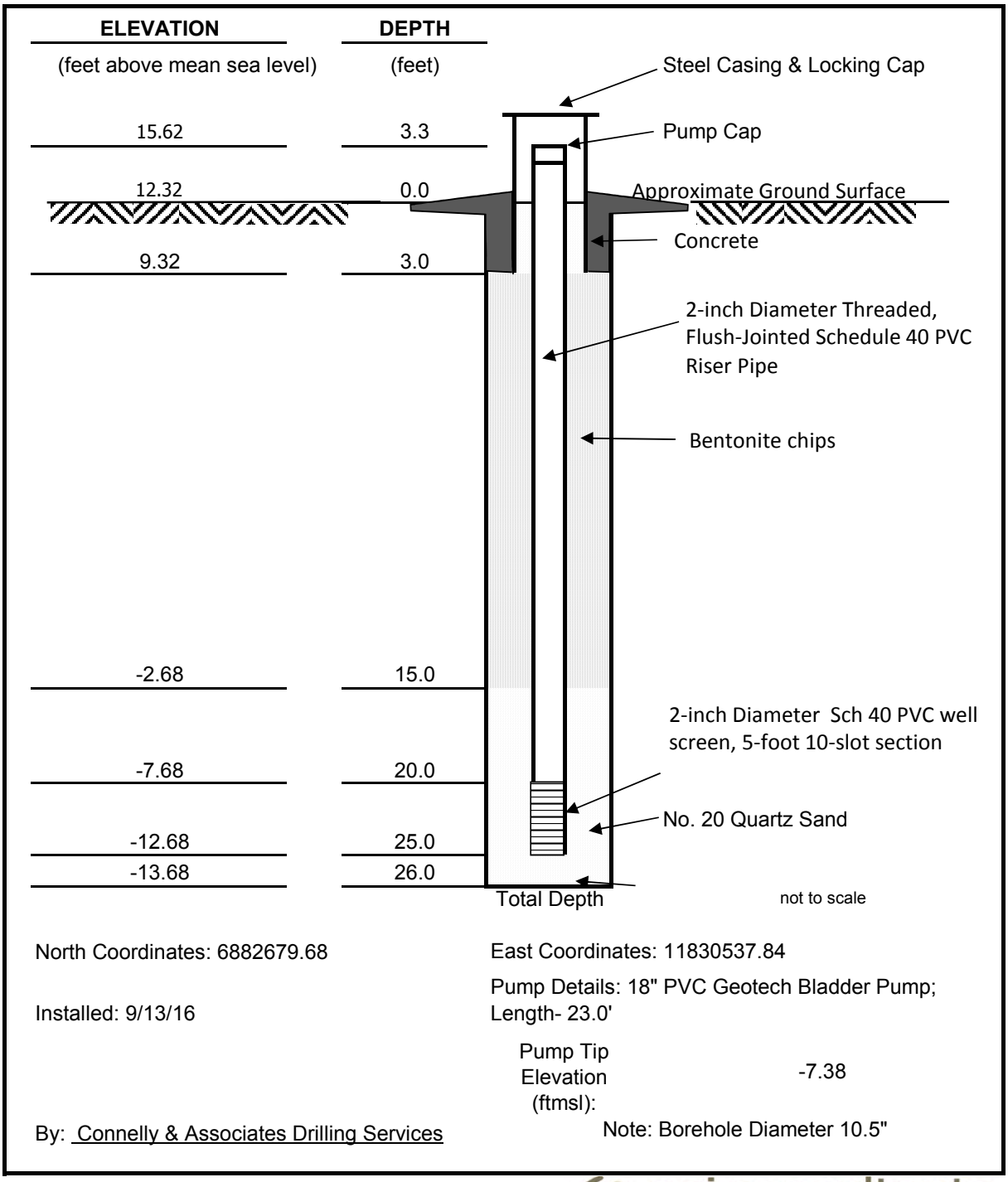
BORING NO. ABC-1608
SHEET 2 OF 2
DATE: START 9/14/16 END 9/14/16
ELEV: 17.96'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
20		4					W	FINE-COARSE SAND, TRACE ROUNDED	
	S-8	7	2.0	—	—	SP	TO	GRAVEL, LIGHT GRAY	
		8					S		
22.0		11						22.0	
22.5								INTERBEDDED SAND & CLAYEY SAND,	
		1				SP	W	FINE-COARSE, GRAYISH BROWN	
	S-9	1	2.0	—	—	/	TO		
		1				SC	S		
24.5		1							
25.0									
		4					S	25.5	
	S-10	7	2.0	—	0	CL		CLAY, GRAYISH BROWN	
		8					W		
27.0		10							
27.5									
		5							
	S-11	4	2.0	—	2.5	CL	W		
		6							
29.5		9						29.5	
								END	
								NOTES	
								AUGERED TO 30.5, #20 SAND PACK	
								29.5-30.5. TIP OF SCREEN SET	
								@ 29.5. FIVE FT. SCREEN. #20 SAND	
								TO 5' ABOVE SCREEN (19.5'-29.5').	BENTONITE CHIPS
							TO	3' BELOW GROUND SURFACE. STEEL	
								PROTECTIVE CASING CONCRETED	
								IN PLACE. LOCKING CAP. 2x2'	
								CONCRETE PAD INSTALLED. NO	
								BOLLARDS NECESSARY DUE TO	
								LOCATION IN THE WOODS.	
								DEVELOPED ON 10/12.	

ABC-1614
Possum Point Power Station
Dominion Transmission, Inc.
Record Detail



North Coordinates: 6882679.68

East Coordinates: 11830537.84

Pump Details: 18" PVC Geotech Bladder Pump; Length- 23.0'

Installed: 9/13/16

Pump Tip Elevation (ftmsl): -7.38

By: Connelly & Associates Drilling Services

Note: Borehole Diameter 10.5"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY CONNELLY DRILLING
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK
DRILLING METHODS: 6" HSA, 2' SPT AUTO.
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: JMS REVIEWED BY: _____ DATE: _____

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BORING NO. ABC-1614
SHEET 1 OF 2
DATE: START 9/13/16 END 9/13/16
ELEV: 12.32'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	Northing 6882679.68 / Easting 11830537.84 REMARKS
0		5					M	0.3' TOPSOIL 0-0.3'	
	S-1	9	1.0	—	—	ML	TO	SANDY SILT LIGHT GRAYISH	
		7					D	BROWN TO LIGHT TAN	
2.0		6							
2.5									
		8					M		
	S-2	10	1.0	—	—		TO	-WITH CLAY	
		12					D		
4.5		13							
5.0								5.0	
		4						SILT, SAND, & CLAY, LIGHT GRAY	
	S-3	9	1.5	—	>4.0		M	W/ ORANGE-BROWN MOTTLING	
		11							
7.0		12							
7.5								7.5	
		8			2.0			SILTY SAND, LIGHT BROWN	
	S-4	8	1.1	—	-4.0	SM	M		
		8					TO		
9.5		7				-	W?		
10.0									
		1				SM/SC		-WITH CLAY & ORANGE MOTTLING	
	S-5	1	0.9	—	—		M		
		2							
12.0		2							
12.5								12.5	
		1				CL/SM	M	INTERBEDDED CLAY & SAND	
	S-6	2	0.5	-	1.0		TO	(LIGHT GRAY CLAY, ORANGE-BROWN	
		2					W	SAND)	
14.5		2							
15.0								15.0	
		1					M	CLAY & SAND, LIGHT GRAY	
	S-7	3	1.8	—	<1.0	SC	TO		
		2					W		
17.0		1							
17.5								17.5	
		4						FINE-MEDIUM SAND, LIGHT GRAY	
	S-8	7	1.5	—	—	SP	S		
		6							
19.5		9							

BORING LOG

PROJECT NO. C150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY CINNELLY
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK
DRILLING METHODS: 6" HSA, 2' SPT AUTO
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: JMS REVIEWED BY: _____ DATE: _____

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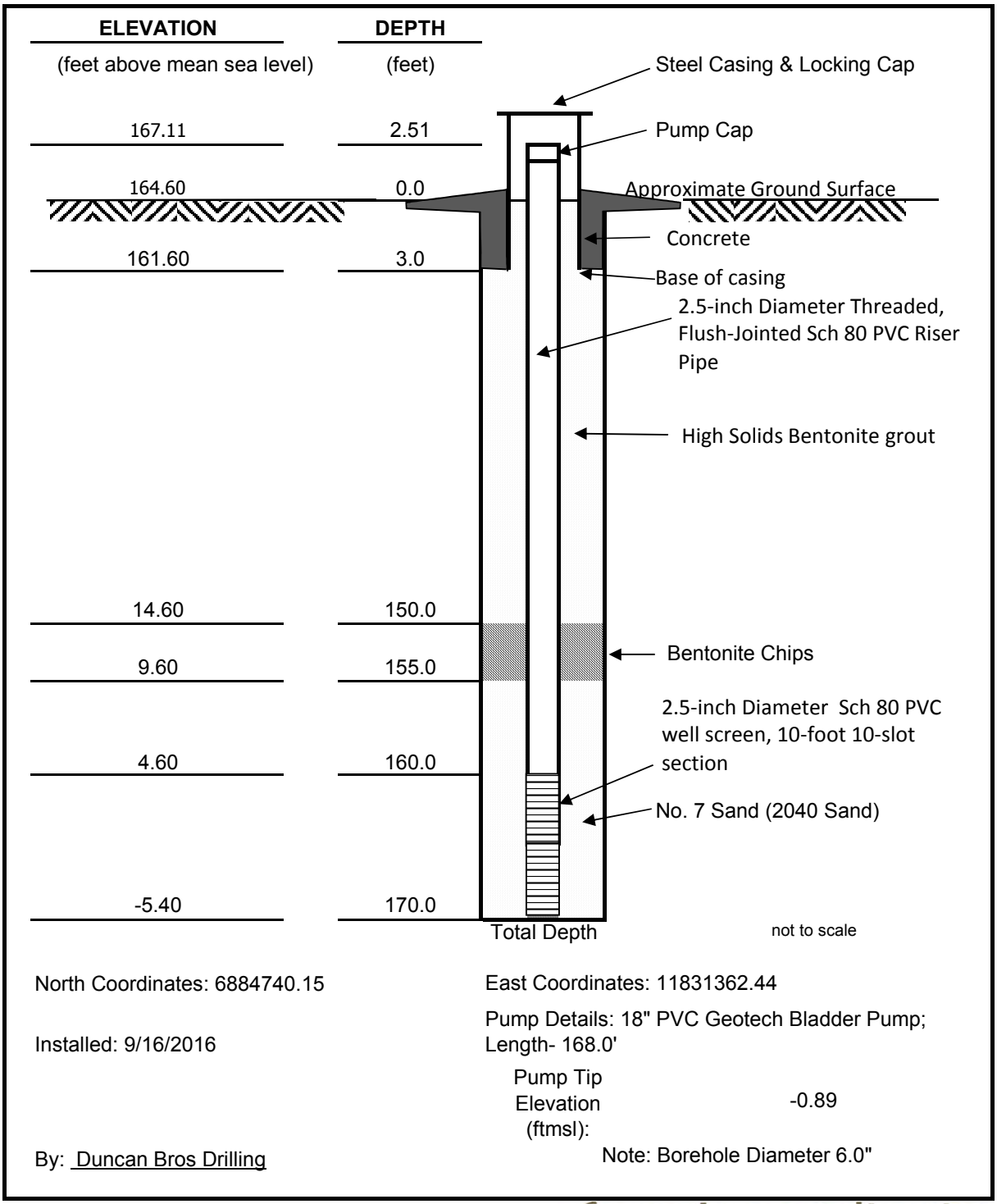
BORING NO. ABC-1614
SHEET 2 OF 2
DATE: START 9/13/16 END 9/13/16
ELEV: 12.32'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
20.0								20.0	
		WOH						SILTY SAND, LIGHT GRAY	
	S-9	3	2.0'	—	—	SM	S		
		2							
22.0		1							
22.5									
		1							
	S-10	1	0.8	—	—		S		
		2						24.3	
24.5		2			1.5	CL	M	CLAY, GRAY	
25.0								25.0'	
								NOTES AUGER TO 26.0', #20 SAND 25.0-26.0'. FIVE FEET SCHEDULE 40, 10-SLOT SCREEN 25-20'. #20 SAND TO 15.0'. BENTONITE CHIP SEAL ON TOP OF SAND TO 3' FROM SURFACE. STEEL PROTECTIVE CASING WITH LOCKING CAP INSTALLED AND CONCRETED IN PLACE. 2x2' CONCRETE PAD AND 4 BOLLARDS INSTALLED. WELL DEVELOPED ON 10/12.	

Monitoring Well ED-1605
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6884740.15

East Coordinates: 11831362.44

Installed: 9/16/2016

Pump Details: 18" PVC Geotech Bladder Pump; Length- 168.0'

Pump Tip Elevation (ftmsl): -0.89

By: Duncan Bros Drilling

Note: Borehole Diameter 6.0"

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BORING LOG

PROJECT NO. C150132.00 .071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD 450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 46' DATE/TIME 9/16/16 11:00
24 HR WATER DEPTH 139' DATE/TIME 9/17/16 9:00
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

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BORING NO. ED-1605
SHEET 1 OF 9
DATE: START 9/13/16 END 9/16/16
ELEV: 164.6'

Northing	Easting
6884740.15	11831362.44

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENESS	H2O CONTENT	DESCRIPTION (Soil: Group Name, Color, State, [Origin]; Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition)	REMARKS
0.0								0-2" TOPSOIL	
					—	SC	MOIST	FINE TO COARSE CLAYEY SAND, LIGHT BROWN	
								2.00	
			5.0	100 %	—	SM	MOIST	FINE TO COARSE SILTY SAND, ORANGE/LIGHT BROWN	
5.0									
			5.0	100 %					
10.0									
			5.0	100 %					
								14.00	
15.0									
			5.0	100 %	—	SP	MOIST	MEDIUM TO COARSE SAND, TRACE SILT, LIGHT BROWN	
20.0								20.00	

BORING LOG

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PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 46' DATE/TIME 9/16/16 11:00
24 HR WATER DEPTH 139' DATE/TIME 9/17/16 9:00
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. ED-1605
SHEET 2 OF 9
DATE: START 9/13/16 END 9/16/16
ELEV: 164.6'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
20.0									
			0	0	—	—	—	20' - 25' NO RECOVERY	HARDER MATERIAL ENCOUNTERED, START USING 6" OUTER BARREL AND WATER
25.0			5.0	100 %	—	SP	MOIST	25.00 FINE TO MEDIUM SAND, LIGHT BROWN/ORANGE	
30.0			5.0	100 %	—	SP	MOIST	30.00 FINE TO COARSE SAND, TRACE OF GRAVEL, LIGHT BROWN/ORANGE	COARSE SAND AND GRAVEL .13" TO 1" DIAMETER
35.0			5.0	100 %					
40.0									

BORING LOG

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PROJECT NO. C150132.00.71
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 46' DATE/TIME 9/16/16 11:00
24 HR WATER DEPTH 139' DATE/TIME 9/17/16 9:00
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. ED 1605
SHEET 3 OF 9
DATE: START 9/13/16 END 9/16/16
ELEV: 164.6'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
40.0									
					—	SP	MOIST	(CONTINUED) FINE TO MEDIUM SAND LITTLE CLAY, LIGHT GRAY 42.00	
			5.0	100%	4.25	CH	DRY	SANDY FAT CLAY (FINE TO MEDIUM SAND), LIGHT GRAY 46.00	
45.0									
			5.0	100%	—	SP	MOIST	FINE TO COARSE SAND, LIGHT GRAY 51.50	
50.0									
			4.0	80%	—	SP	MOIST	FINE TO COARSE SAND, LITTLE CLAY, TRACE FINE GRAVEL, LIGHT GRAY/BROWN 56.00	
55.0									
			5.0	100%	—	SC	MOIST	FINE TO COARSE CLAYEY SAND, TRACE OF FINE GRAVEL 60.00	
60.0									

BORING LOG

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PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 46' DATE/TIME 9/16/16 11:00
24 HR WATER DEPTH 139' DATE/TIME 9/17/16 9:00
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. ED-1605
SHEET 4 OF 9
DATE: START 9/13/16 END 9/16/16
ELEV: 164.6'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
60.0								SANDY CLAY (FINE TO MEDIUM SAND), TRACE GRAVEL, LIGHT GRAY/ORANGE	
			5.0	100%	—	CL	MOIST		
65.0								66.00	
			5.0	100%	—	CL/SM	MOIST	CLAY AND SILTY SAND (MEDIUM TO COARSE), SOME FINE GRAVEL, LIGHT BROWN/ORANGE	
70.0								70.00	
			0	0	—	—	—	NO RECOVERY	70'-73' NO RECOVERY
								73.00	☆ WATER AT 73'
			2.0	40%	—	SP	WET	FINE TO COARSE SAND, TRACE OF FINE GRAVEL, LIGHT BROWN	
75.0								75.00	
			5.0	100%	—	SM	WET	MEDIUM TO COARSE SILTY SAND, SOME FINE GRAVEL, LIGHT BROWN/ORANGE	
80.0								80.00	

BORING LOG

PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 46' DATE/TIME 9/16/16 11:00
24 HR WATER DEPTH 139' DATE/TIME 9/17/16 9:00
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: STEVE COONEY REVIEWED BY: DATE:

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BORING NO. ED-1605
SHEET 5 OF 9
DATE: START 9/13/16 END 9/16/16
ELEV: 164.6'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
80.0									
			5.0	100 %	2.5	CH	DRY	SANDY FAT CLAY (FINE TO MEDIUM SAND) LIGHT BROWN	
85.0								LIGHT GRAY / GREEN COLOR	
			5.0	100 %					
90.0								90.00	
			5.0	100 %	—	SM	MOIST	FINE TO COARSE SILTY SAND, LIGHT GRAY / GREEN	
95.0									
			5.0	100 %					
100.0								100.00	

BORING LOG

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PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 46' DATE/TIME 9/16/16 11:00
24 HR WATER DEPTH 139' DATE/TIME 9/17/16 9:00
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. ED-1605
SHEET 6 OF 9
DATE: START 9/13/16 END 9/16/16
ELEV: 164.6'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
100.0			0	0	—	—	—	NO RECOVERY	100' – 103' NO RECOVERY
								103.00	
			2.0	40 %	—	SC	MOIST	FINE TO COARSE CLAYEY SAND, LIGHT GRAY / GREEN	
105.0								106.00	
								SANDY CLAY (FINE TO COARSE SAND), LIGHT GRAY/GREEN	
			5.0	100 %	4.5	CL	MOIST		
110.0								111.00	
								SANDY FAT CLAY (FINE TO MEDIUM SAND) LIGHT GRAY / GREEN	
			5.0	100 %	>4.5	CH	DRY		
115.0									
			5.0	100 %	>4.5	CH	DRY		
120.0									

BORING LOG

PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 46' DATE/TIME 9/16/16 11:00
24 HR WATER DEPTH 139' DATE/TIME 9/17/16 9:00
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

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BORING NO. ED-1605
SHEET 7 OF 9
DATE: START 9/13/16 END 9/16/16
ELEV: 164.6'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
120.0								(CONTINUED)	
			5.0	100 %	4.5	CH	MOIST	SANDY FAT CLAY (FINE TO MEDIUM), LIGHT GRAY/GREEN	
125.0			5.0	100 %	>4.5	CH	MOIST		
130.0								130.00 SANDY CLAY (FINE TO COARSE SAND), LIGHT GRAY/GREEN	
			5.0	100 %	3.75	CL	MOIST		
135.0								136.00 MEDIUM TO COARSE SILTY SAND, TRACE CLAY, LIGHT BROWN/ORANGE	
			5.0	100 %	—	SM	MOIST		
140.0								140.00	

BORING LOG

PROJECT NO. C150132.00, 071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2000 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC w/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 46' DATE/TIME 9/16/16 11:00
24 HR WATER DEPTH 139' DATE/TIME 9/17/16 9:00
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

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BORING NO. ED-1605
SHEET 8 OF 9
DATE: START 9/13/16 END 9/16/16
ELEV: 164.6'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
140.0					3.25	CL	MOIST	SANDY CLAY (MEDIUM TO COARSE SAND), LIGHT GRAY	
▼								141.50	* WATER AT 141.50'
			5.0	100%	—	SC	WET	MEDIUM TO COARSE CLAYEY SAND, LIGHT BROWN/ORANGE	
145.0								145.00	
								FINE TO COARSE SILTY SAND, TAN / LIGHT BROWN	
			5.0	100%	—	SM	WET		
150.0								150.00	
								FINE TO COARSE CLAYEY SAND, TRACE OF FINE GRAVEL, LIGHT BROWN	
					—	SC	WET		
			5.0	100%				153.00	
								SANDY CLAY (FINE TO MEDIUM SAND), SOME GRAVEL, LIGHT BROWN	
155.0					—	CL	MOIST		
								156.00	
			5.0	100%	—	SC	WET	MEDIUM TO COARSE CLAYEY SAND, SOME FINE GRAVEL, LIGHT GRAY/GREEN	VERY WELL ROUNDED GRAVEL RANGING FROM 0.13" TO .75" DIAMETER
160.0									

BORING LOG

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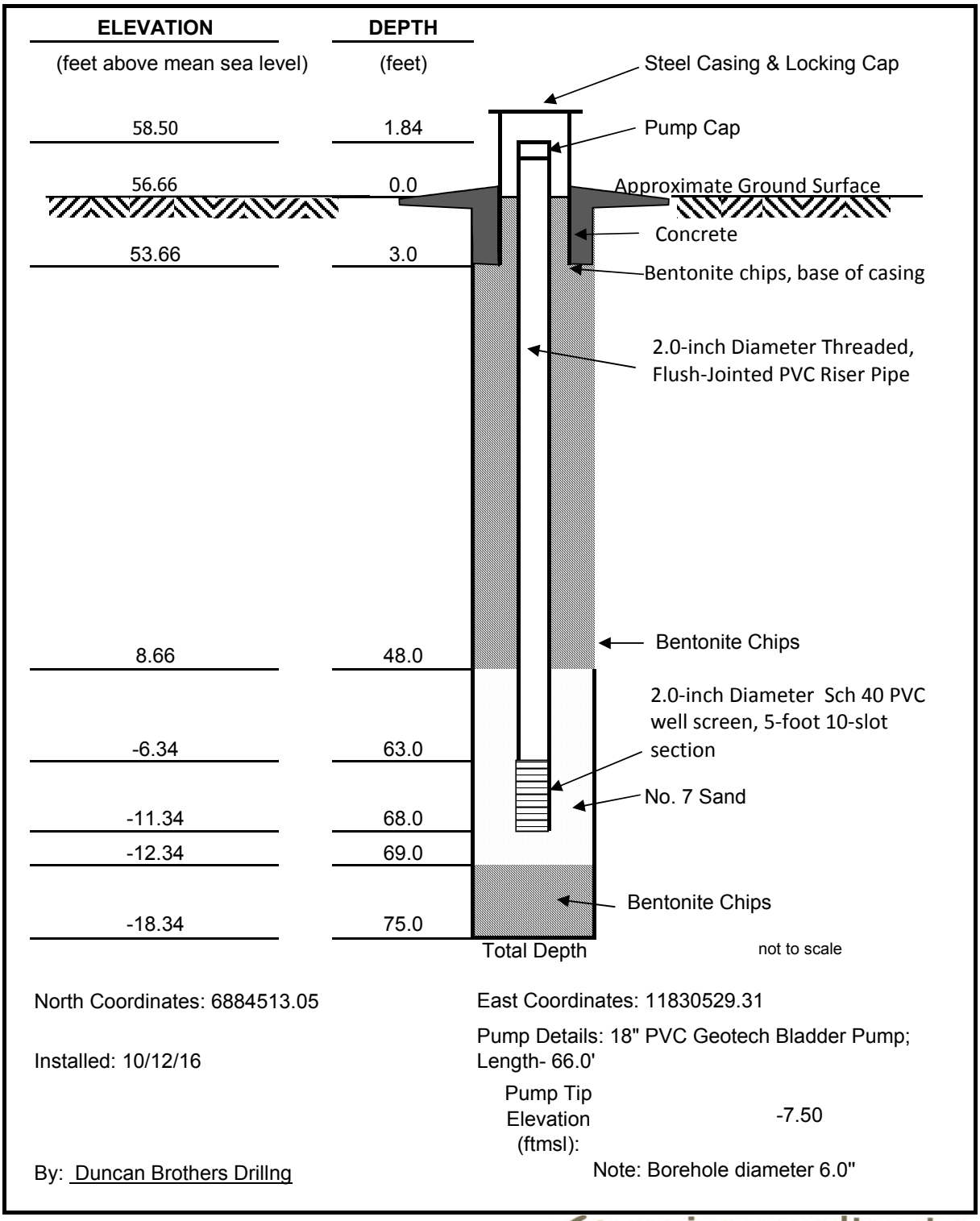
PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER CASING IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 46' DATE/TIME 9/16/16 11:00
24 HR WATER DEPTH 139' DATE/TIME 9/17/16 9:00
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. ED-1605
SHEET 9 OF 9
DATE: START 9/13/16 END 9/16/16
ELEV: 164.6'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
160.0						↑		(CONTINUED) ↑	
			5.0	100%	—	SC	WET	MEDIUM TO COARSE CLAYEY SAND, SOME FINE GRAVEL, LIGHT GRAY / GREEN	WELL ROUNDED GRAVEL (.13" – .75") DIAMETER
165.0									
			5.0	100%	—	SC	WET		
170.0								BORING TERMINATED 170.00	

WELL CONSTRUCTION –
SET WELL AT 170'. USE 10' OF SCH. 80 2.5" WELL SCREEN FROM 170' TO 160'. FILTER PACK CONSISTS OF #7 SAND FROM 170' TO 155'. BENTONITE SEAL WITH BENTONITE CHIPS (3/8") FROM 155' TO 150'. ALLOW BENTONITE TO HYDRATE OVERNIGHT. GROUT FROM 150' TO 3' BELOW GROUND SURFACE WITH TREMIE PIPE USING HIGH SOLIDS BENTONITE GROUT MIX ON 9/16/16.

Monitoring Well ED-1606
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6884513.05

East Coordinates: 11830529.31

Installed: 10/12/16

Pump Details: 18" PVC Geotech Bladder Pump; Length- 66.0'

Pump Tip Elevation (ftmsl): -7.50

By: Duncan Brothers Drillng

Note: Borehole diameter 6.0"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME Possum Point
PROJECT LOCATION Dumfries, VA
DRILLER NAME/COMPANY Ross / Duncan Brothers Drilling
EQUIPMENT USED: Sonic Drilling SD-450 (SN: SDC 09841)
DRILLING METHODS: Sonic Drilling with 6" outer and 4" inner barrel 5' run
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: PWM REVIEWED BY: _____ DATE: _____

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BORING NO. ED-1606
SHEET 1 OF 3
DATE: START 10/11/16 END 10/12/16
ELEV: 56.66'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	Northing 6884513.05 / Easting 11830529.31 REMARKS
0.0	S-1	-	5.0	100	1.0	CL	moist	Lean CLAY, little organics, trace rounded to angular fine to medium grained gravel, medium to stiff, heterogeneous, [Fill]	[moderately sticky]
5.0	S-2	-	5.0	100	1.5		damp	- trace fine grained sand. 9.0'	
10.0	S-3	-	5.0	100	3.5	ML	damp	SILT, some fine grained sand, very stiff, gray mottled to orange. [Alluvium]	[non-sticky]
15.0	S-4	-	5.0	100			damp	16.3' Silty SAND, Poorly graded fine grained, orange to gray	
20.0	S-5	-	5.0	100		SP-SM	damp	- 22.3 becomes coarse grained - trace rounded medium grained gravel	
25.0	S-6	-	5.0	100			Moist	- Becomes fine grained	
30.0	S-7	-	5.0	100			Moist		
35.0	S-8	-	5.0	100		SM	Moist	36.4 Silty SAND, fine grained orange to gray.	
40.0									

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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BORING NO. ED-1606
SHEET 2 OF 3
DATE: START 10/11/16 END 10/12/16
ELEV: 56.66'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
40.0									
	S-9	-	5.0	100		SM	damp	Silty SAND (continued) - Clay seam 39.8 - 40.6 - Stratified orange and gray layers from 36.4 to 37.3	[non-sticky]
45.0	S-10	-	5.0	100			damp to moist	48.2	
50.0	S-11	-	5.0	100		SP SM	moist	Silty SAND, Poorly graded, homogeneous, coarse grained orange to gray. -50.0 - 51.6 clay seam with well graded gravel, subrounded to rounded.	
55.0	S-12	-	5.0	100			moist	-53.0 - 53.4 clay seam. - Becomes fine grained 60.0	
60.0	S-13	-	5.0	100		SM	moist	Silty SAND, uniformly graded little medium subrounded gravel 64.0 - Clay seam 62.0 - 64.0	
65.0	S-14	-	5.0	100		SP SM	moist	Silty SAND, Poorly graded, coarse grained, tan to gray. 69.5 - Clay seam 64.9 - 65.2	
70.0	S-15	-	5.0	100	4.0	CH	damp	Fat CLAY, homogeneous, gray hard. 75.0	[very sticky]
75.0								Boring Terminated at 75.0' See Next Page for Well Construction.	

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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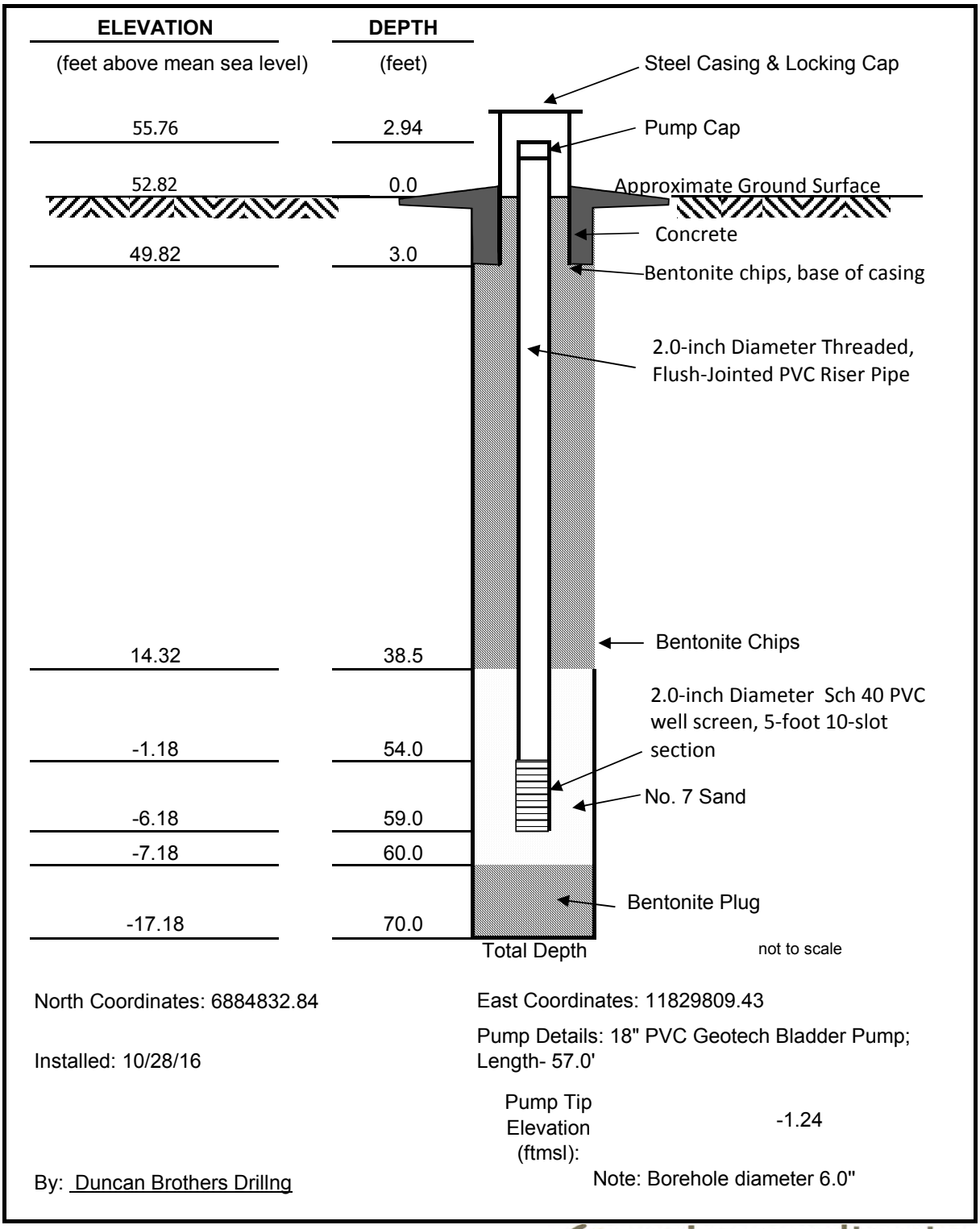
BORING NO. ED-1606
SHEET 3 OF 3
DATE: START 10/11/16 END 10/12/16
ELEV: 56.66'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
								* Well Construction - #7 Sand placed from 69.0 to 48.0'. Well set at 68.0' with 5' of SCH 40 2.0" well screen from 68.0 to 63.0'. Bentonite chip from 48.0' to 3.0' Chips were hydrated. Bentonite plug from 75.0' to 69.0', allowed to hydrate overnight	

Monitoring Well ED-1D
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6884832.84

East Coordinates: 11829809.43

Installed: 10/28/16

Pump Details: 18" PVC Geotech Bladder Pump; Length- 57.0'

Pump Tip Elevation (ftmsl): -1.24

By: Duncan Brothers Drillng

Note: Borehole diameter 6.0"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME Possum Point
PROJECT LOCATION Dumfries VA
DRILLER NAME/COMPANY Ross / Duncan Brothers Drilling
EQUIPMENT USED: Sonic Drill SD-450 (SN: SDC 09-041)
DRILLING METHODS: Sonic Drilling with 6" outer and 4" inner barrels 10'
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: PWM REVIEWED BY: _____ DATE: _____

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BORING NO. ED-10
SHEET 1 OF 2
DATE: START 10/27 END 10/28
ELEV: 52.82'

Northing 6884832.84 Easting 11829809.43

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
0.0	S-1	-	2.0	40%	3.0	CL	moist	Silty Lean CLAY, little organics, little well graded rounded to subrounded gravel, trace fine sand, reddish-brown, very stiff to hard. [alluvium]	
								6.0'	
5.0	S-2	-	5.0	100%	74.5	SM	damp	Silty SAND, fine grained, trace medium subrounded to rounded gravel, light brown, blocky	
10.0	S-3	-	5.0	100%	3.0	SM	damp	-Interbedded 3" clay from 10.0-12.0' -Becomes tan and reddish brown	
15.0	S-4	-	5.0	100%	3.0	SM	damp	-Becomes medium to fine grained -Clay seam 16.6-17.0' -Becomes gray and orange	
20.0	S-5	-	5.0	100%	1.0 to 4.0	ML	Moist	SILT, some fine sand, tan, stiff to very stiff. -Well graded gravel zone from 20.0-21.2'	[non-sticky]
								24.6'	
25.0	S-6	-	5.0	100%		SM	Moist	Silty SAND, medium to coarse grained, tan to orange to gray. -Clay seam 28.5-29.4 with some sand	
30.0	S-7	-	5.0	100%		SP-SM	Moist	SAND, with silt, poorly graded, medium grained, trace medium rounded to subrounded gravel. orange to tan.	
								35.0'	
35.0	S-8	-	5.0	100%		SM	Moist	Silty SAND, medium grained trace subrounded to rounded medium gravel, tan to gray.	
40.0									

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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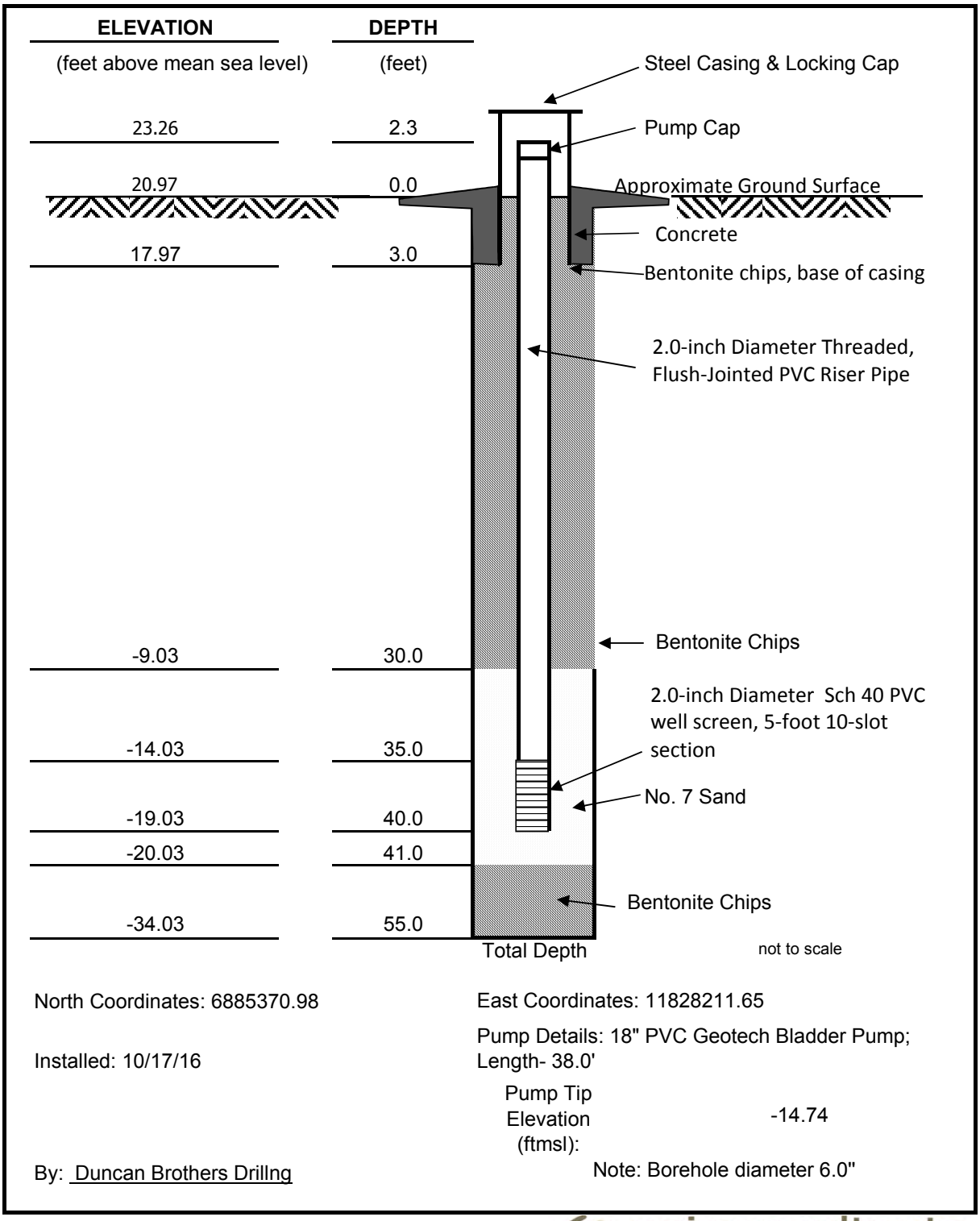
BORING NO. ED-1D
SHEET 2 OF 3
DATE: START 10/27 END 10/28
ELEV: 52.82'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
40.0									
	S-9	–	5.0	100 %		SM	Moist	Silty SAND, (continued) -44.5 - 45.8 clay with some sand and medium subrounded to rounded gravel.	
45.0								45.8'	
	S-10	–	5.0	100 %		SC	Moist	Clayey SAND, medium grained Orange to tan	[moderately sticky]
50.0									
	S-11	–	5.0	100 %		SC	Moist	-53.3 - 55.1 clay seam	
55.0									
	S-12	–	5.0	100 %		SC	Moist to Wet	58.2'	
						SP SC		60.0' SAND, with clay, Poorly graded medium grained, gray to tan.	
60.0									
	S-13	–	5.0	100 %	74.5	CH	Moist to damp	Fat CLAY, homogeneous, gray hard.	[very sticky] [waxy appearance]
65.0									
	S-14	–	5.0	100 %	74.5	CH	damp	-Becomes mottled brown	
70.0								70.0'	
								Boring Terminated at 70.0' * Well Construction: #7 Sand Placed From 60.0 to 38.5' Well Set at 59.0' with 5' SCH 40 2.0" PVC. Well Screen from 59.0 to 54.0' Bentonite Chip 38.5 to 3.0' Bentonite Plug From 70.0 to 60.0' allowed to hydrate overnight.	

Monitoring Well ES-1609
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6885370.98

East Coordinates: 11828211.65

Installed: 10/17/16

Pump Details: 18" PVC Geotech Bladder Pump; Length- 38.0'

Pump Tip Elevation (ftmsl): -14.74

By: Duncan Brothers Drillng

Note: Borehole diameter 6.0"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME Possum Point
PROJECT LOCATION Dumfries, VA
DRILLER NAME/COMPANY Ross / Duncan Brothers Drilling
EQUIPMENT USED: Sonic Drill SD-450 (SN: SDC 09-041)
DRILLING METHODS: Sonic Drilling with 6" outter 4" inner barrels 5' runs
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: PWM REVIEWED BY: _____ DATE: _____

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BORING NO. ES-1609
SHEET 1 OF 2
DATE: START 10/16 END 10/17
ELEV: 20.97'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	Northing 6885370.98 / Easting 11828211.65 REMARKS
0.0	S-1	–	4.0	80	2.0	cl	damp	2.3' Topsoil Lean CLAY, with some fine sand brown to gray, Stiff to Very Stiff. [alluvium]	
5.0	S-2	–	0.0	0			damp	- Sand lense from 3.2 to 3.5 fine grained orange to tan	
10.0	S-3	–	4.0	80		cl / sc	damp	12.0' Clayey SAND, fine grained Stratified to mottled gray and orange.	
15.0	S-4	–	5.0	100	0.25	sc / ml	damp	- lean Clay Seam from 16.0 - 17.3 Pocket Penetrometer 0.75 tsf 19.1' 20.0' SILT, with some fine sand, brown very soft.	
20.0	S-5	–	5.0	100	0.25	cl	damp	Lean CLAY, little fine Sand, homogeneous, gray. Soft to very Soft.	
25.0	S-6	–	5.0	100	1.0	cl	damp	- from 29.0 to 31.7 orange iron stained well graded subrounded to rounded gravel with some coarse Sand	
30.0	S-7	–	5.0	100		gc-gw / sc	moist to wet	31.7 33.0' Clayey GRAVEL, well graded with some coarse sand.	
35.0	S-8	–	5.0	100		sc	moist to damp	Clayey SAND, fine grained, homogeneous, gray	
40.0									

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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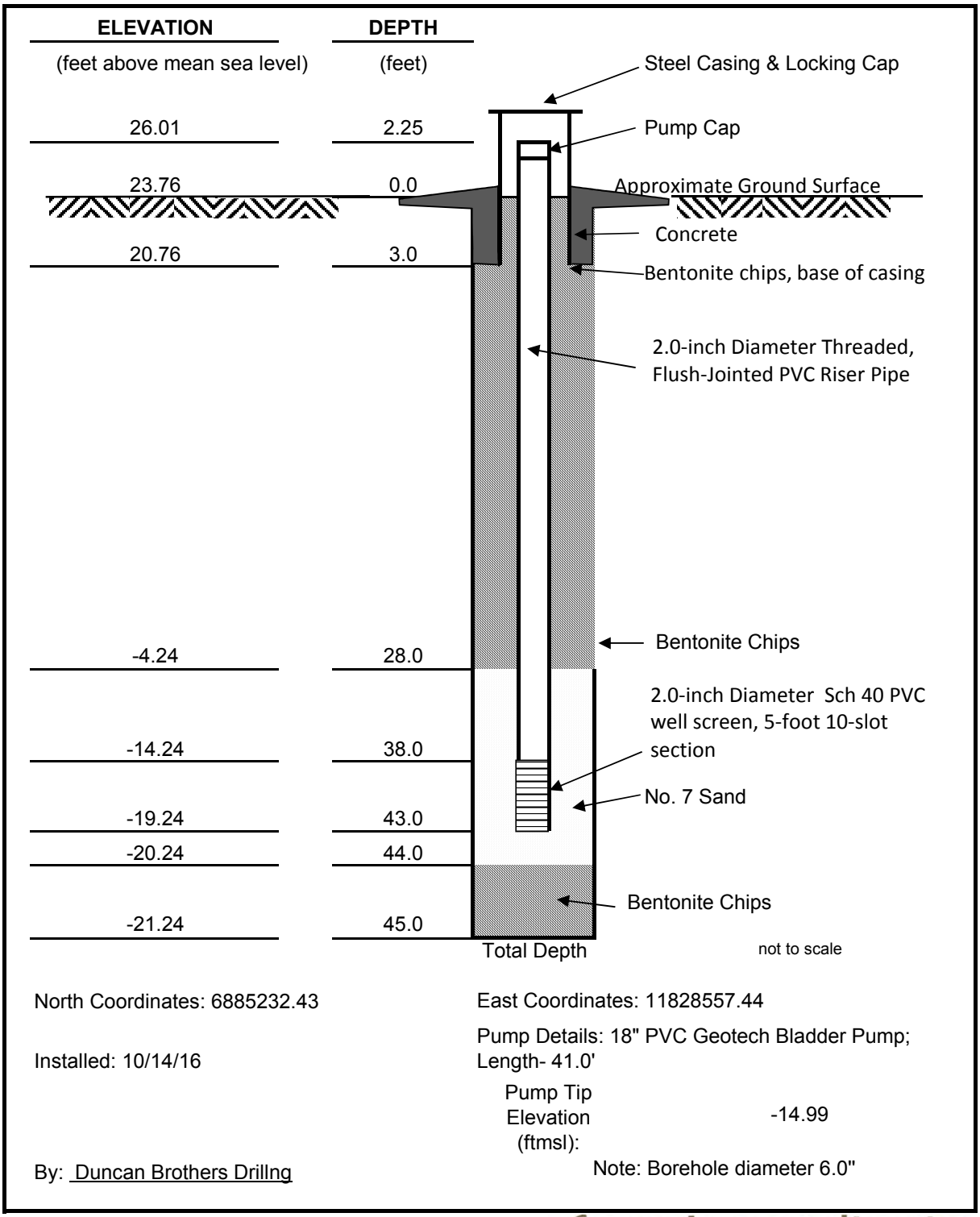
BORING NO. ES-1609
SHEET 2 OF 2
DATE: START 10/16 END 10/17
ELEV: 20.97'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
40.0									
	S-9	-	5.0	100		SC	damp	Clayey SAND, (continued)	
45.0									
	S-10	-	5.0	100		SC	moist to damp	-Well graded gravel subrounded to rounded from 47.2 to 47.7	
50.0									
	S-11	-	5.0	100		SC	damp		
55.0								55.0'	
								Boring Terminated at 55.0' *Well Construction: #7 Sand Placed from 41.0 to 30.0'. Well set at 40.0' with 5' SCH40 2.0' well screen from 40.0 to 35.0' Bentonite chip 55.0 to 41.0' allowed to hydrate and swell for 2.0 hrs. Bentonite chip seal from 30.0 to 3.0' * Shallow well was to be installed if upper sand formation contained a water bearing zone. Drillers pushed casing down to 19.0' and pulled up one foot to find no water bearing zone. Therefore, the drillers continued to sample to the lower sand formation.	

Monitoring Well ES-1613
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6885232.43

East Coordinates: 11828557.44

Installed: 10/14/16

Pump Details: 18" PVC Geotech Bladder Pump; Length- 41.0'

Pump Tip Elevation (ftmsl): -14.99

By: Duncan Brothers Drillng

Note: Borehole diameter 6.0"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME Possum Point
PROJECT LOCATION Dumfries, VA
DRILLER NAME/COMPANY Cass / Duncan Brothers Drilling
EQUIPMENT USED: Sonic Drill SD-450 (SN: SDC 09-041)
DRILLING METHODS: Sonic Drilling with 6" outer and 4" inner barrel and 5' runs
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: PWM REVIEWED BY: _____ DATE: _____

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BORING NO. ES-1613
SHEET 1 OF 2
DATE: START 10/13/16 END 10/14/16
ELEV: 23.76'

Northing	Easting
6885232.43	11828557.44

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
0.0								0.7' Topsoil	
	S-1	-	5.0	100	2.5	CL	moist	Lean CLAY, trace organics orange brown, stiff to very stiff. [alluvium]	
								4.2'	
5.0	S-2	-	0.0	0		SC	moist	Clayey SAND, fine grained tan to orange.	
10.0	S-3	-	3.0	60			damp to dry	- Becomes medium grained sand	
								13.3'	
15.0	S-4	-	3.0	60		SP	damp	SAND, Poorly graded fine grained, tan to white.	
20.0	S-5	-	2.0	40	0.5	CL	moist	23.0'	
								Lean CLAY, gray to orange, soft,	
25.0	S-6	-	4.5	90	0.5	SP	moist	SAND, Poorly graded fine grained tan to white.	
						ML		25.6' 26.0' SILT, gray soft	
						SM		26.5' Silty SAND. fine grained, gray	
30.0					1.0	CL		27.4' Lean CLAY, tan some fine sand stiff	
	S-7	-	4.0	80		SM	damp	Silty SAND, fine grained tan to orange.	
35.0								34.0'	
	S-8	-	5.0	100		SC	damp	Clayey SAND, fine grained gray - 34.0-35.4 well graded gravel subrounded to rounded.	
40.0									

BORING LOG

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PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

BORING NO. B-1613
SHEET 2 OF 2
DATE: START 10/13/11 END 10/14/11
ELEV: 23.76'

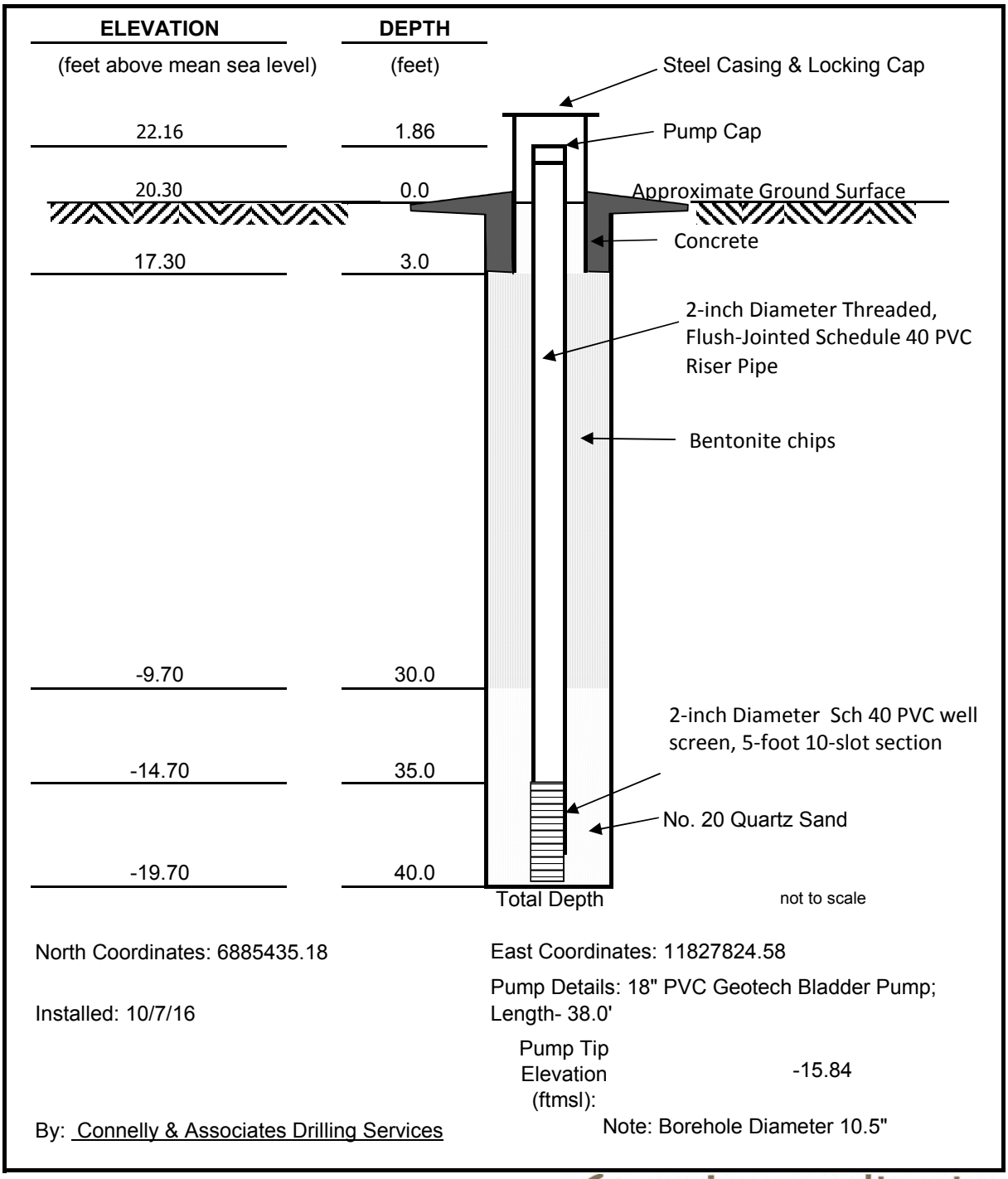
DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
40.0			5.0	100		SC		Clayey SAND (continued)	
	S-9	-					damp	43.7'	
					7+5	CH		Fat CLAY, dark gray little dark brown mottling, hard	
45.0								Boring terminated at 45.0'	

Bentonite plug from 45' to 44'

*Well Construction:
#7 Sand placed from 44' to 28'. Well set at 43' with 5' of SCH 40 2.0" well screen from 43 to 38'. Bentonite Chip From 28 to 3.0'

* Shallow well was to be installed if upper sand formation contained a water bearing zone. Drillers Pushed casing down to 23' pulled up one foot to find no water bearing zone in upper end. The boring was terminated and abandoned using bentonite chips.

ES-3D
Possum Point Power Station
Dominion Transmission, Inc.
Record Detail



North Coordinates: 6885435.18

East Coordinates: 11827824.58

Installed: 10/7/16

Pump Details: 18" PVC Geotech Bladder Pump; Length- 38.0'

Pump Tip Elevation (ftmsl): -15.84

By: Connelly & Associates Drilling Services

Note: Borehole Diameter 10.5"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME Possum Point
PROJECT LOCATION Dumfries, VA
DRILLER NAME/COMPANY Nathan / Connelly Drilling
EQUIPMENT USED: Diedrich D-50 Turbo Twin autohammer
DRILLING METHODS: 6" HSA in Conjunction with SPT 2' Sampling
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: PM / JMS REVIEWED BY: _____ DATE: _____

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BORING NO. ES-3D
SHEET 1 OF 3
DATE: START 9/26/16 END 10/7/16
ELEV: 20.3'

Northing	Easting
6885435.18	11827824.58

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS offset boring 15' due East from ES-3A
0.0									topsoil 0.0-0.5'
	S-1	4 6 6 7	1.6'		>4.5	CL	dry	Lean CLAY, orange brown to light brown, some organics trace Sand, fine grained, Hard, homogeneous. [Fill]	[dusty when dry]
2.0									
2.5	S-2	4 7 8 11	2.0'		3.5	CH	dry	Fat CLAY, mottled gray and orange, trace organics, very stiff. [Alluvial]	[Little powder when dry]
4.5									
5.0	S-3	4 5 5 9	2.0'		3.5	CH	dry to damp	- Becomes predominantly gray	[waxy apperance]
7.0									
7.5	S-4	8 10 12 18	2.0'		3.0	CH	damp	- Little sand, fine grained, dark gray to light gray.	
9.5									
10.0	S-5	6 5 5 6	1.8'		2.75	CH	damp	- Becomes predominantly dark gray	
12.0									
12.5	S-6	10 12 16 16	2.0'		0.5	CH	damp to moist	- Becomes soft - thin clayey sand layer from 13.7' to 13.9'	[thread test < 1/16"]
14.5									
15.0	S-7	3 6 6 8	1.0	-	-	SC	MOIST	CLAYEY SAND, ORANGE TO GRAYISH BROWN	
17.0									
17.5	S-8	4 4 7 9	2.0	-	2.5	CL	MOIST	17.5 SANDY CLAY, GRAYISH BROWN	
19.0					-	SC		19.0 CLAYEY SAND, LIGHT GRAYISH TAN	
19.5									

BORING LOG

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PROJECT NO. 0150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY CHRIS - CONNELLY / JEREMY - CONNELLY
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK
DRILLING METHODS: 6" HSA, 2" SPT AUTO
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: RM / JMS REVIEWED BY: _____ DATE: _____

BORING NO. ES-3D
SHEET 2 OF 3
DATE: START 9/26/16 END 10/7/16
ELEV: 20.3'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
20.0		4			3.5	CL	MOIST	SILTY CLAY, GRAYISH BROWN	
	S-9	4	2.0	—			TO		
		4			—	SC	WET	CLAYEY FINE SAND, LIGHT GRAYISH BROWN	
22.0		5			—	SP		MEDIUM SAND, LIGHT GRAY	
22.5									
		4			1.0			SANDY CLAY, LIGHT GRAYISH TAN	
	S-10	5	2.0	—	—	CL	M	TO BROWNISH GRAY	
		7			3.0				
24.5		6							
25.0								25.0	
		4				SC	M	CLAYEY SAND, LIGHT GRAYISH TAN	
	S-11	5	2.0	—	2.0		TO	26.0	
		6				CH	W	FAT CLAY, LITTLE SAND, GRAYISH	
27.0		11						TAN	
27.5								27.5	
		7						DENSE CLAY, LITTLE SAND	
	S-12	7	2.0	—	4.0	CL	M	DARK ORANGEISH / REDDISH BROWN	
		8							
29.5		9							
30.0								30.0	
		4					M	FINE - MEDIUM SAND, TRACE CLAY	HEAVY FE
	S-13	4	1.0	—	—	SP	TO	DARK ORANGEISH RED / BROWN	STAINING
		7					W		WET SPOON
32.0		10							
32.5								32.5	
		2			3.5	CL	M	FAT CLAY, DARK GRAY, MICACEOUS	
	S-14	1	1.0	—					
		3			—	GP	SAT	COARSE GRAVEL TO COBBLES, SOME	
34.5		7						MEDIUM SAND, TAN TO ORANGE	
35.0									
		16							
	S-15	33	1.0	—	2.5	CL	SAT	(CLAY & COBBLES CONTINUED	
		21				/GL		MAY BE JUNK IN SPOON)	
37.0		11							
		10						COBBLE FRAGS, MAY BE GREATER THAN 2"	
	S-16	14	0.7	—	—	GP	SAT		
		21							
39.0		31							
	S-17	14	0.2	—	—	GP	SAT		
40.0		8							

END 40.0'

BORING LOG

PROJECT NO. C150132.00
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES VA
DRILLER NAME/COMPANY CHRIS-CONNELLY DRILLING
EQUIPMENT USED: DIEDRICH D-50 TURBO TRACK
DRILLING METHODS: 6" HSA, 2' SPT AUTO
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: JMS REVIEWED BY: _____ DATE: _____

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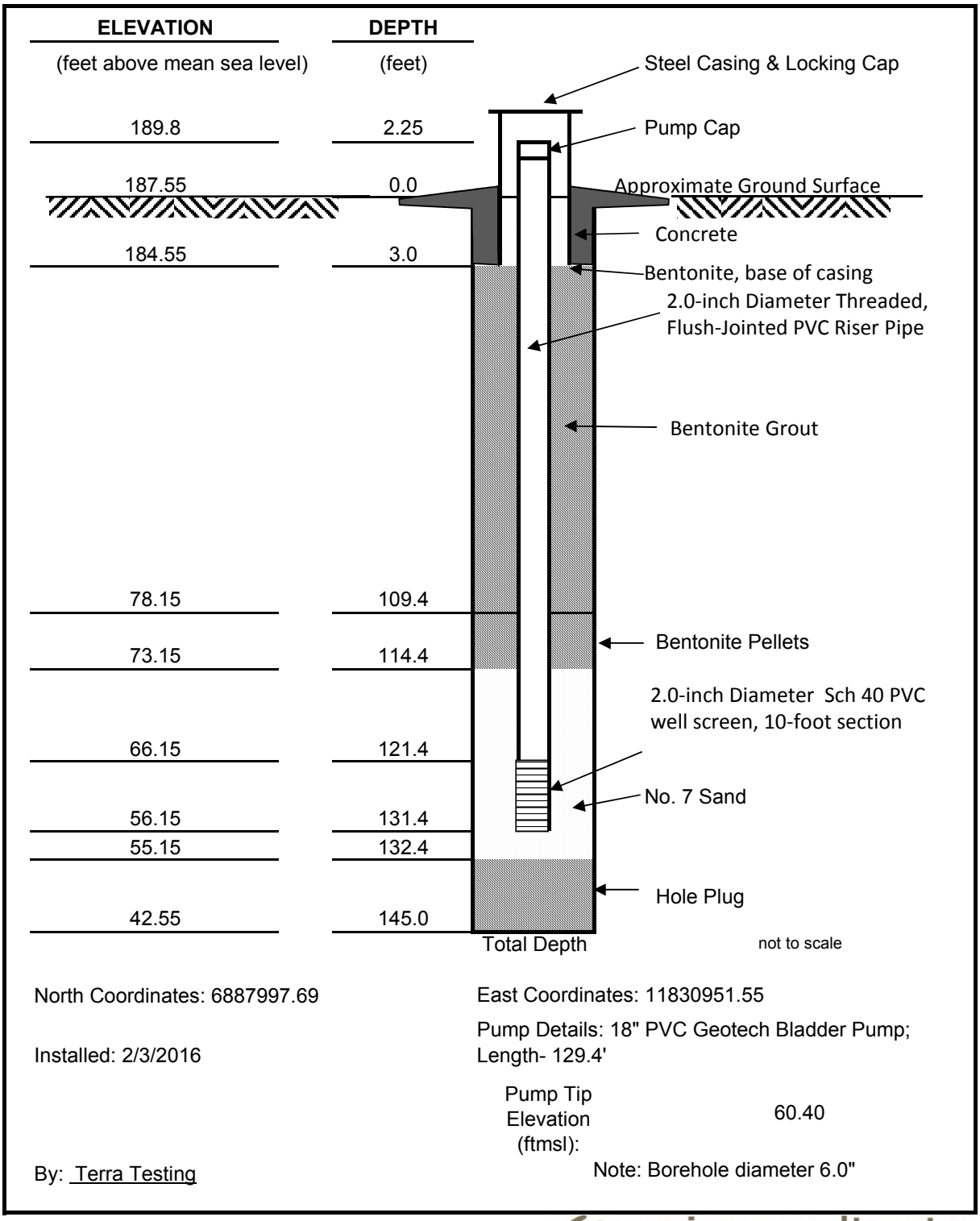
BORING NO. ES-3D
SHEET 3 OF 3
DATE: START 9/26/11 END 10/7/11
ELEV: 20.3'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
								MONITORING WELL INSTALLATION NOTES 5' SCHEDULE 40 PVC, 10-SLOT SCREEN FROM 40'-35'* #20 SAND FROM 40'-30' BENTONITE CHIP SEAL 30'-3' STEEL PROTECTIVE CASING WITH LOCKING CAP CONCRETED IN PLACE. 2x2' CONCRETE PAD INSTALLED AROUND STEEL CASING. FOUR BOLLARDS INSTALLED AROUND CONCRETE PAD. WELL DEVELOPED ON 10/10. * SCHEDULE 40 PVC RISER FROM 35' - SURFACE WITH 3' STICKUP.	

ED-1612

Monitoring Well MW-1612
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6887997.69

East Coordinates: 11830951.55

Installed: 2/3/2016

Pump Details: 18" PVC Geotech Bladder Pump; Length- 129.4'

Pump Tip Elevation (ftmsl): 60.40

By: Terra Testing

Note: Borehole diameter 6.0"

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ED-1612

PROJECT Possum Point Power Station - Pond Closures BORING NO. MW-1612 (P-1)

ELEVATION 187.55' GWL 0 HRS 2/1/16 11:00 AM ELEV: 71.71 PROJECT NO. C150132.05

HRS 2/3/16 1:30 PM ELEV. 81.55

DATE 2/3/16 CLASSIFIED BY E. HOLLAR PAGE 1 of 3

DEPTH (FT.)	BLOWS PER SIX INCHES OR CORE RECOVERY/RUN	SAMPLE NO., TYPE & RECOVERY OR % ROCK RECOVERY	RQD (%) OR TORVANE	DESCRIPTION: PROFILE	SOIL DENSITY - CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS OR ROCK BROKENNESS	Northing 6887997.69 / Easting 11830951.55 — REMARKS* WELL INSTALLATION
1	2	3	4	5	6	7	8	9	10
							REDDISH/BROWN SILTY CLAY W/ TRACE TO LITTLE SAND & GRAVEL (CL)		GRND ELEV. 187.55'
10		6-10(4')					12.0'		Top of Pump Cap El. 189.8'
							REDDISH/BROWN FINE SILTY SAND (DRY) (SM)		Grout to 3.0 ft.
20		18-20(2')							
							TAN FINE SILTY SAND (DRY) (SM)		Grout
30		18-20(2')							
							TAN/BRN FINE TO MEDIUM SITY SAND (MOIST) (SM)		2" PVC
40		35-45(5')							BENTONITE
							BROWN/GRAY FINE TO MEDIUM SILTY SAND (MOIST) (SM)		
50		44-50(6')							
							BROWN/WHITE FINE TO MEDIUM SILTY SAND (SM)		
60		55-60(5')							

REMARKS ** START 1/29/16 11:30AM. DRILLING COMPLETE 1/31/16 10:30 AM. WELL INSTALLATION COMPLETE, INCL. PROTECTIVE COVER ON 2/1/16

* POCKET PENETROMETER READINGS

** METHOD OF ADVANCING AND CLEANING BORING

BORING NO. MW-1612

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ED-1612

PROJECT Possum Point Power Station - Pond Closures BORING NO. MW-1612(P-1)

ELEVATION _____ GWL 0 HRS _____ PROJECT NO. C150132.00

HRS _____

DATE 2/3/16 CLASSIFIED BY _____ PAGE 2 of 3

DEPTH (FT.)	BLOWS PER SIX INCHES OR CORE RECOVERY/RUN	SAMPLE NO., TYPE & RECOVERY OR % ROCK RECOVERY	RQD (%) OR TORVANE	DESCRIPTION: PROFILE	DESCRIPTION: SOIL DENSITY - CONSISTENCY OR ROCK HARDNESS	DESCRIPTION: COLOR	DESCRIPTION: MATERIAL CLASSIFICATION	USCS OR ROCK BROKENNESS	REMARKS*
1	2	3	4	5	6	7	8	9	10
							WHITE-BROWN FINE MEDIUM SILTY SAND TR. GRAVEL (SM		
70		68-70(8')							
							WHITE-BROWN FINE TO MEDIUM SILTY SAND W/ TR GRAVEL (SM)		
80		71-80(9')							
		10'					WHITE-BROWN FINE TO COARSE SILTY SAND TRACE TO LITTLE GRAVEL (MOIST) (SP) 92'		2" PVC Grout Bentonite
90									
		8'					GREEN CLAYEY SILT W/ SAND PARTINGS (MOIST) (CL-ML)		
		92-100							
100									
							GREEN CLAYEY SILT WITH SAND PARTINGS (MOIST) (CL-ML)		
		10'							
110									109.4
							112.0'		Bentonite Pellets 114.4
							BROWN-GRAY FINE TO MED TRACE GRAVEL (MOIST) (SM)		
		10'							
120									SAND FILTER

REMARKS ** _____

* POCKET PENETROMETER READINGS

** METHOD OF ADVANCING AND CLEANING BORING

BORING NO. MW-1612

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ED-1612

PROJECT Possum Point Power Station - Pond Closures BORING NO. MW-1612(P-1)

ELEVATION _____ GWL 0 HRS _____ PROJECT NO. C150132.00

HRS _____

DATE 2/3/16 CLASSIFIED BY _____ PAGE 3 of 3

DEPTH (FT.)	BLOWS PER SIX INCHES OR CORE RECOVERY/RUN	SAMPLE NO., TYPE & RECOVERY OR % ROCK RECOVERY	RQD (%) OR TORVANE	DESCRIPTION: PROFILE	DESCRIPTION: SOIL DENSITY - CONSISTENCY OR ROCK HARDNESS	DESCRIPTION: COLOR	DESCRIPTION: MATERIAL CLASSIFICATION	USCS OR ROCK BROKENNESS	REMARKS*
1	2	3	4	5	6	7	8	9	10
									121.4'
		10'					GRAY-BROWN FINE TO COARSE SILTY SAND TRACE TO LITTLE SANDY GRAVEL (MOIST-WET)		10' SCREEN 10' SAND
130							SM-SP 132.0'		131.4'
									132.4 (EL 56.0)
		10'					GRAY SILTY CLAY TRACE GRAVEL (CL)		HOLE PLUG
140									
		5'					GRAY SILTY CLAY TRACE GRAVEL (CL)		
145							145.0'		
							EOB		

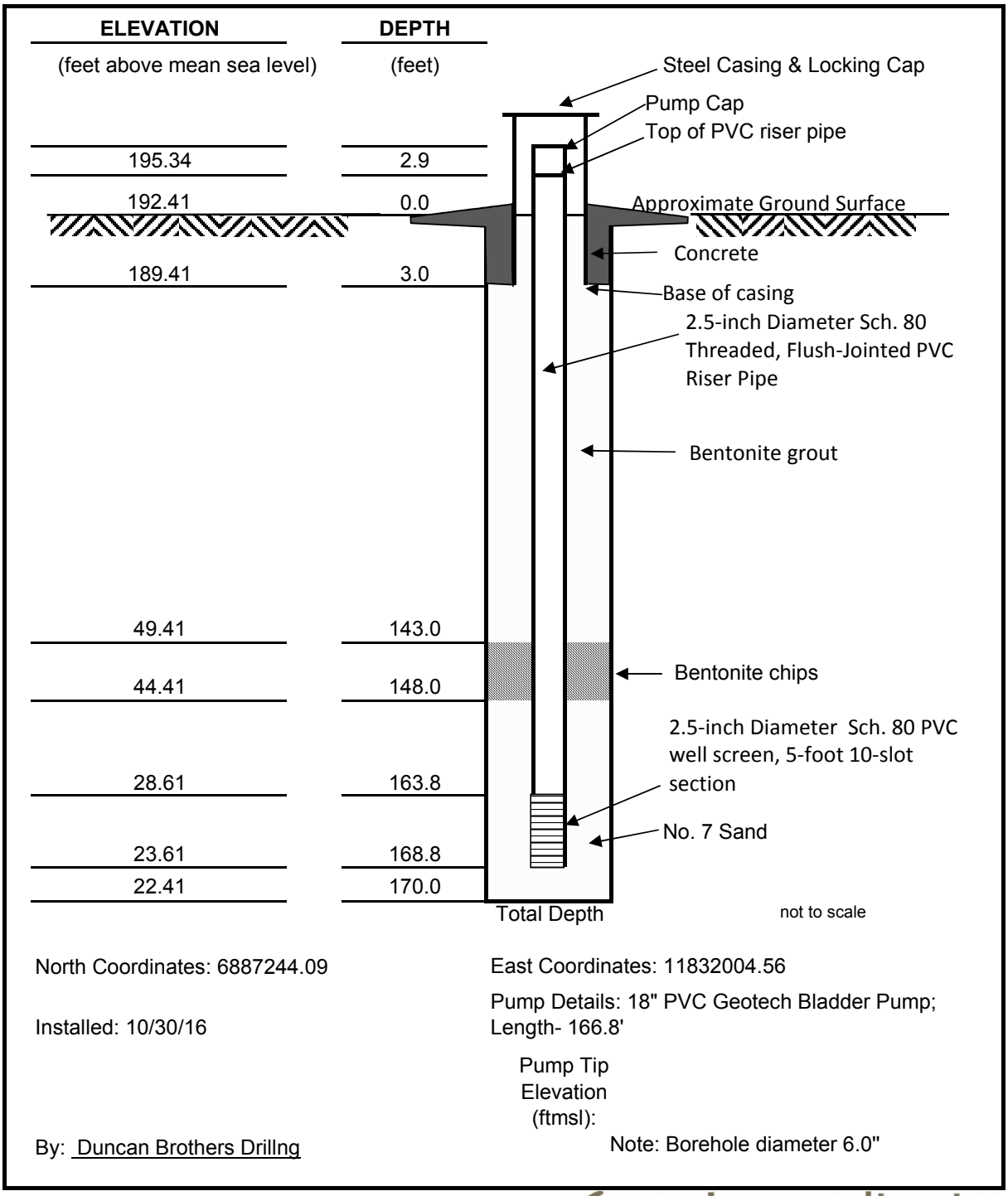
REMARKS ** WELL SET @ APPROX. 131.4

* POCKET PENETROMETER READINGS

** METHOD OF ADVANCING AND CLEANING BORING

BORING NO. MW-1612

Monitoring Well SD-1603
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6887244.09

East Coordinates: 11832004.56

Pump Details: 18" PVC Geotech Bladder Pump; Length- 166.8'

Installed: 10/30/16

Pump Tip Elevation (ftmsl):

By: Duncan Brothers Drillng

Note: Borehole diameter 6.0"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME Possum Point
PROJECT LOCATION Dumfries VA
DRILLER NAME/COMPANY Ross / Duncan Brothers Drilling
EQUIPMENT USED: Sonic Drill SD-450 (SN: SDC09-041)
DRILLING METHODS: Sonic Drilling with 6" outer 4" inner barrels 10' runs
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: PWM REVIEWED BY: _____ DATE: _____

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BORING NO. SD-1603
SHEET 1 OF 5
DATE: START 10/29 END 10/30
ELEV: 192.41'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	Northing 6887244.09 / Easting 11832004.56 REMARKS
0.0									
	S-1	-	9.0	100	0.5	CL	damp to moist	Lean CLAY, blocky, some subangular gravel medium, Brown [fill]	
					2.5			3.6' Lean CLAY, trace fine grained sand, trace organics, dark brown to orange, medium [alluvium]	
					3.0			-Burnt organics and ash 4.8 to 5.3'	
10.0									
	S-2	-	7.0	70	3.5	CL	damp	-Becomes very stiff -9.2 to 9.6 well graded subrounded gravel zone. -Becomes blocky and orange-red.	
20.0								20.0'	
	S-3	-	8.4	84		SM	damp to moist	Silty SAND, fine grained, tan to yellow brown	[non-sticky]
30.0									
	S-4	-	6.7	67		SM	moist	-Becomes gray and red	
40.0									

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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BORING NO. SD-1603
SHEET 2 OF 5
DATE: START 10/29 END 10/30
ELEV: 192.41'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
40.0			8.0	80				Silty SAND, (continued)	
	S-5	–				SM	moist		
50.0			7.0	70					
	S-6	–				SM	moist		
60.0								60.0'	
			10.0	100				Fat CLAY, gray mottled brown, hard	
	S-7	–			74.5	CH	damp		
								- 70.0 to 70.5 Clayey sand seam.	
70.0								70.5'	
			10.0	100				SAND, with some silt, Poorly graded medium sand, tan to light gray.	
	S-8	–				SP SM	damp		
80.0									

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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BORING NO. SD-16.03
SHEET 3 OF 5
DATE: START 10/29 END 10/30
ELEV: 192.41'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
80.0									
			10.0	100		SP SM	damp	SAND, (continued) -Becomes orange to tan	
	S-9	-						-Becomes tan to light gray	
90.0								90.0'	
			10.0	100	74.5	ML		SILT, gray, hard, homogeneous 93.0'	
	S-10	-				SP SM	damp	SAND, with some silt, Poorly graded medium sand, tan to light gray. 100.0'	
100.0									
			10.0	100		SM	moist to wet	Silty SAND, trace well graded subrounded to rounded gravel medium grained sand, tan to orange. 105.8'	
	S-11	-				GW GC		GRAVEL, some clay, well graded subrounded to rounded, medium 109.2 to Coarse Sand, light Brown.	
110.0						SC		Clayey SAND, medium grained, orange brown. 110.0'	
			10.0	100		CH	moist	Fat CLAY, homogeneous, gray with trace to little orange brown mottling, hard.	
	S-12	-			74.5				
120.0									

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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BORING NO. SD-1603
SHEET 4 OF 5
DATE: START 10/29 END 10/30
ELEV: 192.25'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
120.0									
	S-13	–	10.0	100	4.0	CH	moist to damp	Fat CLAY, (continued)	
130.0	S-14	–	10.0	100	3.5	CH	damp		
140.0	S-15	–	10.0	100	24.5	SP SC	moist	141.4' SAND, and clay; Poorly graded, medium grained, gray to light brown. 150.0'	
150.0	S-16	–	10.0	100		SC	moist to wet	Clayey SAND, medium grained trace subrounded to rounded gravel, tan.	
160.0									

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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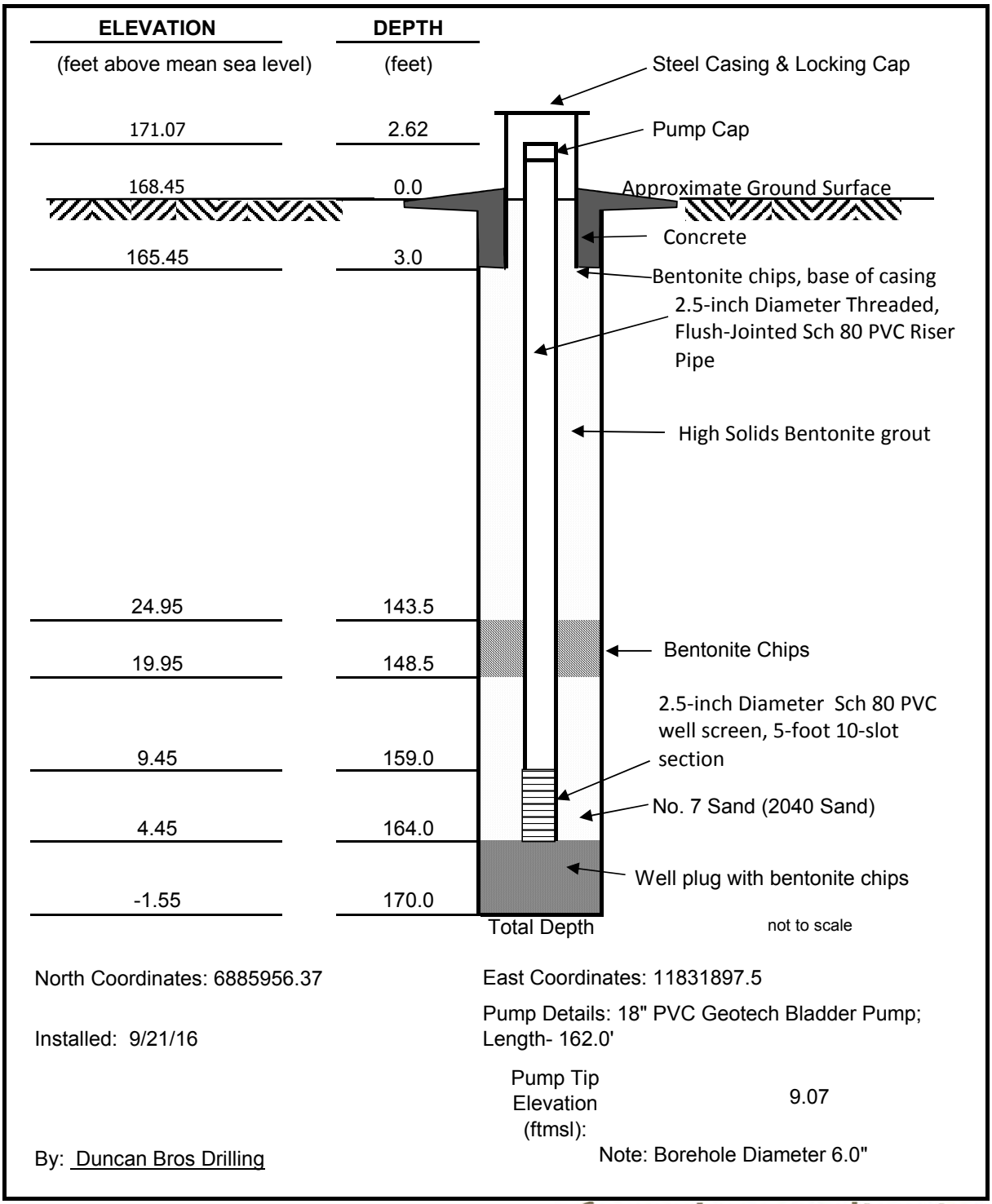
BORING NO. SD-1603
SHEET 5 OF 5
DATE: START 10/29 END 10/30
ELEV: 192.41'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
160.0									
	S-17	-	10.0	100		SC	moist to wet	Clayey SAND, (continued) -163.0-165.3 becomes fine grained and gray -165.3-168.8 becomes medium grained	
170.0					74.5	CH		Fat CLAY, homogeneous, gray, hard 170.0	
								Boring Terminated at 170.0' * Well Construction: #7 Sand placed from 170.0 to 148.0. Well set at 168.8 with 5.0' of SCH80 2.5" well Screen from 168.8 to 163.8. Bentonite chip plug from 148.0 to 143.0. Bentonite chips allowed to hydrate Overnight. Pumped grout the following day to 3.0'	

Monitoring Well SD-1604
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6885956.37

East Coordinates: 11831897.5

Installed: 9/21/16

Pump Details: 18" PVC Geotech Bladder Pump; Length- 162.0'

Pump Tip Elevation (ftmsl): 9.07

By: Duncan Bros Drilling

Note: Borehole Diameter 6.0"

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BORING LOG

PROJECT NO. C150132.00.071
PROJECT NAME Possum Point
PROJECT LOCATION Dumfries, VA
DRILLER NAME/COMPANY Ross Knotts / Duncan Bros Drilling
EQUIPMENT USED: 2006 Sonic SD-450 Track Rig
DRILLING METHODS: Sonic w/ 6" outer and 4" inner barrels in 10' runs
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 34' DATE/TIME 9/20/16 15:00
24 HR WATER DEPTH 29.50' DATE/TIME 9/21/16 14:30
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: Gene Cooney REVIEWED BY: DATE:

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BORING NO. SD-1604
SHEET 1 OF 9
DATE: START 9/16/16 END 9/21/16
ELEV: 168.45

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	Northing 6885956.37 / Easting 11831897.5 REMARKS
0.0								TOPSOIL (2")	
			0	0	—	—	—	NO RECOVERY 3.00	2" - 3' NO RECOVERY
			2.0	40 %	—	GW	DRY	SANDY GRAVEL W/ FINE TO COARSE SAND, GRAY 4.00	
5.0					—	SM	MOIST	FINE TO COARSE SILTY SAND W/ FINE GRAVEL, REDDISH ORANGE	
			5.0	100 %				7.00	
					—	SP	MOIST	MEDIUM TO COARSE GRAVELLY SAND, REDDISH ORANGE 8.50	
10.0					—	SM	MOIST	FINE TO COARSE SILTY SAND, LITTLE FINE GRAVEL, REDDISH ORANGE	VERY WELL ROUNDED GRAVEL
			5.0	100 %					
15.0									
			5.0	100 %					
20.0								20.00	

BORING LOG

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PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 34' DATE/TIME 9/20/16 15:00
24 HR WATER DEPTH 29.50' DATE/TIME 9/21/16 14:30
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. SD-1604
SHEET 2 OF 9
DATE: START 9/16/16 END 9/21/16
ELEV: 168.45

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
20.0					—	CL	MOIST	SANDY CLAY, SOME FINE GRAVEL, REDDISH ORANGE 21.00	☆ HARDER MATERIAL ENCOUNTERED ON 20-30' RUN - START USING OUTER CASING AND WATER
			5.0	100%	—	SP	MOIST	FINE TO MEDIUM SAND, LITTLE SILT, LIGHT BROWN / TAN	
25.0			5.0	100%					
30.0			5.0	100%	—	SP	MOIST	GRAVELLY SAND (MEDIUM TO COARSE SAND), LIGHT BROWN 32.00	
35.0					—	ML	MOIST	SILT, TRACE GRAVEL, DARK GRAY 37.00 37.50	
					—	SP	MOIST	FINE TO COARSE SAND, SOME CLAY LENSES AND FINE GRAVEL, TAN / LIGHT BROWN	
40.0									

BORING LOG

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PROJECT NO. C150132.00.071
PROJECT NAME POSEUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROCK KNOTTS / DUNCAN ROOS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER CASING IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 34' DATE/TIME 9/20/16 15:00
24 HR WATER DEPTH 29.50' DATE/TIME 9/21/16 14:30
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. SD-1604
SHEET 3 OF 9
DATE: START 9/16/16 END 9/21/16
ELEV: 168.45

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
40.0					—	SP	MOIST	(CONTINUED) FINE TO COARSE SAND, SOME CLAY LENSES AND FINE GRAVEL, TAN/LIGHT BROWN 42.00	
			5.0	100%	—	SC	MOIST	MEDIUM TO COARSE CLAYEY SAND, LITTLE FINE GRAVEL, ORANGE/GRAY 44.00	
45.0					3.0	CL	MOIST	SANDY CLAY (FINE TO MEDIUM SAND), TRACE GRAVEL, LIGHT GRAY 47.00	
			5.0	100%	—	SP	MOIST	FINE TO MEDIUM SAND, TRACE SILT AND VERY FINE GRAVEL, TAN/LIGHT GRAY 51.00	
50.0									
			5.0	100%	—	SP	MOIST	FINE TO MEDIUM SAND, SOME FINE GRAVEL, ORANGE	
55.0									
			5.0	100%	—	SP	MOIST		
60.0								60.00	

BORING LOG

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PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 34' DATE/TIME 9/20/16 15:00
24 HR WATER DEPTH 129.50' DATE/TIME 9/21/16 14:30
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. SD-1604
SHEET 4 OF 9
DATE: START 9/16/16 END 9/21/16
ELEV: 168.45

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
60.0								SANDY FAT CLAY, LIGHT BROWN	
			5.0	100%	3.75	CH	MOIST		
65.0								67.00	
			5.0	100 %	—	SP	MOIST	FINE TO COARSE SAND, LIGHT GRAY / ORANGE	
70.0								73.00	▼ WATER AT 73'
			5.0	100 %	—	SM	WET	MEDIUM TO COARSE SILTY SAND, SOME GRAVEL, LIGHT BROWN / GRAY	
75.0			5.0	100 %				78.00	
					—	SP	WET	MEDIUM TO COARSE GRAVELLY SAND, LIGHT BROWN / GRAY	
80.0									

BORING LOG

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PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN ADDS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 34' DATE/TIME 9/20/16 15:00
24 HR WATER DEPTH 129.50' DATE/TIME 9/21/16 14:30
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COOMEY REVIEWED BY: DATE:

BORING NO. SD-1604
SHEET 5 OF 9
DATE: START 9/16/16 END 9/21/16
ELEV: 168.45

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
80.0								(CONTINUED) MEDIUM TO COARSE GRAVELLY SAND, LIGHT BROWN/GRAY	
			5.0	100%	—	SP	WET		
85.0									
			5.0	100%				87.50	
					3.25	CL	MOIST	SANDY CLAY (FINE TO MEDIUM SAND) SOME FINE GRAVEL, LIGHT BROWN/ORANGE 89.00	
90.0					—	SP	MOIST	MEDIUM TO COARSE SAND, TRACE OF FINE GRAVEL GRAVEL, LIGHT BROWN/ORANGE	
			5.0	100%	—	SM	MOIST	92.00 MEDIUM TO COARSE SILTY SAND, SOME FINE GRAVEL, LIGHT BROWN/TAN	
								94.00	
95.0								SANDY FAT CLAY, LIGHT BROWN/ORANGE	
			5.0	100%	3.5	CH	DAY		
100.0									

BORING LOG

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PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROCK KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 34' DATE/TIME 9/20/16 15:00
24 HR WATER DEPTH DATE/TIME 9/21/16 14:30
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. SD-1604
SHEET 6 OF 9
DATE: START 9/16/16 END 9/21/16
ELEV: 168.45

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
100.0					3.5	CH	DAY	(CONTINUED) SANDY FAT CLAY, LIGHT BROWN/ORANGE 101.00	
								SANDY CLAY (FINE TO MEDIUM SAND), LIGHT GRAY/GREEN	
			5.0	100%	2.5	CL	MOIST	104.00	
105.0								FINE TO COARSE CLAYEY SAND, LIGHT GRAY/GREEN	
			5.0	100%	—	SC	MOIST	110.00	
110.0								SANDY CLAY (FINE TO MEDIUM SAND), LITTLE FINE GRAVEL, LIGHT BROWN	
			5.0	100%	1.75	CL	MOIST		
115.0			5.0	100%				118.00	
					1.50	CH	DRY	FAT CLAY, LIGHT BROWN/GREEN	
120.0									

BORING LOG

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PROJECT NO. C150132.00,071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SN-4510 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 34' DATE/TIME 9/20/16 15:00
24 HR WATER DEPTH 129.50' DATE/TIME 9/21/16 14:30
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. SD-1604
SHEET 7 OF 9
DATE: START 9/16/16 END 9/21/16
ELEV: 168.45

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
120.0								(CONTINUED)	
					1.50	CH	DRY	FAT CLAY, LIGHT BROWN/GREEN	
								122.00	
			5.0	100 %	1.50	CL	MOIST	SANDY CLAY (FINE TO MEDIUM SAND), LIGHT BROWN/GREEN	
125.0									
								126.50	
			5.0	100 %	3.75	CH	DRY	SANDY FAT CLAY, LIGHT BROWN/GREEN	
130.0								130.00	
								FINE TO COARSE SAND, LIGHT GRAY/GREEN	
			5.0	100 %	—	SP	MOIST		
135.0									
			5.0	100 %					
140.0									

BORING LOG

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PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC W/ 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 34' DATE/TIME 9/20/16 15:00
24 HR WATER DEPTH 139.50' DATE/TIME 9/21/16 14:30
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

BORING NO. SD-1604
SHEET 8 OF 9
DATE: START 9/16/16 END 9/21/16
ELEV: 168.45

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
140.0								(CONTINUED) FINE TO COARSE SAND, LIGHT GRAY / GREEN	
			5.0	100 %	—	SP	MOIST		
145.0									
			5.0	100 %	—	SP	MOIST	LITTLE FINE GRAVEL, TRACE CLAY	
150.0									
			5.0	100 %	—	SP	MOIST	154.00 ★ WATER AT 154'	
								MEDIUM TO COARSE CLAYEY SAND, LIGHT GRAY / GREEN	
155.0			5.0	100 %	—	SC	WET		
160.0									

BORING LOG

PROJECT NO. C150132.00.071
PROJECT NAME POSSUM POINT
PROJECT LOCATION DUMFRIES, VA
DRILLER NAME/COMPANY ROSS KNOTTS / DUNCAN BROS DRILLING
EQUIPMENT USED: 2006 SONIC SD-450 TRACK RIG
DRILLING METHODS: SONIC 6" OUTER AND 4" INNER BARRELS IN 10' RUNS
PRE CORE WATER DEPTH N/A DATE/TIME
0 HR WATER DEPTH (POST CORE) 34' DATE/TIME 9/20/16 15:00
24 HR WATER DEPTH 129.50' DATE/TIME 9/21/16 14:30
HR WATER DEPTH DATE/TIME
CLASSIFIED BY: GENE COONEY REVIEWED BY: DATE:

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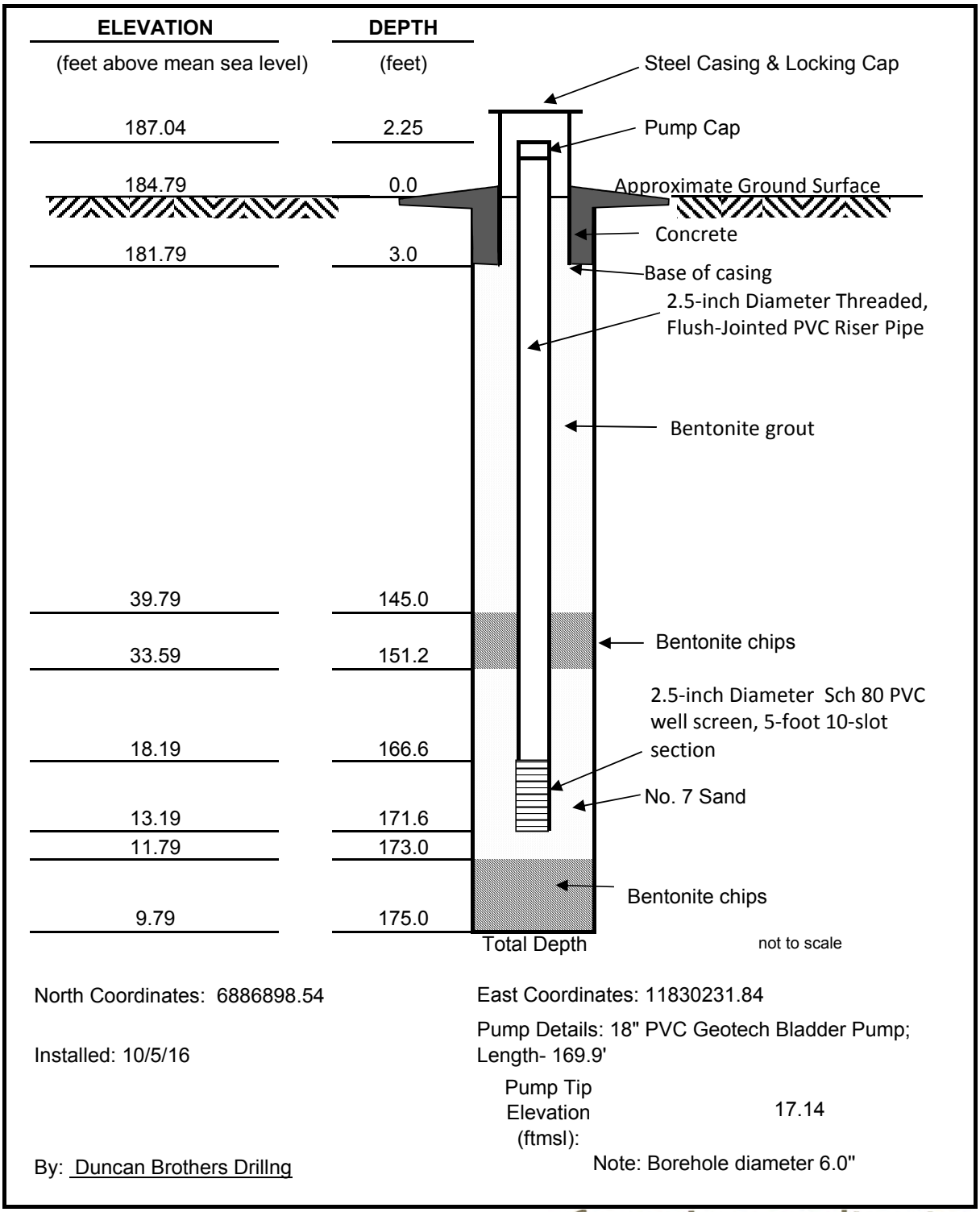
BORING NO. SD-1604
SHEET 9 OF 9
DATE: START 9/16/16 END 9/21/16
ELEV: 168.45

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
160.0								(CONTINUED)	
			5.0	100 %	—	SC	WET	MEDIUM TO COARSE CLAYEY SAND, LIGHT GRAY / GREEN	
								164.00	
165.0			5.0	100%	3.75	CH	DRY	FAT CLAY, DARK GRAY	START OF E LAYER
								BORING TERMINATED 170.00	
170.0								* WELL CONSTRUCTION — BOTTOM OF HOLE PLUGGED FROM 170' TO 164' WITH BENTONITE CHIPS. ALLOW TO HYDRATE FOR AN HOUR PRIOR TO SETTING FILTER PACK AND WELL. SET WELL AT 164'. USE 5' OF SCH. 80 2.5" WELL SCREEN FROM 164' TO 159'. FILTER PACK CONSISTS OF #7 SAND FROM 164' TO 148.50'. BENTONITE SEAL W/ BENTONITE CHIPS (3/8") FROM 148.50' TO 143.50'. ALLOW BENTONITE TO HYDRATE OVERNIGHT. GROUT FROM 144.50' TO 3' BELOW GROUND SURFACE WITH TREMIE PIPE USING HIGH SOLIDS BENTONITE GROUT ON 9/21/16.	

SD-1611D
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6886898.54

East Coordinates: 11830231.84

Installed: 10/5/16

Pump Details: 18" PVC Geotech Bladder Pump; Length- 169.9'

Pump Tip Elevation (ftmsl): 17.14

By: Duncan Brothers Drillng

Note: Borehole diameter 6.0"

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BORING LOG

PROJECT NO. C150132.00
PROJECT NAME Possum Point
PROJECT LOCATION Dumfries, VA
DRILLER NAME/COMPANY Boss / Duncan Brothers Drilling
EQUIPMENT USED: Sonic Drill SD-450 (SN: SDC 09041)
DRILLING METHODS: Sonic with 6" outter and 4" Inner barrel; 10' runs
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: PWM REVIEWED BY: _____ DATE: _____

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BORING NO. SD-1611D
SHEET 1 OF 5
DATE: START 10/2/16 END 10/5/16
ELEV: 184.79'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS Northing: 6886898.54 Easting: 11830231.84
0.0									
			6.0'	60	2.5	CL		Lean CLAY, orange brown, Very Stiff 2.0' little Subrounded Gravel. [Fill]	
	S-1				3.0	CL	moist	Lean CLAY, orange to orange-brown, very blocky, Stratified with gray layers little fine grained sand, little gravel, fine to medium rounded to subrounded, [alluvium] 10.0'	[dull apperance]
10.0									
			5.0'	50		SC SM		Clayey to Silty SAND, Very fine grained, gray brown to light brown. 20.0'	
	S-2						damp		
20.0									
			8.0'	80		SM		Silty SAND, very fine grained poorly Graded, light brown to orange brown	[Slightly Sticky]
	S-3						damp		
30.0									
			5.0'	50					
	S-4						damp		
40.0									

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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BORING NO. SD-1611D
SHEET 2 OF 5
DATE: START 10/2/11 END 10/5/11
ELEV: 184.79'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
40.0			10.0	100		SM	damp	Silty SAND, (continued) - Cemented silty sand at 42.0 - 43.2'	
	S-5								
50.0			8.0	80				54.0'	
	S-6					SP-SM	damp	SAND, with some silt, Poorly Graded, fine grained, gray to light orange brown, trace fine gravel Rounded.	
60.0			9.0	90					
	S-7						damp		
70.0			6.0'	60				- from 69.0 to 76.5 well graded gravel, fine to medium grained, Subrounded to rounded.	
	S-8						moist	- Orange Iron staining 76.0 to 78.5.	
								78.5	
80.0						CH		Fat CLAY, (See next Page)	

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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BORING NO. SD-1611D
SHEET 3 OF 5
DATE: START 10/12/16 END 10/5/16
ELEV: 184.79'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
80.0									
	S-9		10.0	100	>4.5 3.5	CH	damp	Fat CLAY, gray mottled with orange, hard. - Predominatly Gray Color	[waxy apperance] [very Sticky]
90.0	S-10		10.0	100			damp	- little Sand very fine grained -Some Sand very fine grained - from 98.2 to 98.7 Sand lense very fine grained.	
100.0	S-11		10.0	100	4.0		damp	- becomes blocky at 105.0' and predominantly dark red.	
110.0	S-12		10.0	100	4.25		damp	- mottled gray	
120.0									

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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BORING NO. SD-1611D
SHEET 4 OF 5
DATE: START 10/2/16 END 10/5/16
ELEV: 184.79'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENNESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
120.0									
	S-13		10.0	100	3.5	CH	damp	Fat CLAY, (continued) -Predominantly gray mottled dark red	
130.0								130.0'	
	S-14		9.0	90		SM	damp	Silty SAND, Fine grained uniformly graded, tan to gray.	[Slightly sticky]
140.0								143.0'	
	S-15		10.0	100	>4.5	CH	moist	Fat CLAY, and Sand, fine grained tan to gray, hard	
								146.0	
						SM		Silty SAND, fine grained, uniformly graded, tan to gray.	
150.0								152.0	
	S-16		10.0	100		SC	moist	Clayey SAND, fine to corse grained, with little to some subrounded to rounded, coarse to fine grained gravel. Gray -Clay seam 152.2 to 153.1 with gravel, well graded.	
160.0									

BORING LOG

PROJECT NO. _____
PROJECT NAME _____
PROJECT LOCATION _____
DRILLER NAME/COMPANY _____
EQUIPMENT USED: _____
DRILLING METHODS: _____
PRE CORE WATER DEPTH _____ DATE/TIME _____
0 HR WATER DEPTH (POST CORE) _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
_____ HR WATER DEPTH _____ DATE/TIME _____
CLASSIFIED BY: _____ REVIEWED BY: _____ DATE: _____

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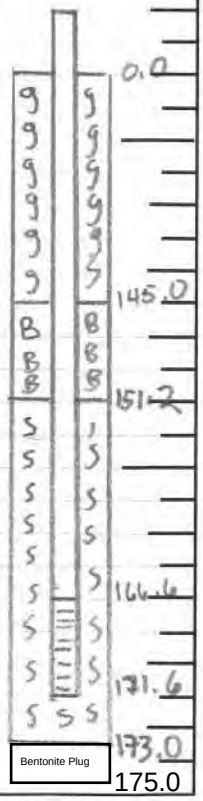
BORING NO. SD-1611D
SHEET 5 OF 5
DATE: START 10/2/16 END 10/5/16
ELEV: 184.79'

DEPTH (FT.)	SAMPLE NO. AND TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT.)	RECOVERY % / RQD %	POCKET PENETROMETER (TSF)	USCS OR ROCK BROKENESS	H2O CONTENT	DESCRIPTION Soil: Group Name, Color, State, [Origin] Rock: Type, Color, Hardness, Weathering, Bedding and Relative Dip, Joint Condition	REMARKS
160.0			9.0	90				Clayey SAND, (continued)	
	S-17					SC	moist	-trace Fine to medium subrounded to rounded gravel.	
170.0			5.0	100				171.6	
	S-18				>4.5	CH	damp	Fat CLAY, dark gray, homogeneous, hard.	
175.0								175.0 Boring Terminated at 175.0'	

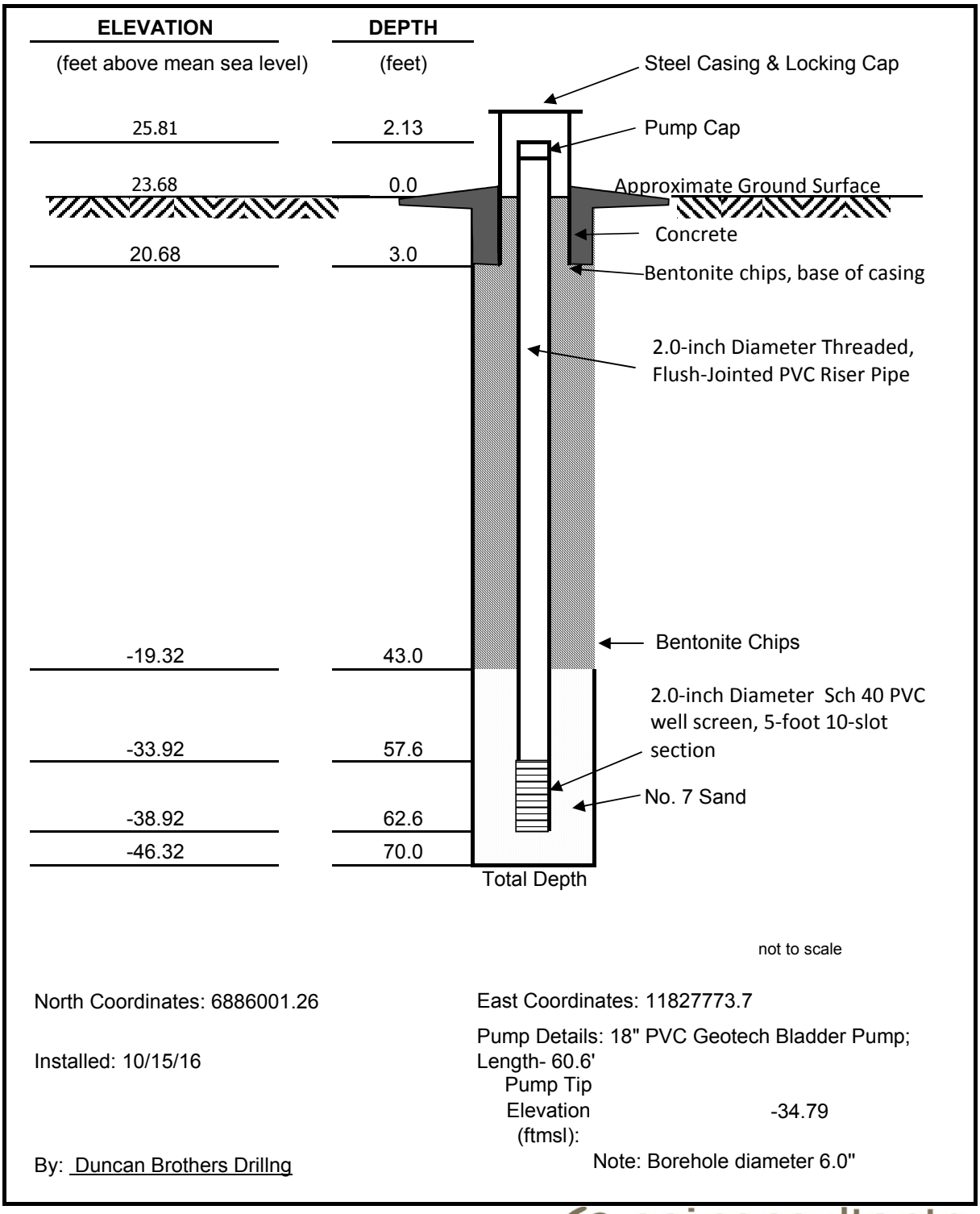
*Well Construction -
#7 Sand placed from 173.0' to 151.2 bgs (10 bags)
Well set at 171.6 bgs with 5' of SCH 80 2.5" well Screen from 171.6 to 166.6'
Bentonite chip plug 5'.0 from 151.2 to 145.0' chips allowed to hydrate overnight. Pumped grout the following day from 145.0' to 3.0'

Bentonite Plug from 175.0' to 173.0', allowed to hydrate for 2hrs



Not to Scale

T-1615D
Possum Point Power Station
Dominion
Record Detail



North Coordinates: 6886001.26

East Coordinates: 11827773.7

Installed: 10/15/16

Pump Details: 18" PVC Geotech Bladder Pump; Length- 60.6'

Pump Tip Elevation (ftmsl): -34.79

By: Duncan Brothers Drillng

Note: Borehole diameter 6.0"

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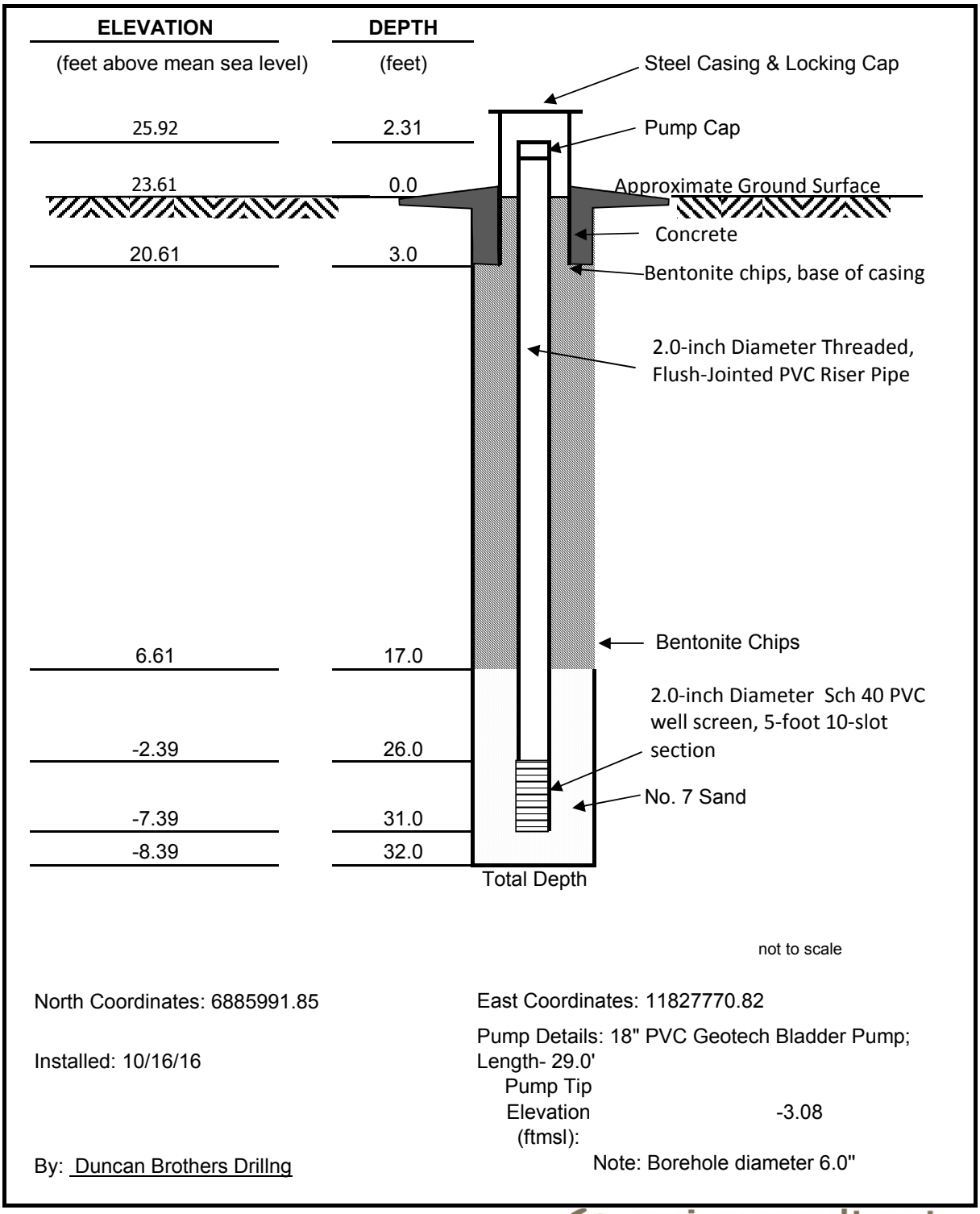
T-1615S
Possum Point Power Station
Dominion
Record Detail



not to scale

North Coordinates: 6885991.85

East Coordinates: 11827770.82

Installed: 10/16/16

Pump Details: 18" PVC Geotech Bladder Pump;
Length- 29.0'
Pump Tip Elevation (ftmsl): -3.08

By: Duncan Brothers Drillng

Note: Borehole diameter 6.0"

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