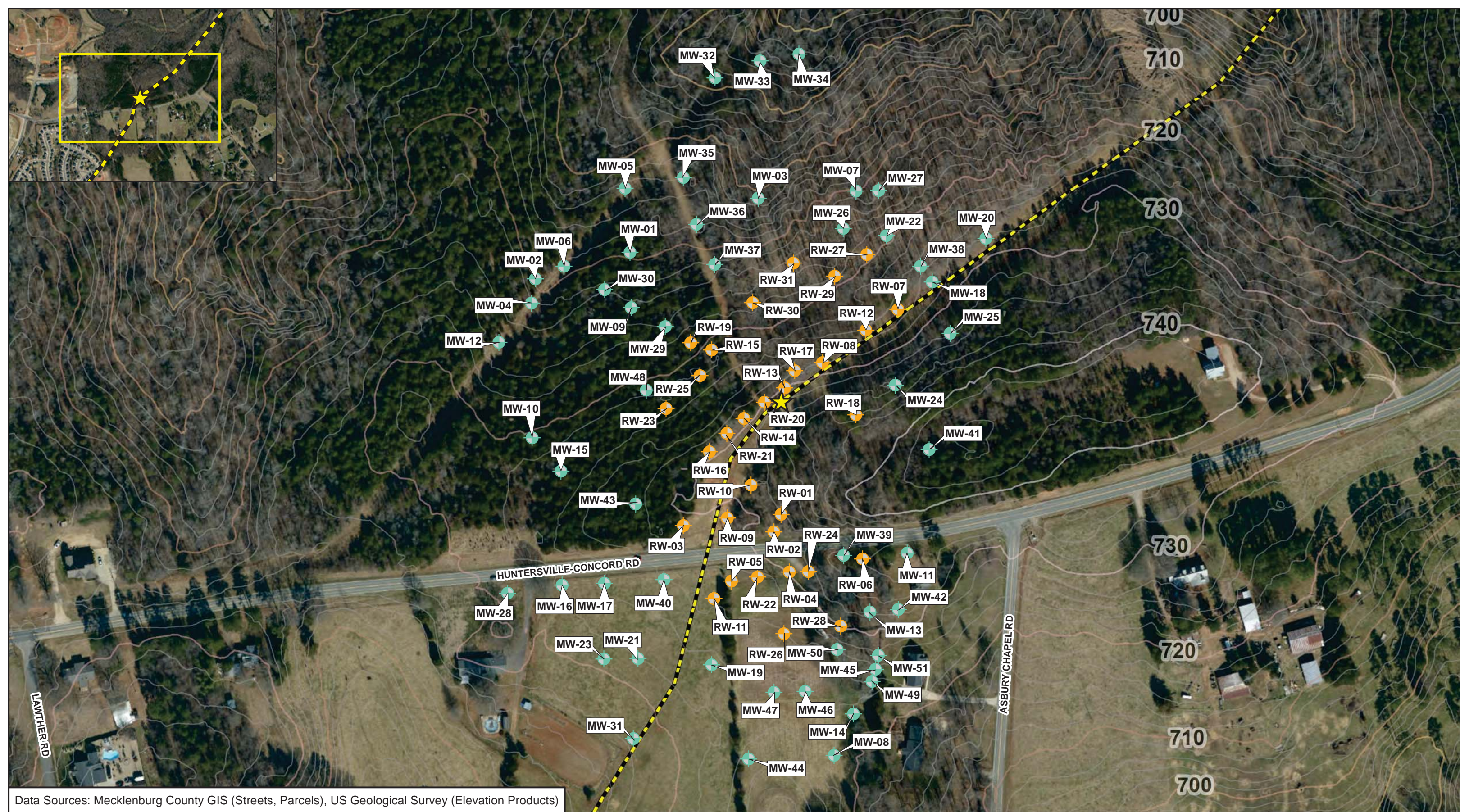


Data Sources: US Geological Survey (Elevation Products)

	Checked By:	AS	<p align="center">Site Vicinity Map Colonial Pipeline Company 2020-I1-2448 Release Huntersville, North Carolina</p> <p>0 405 810 1,620 2,430 Feet</p>			Figure	
	Created By:	JC				1	
	Scale:	1" = 754 FT				Release Site	
	Date/Time:	9/20/2020; 14:18					
	Project No.:	CPC20126					



Data Sources: Mecklenburg County GIS (Streets, Parcels), US Geological Survey (Elevation Products)

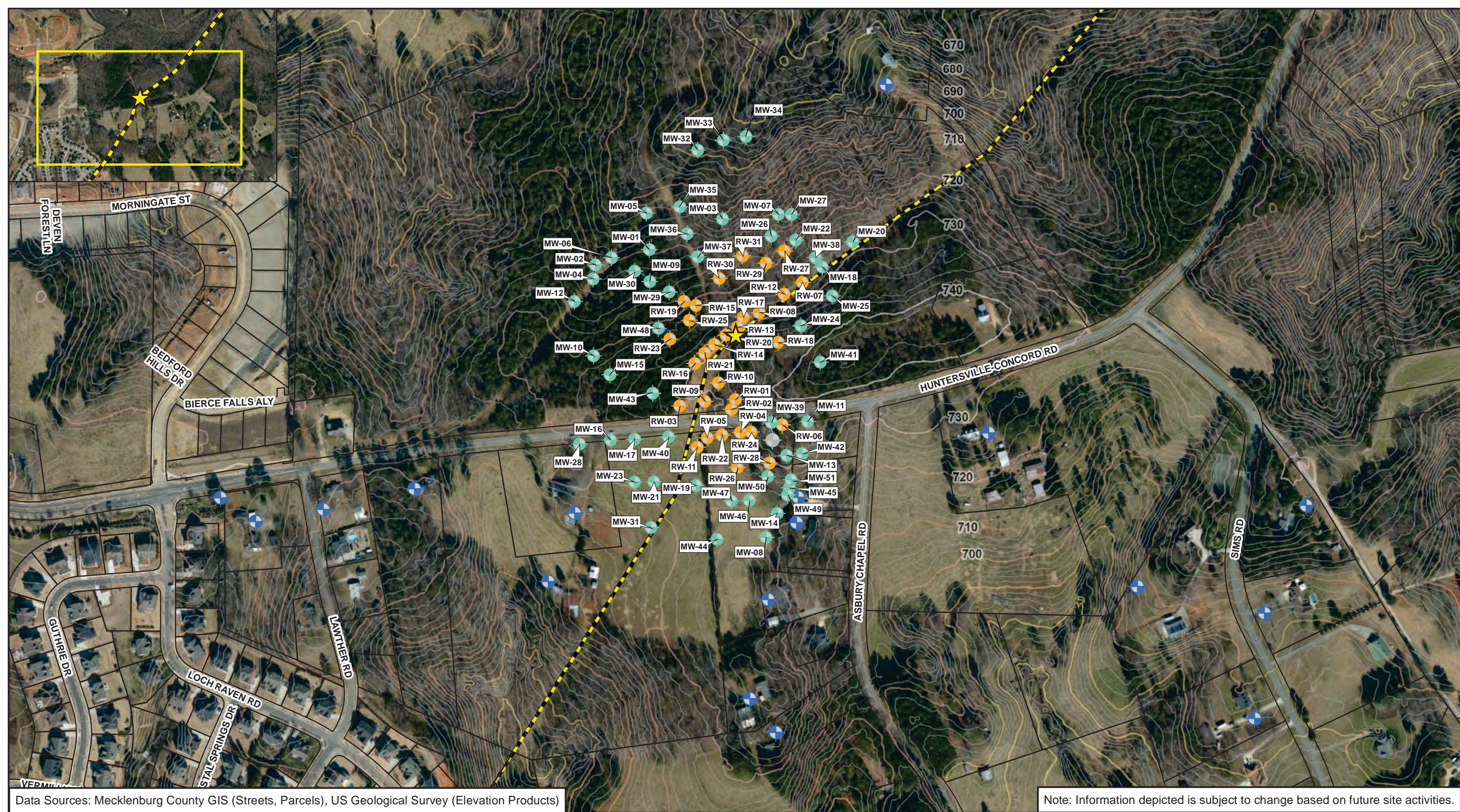
	Checked By:	AS
	Created By:	JC
	Scale:	1" = 167 FT
	Date/Time:	9/20/2020; 14:29
	Project No.:	CPC20126

Site Plan
Colonial Pipeline Company
2020-L1-2448 Release
Huntersville, North Carolina

0 100 200 400 600
 Feet

	Release Site		Monitoring Well
	Pipeline		Recovery Well





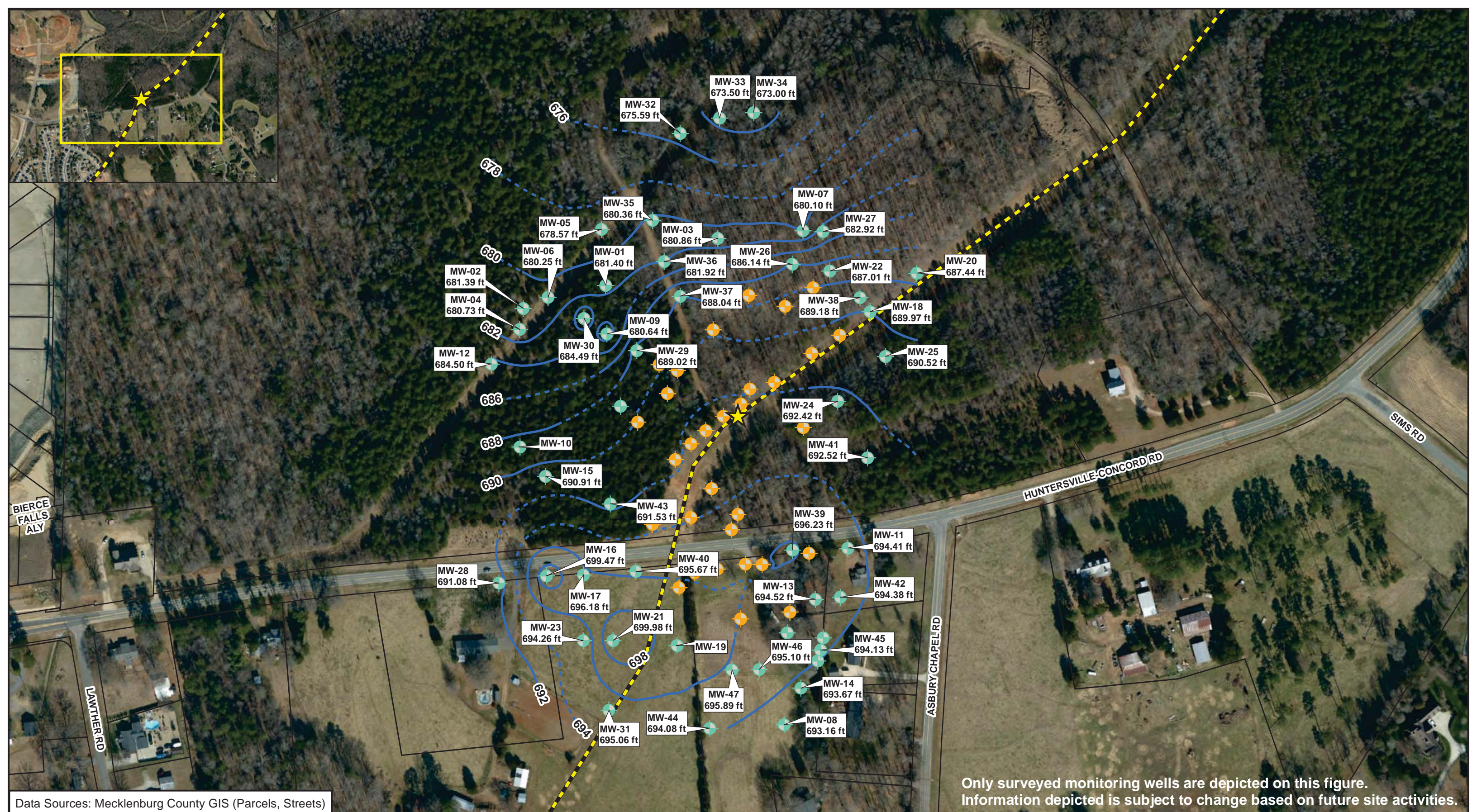
	Checked By:	AS
	Created By:	JC
	Scale:	1" = 292 FT
	Date/Time:	9/20/2020; 14:24
Project No.:	CPC20126	

Site Plan with Well Locations
Colonial Pipeline Company
2020-L1-2448 Release
Huntersville, North Carolina

0 180 360 720 1,080
 Feet

Release Site	Monitoring Well	Water Supply Well	Parcel Boundaries
Pipeline	Recovery Well	Water Supply Well (Abandoned)	

		FIGURE 3
--	--	-------------------------------



Only surveyed monitoring wells are depicted on this figure.
 Information depicted is subject to change based on future site activities.

Data Sources: Mecklenburg County GIS (Parcels, Streets)

	Checked By:	AS
	Created By:	JC
	Scale:	1" = 192 FT
	Date/Time:	9/20/2020; 14:33
	Project No.:	CPC20126

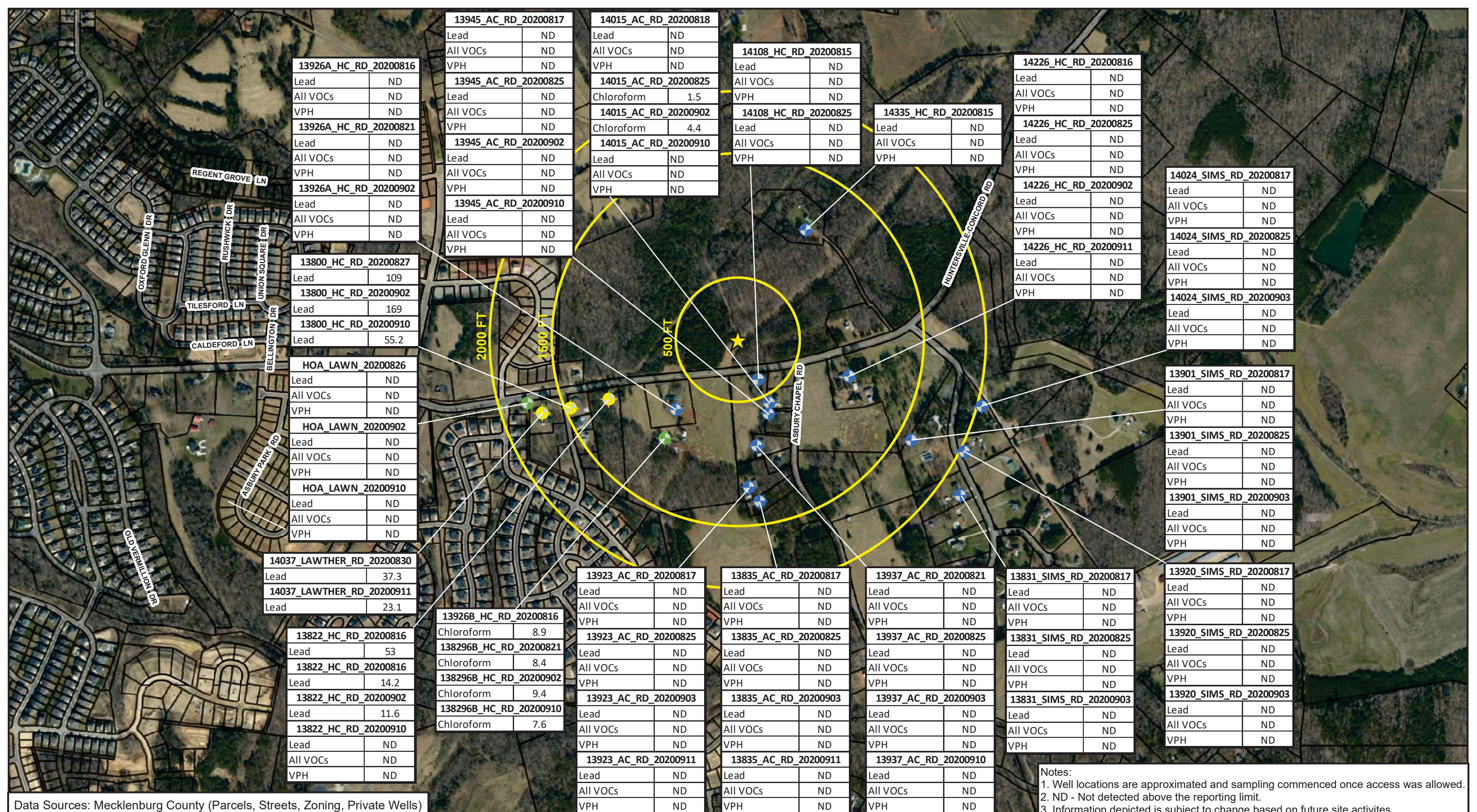
Groundwater Potentiometric Surface Map
Colonial Pipeline Company
2020-L1-2448 Release
Huntersville, North Carolina

0 120 240 480 720
 Feet

Release Site Pipeline Equipotential Contour (Ft. MSL) (Dashed where Inferred)	Monitoring Well Recovery Well	Parcel Boundaries
--	----------------------------------	-------------------

NOTE:
 Recovery Wells, MW-10 (Dry), MW-19, MW-48, MW-49, MW-50, MW-51 not used for contouring
 Contours based on monitoring well gauging data collected on 09/14/2020
 Contours interpolated using ArcMap Spatial Analyst (Kriging)

		FIGURE <h1 style="font-size: 2em;">4</h1>
--	--	--



13926A_HC_RD_20200816	
Lead	ND
All VOCs	ND
VPH	ND
13926A_HC_RD_20200821	
Lead	ND
All VOCs	ND
VPH	ND
13926A_HC_RD_20200902	
Lead	ND
All VOCs	ND
VPH	ND
13800_HC_RD_20200827	
Lead	109
13800_HC_RD_20200902	
Lead	169
13800_HC_RD_20200910	
Lead	55.2
HOA_LAWN_20200826	
Lead	ND
All VOCs	ND
VPH	ND
HOA_LAWN_20200902	
Lead	ND
All VOCs	ND
VPH	ND
HOA_LAWN_20200910	
Lead	ND
All VOCs	ND
VPH	ND
14037_LAWTHER_RD_20200830	
Lead	37.3
14037_LAWTHER_RD_20200911	
Lead	23.1
13822_HC_RD_20200816	
Lead	53
13822_HC_RD_20200816	
Lead	14.2
13822_HC_RD_20200902	
Lead	11.6
13822_HC_RD_20200910	
Lead	ND
All VOCs	ND
VPH	ND

13945_AC_RD_20200817	
Lead	ND
All VOCs	ND
VPH	ND
13945_AC_RD_20200825	
Lead	ND
All VOCs	ND
VPH	ND
13945_AC_RD_20200902	
Lead	ND
All VOCs	ND
VPH	ND
13945_AC_RD_20200910	
Lead	ND
All VOCs	ND
VPH	ND

14015_AC_RD_20200818	
Lead	ND
All VOCs	ND
VPH	ND
14015_AC_RD_20200825	
Chloroform	1.5
14015_AC_RD_20200902	
Chloroform	4.4
14015_AC_RD_20200910	
Lead	ND
All VOCs	ND
VPH	ND

14108_HC_RD_20200815	
Lead	ND
All VOCs	ND
VPH	ND
14108_HC_RD_20200825	
Lead	ND
All VOCs	ND
VPH	ND

14335_HC_RD_20200815	
Lead	ND
All VOCs	ND
VPH	ND

14226_HC_RD_20200816	
Lead	ND
All VOCs	ND
VPH	ND
14226_HC_RD_20200825	
Lead	ND
All VOCs	ND
VPH	ND
14226_HC_RD_20200902	
Lead	ND
All VOCs	ND
VPH	ND
14226_HC_RD_20200911	
Lead	ND
All VOCs	ND
VPH	ND

14024_SIMS_RD_20200817	
Lead	ND
All VOCs	ND
VPH	ND
14024_SIMS_RD_20200825	
Lead	ND
All VOCs	ND
VPH	ND
14024_SIMS_RD_20200903	
Lead	ND
All VOCs	ND
VPH	ND

13901_SIMS_RD_20200817	
Lead	ND
All VOCs	ND
VPH	ND
13901_SIMS_RD_20200825	
Lead	ND
All VOCs	ND
VPH	ND
13901_SIMS_RD_20200903	
Lead	ND
All VOCs	ND
VPH	ND

13926B_HC_RD_20200816	
Chloroform	8.9
138296B_HC_RD_20200821	
Chloroform	8.4
138296B_HC_RD_20200902	
Chloroform	9.4
138296B_HC_RD_20200910	
Chloroform	7.6

13923_AC_RD_20200817	
Lead	ND
All VOCs	ND
VPH	ND
13923_AC_RD_20200825	
Lead	ND
All VOCs	ND
VPH	ND
13923_AC_RD_20200903	
Lead	ND
All VOCs	ND
VPH	ND
13923_AC_RD_20200911	
Lead	ND
All VOCs	ND
VPH	ND

13835_AC_RD_20200817	
Lead	ND
All VOCs	ND
VPH	ND
13835_AC_RD_20200825	
Lead	ND
All VOCs	ND
VPH	ND
13835_AC_RD_20200903	
Lead	ND
All VOCs	ND
VPH	ND
13835_AC_RD_20200911	
Lead	ND
All VOCs	ND
VPH	ND

13937_AC_RD_20200821	
Lead	ND
All VOCs	ND
VPH	ND
13937_AC_RD_20200825	
Lead	ND
All VOCs	ND
VPH	ND
13937_AC_RD_20200903	
Lead	ND
All VOCs	ND
VPH	ND
13937_AC_RD_20200910	
Lead	ND
All VOCs	ND
VPH	ND

13831_SIMS_RD_20200817	
Lead	ND
All VOCs	ND
VPH	ND
13831_SIMS_RD_20200825	
Lead	ND
All VOCs	ND
VPH	ND
13831_SIMS_RD_20200903	
Lead	ND
All VOCs	ND
VPH	ND

13920_SIMS_RD_20200817	
Lead	ND
All VOCs	ND
VPH	ND
13920_SIMS_RD_20200825	
Lead	ND
All VOCs	ND
VPH	ND
13920_SIMS_RD_20200903	
Lead	ND
All VOCs	ND
VPH	ND

Notes:
 1. Well locations are approximated and sampling commenced once access was allowed.
 2. ND - Not detected above the reporting limit.
 3. Information depicted is subject to change based on future site activities.

Data Sources: Mecklenburg County (Parcels, Streets, Zoning, Private Wells)

Checked By:	AS
Created By:	JC
Scale:	1" = 700 FT
Created On:	9/20/2020; 14:48
Project No.:	CPC20126

Water Supply Well Sampling Results
Round 4
Colonial Pipeline Company
Huntersville, North Carolina

Sampled Water Supply Wells:

- Release Site
- Parcels
- Non-Potable Use Well
- Potable Use Well
- Inactive Use Well

FIGURE
5

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: MW-1

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 8/24/2020

DATE FINISHED: 8/24/2020

FIELD ENGINEER: B. Weiserbs

DRILLER: T. Whitehead

NORTH: 610872.421

EAST: 1461603.523

TOP OF CASING ELEVATION: 711.86'

GWL DATE/TIME: 9/14/2020

GWL DEPTH: 28.20' btoc

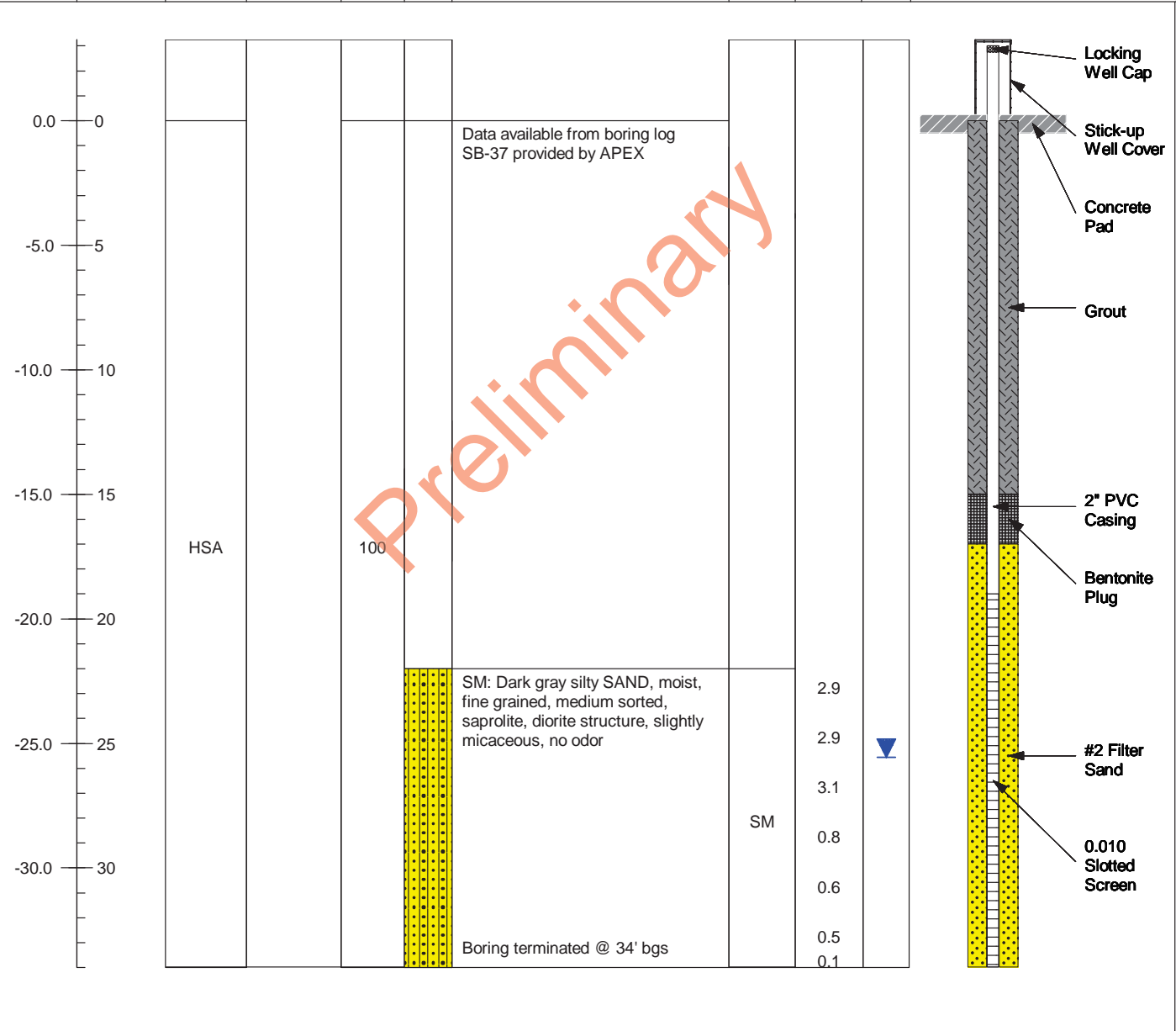
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730 DT

CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT.)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
-----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



		<p>Soil Boring and Well Installation Log Colonial Pipeline Huntersville-Concord Rd Huntersville, NC 2020-L1-2248 Incident</p>	DRAWN BY: MPS CHECKED BY: AJW SHEET: DRAFT	PROJECT NO: 60639876
--	--	---	--	--------------------------------

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: MW-2

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 8/25/2020

DATE FINISHED: 8/25/2020

FIELD ENGINEER: B. Weiserbs

DRILLER: T. Whitehead

NORTH: 610823.419

EAST: 1461424.282

TOP OF CASING ELEVATION: 712.53'

GWL DATE/TIME: 9/14/2020

GWL DEPTH: 29.57 btoc'

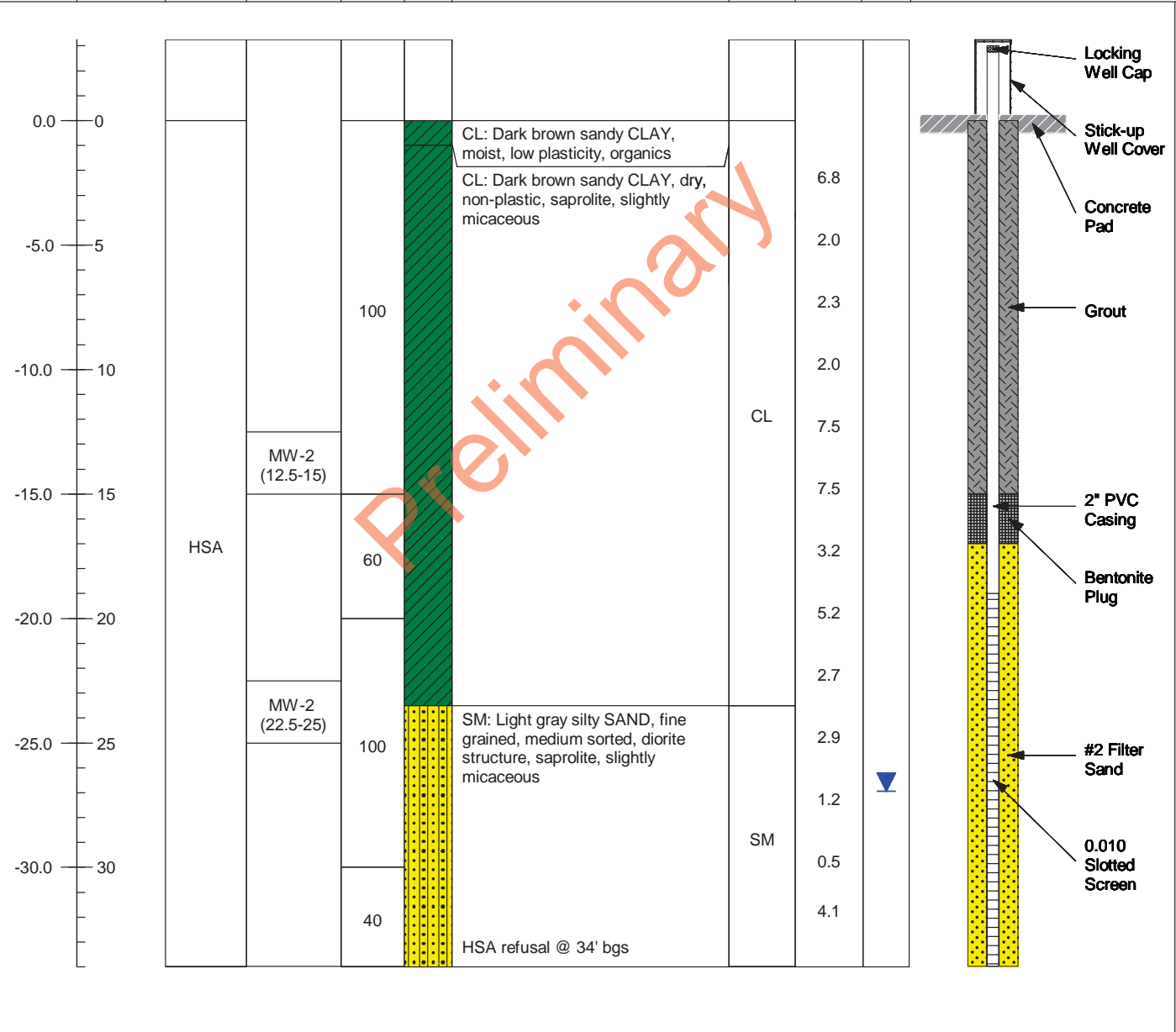
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730 DT

CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Incident

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: MW-3

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 8/25/2020

DATE FINISHED: 8/25/2020

FIELD ENGINEER: B. Weiserbs

DRILLER: T. Whitehead

NORTH: 610971.458

EAST: 1461854.767

TOP OF CASING ELEVATION: 703.64'

GWL DATE/TIME: 9/14/2020

GWL DEPTH: 22.78' btoc

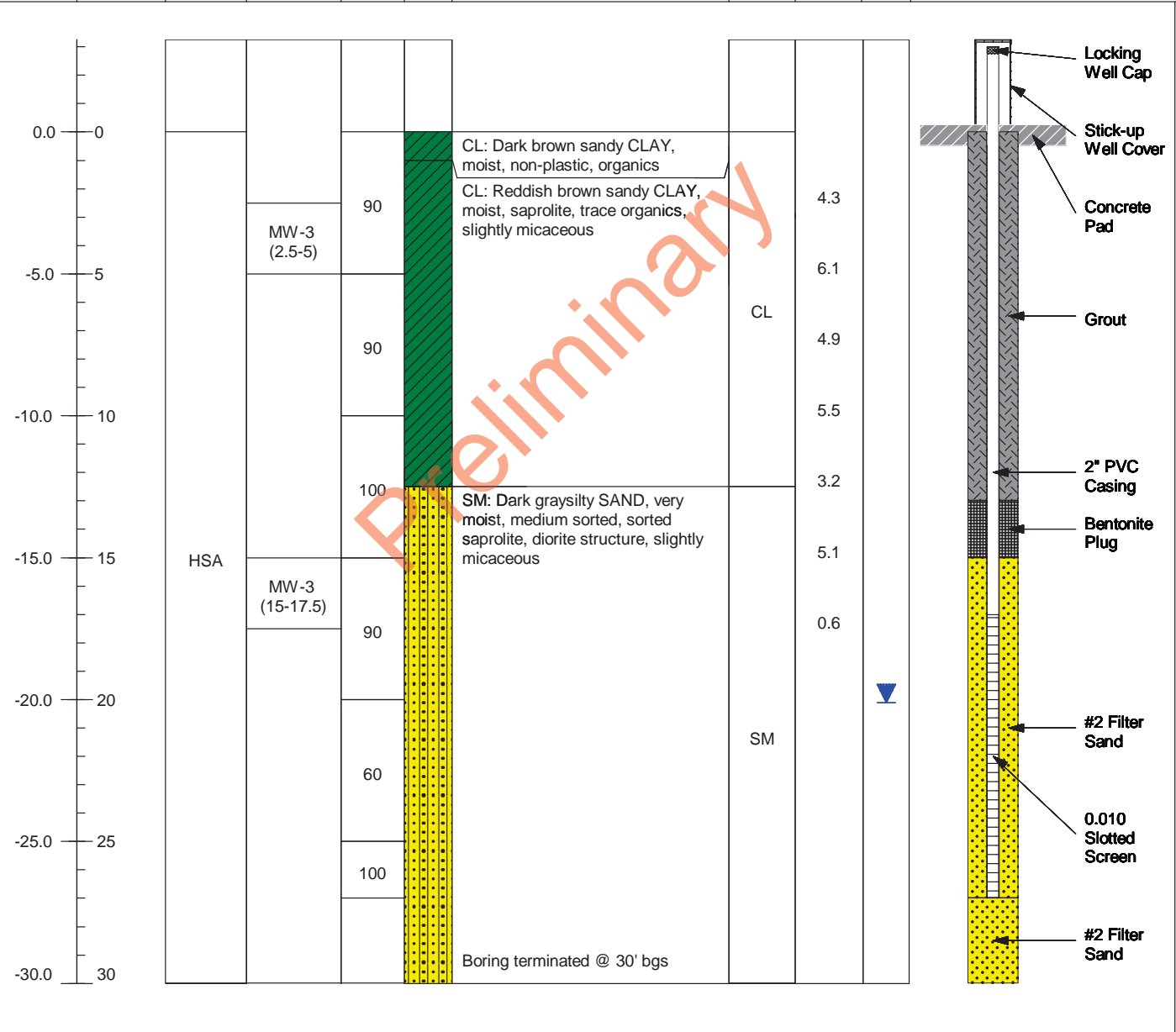
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730 DT

CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Incident

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: MW-4

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 8/28/2020

DATE FINISHED: 8/28/2020

FIELD ENGINEER: B. Weiserbs

DRILLER: T. Whitehead

NORTH: 610775.065

EAST: 1461415.603

TOP OF CASING ELEVATION: 712.26'

GWL DATE/TIME: 9/14/2020

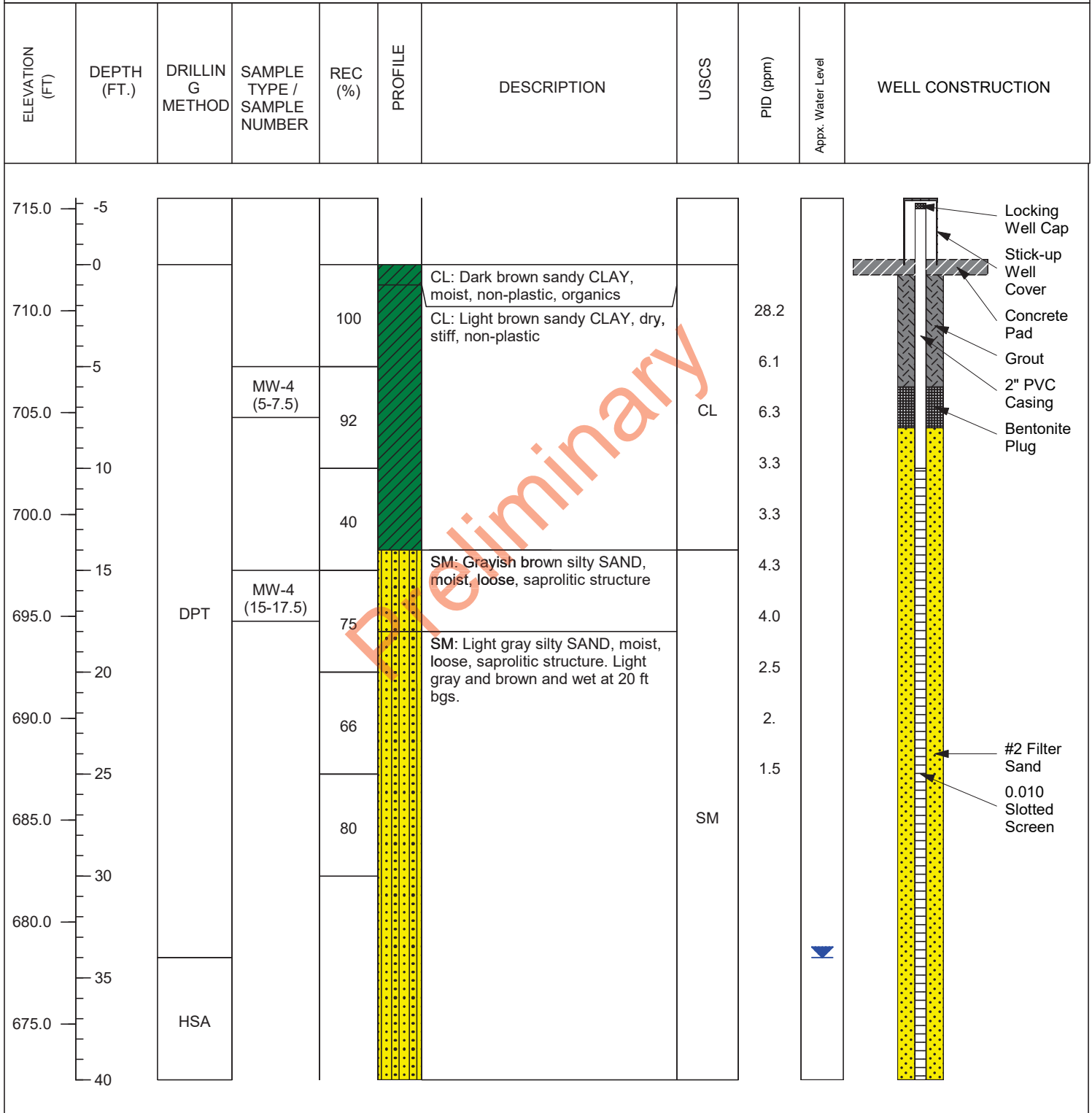
GWL DEPTH: 31.32' btoc

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730 DT

CHECKED BY: AJW

CONTRACTOR: SM&E



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Incident

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876	SHEET: DRAFT
-------------------------	---------------------------	--------------------------------	------------------------

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: MW-5

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 8/28/2020

DATE FINISHED: 8/28/2020

FIELD ENGINEER: B. Weiserbs

DRILLER: T. Whitehead

NORTH: 610997.941

EAST: 1461596.966

TOP OF CASING ELEVATION: 704.28'

GWL DATE/TIME: 9/14/2020

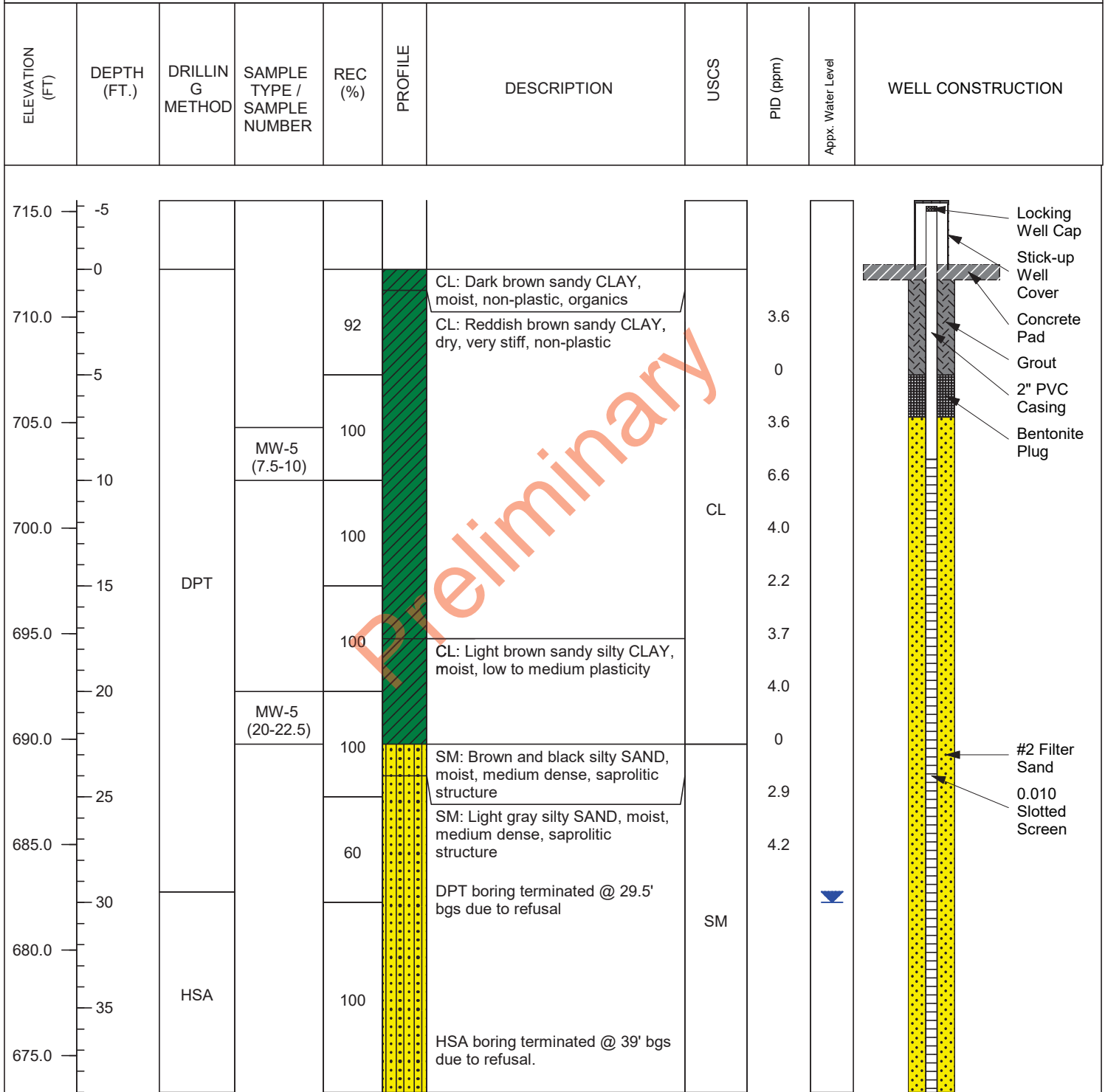
GWL DEPTH: 27.04' btoc

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730 DT

CHECKED BY: AJW

CONTRACTOR: SM&E



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Incident

DRAWN BY:	MPS	CHECKED BY:	AJW
SHEET:	DRAFT		
PROJECT NO:	60639876		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: MW-6

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 8/29/2020

DATE FINISHED: 8/29/2020

FIELD ENGINEER: A. Wreschnig

DRILLER: T. Whitehead

NORTH: 610954.120

EAST: 1461495.917

TOP OF CASING ELEVATION: 703.43'

GWL DATE/TIME: 9/14/2020

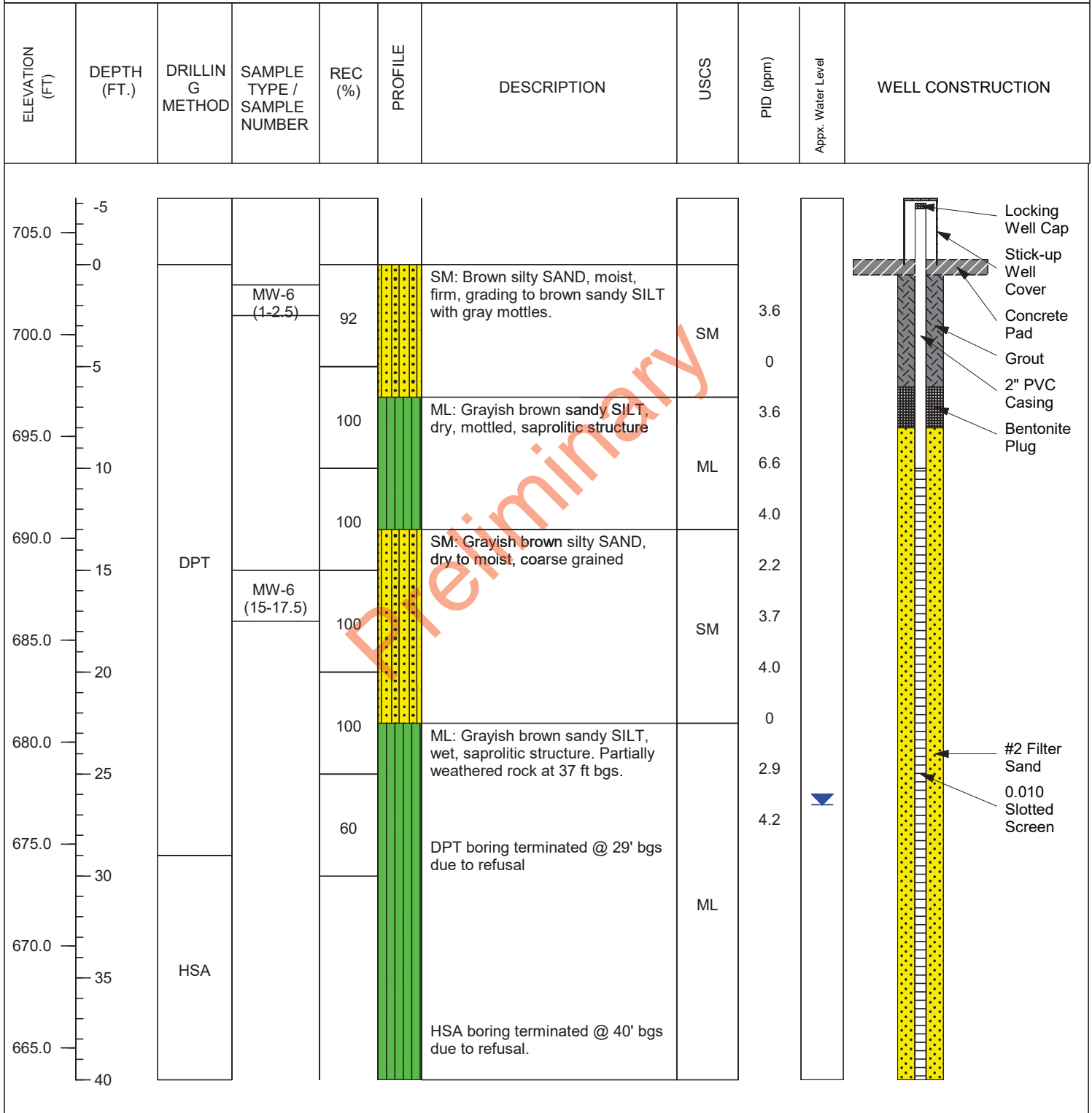
GWL DEPTH: 27.04' btoc

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730 DT

CHECKED BY: AJW

CONTRACTOR: SM&E



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Incident

DRAWN BY:	MPS	CHECKED BY:	AJW
SHEET:	DRAFT		
PROJECT NO:	60639876		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: MW-7

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 8/30/2020

DATE FINISHED: 8/30/2020

FIELD ENGINEER: B. Weiserbs

DRILLER: T. Whitehead

NORTH: 610963.967

EAST: 1462042.726

TOP OF CASING ELEVATION: 709.19'

GWL DATE/TIME: 9/14/2020

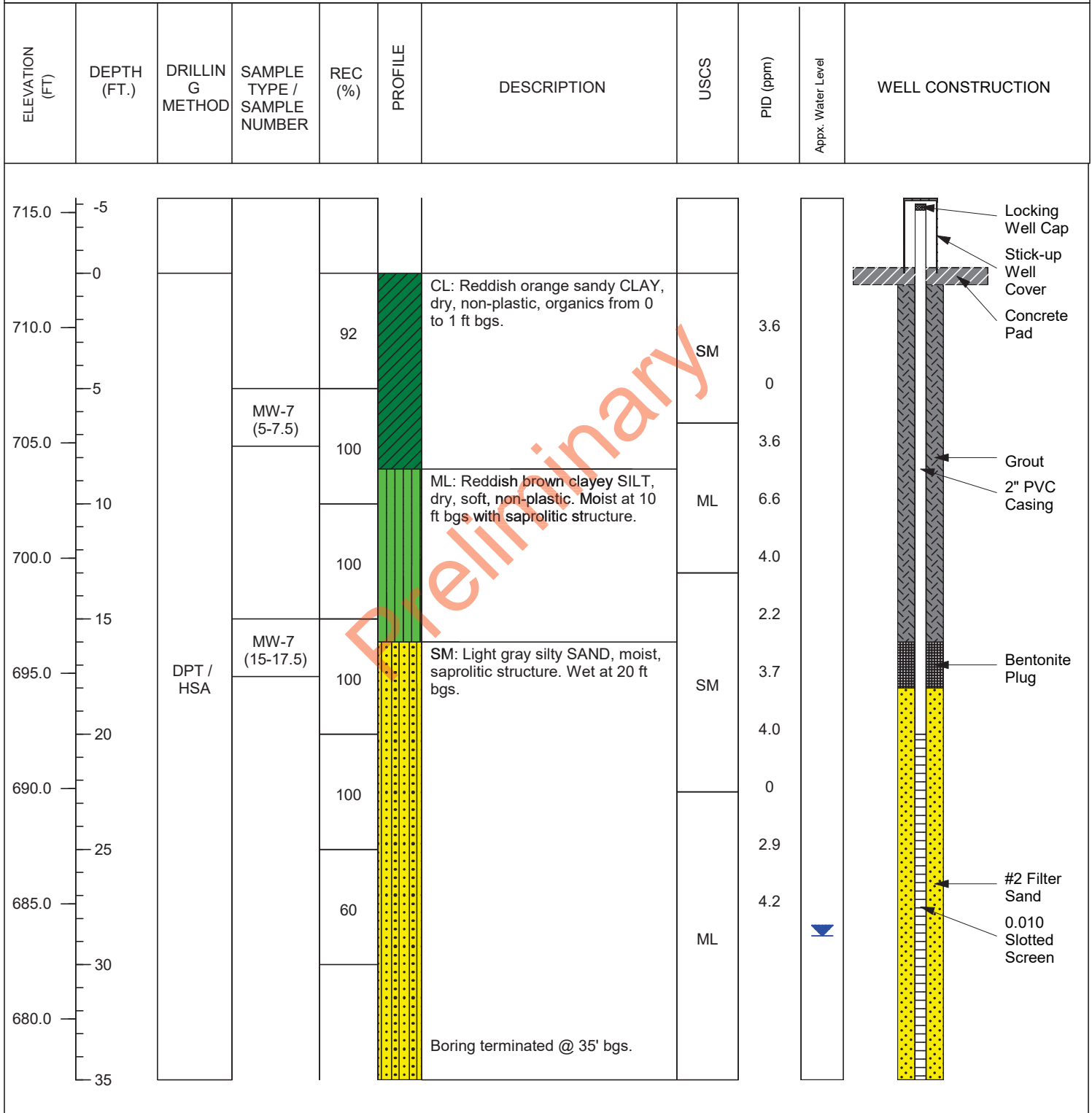
GWL DEPTH: 31.77' btoc

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730 DT

CHECKED BY: AJW

CONTRACTOR: SM&E



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Incident

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876	SHEET: DRAFT
-------------------------	---------------------------	--------------------------------	------------------------



BORING NUMBER MW-08

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 8/28/2020 **COMPLETED** 8/28/2020 **GROUND ELEVATION** 721.82 ft
DRILLING CONTRACTOR Walker-Hill Environmental **TOTAL DEPTH** 45 ft
DRILLER Frank Harrington **GROUND WATER LEVELS:**
LOGGED BY Gavin Kitchens **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
0 - 12.5	SC Sonic 1	100 (%)	PID = 5.3 PID = 4.6 PID = 5.4 PID = 5.5		LEAN CLAY, SILTY CLAY, (CL-ML) red 2.5YR 4/6, moist, low plasticity, little fine sand, no odor, micaceous, increasing sand content with depth	drilled along ER Line 6 at 188 m	grout 4-in. Sch 40 PVC casing
12.5 - 22.5	SC Sonic 2	100 (%)	PID = 6.8 PID = 5.7 PID = 5.4 PID = 5.7		SILTY SAND, SILTY SAND, (SM) brown 10YR 4/3, very fine to fine grained, dry, non plastic, trace medium to coarse sand, no odor, saprolite, micaceous, phaneritic		bentonite 1/4-in. pellets
22.5 - 30.0	SC Sonic 3	100 (%)	PID = 15.1 PID = 6.4 PID = 7.7 PID = 5.5		SILT WITH SAND, SILT, (ML) brown 10YR 4/3, dry, non plastic, with fine sand, no odor, saprolite, micaceous, phaneritic - decreasing crystal size	22.5-25 feet bgs, soil sample, MADEP-VPH, VOC 8260	
30.0 - 37.0	SC Sonic 4	100 (%)	PID = 4.5 PID = 9 PID = 6.2		SILT WITH SAND, SILT, (ML) brown olive 2.5Y 4/3, dry, non plastic, with fine sand, trace medium to coarse sand, no odor, saprolite, micaceous, phaneritic - decreasing crystal size		silica sand 20-40 4-in. Sch 40 PVC 0.010 slotted screen
37.0 - 44.0	SC Sonic 5	100 (%)	PID = 6.5 PID = 4.7 PID = 5.2		POORLY GRADED SAND WITH SILT, SAND, (SP-SM) brown olive 2.5Y 4/3, very fine to fine grained, moist, non plastic, with silt, some medium to coarse sand, no odor, saprolite, micaceous, phaneritic - small crystal size	hard drilling	
44.0 - 45.0							
Bottom of borehole at 45.0 feet.							

CPC_HUNTERSVILLE_BH_MW - GINT STD US LAB.GDT - 20/09/18 16:48 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: MW-9

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 8/31/2020

DATE FINISHED: 8/31/2020

FIELD ENGINEER: B. Weiserbs

DRILLER: T. Whitehead

NORTH: 610766.024

EAST: 1461606.198

TOP OF CASING ELEVATION: 717.15'

GWL DATE/TIME: 9/14/2020

GWL DEPTH: 28.82' btoc

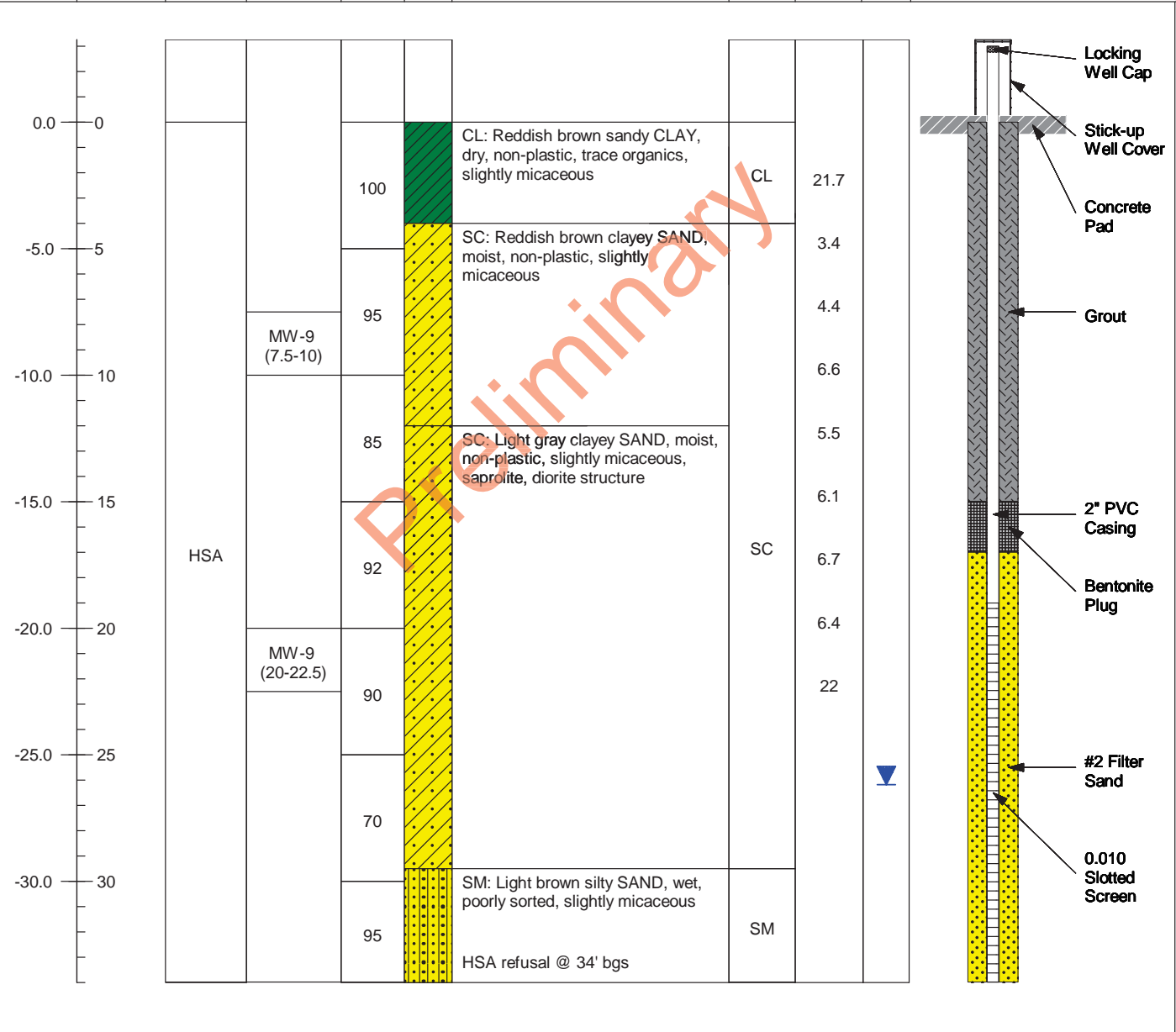
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730 DT

CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Incident

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: MW-10

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 8/31/2020

DATE FINISHED: 8/31/2020

FIELD ENGINEER: B. Weiserbs

DRILLER: T. Whitehead

NORTH: 610518.259

EAST: 1461415.944

TOP OF CASING ELEVATION: 722.91'

GWL DATE/TIME: 9/14/2020

GWL DEPTH: Dry

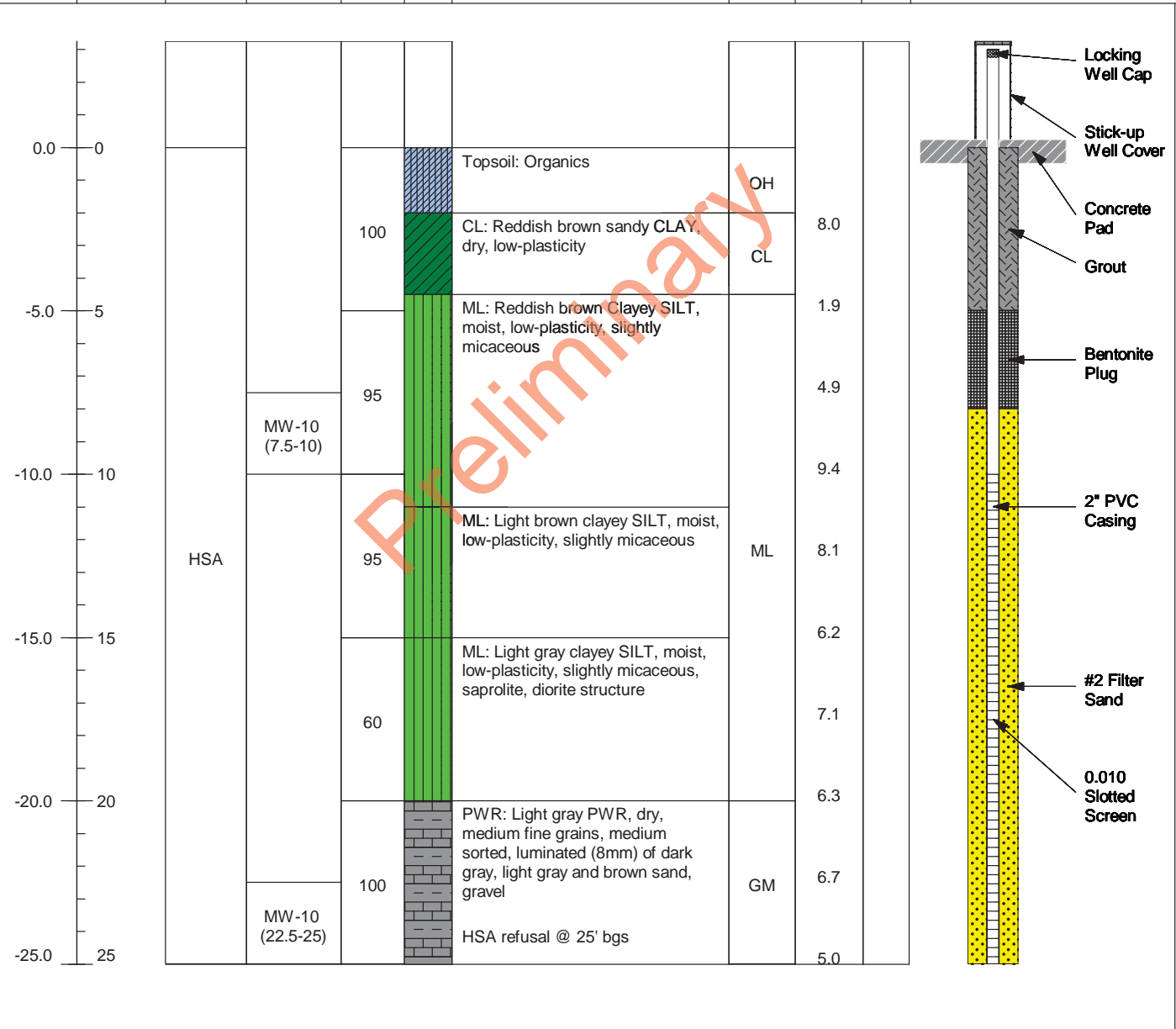
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730 DT

CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



		<p>Soil Boring and Well Installation Log Colonial Pipeline Huntersville-Concord Rd Huntersville, NC 2020-L1-2248 Incident</p>	DRAWN BY: MPS CHECKED BY: AJW SHEET: DRAFT PROJECT NO: 60639876
--	--	---	--



BORING NUMBER MW-11

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 8/31/2020 **COMPLETED** 9/1/2020 **GROUND ELEVATION** 736.42 ft
DRILLING CONTRACTOR Walker-Hill Environmental **TOTAL DEPTH** 50 ft
DRILLER Frank Harrington **GROUND WATER LEVELS:**
LOGGED BY Bill Jones **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							
7.5	SC Sonic 1	(%)	PID = 1.6 PID = 1.3	[Hatched pattern]	LEAN CLAY, SILTY CLAY, (CL-ML) brown red, moist, saprolite fill		[Hatched pattern]
17.5	SC Sonic 2	(%)	PID = 1.6 PID = 1.9 PID = 1.8 PID = 2	[Dotted pattern]	SILTY SAND, SILTY SAND, (SM) brown, very fine to fine grained, dry, with clay, saprolite fill		[Dotted pattern]
20.0			PID = 2.1	[Dotted pattern]	POORLY GRADED SAND, SAND, (SP) pale brown, very fine to fine grained, dry, saprolite fill		[Dotted pattern]
30.0	SC Sonic 3	(%)	PID = 2 PID = 2.5 PID = 3.1 PID = 2.1	[Dotted pattern]	SILTY SAND, SILTY SAND, (SM) pale brown, very fine to fine grained, dry, saprolite fill		[Dotted pattern]
35.0	SC Sonic 4	(%)	PID = 1.9 PID = 2.3	[Hatched pattern]	LEAN CLAY, SILTY CLAY, (CL-ML) brown gray, dry, saprolite fill		[Hatched pattern]
42.5	SC Sonic 5	(%)	PID = 1.8 PID = 2.7 PID = 2.8 PID = 2.9 PID = 3.2 PID = 3.9	[Dotted pattern]	SILTY SAND, SILTY SAND, (SM) pale gray, very fine to fine grained, dry, saprolite fill		[Dotted pattern]
50.0							

DEPTH (ft)	WELL DIAGRAM
728.9	grout 4-in. Sch 40 PVC casing
718.9	bentonite pellets 1/4-in.
716.4	
706.4	
701.4	silica sand 10-20 4-in. Sch 40 PVC 0.010 slotted screen
693.9	
686.4	

Bottom of borehole at 50.0 feet.

CPC_HUNTERSVILLE_BH_MW - GINT STD US LAB.GDT - 20/09/18 16:48 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: BH-1 / MW-15

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 9/2/2020

DATE FINISHED: 9/2/2020

FIELD ENGINEER: B. Weiserbs / S. McGuire

DRILLER: T. Whitehead / S. Gowan

NORTH: 610450.293

EAST: 1461470.456

TOP OF CASING ELEVATION: 725.70'

GWL DATE/TIME: 9/14/2020

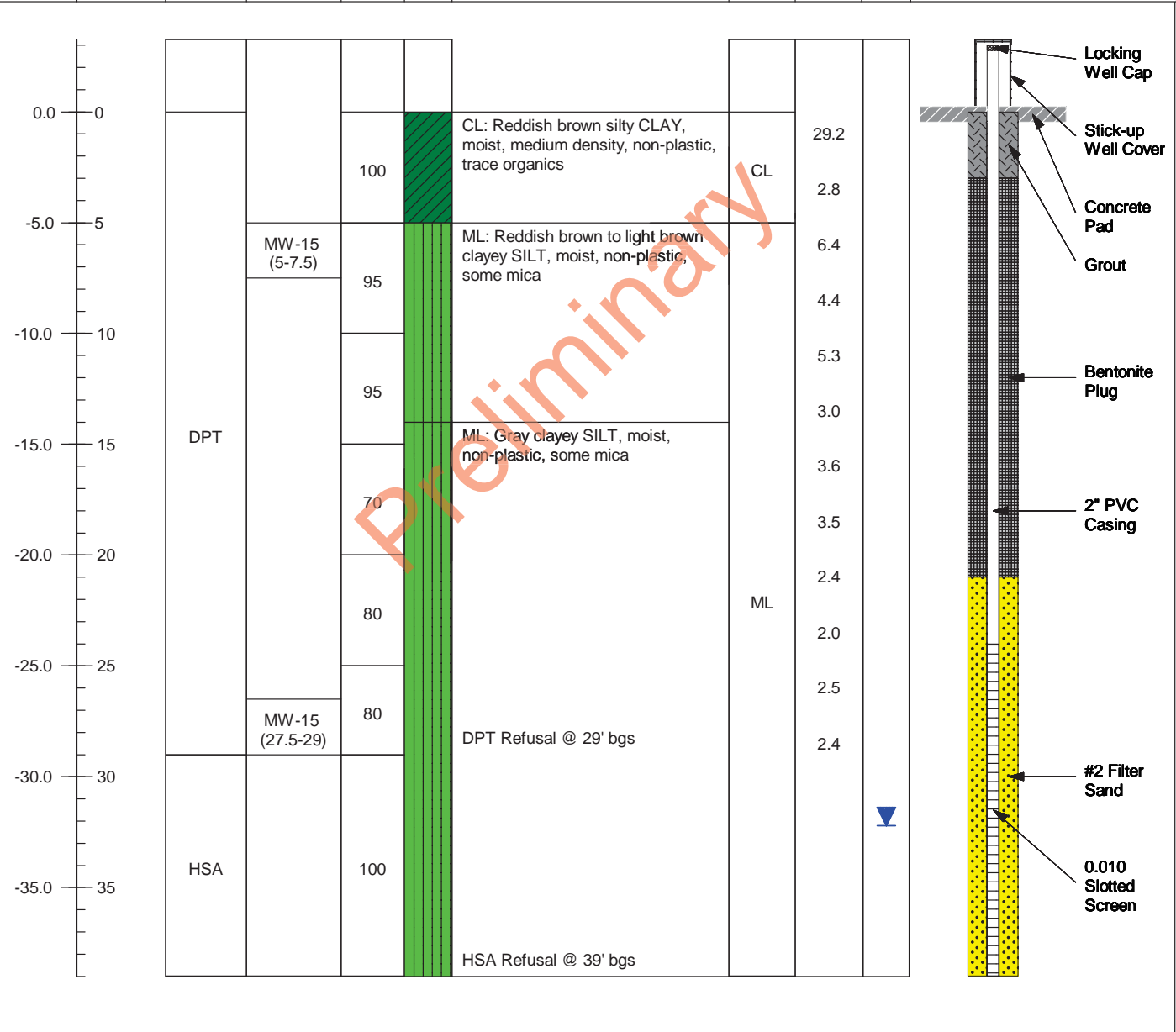
GWL DEPTH: 34.79' btoc

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730DT / CME-750X CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Incident

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: BH-3 / MW-18

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 9/2/2020

DATE FINISHED: 9/2/2020

FIELD ENGINEER: B. Weiserbs / S. McGuire

DRILLER: T. Whitehead / S. Gowan

NORTH: 610817.943

EAST: 1462185.479

TOP OF CASING ELEVATION: 729.75'

GWL DATE/TIME: 9/14/2020

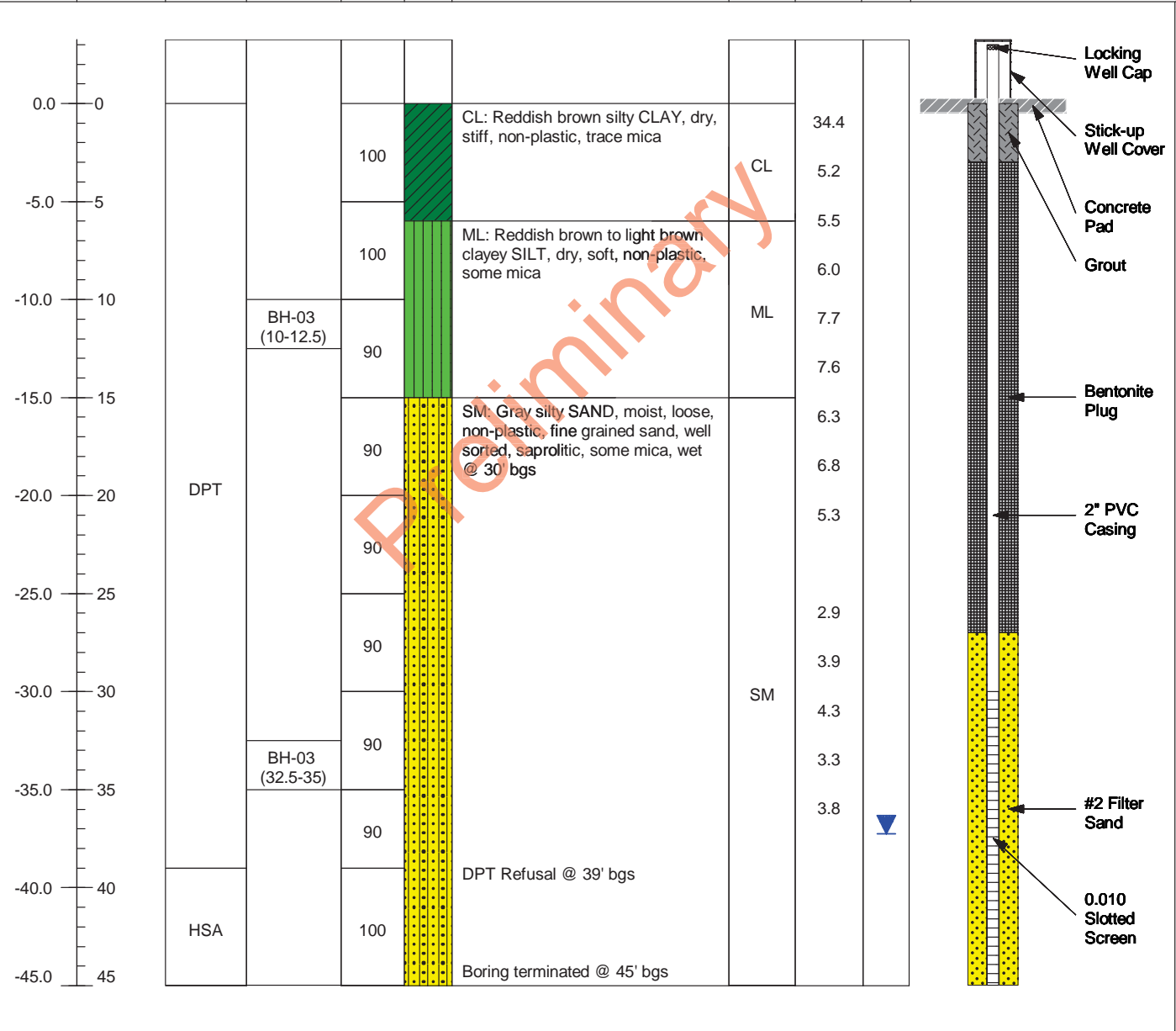
GWL DEPTH: 39.78' btoc

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730DT / CME-750X CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: BH-4 / MW-20

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 9/2/2020

DATE FINISHED: 9/3/2020

FIELD ENGINEER: B. Weiserbs / S. McGuire

DRILLER: T. Whitehead / S. Gowan

NORTH: 610895.751

EAST: 1462288.912

TOP OF CASING ELEVATION: 729.69'

GWL DATE/TIME: 9/14/2020

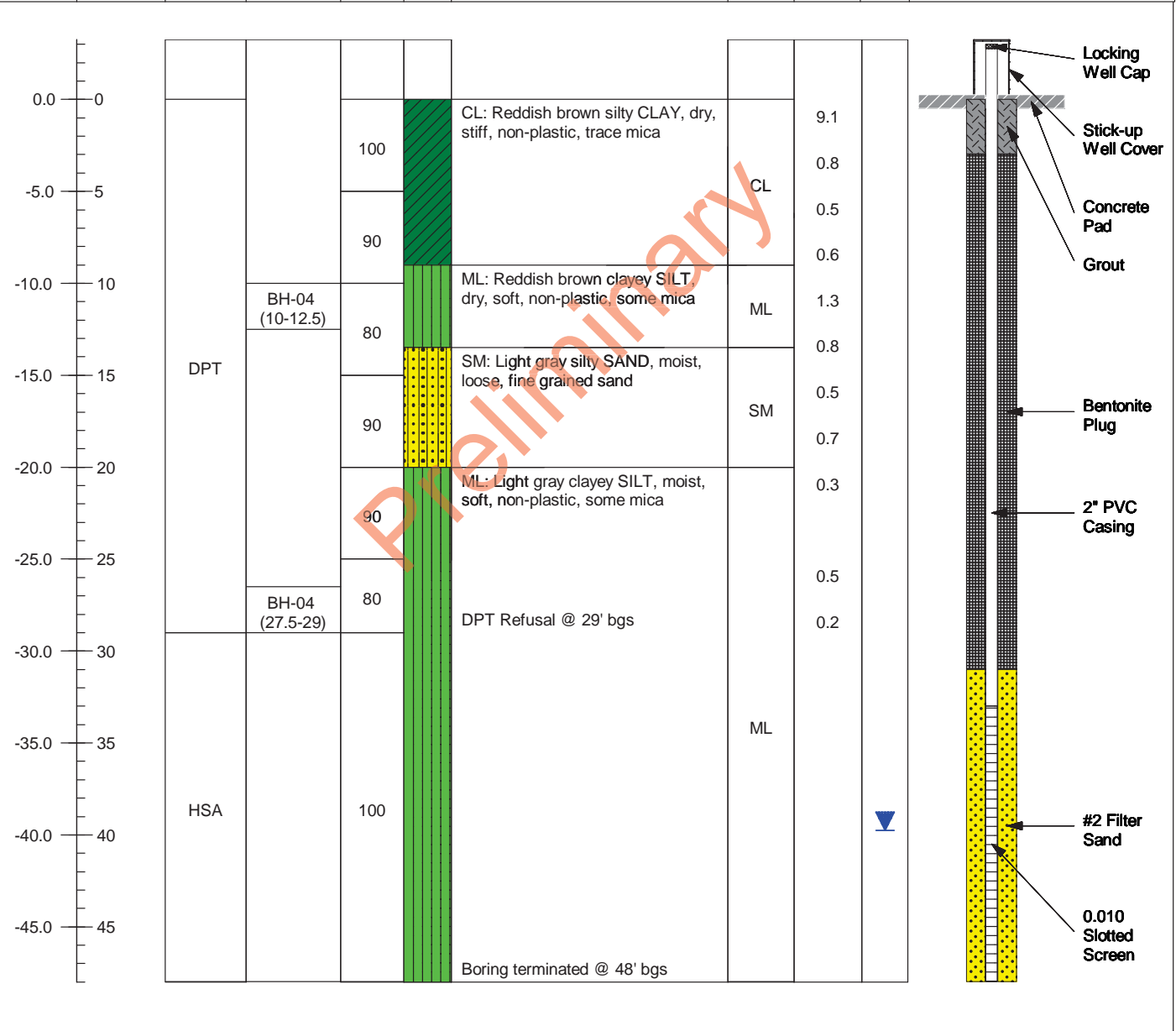
GWL DEPTH: 42.25' btoc

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730DT / CME-750X CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: BH-5 / MW-22

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 9/2/2020

DATE FINISHED: 9/3/2020

FIELD ENGINEER: B. Weiserbs / S. McGuire

DRILLER: T. Whitehead / S. Gowan

NORTH: 610918.335

EAST: 1462111.418

TOP OF CASING ELEVATION: 721.89'

GWL DATE/TIME: 9/14/2020

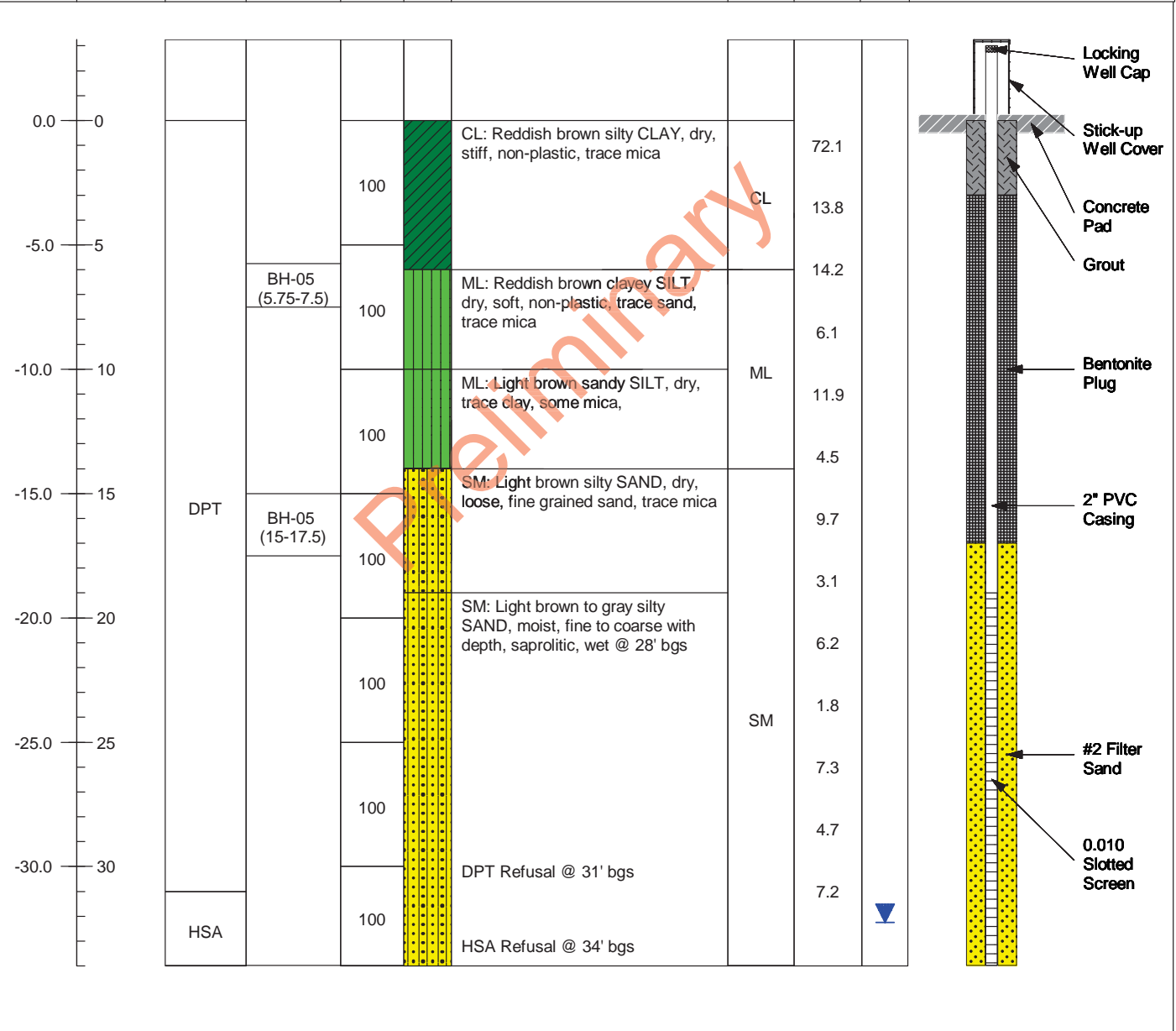
GWL DEPTH: 34.88' btoc

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730DT / CME-750X CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: BH-6 / MW-24

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 9/2/2020

DATE FINISHED: 9/4/2020

FIELD ENGINEER: B. Weiserbs / S. McGuire

DRILLER: T. Whitehead / S. Gowan

NORTH: 61918.335

EAST: 146211.418

TOP OF CASING ELEVATION: 721.89'

GWL DATE/TIME: 9/8/2020

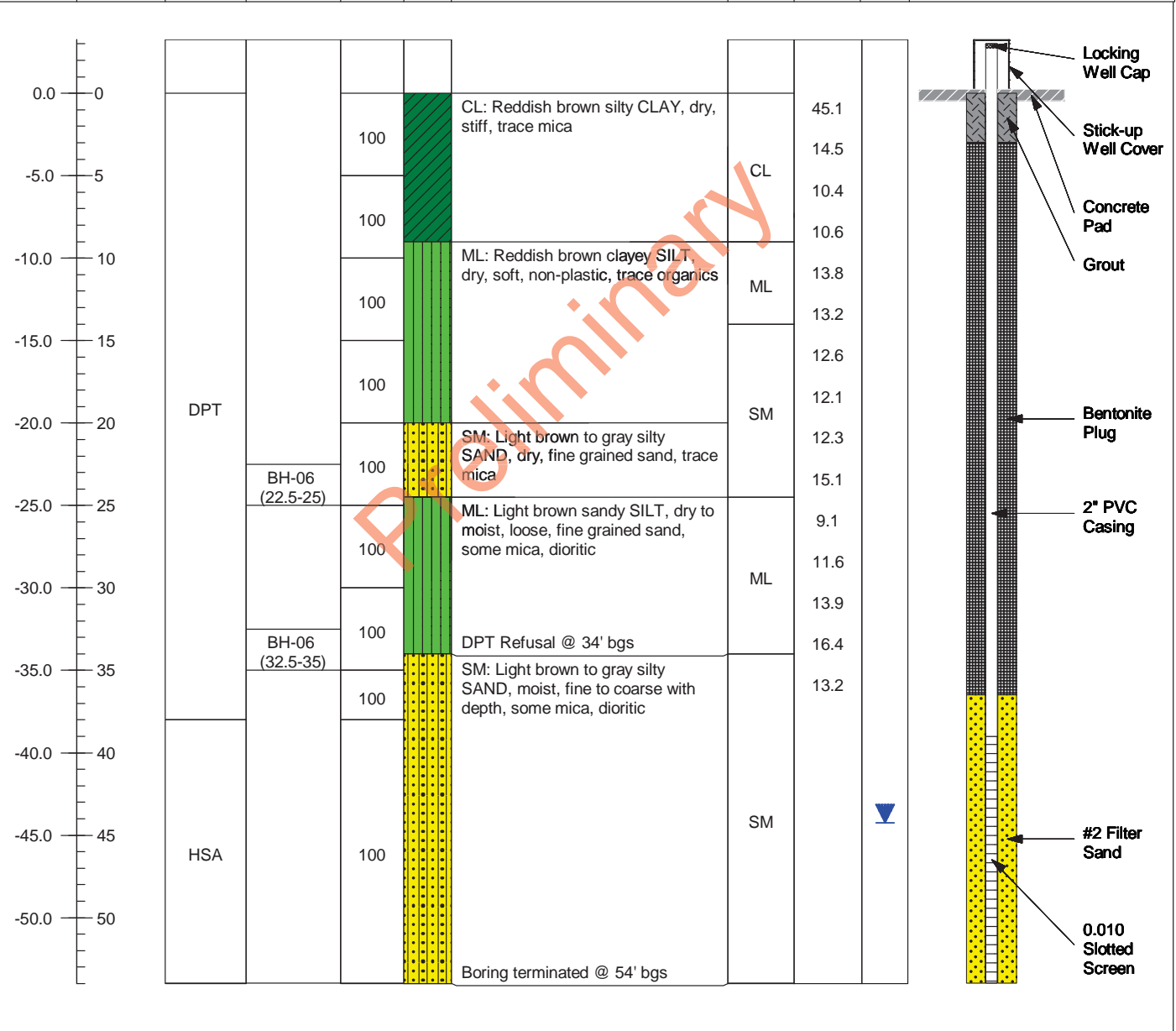
GWL DEPTH: 44.36' (LNAPL) / 46.69' (GW)

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730DT / CME-750X CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: BH-7 / MW-25

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 9/4/2020

DATE FINISHED: 9/4/2020

FIELD ENGINEER: B. Weiserbs / S. McGuire

DRILLER: T. Whitehead / S. Gowan

NORTH: 610724.207

EAST: 1462220.540

TOP OF CASING ELEVATION: 734.04'

GWL DATE/TIME: 9/14/2020

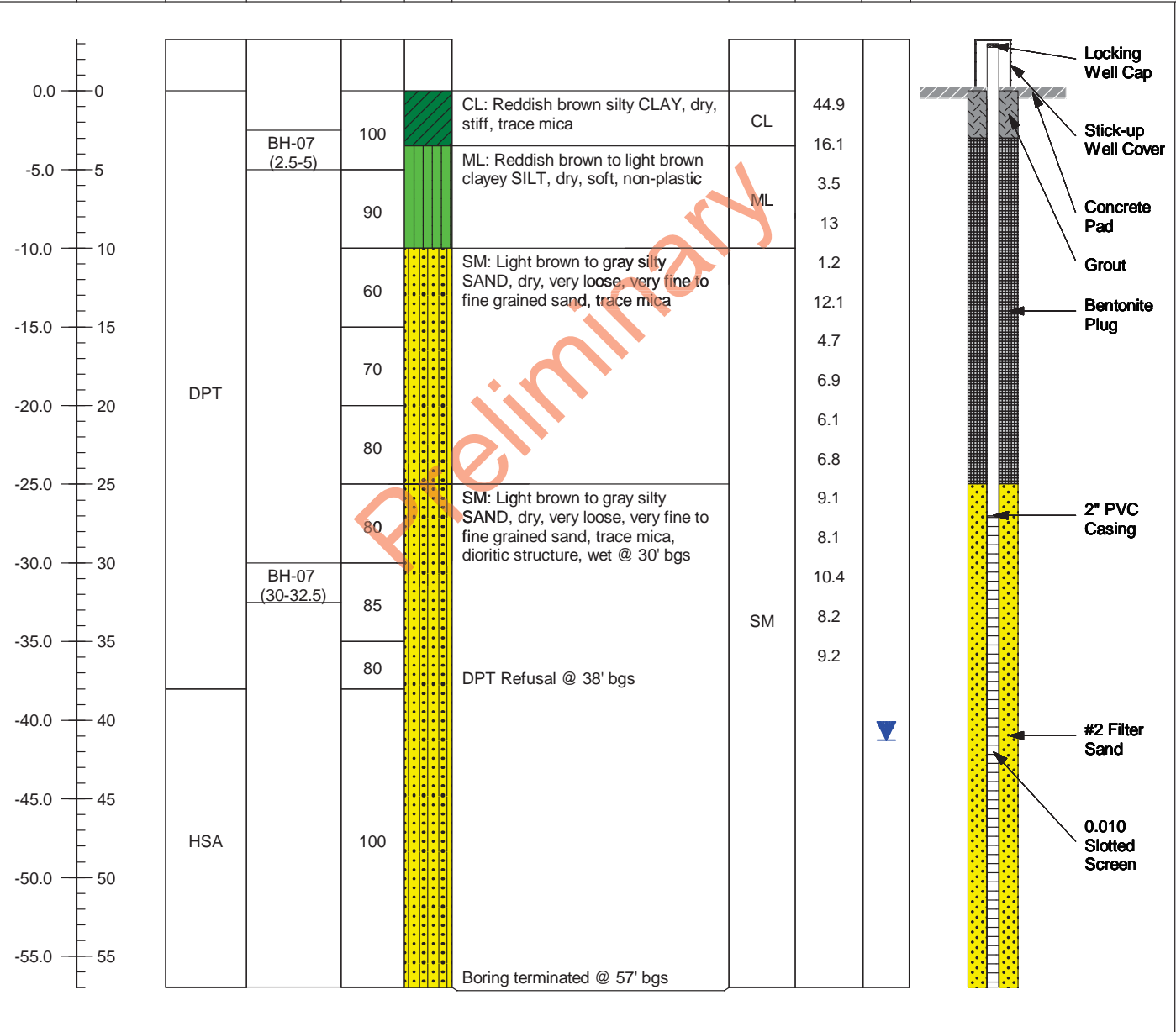
GWL DEPTH: 43.52' btoc

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730DT / CME-750X CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------



Soil Boring and Well Installation Log
Colonial Pipeline
Huntersville-Concord Rd
Huntersville, NC
2020-L1-2248 Release

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: BH-8 / MW-26

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 9/4/2020

DATE FINISHED: 9/4/2020

FIELD ENGINEER: B. Weiserbs / S. McGuire

DRILLER: T. Whitehead / S. Gowan

NORTH: 610924.172

EAST: 1462017.515

TOP OF CASING ELEVATION: 717.71'

GWL DATE/TIME: 9/14/2020

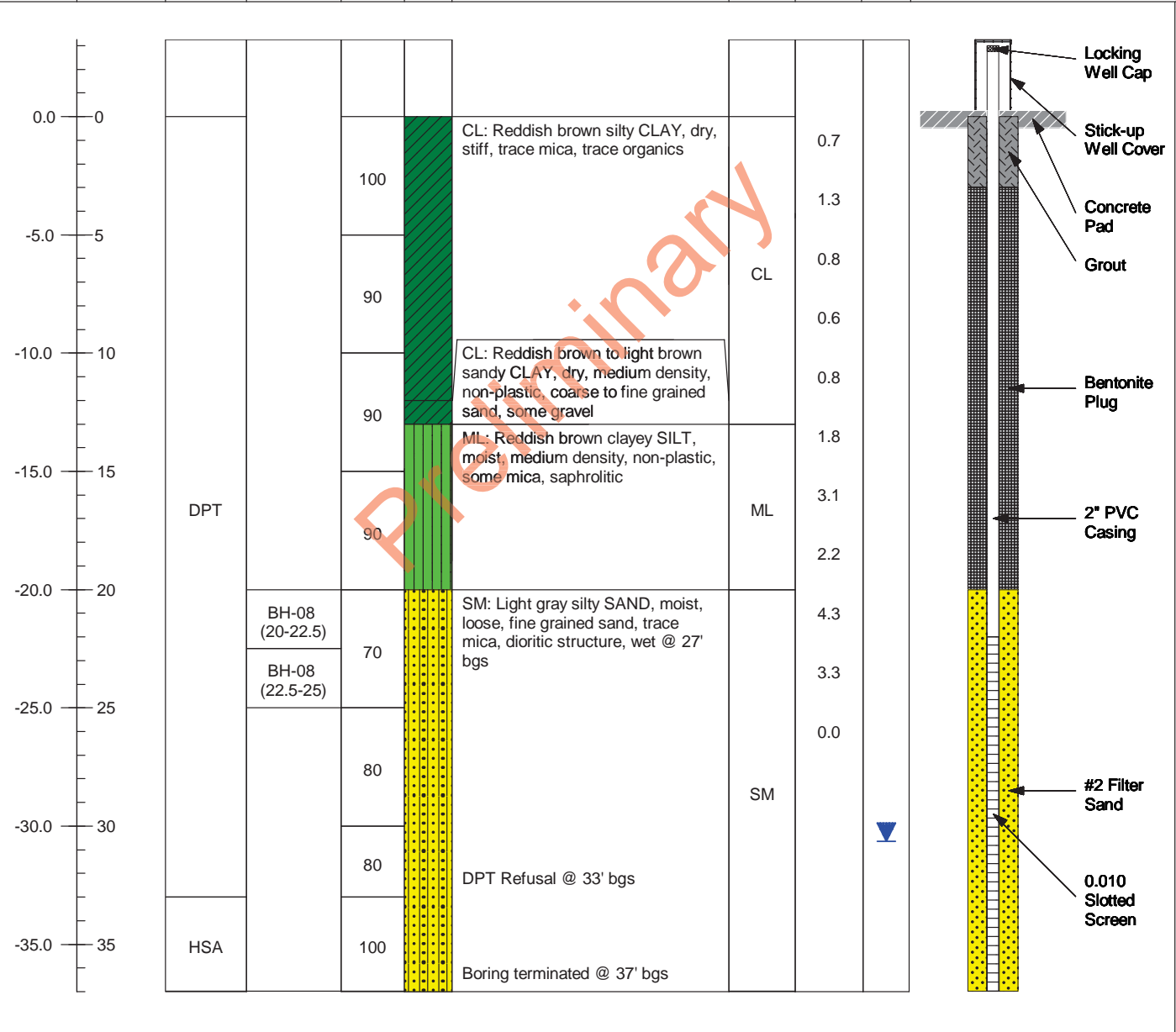
GWL DEPTH: 31.19' (LNAPL) / 33.25' (GW)

DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: Geoprobe 7730DT / CME-750X CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT.)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
-----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------

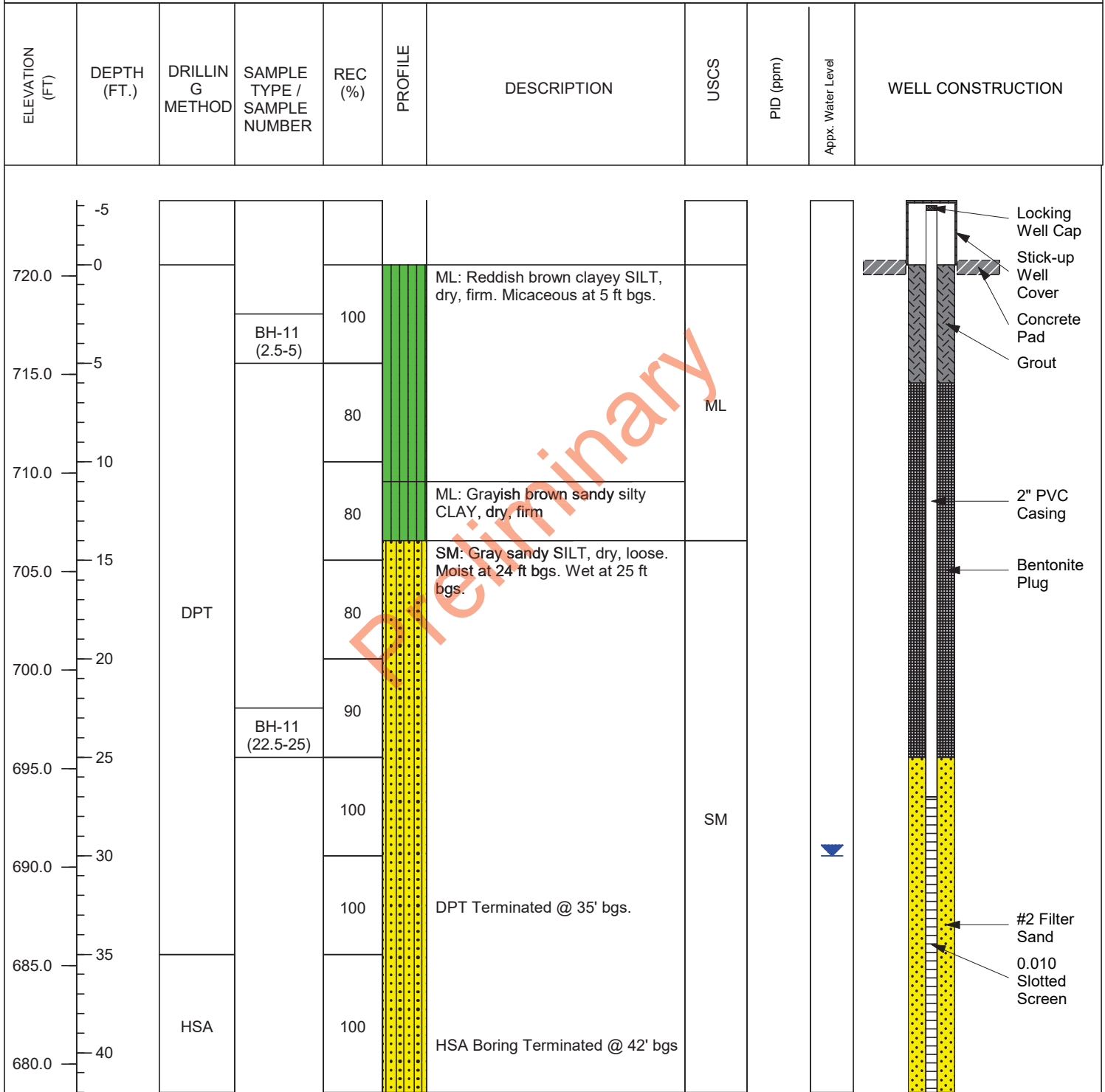


Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876	BORING NO: BH-11 / MW-27	PROJECT NAME: Colonial Pipeline
DATE BEGAN: 9/5/2020	DATE FINISHED: 9/5/2020	FIELD ENGINEER: A. Wreschnig / M. Stone
DRILLER: T. Whitehead / S. Gowan	NORTH: 610966.312	EAST: 1462065.696
TOP OF CASING ELEVATION: 713.30	GWL DATE/TIME: 9/5/2020	GWL DEPTH: 33.27' btoc
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT	DRILL EQUIP: Geoprobe 7730DT / CME-750X	CHECKED BY: AJW
CONTRACTOR: SM&E		

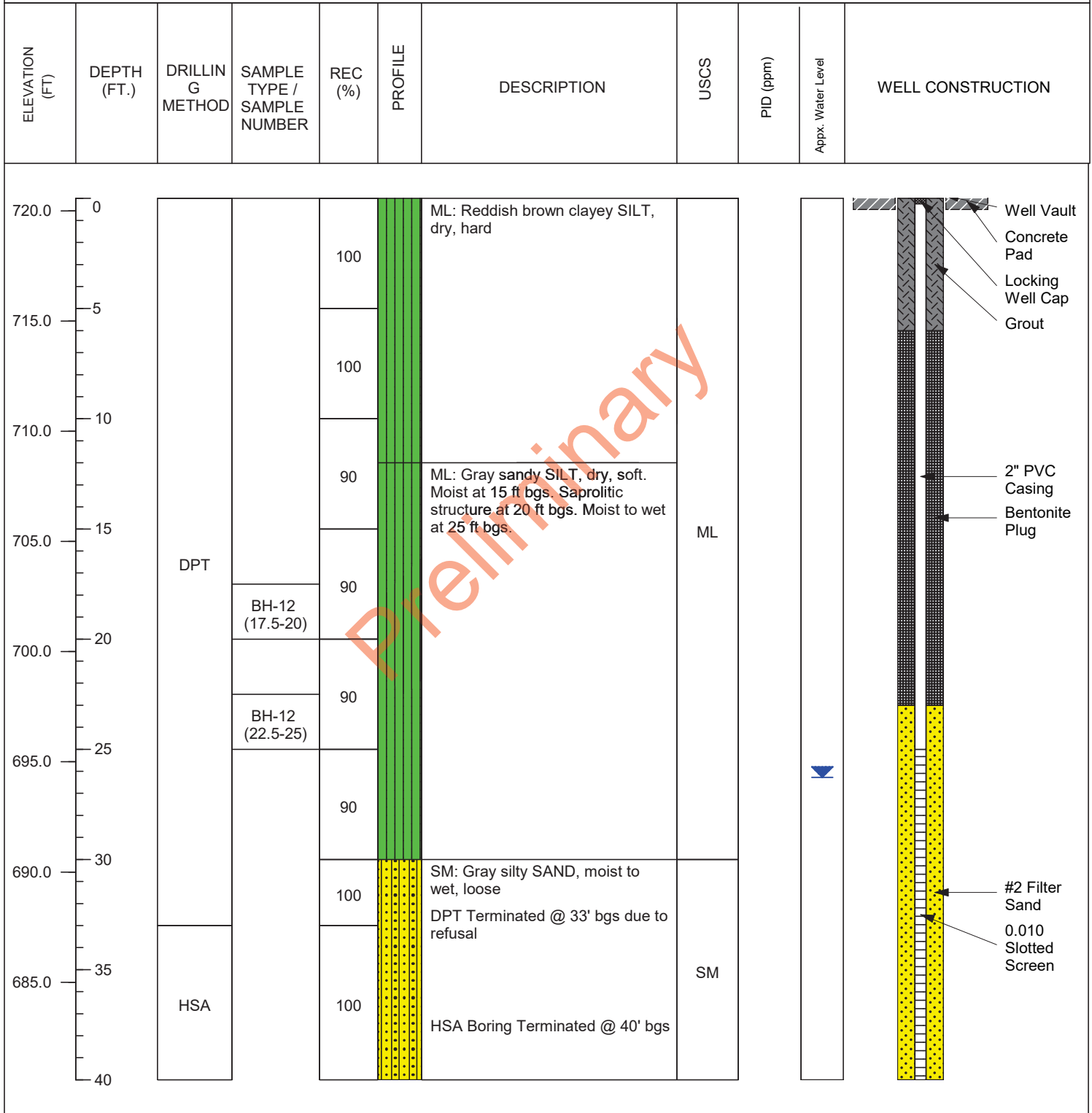


Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: AJW	CHECKED BY: MPS	PROJECT NO: 60639876	SHEET: DRAFT
-------------------------	---------------------------	--------------------------------	------------------------

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876	BORING NO: BH-12 / MW-28	PROJECT NAME: Colonial Pipeline
DATE BEGAN: 9/5/2020	DATE FINISHED: 9/6/2020	FIELD ENGINEER: A. Wreschnig / M. Stone
DRILLER: T. Whitehead / S. Gowan	NORTH: 610216.934	EAST: 1461369.873
TOP OF CASING ELEVATION: 720.57	GWL DATE/TIME: 9/7/2020	GWL DEPTH: 29.37' btoc
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT	DRILL EQUIP: Geoprobe 7730DT / CME-750X	CHECKED BY: AJW
CONTRACTOR: SM&E		



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: AJW	CHECKED BY: MPS	PROJECT NO: 60639876	SHEET: DRAFT
-------------------------	---------------------------	--------------------------------	------------------------

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876

BORING NO: MW-30

PROJECT NAME: Colonial Pipeline

DATE BEGAN: 9/7/2020

DATE FINISHED: 9/7/2020

FIELD ENGINEER: M. Stone

DRILLER: S. Gowan

NORTH: 610799.782

EAST: 1461554.298

TOP OF CASING ELEVATION: 715.08'

GWL DATE/TIME: 9/14/2020

GWL DEPTH: 30.59' btoc

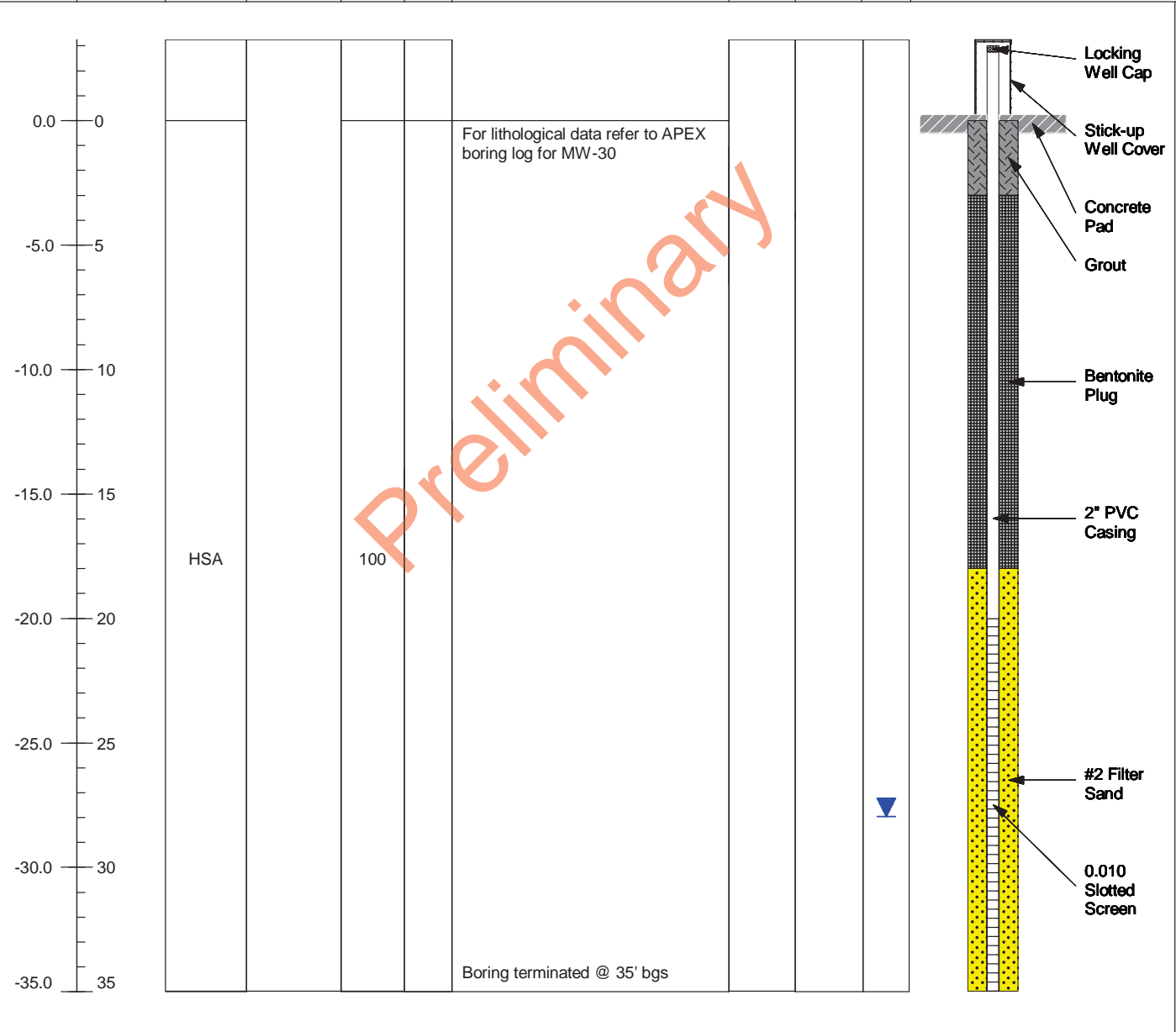
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT

DRILL EQUIP: CME-750X

CHECKED BY: AJW

CONTRACTOR: SM&E

ELEVATION (FT)	DEPTH (FT.)	DRILLING METHOD	SAMPLE TYPE / SAMPLE NUMBER	REC (%)	PROFILE	DESCRIPTION	USCS	PID (ppm)	Appx. Water Level	WELL CONSTRUCTION
----------------	-------------	-----------------	-----------------------------	---------	---------	-------------	------	-----------	-------------------	-------------------

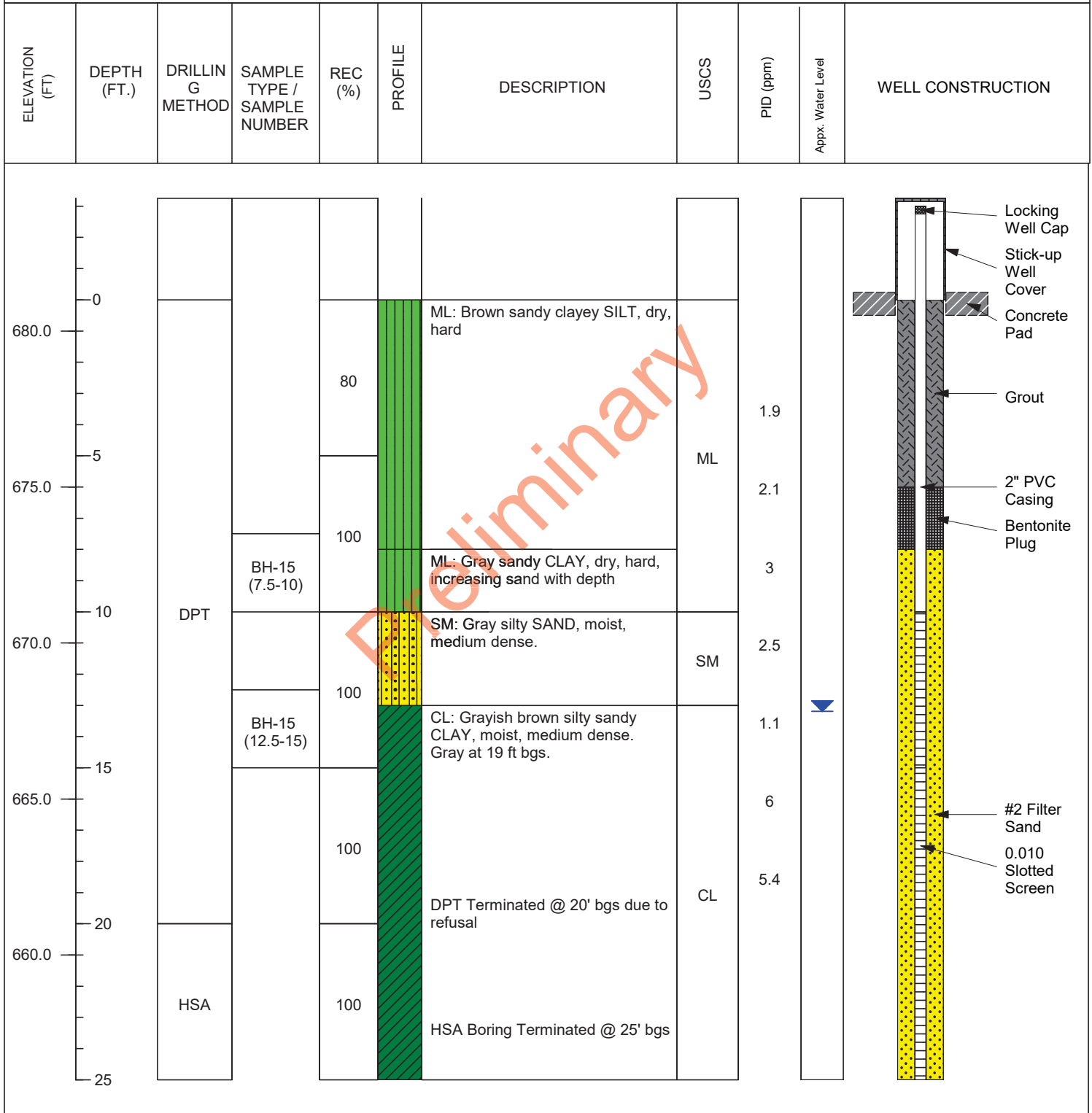


Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: MPS	CHECKED BY: AJW	PROJECT NO: 60639876
SHEET: DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876	BORING NO: BH-15 / MW-32	PROJECT NAME: Colonial Pipeline
DATE BEGAN: 9/7/2020	DATE FINISHED: 9/6/2020	FIELD ENGINEER: A. Wreschnig / M. Stone
DRILLER: T. Whitehead / S. Gowan	NORTH: 611273.038	EAST: 1461934.811
TOP OF CASING ELEVATION: 681.00	GWL DATE/TIME: 9/7/2020	GWL DEPTH: 16.19' btoc
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT	DRILL EQUIP: Geoprobe 7730DT / CME-750X	CHECKED BY: AJW
CONTRACTOR: SM&E		

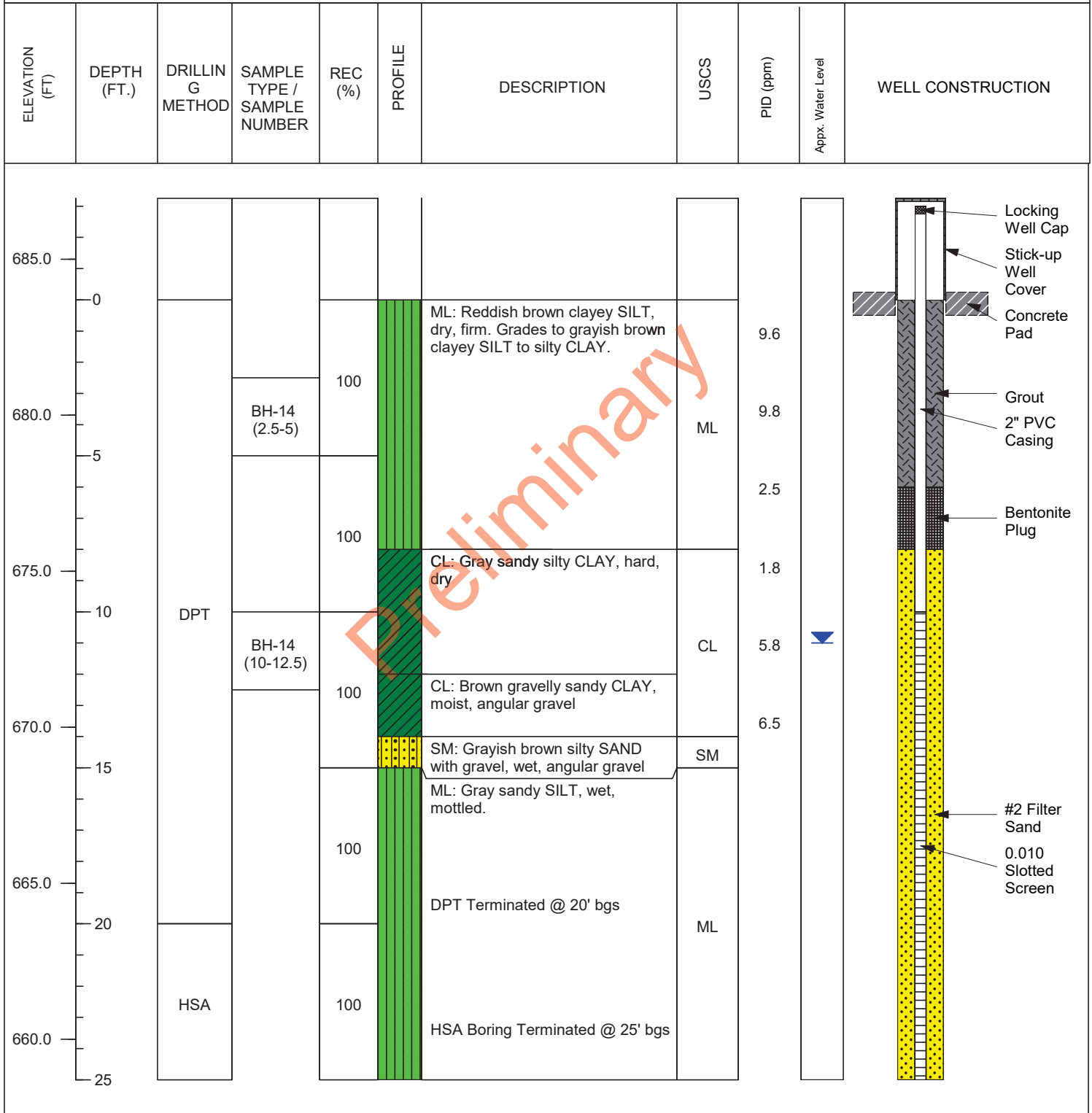


Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: AJW	CHECKED BY: MPS	PROJECT NO: 60639876	SHEET: DRAFT
-------------------------	---------------------------	--------------------------------	------------------------

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876	BORING NO: BH-14 / MW-33	PROJECT NAME: Colonial Pipeline
DATE BEGAN: 9/7/2020	DATE FINISHED: 9/6/2020	FIELD ENGINEER: A. Wreschnig / M. Stone
DRILLER: T. Whitehead / S. Gowan	NORTH: 611254.113	EAST: 1461664.564
TOP OF CASING ELEVATION: 683.70	GWL DATE/TIME: 9/7/2020	GWL DEPTH: 13.20' btoc
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT	DRILL EQUIP: Geoprobe 7730DT / CME-750X	CHECKED BY: AJW
CONTRACTOR: SM&E		

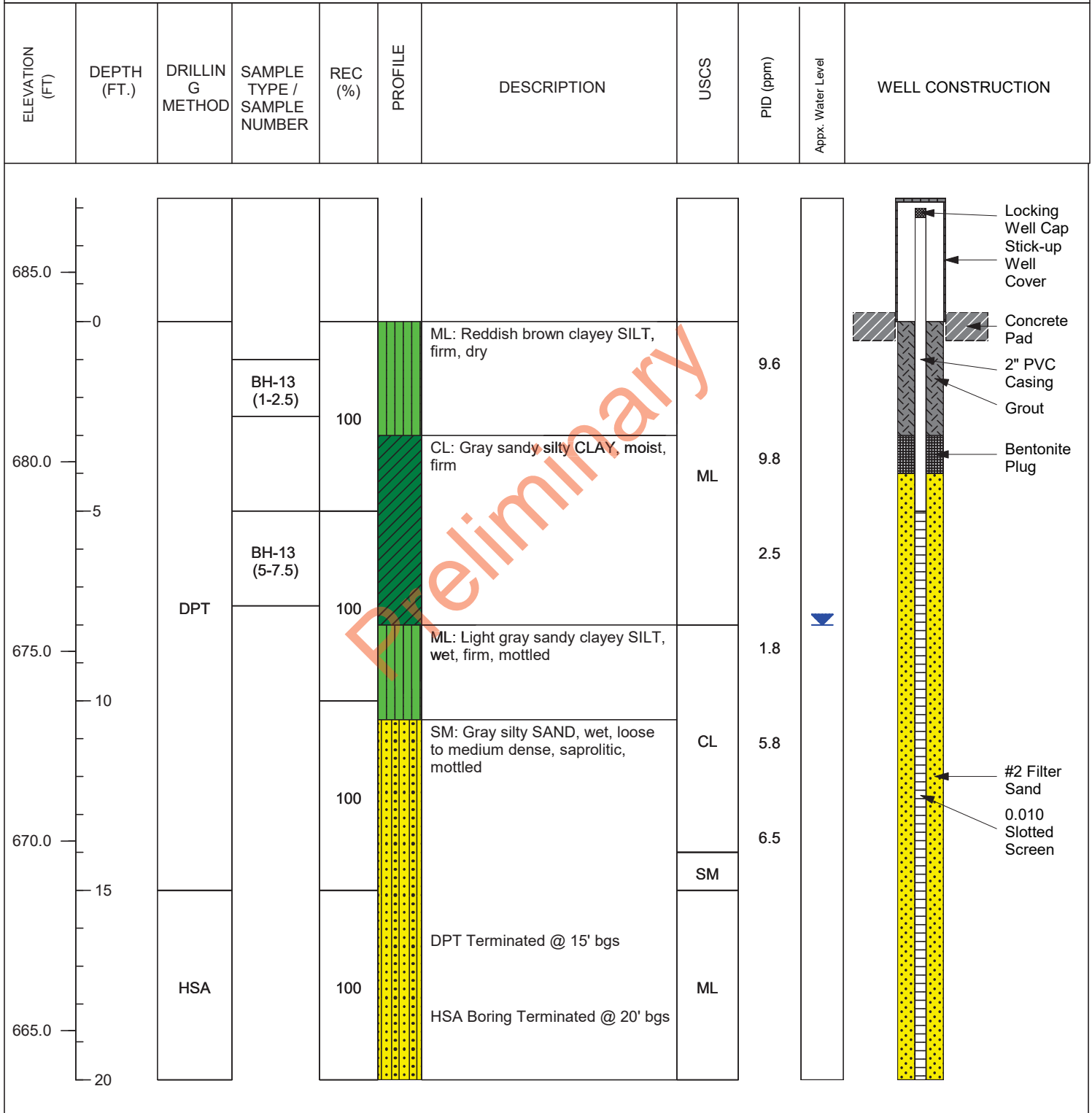


Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: AJW	CHECKED BY: MPS	PROJECT NO: 60639876	SHEET: DRAFT
-------------------------	---------------------------	--------------------------------	------------------------

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876	BORING NO: BH-13 / MW-34	PROJECT NAME: Colonial Pipeline
DATE BEGAN: 9/5/2020	DATE FINISHED: 9/6/2020	FIELD ENGINEER: A. Wreschnig / M. Stone
DRILLER: T. Whitehead / S. Gowan	NORTH: 611273.038	EAST: 1461934.811
TOP OF CASING ELEVATION: 681.00	GWL DATE/TIME: 9/14/2020	GWL DEPTH: 10.89' btoc
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT	DRILL EQUIP: Geoprobe 7730DT / CME-750X	CHECKED BY: AJW
CONTRACTOR: SM&E		

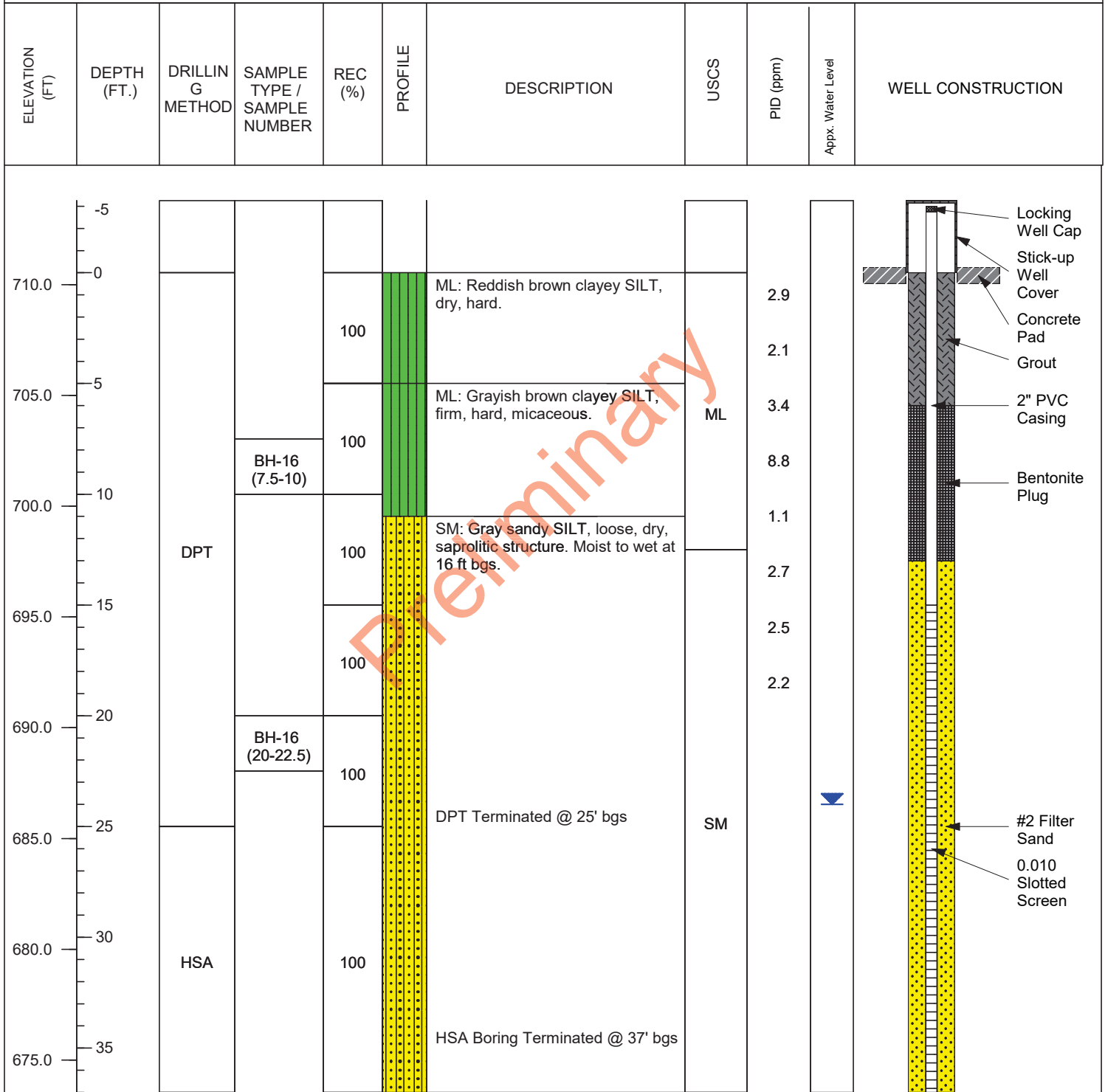


Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY:	AJW	CHECKED BY:	MPS	PROJECT NO:	60639876
SHEET:			DRAFT		

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876	BORING NO: BH-16 / MW-35	PROJECT NAME: Colonial Pipeline
DATE BEGAN: 9/7/2020	DATE FINISHED: 9/7/2020	FIELD ENGINEER: A. Wreschnig / M. Stone
DRILLER: T. Whitehead / S. Gowan	NORTH: 611009.321	EAST: 1461705.220
TOP OF CASING ELEVATION: 704.07'	GWL DATE/TIME: 9/7/2020	GWL DEPTH: 26.78' btoc
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT	DRILL EQUIP: Geoprobe 7730DT / CME-750X	CHECKED BY: AJW
CONTRACTOR: SM&E		

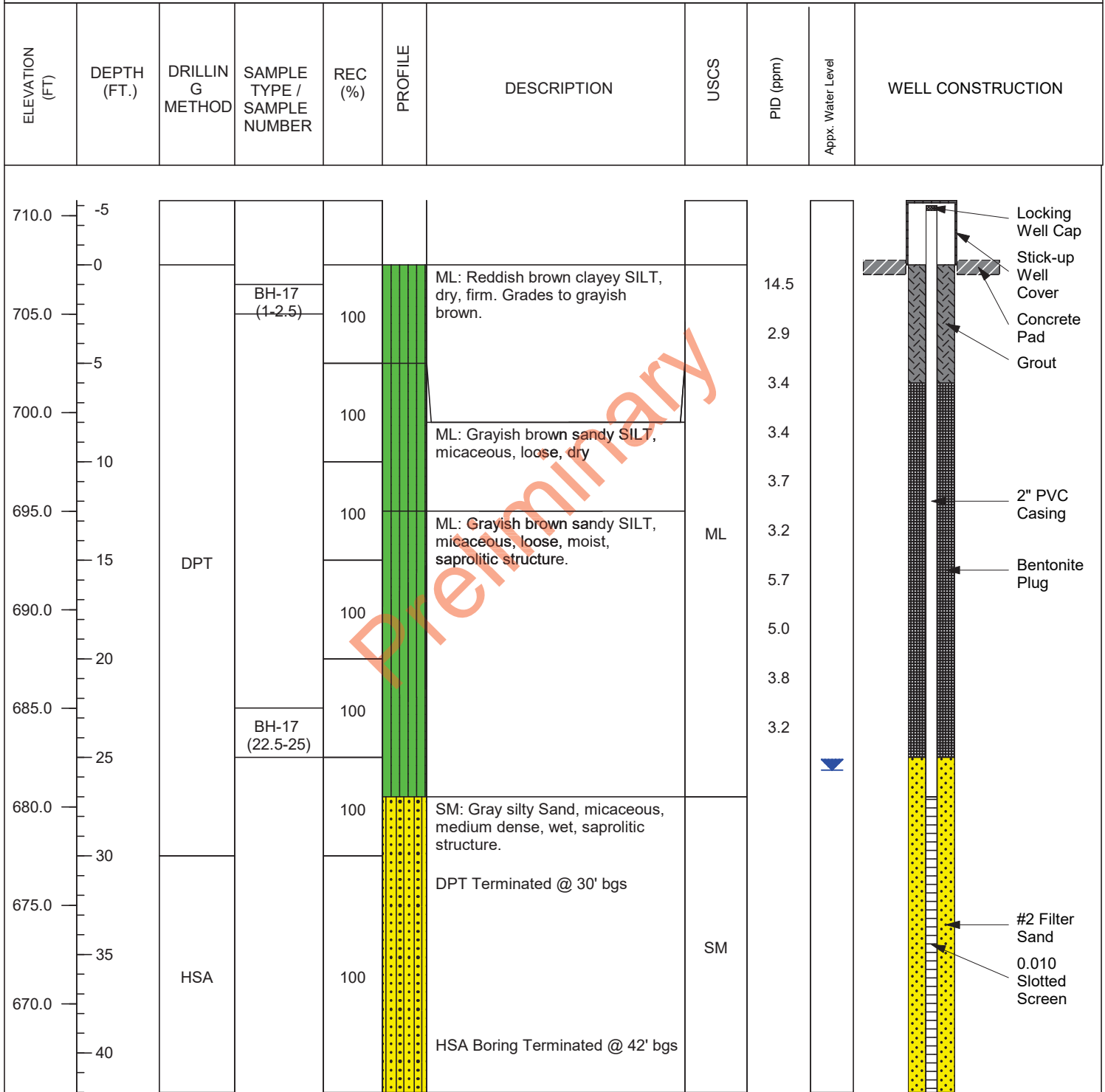


Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: AJW	CHECKED BY: MPS	PROJECT NO: 60639876	SHEET: DRAFT
-------------------------	---------------------------	--------------------------------	------------------------

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876	BORING NO: BH-17 / MW-36	PROJECT NAME: Colonial Pipeline
DATE BEGAN: 9/8/2020	DATE FINISHED: 9/8/2020	FIELD ENGINEER: A. Wreschnig / M. Stone
DRILLER: T. Whitehead / S. Gowan	NORTH: 610244.764	EAST: 1461745.145
TOP OF CASING ELEVATION: 707.51'	GWL DATE/TIME:	GWL DEPTH: 28.62' btoc
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT	DRILL EQUIP: Geoprobe 7730DT / CME-750X	CHECKED BY: AJW
CONTRACTOR: SM&E		

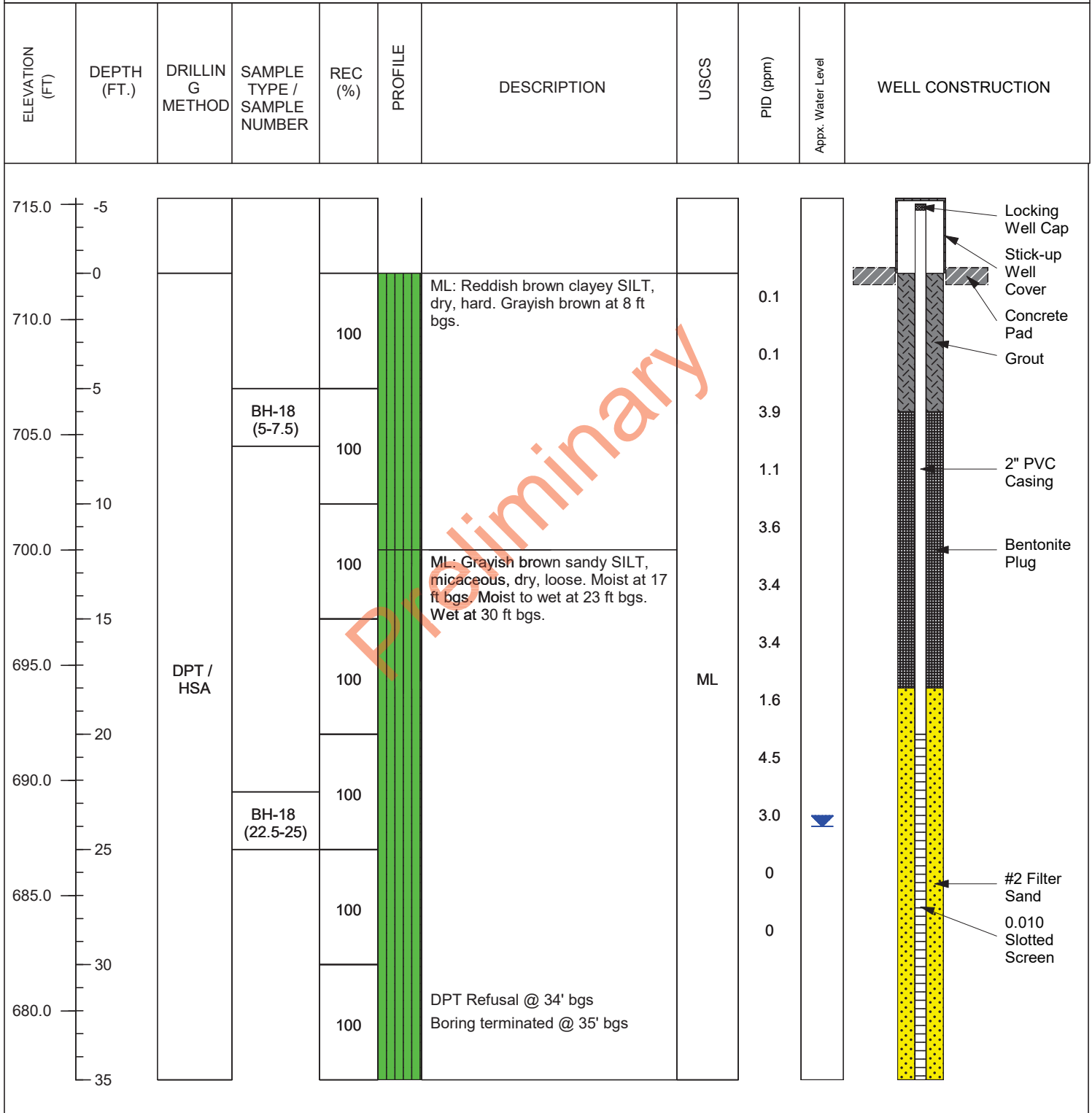


Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: AJW	CHECKED BY: MPS	PROJECT NO: 60639876	SHEET: DRAFT
-------------------------	---------------------------	--------------------------------	------------------------

AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

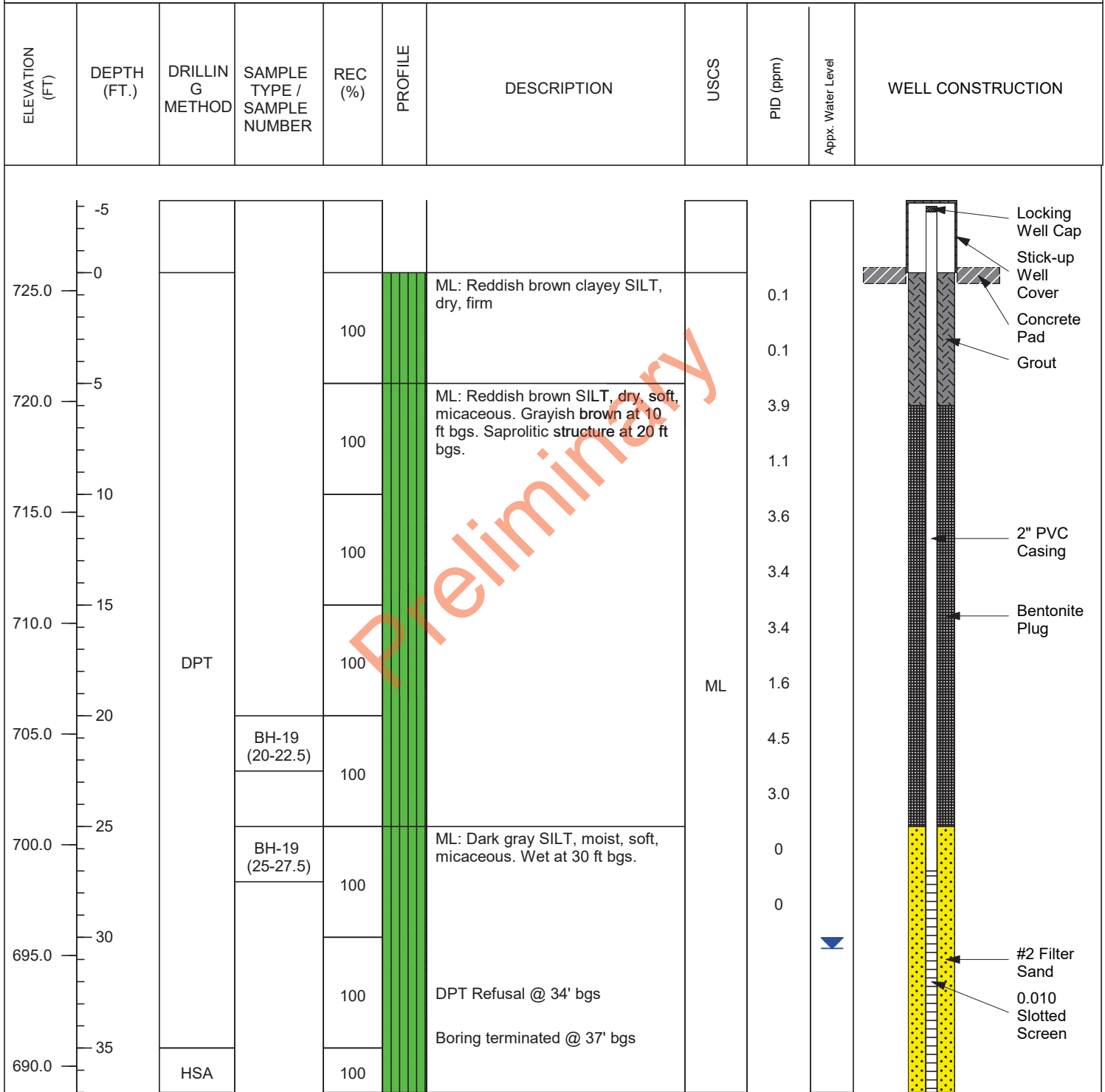
PROJECT NO: 60639876	BORING NO: BH-18 / MW-37	PROJECT NAME: Colonial Pipeline
DATE BEGAN: 9/8/2020	DATE FINISHED: 9/8/2020	FIELD ENGINEER: A. Wreschnig / M. Stone
DRILLER: T. Whitehead / S. Gowan	NORTH: 610847.989	EAST: 1461775.311
TOP OF CASING ELEVATION: 712.01'	GWL DATE/TIME:	GWL DEPTH: 26.90' btoc
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT	DRILL EQUIP: Geoprobe 7730DT / CME-750X	CHECKED BY: AJW
CONTRACTOR: SM&E		



		Soil Boring and Well Installation Log Colonial Pipeline Huntersville-Concord Rd Huntersville, NC 2020-L1-2248 Release	DRAWN BY: AJW CHECKED BY: MPS SHEET: DRAFT	PROJECT NO: 60639876
--	--	---	---	-------------------------

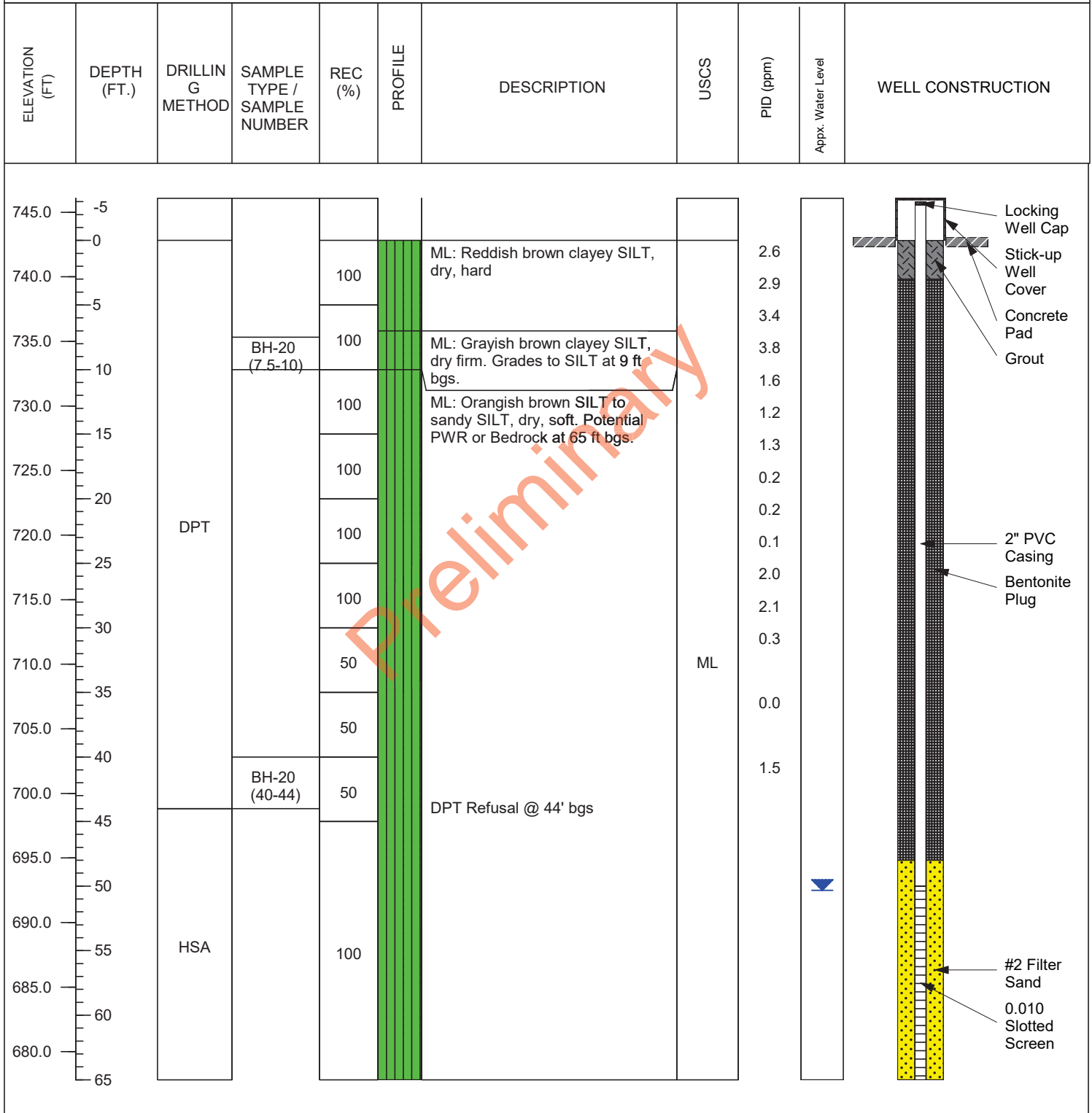
AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876	BORING NO: BH-19 / MW-40	PROJECT NAME: Colonial Pipeline
DATE BEGAN: 9/8/2020	DATE FINISHED: 9/9/2020	FIELD ENGINEER: A. Wreschnig / M. Stone
DRILLER: T. Whitehead / S. Gowan	NORTH: 610244.764	EAST: 1461670.079
TOP OF CASING ELEVATION: 725.82'	GWL DATE/TIME:	GWL DEPTH: 33.25' btoc
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT	DRILL EQUIP: Geoprobe 7730DT / CME-750X	CHECKED BY: AJW
CONTRACTOR: SM&E		



AECOM LITHOLOGIC LOG / WELL CONSTRUCTION LOG

PROJECT NO: 60639876	BORING NO: BH-20 / MW-41	PROJECT NAME: Colonial Pipeline
DATE BEGAN: 9/8/2020	DATE FINISHED: 9/9/2020	FIELD ENGINEER: B. Weiserbs / S. McGuire
DRILLER: T. Whitehead / S. Gowan	NORTH: 610493.441	EAST: 1462185.803
TOP OF CASING ELEVATION: 742.82'	GWL DATE/TIME:	GWL DEPTH: 53.40' btoc
DRILLING METHOD: 4.25" ID Hollow Stem Auger / DPT	DRILL EQUIP: Geoprobe 7730DT / CME-750X	CHECKED BY: AJW
CONTRACTOR: SM&E		



Soil Boring and Well Installation Log
 Colonial Pipeline
 Huntersville-Concord Rd
 Huntersville, NC
 2020-L1-2248 Release

DRAWN BY: AJW	CHECKED BY: MPS	PROJECT NO: 60639876	SHEET: DRAFT
-------------------------	---------------------------	--------------------------------	------------------------



BORING NUMBER RW-05

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 8/28/2020 **COMPLETED** 8/28/2020 **GROUND ELEVATION** 726.93 ft
DRILLING CONTRACTOR Walker-Hill Environmental **TOTAL DEPTH** 40 ft
DRILLER Frank Harrington **GROUND WATER LEVELS:**
LOGGED BY Kyle Zigler **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
5	SC Sonic Coring Barrell 1	(%)	PID = 10.6 PID = 9.8 PID = 8.5	7.5	LEAN CLAY, SILTY LEAN CLAY, (CL) brown red, dry, low plasticity, no odor		grout 4-in. Sch 40 PVC casing bentonite 1/4-in. pellets
10			PID = 6.4		SILTY SAND, SILTY SAND, (SC-SM) brown red, very fine to fine grained, dry, with clay, residuum fill, pyrite	719.4	
15	SC Sonic Coring Barrell 2	(%)	PID = 3.4 PID = 4.9 PID = 3.8	15.0	SILTY SAND, SILTY SAND, (SM) brown red, very fine to fine grained, dry, trace clay, saprolite fill, pyrite	711.9	
20			PID = 7.3				
25	SC Sonic Coring Barrell 3	(%)	PID = 67.1 PID = 355.3 PID = 659.1	22.5	SILT, CLAYEY SILT, (ML) gray, saprolite fill, pyrite, mica	704.4	silica sand 20-40 4-in. Sch 40 PVC 0.010 slotted screen
30			PID = 384.5				
35	SC Sonic Coring Barrell 4	(%)	PID = 1388 PID = 1101 PID = 1248	35.0	DIORITE, highly weathered, gray	691.9	
40			PID = 876.4	40.0		686.9	
					Bottom of borehole at 40.0 feet.		

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:49 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-06

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 8/28/2020 **COMPLETED** 8/29/2020 **GROUND ELEVATION** 735.55 ft
DRILLING CONTRACTOR Walker-Hill Environmental **TOTAL DEPTH** 60 ft
DRILLER Frank Harrington **GROUND WATER LEVELS:**
LOGGED BY Kyle Zigler **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
0 - 10	SC Sonic Coring Barrel 1	(%)	PID = 1.2 PID = 1.2 PID = 2.8 PID = 1.8		LEAN CLAY, SILTY CLAY, (CL-ML) brown red, dry, low plasticity, saprolite fill		grout 4-in. Sch 40 PVC casing
10 - 20	SC Sonic Coring Barrel 2	(%)	PID = 1.2 PID = 1.1 PID = 1		SILTY SAND, SILTY SAND, (SM) pale gray brown, very fine to fine grained, dry, trace clay, saprolite fill, mica		bentonite 1/4-in. pellets
20 - 30	SC Sonic Coring Barrel 3	(%)	PID = 1 PID = 1.3 PID = 1.7 PID = 1		SILTY SAND, SILTY SAND, (SM) gray, very fine to fine grained, trace clay, saprolite fill, mica		
30 - 40	SC Sonic Coring Barrel 4	(%)	PID = 3 PID = 20.3 PID = 98.3		SILTY SAND, SILTY SAND, (SM) dark gray, very fine to fine grained, trace clay, saprolite fill, mica		
40 - 50	SC Sonic Coring Barrel 5	(%)	PID = 248 PID = 3020 PID = 219.5 PID = 235.4 PID = 2130 PID = 2712		SILTY SAND, SILTY SAND, (SM) dark gray brown, very fine to fine grained, trace clay, saprolite fill, mica		silica sand 20-40 4-in. Sch 40 PVC 0.010 slotted screen
50 - 60	SC Sonic Coring Barrel 6	(%)	PID = 1430 PID = 1425		SILTY SAND, SILTY SAND, (SM) pale brown, very fine to fine grained, saprolite fill, mica		
60			PID = 775 PID = 977		POORLY GRADED SAND WITH SILT, SAND, (SP-SM) very fine to fine grained, very dense, with silt, trace clay, saprolite fill, mica	left hole open to 50 ft bgs overnight	
60.0							
Bottom of borehole at 60.0 feet.							

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:49 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-08

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/12/2020 **COMPLETED** 9/12/2020 **GROUND ELEVATION** _____
DRILLING CONTRACTOR Walker-Hill Environmental **TOTAL DEPTH** 34 ft
DRILLER Frank Harrington **GROUND WATER LEVELS:**
LOGGED BY Andrew Street **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0					no stratigraphic logging		<p> Casing Type: 4 grout 4-in. Sch 40 PVC casing bentonite pellets 1/4-in. silica sand 10-20 4-in. Sch 40 PVC 0.010 slotted screen </p>
5							
10							
15							
20							
25							
30							
					34.0		
					Bottom of borehole at 34.0 feet.		

Preliminary

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/9/18 16:49 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ

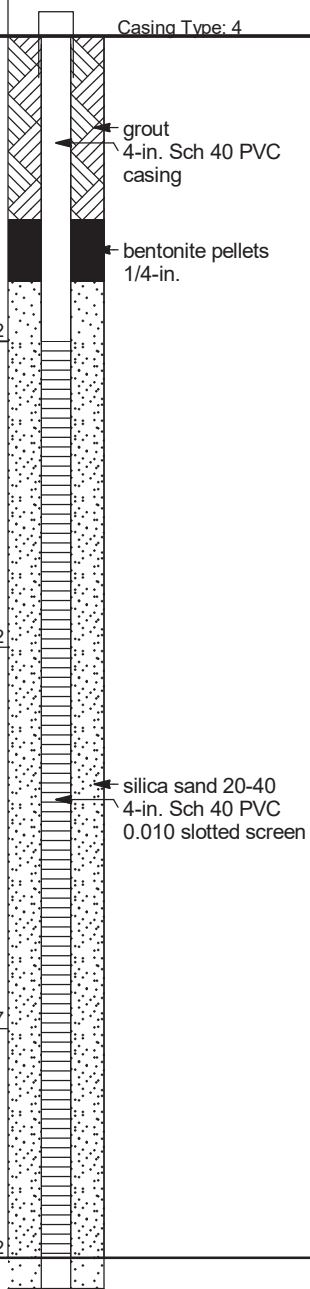
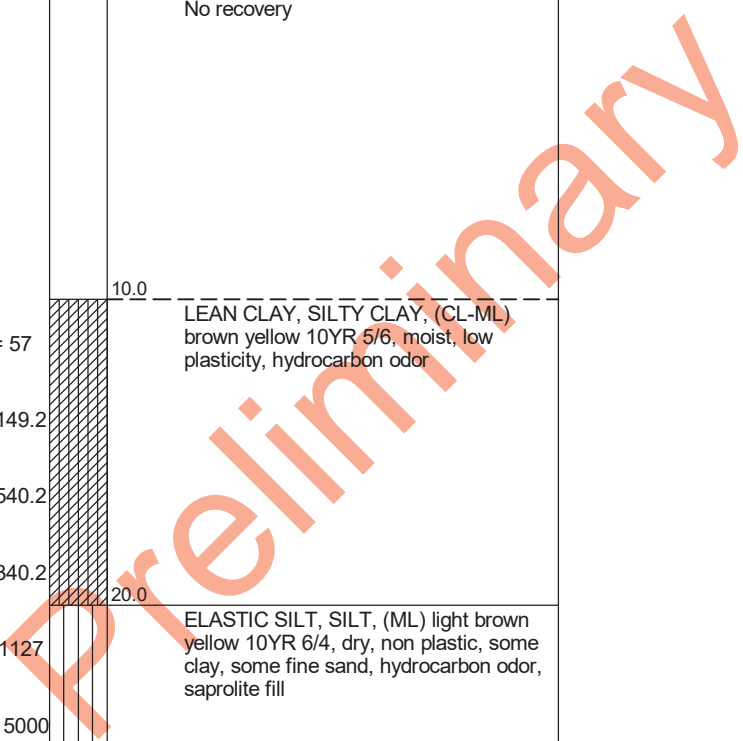


BORING NUMBER RW-09

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 8/30/2020 **COMPLETED** 8/30/2020 **GROUND ELEVATION** 729.18 ft
DRILLING CONTRACTOR Walker-Hill Environmental **TOTAL DEPTH** 40 ft
DRILLER Frank Harrington **GROUND WATER LEVELS:**
LOGGED BY Gavin Kitchens **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							
5	SC Sonic Core 1	0 (%)			No recovery		
10			PID = 57		LEAN CLAY, SILTY CLAY, (CL-ML) brown yellow 10YR 5/6, moist, low plasticity, hydrocarbon odor		
15	SC Sonic Core 2	(%)	PID = 149.2 PID = 540.2				
20			PID = 340.2				
25	SC Sonic 3	(%)	PID = 1127 PID = 15000 PID = 15000		ELASTIC SILT, SILT, (ML) light brown yellow 10YR 6/4, dry, non plastic, some clay, some fine sand, hydrocarbon odor, saprolite fill		
30			PID = 15000				
35	SC Sonic 4	(%)	PID = 15000 PID = 15000 PID = 15000		ELASTIC SILT, SILT, (ML) gray olive 5Y 4/2, dry, non plastic, with sand, hydrocarbon odor, saprolite fill, phaneritic		
40			PID = 15000				
					Bottom of borehole at 40.0 feet.		

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:49 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ





BORING NUMBER RW-10

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 8/31/2020 **COMPLETED** 8/31/2020 **GROUND ELEVATION** 731.32 ft
DRILLING CONTRACTOR Walker-Hill Environmental **TOTAL DEPTH** 30 ft
DRILLER Frank Harrington **GROUND WATER LEVELS:**
LOGGED BY Bill Jones **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0					no recovery		Casing Type: 4
5			PID = 12.5				grout
			PID = 5.9	5.0	SILT, CLAYEY SILT, (ML) brown, moist, medium plasticity	726.3	4-in. Sch 40 PVC casing
10			PID = 45.6	10.0	SANDY ELASTIC SILT, SANDY SILT, (ML) brown, dry, non plastic	721.3	bentonite
			PID = 722				
15			PID = 747	15.0	SILTY SAND, SILTY SAND, (SM) brown, medium grained, dry, non plastic	716.3	
			PID = 744				
20			PID = 223				silica sand 20-40
			PID = 141	22.5	SILTY SAND, SILTY SAND, (SM) light tan gray, medium grained, dry	708.8	4-in. Sch 40 PVC 0.010 slotted screen
25			PID = 167				
			PID = 183	27.5	SANDY ELASTIC SILT, SANDY SILT, (ML) gray, wet, hydrocarbon odor	703.8	
30				30.0		701.3	
					Bottom of borehole at 30.0 feet.	liquid product in borehole	

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:49 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-11

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/2/2020 **COMPLETED** 9/5/2020 **GROUND ELEVATION** 726.82 ft
DRILLING CONTRACTOR Cascade **TOTAL DEPTH** 39 ft
DRILLER Jimmy hall **GROUND WATER LEVELS:**
LOGGED BY Bill Jones **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
5	SC Sonic 1	(%)	PID = 2 PID = 0.8 PID = 1.1 PID = 1.3		LEAN CLAY, SILTY CLAY, (CL-ML) red, medium plasticity	originally identified as RW-11	grout 4-in. Sch 40 PVC casing bentonite 1/4-in. pellets
15	SC Sonic 2	(%)	PID = 1.4 PID = 3.2 PID = 1.9		LEAN CLAY, SILTY CLAY, (CL-ML) brown, low plasticity		
25	SC Sonic 3	(%)	PID = 9.6 PID = 177 PID = 286 PID = 175 PID = 1994	17.5 22.5	LEAN CLAY, SILTY CLAY, (CL-ML) gray, low plasticity, saprolite fill		709.3 704.3 silica sand 8-30 4-in. Sch 40 PVC 0.010 slotted screen
35	SC Sonic 4	(%)	PID = 32.5		DIORITE, moderately weathered, [Quartz Diorite]		694.3
39.0					Bottom of borehole at 39.0 feet.		687.8

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:49 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-12

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/3/2020 **COMPLETED** 9/3/2020 **GROUND ELEVATION** 724.41 ft
DRILLING CONTRACTOR Cascade **TOTAL DEPTH** 35 ft
DRILLER Jimmy Hall **GROUND WATER LEVELS:**
LOGGED BY Kyle Zigler **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
5	SC Sonic 1	(%)	PID = 1.4 PID = 1		LEAN CLAY, SILTY CLAY, (CL-ML) brown red, moist, low plasticity, saprolite fill		grout 4-in. Sch 40 PVC casing
7.5			PID = 0.6				bentonite
10	SC Sonic 2	(%)	PID = 5.6 PID = 4.3		SILT, CLAYEY SILT, (ML) brown red, dry, saprolite fill		
12.5			PID = 6.7		SILT, CLAYEY SILT, (ML) pale brown red, dry, trace sand, saprolite fill		
15			PID = 4.8				
20	SC Sonic 3	(%)	PID = 67.2 PID = 258.9		SILT WITH SAND, SILT, (ML) gray, dry, with sand, saprolite fill		
25			PID = 1552				
30			PID = 215.8				
32.5	SC Sonic 4	(%)	PID = 1436 PID = 1598		DIORITE, highly weathered, [Quartz Diorite]		silica sand 8-30 4-in. Sch 40 PVC 0.010 slotted screen
35			PID = 1710				
38.0			PID = 8				
							716.9 711.9 704.4 691.9 686.4

Bottom of borehole at 35.0 feet.

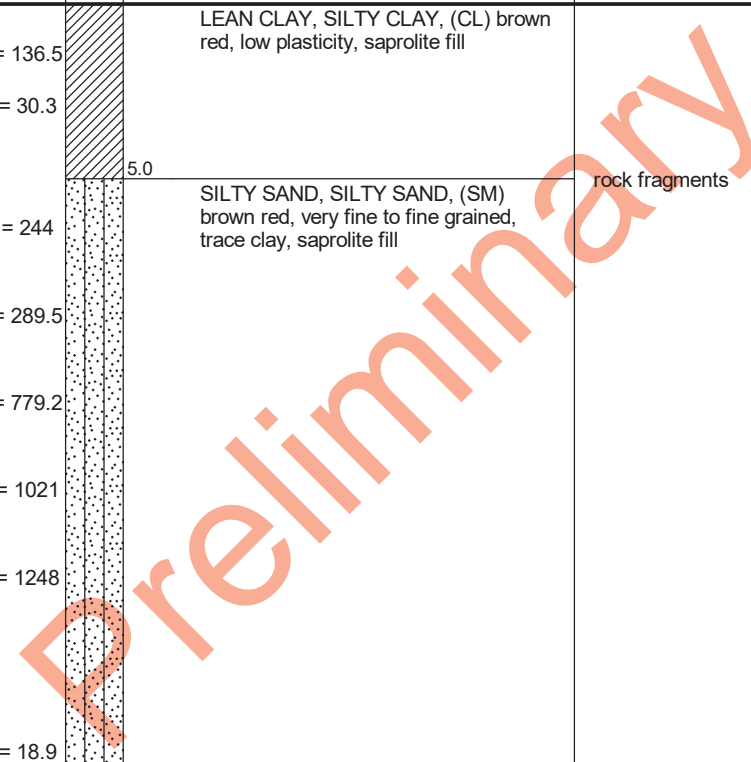


BORING NUMBER RW-13

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/3/2020 **COMPLETED** 9/4/2020 **GROUND ELEVATION** 729.24 ft
DRILLING CONTRACTOR Cascade **TOTAL DEPTH** 35 ft
DRILLER Jimmy Hall **GROUND WATER LEVELS:**
LOGGED BY Kyle Zigler **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
5	SC Sonic 1	(%)	PID = 136.5 PID = 30.3		LEAN CLAY, SILTY CLAY, (CL) brown red, low plasticity, saprolite fill		grout 4-in. Sch 40 PVC casing
5				5.0	rock fragments	724.2	bentonite
10	SC Sonic 2	(%)	PID = 244 PID = 289.5 PID = 779.2 PID = 1021 PID = 1248		SILTY SAND, SILTY SAND, (SM) brown red, very fine to fine grained, trace clay, saprolite fill		
20	SC Sonic 3	(%)	PID = 18.9 PID = 15.1				silica sand 8-30 4-in. Sch 40 PVC 0.010 slotted screen
25			PID = 18.9 PID = 1.4	24.0 	DIORITE, moderately weathered, [Quartz Diorite]	705.2	
35				35.0	Bottom of borehole at 35.0 feet.	694.2	

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:49 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ





BORING NUMBER RW-14

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/4/2020 **COMPLETED** 9/4/2020 **GROUND ELEVATION** 728.18 ft
DRILLING CONTRACTOR _____ **TOTAL DEPTH** 37 ft
DRILLER _____ **GROUND WATER LEVELS:**
LOGGED BY Bill Jones **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
5	SC Sonic 1	(%)			No stratigraphic logging due to presence of saturated soil and LNAPL		grout 4-in. Sch 40 PVC casing bentonite 1/4-in. pellets
10							
15	SC Sonic 2	(%)					
20							
25	SC Sonic 3	(%)					silica sand 20-40 4-in. Sch 40 PVC 0.010 slotted screen
30							
35	SC Sonic 4	(%)					
					37.0	Bottom of borehole at 37.0 feet.	691.2

Preliminary

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/9/18 16:50 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-15

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/4/2020 **COMPLETED** 9/4/2020 **GROUND ELEVATION** 721.01 ft
DRILLING CONTRACTOR Cascade **TOTAL DEPTH** 44 ft
DRILLER Jimmy Hall **GROUND WATER LEVELS:**
LOGGED BY Calvin Mentzer **BOREHOLE DIAMETER** in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
5	SC Sonic 1	(%)	PID = 46.3 PID = 32.5	5.0	LEAN CLAY, SILTY CLAY, (CL-ML) brown red, low plasticity	716.0	4-in. Sch 40 PVC casing
10	SC Sonic 2	(%)	PID = 27 PID = 39.3 PID = 118.6 PID = 885.5	17.5	SILT, CLAYEY SILT, (ML) light brown, low plasticity, saprolite fill	703.5	grout bentonite 1/4-in. pellets
20	SC Sonic 3	(%)	PID = 986.1 PID = 603.7 PID = 348.2 PID = 862.6	27.5	SILT, CLAYEY SILT, (ML) light brown gray, low plasticity, hydrocarbon odor, saprolite fill, mica	693.5	silica sand 8-30 4-in. Sch 40 PVC 0.010 slotted screen
30	SC Sonic 4	(%)	PID = 265.9 PID = 489.3 PID = 246.2 PID = 864 PID = 297.1		SILT, CLAYEY SILT, (ML) dark gray, low plasticity, hydrocarbon odor, saprolite fill, mica		
40	SC Sonic 5	(%)	PID = 274 PID = 40.5				
44.0			PID = 716	44.0	Bottom of borehole at 44.0 feet.	677.0	

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:50 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-16

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/4/2020 **COMPLETED** 9/4/2020 **GROUND ELEVATION** 729.5 ft
DRILLING CONTRACTOR _____ **TOTAL DEPTH** 43 ft
DRILLER _____ **GROUND WATER LEVELS:**
LOGGED BY Bill Jones **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
5	SC Sonic 1	(%)	PID = 9.6 PID = 1.4 PID = 24.9		LEAN CLAY, SILTY CLAY, (CL-ML) red, moist, medium plasticity	drilled along ER Line 8 at 50 m; previously identified as BO-10	grout 4-in. Sch 40 PVC casing
10			PID = 645	10.0	LEAN CLAY, SILTY CLAY, (CL-ML) red, moist, low plasticity, saprolite fill		719.5
15	SC Sonic 2	(%)	PID = 63 PID = 61 PID = 67	12.5 15.0	LEAN CLAY, SILTY CLAY, (CL-ML) brown gray, moist, low plasticity, saprolite fill		717.0
20			PID = 363		LEAN CLAY WITH SAND, SANDY CLAY, (CL) brown gray, moist, low plasticity, saprolite fill		714.5
25	SC Sonic 3	(%)	PID = 1020 PID = 791 PID = 793				
30			PID = 774	30.0	No stratigraphic logging due to presence of LNAPL saturated soil		699.5
35	SC Sonic 4	(%)					
40	SC Sonic 5	(%)					
				43.0	Bottom of borehole at 43.0 feet.		686.5

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:50 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-19

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/5/2020 **COMPLETED** 9/6/2020 **GROUND ELEVATION** 718.03 ft
DRILLING CONTRACTOR Cascade **TOTAL DEPTH** 50 ft
DRILLER Jimmy Hall **GROUND WATER LEVELS:**
LOGGED BY Calvin Mentzer **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
	SC Sonic 1	(%)	PID = 4.9 PID = 2.7 PID = 0.8		LEAN CLAY, SILTY CLAY, (CL-ML) brown red, moist, low plasticity	drilled along ER Line 6 at 126 m	grout 4-in. Sch 40 PVC casing bentonite 1/4-in. pellets
10	SC Sonic 2	(%)	PID = 2.6 PID = 2.2 PID = 4.7 PID = 5.7	10.0 12.5	ELASTIC SILT, SILT, (ML) light brown, saprolite fill ELASTIC SILT, SILT, (ML) light gray, hydrocarbon odor, saprolite fill		708.0 705.5
20	SC Sonic 3	(%)	PID = 83.5 PID = 1174 PID = 897 PID = 921	28.0	No stratigraphic logging due to presence of LNAPL saturated soil		690.0
30							silica sand 8-30 4-in. Sch 40 PVC 0.010 slotted screen
40							
50							668.0
Bottom of borehole at 50.0 feet.							

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:50 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-20

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/6/2020 **COMPLETED** 9/6/2020 **GROUND ELEVATION** 728.63 ft
DRILLING CONTRACTOR Cascade **TOTAL DEPTH** 35 ft
DRILLER Jimmy Hall **GROUND WATER LEVELS:**
LOGGED BY Calvin Mentzer **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
5						drilled between RW-13 and -14 for additional recovery in area	grout 4-in. Sch 40 PVC casing bentonite 1/4-in. pellets
10							
15							
20							
25							silica sand 8-30 4-in. Sch 40 PVC 0.010 slotted screen
30							
35							

Preliminary

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:50 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-21

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/8/2020 **COMPLETED** 9/8/2020 **GROUND ELEVATION** 729.02 ft
DRILLING CONTRACTOR Cascade **TOTAL DEPTH** 47 ft
DRILLER Jimmy Hall **GROUND WATER LEVELS:**
LOGGED BY Calvin Mentzer **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0					No stratigraphic logging due to presence of LNAPL saturated soil		<p> Casing Type: 4 grout 4-in. Sch 40 PVC casing bentonite 1/4-in. pellets silica sand 8-30 4-in. Sch 40 PVC 0.010 slotted screen </p>
10							
20							
30							
40							
47.0						8-in. borehole to 45 ft bgs, 7-in. borehole to 47 ft bgs	682.0
					Bottom of borehole at 47.0 feet.		

Preliminary

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/9/18 16:50 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-22

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/8/2020 **COMPLETED** 9/8/2020 **GROUND ELEVATION** 727.48 ft
DRILLING CONTRACTOR Walker-Hill Environmental **TOTAL DEPTH** 40 ft
DRILLER Frank Harrington **GROUND WATER LEVELS:**
LOGGED BY Kyle Zigler **BOREHOLE DIAMETER** 8 in. ∇ **DURING DRILLING** 26.50 ft / Elev 700.98 ft
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
5	SC Sonic 1	(%)	PID = 4.5 PID = 10.2 PID = 22.5 PID = 35.6		LEAN CLAY, SILTY CLAY, (CL-ML) brown red, low plasticity	drilled along ER Line 4 at 212 m	grout 4-in. Sch 40 PVC casing bentonite 1/4-in. pellets
10				10.0			717.5
15	SC Sonic 2	(%)	PID = 55.9 PID = 85.4 PID = 203.3		SILT, CLAYEY SILT, (ML) brown red, trace sand, saprolite fill		
20				17.5			710.0
25	SC Sonic 3	(%)	PID = 330.2 PID = 675.7 PID = 351.9 PID = 403.1		SILT, CLAYEY SILT, (ML) brown gray, trace sand, saprolite fill		
30				27.5			700.0
35	SC Sonic 4	(%)	PID = 302.5		SILT, CLAYEY SILT, (ML) gray, moist, trace sand, saprolite fill, minerals visible	soil saturated with LNAPL	
40				40.0			687.5
Bottom of borehole at 40.0 feet.							

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:50 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-23

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/9/2020 **COMPLETED** 9/9/2020 **GROUND ELEVATION** 722.31 ft
DRILLING CONTRACTOR Cascade **TOTAL DEPTH** 44 ft
DRILLER Jimmy Hall **GROUND WATER LEVELS:**
LOGGED BY Gordon O'Toole **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
5	SC Sonic 1	(%)	PID = 2.7 PID = 1.6		LEAN CLAY, SILTY CLAY, (CL-ML) brown red		
10	SC Sonic 2	(%)	PID = 1 PID = 1.6		SILT, CLAYEY SILT, (ML) light brown		grout 4-in. Sch 40 PVC casing
15			PID = 3.8				bentonite chips
20	SC Sonic 3	(%)	PID = 7.6 PID = 16.7		POORLY GRADED SAND WITH SILT, SILTY SAND, (SM) gray, very fine to fine grained, saprolite fill		
25			PID = 46.2		POORLY GRADED SAND WITH SILT, SILTY SAND, (SM) olive, very fine to fine grained, moist, saprolite fill		
30	SC Sonic 4	(%)	PID = 1362 PID = 1216 PID = 258 PID = 1053 PID = 1124		SILT, CLAYEY SILT, (ML) olive, moist, saprolite fill		
35			PID = 824		SILT, CLAYEY SILT, (ML) gray, moist, with sand, saprolite fill		
40					DIORITE, [Quartz diorite]		silica sand 8-30 4-in. Sch 40 PVC 0.010 slotted screen
44.0					Bottom of borehole at 44.0 feet.		

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:51 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-24

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/9/2020 **COMPLETED** 9/9/2020 **GROUND ELEVATION** 731.82 ft
DRILLING CONTRACTOR Walker-Hill Environmental **TOTAL DEPTH** 43 ft
DRILLER Frank Harrington **GROUND WATER LEVELS:**
LOGGED BY Kyle Zigler **BOREHOLE DIAMETER** 8 in. **∇ DURING DRILLING** 35.00 ft / Elev 696.82 ft
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
0 - 7.5	SC Sonic 1	(%)	PID = 2 PID = 1.4 PID = 0.3		LEAN CLAY, SILTY CLAY, (CL-ML) brown red, saprolite fill	drilled along ER Line 4 at 242 m	grout 4-in. Sch 40 PVC casing
7.5 - 25.0	SC Sonic 2	(%)	PID = 2.1 PID = 2 PID = 2.1 PID = 2.8 PID = 3.6		SILT, CLAYEY SILT, (ML) brown, saprolite fill, mica, pyrite		bentonite pellets 1/4-in.
25.0 - 32.5	SC Sonic 3	(%)	PID = 9.8 PID = 12.6 PID = 2.4 PID = 13		SILT, CLAYEY SILT, (ML) gray, saprolite fill, quartz, mica, pyrite		silica sand 10-20 4-in. Sch 40 PVC 0.010 slotted screen
32.5 - 40.0	SC Sonic 4	(%)	PID = 318.6 PID = 554.3 PID = 635.1 PID = 62.6		SILT, CLAYEY, (ML) gray, trace sand, saprolite fill, quartz, mica, pyrite	∇	
40.0 - 43.0					No stratigraphic logging due to elevated benzene vapor in soil		
Bottom of borehole at 43.0 feet.							

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:51 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-25

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/9/2020 **COMPLETED** 9/10/2020 **GROUND ELEVATION** 721.18 ft
DRILLING CONTRACTOR Cascade **TOTAL DEPTH** 52 ft
DRILLER Jimmy Hall **GROUND WATER LEVELS:**
LOGGED BY Gordon O'Toole **BOREHOLE DIAMETER** 8 in. **DURING DRILLING** ---
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
	SC Sonic 1	(%)			No stratigraphic logging due to presence of LNAPL saturated soil		grout 4-in. Sch 40 PVC casing
10	SC Sonic 2	(%)				bentonite pellets 1/4-in.	
20	SC Sonic 3	(%)					
30	SC Sonic 4	(%)					
40	SC Sonic 5	(%)					
50	SC Sonic 6	(%)					
	SC Sonic 7	(%)					silica sand 8-30 4-in. Sch 40 PVC 0.010 slotted screen
				52.0	Bottom of borehole at 52.0 feet.	669.2	

Preliminary

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/9/18 16:51 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ



BORING NUMBER RW-28

CLIENT Colonial Pipeline **PROJECT NAME** CPC Huntersville
PROJECT NUMBER CPC20126 **PROJECT LOCATION** Huntersville, NC
DATE STARTED 9/10/2020 **COMPLETED** 9/10/2020 **GROUND ELEVATION** 730.16 ft
DRILLING CONTRACTOR Walker-Hill Environmental **TOTAL DEPTH** 50 ft
DRILLER Frank Harrington **GROUND WATER LEVELS:**
LOGGED BY Kyle Zigler **BOREHOLE DIAMETER** 8 in. **∇ DURING DRILLING** 30.00 ft / Elev 700.16 ft
METHOD Sonic **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (%)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	COMMENTS	WELL DIAGRAM
0							Casing Type: 4
0 - 7.5	SC Sonic 1	(%)	PID = 0	[Hatched pattern]	LEAN CLAY, SILTY CLAY, (CL-ML) brown red, saprolite fill	drilled along ER Line 7 at 176 m	grout 4-in. Sch 40 PVC casing
7.5 - 12.5			PID = 0	[Dotted pattern]	SILT, CLAYEY SILT, (ML) brown red, saprolite fill		bentonite pellets 1/4-in.
12.5 - 22.5	SC Sonic 2	(%)	PID = 0	[Dotted pattern]	SILT, CLAYEY SILT, (ML) pale brown red, saprolite fill		
22.5 - 30.0	SC Sonic 3	(%)	PID = 0	[Dotted pattern]	SILT, CLAYEY SILT, (ML) gray, moist, saprolite fill		
30.0 - 40.0	SC Sonic 4	(%)	PID = 0	[Dotted pattern]	SILT, CLAYEY SILT, (ML) gray, wet, saprolite fill		silica sand 10-20 4-in. Sch 40 PVC 0.010 slotted screen
40.0 - 47.5	SC Sonic 5	(%)	PID = 5.4 PID = 605.3	[Dotted pattern]	POORLY GRADED SAND WITH SILT, SILTY SAND, (SM) gray, very fine to fine grained, wet, with clay, some gravel, hydrocarbon odor, saprolite fill	LNAPL on tooling, transmissive zone encountered at 42 ft bgs	
47.5 - 50.0				[Dotted pattern]	SILT WITH SAND, CLAYEY SILT, (ML) gray, wet, with sand, saprolite fill		
50.0					Bottom of borehole at 50.0 feet.		

CPC_HUNTERSVILLE_BH_MM - GINT STD US LAB.GDT - 20/09/18 16:51 - P:\SHARE\GINT\BENTLEY\GINT\PROJECTS\CPC_HUNTERSVILLE.GPJ

Table 1
Summary of Groundwater Elevation Data

2020-L1-2448
Colonial Pipeline Company
Huntersville, North Carolina

Well ID	Top of Casing Elevation ¹	Date	Depth to LNAPL (ft btoc)	Depth to Groundwater (ft btoc)	Apparent LNAPL Thickness	Groundwater Elevation ² (ft btoc)
MW-01	709.60	9/14/2020	ND	28.20	N/A	681.40
MW-02	710.96	9/14/2020	ND	29.57	N/A	681.39
MW-03	703.64	9/14/2020	ND	22.78	N/A	680.86
MW-04	712.05	9/14/2020	ND	31.32	N/A	680.73
MW-05	705.61	9/14/2020	ND	27.04	N/A	678.57
MW-06	703.81	9/14/2020	ND	23.56	N/A	680.25
MW-07	709.46	9/14/2020	ND	29.36	N/A	680.10
MW-08	724.93	9/14/2020	ND	31.77	N/A	693.16
MW-09	709.46	9/14/2020	ND	28.82	N/A	680.64
MW-10	721.52	9/14/2020	ND	Dry	N/A	Dry
MW-11	739.65	9/14/2020	ND	45.24	N/A	694.41
MW-12	718.27	9/14/2020	ND	33.77	N/A	684.50
MW-13	736.29	9/14/2020	ND	41.77	N/A	694.52
MW-14	724.88	9/14/2020	ND	31.21	N/A	693.67
MW-15	725.70	9/14/2020	ND	34.79	N/A	690.91
MW-16	725.49	9/14/2020	ND	26.02	N/A	699.47
MW-17	727.50	9/14/2020	ND	31.32	N/A	696.18
MW-18	729.75	9/14/2020	ND	39.78	N/A	689.97
MW-19	726.29	9/14/2020	ND	13.45	N/A	712.84
MW-20	729.69	9/14/2020	ND	42.25	N/A	687.44
MW-21	724.97	9/14/2020	ND	24.99	N/A	699.98
MW-22	721.89	9/14/2020	ND	34.88	N/A	687.01
MW-23	724.32	9/14/2020	ND	30.06	N/A	694.26
MW-24	737.63	9/14/2020	44.36	46.69	2.06	692.42
MW-25	734.04	9/14/2020	ND	43.52	N/A	690.52
MW-26	717.71	9/14/2020	31.19	33.25	2.33	686.14
MW-27	716.19	9/14/2020	ND	33.27	N/A	682.92
MW-28	720.45	9/14/2020	ND	29.37	N/A	691.08
MW-29	718.73	9/14/2020	ND	29.71	N/A	689.02
MW-30	715.08	9/14/2020	ND	30.59	N/A	684.49
MW-31	721.45	9/14/2020	ND	26.39	N/A	695.06
MW-32	691.78	9/14/2020	ND	16.19	N/A	675.59
MW-33	686.70	9/14/2020	ND	13.20	N/A	673.50
MW-34	683.89	9/14/2020	ND	10.89	N/A	673.00
MW-35	707.14	9/14/2020	ND	26.78	N/A	680.36
MW-36	710.54	9/14/2020	ND	28.62	N/A	681.92

Table 1
Summary of Groundwater Elevation Data

2020-L1-2448
Colonial Pipeline Company
Huntersville, North Carolina

Well ID	Top of Casing Elevation ¹	Date	Depth to LNAPL (ft btoc)	Depth to Groundwater (ft btoc)	Apparent LNAPL Thickness	Groundwater Elevation ² (ft btoc)
MW-37	714.94	9/14/2020	ND	26.90	N/A	688.04
MW-38	726.74	9/14/2020	ND	37.56	N/A	689.18
MW-39	738.13	9/14/2020	ND	41.90	N/A	696.23
MW-40	728.92	9/14/2020	ND	33.25	N/A	695.67
MW-41	745.92	9/14/2020	ND	53.40	N/A	692.52
MW-42	735.71	9/14/2020	ND	41.33	N/A	694.38
MW-43	729.80	9/14/2020	ND	38.27	N/A	691.53
MW-44	726.48	9/14/2020	ND	32.40	N/A	694.08
MW-45	729.41	9/14/2020	ND	35.28	N/A	694.13
MW-46	726.73	9/14/2020	ND	31.63	N/A	695.10
MW-47	726.77	9/14/2020	ND	30.88	N/A	695.89

Notes:

LNAPL = Light Non-Aqueous Phase Liquid

ft btoc = Feet Below Top of Casing

N/A = Not Applicable

MW = Monitoring Well

ND - Not Detected

1 = Elevations surveyed in feet using the NAVD88 vertical datum.

2= Groundwater Elevation = Top of Casing - Depth to Water + (LNAPL thickness x 0.72)

Date: September 15, 2020

Via Email

Jeff Morrison
Colonial Pipeline Company
3925 Anderson Farm Road
Austell, Georgia 30106
JMorrison@colpipe.com

Subject: Surface Water and Sediment Sampling associated with the 2020-L1-SR2448: Incident Response, Huntersville, North Carolina

Dear Jeff:

This document provides a summary of the surface water and sediment sampling activities associated with the response to date for the 2020-L1-SR2448 Incident, Huntersville, North Carolina.

Surface Water Sampling

Surface water sampling was conducted by Environmental Planning Specialists, Inc.¹ (EPS) daily at 12 locations (SW-1 through SW-12) from August 15th through August 22, 2020 (Figure 1). The upgradient location (SW-1) is upstream of the pipeline crossing at the intersection of North Prong Clark Creek and Ramah Church Road. The downgradient locations (SW-2 through SW-12) are all located on the progression of North Prong Clark Creek, South Prong Clark Creek, Clark Creek, and Rocky River. Subsequent to the daily sampling during this period, surface water samples have been collected, and will continue to be collected weekly, starting on August 27th, 2020 at locations SW-1 through SW-7. Surface water is also being sampled at these seven locations after rain events that are 1" or greater in a 24-hour period. There have been 3 of these events thus far (September 1, September 2, and September 3, 2020). Additionally, surface water samples have been collected from a seep location (SW Seep) and a downgradient surface water location (Seep Confluence) daily on September 1, 2, and 3; with subsequent sampling occurring weekly and with rain events, at the same time as the weekly sampling conducted at locations SW-1 through SW-7.

The surface water samples are being analyzed for benzene, toluene, ethylbenzene, xylenes (collectively known as BTEX) and total petroleum hydrocarbons in the gasoline range (TPH-GRO). *All surface water samples collected to date have been non-detect for the constituents analyzed.* Surface water sample data tables, including the constituent analysis as well as field monitoring parameters, are provided in Tables 1 and 2, respectively, in Attachment I.

Sediment Sampling

Sediment sampling was conducted at 12 locations (SD-1 through SD-12) along the progression of North Prong Clark Creek, South Prong Clark Creek, Clark Creek, and Rocky River on August 16th (Figure 1). These include one location (SD-1) that is located upgradient of the pipeline crossing at the intersection of North Prong Clark Creek and Ramah Church Road. The sediment samples are being analyzed for BTEX and TPH-GRO. *All sediment samples collected to date have been non-detect for the constituents analyzed*

¹ An affiliate of the Montrose Environmental Group Company



except for one sample at SD-6, where a trace level of Toluene was detected (8.2 ug/kg, marginally above the reporting limit of 8.0 ug/kg). A sediment sample summary table is provided in Table 3 of Attachment I.

Surface water and sediment sample analysis was conducted by Pace Analytical Services². The analytical reports for these samples are provided in Attachment II.

Should you have any questions or comments regarding this summary, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, which appears to read 'Joseph Nicolette', is positioned above the typed name.

Joseph Nicolette
Project Coordinator
Environmental Planning Specialists, Inc., an affiliate of Montrose Environmental Group
400 Northridge Road
Suite 400
Sandy Springs, Georgia 30350
Direct Phone: 678-336-8554

- cc. Colonial Pipeline
- Robert Hughes
 - John Wyatt
 - John Culbreath

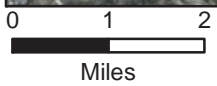
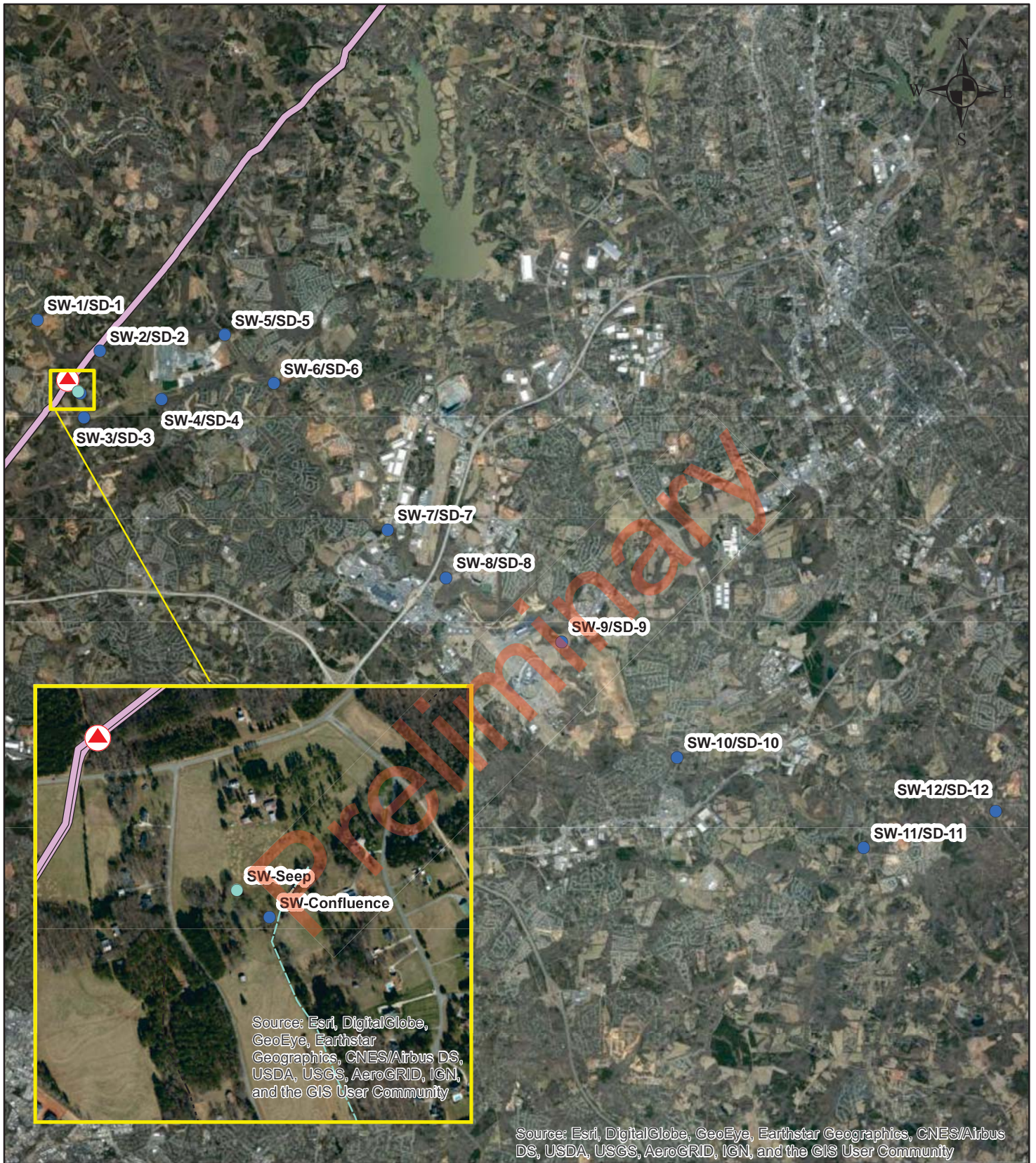
Preliminary

² Pace Analytical Services, LLC, 9800 Kincey Ave. Suite 100, Huntersville, NC 28078

FIGURE 1

SURFACE WATER AND SEDIMENT SAMPLING LOCATIONS

Preliminary



Legend

- Approximate Leak Site
- Surface Water (SW)/Sediment (SD) Sampling Location
- Seep Sampling Location
- Colonial Pipeline
- Ephemeral Stream
- Incise Valley

Surface Water/Sediment Sampling Locations

*2020-L1-SR2448 Incident
Huntersville, NC*



ATTACHMENT I

SURFACE WATER AND SEDIMENT SUMMARY DATA

Preliminary

**Table 1. Surface Water Sampling Results
2020-L1-SR2448 Incident**

Location ID	Description	Date	TPH (GRO) (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	m,p-Xylene (µg/L)	o-Xylene (µg/L)	Xylenes (µg/L)	Rain Event
	EPA MCL			5	1,000	700	10,000	10,000	10,000	
	EPA Region 4 ESV (acute)			700	560	550	240	240	240	
	15A North Carolina Administrative Code subchapter 02B			51	11	97	420	600	670	
SW-1	North Prong Clark Creek (Up-gradient of the leak site)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
		8/22/2020	<80	<1	<1	<1	<2	<1	<1	
		8/27/2020	<80	<1	<1	<1	<2	<1	<1	
		9/1/2020	<80	<1	<1	<1	<2	<1	<1	x
		9/2/2020	<80	<1	<1	<1	<2	<1	<1	x
9/3/2020	<80	<1	<1	<1	<2	<1	<1	x		
SW-2	North Prong Clark Creek (Downgradient of leak site)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
		8/22/2020	<80	<1	<1	<1	<2	<1	<1	
		8/27/2020	<80	<1	<1	<1	<2	<1	<1	
		9/1/2020	<80	<1	<1	<1	<2	<1	<1	x
		9/2/2020	<80	<1	<1	<1	<2	<1	<1	x
9/3/2020	<80	<1	<1	<1	<2	<1	<1	x		
SW-3	South Prong Clark Creek (Downgradient of the leak site)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
		8/22/2020	<80	<1	<1	<1	<2	<1	<1	
		8/27/2020	<80	<1	<1	<1	<2	<1	<1	
		9/1/2020	<80	<1	<1	<1	<2	<1	<1	x
		9/2/2020	<80	<1	<1	<1	<2	<1	<1	x
9/3/2020	<80	<1	<1	<1	<2	<1	<1	x		
SW-4	Clarke Creek (Downgradient of North/South Prong Clark Creek confluence)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
		8/22/2020	<80	<1	<1	<1	<2	<1	<1	
		8/27/2020	<80	<1	<1	<1	<2	<1	<1	
		9/1/2020	<80	<1	<1	<1	<2	<1	<1	x
		9/2/2020	<80	<1	<1	<1	<2	<1	<1	x
9/3/2020	<80	<1	<1	<1	<2	<1	<1	x		
SW-5	Ramah Creek (Upgradient of SW-6)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
		8/22/2020	<80	<1	<1	<1	<2	<1	<1	
		8/27/2020	<80	<1	<1	<1	<2	<1	<1	
		9/1/2020	<80	<1	<1	<1	<2	<1	<1	x
		9/2/2020	<80	<1	<1	<1	<2	<1	<1	x
9/3/2020	<80	<1	<1	<1	<2	<1	<1	x		
SW-6	Clarke Creek (Downgradient of Ramah Creek confluence)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
		8/22/2020	<80	<1	<1	<1	<2	<1	<1	
		8/27/2020	<80	<1	<1	<1	<2	<1	<1	
		9/1/2020	<80	<1	<1	<1	<2	<1	<1	x
		9/2/2020	<80	<1	<1	<1	<2	<1	<1	x
9/3/2020	<80	<1	<1	<1	<2	<1	<1	x		

**Table 1. Surface Water Sampling Results
2020-L1-SR2448 Incident**

Location ID	Description	Date	TPH (GRO) (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	m,p-Xylene (µg/L)	o-Xylene (µg/L)	Xylenes (µg/L)	Rain Event
	EPA MCL			5	1,000	700	10,000	10,000	10,000	
	EPA Region 4 ESV (acute)			700	560	550	240	240	240	
	15A North Carolina Administrative Code subchapter 02B			51	11	97	420	600	670	
SW-7	Rocky River (Downgradient of Clarke River confluence)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
		8/22/2020	<80	<1	<1	<1	<2	<1	<1	
		8/27/2020	<80	<1	<1	<1	<2	<1	<1	
		9/1/2020	<80	<1	<1	<1	<2	<1	<1	x
9/2/2020	<80	<1	<1	<1	<2	<1	<1	x		
9/3/2020	<80	<1	<1	<1	<2	<1	<1	x		
SW-8	Rocky River (Downgradient of Clarke River confluence)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
8/22/2020	<80	<1	<1	<1	<2	<1	<1			
SW-9	Rocky River (Downgradient of Clarke River confluence)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
8/22/2020	<80	<1	<1	<1	<2	<1	<1			
SW-10	Rocky River (Downgradient of Clarke River confluence)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
8/22/2020	<80	<1	<1	<1	<2	<1	<1			
SW-11	Rocky River (Downgradient of Mallard Creek)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
8/22/2020	<80	<1	<1	<1	<2	<1	<1			
SW-12	Rocky River (Downgradient of Back Creek)	8/15/2020	<80	<1	<1	<1	<2	<1	<1	
		8/16/2020	<80	<1	<1	<1	<2	<1	<1	
		8/17/2020	<80	<1	<1	<1	<2	<1	<1	
		8/18/2020	<80	<1	<1	<1	<2	<1	<1	
		8/19/2020	<80	<1	<1	<1	<2	<1	<1	
		8/20/2020	<80	<1	<1	<1	<2	<1	<1	
		8/21/2020	<80	<1	<1	<1	<2	<1	<1	
8/22/2020	<80	<1	<1	<1	<2	<1	<1			
SW-Seep	Downgradient of Site	9/1/2020	<80	<1	<1	<1	<2	<1	<1	x
		9/2/2020	<80	<1	<1	<1	<2	<1	<1	x
		9/3/2020	<80	<1	<1	<1	<2	<1	<1	x
SW-Confluence	Downgradient of Site	9/1/2020	<80	<1	<1	<1	<2	<1	<1	x
		9/2/2020	<80	<1	<1	<1	<2	<1	<1	x
		9/3/2020	<80	<1	<1	<1	<2	<1	<1	x

**Table 2. Surface Water General Parameter Measurements
2020-L1-SR2448 Incident**

Location ID	Description	Date	Temperature (°C)	pH (STU)	ORP (mV)	Conductivity (mS/cm)	DO (mg/L)	Turbidity (NTU)
SW-1	North Prong Clark Creek (Up-gradient of the leak site)	8/15/2020	26.66	7.58	57	0.146	4.75	10.1
		8/16/2020	26.74	7.47	106	0.133	7.01	9.6
		8/17/2020	25.78	7.47	101	0.137	4.88	2.9
		8/18/2020	23.71	7.52	39	0.168	5.77	15.00
		8/19/2020	26.20	7.45	126	0.13	3.92	5.7
		8/20/2020	24.58	7.52	150	0.135	3.31	13
		8/21/2020	23.23	7.51	166	0.114	2.92	46.6
		8/22/2020	25.05	7.27	121	0.123	4.34	9.5
		8/27/2020	27.40	7.47	186	0.147	3.89	1.3
		9/1/2020	28.48	7.65	175	0.135	3.7	11.9
9/2/2020	31.39	8.09	152	0.115	4.95	22.4		
9/3/2020	29.03	7.55	176	0.123	4.71	6.5		
SW-2	North Prong Clark Creek (Downgradient of leak site)	8/15/2020	24.78	7.68	94	0.142	6.99	90.9
		8/16/2020	23.59	7.73	110	0.109	7.90	247
		8/17/2020	23.05	7.72	106	0.099	7.11	324
		8/18/2020	21.95	7.67	101	0.117	7.75	271
		8/19/2020	23.05	7.73	128	0.131	6.94	51
		8/20/2020	22.26	7.74	112	0.117	6.12	55.7
		8/21/2020	21.87	7.61	128	0.143	3.72	31.8
		8/22/2020	22.61	7.81	117	0.145	6.73	27.1
		8/27/2020	24.76	7.77	170	0.149	5.94	15.8
		9/1/2020	26.13	7.63	165	0.112	4.81	173
9/2/2020	28.20	7.12	184	0.089	4.49	321		
9/3/2020	26.52	7.41	185	0.095	6.36	226		
SW-3	South Prong Clark Creek (Downgradient of the leak site)	8/15/2020	25.04	7.65	109	0.113	7.17	224
		8/16/2020	22.52	7.54	123	0.099	7.67	250
		8/17/2020	22.66	7.64	125	0.131	7.76	248
		8/18/2020	20.10	7.68	111	0.151	7.65	198
		8/19/2020	22.98	7.66	147	0.166	6.02	27.3
		8/20/2020	21.92	7.8	99	0.176	5.37	20.9
		8/21/2020	21.40	7.64	128	0.16	3.79	94.2
		8/22/2020	22.26	7.88	113	0.154	6.66	35.5
		8/27/2020	24.99	7.83	162	0.187	6	8.2
		9/1/2020	25.34	7.61	162	0.105	5.81	141
9/2/2020	27.13	7.12	176	0.071	4.52	238		
9/3/2020	25.18	7.38	158	0.100	5.4	98.5		
SW-4	Clarke Creek (Downgradient of North/South Prong Clark Creek confluence)	8/15/2020	25.06	7.7	108	0.124	8.00	168
		8/16/2020	22.85	7.62	96	0.099	7.32	299
		8/17/2020	23.03	7.55	87	0.127	8.00	125
		8/18/2020	20.96	7.60	106	0.129	7.07	96.7
		8/19/2020	23.79	7.63	145	0.147	6.66	29.3
		8/20/2020	22.41	7.77	90	0.155	4.98	22.5
		8/21/2020	21.74	7.69	114	0.163	6.17	40.2
		8/22/2020	22.20	7.9	102	0.14	7.59	42
		8/27/2020	25.56	7.71	187	0.172	6.01	7.6
		9/1/2020	25.61	7.43	138	0.116	5.73	58
9/2/2020	27.75	6.75	187	0.078	4.97	278		
9/3/2020	25.69	6.86	165	0.103	4.16	131		
SW-5	Ramah Creek (Upgradient of SW-6)	8/15/2020	25.44	7.49	51	0.156	6.92	14.3
		8/16/2020	23.57	7.59	55	0.123	8.70	16.6
		8/17/2020	22.57	7.42	62	0.144	5.81	24.3
		8/18/2020	20.28	7.54	37	0.142	7.87	0.00
		8/19/2020	23.98	7.75	136	0.151	6.72	51.1
		8/20/2020	22.06	7.77	86	0.151	6.04	0
		8/21/2020	21.73	7.74	109	0.149	5.3	39.1
		8/22/2020	22.29	7.77	73	0.137	7.38	21.6
		8/27/2020	26.12	7.59	177	0.159	5.29	8.9
		9/1/2020	25.13	7.29	120	0.108	5.47	858
9/2/2020	27.51	6.59	151	0.073	4.48	233		
9/3/2020	24.87	5.99	213	0.100	4.02	217		
SW-6	Clarke Creek (Downgradient of Ramah Creek confluence)	8/15/2020	25.97	7.56	109	0.131	6.50	20.7
		8/16/2020	24.06	7.13	125	0.107	4.42	122
		8/17/2020	24.06	7.64	124	0.139	7.38	71.3
		8/18/2020	21.92	7.49	110	0.136	7.03	52.4
		8/19/2020	23.21	7.56	127	0.142	7.7	23
		8/20/2020	22.42	7.79	126	0.151	6.38	17
		8/21/2020	22.09	7.56	131	0.14	5.55	15.7
		8/22/2020	22.52	7.69	113	0.138	6.03	28
		8/27/2020	25.02	7.64	228	0.17	5.32	3.8
		9/1/2020	26.00	7.19	156	0.151	5.08	103
9/2/2020	27.23	6.34	224	0.058	2.51	389		
9/3/2020	25.38	6.57	202	0.057	4.38	135		

Note:
(1) Updated 9/3/2020.

**Table 2. Surface Water General Parameter Measurements
2020-L1-SR2448 Incident**

Location ID	Description	Date	Temperature (°C)	pH (STU)	ORP (mV)	Conductivity (mS/cm)	DO (mg/L)	Turbidity (NTU)
SW-7	Rocky River (Downgradient of Clarke River confluence)	8/15/2020	25.81	7.56	132	0.175	6.65	45.5
		8/16/2020	23.98	7.33	127	0.103	6.02	254
		8/17/2020	25.00	7.76	101	0.122	6.89	102
		8/18/2020	22.22	7.54	114	0.16	7.15	71.7
		8/19/2020	22.89	7.63	118	0.181	6.39	41.5
		8/20/2020	22.67	7.75	145	0.179	6.02	33.5
		8/21/2020	22.54	7.57	141	0.191	6.08	49
		8/22/2020	22.66	7.65	124	0.161	6.11	52.9
		8/27/2020	25.42	7.88	247	0.24	5.61	25
		9/1/2020	25.66	7.00	183	0.106	4.72	197
9/2/2020	31.26	4.96	338	2.28	6.15	163		
9/3/2020	26.12	5.81	312	0.134	3.51	108		
SW-8	Rocky River (Downgradient of Clarke River confluence)	8/15/2020	25.72	7.65	105	0.164	7.71	56.4
		8/16/2020	24.19	7.47	136	0.098	6.34	280
		8/17/2020	25.66	7.84	134	0.189	6.88	15.5
		8/18/2020	22.44	7.60	105	0.15	6.9	73.3
		8/19/2020	23.05	7.58	130	0.171	5.34	43.5
		8/20/2020	22.77	7.68	178	0.168	3.6	50.4
		8/21/2020	22.73	7.53	127	0.193	5.7	33.5
		8/22/2020	22.72	7.72	115	0.145	6.5	60.1
SW-9	Rocky River (Downgradient of Clarke River confluence)	8/15/2020	25.27	7.57	126	0.165	5.61	93.1
		8/16/2020	23.83	7.49	125	0.087	4.11	332
		8/17/2020	23.01	7.40	98	0.117	6.77	101
		8/18/2020	23.12	7.60	140	0.135	6.47	72.2
		8/19/2020	23.31	7.33	136	0.161	5.9	34.1
		8/20/2020	23.45	7.45	203	0.139	5.34	40.1
		8/21/2020	23.43	7.33	126	0.168	4.86	23.5
		8/22/2020	22.99	7.55	131	0.156	6.24	109
SW-10	Rocky River (Downgradient of Clarke River confluence)	8/15/2020	25.44	7.56	127	0.169	6.18	77.7
		8/16/2020	24.14	7.34	125	0.091	5.39	459
		8/17/2020	23.15	7.31	113	0.134	6.16	115
		8/18/2020	23.52	7.62	142	0.158	6.36	154
		8/19/2020	23.54	7.2	147	0.191	5.46	3.89
		8/20/2020	23.1	7.45	158	0.112	5.62	219
		8/21/2020	23.61	7.2	152	0.124	4.95	35.1
		8/22/2020	23.39	7.53	128	0.163	5.43	62.3
SW-11	Rocky River (Downgradient of Mallard Creek)	8/15/2020	25.01	7.60	125	0.155	7.15	143
		8/16/2020	24.24	7.02	153	0.086	5.33	466
		8/17/2020	23.20	7.3	128	0.112	6.82	144
		8/18/2020	23.6	7.59	121	0.143	6.36	90.5
		8/19/2020	23.4	7.11	191	0.151	4.2	105
		8/20/2020	23.06	7.55	201	0.098	5.05	359
		8/21/2020	23.33	6.88	198	0.143	3.67	48.9
		8/22/2020	23.28	7.58	124	0.139	6.29	55.6
SW-12	Rocky River (Downgradient of Back Creek)	8/15/2020	25.03	7.61	130	0.159	6.98	157
		8/16/2020	24.22	7.22	150	0.091	6.01	433
		8/17/2020	23.10	7.45	121	0.105	6.74	152
		8/18/2020	23.73	7.73	120	0.141	7.07	117
		8/19/2020	23.31	6.9	226	0.153	5.45	56.8
		8/20/2020	23.12	7.72	119	0.096	5.83	565
		8/21/2020	23.36	6.38	266	0.138	4.66	51.3
		8/22/2020	23.27	7.74	124	0.148	6.11	93.7
SW-Seep	Downgradient of Spill Location	9/1/2020	25.73	5.6	76	0.13	1.2	228
		9/2/2020	28.17	7.13	171	0.121	2.95	6.97
		9/3/2020	31.55	6.24	183	0.113	4.99	516
SW-Confluence	Downgradient of Spill Location	9/1/2020	23.88	6.46	59	0.225	2.75	618
		9/2/2020	28.91	7.69	177	0.13	6.51	156
		9/3/2020	28.58	7.16	148	0.249	7.1	245

Table 3. Sediment Sampling Results
2020-L1-SR2448 Incident

Location ID	Description	Date	TPH (GRO) (mg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	m,p-Xylene (µg/kg)	o-Xylene (µg/kg)	Xylenes (µg/kg)
	EPA Region 4 ESV (acute)			10	10	290	130	130	130
	EPA Region 4 RSV (acute)			2,185	2,074	1,467	1,074	1,074	1,074
SD-1	North Prong Clark Creek (Up-gradient of the leak site)	8/16/2020	<7.6	<6.5	<6.5	<6.5	<13	<6.5	<13
SD-2	North Prong Clark Creek (Downgradient of leak site)	8/16/2020	<6.2	<5.2	<5.2	<5.2	<10.3	<5.2	<10.3
SD-3	South Prong Clark Creek (Downgradient of the leak site)	8/16/2020	<6.9	<5.1	<5.1	<5.1	<10.2	<5.1	<10.2
SD-4	Clarke Creek (Downgradient of North/South Prong Clark Creek confluence)	8/16/2020	<8.8	<7.4	<7.4	<7.4	<14.8	<7.4	<14.8
SD-5	Ramah Creek (Upgradient of SD-6)	8/16/2020	<6.6	<5	<5	<5	<9.9	<5	<9.9
SD-6	Clarke Creek (Downgradient of Ramah Creek confluence)	8/16/2020 8/19/2020	<10 <9.8	<8 <7.9	8.2 <7.9	<8 <7.9	<15.9 <15.9	<8 <7.9	<15.9 <15.9
SD-7	Rocky River (Downgradient of Clarke River confluence)	8/16/2020	<7.7	<9	<9	<9	<18.1	<9	<18.1
SD-8	Rocky River (Downgradient of Clarke River confluence)	8/16/2020	<6.5	<6.4	<6.4	<6.4	<12.8	<6.4	<12.8
SD-9	Rocky River (Downgradient of Clarke River confluence)	8/16/2020	<12.4	<9.9	<9.9	<9.9	<19.8	<9.9	<19.8
SD-10	Rocky River (Downgradient of Clarke River confluence)	8/16/2020	<9.8	<9.4	<9.4	<9.4	<18.7	<9.4	<18.7
SD-11	Rocky River (Downgradient of Mallard Creek)	8/16/2020	<8.5	<3.8	<3.8	<3.8	<7.6	<3.8	<7.6
SD-12	Rocky River (Downgradient of Back Creek)	8/16/2020	<10.4	<5.3	<5.3	<5.3	<10.6	<5.3	<10.6

Preliminary

ATTACHMENT II

**PACE LABORATORY ANALYTICAL REPORTS FOR
SURFACE WATER AND SEDIMENT SAMPLES**

(Available upon Request)

Preliminary