

APPENDIX E NAPL COLLECTION WELLS INSTALLATION PLAN AND GROUNDWATER MONITORING PLAN

M E M O R A N D U M

August 5, 2020

To: NYSDEC
From: Heather Philip, Parsons Project Manager
Subject: NYSEG Clark St. Former MGP Site (Site No. 7-06-010)
NAPL Collection Well Installation Plan and Groundwater Monitoring

Following the completion of remedial activities at the NYSEG Clark Street Former MGP Site, a bedrock NAPL collection system will be implemented on site as called for in the March 2009 Record of Decision (ROD). Collection wells will be used to recover remaining non-aqueous phase liquid (NAPL) to the extent practical and will support the achievement of the Site remedial goals described in Section 6 of the ROD. Ten NAPL recovery wells will be strategically placed with the goal of maximizing the recovery of NAPL from the bedrock. The NAPL recovery procedures for each well are anticipated to remain in place until negligible quantities (< 0.01 gallons) of NAPL are recovered in three consecutive sampling and collection rounds for that well, as described further below. All work proposed in this memorandum will be conducted in accordance with the health and safety procedures.

NAPL Collection Well Placement

NAPL recovery well locations have been selected based on the results of the multi-year NAPL monitoring program conducted by Arcadis from 2010-2015 (Arcadis, 2012 and Arcadis, 2015) and are expected to optimize NAPL collection at the site.

Measurable quantities of NAPL were recovered from six of the 25 monitoring wells (MW-03B, MW-04B, MW-05B, MW-06B, MW-07B, and MW-11D). The ten proposed bedrock NAPL collection wells will be installed around the perimeter of the upland portion of the site, as shown on Figures 1 and 2 “Site Plan” and “Proposed NAPL Collection Wells,” respectively. Collection wells were proposed in areas where NAPL has historically been observed.

NAPL Recovery Well Construction

Wells will be installed through fractured bedrock zone and will include a 5-foot sump into competent bedrock. The NAPL collection wells will be constructed using 4-inch diameter schedule 40 (SCH-40) polyvinyl chloride (PVC) or stainless-steel riser pipe and 4-inch diameter SCH-40 PVC or stainless-steel screen with 0.050 slot size. The sump will be grouted into competent bedrock and a sand pack will be installed around the screened interval from the competent bedrock interface to one foot above the top of fractured bedrock. The annular space will be sealed with bentonite and grouted with a Portland cement/bentonite slurry. Recovery wells will be constructed in accordance with the specifications detailed on Figure 3 “Recovery Well Detail.”

Following well installation, well construction logs, including visual observations made during installation, will be prepared. Cuttings from well installation, as well as any NAPL/water, will be staged in 55-gallon drums on-site as IDW and characterized/disposed of using the appropriate waste disposal stream.

NAPL Collection and Disposal

NAPL collection at the Site is recommended to occur on a quarterly basis for a two-year period. Following the initial two year period, the frequency may increase, decrease, or remain the same depending on the amount of NAPL being collected. Decisions regarding the frequency of NAPL collection will be made in conjunction with, and approval from, NYSDEC. Recovery wells exhibiting negligible NAPL collection (< 0.01 gallons) during the last three quarters of the initial two-year sampling period will be placed on an annual sampling and collection schedule. If a recovery well exhibits negligible recovery for three consecutive years sampling and collection efforts at that location will cease.

NAPL will be collected from recovery wells using bailers and/or absorbent socks/pads. Recovered NAPL, and products containing NAPL, will be disposed of by a licensed waste hauler and transported off-site for treatment or disposal at an approved facility.

Groundwater Monitoring Well Placement

Six proposed overburden groundwater monitoring wells will be utilized for annual groundwater monitoring on the Site. Existing overburden monitoring well MW-01B is located at the southeastern border of the site and would serve as an upgradient monitoring well. Three bedrock wells north of the Owasco outlet (MW-08D, MW-09D, and MW-10D) will be monitored as historical impacts were noted in these wells. Two additional overburden wells are recommended for installation in the upland portion of the site, serving as downgradient monitoring wells. Following installation of new wells, well construction logs, including visual observations made during installation, will be prepared. The locations of the proposed groundwater monitoring wells are shown on Figure 4 "Proposed Overburden Groundwater Monitoring Wells."

Groundwater Monitoring Well Sampling

The overburden monitoring well network will be sampled annually according to the Site Management Plan. Groundwater samples will be collected via low-flow techniques and submitted for laboratory analysis of site-specific COCs, i.e. BTEX and PAHs.

At the request of the New York State Department of Environmental Conservation, emergent contaminants (per- and polyfluoroalkyl substances [PFAS] and 1,4 dioxane), samples will be collected during the initial annual monitoring event. Emergent contaminant sampling will be conducted in accordance with the previously approved New York State Emergent Contaminant Field Sampling Plan and Quality Assurance Project Plan prepared and submitted by Parsons (2019).

References

ARCADIS, 2012a. Monthly NAPL Monitoring Program – Annual Report, NYSEG Clark Street Former MGP Site. January 25, 2012.

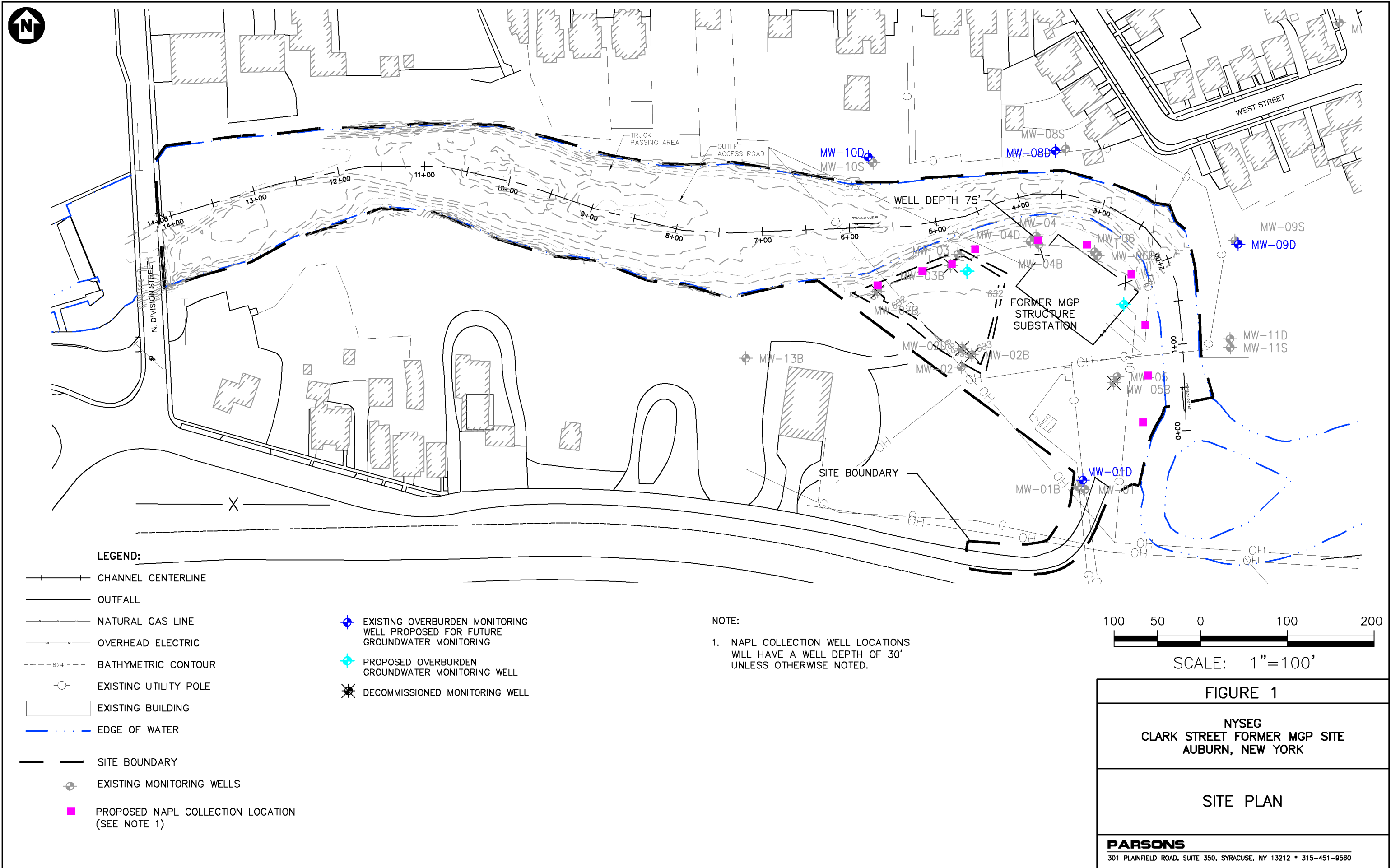
ARCADIS, 2015. NYSEG Clark Street Former MGP Site, Semi- Annual NAPL Monitoring. July 16, 2015.

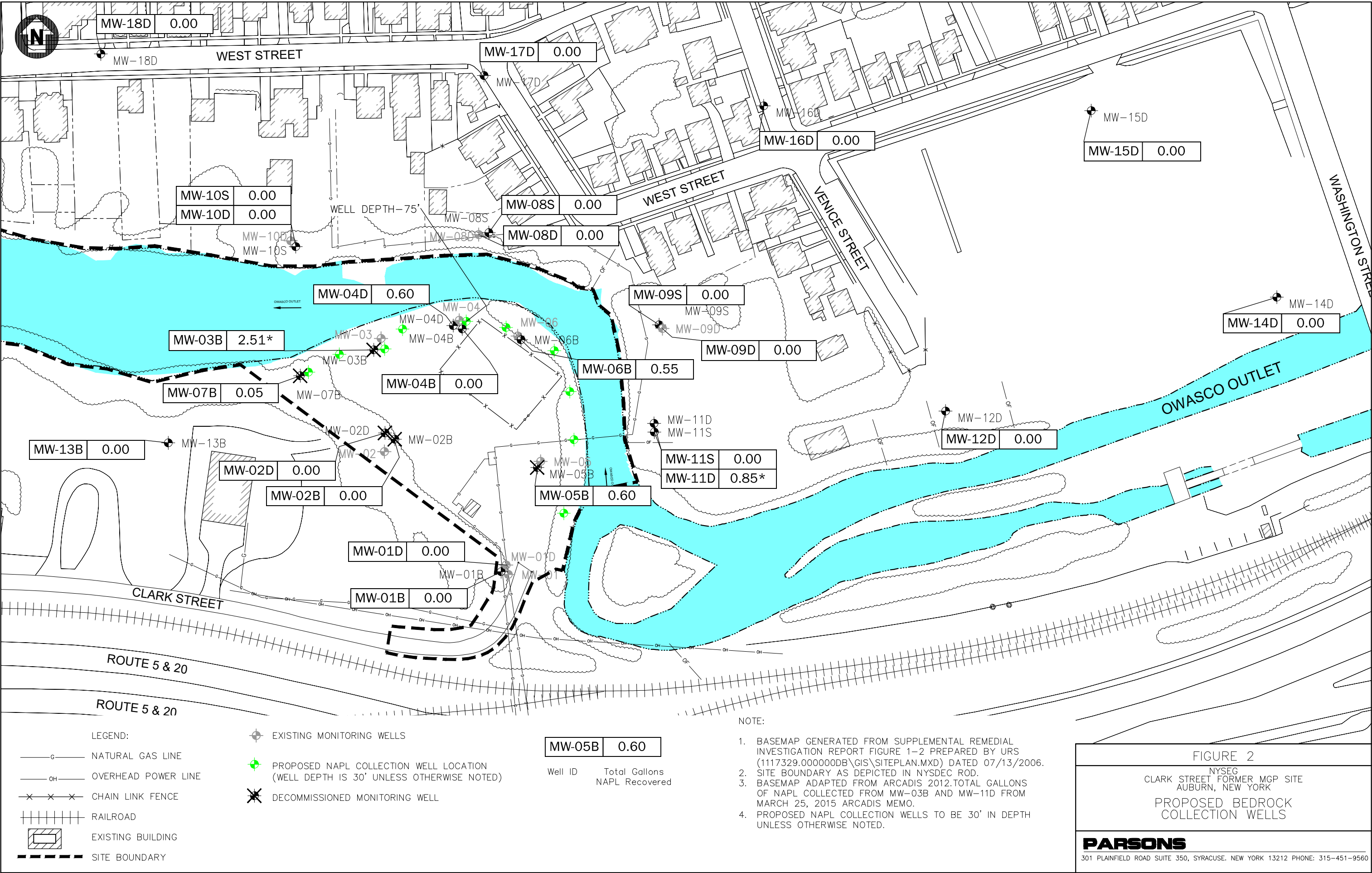
NYSDEC, 2009. Record of Decision, NYSEG Clark Street – Auburn MGP Site, Auburn Cayuga County, NY. Site Number 7-06-008. March 2009.

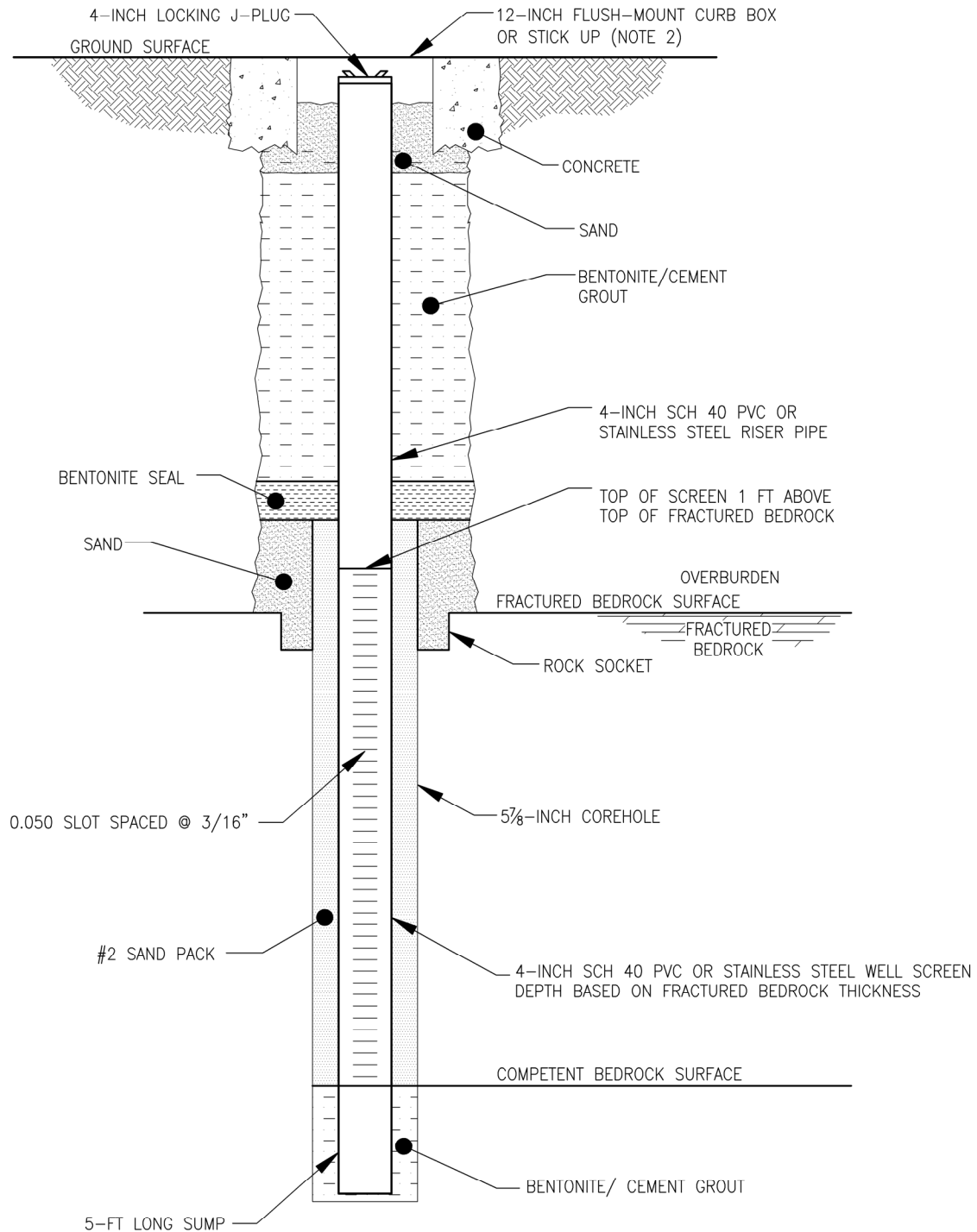
Parsons, 2020, Site Management Plan, NYSEG Clark Street Former MGP Site. DRAFT.

Parsons, 2019. New York State Emergent Contaminant Field Sampling Plan and Quality Assurance Project Plan. September 2019.

FIGURES







**TYPICAL BEDROCK DNAPL
COLLECTION WELL**
NOT TO SCALE

NOTES:

1. DNAPL COLLECTION WELL TO BE INSTALLED BY REMEDIATION ENGINEER (NOT PART OF CONTRACT).
2. GROUTING WILL BE COMPLETED ESSENTIALLY TO GRADE, LEAVING ENOUGH SPACE FOR COMPLETION AS EITHER FLUSH MOUNT OR STICK-UP TO BE DETERMINED IN THE FIELD BASED ON LOCATION.
3. ELEVATION OF COMPETENT ROCK SURFACE TO BE EXTRAPOLATED FROM McMASTERS STREET SOUTH BANK DESIGN TO BE FIELD VERIFIED WITH ROCK CORE FOR FIELD DEVIATION, IF ANY.
4. SLOTTED ZONE TO BE AT LEAST 5 FEET IN LENGTH.

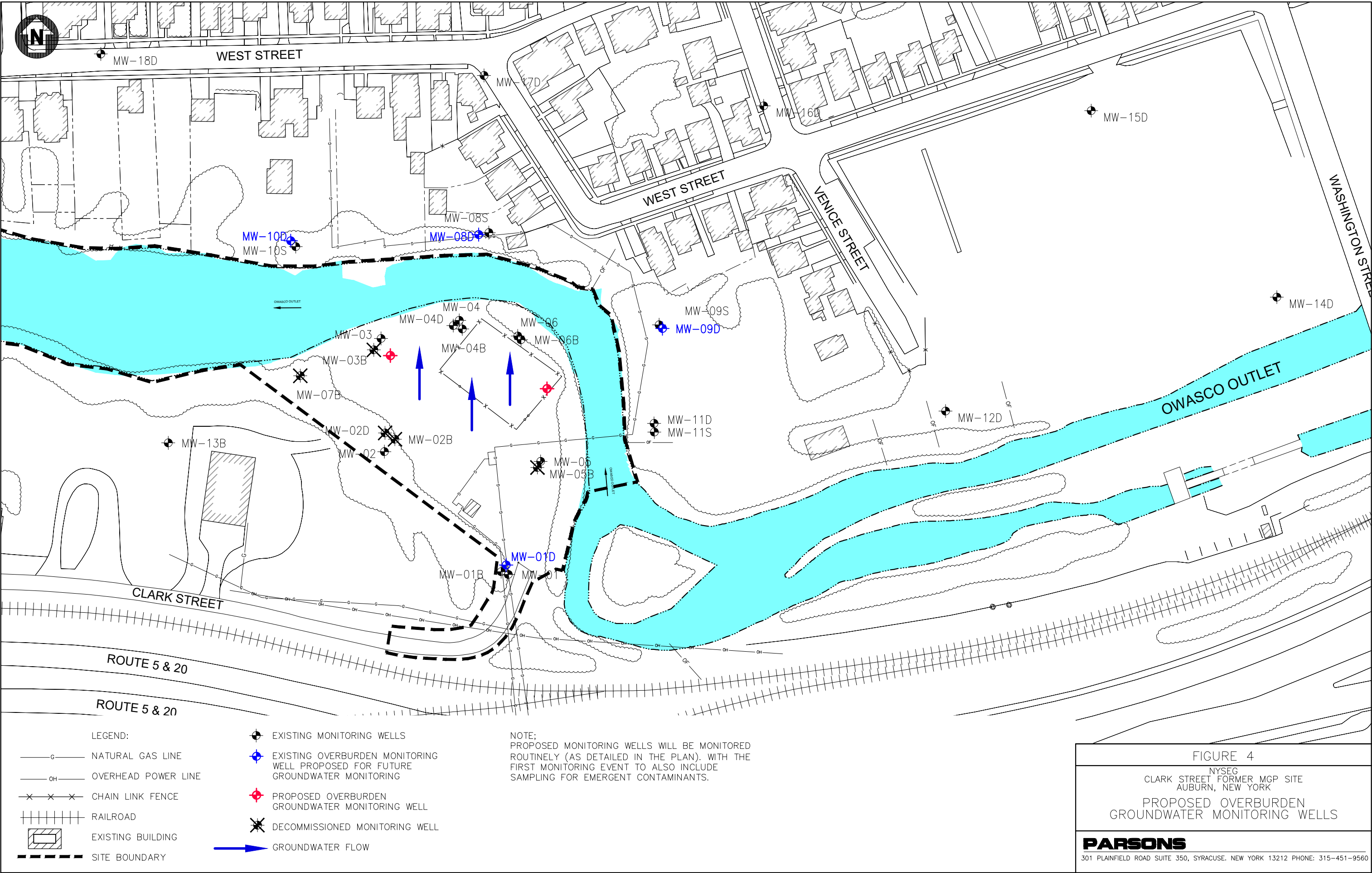
FIGURE 2

NYSEG
CLARK STREET FORMER MGP SITE
AUBURN, NEW YORK

RECOVERY WELL DETAIL

PARSONS

301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 • 315-451-9560



APPENDIX F GROUNDWATER MONITORING WELL AND NAPL COLLECTION WELL LOGS

BLASLAND & BUCK ENGINEERS, P.C.

DATE STARTED/COMPLETED: 8/25/92

MW9201

DRILLING AND SAMPLING METHOD:

CLASSIFIED BY: STH

PROJECT NO.: 130.04.02

4 1/4-inch ID HSA, split spoon

PROJECT: NYSEG

PAGE: 1 of 1

LOCATION: Clark St., Auburn, NY

DEPTH (FT)	SAMPLES	SOIL DATA					ROCK DATA			WELL COLUMN	GEOLOGIC COLUMN	SUBSURFACE LOG		ROCK FEATURES
		SAMPLE/RUN NO.	RECOVERY (FT)	BLOWS/6 IN.	PID FIELD (ppm)	PID HEADSPACE (ppm)	% RECOVERY	% ROD	AVERAGE RATE (MIN./FT)			SOIL/ROCK CLASSIFICATION		
5														
4														
3														
2														
1														
0														
-1														
-2	1	1.5	3	0.1	2.3									
-3			2											
-4			3											
-5			4											
-6	2	1.7	5	0.1	3.2									
-7			6											
-8			7											
-9			13											
-10	3	NR	50/3	NR	NR									
-11														
-12	4	0.7	10	0.1	4.3									
-13			14											
-14			17											
-15			29											
-16	5	1.1	17	0.1	4.1									
-17			26											
-18			29											
-19			32											
-20	6	0.3	50/30	1	3.6									
-21														
-22														
-23	7	NR		NR	NR									
-24														
-25														
-26														
-27														
-28														
-29														
-30														
-31														
-32														
-33														
-34														
-35														
-36														
-37														
-38														
-39														
-40														
-41														
-42														
-43														
-44														
-45														
-46														
-47														
-48														
-49														
-50														
-51														
-52														
-53														
-54														
-55														
-56														
-57														
-58														
-59														
-60														
-61														
-62														
-63														
-64														
-65														
-66														
-67														
-68														
-69														
-70														
-71														
-72														
-73														
-74														
-75														
-76														
-77														
-78														
-79														
-80														
-81														
-82														
-83														
-84														
-85														
-86														
-87														
-88														
-89														
-90														
-91														
-92														
-93														
-94														
-95														
-96														
-97														
-98														
-99														
-100														
-101														
-102														
-103														
-104														
-105														
-106														
-107														
-108														
-109														
-110														
-111														
-112														
-113														
-114														
-115														
-116														
-117														
-118														
-119														
-120														
-121														
-122														
-123														
-124														
-125														
-126														
-127														
-128														
-129														
-130														
-131														
-132														
-133														
-134														
-135														
-136														
-137														
-138														
-139														
-140														
-141														
-142														
-143														
-144														
-145														
-146														
-147														
-148														
-149														
-150														
-151														
-152														
-153														
-154														
-155														
-156														
-157														
-158														
-159														
-160														
-161														
-162														
-163														
-164														
-165														
-166														
-167														
-168														
-169														
-170														
-171														
-172														
-173														
-174</														

PROJECT:	NYSEG	ELEVATION:	GRD. 635.58'/ TOC. 638.14' amsl
BORING NO.:	MW-01B	BORING LOCATION:	N 1068040.150/ E 820971.630
DATE:	11/17/04	METHOD OF DRILLING:	Hollow Stem Auger & HQ Core
BORING DIAMETER:	8" OVB/4" BR	SAMPLE TYPE:	2-inch Split Spoon & HQ Core
BORING DEPTH:	30.5 Feet	SURFACE CONDITIONS:	Grass Surface

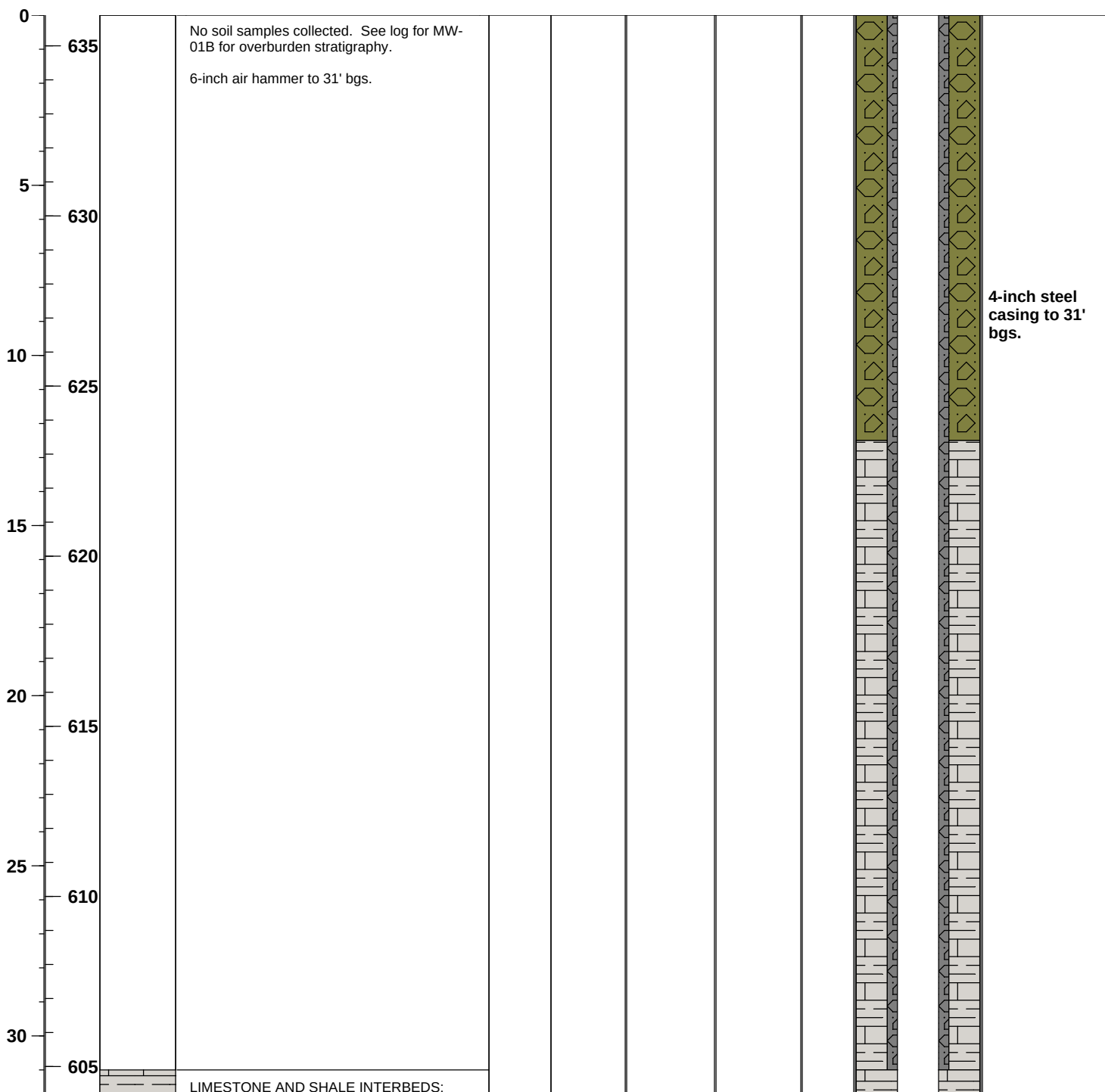
Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0									
635		FILL: Brown SILTY SAND, some roots, moist.		0-2	24/2	6,8 2,5	0.1		
		FILL: Dark brown medium SAND, some angular coarse gravel and brick fragments, trace silt, moist.		2-4	24/8	5,3 3,2	0.5		
5									
630		SILTY SAND: Reddish brown SILTY SAND, little fine angular gravel, wet.		4-6	24/11	4,4 12,29	0.3		
		GRAVELLY SAND: Greyish brown GRAVELLY SAND, trace silt, wet. Refusal at 8.6' bgs.		6-8	24/13	10,18 16,18	0.1		
				8-8.6	8/8	24,60/2	0.3		
10		GRAVEL: Black GRAVEL, little fine sand, very dense.		10-12	24/8	12,12 16,65	0.1		
		SILTY GRAVEL: Grey SILTY GRAVEL, very dense, dry. Refusal at 12.7' bgs.		12-12.7	9/9	39,50/3	NA		
		SILTY GRAVEL: Wash rotary to 15.4' bgs. Encounter top of bedrock at 14.8' bgs.							
15		LIMESTONE AND SHALE INTERBEDS: 5 7/8" Wash rotary from 12.7 to 15.4' bgs. Top of bedrock at 14.8' bgs.							
		LIMESTONE AND SHALE INTERBEDS: Run 1: 15.4-20.1' bgs 100% Recovery 55% RQD							
20		Six inch ream to 20.1' bgs.							
615		Set 4-inch carbon steel casing to 20.1' bgs.							
		LIMESTONE AND SHALE INTERBEDS: Run 2: 20.5-25.5' bgs 100% Recovery 84% RQD							
25									
610		LIMESTONE AND SHALE INTERBEDS: Run 3: 25.5-30.5' bgs 94% Recovery 66% RQD							
30									

4-inch steel casing to 20.5' bgs.

4-inch diameter open hole 20.5-30.5' bgs.

PROJECT:	NYSEG	ELEVATION:	GRD. 635.9' / TOC 638.14' amsl
BORING NO.:	MW-01D	BORING LOCATION:	N 1068047.86 / E 820977.76
DATE:	6/30/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	79.5 Feet	SURFACE CONDITIONS:	Grass Surface

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
--------------------	-----------------	------------------	-------------	----------------------------	------------------------------	--------------------------	--------------	----------------------	---------------------



PROJECT:	NYSEG	ELEVATION:	GRD. 635.9' / TOC 638.14' amsl
BORING NO.:	MW-01D	BORING LOCATION:	N 1068047.86 / E 820977.76
DATE:	6/30/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	79.5 Feet	SURFACE CONDITIONS:	Grass Surface

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
35	600	Run 1: 31-34.5' bgs. 100% Recovery 74% RQD							
40	595	LIMESTONE AND SHALE INTERBEDS: Run 2: 34.5-39.5' bgs. 100% Recovery 92% RQD							
45	590	LIMESTONE AND SHALE INTERBEDS: Run 3: 39.5-44.5' bgs 100% Recovery 90% RQD Packer sample 31-44.5' bgs (PAH & BTEX)							
50	585	LIMESTONE AND SHALE INTERBEDS: Run 4: 44.5-49.5' bgs 100% Recovery 88% RQD							
55	580	LIMESTONE AND SHALE INTERBEDS: Run 5: 49.5-54.5' bgs 100% Recovery 94% RQD Packer sample 44.5-54.5' bgs (PAH & BTEX)							
60	575	LIMESTONE AND SHALE INTERBEDS: Run 6: 54.5-59.5' bgs 100% Recovery 88% RQD							
		LIMESTONE AND SHALE INTERBEDS: Run 7: 59.5-64.5' bgs 100% Recovery 10% RQD Packer sample 54.5-64.5' bgs (PAH & BTEX)							

4-inch
diameter open
hole 31-79.5'
bgs.



DRAFT
LOG OF BORING

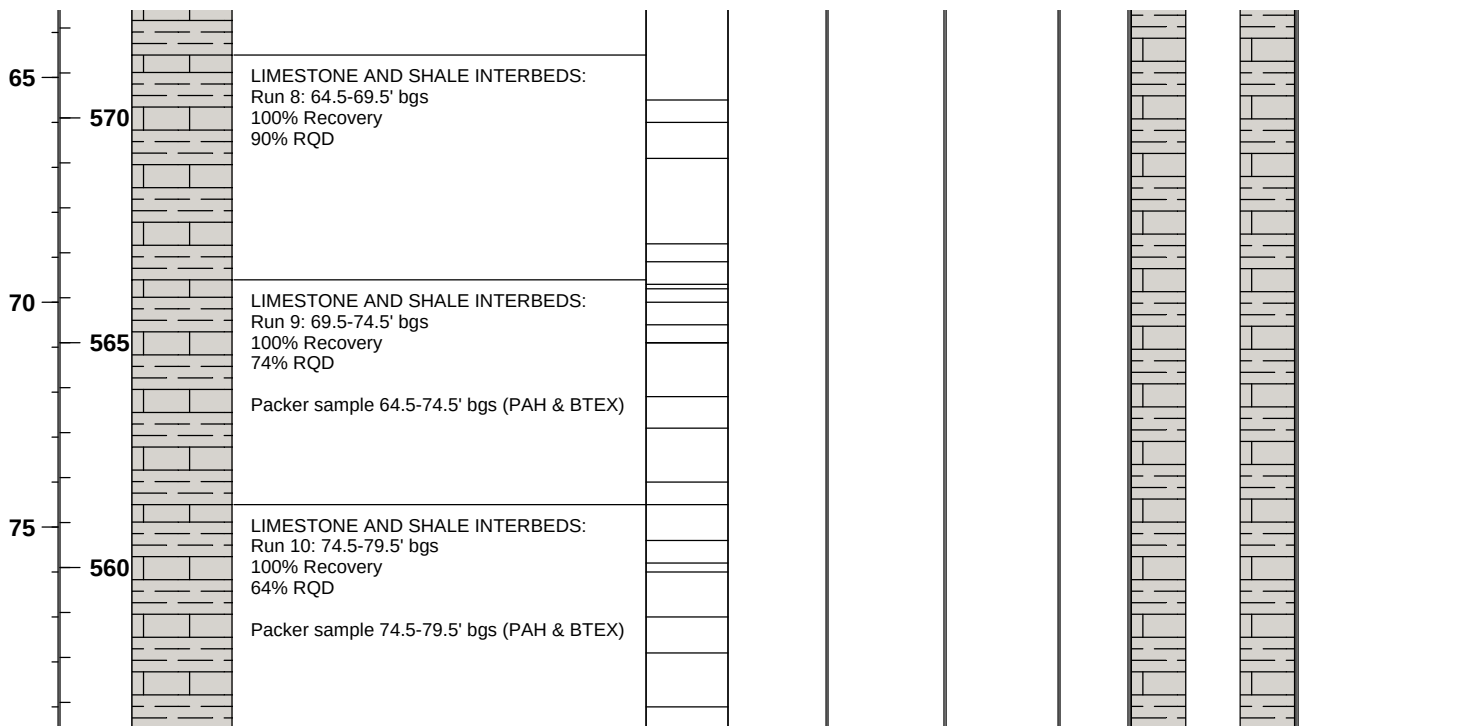


PROJECT: NYSEG
BORING NO.: MW-01D
DATE: 6/30/05
BORING DIAMETER: 6" OVB&TOR/4" B
BORING DEPTH: 79.5 Feet

ELEVATION:
BORING LOCATION: GRD. 635.9'/ TOC 638.14' amsl
N 1068047.86/ E 820977.76
METHOD OF DRILLING: 6-inch air hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Grass Surface

Page 3 of 3

Depth	Soil	Soil Description	Frac	Sample	Driven/	Blows	PID	Well	Well
Elevation	Symbols		Log	Depth	Recovery	per/	(ppm)	Construction	Description
				(ft bg)	(in.)	(6 in.)			



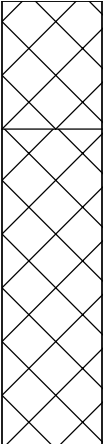
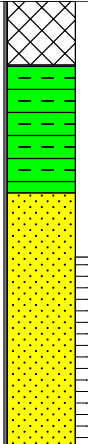
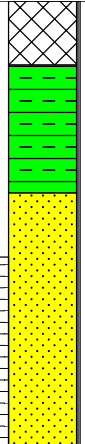


DRAFT
LOG OF BORING



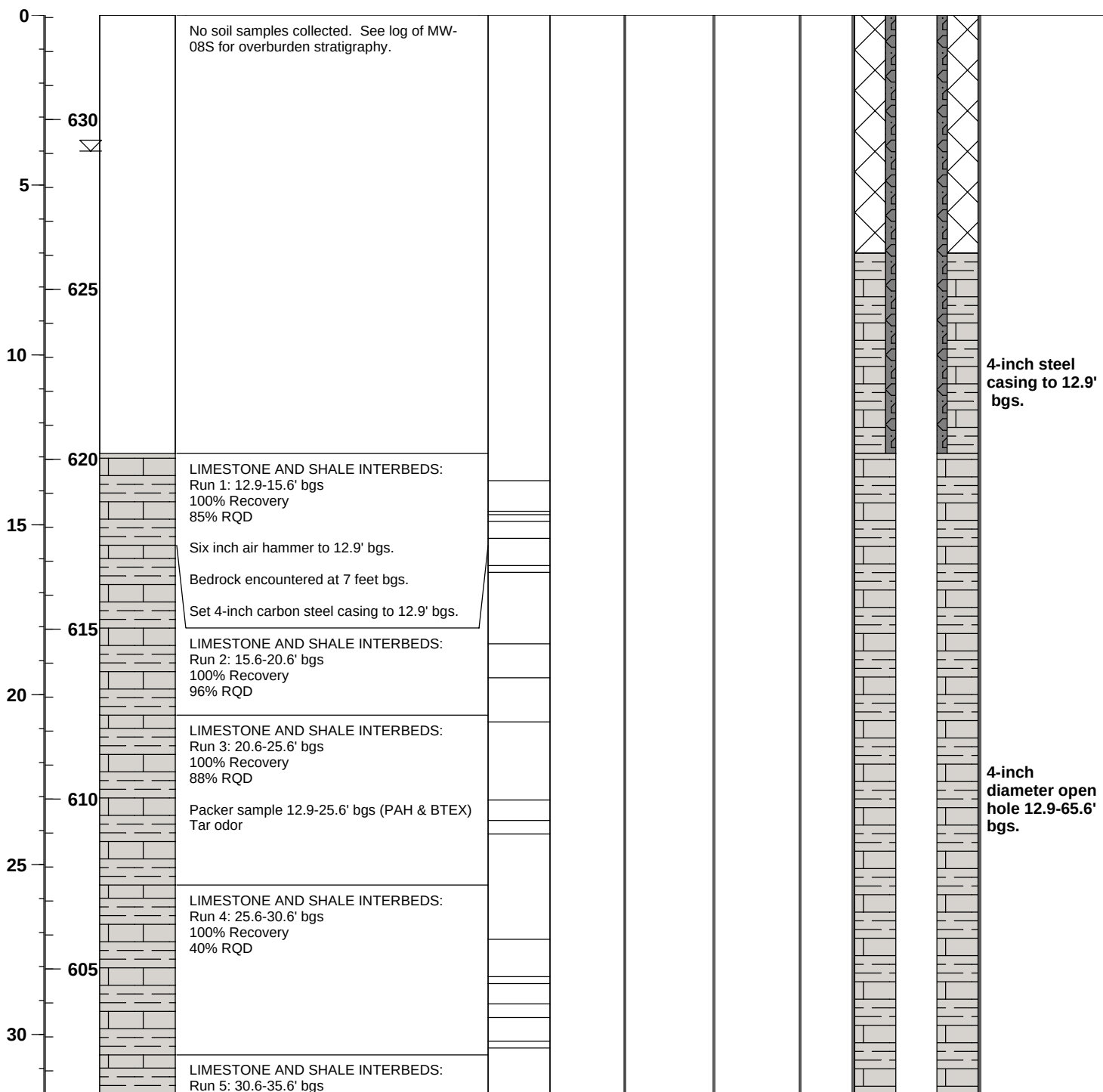
PROJECT:	NYSEG	ELEVATION:	GRD. 633.68'/ TOC 633.32' amsl
BORING NO.:	MW-08S	BORING LOCATION:	N 1068427.59/ E 820957.49
DATE:	7/14/05	METHOD OF DRILLING:	Hollow Stem Auger
BORING DIAMETER:	6-inches	SAMPLE TYPE:	2-inch Split Spoon
BORING DEPTH:	7.0 Feet	SURFACE CONDITIONS:	Grass Surface

page 1 of 1

Depth Elevation	Soil Symbols	Soil Description	USCS Code	Sample Depth (ft bg)	Driven/ Recovery (ft.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0		FILL: No Recovery	FILL	0-2	24/0	NA	0		Flush mount road box with concrete seal. Bentonite seal 1.0-3.0' bgs
		FILL: Brown SILTY SAND, trace subangular gravel, moist. Split spoon refusal at 6.2 feet bgs. Auger refusal at 7.0 feet bgs.		2-4	24/6	NA	0		2-inch Sch. 40 PVC riser 0-4.0' bgs
630				4-6	24/8	NA	0		2-inch Sch. 40 PVC 0.010" slot screen
5				6-6.2	2/2		0		

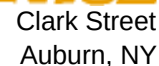
PROJECT:	NYSEG	ELEVATION:	GRD. 633.07' / TOC 632.67' amsl
BORING NO.:	MW-08D	BORING LOCATION:	N 1068426.04 / E 820945.88
DATE:		METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	65.6 Feet	SURFACE CONDITIONS:	Grass Surface

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bgs)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
--------------------	-----------------	------------------	-------------	-----------------------------	------------------------------	--------------------------	--------------	----------------------	---------------------





LOG OF BORING



PROJECT:	NYSEG	ELEVATION:	GRD. 633.07'/ TOC 632.67' amsl
BORING NO.:	MW-08D	BORING LOCATION:	N 1068426.04/ E 820945.88
DATE:		METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" Bore	SAMPLE TYPE:	HQ Core
BORING DEPTH:	65.6 Feet	SURFACE CONDITIONS:	Grass Surface

Page 2 of 3

Depth	Soil	Soil Description	Frac	Sample	Driven/	Blows	PID	Well	Well
Elevation	Symbols		Log	Depth (ft bg)	Recovery (in.)	per/ (6 in.)	(ppm)	Construction	Description
600		100% Recovery 70% RQD							
35		Packer sample 25.6-35.6' bgs (PAH & BTEX) Sulfur odor							
595		LIMESTONE AND SHALE INTERBEDS: Run 6: 35.6-40.6' bgs 100% Recovery 20% RQD							
40									
590		LIMESTONE AND SHALE INTERBEDS: Run 7: 40.6-45.6' bgs 100% Recovery 60% RQD							
45		Packer sample 35.6-45.6' bgs (PAH & BTEX) Sulfur odor							
585		LIMESTONE AND SHALE INTERBEDS: Run 8: 45.6-50.6' bgs 100% Recovery 96% RQD							
50									
580		LIMESTONE AND SHALE INTERBEDS: Run 9: 50.6-55.6' bgs 100% Recovery 100% RQD							
55		Packer sample 45.6-55.6' bgs (PAH & BTEX) Sulfur odor							
575		LIMESTONE AND SHALE INTERBEDS: Run 10: 55.6-60.6' bgs 100% Recovery 84% RQD							
60									
570		LIMESTONE AND SHALE INTERBEDS: Run 11: 60.6-65.6' bgs 100% Recovery 60% RQD							
		Packer sample 55.6-65.6' bgs (PAH & BTEX)							

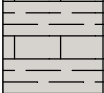


DRAFT
LOG OF BORING



PROJECT: NYSEG
BORING NO.: MW-08D
DATE:
BORING DIAMETER: 6" OVB&TOR/4" B
BORING DEPTH: 65.6 Feet
ELEVATION: GRD. 633.07' / TOC 632.67' amsl
BORING LOCATION: N 1068426.04 / E 820945.88
METHOD OF DRILLING: 6-inch air hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Grass Surface

Page 3 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft lg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
65		No odor							

PROJECT:	NYSEG	ELEVATION:	GRD. 634.9'/ TOC 634.51' amsl
BORING NO.:	MW-09S	BORING LOCATION:	N 1068325.94/ E 821153.19
DATE:	7/13/05	METHOD OF DRILLING:	Hollow Stem Auger
BORING DIAMETER:	6-inches	SAMPLE TYPE:	2-inch Split Spoon
BORING DEPTH:	10.5 Feet	SURFACE CONDITIONS:	Grass Surface

page 1 of 1

Depth Elevation	Soil Symbols	Soil Description	USCS Code	Sample Depth (ft bg)	Driven/ Recovery (ft.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0		FILL: Brown medium SAND, some silt, trace organic fibers and gravel, dry.	FILL	0-2	24/12	9,15	0		Flush mount road box with concrete seal. Bentonite seal 1.5-3.5' bgs
		SANDY GRAVEL: Brown SANDY GRAVEL, little caol fragments, dry.		2-4	24/8	19,18 7,18	0		2-inch Sch. 40 PVC riser 0-5.5' bgs
5		SAND: Brown medium SAND, little silt, trace organic fibers, moist.	SP	4-6	24/3	17,12 7,9	0		
		SILTY SAND: Greyish green SILTY SAND, dry, spoon refusal at 7.25'bgs.	ML	6-7.2	15/2	7,8	0		2-inch Sch. 40 PVC 0.010" slot screen 5.5-10.5' bgs
		SILTY GRAVEL: Grey SILTY GRAVEL, moist.	GP	8-10	24/12	50/3 8,19	0		#0 Sand pack 3.5-10.5' bgs
10				10-10.5	7/7	16,24	0		

PROJECT:	NYSEG	ELEVATION:	GRD. 634.74'/ TOC 634.29' amsl
BORING NO.:	MW-09D	BORING LOCATION:	N 1068318.75/ E 821155.23
DATE:	7/26/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	65.3 Feet	SURFACE CONDITIONS:	Grass Surface

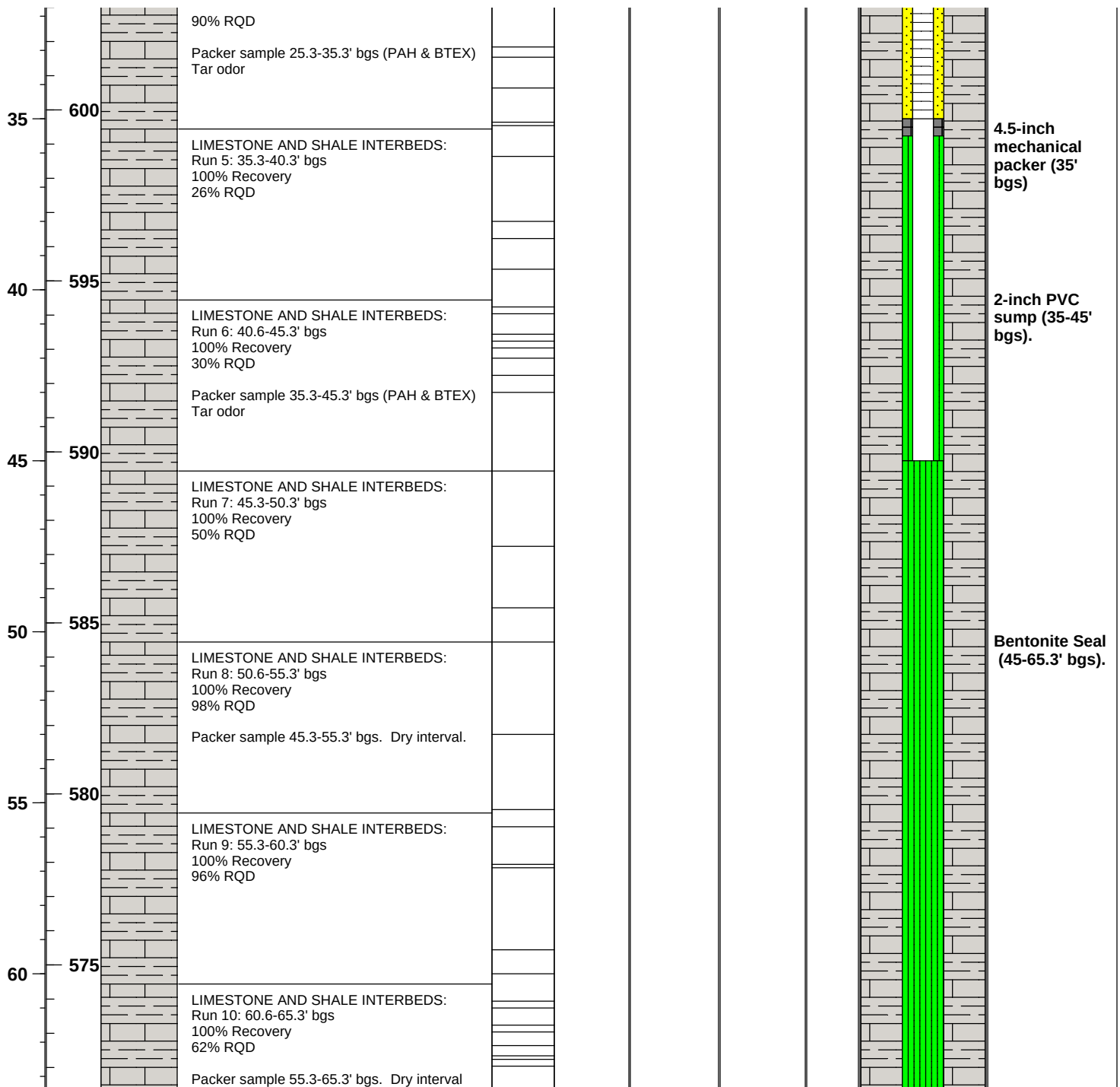
Page 1 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0		No soil samples collected. See log of MW-08S for overburden stratigraphy.							
5									2-inch PVC riser (15' bgs to grade).
10									4-inch steel casing to 15.3' bgs.
15									
20		LIMESTONE AND SHALE INTERBEDS: Run 1: 15.3-20.3' bgs 100% Recovery 46% RQD Six inch air hammer to 15.3' bgs. Bedrock encountered at 10.5 feet bgs. Set 4-inch carbon steel casing to 15.3' bgs.							
25		LIMESTONE AND SHALE INTERBEDS: Run 2: 20.6-25.3' bgs 100% Recovery 90% RQD Packer sample 15.3-25.3' bgs (PAH & BTEX) Tar blebs							4-inch diameter open hole 15.3-65.3' bgs.
30		LIMESTONE AND SHALE INTERBEDS: Run 3: 25.3-30.3' bgs 100% Recovery 84% RQD							
		LIMESTONE AND SHALE INTERBEDS: Run 4: 30.6-35.3' bgs 100% Recovery							2-inch PVC, 0.010" slot screen (15' to 35' bgs)

PROJECT:	NYSEG	ELEVATION:	GRD. 634.74'/ TOC 634.29' amsl
BORING NO.:	MW-09D	BORING LOCATION:	N 1068318.75/ E 821155.23
DATE:	7/26/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	65.3 Feet	SURFACE CONDITIONS:	Grass Surface

Page 2 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
--------------------	-----------------	------------------	-------------	----------------------------	------------------------------	--------------------------	--------------	----------------------	---------------------





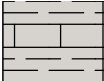
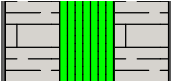
DRAFT
LOG OF BORING



PROJECT: NYSEG
BORING NO.: MW-09D
DATE: 7/26/05
BORING DIAMETER: 6" OVB&TOR/4" B
BORING DEPTH: 65.3 Feet

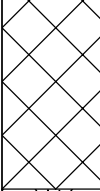
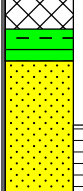
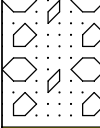
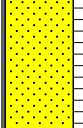
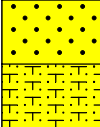
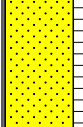
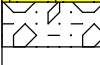
ELEVATION: GRD. 634.74'/ TOC 634.29' amsl
BORING LOCATION: N 1068318.75/ E 821155.23
METHOD OF DRILLING: 6-inch air hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Grass Surface

Page 3 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
65 570									

PROJECT:	NYSEG	ELEVATION:	GRD. 630.43'/ TOC 630.07' amsl
BORING NO.:	MW-10S	BORING LOCATION:	N 1068413.39/ E 820736.64
DATE:	7/14/05	METHOD OF DRILLING:	Hollow Stem Auger
BORING DIAMETER:	6-inches	SAMPLE TYPE:	2-inch Split Spoon
BORING DEPTH:	8 Feet	SURFACE CONDITIONS:	Grass Surface

page 1 of 1

Depth Elevation	Soil Symbols	Soil Description	USCS Code	Sample Depth (ft bg)	Driven/ Recovery (ft.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 630		FILL: Brown SILTY SAND, little roots, trace sea shell fragments, dry.	FILL	0-2	24/14	6,10 7,19 14,6	0		Flush mount road box with concrete seal. Bentonite seal 0.5-1.0' bgs 2-inch Sch. 40 PVC riser 0-2' bgs
		SANDY GRAVEL: Light brown fine SAND, trace silt, wet.	SW	2-4	24/10	3,4 2,3	0		
5 625		SAND: Light brown SILTY CLAY, medium soft, trace wood chips, wet.	SP	4-6	24/14	4,6 8,11	0		2-inch Sch. 40 PVC 0.010" slot screen 2-8' bgs
		SILTY SAND: Light greenish brown SILTY SAND, trace clay, wet.							
		SILTY GRAVEL: Dark grey SILTY GRAVEL, very dense, dry.	GP	6-7.7	20/6	16,50/2	0		

LOG OF BORING

PROJECT: NYSEG
BORING NO.: MW-10D
DATE: 7/05
BORING DIAMETER: 6" OVB&TOR/4" B
BORING DEPTH: 59.5 Feet
ELEVATION: GRD. 630.69' / TOC 630.24' amsl
BORING LOCATION: N 1068419.39 / E 820731.74
METHOD OF DRILLING: 6-inch air hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Grass Surface

Page 1 of 2

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 630		No soil samples collected. See log of MW-10S for overburden stratigraphy.							
5 625									
10 620		LIMESTONE AND SHALE INTERBEDS: Run 1: 9.5-14.5' bgs 100% Recovery 50% RQD Six inch air hammer to 9.5' bgs. Bedrock encountered at 8 feet bgs. Set 4-inch carbon steel casing to 9.5' bgs.							4-inch steel casing to 9.5' bgs.
15 615		LIMESTONE AND SHALE INTERBEDS: Run 2: 14.5-19.5' bgs 100% Recovery 90% RQD Packer sample 9.5-14.5' bgs (PAH & BTEX) Tar odor and sheen							
20 610		LIMESTONE AND SHALE INTERBEDS: Run 3: 19.5-24.5' bgs 100% Recovery 70% RQD							
25 605		LIMESTONE AND SHALE INTERBEDS: Run 4: 24.5-29.5' bgs 100% Recovery 56% RQD Packer sample 14.5-29.5' bgs (PAH & BTEX) Tar odor							
30 600		LIMESTONE AND SHALE INTERBEDS: Run 5: 29.5-34.5' bgs 100% Recovery 80% RQD							4-inch diameter open hole 9.5-59.5' bgs.

PROJECT:	NYSEG	ELEVATION:	GRD. 630.69' / TOC 630.24' amsl
BORING NO.:	MW-10D	BORING LOCATION:	N 1068419.39 / E 820731.74
DATE:	7/10/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	59.5 Feet	SURFACE CONDITIONS:	Grass Surface

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bgs)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
35	595	LIMESTONE AND SHALE INTERBEDS: Run 6: 34.5-39.5' bgs 100% Recovery 50% RQD Packer sample 29.5-39.5' bgs (PAH & BTEX) Tar odor							
40	590	LIMESTONE AND SHALE INTERBEDS: Run 7: 39.5-44.5' bgs 100% Recovery 50% RQD							
45	585	LIMESTONE AND SHALE INTERBEDS: Run 8: 44.5-49.5' bgs 100% Recovery 90% RQD Packer sample 39.5-49.5' bgs (PAH & BTEX) Tar odor							
50	580	LIMESTONE AND SHALE INTERBEDS: Run 9: 49.5-54.5' bgs 100% Recovery 90% RQD							
55	575	LIMESTONE AND SHALE INTERBEDS: Run 10: 54.5-59.5' bgs 100% Recovery % RQD Packer sample 49.5-59.5' bgs (PAH & BTEX) Tar odor							

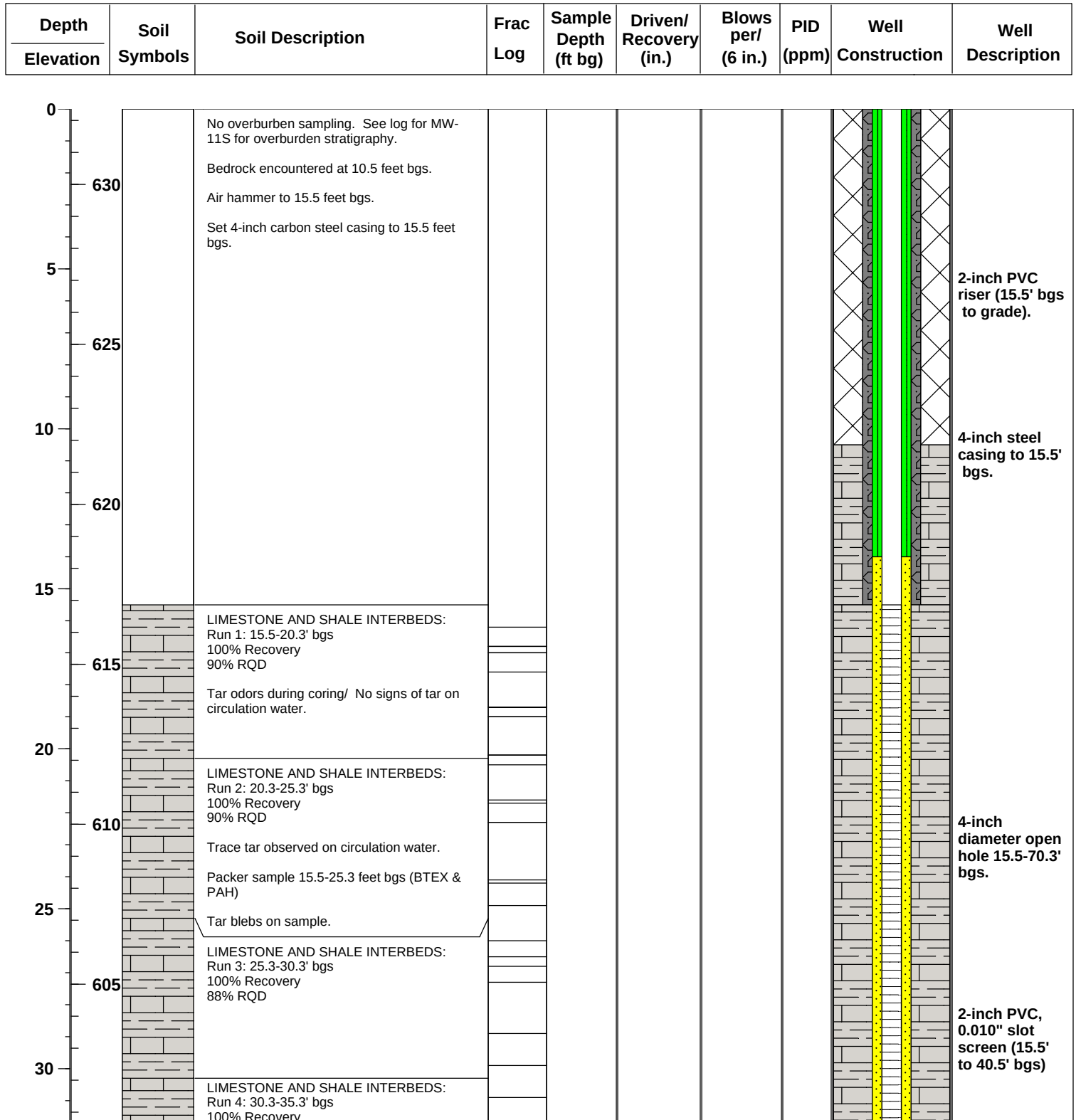
PROJECT:	NYSEG	ELEVATION:	GRD. 632.27' / TOC 631.96' amsl
BORING NO.:	MW-11S	BORING LOCATION:	N 1068200.66 / E 821147.75
DATE:	7/13/05	METHOD OF DRILLING:	Hollow Stem Auger
BORING DIAMETER:	6-inches	SAMPLE TYPE:	2-inch Split Spoon
BORING DEPTH:	10.5 Feet	SURFACE CONDITIONS:	Grass Surface

page 1 of 1

Depth Elevation	Soil Symbols	Soil Description	USCS Code	Sample Depth (ft bg)	Driven/ Recovery (ft.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0		FILL: Dark brown SILTY SAND, little coarse angular gravel, trace organic fibers, dry.	FILL	0-2	24/18	6,7	0		Flush mount road box with concrete seal. Bentonite seal 1-2' bgs
630		NO RECOVERY		2-4	24/0	9,11 11,8	0		2-inch Sch. 40 PVC riser 0-4' bgs
		FILL: Dark brown medium to coarse SAND, little coal fragments, dry.				4,5			
5		SAND: Greyish green medium SAND, little silt, wet.	SM	4-6	24/12	4,3 6,7	0		
625		SILTY SAND: Greyish green SILTY SAND, wet.		6-8	24/15	8,11 12,13	0		2-inch Sch. 40 PVC 0.010" slot screen 4-10' bgs
		SANDY CLAY: Greyish green SANDY CLAY, some silt, moist.	ML			6,34			#0 Sand pack 2-10' bgs
		SANDY GRAVEL: Brown SANDY GRAVEL, wet.	GP	8-10	24/3	13,11	0		
10		GRAVELLY SAND: Greyish brown GRAVELLY SAND, trace silt, wet.		10-10.5	7/6	19,50/1	0		

PROJECT:	NYSEG	ELEVATION:	GRD. 632.36'/ TOC 631.96' amsl
BORING NO.:	MW-11D	BORING LOCATION:	N 1068206.62/ E 821148.28
DATE:	7/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	70.3 Feet	SURFACE CONDITIONS:	Grass Surface

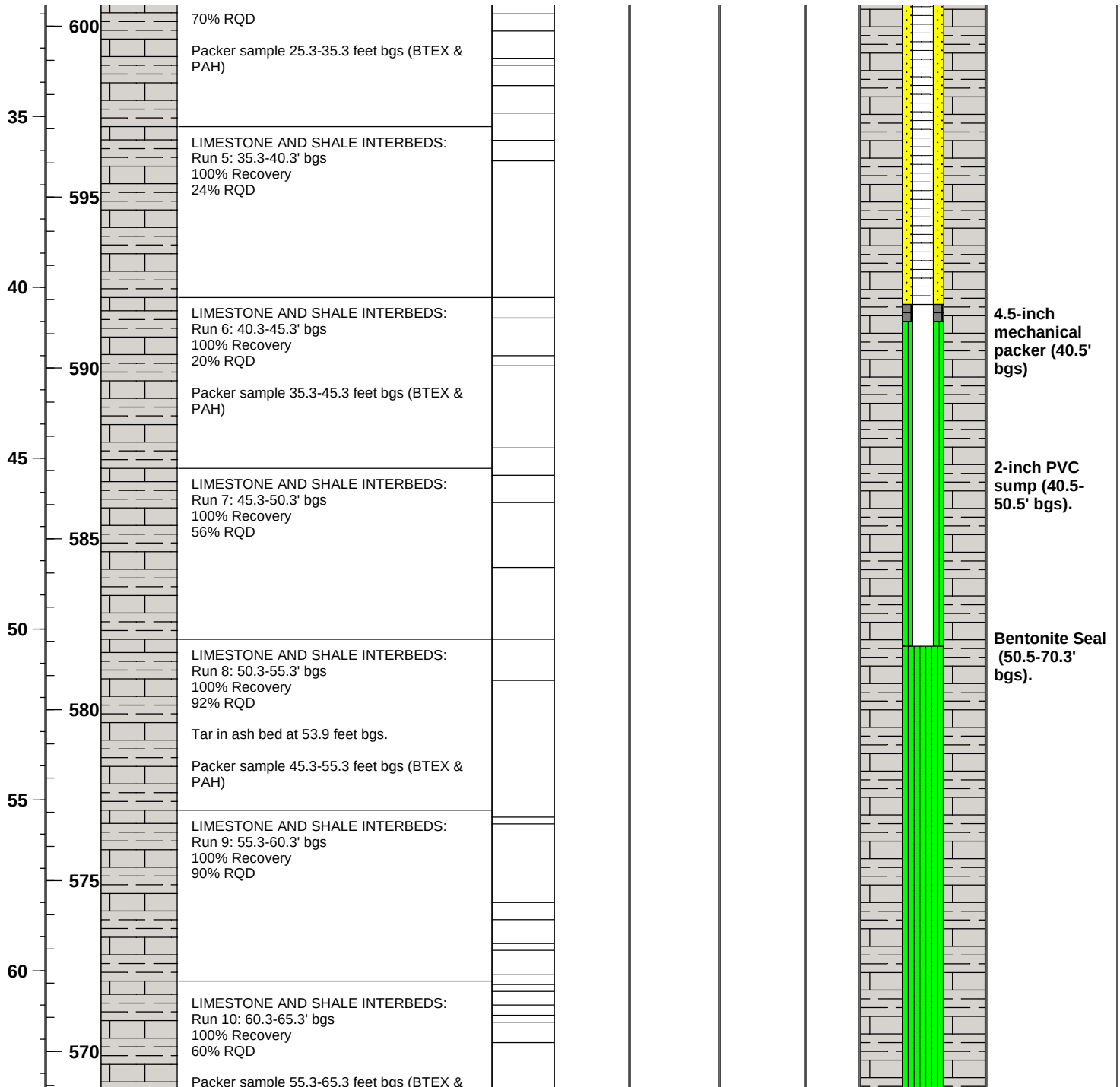
Page 1 of 3



PROJECT:	NYSEG	ELEVATION:	GRD. 632.36'/ TOC 631.96' amsl
BORING NO.:	MW-11D	BORING LOCATION:	N 1068206.62/ E 821148.28
DATE:	7/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	70.3 Feet	SURFACE CONDITIONS:	Grass Surface

Page 2 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bgs)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
--------------------	-----------------	------------------	-------------	-----------------------------	------------------------------	--------------------------	--------------	----------------------	---------------------





DRAFT
LOG OF BORING



PROJECT: NYSEG
BORING NO.: MW-11D
DATE: 7/05
BORING DIAMETER: 6" OVB&TOR/4" B
BORING DEPTH: 70.3 Feet

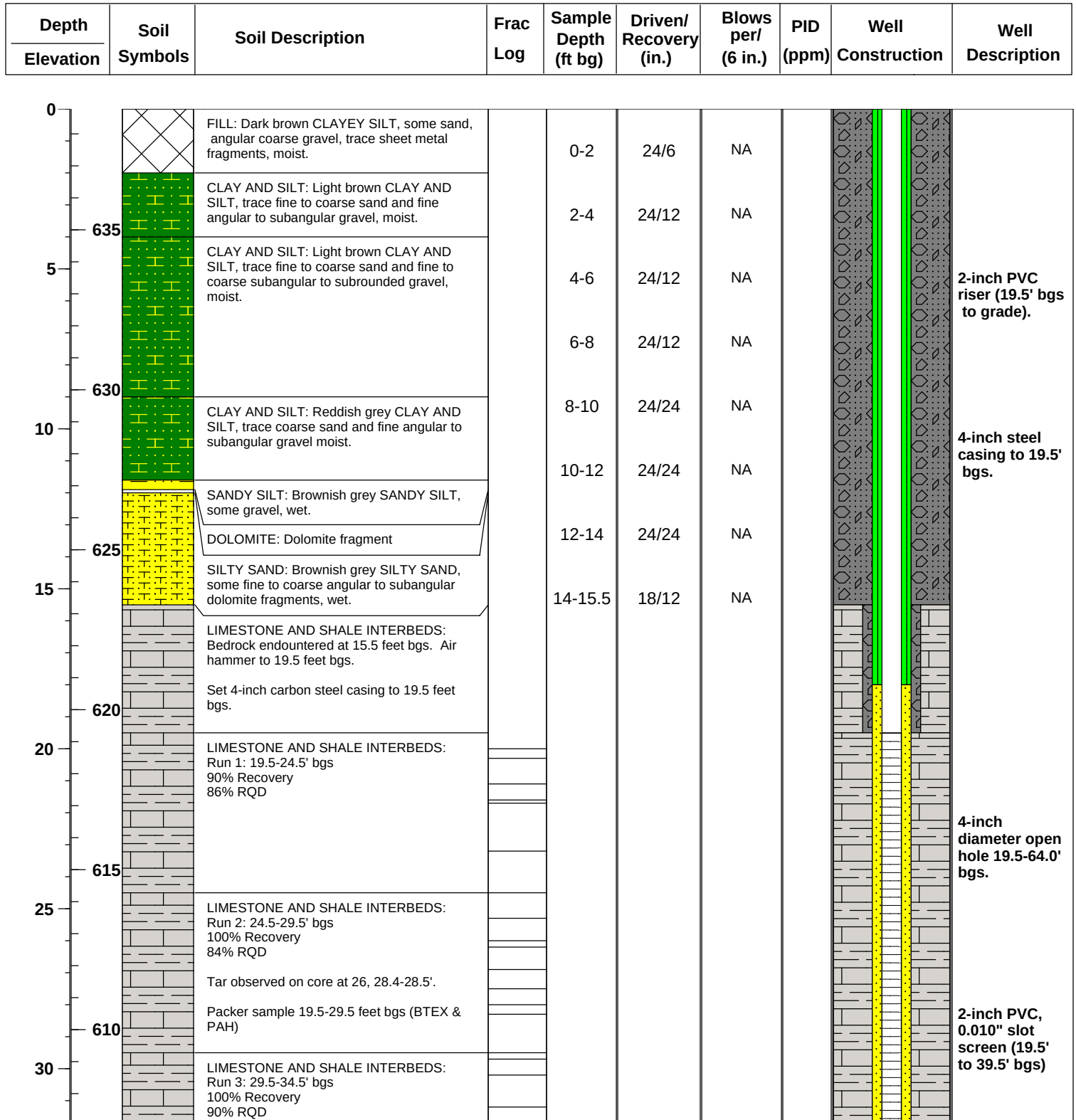
ELEVATION: GRD. 632.36'/ TOC 631.96' amsl
BORING LOCATION: N 1068206.62/ E 821148.28
METHOD OF DRILLING: 6-inch air hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Grass Surface

Page 3 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
65		PAH)							
565		LIMESTONE AND SHALE INTERBEDS: Run 11: 65.3-70.3' bgs 100% Recovery 76% RQD							
70		Packer sample 65.3-70.3 feet bgs (BTEX & PAH).							

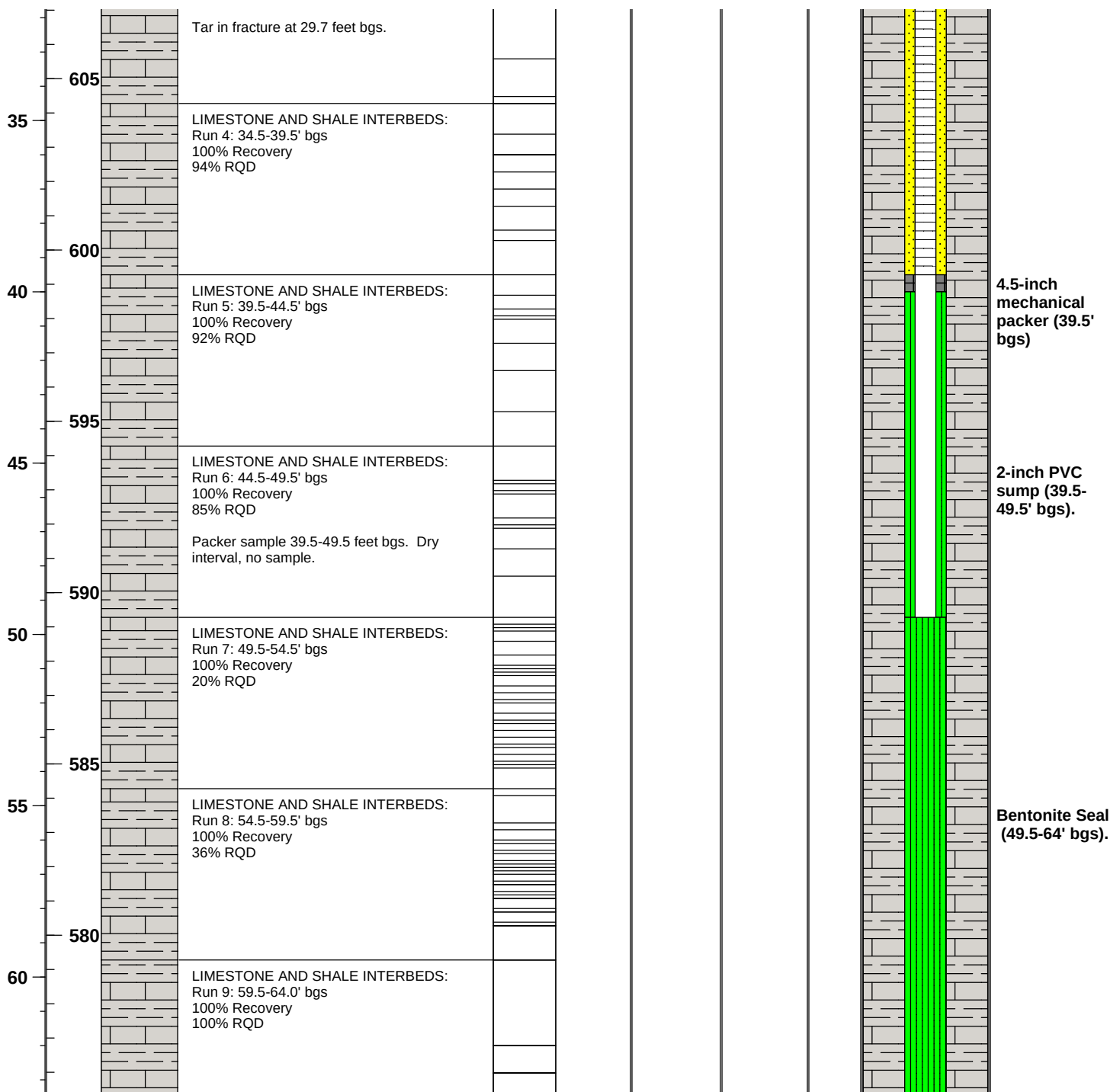
PROJECT:	NYSEG	ELEVATION:	GRD. 638.78' / TOC 638.32' amsl
BORING NO.:	MW-12D	BORING LOCATION:	N 1068224.09 / E 821482.36
DATE:	8/16/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	2" Split Spoons & HQ Core
BORING DEPTH:	64.0 Feet	SURFACE CONDITIONS:	Grass Surface

Page 1 of 3



PROJECT:	NYSEG	ELEVATION:	GRD. 638.78' / TOC 638.32' amsl
BORING NO.:	MW-12D	BORING LOCATION:	N 1068224.09 / E 821482.36
DATE:	8/16/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	2" Split Spoons & HQ Core
BORING DEPTH:	64.0 Feet	SURFACE CONDITIONS:	Grass Surface

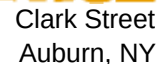
Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bgs)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
--------------------	-----------------	------------------	-------------	-----------------------------	------------------------------	--------------------------	--------------	----------------------	---------------------





DRAFT

LOG OF BORING



PROJECT:	NYSEG	ELEVATION:	GRD. 638.78'/ TOC 638.32' amsl
BORING NO.:	MW-12D	BORING LOCATION:	N 1068224.09/ E 821482.36
DATE:	8/16/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" Bore	SAMPLE TYPE:	2" Split Spoons & HQ Core
BORING DEPTH:	64.0 Feet	SURFACE CONDITIONS:	Grass Surface

Page 3 of 3

Depth	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
Elevation									



PROJECT:	NYSEG	ELEVATION:	GRD. 653.32' / TOC 652.92' amsl
BORING NO.:	MW-13B	BORING LOCATION:	N 1068187.54 / E 820588.92
DATE:	8/11/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	45.5 Feet	SURFACE CONDITIONS:	Grass Surface

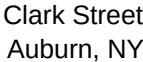
Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0		No overburden sampling. See log for GB-01 for overburden stratigraphy.							
		Bedrock encountered at 30.0 feet bgs.							
		Air hammer to 34.5 feet bgs.							
650		Set 4-inch carbon steel casing to 34.5 feet bgs.							
5									
645									
10									
640									
15									
635									
20									
630									
25									
625									
30									

4-inch steel casing to 34.5' bgs.

4-inch diameter open hole 34.5-45.5' bgs.



LOG OF BORING



PROJECT:	NYSEG	ELEVATION:	GRD. 653.32'/ TOC 652.92' amsl
BORING NO.:	MW-13B	BORING LOCATION:	N 1068187.54/ E 820588.92
DATE:	8/11/05	METHOD OF DRILLING:	6-inch air hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" BPI	SAMPLE TYPE:	HQ Core
BORING DEPTH:	45.5 Feet	SURFACE CONDITIONS:	Grass Surface

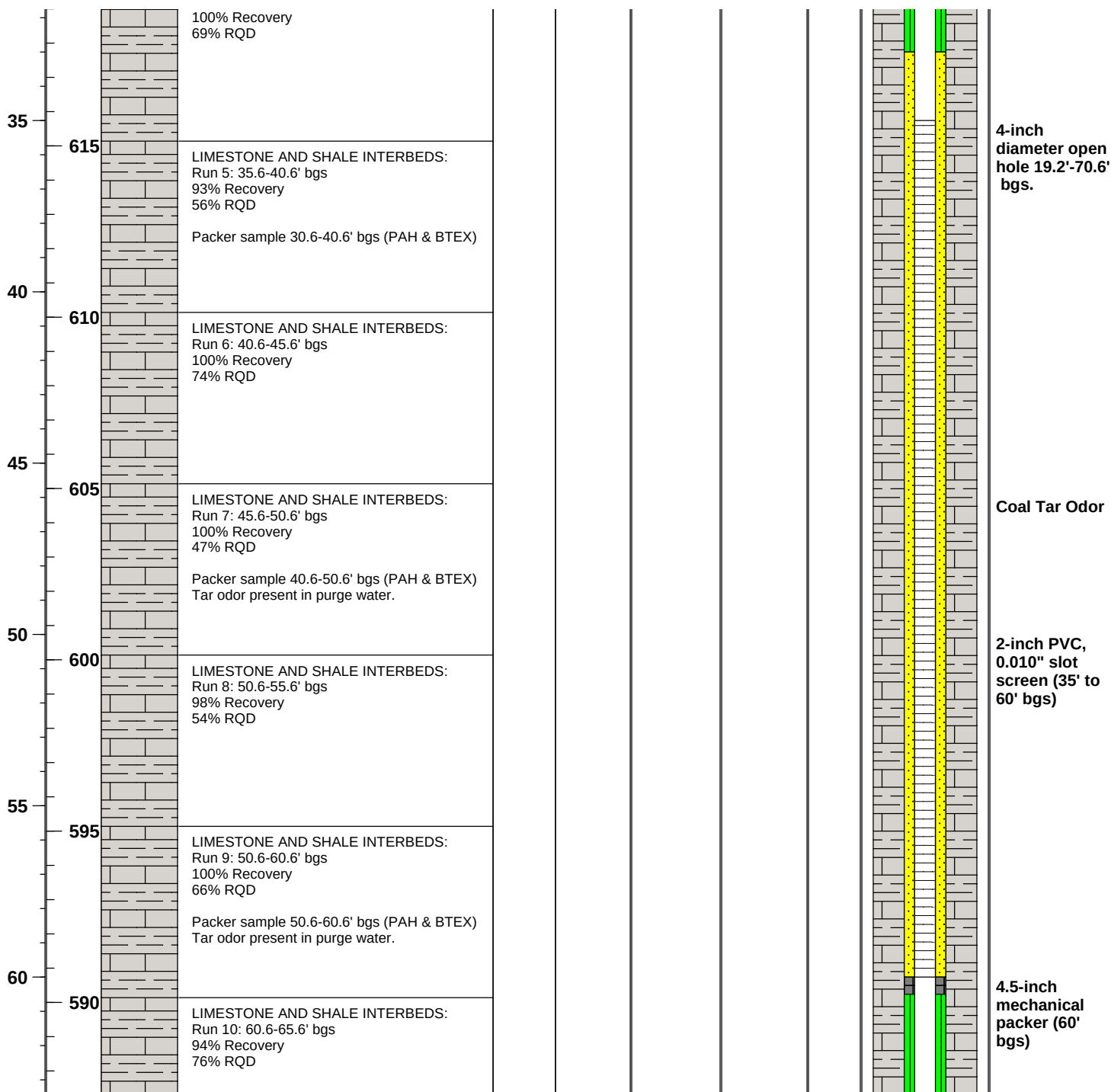
[illegible]

PROJECT:	NYSEG	ELEVATION:	GRD. 650.74' / TOC 650.74' amsl
BORING NO.:	MW-14D	BORING LOCATION:	1068354.23 N/821864.52 E
DATE:	11/29/05	METHOD OF DRILLING:	6" Air Hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	70.6 Feet	SURFACE CONDITIONS:	Grass Surface

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bgs)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 650		No soil samples collected. 6-inch air hammer to 19' bgs. Bedrock encountered at 14' bgs.							
5 645									
10 640									4-inch steel casing to 19.2' bgs.
15 635									2-inch PVC riser (35' bgs to grade).
20 630		LIMESTONE AND SHALE INTERBEDS: Run 1: 19.2-20.6' bgs 100% Recovery 71% RQD							
25 625		LIMESTONE AND SHALE INTERBEDS: Run 2: 20.6-25.6' bgs 97% Recovery 74% RQD							
30 620		LIMESTONE AND SHALE INTERBEDS: Run 3: 25.6-30.6' bgs 97% Recovery 88% RQD Packer sample 19.2-30.6' bgs. Interval dry. No sample collected.							
		LIMESTONE AND SHALE INTERBEDS: Run 4: 30.6-35.6' bgs							

PROJECT:	NYSEG	ELEVATION:	GRD. 650.74' / TOC 650.74' amsl
BORING NO.:	MW-14D	BORING LOCATION:	1068354.23 N/821864.52 E
DATE:	11/29/05	METHOD OF DRILLING:	6" Air Hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	70.6 Feet	SURFACE CONDITIONS:	Grass Surface

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bgs)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
--------------------	-----------------	------------------	-------------	-----------------------------	------------------------------	--------------------------	--------------	----------------------	---------------------





DRAFT

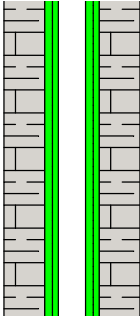
LOG OF BORING

NYSE

Clark Street
Auburn, NY

PROJECT:	NYSEG	ELEVATION:	GRD. 650.74'/ TOC 650.74' amsl
BORING NO.:	MW-14D	BORING LOCATION:	1068354.23 N/821864.52 E
DATE:	11/29/05	METHOD OF DRILLING:	6" Air Hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" BFI	SAMPLE TYPE:	HQ Core
BORING DEPTH:	70.6 Feet	SURFACE CONDITIONS:	Grass Surface

Page 3 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
65	585	LIMESTONE AND SHALE INTERBEDS: Run 11: 65.6-70.6' bgs 100% Recovery 90% RQD							2-inch PVC sump (60-70' bgs).
70		Packer sample 60.6-70.6' bgs. Interval dry. No sample collected.							

PROJECT:	NYSEG	ELEVATION:	GRD. 639.87' / TOC 639.87' amsl
BORING NO.:	MW-15D	BORING LOCATION:	1068568.28 N/821649.17 E
DATE:	11/30/05	METHOD OF DRILLING:	6" Air Hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	65.2 Feet	SURFACE CONDITIONS:	Asphalt Surface

Page 1 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0		No soil samples collected. 6-inch air hammer to 8' bgs. Bedrock encountered at 5' bgs.							
5	635								4-inch steel casing to 8.2' bgs.
10	630	LIMESTONE AND SHALE INTERBEDS: Run 1: 8.2-13.2' bgs 96% Recovery 63% RQD							
15	625	LIMESTONE AND SHALE INTERBEDS: Run 2: 13.2-15.2' bgs 92.5% Recovery 43% RQD							
20	620	LIMESTONE AND SHALE INTERBEDS: Run 3: 15.2-20.2' bgs 98% Recovery 86% RQD Packer sample 8.2-20.2' bgs (PAH & BTEX)							
25	615	LIMESTONE AND SHALE INTERBEDS: Run 4: 20.2-25.2' bgs 100% Recovery 90% RQD							
30	610	LIMESTONE AND SHALE INTERBEDS: Run 5: 25.2-30.2' bgs 100% Recovery 84% RQD Packer sample 20.2-30.2' bgs (PAH & BTEX)							
		LIMESTONE AND SHALE INTERBEDS: Run 6: 30.2-35.2' bgs 100% Recovery							4-inch diameter open hole 8.2-65.2'

PROJECT:	NYSEG	ELEVATION:	GRD. 639.87' / TOC 639.87' amsl
BORING NO.:	MW-15D	BORING LOCATION:	1068568.28 N/821649.17 E
DATE:	11/30/05	METHOD OF DRILLING:	6" Air Hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	65.2 Feet	SURFACE CONDITIONS:	Asphalt Surface

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bgs)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
35	605	99% RQD							bgs.
40	600	LIMESTONE AND SHALE INTERBEDS: Run 7: 35.2-40.2' bgs 100% Recovery 96% RQD Packer sample 30.2-40.2' bgs (PAH & BTEX)							
45	595	LIMESTONE AND SHALE INTERBEDS: Run 8: 40.2-45.2' bgs 100% Recovery 84% RQD							
50	590	LIMESTONE AND SHALE INTERBEDS: Run 9: 45.2-50.2' bgs 100% Recovery 60% RQD Packer sample 40.2-50.2' bgs (PAH & BTEX)							
55	585	LIMESTONE AND SHALE INTERBEDS: Run 10: 50.2-55.2' bgs 100% Recovery 99% RQD							
60	580	LIMESTONE AND SHALE INTERBEDS: Run 11: 55.2-60.2' bgs 100% Recovery 92% RQD Packer sample 50.2-65.2' bgs. Interval dry. No sample collected.							
		LIMESTONE AND SHALE INTERBEDS: Run 12: 60.2-65.2' bgs 100% Recovery 100% RQD							



DRAFT
LOG OF BORING



PROJECT: NYSEG
BORING NO.: MW-15D
DATE: 11/30/05
BORING DIAMETER: 6" OVB&TOR/4" B
BORING DEPTH: 65.2 Feet

ELEVATION: GRD. 639.87' TOC 639.87' amsl
BORING LOCATION: 1068568.28 N/821649.17 E
METHOD OF DRILLING: 6" Air Hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Asphalt Surface

Page 3 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
65 575								 	



New York

DRAFT

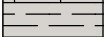
LOG OF BORING



Clark Street
Auburn, NY

PROJECT: NYSEG
BORING NO.: MW-16D
DATE: 12/2/05
BORING DIAMETER: 6" OVB&TOR/4" B
BORING DEPTH: 64.35 Feet
ELEVATION: GRD. 636.85'/ TOC 636.85' amsl
BORING LOCATION: 1068573.89 N/821273.70 E
METHOD OF DRILLING: 6" Air Hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Asphalt Surface

Page 3 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
†								 	

LOG OF BORING

PROJECT: NYSEG
BORING NO.: MW-17D
DATE: 12/6/05
BORING DIAMETER: 6" OVB&TOR/4" BPS
BORING DEPTH: 65.15 Feet
ELEVATION: GRD. 635.45' / TOC 635.45' amsl
BORING LOCATION: 1068609.23 N/820952.56 E
METHOD OF DRILLING: 6" Air Hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Asphalt Surface

Page 1 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 635		No soil samples collected. 6-inch air hammer to 12.45' bgs. Bedrock encountered at 9' bgs.							
5 630									4-inch steel casing to 12.45' bgs.
10 625									
15 620		LIMESTONE AND SHALE INTERBEDS: Run 1: 12.45-15.15' bgs 100% Recovery 88% RQD							
20 615		LIMESTONE AND SHALE INTERBEDS: Run 2: 15.15-20.15' bgs 100% Recovery 100% RQD							
25 610		LIMESTONE AND SHALE INTERBEDS: Run 3: 20.15-25.15' bgs 100% Recovery 98% RQD							
30 605		LIMESTONE AND SHALE INTERBEDS: Run 4: 25.15-30.15' bgs 100% Recovery 100% RQD							
		LIMESTONE AND SHALE INTERBEDS: Run 5: 30.15-35.15' bgs 100% Recovery							4-inch diameter open hole 12.45-



DRAFT

LOG OF BORING



PROJECT: NYSEG
BORING NO.: MW-17D
DATE: 12/6/05
BORING DIAMETER: 6" OVB&TOR/4" B
BORING DEPTH: 65.15 Feet
ELEVATION: GRD. 635.45'/ TOC 635.45' amsl
BORING LOCATION: 1068609.23 N/820952.56 E
METHOD OF DRILLING: 6" Air Hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Asphalt Surface

Page 2 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
35	600	93% RQD LIMESTONE AND SHALE INTERBEDS: Run 6: 35.15-40.15' bgs 100% Recovery 78% RQD							65.15' bgs.
40	595	LIMESTONE AND SHALE INTERBEDS: Run 7: 40.15-45.15' bgs 100% Recovery 100% RQD							
45	590	LIMESTONE AND SHALE INTERBEDS: Run 8: 45.15-50.15' bgs 100% Recovery 100% RQD							
50	585	LIMESTONE AND SHALE INTERBEDS: Run 9: 50.15-55.15' bgs 100% Recovery 98% RQD							
55	580	LIMESTONE AND SHALE INTERBEDS: Run 10: 55.15-60.15' bgs 100% Recovery 100% RQD							
60	575	LIMESTONE AND SHALE INTERBEDS: Run 11: 60.15-65.15' bgs 96% Recovery 98% RQD							



DRAFT
LOG OF BORING



PROJECT: NYSEG
BORING NO.: MW-17D
DATE: 12/6/05
BORING DIAMETER: 6" OVB&TOR/4" B
BORING DEPTH: 65.15 Feet

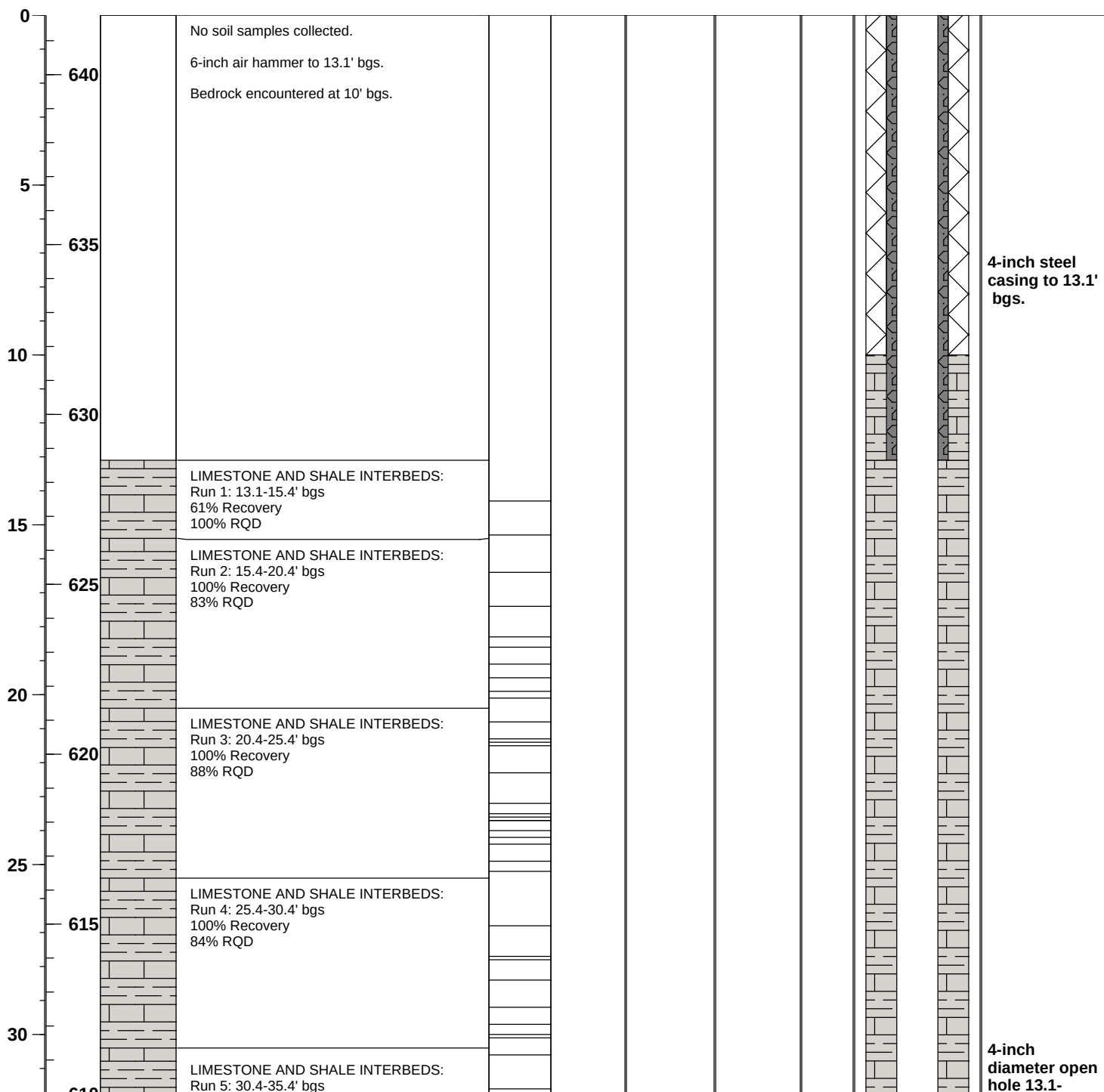
ELEVATION: GRD. 635.45'/ TOC 635.45' amsl
BORING LOCATION: 1068609.23 N/820952.56 E
METHOD OF DRILLING: 6" Air Hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Asphalt Surface

Page 3 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
65									

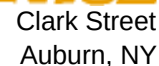
PROJECT:	NYSEG	ELEVATION:	GRD. 641.75'/ TOC 641.75' amsl
BORING NO.:	MW-18D	BORING LOCATION:	1068633.37 N/820511.78 E
DATE:	12/5/05	METHOD OF DRILLING:	6" Air Hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	66.65 Feet	SURFACE CONDITIONS:	Asphalt Surface

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bgs)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
--------------------	-----------------	------------------	-------------	-----------------------------	------------------------------	--------------------------	--------------	----------------------	---------------------





LOG OF BORING



PROJECT:	NYSEG	ELEVATION:	GRD. 641.75'/ TOC 641.75' amsl
BORING NO.:	MW-18D	BORING LOCATION:	1068633.37 N/820511.78 E
DATE:	12/5/05	METHOD OF DRILLING:	6" Air Hammer & HQ Core
BORING DIAMETER:	6" OVB&TOR/4" B	SAMPLE TYPE:	HQ Core
BORING DEPTH:	66.65 Feet	SURFACE CONDITIONS:	Asphalt Surface

Page 2 of 3

Depth	Soil	Soil Description	Frac	Sample	Driven/	Blows	PID	Well	Well
Elevation	Symbols		Log	Depth	Recovery	per/	(ppm)	Construction	Description
				(ft bg)	(in.)	(6 in.)			
610		100% Recovery 90% RQD							66.65' bgs.
35									
605		LIMESTONE AND SHALE INTERBEDS: Run 6: 35.4-40.4' bgs 100% Recovery 84% RQD							
40									
600		LIMESTONE AND SHALE INTERBEDS: Run 7: 40.4-45.4' bgs 100% Recovery 84% RQD							
45									
595		LIMESTONE AND SHALE INTERBEDS: Run 8: 45.4-50.4' bgs 100% Recovery 96% RQD							
50									
590		LIMESTONE AND SHALE INTERBEDS: Run 9: 50.4-55.4' bgs 100% Recovery 90% RQD							
55									
585		LIMESTONE AND SHALE INTERBEDS: Run 10: 55.4-60.4' bgs 100% Recovery 88% RQD							
60									
580		LIMESTONE AND SHALE INTERBEDS: Run 11: 60.4-65.4' bgs 100% Recovery 80% RQD							



DRAFT
LOG OF BORING

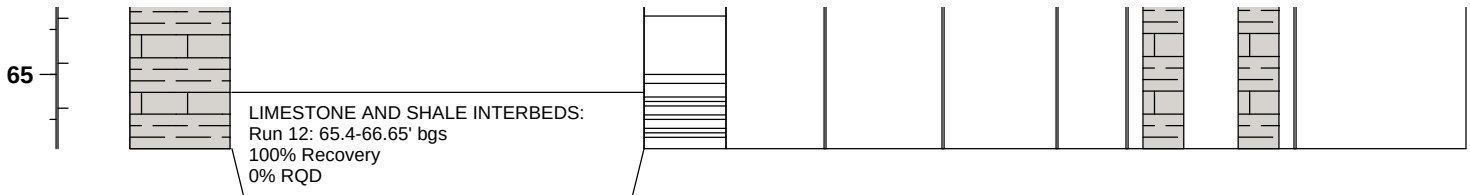


PROJECT: NYSEG
BORING NO.: MW-18D
DATE: 12/5/05
BORING DIAMETER: 6" OVB&TOR/4" B
BORING DEPTH: 66.65 Feet

ELEVATION: GRD. 641.75'/ TOC 641.75' amsl
BORING LOCATION: 1068633.37 N/820511.78 E
METHOD OF DRILLING: 6" Air Hammer & HQ Core
SAMPLE TYPE: HQ Core
SURFACE CONDITIONS: Asphalt Surface

Page 3 of 3

Depth Elevation	Soil Symbols	Soil Description	Frac Log	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
--------------------	-----------------	------------------	-------------	----------------------------	------------------------------	--------------------------	--------------	----------------------	---------------------



BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 631.04 ft asl	BOREHOLE NO: MW-PAR-01
LOCATION: Auburn, NY	GRADE ELEV.: 631.4 ft asl	START DATE: 04/09/2021
CLIENT: Iberdrola	OBS. DTW: 11.8 ft bgs	COMPLETION DATE: 04/09/2021
EASTING, NORTHING (ft): 820842.1 ft, 1068293.1 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 1

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	MONITORING WELL	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Moist, loose, brown, SILT, some sand and gravel, trace clay, vegation [SM]									COMPLETED WITH FLUSH MOUNT ROAD BOX W/ CONCRETE APRON.	0
			HC	0	-	-	100	0			
										BENTONITE GROUT (0.5'-3')	
										2" OD PVC RISER (0'-7.11')	
5	Dry, loose, brown, SAND, little gravel, trace silt, wood debris [SM]		SS	1	2	-	-	0			5
			SS	1	6	-	-	0			
			SS	1	6	-	-	0			
			SS	1	6	-	66	0			
	Dry, loose, brown, SAND, little gravel, trace silt [SM]		SS	2	8	-	-	0		BENTONITE ANNULAR SEAL (3'-6.9')	
			SS	2	8	-	-	0		0.010 SLOT 2" OD PVC SCREEN (7.11'-12.11')	
			SS	2	9	-	-	0			
			SS	2	10	-	66	0			
	Dry, loose, brown, SAND, little gravel, trace silt [SM]		SS	3	2	-	-	0			
10	Moist, loose, brown, SAND, little gravel, trace silt [SM]		SS	3	2	-	-	0			10
			SS	3	3	-	-	0			
			SS	3	3	-	44	0			
	Moist, soft, brown, SILT, some sand, little clay, trace gravel [SM]		SS	4	6	-	-	0			
			SS	4	9	-	-	0			
			SS	4	5	-	-	0			
	Dry, dense, gray, GRAVEL, weathered shale fragments [GW]		SS	4	50/5"	-	79	0.5		#28 BELLEMARE SAND PACK (6.9'-12.11')	
	BOREHOLE TD @ 13 FT BGS										
15											15



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon

BOREHOLE DIA.: 2 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 631.47 ft asl	BOREHOLE NO: MW-PAR-02
LOCATION: Auburn, NY	GRADE ELEV.: 631.7 ft asl	START DATE: 04/29/2021
CLIENT: Iberdrola	OBS. DTW: 5 ft bgs	COMPLETION DATE: 04/29/2021
EASTING, NORTHING (ft): 821025.8 ft, 1068240.4 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 1

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	MONITORING WELL	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Moist, soft, gray-black, SILT, some sand and gravel, brick debris, wood debris, vegetation [GM]		HC	0	-	-	100	0		COMPLETED WITH FLUSH MOUNT ROAD BOX W/ CONCRETE APRON BENTONITE GROUT (0.5'-1') BENTONITE ANNULAR SEAL (1'-3')	0
										#28 BELLEMAIRE SAND PACK (3'-12.6')	
										2" OD PVC RISER (0'-4')	
										.010 SLOT 2" OD PVC SCREEN (4'-12.6')	
	Moist, soft, green-gray, SILT, some sand, little clay [ML]										
5	Wet, soft, gray-black, SILT, some sand, little clay [ML]		SS	1	2	-	-	0			
			SS	1	2	-	-	0			
			SS	1	3	-	-	0			
			SS	1	5	-	25	0			
	Wet, soft, brown, SILT and SAND [SM]		SS	2	5	-	-	0			
	Wet, soft, purple, SILT and SAND [SM]		SS	2	5	-	-	0			
			SS	2	6	-	-	0			
			SS	2	8	-	66	0			
	Wet, medium stiff, purple, SILT and SAND [SM]		SS	3	8	-	-	0			
	Wet, stiff, brown-gray, SILT and SAND, some gravel [GM]		SS	3	11	-	-	0			
10			SS	3	16	-	-	0			
			SS	3	72	-	60	0.1			
	Wet, dense, brown-gray, GRAVEL, some sand and silt [GM]		SS	4	41	-	-	0			
			SS	4	58	-	-	0			
			SS	4	31	-	-	0			
	Wet, dense, dark gray, GRAVEL, weathered shale [GW]		SS	4	50/5"	-	60	0.3			
	BOREHOLE TD @ 13.00 FT BGS										
15											15



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon

BOREHOLE DIA.: 2 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.19 ft asl	BOREHOLE NO: RW-01
LOCATION: Auburn, NY	GRADE ELEV.: 630.4 ft asl	START DATE: 03/29/2021
CLIENT: Iberdrola	OBS. DTW: 3.34 ft bgs	COMPLETION DATE: 03/31/2021
EASTING, NORTHING (ft): 820772.3 ft, 1068276.7 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Moist, loose, brown, SAND and SILT, some gravel, trace clay [SM]									COMPLETED WITH FLUSH MOUNT ROAD BOX W/ CONCRETE APRON (0' - 0.5')	0
										BENTONITE GROUT (0.5'-4.0')	
			HC	0	-	-	100	0			
										BENTONITE ANNULAR SEAL (4.0' - 6.1')	
5	Moist, soft, brown, SAND and SILT, little gravel, trace clay [SM]		SS	1	3	-	-	0			5
			SS	1	4	-	-	0			
			SS	1	5	-	-	0		#6 BELLEMARE SAND PACK (6.1'-23.1')	
			SS	1	6	-	50	0.1			
	Wet, soft, brown, SAND and SILT, some gravel, trace clay [SM]		SS	2	7	-	-	0			
			SS	2	6	-	-	0			
	Moist, soft, brown, SAND and SILT, some gravel, trace clay [SM]		SS	2	3	-	-	0		4" OD 0.050 SLOT PVC SCREEN (8.1'-23.1')	
			SS	2	3	-	65	0.1			
	Wet, soft, brown, Sand and Silt, some gravel, trace clay [SM]		SS	3	1	-	-	0			
			SS	3	1	-	-	0			
			SS	3	1	-	-	0			
			SS	3	1	-	33	0			
	Wet, loose, brown, GRAVEL, little silt [GM]		SS	4	83	-	-	0			
	Wet, stiff, brown, SAND and SILT, little gravel [GM]		SS	4	100/1"	-	55	1.5			
	Moist, stiff, gray, GRAVEL, little silt and clay, weatherd shale [GC]										
	Dark gray, mudstone (carbonate mud), fossils, pyrite										
			HQ	5	-	74	95	0		REAMED COREHOLE DIAMETER INCREASED FROM 3.7" TO 5.9" (12'-28.2')	
15											15



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.19 ft asl	BOREHOLE NO: RW-01
LOCATION: Auburn, NY	GRADE ELEV.: 630.4 ft asl	START DATE: 03/29/2021
CLIENT: Iberdrola	OBS. DTW: 3.34 ft bgs	COMPLETION DATE: 03/31/2021
EASTING, NORTHING (ft): 820772.3 ft, 1068276.7 ft	DATUM: NAD 83, NAVD 88	PAGE 2 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
15	Light gray, wackestone, interbedded shale, pyrite, fossils, vertical fractures		HQ	5	-	74	95	0			15
	Dark gray, wackestone, interbedded shale, fossils, pyrite, tar blebs										
	Light gray, wackestone, interbedded shale, little chert, coral fossils, pyrite, vertical fractures, tar blebs		HQ	6	-	60	100	25.6			
20											20
	Light gray, packestone, interbedded shale, coral fossils										
			HQ	7	-	95	100	0			
25	Light gray packestone, chert gravel, pyrite									4" OD PVC SUMP (23.1'-28.2')	25
	Dark gray, interbedded shale, wackestone, fossils, pyrite										
	No Recovery		NR		-	-	-	0		BENTONITE ANNULAR SEAL (23.1'-28.2')	
	BOREHOLE TD @ 28.20 FT BGS										
30											30



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.68 ft asl	BOREHOLE NO: RW-02
LOCATION: Auburn, NY	GRADE ELEV.: 631 ft asl	START DATE: 03/31/2021
CLIENT: Iberdrola	OBS. DTW: 3.56 ft bgs	COMPLETION DATE: 04/01/2021
EASTING, NORTHING (ft): 820795.9 ft, 1068282.1 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Moist, loose, brown, SAND and SILT, some gravel, trace clay [SM]									FLUSH MOUNT ROAD BOX W/ CONCRETE APRON (0'-1')	0
										BENTONITE GROUT (1'-4.4')	
			HC	0	-	-	100	0			
										BENTONITE ANNULAR SEAL (4.4'-7.8')	
5	Wet, medium stiff, brown, SAND and SILT, some gravel, little clay [SM]		SS	1	3	-	-	0			5
			SS	1	6	-	-	0			
			SS	1	8	-	-	0			
			SS	1	3	-	33	0			
	Wet, loose, brown, SILT and Gravel, some sand, little, clay [GM]		SS	2	6	-	-	0			
			SS	2	5	-	-	0		#6 BELLEMARE SAND PACK (7.8'-19.1')	
			SS	2	4	-	-	0			
			SS	2	4	-	90	0			
	Wet, loose, brown, SILT and Gravel [ML]		SS	3	1	-	-	0		4" OD 0.050 SLOT PVC SCREEN (9.2'- 19.2')	
	Wet, soft, brown, SILT, little clay, trace gravel [ML]		SS	3	2	-	-	0			
10			SS	3	1	-	-	0			10
			SS	3	2	-	50	0			
	Wet, soft, brown, SILT, little clay, trace gravel [ML]		SS	4	4	-	-	0			
			SS	4	3	-	-	0			
			SS	4	3	-	-	0			
			SS	4	3	-	40	0			
	Moist, stiff, gray, GRAVEL, little silt and clay, weathered shale [GM]		SS	5	100/2"	-	30	3.3		SPLIT SPOON REFUSAL (13.2')	
	No Recovery		SS	5	-	-	0	0			
	Gray wackestone, interbedded shale, fossils, pyrite, tar blebs		HQ	6	-	76	-	6		REAMED COREHOLE DIAMETER INCREASED FROM 3.7" TO 5.9" (13.2' - 24.3')	
15											15



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.68 ft asl	BOREHOLE NO: RW-02
LOCATION: Auburn, NY	GRADE ELEV.: 631 ft asl	START DATE: 03/31/2021
CLIENT: Iberdrola	OBS. DTW: 3.56 ft bgs	COMPLETION DATE: 04/01/2021
EASTING, NORTHING (ft): 820795.9 ft, 1068282.1 ft	DATUM: NAD 83, NAVD 88	PAGE 2 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
15											15
			HQ	6	-	76	-	6			
	Light gray, packstone, interbedded shale, coral fossils, pyrite									4" OD PVC SUMP (19.2'-24.3')	
20			HQ	7	-	94	-	0		BENTONITE ANNULAR SEAL (19.1' - 24.3')	20
	BOREHOLE TD @ 24.30 FT BGS										
25											25
30											30



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.26 ft asl	BOREHOLE NO: RW-03
LOCATION: Auburn, NY	GRADE ELEV.: 630.6 ft asl	START DATE: 04/01/2021
CLIENT: Iberdrola	OBS. DTW: 3.03 ft bgs	COMPLETION DATE: 04/05/2021
EASTING, NORTHING (ft): 820825.7 ft, 1068296.5 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Wet, soft, brown, SILT and SAND, some gravel, organics [GM]									COMPLETED WITH FLUSH MOUNT ROAD BOX W/ CONCRETE APRON BENTONITE GROUT (0.5'-1.6')	0
										BENTONITE ANNULAR SEAL (1.6'-5.9')	
			HC	0	-	-	100	0		4" OD PVC RISER (0.0'-7.3')	
5	Wet, soft, brown, SILT, some fine sand, little gravel, trace clay, wood debris [SM]		SS	1	2	-	-	0			5
			SS	1	4	-	-	0			
			SS	1	4	-	-	0		#6 BELLERMARE SAND PACK (5.9'-22.1')	
			SS	1	7	-	65	0			
	Wet, looe, brown, GRAVEL, some silt and sand [GM]		SS	2	4	-	-	0		4" OD .050 SLOT PVC SCREEN (7.3'-22.3')	
	Wet, soft, brown, SILT and SAND, trace gravel and clay [SM]		SS	2	5	-	-	0			
			SS	2	6	-	-	0			
			SS	2	6	-	80	0			
	Wet, soft, brown, SAND and SILT, trace gravel and clay [SM]		SS	3	4	-	-	0			
			SS	3	2	-	-	0			
10	Wet, dense, gray, GRAVEL [GM]		SS	3	2	-	-	0			10
	Dry, dense, gray, GRAVEL, little silt, weathered shale [GM]		SS	3	50/5"	-	65	5.5			
	NO RECOVERY		SS	4	-	-	-	0			
			SS	4	-	-	-	0			
	Dark gray, wackstone, interbedded shale, highly fractured, tar blebs		HQ	5	-	48	95	25.2		REAMED COREHOLE DIAMETER INCREASED FROM 3.7" TO 5.9" (11.0'-27.7')	
15											15



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.26 ft asl	BOREHOLE NO: RW-03
LOCATION: Auburn, NY	GRADE ELEV.: 630.6 ft asl	START DATE: 04/01/2021
CLIENT: Iberdrola	OBS. DTW: 3.03 ft bgs	COMPLETION DATE: 04/05/2021
EASTING, NORTHING (ft): 820825.7 ft, 1068296.5 ft	DATUM: NAD 83, NAVD 88	PAGE 2 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
15			HQ	5	-	48	95	25.2			15
	Gray, wackestone, interbedded shale, coral fossils, pyrite										
20			HQ	6	-	66	100	5.5			20
	Light gray, packstone, coral fossils, pyrite, chert										
25			HQ	7	-	88	100	0		4" OD PVC SUMP (22.3'-27.7')	25
										BENTONITE ANNULAR SEAL (22.1'-27.7')	
30	BOREHOLE TD @ 27.70 FT BGS										30



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.81 ft asl	BOREHOLE NO: RW-04
LOCATION: Auburn, NY	GRADE ELEV.: 631.1 ft asl	START DATE: 04/05/2021
CLIENT: Iberdrola	OBS. DTW: 3.85 ft bgs	COMPLETION DATE: 04/07/2021
EASTING, NORTHING (ft): 820872.9 ft, 1068303.3 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 4

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Moist, loose, brown, SILT, some sand and grave;, trace clay, vegetation [GM]		HC	0	-	-	100	0		COMPLETED WITH FLUSH MPUNT ROAD BOX W/ CONCRETE APRON BENTONITE GROUT (0.5'-3')	0
										BENTONITE SEAL (3'-6')	
5	Moist, loose, brown-black, SILT, some sand, little gravel, trace clay, wood debris, brick fragments [GM]		SS	1	3	-	-	0		4" OD PVC RISER (0'-7.4')	5
			SS	1	4	-	-	0			
			SS	1	4	-	-	0		#6 BELLEMARE SAND PACK (6'-47.1')	
			SS	1	3	-	50	0			
	Wet, loose, brown, SILT and GRAVEL, little fine sand [GM]		SS	2	3	-	-	0		4" OD .050 SLOT PVC SCREEN (7.4'-47.4')	
	Moist, loose, brown-black, SAND and SILT, little gravel, wood debris [SM]		SS	2	3	-	-	0			
			SS	2	3	-	-	0			
			SS	2	3	-	100	0			
10	Wet, soft, brown, SILT, some sand, little gravel [SM]		SS	3	2	-	-	0			10
			SS	3	2	-	-	0			
			SS	3	1	-	-	0			
			SS	3	1	-	30	0			
	Wet, dense, gray-black, GRAVEL, little silt, weathered shale [GW]		SS	4	1	-	-	0			
			SS	4	1	-	-	0			
			SS	4	3	-	-	0			
			SS	4	100/6"	-	25	0			
	Dark gray, wackestone, interbedded shale, pyrite		HQ	5	-	76	98	0			
15											15



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.81 ft asl	BOREHOLE NO: RW-04
LOCATION: Auburn, NY	GRADE ELEV.: 631.1 ft asl	START DATE: 04/05/2021
CLIENT: Iberdrola	OBS. DTW: 3.85 ft bgs	COMPLETION DATE: 04/07/2021
EASTING, NORTHING (ft): 820872.9 ft, 1068303.3 ft	DATUM: NAD 83, NAVD 88	PAGE 2 of 4

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
15										REAMED COREHOLE DIAMETER INCREASED FROM 3.7" TO 5.9" (13.0'-52.8')	15
	Light gray, wackestone, interbedded shale, pyrite		HQ	5	-	76	98	0			
	Gray, wackestone, interbedded shale, tar blebs										
20	Gray, packstone, interbedded shale, coral fossils, tar blebs		HQ	6	-	86	96	15			20
	Gray, packstone, interbedded shale, coral fossils, little chert, tar blebs										
25			HQ	7	-	85	99	7			25
	Chert gravel, tar blebs										
	Gray, packstone, interbedded shale, coral fossils, little chert, tar blebs										
	Gray, packstone, interbedded shale, coral fossils, little chert, tar blebs										
	Gray, wackestone, interbedded shale, fossils, some chert gravel, tar blebs		HQ	8	-	53	100	52.3			30

AVANGRID BOREHOLE LOG AVANGRID BASE PROJECT GP J AVANGRID_TEMPLATE.GDT 9/17/21



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.81 ft asl	BOREHOLE NO: RW-04
LOCATION: Auburn, NY	GRADE ELEV.: 631.1 ft asl	START DATE: 04/05/2021
CLIENT: Iberdrola	OBS. DTW: 3.85 ft bgs	COMPLETION DATE: 04/07/2021
EASTING, NORTHING (ft): 820872.9 ft, 1068303.3 ft	DATUM: NAD 83, NAVD 88	PAGE 3 of 4

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
30											30
			HQ	8	-	53	100	52.3			
	Dark gray, wackestone, interbedded shale, fossils, little chert gravel, tar blebs										
35			HQ	9	-	93	100	4.5			35
	Gray, packstone, interbedded shale, fossils, tar blebs										
40			HQ	10	-	84	100	2.1			40
	Dark gray-black, wackestone, interbedded shale										
			HQ	11	-	84	100	0			
	Gray, wackestone, interbedded shale										
45											45

AVANGRID BOREHOLE LOG AVANGRID BASE PROJECT GP J AVANGRID_TEMPLATE.GDT 9/17/21



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.81 ft asl	BOREHOLE NO: RW-04
LOCATION: Auburn, NY	GRADE ELEV.: 631.1 ft asl	START DATE: 04/05/2021
CLIENT: Iberdrola	OBS. DTW: 3.85 ft bgs	COMPLETION DATE: 04/07/2021
EASTING, NORTHING (ft): 820872.9 ft, 1068303.3 ft	DATUM: NAD 83, NAVD 88	PAGE 4 of 4

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
45			HQ	11	-	84	100	0			45
	Gray, wackestone, interbedded shale									4" OD PVC SUMP (47.4'-52.8')	
50			HQ	12	-	99	96	0		BENTONITE ANNULAR SEAL (47.1'-52.8')	50
	BOREHOLE TD @ 52.80 FT BGS										
55											55
60											60



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.60 ft asl	BOREHOLE NO: RW-05
LOCATION: Auburn, NY	GRADE ELEV.: 630.9 ft asl	START DATE: 04/20/2021
CLIENT: Iberdrola	OBS. DTW: 3.66 ft bgs	COMPLETION DATE: 04/22/2021
EASTING, NORTHING (ft): 820926.8 ft, 1068317.5 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 6

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Moist, soft, brown, SILT, some sand and gravel, trace clay, wood debris, vegetation [GM]									COMPLETED WITH FLUSH MOUNT ROAD BOX W/ CONCRETE APRON BENTONITE GROUT (0.5'-3.7')	0
			HC	0	-	-	100	0		4" OD PVC RISER (0.0'-7.9')	
										BENTONITE ANNULAR SEAL (3.7'-6.9')	
5	Moist, loose, dark brown, SAND and SILT, some gravel [GM]		SS	1	3	-	-	0			5
			SS	1	4	-	-	0			
			SS	1	3	-	-	0			
			SS	1	4	-	29	0			
	Moist, soft, brown-black, fine SAND and SILT, little gravel, trace clay [SM]		SS	2	4	-	-	0		#6 BELLEMARE SAND PACK (6.9'-67.9')	
			SS	2	6	-	-	0			
			SS	2	5	-	-	0		4" OD .050 SLOT PVC SCREEN (7.9'-67.9')	
			SS	2	4	-	5	0			
10	Moist, medium stiff, purple-brown, fine SAND and SILT, little gravel, trace clay [SM]		SS	3	2	-	-	0			10
			SS	3	4	-	-	0			
			SS	3	6	-	-	0			
			SS	3	7	-	50	16.9			
	Wet, medium stiff, purple-brown, fine SAND and SILT, little gravel, trace clay [SM]		SS	4	5	-	-	0			
	Dry, loose, dark gray, GRAVEL, weathered shale [GW]		SS	4	100/4"	-	50	1.5			
	NO RECOVERY		SS	4	-	-	-	0			
	Gray, wackestone, interbedded shale, burrows, fossils, pyrite		HQ	5	-	70	100	40.1			
15											15



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.60 ft asl	BOREHOLE NO: RW-05
LOCATION: Auburn, NY	GRADE ELEV.: 630.9 ft asl	START DATE: 04/20/2021
CLIENT: Iberdrola	OBS. DTW: 3.66 ft bgs	COMPLETION DATE: 04/22/2021
EASTING, NORTHING (ft): 820926.8 ft, 1068317.5 ft	DATUM: NAD 83, NAVD 88	PAGE 2 of 6

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
15										REAMED COREHOLE DIAMETER INCREASED FROM 3.7" TO 5.9" (12.0'-73.1')	15
	Gray, wackestone, interbedded shale, fossils, tar blebs		HQ	5	-	70	100	40.1			
	Gray, wackestone, interbedded shale, trace chert gravel, tar blebs										
	Light gray, wackestone, interbedded shale, fossils, tar blebs										
20			HQ	6	-	66	98	15			20
	Gray, packstone, coral fossils										
	Chert gravel interval										
25	Dark gray, wackestone, interbedded shale, verticle fractures, tar blebs		HQ	7	-	35	100	2			25
	Dark gray, wackestone, interbedded shale, fossils, pyrite, verticle fractures, little chert, tar bleb		HQ	8	-	75	100	2.5			
30											30



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.60 ft asl	BOREHOLE NO: RW-05
LOCATION: Auburn, NY	GRADE ELEV.: 630.9 ft asl	START DATE: 04/20/2021
CLIENT: Iberdrola	OBS. DTW: 3.66 ft bgs	COMPLETION DATE: 04/22/2021
EASTING, NORTHING (ft): 820926.8 ft, 1068317.5 ft	DATUM: NAD 83, NAVD 88	PAGE 3 of 6

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
30			HQ	8	-	75	100	2.5			30
	Dark gray, wackestone, interbedded shale, little chert, verticle fractures										
35			HQ	9	-	58	100	0.3			35
	Dark gray, wackestone, interbedded shale, fossils, horizontal and vertical fractures										
40			HQ	10	-	62	100	0.5			40
	Light gray, wackestone, interbedded shale, verticle fractures, tar blebs										
45			HQ	11	-	90	100	20.5			45



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.60 ft asl	BOREHOLE NO: RW-05
LOCATION: Auburn, NY	GRADE ELEV.: 630.9 ft asl	START DATE: 04/20/2021
CLIENT: Iberdrola	OBS. DTW: 3.66 ft bgs	COMPLETION DATE: 04/22/2021
EASTING, NORTHING (ft): 820926.8 ft, 1068317.5 ft	DATUM: NAD 83, NAVD 88	PAGE 4 of 6

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
45											45
	Dark gray, wackestone, interbedded shale, tar blebs		HQ	11	-	90	100	20.5			
	Dark gray, wackestone, interbedded shale										
	Light gray, wackestone, interbedded shale, tar blebs										
50			HQ	12	-	100	100	0			50
	Dark gray, wackestone, interbedded shale										
	Dark gray, wackestone										
	Light gray, wackestone, interbedded shale, vertical fractures										
55			HQ	13	-	90	100	0.5			55
	Dark gray, wackestone, interbedded shale										
	Light gray, wackestone										
	Gray wackestone, interbedded shale, little chert		HQ	14	-	66	98	0			
60											60



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.60 ft asl	BOREHOLE NO: RW-05
LOCATION: Auburn, NY	GRADE ELEV.: 630.9 ft asl	START DATE: 04/20/2021
CLIENT: Iberdrola	OBS. DTW: 3.66 ft bgs	COMPLETION DATE: 04/22/2021
EASTING, NORTHING (ft): 820926.8 ft, 1068317.5 ft	DATUM: NAD 83, NAVD 88	PAGE 5 of 6

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
60			HQ	14	-	66	98	0			60
	Dark gray, wackestone										
	Dark gray, wackestone, interbedded shale, horizontal fractures										
65			HQ	15	-	64	98	0.1			65
	Light gray, wackestone, interbedded shale, horizontal fractures										
	Gray, wackestone, interbedded shale, white mineralized veins										
70			HQ	16	-	88	98	0			70
										4" OD PVC SUMP (67.9'-73.1')	
										BENTONITE ANNULAR SEAL (67.9'-73.1')	
	BOREHOLE TD @ 73.10 FT BGS										
75											75

AVANGRID BOREHOLE LOG AVANGRID BASE PROJECT GP J AVANGRID_TEMPLATE.GDT 9/17/21



CONTRACTOR: ATL	EQUIPMENT: CME-55	BOREHOLE DIA.: 6 in
DRILLER: M. Childs	METHOD: Split Spoon/Rock Coring	
OVERSIGHT: Z. Cornish		

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.60 ft asl	BOREHOLE NO: RW-05
LOCATION: Auburn, NY	GRADE ELEV.: 630.9 ft asl	START DATE: 04/20/2021
CLIENT: Iberdrola	OBS. DTW: 3.66 ft bgs	COMPLETION DATE: 04/22/2021
EASTING, NORTHING (ft): 820926.8 ft, 1068317.5 ft	DATUM: NAD 83, NAVD 88	PAGE 6 of 6

[illegible]

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.77 ft asl	BOREHOLE NO: RW-06
LOCATION: Auburn, NY	GRADE ELEV.: 631 ft asl	START DATE: 04/07/2021
CLIENT: Iberdrola	OBS. DTW: 3.36 ft bgs	COMPLETION DATE: 04/10/2021
EASTING, NORTHING (ft): 820977.5 ft, 1068309.2 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Moist, soft, brown, SILT and SAND, little gravel, trace clay, wood debris, vegetation [SM]									COMPLETED WITH FLUSH MOUNT ROAD BOX W/ CONCRETE APRON BENTONITE GROUT (0.5'-2.5')	0
			HC	0	-	-	100	0		BENTONITE ANNULAR SEAL (2.5'-6') 4" OD PVC RISER (0.0'-7.05')	
5	Moist, medium stiff, SILT and SAND, little gravel [SM]		SS	1	5	-	-	0			5
			SS	1	2	-	-	0			
			SS	1	5	-	-	0		#6 BELLEMARE SAND PACK (6'-22.05')	
			SS	1	5	-	50	0			
	Wet, medium stiff, brown, SILT, little clay and gravel [ML]		SS	2	5	-	-	0		4" OD .050 SLOT PVC SCREEN (7.05'-22.05')	
			SS	2	6	-	-	0			
			SS	2	4	-	-	0			
			SS	2	4	-	100	0			
10	Wet, soft, brown, SILT, little clay, trace gravel, wood debris [ML]		SS	3	1	-	-	0			10
			SS	3	1	-	-	0			
			SS	3	3	-	-	0			
			SS	3	4	-	50	1.7			
	Wet, dense, brown-black, GRAVEL, some silt, little clay, weathered shale [GM]		SS	4	100/3"	-	13	0.5			
	Gray, wackestone, interbedded shale, burrow marks, fossils, horizontal fractures										
			HQ	5	-	83	100	0			
15											15



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.77 ft asl	BOREHOLE NO: RW-06
LOCATION: Auburn, NY	GRADE ELEV.: 631 ft asl	START DATE: 04/07/2021
CLIENT: Iberdrola	OBS. DTW: 3.36 ft bgs	COMPLETION DATE: 04/10/2021
EASTING, NORTHING (ft): 820977.5 ft, 1068309.2 ft	DATUM: NAD 83, NAVD 88	PAGE 2 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
15			HQ	5	-	83	100	0		REAMED COREHOLE DIAMETER INCREASED FROM 3.7" TO 5.9" (11.5'-27.2')	15
	Light gray, wackestone, vertical fractures										
	Dark gray, wackestone, interbedded shale, fossils, pyrite										
			HQ	6	-	78	100	0			
20											20
	Gray wackestone, fossils										
	Gray, packstone, interbedded shale, fossils									4" OD PVC SUMP (22.05'-27.2')	
	Black chert gravel interval										
	Gray, wackestone		HQ	7	-	84.6	100	0			
25										BENTONITE ANNULAR SEAL (22.05'-27.2')	25
	BOREHOLE TD @ 26.50 FT BGS										
30											30



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.55 ft asl	BOREHOLE NO: RW-07
LOCATION: Auburn, NY	GRADE ELEV.: 631.1 ft asl	START DATE: 04/09/2021
CLIENT: Iberdrola	OBS. DTW: 3.15 ft bgs	COMPLETION DATE: 04/12/2021
EASTING, NORTHING (ft): 821027.3 ft, 1068279.3 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 3

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Moist, loose, SILT and SAND, little gravel, trace clay, wood debris, vegetation [SM]									COMPLETED WITH FLUSH MOUNT ROAD BOX W/ CONCRETE APRON	0
										BENTONITE GROUT (1.0'-4.9')	
			HC	0	-	-	100	0			
										4" OD PVC RISER (0.0'-8.11')	
5	Moist, soft, brown, SILT and SAND, some gravel, trace clay [SM]		SS	1	6	-	-	0		BENTONITE ANNULAR SEAL (4.9'-7.9')	5
	Moist, soft, brown-purple, SILT and SAND, some gravel, trace clay [SM]		SS	1	3	-	-	0			
			SS	1	2	-	-	0			
			SS	1	3	-	50	0			
	Moist, medium stiff, brown-purple, SILT and SAND, some gravel, trace clay [SM]		SS	2	5	-	-	0			
			SS	2	6	-	-	0			
	Dry, medium dense, black, SAND and GRAVEL, some silt [GM]		SS	2	8	-	-	0		#6 BELLEMARE SAND PACK (7.9'-28.11')	
			SS	2	16	-	60	0		4" OD .050 SLOT PVC SCREEN (8.11'-28.11')	
	NO RECOVERY		SS	3	50/5"	-	-	0			
			SS	3	-	-	-	0			
10	Wet, dense, gray-brown, SILT and CLAY, some sand and gravel [ML]		SS	3	12	-	-	0		REAMED COREHOLE DIAMETER INCREASED FROM 3.7" TO 5.9" (9.0'-34.1')	10
			SS	3	22	-	15	0			
	Dry, dense, black, GRAVEL, weathered shale [GW]		SS	4	75	-	54	0			
	Dark gray, wackestone, interbedded shale, fossils, pyrite										
			HQ	5	-	67	73	7			
15											15



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.55 ft asl	BOREHOLE NO: RW-07
LOCATION: Auburn, NY	GRADE ELEV.: 631.1 ft asl	START DATE: 04/09/2021
CLIENT: Iberdrola	OBS. DTW: 3.15 ft bgs	COMPLETION DATE: 04/12/2021
EASTING, NORTHING (ft): 821027.3 ft, 1068279.3 ft	DATUM: NAD 83, NAVD 88	PAGE 2 of 3

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
15											15
	Light gray, wackestone, interbedded shale, fossils		HQ	5	-	67	73	7			
	Light gray, wackestone, interbedded shale, fossils, tar blebs		HQ	6	-	91	98	38			
20											20
	Light gray, packstone, interbedded shale, fossils, tar belbs										
	Light gray, packstone, interbedded shale, fossils, tar belbs Black chert gravel interval, fossils										
25											25
	Gray, packstone, fossils, interbedded shale, tar blebs		HQ	7	-	94	99	25			
	Gray, wackestone, interbedded shale, fossils, tar blebs										
	Dark gray, wackestone, fossils		HQ	8	-	94	100	2			
30										4" OD PVC SUMP (28.11'-34')	30

AVANGRID BOREHOLE LOG AVANGRID BASE PROJECT GP J AVANGRID_TEMPLATE.GDT 9/17/21



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 630.55 ft asl	BOREHOLE NO: RW-07
LOCATION: Auburn, NY	GRADE ELEV.: 631.1 ft asl	START DATE: 04/09/2021
CLIENT: Iberdrola	OBS. DTW: 3.15 ft bgs	COMPLETION DATE: 04/12/2021
EASTING, NORTHING (ft): 821027.3 ft, 1068279.3 ft	DATUM: NAD 83, NAVD 88	PAGE 3 of 3

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
30			HQ	8	-	94	100	2		BENTONITE ANNULAR SEAL (28.11'-34')	30
35	BOREHOLE TD @ 34.10 FT BGS										35
40											40
45											45



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

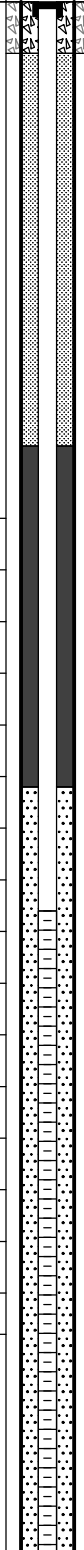
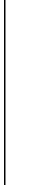
EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 631.51 ft asl	BOREHOLE NO: RW-08
LOCATION: Auburn, NY	GRADE ELEV.: 631.8 ft asl	START DATE: 04/15/2021
CLIENT: Iberdrola	OBS. DTW: 3.48 ft bgs	COMPLETION DATE: 04/16/2021
EASTING, NORTHING (ft): 821047.8 ft, 1068224 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)	
0	Wet, loose, Sand and GRAVEL, some silt, wood debris, vegetation [GP]		HC	0	-	-	100	0		COMPLETED WITH FLUSH MOUNT ROAD BOX W/ CONCRETE APRON BENTONITE GROUT (0.5'-4.3')	0	
5	NO RECOVERY		SS	1	9	-	-	0		BENTONITE ANNULAR SEAL (4.3'-7.6')	5	
			SS	1	6	-	-	0		4" OD PVC RISER (0.0'-8.8')		
			SS	1	6	-	-	0				
			SS	1	9	-	0	0				
	Moist, medium stiff, brown-purple, fine sand and silt, trace gravel and clay [SM]		SS	2	5	-	-	0		#6 BELLEMARE SAND PACK (7.6'-23.8')		
			SS	2	5	-	-	0				
			SS	2	6	-	-	0				
			SS	2	9	-	75	0				
	Moist, medium stiff, brown-purple, fine sand and silt, trace gravel and clay [SM]		SS	3	8	-	-	0		4" OD .050 SLOT PVC SCREEN (8.8'-23.8')		
			SS	3	7	-	-	0				
10	Wet, loose, gray, SAND and GRAVEL, sheen [GP]		SS	3	8	-	-	0		REAMED COREHOLE DIAMETER INCREASED FROM 3.7" TO 5.9" (12.5'-29')	10	
			SS	3	9	-	60	1				
	Wet, loose, gray, SAND and GRAVEL, sheen [GP]		SS	4	12	-	-	0				
	Wet, medium stiff, gray, SILT and CLAY, some sand [SM]		SS	4	18	-	-	0				
	Wet, dense, dark gray, GRAVEL and SILT, weathered shale [GM]		SS	4	26	-	50	1.2				
	NO RECOVERY		SS	4	100/5"	-	0	0				
	Gray, wackestone, interbedded shale, fossils		HQ	5	-	84	97	0				15
15												

AVANGRID BOREHOLE LOG AVANGRID BASE PROJECT GP J AVANGRID_TEMPLATE GDT 9/17/21



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 631.51 ft asl	BOREHOLE NO: RW-08
LOCATION: Auburn, NY	GRADE ELEV.: 631.8 ft asl	START DATE: 04/15/2021
CLIENT: Iberdrola	OBS. DTW: 3.48 ft bgs	COMPLETION DATE: 04/16/2021
EASTING, NORTHING (ft): 821047.8 ft, 1068224 ft	DATUM: NAD 83, NAVD 88	PAGE 2 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
15											15
			HQ	5	-	84	97	0			
	Gray, wackestone, interbedded shale, fossils, pyrite, tar blebs										
20			HQ	6	-	86	100	4			20
	Light gray, packstone, interbedded shale, fossils										
	Light gray, packstone, interbedded shale, fossils, pyrite										
25			HQ	7	-	99	98	0		4" OD PVC SUMP (23.8'-29')	25
	Chert gravel interval									BENTONITE ANNULAR SEAL (23.8'-29')	
	Light gray, packstone, interbedded shale, fossils, pyrite										
	BOREHOLE TD @ 27.90 FT BGS										
30											30



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

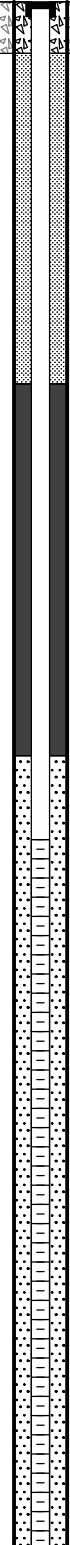
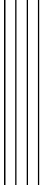
OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 632.62 ft asl	BOREHOLE NO: RW-09
LOCATION: Auburn, NY	GRADE ELEV.: 632.9 ft asl	START DATE: 04/22/2021
CLIENT: Iberdrola	OBS. DTW: 4.75 ft bgs	COMPLETION DATE: 04/26/2021
EASTING, NORTHING (ft): 821036.5 ft, 1068168.4 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Gray, loose, GRAVEL, some silt and sand, slag [GP]		HC	0	-	-	100	0		COMPLETED WITH FLUCH MOUNT ROAD BOX W/ CONCRETE APRON BENTONITE GROUT (0.5'-3.7')	0
	Moist, loose, red-brown, SILT and SAND, some gravel [GP]										
	Wet, green-gray, SILT and SAND, some clay [ML]										
5	Wet, soft, brown-gray, SILT, little clay and sand [ML]		SS	1	1	-	-	0		4" OD PVC RISER (0.0'-8.11')	5
				1	1	-	-	0			
				1	1	-	-	0			
				1	2	-	50	0.3			
	Wet, stiff, brown, SILT, little sand and clay [ML]		SS	2	10	-	-	0		#6 BELLEMARE SAND PACK (7.3'-23.85')	
				2	10	-	-	0			
	Moist, stiff, brown-purple, SILT, some sand, trace clay [SM]		SS	2	14	-	-	0		4" OD .050 SLOT PVC SCREEN (8.11'-23.11')	
				2	13	-	100	0			
	Moist, medium stiff, brown-purple, SILT, some sand, trace clay [SM]		SS	3	6	-	-	0			
				3	7	-	-	0			
10	Wet, medium dense, brown, SAND and GRAVEL, some silt [GM]		SS	3	8	-	-	0			10
				3	14	-	66	0.3			
	Moist, stiff, brown-purple, SILT, some sand, trace clay [SM]		SS	4	10	-	-	0			
	Wet, medium dense, brown, SAND and GRAVEL, some silt [SM]			4	15	-	-	0			
	Wet, dense, dark gray, GRAVEL, weathered shale [GM]		SS	4	12	-	-	0			
				4	26	-	68	1.5			
	Wet, dense, dark gray, GRAVEL, weathered shale [GM]		SS	5	50/1"	-	8	10			
	NO RECOVERY										
	Gray, wackestone, interbedded shale, burrows, fossils, pyrite		HQ	6	-	77	95	0			15
15											

AVANGRID BOREHOLE LOG AVANGRID BASE PROJECT GP J AVANGRID_TEMPLATE.GDT 9/17/21



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 632.62 ft asl	BOREHOLE NO: RW-09
LOCATION: Auburn, NY	GRADE ELEV.: 632.9 ft asl	START DATE: 04/22/2021
CLIENT: Iberdrola	OBS. DTW: 4.75 ft bgs	COMPLETION DATE: 04/26/2021
EASTING, NORTHING (ft): 821036.5 ft, 1068168.4 ft	DATUM: NAD 83, NAVD 88	PAGE 2 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
15			HQ	6	-	77	95	0		REAMED COREHOLE DIAMETER INCREASED FROM 3.7" TO 5.9" (13.2'-29.2')	15
	Gray, wackestone, interbedded shale, coral fossils										
20			HQ	7	-	88	100	0.2			
	Light gray, packstone, interbedded shale, coral fossils										
	Gray, packstone, chert gravel									4" OD PVC SUMP (23.10'-29.2')	
25			HQ	8	-	90	97	0.1			
	Gray, wackestone										
	Dark gray, wackestone									BENTONITE ANNULAR SEAL (23.85'-29.2')	
	NO RECOVERY										
	BOREHOLE TD @ 29.20 FT BGS										
30											30



CONTRACTOR: ATL

DRILLER: M. Childs

OVERSIGHT: Z. Cornish

EQUIPMENT: CME-55

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 633.37 ft asl	BOREHOLE NO: RW-10
LOCATION: Auburn, NY	GRADE ELEV.: 633.7 ft asl	START DATE: 04/22/2021
CLIENT: Iberdrola	OBS. DTW: 4.52 ft bgs	COMPLETION DATE: 04/23/2021
EASTING, NORTHING (ft): 821033.8 ft, 1068115.7 ft	DATUM: NAD 83, NAVD 88	PAGE 1 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
0	Dry, loose, gray, GRAVEL, some silt and sand, slag [GP]									COMPLETED WITH FLUSH MOUNT ROAD BOX W/ CONCRETE APRON BENTONITE GROUT (0.5'-3.11')	0
	Moist, loose, red-brown, SAND and GRAVEL, some silt, brick debris [GM]		HC	0	-	-	100	0		BENTONITE ANNULAR SEAL (3.11'-7.4')	
	Wet, soft, green-gray, SILT and SAND, some clay [ML]										
5	Moist, loose, brown-gray, SILT and SAND, some gravel, little clay [GM]		SS	1	6	-	-	0		4" OD PVC RISER (0.0'-23.85')	5
			SS	1	7	-	-	0			
			SS	1	8	-	-	0			
			SS	1	11	-	66	0			
	Wet, dense, brown-gray, GRAVEL and SAND, some silt [GM]		SS	2	31	-	-	0		#6 BELLEMARE SAND PACK (7.4'-23.7')	
			SS	2	39	-	-	0			
			SS	2	31	-	-	0			
			SS	2	27	-	25	0		4" OD .050 SLOT PVC SCREEN (8.85'-23.85')	
	Wet, dense, gray, GRAVEL, some silt, little clay [GM]		SS	3	100/5"	-	-	0			
10	Moist, medium stiff, brown-purple, SILT and SAND [SM]		SS	3	18	-	-	0			10
			SS	3	19	-	-	0			
			SS	3	11	-	50	0			
	Moist, medium dense, gray, GRAVEL, some silt, trace clay [GM]		SS	4	41	-	-	0			
			SS	4	25	-	-	0			
	Wet, dense, brown-black, GRAVEL, some silt and sand, weathered shale [GM]		SS	4	100/5"	-	-	0			
			SS	4	100/5"	-	25	0			
	Gray, wackestone, interbedded shale, fossils, pyrite, horizontal fractures		DC	5	-	-	-	0			
15			HQ	6	-	75	80	0			15



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

BOREHOLE LOG

PROJECT: 452563 - Clark Street Former MGP Site	TOC ELEV.: 633.37 ft asl	BOREHOLE NO: RW-10
LOCATION: Auburn, NY	GRADE ELEV.: 633.7 ft asl	START DATE: 04/22/2021
CLIENT: Iberdrola	OBS. DTW: 4.52 ft bgs	COMPLETION DATE: 04/23/2021
EASTING, NORTHING (ft): 821033.8 ft, 1068115.7 ft	DATUM: NAD 83, NAVD 88	PAGE 2 of 2

Depth (ft)	STRATIGRAPHIC DESCRIPTION	MATERIAL TYPE	SAMPLE TYPE	RUN NUMBER	BLOW COUNTS	RQD	RECOVERY %	PID (ppm)	WELL INSTALLATION	COMMENTS AND MONITORING WELL NOTES	Depth (ft)
15			HQ	6	-	75	80	0		REAMED COREHOLE DIAMETER INCREASED FROM 3.7" TO 5.9" (13.2'-28.10')	15
	Gray, packstone, interbedded shale, coral fossils Gray, wackestone, interbedded shale		HQ	7	-	99	100	0			
20											
	Black chert gravel interval										
	Dark gray, wackestone, interbedded shale, cherty gravel		HQ	8	-	88	100	0		4" OD PVC SUMP (23.95'-28.10')	
25										BENTONITE ANNULAR SEAL (23.7'-28.10')	25
	NO RECOVERY		NR	10	-	-	-	0			
	BOREHOLE TD @ 29.11 FT BGS										
30											30



CONTRACTOR: ATL

DRILLER: M. Childs

EQUIPMENT: CME-55

OVERSIGHT: Z. Cornish

METHOD: Split Spoon/Rock Coring

BOREHOLE DIA.: 6 in

AVANGRID BOREHOLE LOG AVANGRID BASE PROJECT GP J AVANGRID_TEMPLATE.GDT 9/17/21