AECOM Environment

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Site Management Plan
Mechanicville Central Avenue Former MGP Site
Mechanicville, New York
NYSDEC Site # 5-46-033

Final

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Engineering Certification

I certify that I am currently a NYS registered professional engineer and that this Site Management Plan for the Former Mechanicville Manufactured Gas Plant Site was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Respectfully submitted,
AECOM Technical Services Northeast, Inc.

April 8, 2011

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1.0 Introduction

This Site Management Plan (SMP) has been developed for the Mechanicville Former Manufactured Gas Plant (MGP) Site (Site) by AECOM Technical Services Northeast, Inc. (AECOM) for New York State Electric and Gas Corporation (NYSEG). The SMP has been prepared in accordance with the Record of Decision (ROD) issued by the New York State Department of Conservation (NYSDEC) in March 2006. The NYSDEC reference number for the Site is 546033.

The Site is located on North Central Avenue in Mechanicville, Saratoga County, NY (Figure 1). The Site was the subject of Order on Consent Index #DO-002-9309 between NYSEG and NYSDEC. The Site is bordered on the east by North Central Avenue (formerly the Champlain Canal); on the south by Ferris Lane; on the west by G. A. Bove & Sons, a fuel distributor; and on the north by the Anthony Kill, a small tributary that flows eastward into the Hudson River.

The rectangular Site covers approximately 1.8 acres. The neighborhood around the Site is mixed commercial/industrial and residential. A gasoline station existed southeast of the Site, and a fuel distributor and a furniture store exist west and east of the Site. An automobile repair business is located across the Anthony Kill, opposite the Site. The residences closest to the Site are situated to the south.

The Site gently slopes towards the Anthony Kill except at the bank, where there is a steep drop. The Champlain Canal once bordered the site to the east, prior to North Central Avenue. The canal was elevated and the water surface was approximately ten feet above the gas plant. The canal was abandoned in 1916. The Site was excavated and remediated in 2008-2009 and only one building (the gas regulator building) remains on the Site. The rest of the Site is covered with grass, soil and/or gravel. Currently the Site is vacant and occasionally used for parking NYSEG vehicles.

The remedial activities for the Site included:

1. Excavation and off-site treatment and disposal of the coal tar impacted soils with polycyclic aromatic hydrocarbons (PAHs) above 500 parts per million (ppm) or soils containing visible tar or non-aqueous phase liquid (NAPL) to top of bedrock;
2. Dewatering and treatment of the recovered groundwater;
3. Off-site disposal of the underground structures, their contents, associated piping, visible tarry waste, MGP impacted soils, and purifier waste near North Central Avenue;
4. Demolition of the ‘dog-house’ structure;
5. Decommissioning of the wells in the excavation area;
6. Collection of end-point samples;
7. Execution of the community air monitoring program (CAMP);
8. Stream-bank stabilization;
9. Backfilling excavated areas to grade;
10. Installation of new monitoring wells; and
11. Groundwater and NAPL monitoring.

These remedial activities occurred on the site between 2008 and 2010 as documented in: the Final Remedial Action Construction Completion Report (AECOM, 2009a) for remedial activities 1 through 9; the Long-Term NAPL Recovery Testing Letter Report to the NYSDEC dated September 11, 2009

(AECOM, 2009b) for remedial activity 10; and the NAPL Monitoring Summary 2010 letter to the NYSDEC dated June 14, 2010 (AECOM, 2010b) for remedial activity 11.

This SMP includes an Engineering Control/Institutional Control (EC/IC) Plan, a Monitoring Plan, and an Operation and Maintenance (O&M) Plan for the Site. The SMP does not supersede any federal, state, or local statutes, regulations, or ordinances pertaining to the environment, and current and future holders of interests of the Site will remain obligated to comply with the same. This SMP also outlines general soil management practices that should be followed during future construction activities at the Site.

The NYSDEC, its agents, employees, or other representatives of the government may enter and inspect the Site in a reasonable manner and at reasonable times following the access arrangements with the NYSEG or their representative to assure compliance with the SMP. This SMP has been prepared as a mechanism to assure that consistent and effective inspection, maintenance and enforcement activities are occurring and will occur in the future at the Site. The objectives listed below will be primarily achieved through the implementation of EC/ICs, groundwater monitoring and, sediment monitoring, and O&M as required. Future owners of the property will be bound by the provisions of this SMP.

1.1 Objectives

Residual coal tar contamination is present in the bedrock at the Site after completion of the remedial action. The objectives of the remedial actions were achieved by removing the contaminated soils to the bedrock; dewatering and treating groundwater during construction; backfilling the Site with clean fill; restoring the stream bank; and installing a recovery and treatment system at two bedrock monitoring wells. EC/ICs have been incorporated into the Site remedy to provide proper management of residual contamination to ensure future protection of public health and the environment although the contamination from most of the soils has been removed. An Environmental Easement that provides an enforceable legal instrument to ensure compliance with this SMP and all ECs and ICs placed on the Site will be granted to the NYSDEC upon approval of this SMP and recorded with the Saratoga County Clerk.. The ICs place restrictions on Site use and mandates operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary to ensure compliance with all ECs and ICs required by the Environmental Easement for contamination that remains at the Site. Once approved, this SMP may only be revised with the approval of the NYSDEC.

The SMP provides a detailed description of all procedures required to manage remaining contamination at the Site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) groundwater and creek monitoring; (3) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports (PRRs); and (4) defining criteria for termination of monitoring.

The specific objectives of this SMP are as follows:

- To describe the binding and enforceable ECs/ICs that will facilitate future construction activities on the Site, in any;
- To establish controls on groundwater use; and
- To establish long-term monitoring requirements at the Site.

1.2 Site History

From circa 1901 through 1955, NYSEG and predecessor companies used the Site on Central Avenue in Mechanicville to manufacture gas, which was used by the local residents and businesses near the Site. The plant used the carbureted water gas process to produce gas from coal for lighting, cooking, and heating. In 1901, the Halfmoon Light, Heat, & Power Co., which was founded in 1900, began distributing gas manufactured from coal to the citizens of Mechanicville. In 1924, Halfmoon Light, Heat, & Power Co. was acquired by the Associated Gas and Electric System, and in 1928 it became a part of NYSEG. Coal gas production continued at the plant until 1955. NYSEG operated the Site as a natural gas and electric service center from 1955 until 1990, when the operation was relocated to a new service center in the town of Halfmoon.

The former MGP structures associated with coal gasification were concentrated on the eastern part of the Site. The only structure that currently remains within the former MGP portion of the Site is the gas regulator building. NYSEG did not own the western part of the Site during most of the operations of the MGP, which closed in 1955. By-products of the coal gasification process included coal ash, condensate material from the gas house, wood chips from the purifier house, coal tar, and oil sludge. No information about the methods employed to handle these materials in the early days of gas production at Mechanicville was found. However, common practice was to dispose ashes and spent oxide material on Site. Also, the tars produced in gas plants were an important raw material for the flourishing tar distillation industry in the early 1900s.

The neighborhood around the former MGP Site has been a mixed commercial/residential section of Mechanicville.

1.2.1 Previous Investigation and Remedial History

The following Investigations and Reports were completed at the Site:

August 1986	Task 1 Report Preliminary Site Evaluation (E.C. Jordan Co., 1986)
December 1987	Task 2 Report Initial Investigation Field Program (E.C. Jordan Co., 1987)
September 1989	Task 3 Report Expanded Problem Definition Program (E.C. Jordan Co., 1989)
June 1992	Investigation of the Former Coal Gasification Site at Mechanicville, New York (ABB Environmental Services, 1992)
December 1993	Phase IIA Supplemental Remedial Investigation and Feasibility Report (ABB Environmental Services, 1993)
October 2000	Interim Remedial Measure (IRM) Final Engineering Report (NYSEG, 2000)
September 2004	Supplemental Remedial Investigation (SRI) Report (URS Corp., 2004)
December 2005	Feasibility Study (FS) Report (URS Corp, 2005)
March 2006	Record of Decision (NYSDEC, 2006)
November 2007	NAPL Recovery Pump Test Report (Earth Tech, 2007)
February 2008	Remedial Action Design and Work Plan (Earth Tech, 2008)
July 2008	Pre-Remediation Soil Sampling & Analysis (Earth Tech | AECOM, 2008a)
August 2008	Long-Term NAPL Recovery Testing Letter (Earth Tech | AECOM, 2008b)
December 2009	Final Remedial Action Construction Certification Report (AECOM, 2009a)
Aug-Dec 2009	Long-Term NAPL Recovery Testing – Status Report (AECOM, 2009b)
June 2010	NAPL Monitoring Summary 2010 Letter (AECOM, 2010b)

All of the documents associated with these Investigations and Reports are available for public review at the following document repository:

New York State Department of Environmental Conservation
Central Office, 625 Broadway 11th Floor
Albany, New York 12233-7014
Attn: Mr. John Spellman
(518) 402-96662 (By appointment only)

In 1981, NYSEG collected soil samples from the filter bed area and the gas relief holder foundation. A sample from the filter beds area exceeded the threshold for the characteristic of reactivity, indicating the soil would be considered a hazardous waste.

In 1986, the NYSDEC first listed the Site as a Class 2a site in the Registry of Inactive Hazardous Waste Disposal Sites in New York (the Registry). Class 2a is a temporary classification assigned to a Site that has inadequate and/or insufficient data for inclusion in any of the other classifications. In the same year, NYSEG initiated field investigation activities at the Site to assess the potential presence of residual by-product waste associated with MGP activities.

In September 1988, structural repairs were undertaken on the North Central Avenue Bridge over the Anthony Kill. Sheen was observed on the sediments during the repairs. Analysis of the sediment identified contaminants that were likely associated with the former MGP operations. NYSEG took responsibility for the disposal of 22 tons of sediment.

In 1989, the NYSDEC listed the Site as a Class 2 site in the Registry. A Class 2 site is a site where hazardous waste presents a significant threat to public health or the environment and action is required.

By the end of 2004, NYSEG had conducted five investigative phases and one risk assessment phase. Each of these phases was an expansion of the information of the previous investigation. The SRI provides a summary of the earlier investigations, as well as presenting the results of the latest investigation.

In 1999, NYSEG removed contaminated soil from the Site. During the IRM, the holder structure was also partially removed. A NAPL gauging and passive recovery program had been ongoing since 2001. Approximately 24 monitoring wells were inspected at least monthly for the presence of NAPL. Passive recovery included lowering bailers or pumping NAPL from the monitoring wells on a periodic basis as NAPL was recharged within the well.

The ROD was issued in March 2006 and included a summary of remedial investigations; Site geology and hydrology; nature and extent of contamination; IRMs; human exposure pathways; and environmental impacts. Since issuance of the ROD, approximately 25,600 tons of material was removed from the Site as part of a remedial action between October 2008 and July 2009. In addition, approximately 31 gallons of NAPL were removed from Site bedrock wells as part of automated NAPL recovery efforts at the Site between August 2009 and November 2009.

The conclusion of the NAPL recovery effort in 2009 was that the NAPL yield was not high enough to warrant an automated system and monitoring should be performed over a 3-month period to identify NAPL recovery potential (AECOM, 2010a). During the 3-month monitoring period, the maximum thickness measured in any well was 3 inches (AECOM, 2010b).

The Anthony Kill was also monitored for NAPL blebs which were observed to be emanating from a single location in the Kill, in line with the bedrock fault that was observed during the soil remedial action. The sheens in the Anthony Kill were observed to be caused by air/gas bubbles being released from the sediment and/or bedrock and when the gas bubbles broke on the surface, a sheen of less than 3-inches in diameter would appear and dissipate within a few seconds. In response to this,

NYSDEC requested that NYSEG develop an approach to address the release of NAPL blebs into the Anthony Kill (AECOM, 2010b). Sediments from the area where the blebs were observed were removed using a vacuum to gain a better understanding of the release mechanisms of the NAPL blebs. A small amount of NAPL-impacted sediment was found and removed from the folds of the bedrock surface. The creek was observed for four weeks after completion of the work, and no NAPL blebs were observed.

1.3 Summary of Remedial Investigation Findings

An RI and FS were conducted at the Site prior to issuance of the ROD to evaluate the alternatives for addressing threats to public health and the environment.

1.3.1 Site Geology and Hydrology

The Site is in the Anthony Kill valley, which is a post-glacial tributary valley of the Hudson River Valley following the most recent glacial period.

Overburden at the Site was approximately four to twenty-seven feet thick and consisted primarily of fill material, which was underlain by a discontinuous layer of native material. The majority of the fill contained sand and gravel, with lesser amounts of silt, clay and pebbles. Materials related to the former MGP Site include broken concrete foundations, coal, brick fragments, clinkers, slag and wood chips. The scarce native material was likely alluvial in nature.

The bedrock beneath the Site is the Snake Hill Formation and is composed of dark gray shale. The shale exhibits pencil-shaped breaks; these breaks were produced by stresses associated with the movement of bedrock blocks along two tear faults running generally east-west, and the ramping of bedrock blocks to the west along thrust faults. The Anthony Kill is the surficial expression of the northern tear fault. The significance of this geologic condition is that the highly fractured bedrock allows for a substantial flow of water, both contaminated and non-contaminated, through the rock. NAPL was expected to migrate preferentially through zones of more intense cleavage.

Both shallow groundwater flow and groundwater flow within the deep bedrock at the Site are from the southwest to the northeast toward the Anthony Kill. The depth to groundwater is approximately five feet below the ground surface.

1.3.2 Nature of Contamination

As described in the RI report, the main categories of contaminants that exceeded their SCGs were volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs).

The manufactured gas was cooled and purified prior to distribution. Two principal waste materials were produced in this process: coal tar and purifier waste. Coal tar was a reddish brown oily liquid by-product which formed as a condensate as the gas cooled. Purifier waste was a mixture of iron filings and wood chips which was used to remove cyanide and sulfur gases from the gas mix prior to distribution. Both waste materials were found on Site during the remedial investigations.

Coal tar does not readily dissolve in water. Materials such as this are commonly referred to as a non-aqueous phase liquid, or NAPL. Although most coal tars are slightly denser than water, NAPL can either float or sink when in contact with water.

Unlike NAPL, purifier waste is a solid waste of oatmeal consistency. Purifier waste has the potential to contribute cyanide and create acidic conditions in nearby surface water and/or groundwater. It contains high concentrations of sulfur and cyanide and has a characteristic blue color from complex ferrocyanides.

Specific VOCs of concern were benzene, toluene, ethylbenzene and xylenes (BTEX). Specific SVOCs of concern were PAHs. Some of the PAHs were probable human carcinogens, known as carcinogenic PAHs (cPAHs).

All media were analyzed for pesticides and metals and results indicated that they were not contaminants of concern (COCs). Analysis of five surface soil samples collected in 1993 showed polychlorinated biphenyls (PCBs) at concentrations greater than one ppm but less than 10 ppm in the former transformer storage areas and an area proximate to the former filter beds. The former filter beds were excavated during the recent IRM and the former transformer areas were removed after 1993. Therefore, PCBs are not a Site COC.

1.3.3 Extent of Contamination

This section describes the investigation results for all environmental media that were investigated. Chemical concentrations are reported in parts per billion (ppb) for groundwater, and ppm for waste, soil, and sediment.

Waste Materials

The RI data supported the conclusion that much of the tar presence resulted from leakage of the former gas relief holder (see Figure 2 for location of former structures). Overburden material, which was saturated with NAPL, and NAPL-producing fractures in the underlying bedrock were observed near the north end of the former gas relief holder during the 1999 and 2000 IRM and SRI. Observations of NAPL in the overburden were limited to the former MGP portion of the Site and along the west side of North Central Avenue. No significant MGP contamination was found along the former Champlain Canal alignment adjacent to the Site during RI.

The majority of NAPL was found in the top of the bedrock and along major fractures. Off-site NAPL is found mainly in the bedrock to the east of the Site. NAPL was not found west or south of the Site. NAPL was found as shallow as 3 feet below ground surface (bgs) near the former filter bed area and as deep as 150 feet bgs on the Getty property.

Two bedrock wells (MW-10D and MW-42D, shown on Figure 3) continued to accumulate NAPL, four years after they were drilled. The NAPL in these wells was located at depths of 82 to 114 feet bgs and 140 to 175 feet bgs. Approximately 170 gallons of NAPL and groundwater was recovered from wells MW-10D and MW-42D by the date of issuance of the ROD. Two wells completed in the overburden also accumulated NAPL. One of these (RH-01S) was installed in the backfill material from the 1999 IRM. Fifteen gallons of NAPL was recovered from well RH-01 S by the date of issuance of the ROD. A cross-section of the site is shown in Figure 4.

Purifier waste was observed along the North Central Avenue embankment. During the IRM, a portion of the waste was removed and the remainder covered with crushed stone. The Site investigations did not find any other extensive purifier waste disposal areas. This was corroborated by the lack of groundwater exceeding total cyanide standards.

Surface Soil

BTEX and cyanide, where detected in surface soils, were at concentrations less than 0.01 ppm. Total PAHs in surface soil ranged from less than one ppm to 320 ppm. The 320 ppm sample was located in Ferris Lane. The next highest surface soil value was 191 ppm located on the eastern portion of the Site. Five surface soil samples were collected from private residential properties south of Ferris Lane at NYSDOH-concurred locations. The concentrations of PAHs and cPAHs collected from these properties were less than 3.0 ppm and 1.0 ppm, respectively.

Subsurface Soil

Higher concentrations of BTEX (greater than 10 ppm) in subsurface soils were co-located with soil containing NAPL near the former relief holder. The maximum detected BTEX concentration was 2,640 ppm, which was collected near the former relief holder. A concentration of 437 ppm BTEX value was found off-site at soil boring SB-45, but was concluded to be unrelated to the former MGP operations. All other off-site subsurface soil BTEX values were within SCG values.

Similar to BTEX, higher concentrations of PAHs (greater than 1,000 ppm) in subsurface soils were also found co-located with soil containing NAPL. The areal extent of PAHs exceeding SCGs was greater than that of BTEX exceeding SCGs. Soil exceeding the SCG of 500 ppm total SVOCs encompassed the eastern portion of the former MGP operation areas, including the former relief holder and pockets to the north.

Cyanide was not detected in 59 of the 64 subsurface soil samples analyzed for cyanide. The highest concentration of cyanide found in the subsurface soil was 21 ppm in on-site soil boring SB-17 northeast of the former gas relief holder. The cyanide detections were limited to two areas: one north of the relief holder and one co-located with PAHs greater than 500 ppm in the northwest corner of the Site. With the removal of purifier waste during the IRM, the cyanide affected area north of the relief holder was reduced, but insufficient post-IRM cyanide data existed to confirm full removal.

Groundwater

The location of groundwater contamination generally corresponds to the locations of NAPL and soil exceeding the SCGs.

Overburden
During the RI**,** groundwater from overburden wells containing NAPL was not analyzed. Thus, only five out of 14 wells were sampled for analysis. BTEX was consistently detected in wells MW-4 and MW-12, which were north and east of the former relief holder. The highest concentration of BTEX in overburden groundwater on-site, for the wells that were sampled, was 30 ppb in MW-21S, which was located in the north-central area of the Site.

Off-site, BTEX exceeding groundwater standards was limited to wells located in the west embankment of North Central Avenue between Ferris Street and the Anthony Kill. MW-14S located in the embankment contained 255 ppb BTEX. As expected, relatively higher PAH concentrations were co-located with wells containing higher BTEX. Dissolved PAHs were found as high as 267 ppb in well MW-21S.

Cyanide concentrations in groundwater did not exceed the groundwater standard for samples collected after the IRM.

In summary:

- Overburden groundwater quality was severely impacted by the presence of NAPL.
- MGP impact to off-site overburden groundwater quality was limited in lateral extent to the embankment area.
- The IRM did not improve overburden groundwater quality.

Bedrock
MGP aqueous phase contamination in the bedrock aquifer extended further to the north and southeast as compared to the overburden aquifer. The highest concentration of BTEX found was

2,630 ppb in well MW-35I, located approximately 80 feet north of the site (north of the Anthony Kill). PAHs were generally not detected in analyzed aqueous phase samples.

Most deep bedrock wells were installed after the IRM; therefore, no quantitative evaluation was made regarding the effect, if any, of the IRM on deep bedrock groundwater quality.

Surface Water

Analysis of 18 surface water samples did not identify any BTEX, PAHs or cyanide in excess of the SCGs. However, NAPL was observed discharging into the stream adjacent to the Site, a contravention of the narrative water quality standard of "No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease" (6 NYCRR 703.2).

Sediments

The Anthony Kill is a fast-flowing stream with a bedrock bottom. Stream probing and reconnaissance activities were therefore undertaken in an effort to find localized areas of soft sediment. The stream was probed along seven transects upstream of the Site, and 35 transects adjacent to or downstream of the Site. The probing results concluded that the majority of the bottom of the Anthony Kill is shale bedrock; no significant depositional areas existed between the Site and its confluence with the Hudson River.

NAPL was observed along four transects located adjacent to the Site; a thin layer (less than six inches) of sediments existed at three of these transects. Also, coal tar seepage was observed at six locations on the south bank adjacent to the Site. Coal tar was also observed on the bottom of the stream. The visual observance of NAPL or sheens occurs primarily adjacent to the eastern portion of the Site where former MGP operations were located. The Hudson River was also probed, both upstream and downstream of the Anthony Kill confluence. No visual evidence of MGP contamination was observed.

Thirty-eight sediment samples were collected from the Anthony Kill and five sediment samples were also collected from the Hudson River at the confluence with the Anthony Kill. BTEX was not detected in any Anthony Kill sediment samples. PAHs in Anthony Kill samples range from not detected to 2,500 ppm. The majority of samples from the SRI contained less than 4 ppm PAHs. Higher concentrations of PAHs were indicative of the occasional tar seeping into the Anthony Kill. Certain Hudson River sediment values exceeded the sediment SCG both upstream and downstream of the Anthony Kill confluence.

Soil Gas/Sub-Slab Vapor/Air

Soil gas analysis was not conducted on the Site.

1.4 Record of Decision

Following the RI/FS, the NYSDEC issued a ROD for the Site in March 2006, deciding that at a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the Site through the proper application of scientific and engineering principles. The ROD specified the following remediation goals through the remedy selection process stated in 6 NYCRR Part 375-1.10:

The remediation goals for this Site are to eliminate or reduce to the extent practicable:

- Exposures of persons at or around the Site to site-related contaminants in soil, bedrock and groundwater;

- Migration of NAPL in the subsurface soil and bedrock;
- NAPL discharges to the Anthony Kill;
- Off-site migration of groundwater that does not attain New York State Groundwater Quality Standards;
- The contravention of NYSDEC surface water quality criteria by site related constituents in the Anthony Kill.

Further, the remediation goals for the Site include attaining to the extent practicable:

- Ambient groundwater quality standards;
- TAGM 4046 values for the individual contaminants of concern.

A listing of the cleanup objectives for soil and groundwater are presented below.

Contaminant	Soil Cleanup Objective (mg/kg)	Groundwater Cleanup Objective (ug/L)
Benzene	Not Applicable	1
Toluene	Not Applicable	5
Ethylbenzene	Not Applicable	5
Xylenes (total)	Not Applicable	5
Total BTEX	10	Not Applicable
Total PAHs	500	Varies
Cyanide (total)	Not Applicable	200

Based on the results of the RI/FS for the Site and the criteria identified for evaluation of alternatives, the NYSDEC selected removal of source area contamination with bedrock NAPL recovery for the Site remedy. The components of the remedy are as follows:

- Removal to the top of bedrock of all soil containing PAH concentrations greater than 500 ppm or soil containing visual tar or NAPL;
- Removed soil to be treated or disposed off-site;
- Removal and off-site disposal of purifier waste remaining in or near the North Central Avenue embankment;
- A NAPL recovery system for the bedrock contamination;
- An institutional control (IC) in the form of an environmental easement;
- Development and implementation of a site management plan (SMP); and,
- An evaluation of indoor air quality, if occupied structures were to be constructed on the Site in future.

1.5 Summary of Remedial Actions

1.5.1 Interim Remedial Measures

Between October 1999 and April 2000, NYSEG completed an IRM to excavate contaminated soil and the remnants of underground former MGP structures at the Mechanicville Site. The contents of the former gas relief holder foundation, the former filter bed and associated piping encountered during excavation were removed. The gas relief holder foundation had circular concrete walls and appeared to have a bedrock and concrete bottom at a depth of 12 to 15 feet bgs. Approximately

seven feet of the holder foundation wall was removed from below the ground surface. The IRM generated approximately 6,500 tons of contaminated soil and other wastes.

A substantial quantity of groundwater and NAPL was found to be present in the area of the holder. During excavation, groundwater was encountered at about eight feet bgs. NYSEG attempted to dewater the holder by pumping out approximately 9,000 gallons. However, the water level in the holder had returned to the same elevation as the groundwater outside the holder within a day. A total of approximately 68,000 gallons of water was removed from the holder and transported off-site for treatment and/or fuel blending.

Purifier waste was removed from the road embankment along North Central Avenue and disposed of off-site. Some waste remained, however, which was subsequently covered with crushed stone.

A test trench was excavated parallel to the Anthony Kill to locate and remove piping that was suspected to be a preferential conveyance for contaminants to the stream. The trench was excavated along the top of the bank down to bedrock. A NAPL recovery system was installed following pipe removal in the test trench.

Twenty-six post-excavation samples were collected and analyzed for BTEX and PAHs. The results of the post-excavation samples indicated that there were still relatively high concentrations of contaminants (greater than 1,000 ppm PAHs) in the soil.

1.5.2 Remedial Action

Soil remediation activities were performed on-site between October 2008 and July 2009 in accordance with the ROD and 2007 Remedial Action Work Plan (RAWP). The remedial action consisted of removing the vast majority of the MGP impacts from the Site. Over 25,600 tons of material representing the contaminant source areas, including the relief holder foundation, and below grade structures and piping were removed. All soil removed was sent to ESMI in Fort Edward, New York and thermally treated. Approximately 4,787 tons of treated soil came back as fill; the remainder of the fill was imported from Palette Stone Corporation (813.58 tons) and R.J. Valente Gravel (4,011.6 tons gravel/stone and 10,627 cubic yards of fill).

A total of 21 confirmation samples were collected along the excavation limits. These results demonstrated that no residual contaminants remain above the Site-specific action levels of 500 ppm of total PAHs and 10 ppm of total BTEX.

All remaining purifier waste that was covered with crush stone following the 1999 IRM was removed during this removal action.

A total of 1,459,231 gallons of water were treated by a temporary water treatment system and discharged to the Anthony Kill during the remedial activities. The water treatment plant consisted of influent storage tanks, an organo-clay unit, bag filters, and granular activated carbon units. Weekly effluent samples were collected from the water treatment plant. During the initial operation of the plant, several compounds (BTEX, PAHs) exceeded State Pollutant Discharge Elimination System (SPDES) discharge limits. The organo-clay and granular activated carbon units were changed out and no more exceedances of PAHs or BTEX were recorded.

During excavation activities, a Community Air Monitoring Program (CAMP) was implemented to monitor volatile organic compounds (VOCs) and air particulates. The Site improvements that were made as part of the re-construction of the Site, especially the stream bank restoration, added significant value to the City of Mechanicville and in general to the surrounding neighborhood.

1.5.3 Treatment Systems

In August 2009, eleven wells were installed at the Site with the purpose of further investigating the extent of NAPL within on-site bedrock fractures and evaluating the feasibility of future recovery from these fractures. Following the well installation, selected bedrock wells were pumped using low-flow, positive air displacement (pneumatic drive) pumps. Extracted liquids were treated through an on-site treatment system and the effluent was discharged to the Anthony Kill; collected NAPL was stored in 55-gallon drums and properly disposed of at an off-site facility. Approximately 18,600 gallons of treated effluent was discharged to the Anthony Kill.

Since initiation of the recovery test in August 2009, NAPL recovered by the recovery system included: 23 gallons of NAPL from TW-1, 0.5 gallons from MW-45I, and none from TW-2I. NAPL recovery from TW-1 decreased from 0.73 gallons per day in August to approximately 0.025 gallons per day in November indicating a long-term sustainable NAPL yield of less than 1 gallon per month. Based on the data presented above, the maximum NAPL recovery from any of the bedrock wells at the Site was not high enough to warrant long-term operation of an automated NAPL pumping/treatment system. Hence, the system was shut down on November 23, 2009 and was removed in December 2009. The on-site wells and selected off-site wells were monitored on a weekly basis from March 5, 2010 to May 27, 2010 to measure accumulated NAPL thickness. The monitoring demonstrated the greatest thickness of NAPL accumulation was 3 inches, which is considered insufficient for long-term operation of a recovery system and supports the decision to discontinue the on-site NAPL recovery system.

1.5.4 Remaining Contamination

During the Pre-Remediation Waste Characterization Sampling event, an additional area of coal tar contamination was discovered under the Site entrance at the corner of Ferris Lane and North Central Avenue. This area was designated as Area 5 in the December 2009 Final Remedial Action Construction Certification Report. Upon identification and mark-out of nearby gas mains, the excavation of Area 5 was deemed infeasible since limited area could be safely removed without affecting the stability of the gas mains. This discovery was communicated to NYSDEC on May 28, 2009 and on June 2, 2009. NYSDEC responded that it was acceptable not to excavate Area 5 for the reasons provided. Hence, some contaminated soils remain on-site near the gas main as shown on the Figure 5.

The bedrock fractures contain some residual NAPL that could not be removed during remedial excavation or by operation of a NAPL recovery system. The amount of NAPL remaining in the bedrock fractures is not sufficient to warrant an active recovery system. The bedrock wells (listed in Section 3.6) will be monitored and NAPL present will be recovered if feasible.

1.5.5 Engineering and Institutional Controls

Since contamination remains at the Site above unrestricted use levels ECs and ICs are required. The ECs/ICs are designed to:

- Eliminate or reduce the exposures of people at or around the Site to MGP residues in soils and groundwater;
- Eliminate or reduce environmental exposures of surface water, flora or fauna to MGP residues in soil and groundwater;
- Eliminate or reduce the release of contaminants from bedrock fracture into groundwater that may create exceedances of groundwater quality standards;
- Eliminate or reduce the release of contaminants from subsurface soil under buildings into indoor air through soil vapor intrusion; and

- Eliminate or reduce the release of contaminants from bedrock fracture into Anthony Kill and attain ambient groundwater quality standards to the extent practicable.

The Site has the following ECs:

- The presence of a crushed gravel road cover over the remaining MGP impacted Site soils by the gas main at the Site entrance near North Central Avenue. This EC also includes implementation of a Soil Management Plan to address removal and handling of contaminated soils should they become accessible.

The Site will require an IC in the form of an environmental easement. The environmental easement should accomplish the following:

- Restrict the use of the Site to commercial or industrial uses consistent with local zoning;
- Restrict use of groundwater on the Site;
- Require management of the Site in accordance with the provisions of the SMP approved by the NYSDEC;
- Require the property owner to complete and submit a periodic certification of ICs and ECs to the NYSDEC; and
- Require evaluation of the potential for vapor intrusion for any change in site usage, including renovation of existing buildings or construction of new buildings, and mitigation as necessary.

2.0 Engineering and Institutional Control Plan

Since residual contaminated soil, groundwater and soil vapor exists beneath the Site, EC/ICs are required to protect human health and the environment. This EC/IC Control Plan describes the procedures for the implementation and management of all EC/ICs at the Site. The EC/IC Plan is one component of the SMP in addition to the Monitoring Plan (Section 3) and O&M Plan (Section 4).

2.1 Purpose

The purpose of the EC/IC Plan is to provide:

- A description of all EC/ICs on the Site;
- The basic operation and intended role of each implemented EC/IC;
- A description of the key components of the ICs created as stated in the Environmental Easement;
- A description of the features that should be evaluated during each periodic inspection and compliance certification period;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of an Excavation Plan for the safe handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the Site;
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required for the Site remedy, as determined by the NYSDEC; and
- A description of the reporting requirements for these controls.

2.2 Engineering Controls

No engineering controls (e.g., soil cover system) exist for the site. However, soil contamination may still exists on the property and that appropriate health and safety measures, human exposure controls and proper handling of media are to be undertaken with respect to any remaining residual contamination. There are three potential areas on the site where contaminated soils may exist in the subsurface:

1. The subsurface soils near the entrance that may contain have contaminant concentrations above the ROD-required criteria, such as PAHs above 500 ppm.
2. Imported backfill that meets the commercial use criteria prescribed for the site, but may be above the criteria for unrestricted-use.
3. Soils where no removal took place that currently either meet ROD-required criteria (i.e., areas not excavated) or have no direct exposure (i.e., including soil under the remaining structure)

All exposed surface soil and accessible subsurface soil down to a minimum of six feet meet the criteria for commercial use. Soils under the building may be above the commercial use criteria, but does not present a risk since no exposure pathway exists. Should any of these materials be accessible during future redevelopment of the Site, the material will be excavated and handled in accordance with the Excavation Plan as described in Appendix A. Should the site use change to a more restrictive use (i.e., residential), then additional soil characterization will be required to determine if the appropriate criteria have been met.

One exception is that no notification or Excavation Plan will be required for any soil disturbances that are intended to access just the gas mains under Ferris Lane, which are approximately 30 inches below grade. The soil above the gas main is covered with imported fill.

2.3 Institutional Controls

Institutional Controls are required by the ROD to: (1) implement, maintain and monitor ECs; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; (3) limit the use and development of the Site to commercial or industrial use; and, (4) to limit use of on-site groundwater for potable or process water prior to treatment. Adherence to the ICs is required by the Environmental Easement and will be implemented upon NYSDEC approval of the SMP.

The Environmental Easement will include the following restrictions on the property:

- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended purpose;
- All future activities on the property that will disturb remaining contaminated material are prohibited unless they are conducted in accordance with this SMP;
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site, and any potential impacts that are identified must be mitigated;
- The property may only be used for commercial or industrial use provided that the long-term EC/ICs included in this SMP are employed.
- The Site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted as part of the period review process. The certification will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Vapor Intrusion Evaluation

Prior to the construction of any enclosed structures located over areas that contain remaining contamination and the potential for soil vapor intrusion (SVI) has been identified (see Figure 5), an SVI evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

Prior to conducting an SVI investigation or installing a mitigation system, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH “Guidance for Evaluating Vapor Intrusion in the State of New York” (NYSDOH, 2006). Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation.

SVI sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report.

2.4 Inspections and Notifications

2.4.1 Periodic Inspections

Periodic inspections of all ECs at the Site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the PRR. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If the ECs continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If Site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system.

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Site Management Reporting Plan.

2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following:

- 60-day advance notice of any proposed changes in Site use that are required under the terms of the Order on Consent, 6NYCRR Part 375, and/or Environmental Conservation Law.
- 10-day advance notice of any proposed ground-intrusive activities that will go to depths greater than 6 feet in the areas where potential impacted soils exist.
- Notice within 48 hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other ECs and likewise any action to be taken to mitigate the damage or defect.
- Notice within 48 hours of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, including a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.
- Vegetable gardens and farming on this property are prohibited.

Notifications will be made to:

Mr. John Spellman
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233-7013

In the event that NYSDEC develops a centralized notification system, that system will be used instead.

3.0 Monitoring Plan

3.1 Introduction

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the implemented ECs and monitoring program as required by the ROD. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.1 General

In Section 8.0 of the ROD, "Summary of the Selected Remedy," a monitoring plan is required to monitor the overburden and bedrock aquifers for the Site.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of appropriate media (e.g., groundwater, indoor air, soil vapor, soils, surface water, sediments);
- Assessing compliance with NYSDEC groundwater standards, ambient water quality standards for the creek, and soil vapor intrusion guidelines;
- Assessing compliance with discharge or effluent limits (if any system is operational);
- Assessing achievement of the remedial performance criteria;
- Evaluating Site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol, and frequency;
- Information on designed monitoring systems (if present);
- Analytical sampling program requirements;
- Reporting requirements; and
- Quality Assurance/Quality Control (QA/QC) requirements (Appendix B);

Monitoring programs for environmental media are summarized in Table 3.1 and outlined in detail in Sections 3.2 through 3.5 below.

Table 3.1: Media Monitoring Schedule

Monitoring Program	Frequency*	Matrix	Analysis
NAPL	Quarterly for the first year; evaluated thereafter	NAPL	Monitoring for NAPL in bedrock monitoring wells; Manually remove NAPL if measured thickness is > 0.5'
Groundwater Monitoring	Once every two years	Water	VOCs, SVOCs and Cyanide (total)
Anthony Kill	Quarterly for the first year; evaluated thereafter	Surface water / Sediment	Observe for oil blebs on water and in sediment
Streambank	Annually for the first five years	Vegetation	Visual Inspection - confirm 95% of surface soil coverage is maintained
Indoor Air Quality	Prior to change in site usage or development	Air	TO-15

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

3.2 NAPL Monitoring Program

A temporary NAPL recovery system was installed to recover NAPL from the bedrock. Recovery pumps were installed in two bedrock monitoring wells and the NAPL/groundwater was treated with an oil/water separator, bag filters and granular activated carbon prior to effluent being discharged into the Anthony Kill. The system operated from August 2009 to November 2009, resulting in less than a gallon of NAPL recovered per month. The conclusion from the temporary NAPL recovery test was that NAPL could not effectively be recovered from the bedrock aquifer. The recommendation from the test was that active recovery be discontinued and replaced with monitoring and manual recovery if NAPL thicknesses of greater than 6 inches were measured (AECOM, 2010a).

Monitoring wells TW-1, TW-2I, TW-3, MW-1D, MW-10D, MW-33D, MW-34D, MW-35I, MW-42D, MW-44I, and MW-45I will be monitored for the accumulation of NAPL on a quarterly basis for the first year and evaluated thereafter (Figure 3 shows location of wells and Figure 4 shows a cross-section of the site). Gauging of NAPL should be done using a weighted string or equivalent methods. If more than 0.5-ft of NAPL accumulation is found in any of the wells, the NAPL will be manually bailed and stored in the on-site 55-gallon drums until arrangements are made to properly dispose it off-site. If sustained yield of greater than 0.5-ft is observed over multiple consecutive monitoring periods, then the use of an automated system will be evaluated.

Monitoring Event	Frequency	Monitoring Locations		Measurements/Analysis
NAPL Monitoring	Quarterly first year; evaluated thereafter	TW-1 TW-2I TW-3 MW-1D MW-10D MW-33D	MW-34D MW-35I MW-42D MW-44I MW-45I	Thickness of NAPL using weighted string

3.3 Groundwater Monitoring Program

The groundwater monitoring program is a long term plan to monitor the quality of groundwater on-site and off-site. Groundwater samples will be collected from monitoring wells TW-2S, MW-2, MW-2I, MW-17, MW-17I, MW-17D, MW-20D, MW-34D, MW-36I, MW-36D, MW-38I, MW-38D, MW-39D, MW-

40D, and MW-46I will be collected and analyzed once every two years until the results meet the groundwater SCGs (based on the NYSDEC "Ambient Water Quality Standards and Guidance Values") for at least two consecutive sampling events; however ceasing the groundwater monitoring program will be made in consultation with the NYSDEC. The monitoring wells identified in Section 3.2 (NAPL Monitoring Program) will not be included in the Groundwater Monitoring Program, since they will be monitored for the presence of NAPL. All monitoring wells will have water levels recorded prior to sampling activities.

Monitoring Event	Frequency	Monitoring Locations		Measurements/Analysis
Groundwater Monitoring	Once every two years	TW-2S MW-2 MW-2I MW-17 MW-17I MW-17D MW-20D MW-34D	MW-36I MW-36D MW-38I MW-38D MW-39D MW-40D MW-46I	• Water Levels • Field Parameters (DO, ORP, turbidity, temp) • VOCs – Method 8260 • SVOCs – Method 8270 • Cyanide (total) – Method 9012

3.3.1 Groundwater Monitoring Schedule

Groundwater monitoring will be conducted once every two years. The events may be scheduled within this time period to account for seasonal variability.

The sampling frequency may be modified with the approval NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC.

3.3.2 Sampling Event Protocol

All monitoring well sampling activities will be recorded in a field book and a monitoring well purging/sampling form presented in C. Other observations (e.g., well integrity) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network. Prior to sampling the wells, depth to groundwater will be measured using a water level indicator. All wells shall be purged and sampled with a submersible pump using methods specified by the USEPA for low flow/low stress sampling [USEPA, 1996].

Wells will be sampled for VOCs (EPA Method 8260) and SVOCs (EPA Method 8270). All analyses will be performed by a NYSDOH accredited laboratory.

Required equipment and supplies for the groundwater monitoring events include:

- Field book;
- Project plans;
- Electronic oil/water interface probe;
- Disposable polyethylene bailers and low-flow sampling pump;
- Polypropylene rope;
- Temperature, conductivity, and pH meter;
- Turbidity meter;
- Flow through cell;
- Decontamination supplies;
- Peristaltic or submersible pump capable of achieving low-flow rates (i.e., 0.5 liters per minute or less);
- Plastic tubing;
- Plastic sheeting;

- Photoionization detector;
- Clear tape, duct tape;
- Coolers and ice;
- Laboratory sample bottles; and
- Federal Express labels.

Purging activities are detailed below:

- Prior to sampling, the static water level will be measured to the nearest 0.01 foot from the surveyed well elevation mark on the top of the PVC casing with a decontaminated oil/water interface probe. NAPL thickness and depth of the well will be measured to the nearest 0.1 foot with a weighted string. The measurement will be recorded in the field book.
- The probe will be decontaminated between uses.
- Groundwater from the well will be purged until field parameters stabilize, up to three well volumes are removed, or 1 hour of continuous purging is performed. Field parameters are considered to be stable when three consecutive readings are within the stabilization criteria for that parameter. The stabilization criteria are as follows: 10% or below 10 NTUs for turbidity, 3% of conductivity and temperature, 0.1 unit for pH, and 10 mV for ORP. Purging will be conducted using the low-flow sampling technique specified by the U.S. EPA Region 1 in its guidance document entitled "Low-Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells".
- The flow rate measurement will be approximately 0.5 liter per minute or less.
- If a well goes dry before the required volumes are removed, it will be allowed to recover, purged a second time until dry or the required parameters are met, and sampled when it recovers sufficiently, in accordance with low-flow sampling protocol.
- All purge water generated from the groundwater monitoring program will be collected and stored in the 55-gallon drums located on-site until arrangements have been made to ship the containers to an off-site facility for proper disposal.

Sampling activities are detailed below:

- Samples will be collected using dedicated polyethylene tubing.
- Prior to filling the sample bottles, the temperature, pH, conductivity, and oxidation reduction potential (ORP) will be measured within a flow-through cell. Turbidity will be measured with a hand-held turbidity meter. All measurements will be recorded in the field book.
- Three 40-ml VOA vials with Teflon lined septa and hydrochloric acid as a preservative will be filled for analysis of VOCs. The VOA vials will be filled to ensure that no bubbles are in the sample. A 1 liter (L) amber glass will be filled for SVOC analysis.
- The sample containers will be labeled, placed in a laboratory-supplied cooler, and packed on ice (to maintain a temperature of 4^{o} C). The cooler will be shipped overnight or delivered to the laboratory for analysis.
- Standard chain of custody procedures will be followed.
- Well sampling data will be recorded on the monitoring well purging/sampling form included in Appendix C, or a similar form.

All sampling and analyses will be performed in accordance with the requirements described in the Quality Assurance Project Plan (QAPP) included as Appendix B.

Groundwater monitoring will continue until the remedial objectives have been achieved or until the NYSDEC determines that it is no longer practical.

3.3.3 Monitoring Well Repairs, Replacement and Decommissioning

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells that are part of this Monitoring Plan, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced, if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance. The NYSDEC will be notified prior to any repair or decommissioning of monitoring wells for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent periodic report. Well decommissioning without replacement will be done only with the prior approval of NYSDEC. Well abandonment will be performed in accordance with NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

In September 2010, seven off-site monitoring wells, including MW-19I, MW-31S, MW-31D, MW-37I, MW-37D, MW-41D, and MW43D were decommissioned in accordance with the CP-43 - Groundwater Monitoring Well Decommissioning Procedures (NYSDEC, 2009), based on NYSDEC approval (NYSDEC, 2010). In addition, repairs were performed at six monitoring wells at DiSiena Furniture Store that had been covered by asphalt, including MW-17, MW-17I, MW-17D, MW-18, MW-33D, and MW-39D. The wells were uncovered and new curb boxes were installed. Two wells just south of the Site, MW-1I and MW-1D, were also raised to grade for improved access during monitoring events. This work was described in an email from AECOM to NYSDEC on September 10, 2010 (AECOM, 2010c).

A list of all wells associated with the site and their well construction diagrams can be found in Appendix D.

3.4 Anthony Kill Monitoring

Based on historical observation of NAPL blebs in the Anthony Kill, the creek should be monitored for NAPL blebs for one hour during the NAPL monitoring event. In addition, the area where the pockets of tar were historically observed should be probed with a steel rod or equivalent for the presence of NAPL.

If NAPL blebs reappear, NYSEG will attempt to determine the source and cause of the blebs by performing a focused engineering evaluation to determine the most appropriate action based on the Site conditions. Based on these recommendations, contingency actions could include more frequent observations, periodic sediment removal, capping, grouting, or hydraulic control subject to the approval of the NYSDEC.

Monitoring Event	Frequency	Monitoring Locations	Measurements/Analysis
Anthony Kill NAPL Monitoring	Quarterly first year; evaluated thereafter	Along bank as shown in Figure 5	• Observe Anthony Kill for 1-hour for signs of NAPL blebs • Probe sediment for signs of NAPL accumulation

3.5 Streambank Monitoring

The southern edge of the Anthony Kill streambank where soil removal occurred must be inspected annually for five years. Inspections will assess the condition of the vegetative cover and will not

observations of bank sloughing, erosion, and the presence of NAPL. The vegetative cover will be monitored to confirm that 95% surface coverage is being naturally maintained. The general condition of larger plantings will also be observed and noted. The NYSDEC will be consulted prior to taking any corrective actions. Additional hardening of the streambanks or removal of streambank vegetation will not occur without consultation with the NYSDEC.

3.6 Indoor Air Quality Monitoring Program

Since residual contamination may be present at the Site, an evaluation of indoor air quality will be required if future Site use includes occupied structures. Currently, only one single-story, unoccupied building is present at the Site.

If indoor air quality evaluation is required, indoor air and sub-slab vapor samples should be collected in accordance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York. If sampling identifies VOCs at concentrations exceeding the NYSDOH guidance values, measures will be taken to mitigate the effects of vapor intrusion (e.g. by installing and maintaining an SSDS or maintaining positive pressure inside the building).

4.0 Operation and Maintenance Plan

There is no active remedial treatment system on the Site. The automated NAPL recovery system was discontinued after approximately four months of operation on November 23, 2009 as NAPL recovery was less than one gallon per month. If an automated treatment system or an SSDS are installed at the Site in the future, the O&M Plan section of this SMP should be modified accordingly, as described below.

The O&M Plan should describe the measures necessary to operate and maintain any mechanical components of active treatment system(s) operating on the Site. This O&M Plan should:

- Include the steps necessary to allow individuals unfamiliar with the Site to operate and maintain the recovery system and/or the SSDS;
- Include an O&M contingency plan; and,
- Will be updated periodically to reflect changes in Site conditions or the manner in which the mitigation system is operated and maintained.

Information on non-mechanical ECs are provided in Section 3. .

4.1.1 System Performance Monitoring and Recordkeeping

Monitoring of an SSDS will be performed at least annually. The operator is to maintain a logbook and record the equipment readings and any other conditions noted at the Site. The logbook should be kept up to date with the observations and actions taken during each Site visit. The operator is responsible for reviewing these records for any short or long term changes in the system, since these may be indicators of a need for repair or maintenance. This logbook will remain on-site along with the visitors' sign in sheet and this Manual.

Monitoring of an automated NAPL recovery system will require more frequent monitoring, to be determined prior to system operation and modified as necessary, with NYSDEC concurrence.

4.1.2 System Inspection and Maintenance

The operator will maintain the equipment according to the schedule and requirements of the component manufacturers or more frequently when inspection indicates the need exists. The manufacturers' installation, operation, and maintenance manuals should be provided with the revised SMP.

4.1.3 Maintenance Reporting Requirements

Maintenance reports and any other information generated during regular operations at the Site will be kept by the site operators and NYSEG project manager, as applicable. All reports, forms, and other relevant information generated will be available upon request to the NYSDEC and will be submitted as part of the PRR.

Checklists or forms/field book will be completed during each maintenance event. Checklists/forms will include, but not be limited to the following information:

- Date;
- Name, company, and position of person(s) conducting maintenance activities;
- Maintenance activities conducted;

- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment (attached to the checklist/form).

4.2 Contingency Plan

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions. In the event of an emergency condition impacting the treatment system(s), or building (such as a fire, flood, failure of the heating system during freezing temperatures) or caused by the treatment system(s) (such as a break in the piping or blower, or some other problem, causing a fire or spill/overflow), shut off power to the system if safe to do so. Then proceed as otherwise provided below.

4.2.1 Emergency Spill Response

In the event of an overflow/spill condition, the following procedures should be followed if safe to do:

The person reporting the emergency should then immediately call the following emergency coordinators in the order shown until one is reached.

Name	Title	Phone
Tracy Blazicek	NYSEG Project Manager	607-237-5325
Scott Underhill	AECOM Project Manager	518-396-7638

The emergency coordinator shall obtain the following information from the person reporting the emergency.

- The estimated time of the event (Time/Date)
- The exact location and nature of the emergency
- The extent of the spill/overflow or release, if any
- The nature and extent of damage caused
- Corrective actions taken
- Persons and agencies contacted

Once the emergency is discovered and reported to the emergency coordinator, the coordinator shall assess the urgency of the situation and determine if the system should be shut down or other measures taken and if the NYSDEC or others need to be contacted.

4.2.2 Personal Injury

If a personal injury occurs or is reported at or from the SSDS, recovery system, or storage building, the event should be reported to the emergency coordinator as soon as possible, not longer than 24 hours.

4.2.3 Toxic Exposure

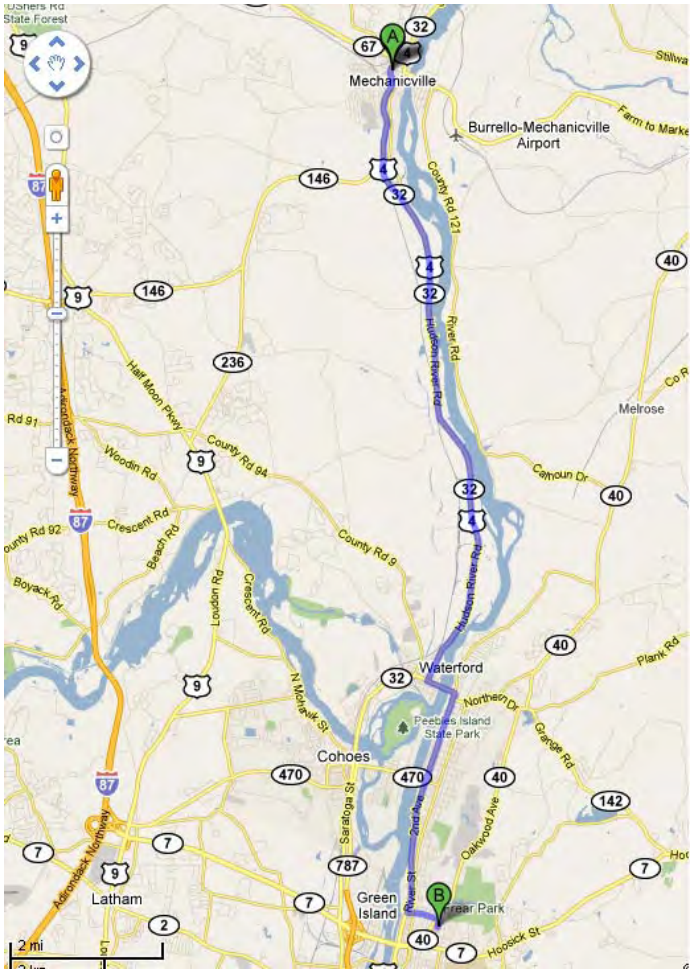
If a toxic exposure occurs, the event should be reported to the project manager as well as outside agencies which may include the fire department, hospital, or ambulance, as necessary and as soon as possible, not longer than 24 hours.

4.2.4 Public Notification

Public notification will be provided to or by the appropriate agencies (e.g., NYSDEC, fire department, POTW, police department) when necessary to make the general public aware of the conditions at the Site. The phone numbers of the key agencies are as below:

Agency	Contact Person	Title	Contact Number
Fire Department			911
Police Department			911
NYSDEC	John Spellman	Project Manager	518-402-9662
City of Mechanicville	Tim Hipwell	Commissioner of Public Safety	518-664-5651

4.3 Map and Directions to Emergency Health Facility



Site Location: N Central Ave Mechanicville, NY
Nearest Hospital (with Emergency Room): Seton Health System- St. Mary's Hospital, Troy
Hospital Location: 1300 Massachusetts Ave, Troy, NY 12180

Phone Number of the Hospital: (518) 268-5000

Directions to the Hospital:

1.	Head **south** on **NY-32 S/US-4 W/N Central Ave**	8.6 mi
2.	Turn **left** at **US-4 W/Broad St**	0.4 mi
3.	Turn **right** at **2nd Ave**	2.5 mi
4.	Continue onto **River St**	0.5 mi
5.	Turn **left** at **Middleburgh St**	0.4 mi
6.	Continue onto **Park Blvd**	213 ft
7.	Turn **right** at **Lindenwood Ct**	463 ft
8.	Slight **left** at **Massachusetts Ave** Hospital will be on the right	164 ft

- Total Distance: 12.5 Miles
- Total Estimated Time: 21 Minutes

5.0 Inspections, Reporting and Certification

5.1 Site Inspections

5.1.1 Inspection Frequencies

All inspections will be conducted at the frequency specified in the schedules provided in Section 3 Monitoring Plan and Section 4 Operation and Maintenance Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually. Inspections of remedial components will also be conducted when a breakdown of any treatment system component has occurred or whenever a severe condition has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate forms contained in Appendix C. Additionally, a general site-wide inspection form will be completed during the site-wide inspection (see Appendix E). All applicable inspection forms and other records, including all media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format in the PRR.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that:

- The EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Operation and maintenance activities are being conducted properly; and, based on the above items,
- The site remedy continues to be protective of public health and the environment.

5.1.4 Certification of Engineering and Institutional Controls

After the last inspection of the reporting period, a Professional Engineer licensed to practice in New York State will certify the following:

- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Use of the site is compliant with the environmental easement; and
- The engineering control systems are performing as designed and are effective.

5.2 Periodic Review Report

A PRR will be submitted to the Department 18 months upon approval of this SMP (December 2012) and every five years thereafter, unless the frequency is changed in a subsequent PRR. The PRR will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period. Media sampling results will also incorporated into the PRR. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site;

- Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the site during the reporting period in electronic format;
- Data summary tables and graphical representations of contaminants of concern by media which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific RAWP, ROD or Decision Document;
    - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
    - The overall performance and effectiveness of the remedy.

The PRR will be submitted, in electronic format, to the NYSDEC Central Office and the NYSDOH Bureau of Environmental Exposure Investigation.

5.3 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

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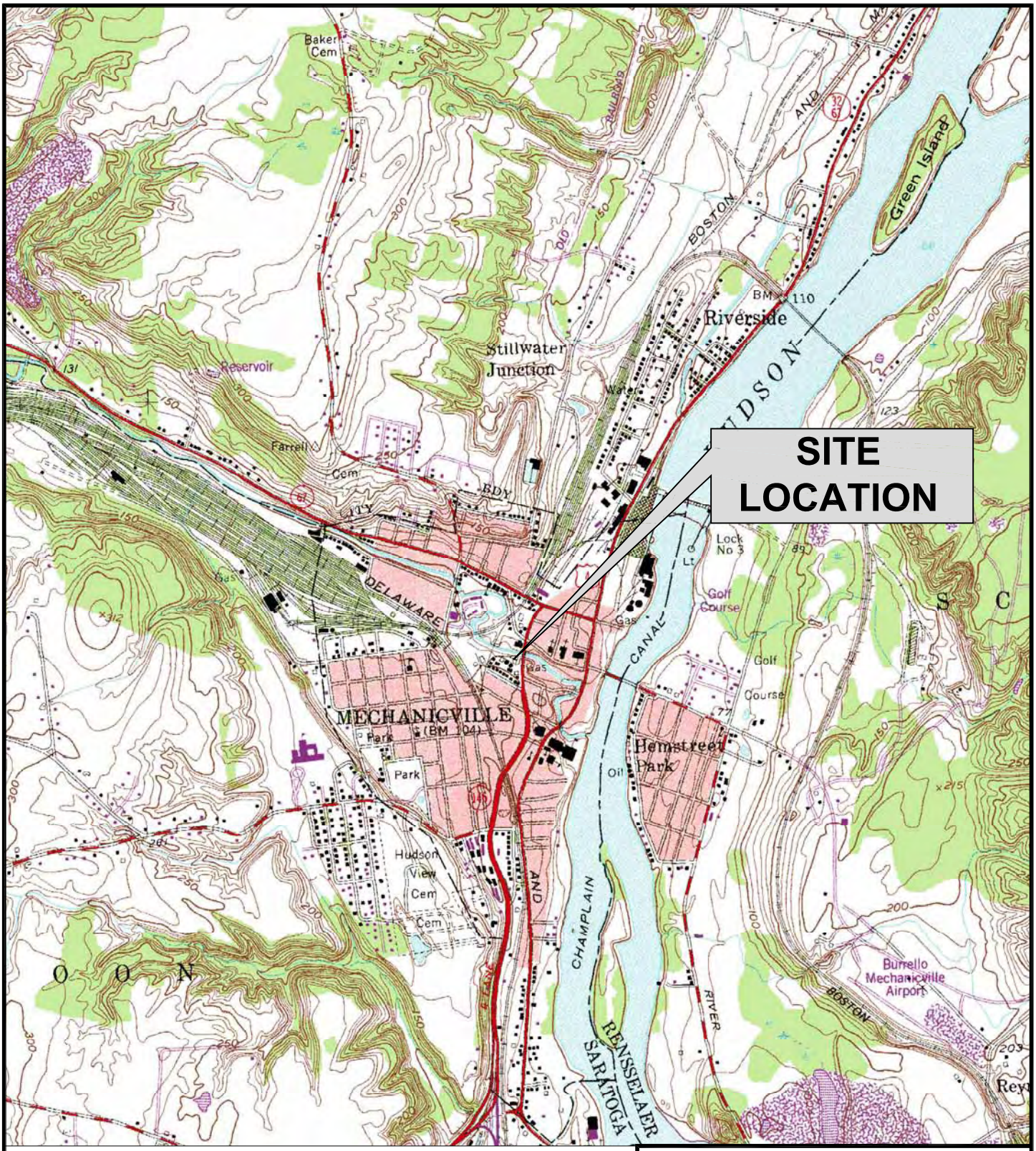
Figures



PROJECT LOCATION MAP

SOURCE: NYSDOT MECHANICVILLE 7.5' QUADRANGLE
SCALE: 1" = 2000 FT.

AECOM

SITE MANAGEMENT PLAN

SITE
LOCATION
MAP

NEW YORK STATE ELECTRIC AND GAS
MECHANICVILLE, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
	---	60135689	12/2010	1

Plotted By: meisterk
Layout-Sheet Name: FIG-1
Plot File Date Created: Dec/02/2010 11:12 AM

Filename: L:\WORK\94560\CADD\SITE_MANAGEMENT_PLAN\ACAD-94560_SITE-LOC.DWG

ANTHONY KILL

NORTH CENTRAL AVENUE

FERRIS LANE

FORMER TRANSFORMER STORAGE

FILTER BEDS

FORMER COAL STORAGE

FORMER BOILER ROOM

FORMER SUBSTATION

EXISTING STRUCTURE

FORMER GAS HOUSE

FORMER PURIFIER HOUSE

FORMER OXIDE HOUSE

FORMER DISTRIBUTION GAS HOLDER

OIL TANK

FORMER GAS RELIEF HOLDER

EXISTING STONE RETAINING WALL

EXISTING RIP RAP ON SLOPE

EXISTING STRUCTURE

BM 2

LEGEND

- EXISTING STRUCTURES
- G — EXISTING UNDERGROUND GAS LINE
- GAS MARKER
- 86' — GROUND SURFACE CONTOUR
- FENCE
- FORMER STRUCTURE LOCATION

PLAN

0' 20' 40' 80'

AECOM

SITE MANAGEMENT PLAN

FORMER OPERATIONS LAYOUT

NEW YORK STATE ELECTRIC AND GAS
MECHANICVILLE, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
	---	60135689	12/2010	2

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Layout-Sheet Name: SM-EXISTING
Plot File Date Created: Dec/02/2010 11:40 AM

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MW-36I
MW-36D
MW-20D
A'
MW-35I
MW-34D
ANTHONY KILL
MW-32D
NORTH CENTRAL AVENUE
TW-4
MW-15IR
MW-22IR
TW-2SI
TW-3
MW-29IR
TW-2I
MW-14
MW-14S
MW-14D
BLOCK / BRICK STRUCTURE
MW-46I
MW-2
MW-2I
MW-44I
MW-25I
MW-25D
MW-12S
MW-45I
MW-13
MW-12
TW-1
MW-30D
MW-30S
MW-19I
MW-1I
MW-1
MW-1D
MW-10D
MW-10
MW-10I
MW-40D
ELECTRIC SUB-STATION
A
MW-42D
MW-43D
MW-31S
MW-31D
MW-37I
MW-37D
MW-41D
GROVE STREET
MW-17I
MW-17D
MW-17
MW-18
MW-33D
MW-38D
MW-38I
MW-39D
WILLIAM STREET
FERRIS LANE
WEST WAY
JAMES STREET
BURKE STREET
EAST WAY
FRANCES STREET
CANAL S
N STREET

LEGEND

- MW-12S — MONITORING WELL LOCATION
- MW-12S — DECOMISSIONED MONITORING WELL
- WELL USED FOR NAPL MONITORING
- WELL USED FOR SAMPLING
- APPROXIMATE LOCATION OF FRACTURES
- EXTENT OF 2009 SOIL REMOVAL LIMITS
- X — ANTHONY KILL OBSERVATION LOCATION

0' 40' 80' 160'

AECOM

SITE MANAGEMENT PLAN
LONG-TERM
MONITORING WELLS

NEW YORK STATE ELECTRIC AND GAS
MECHANICVILLE, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
	---	60135689	4 / 2011	3

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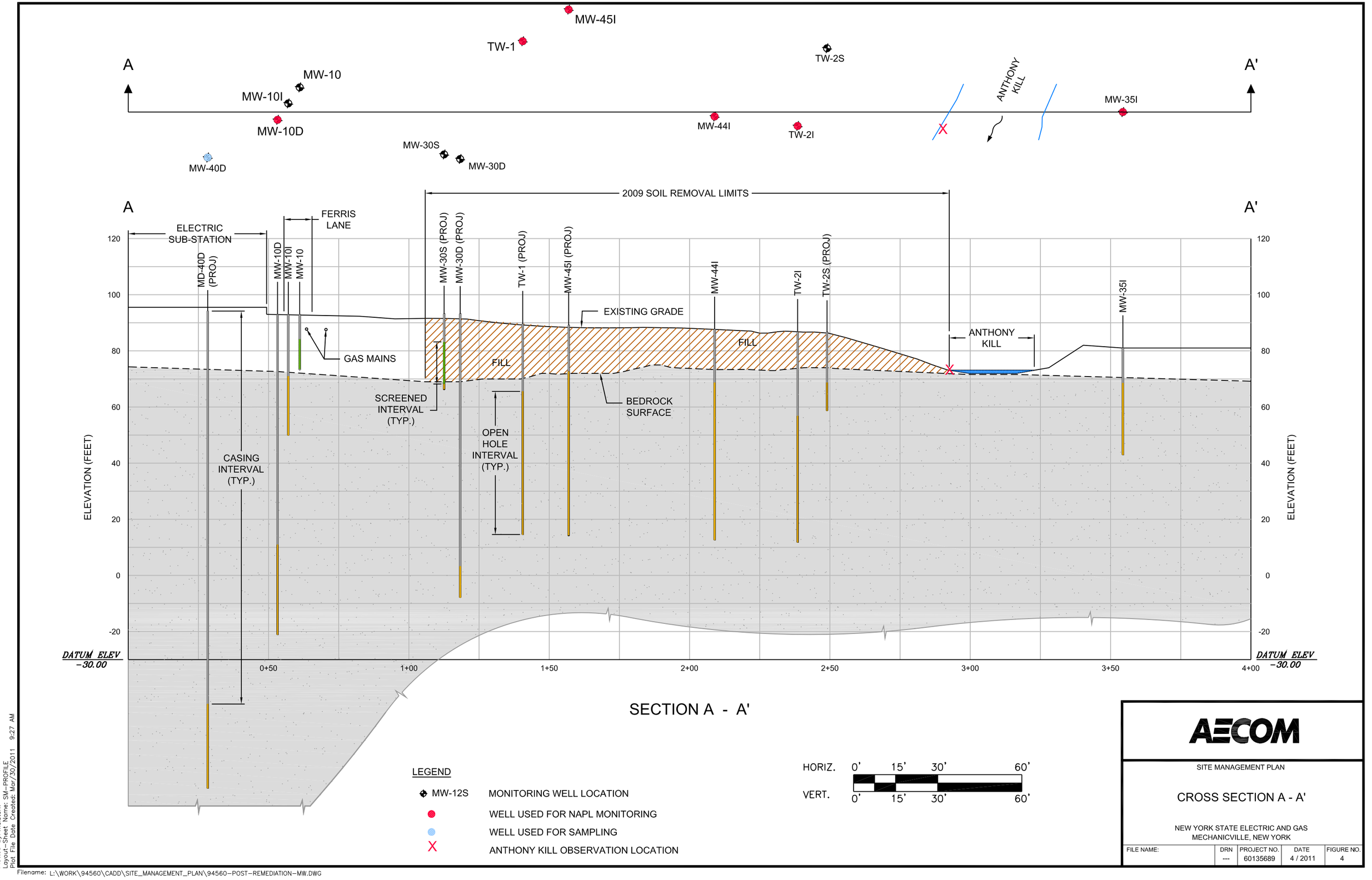

SECTION A - A'

LEGEND

- MW-12S — MONITORING WELL LOCATION
- WELL USED FOR NAPL MONITORING
- WELL USED FOR SAMPLING
- ANTHONY KILL OBSERVATION LOCATION

HORIZ. 0' 15' 30' 60'

VERT. 0' 15' 30' 60'

AECOM

SITE MANAGEMENT PLAN

CROSS SECTION A - A'

NEW YORK STATE ELECTRIC AND GAS
MECHANICVILLE, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
	---	60135689	4 / 2011	4

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Plot File Date Created: Mar/30/2011 9:27 AM

Filename: L:\WORK\94560\CADD\SITE_MANAGEMENT_PLAN\94560-POST-REMEDIATION-MW.DWG

POST-REMEDIATION SEDIMENT REMOVAL AREA

MW 35I

MW 34D

ANTHONY KILL

FRACTURES OBSERVED AT ROCK SURFACE

MW-32D

GRAVEL

TW-4

MW-15IR

MW-11

FOLD FOUND AT ROCK SURFACE

TW-3

MW-22IR

MW-29IR

TW-2S

TW-2I

MW-14

MW-14S

MW-14D

MW-46I

BLOCK / BRICK STRUCTURE

CONC.

GRAVEL

MW-44I

ASPHALT

MW-17I

MW-17D

MW-25I

MW-25S

MW-2

MW-21

GRAVEL

MW-12S

MW-13

MW-12

MW-45I

TW-1

CENTRAL AVENUE

MW-17

MW-18

TEAR FAULT FOUND AT ROCK SURFACE

MW-30D

MW-30S

MW 19I

FERRIS LANE

GRAVEL

ASPHALT

MW 1I

MW-1

MW 1D

MW-10

MW-10I

MW-10D

MW 40D

ELECTRIC SUB-STATION

LEGEND

- 2009 REMEDAIL EXCAVATION LIMIT BOUNDARY
- 90 — SURFACE CONTOUR (1 FT.)
- STONE FILL
- MW-15IR — MONITORING WELL
- TW-3 — EXTRACTION WELL
- AREA OF POTENTIALLY IMPACTED SOILS AT DEPTH (> 6 FEET)

PLAN

0’ 20’ 40’ 80’

AECOM

SITE MANAGEMENT PLAN

EXTENT OF REMEDIAL EXCAVATION

NEW YORK STATE ELECTRIC AND GAS
MECHANICVILLE, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
	---	60135689	12/2010	5

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Appendix A

Excavation Plan

AECOM Environment

Prepared for:
New York State Electric and Gas Corp
18 Link Drive
P. O. Box 5224
Binghamton, NY 13902

Prepared by:
AECOM
Latham, NY
Project 60162147
April 2011

Excavation Plan
Mechanicville Central Avenue Former MGP Site
Mechanicville, New York
NYSDEC Site # 5-46-033

Final

Contents

1.0 Introduction

This Excavation Plan provides a description of the excavation procedures/protocols to be used in support of Site Management activities associated with the Mechanicville-Central Avenue former manufactured gas plant site located in the City of Mechanicville, Saratoga County, New York. Any future intrusive work that will penetrate, encounter or disturb the residual contamination will be performed in compliance with this Excavation Plan (EP). Intrusive construction work must also be conducted in accordance with the procedures defined in a Site-specific Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) that will be developed for the excavation. Any intrusive construction work require the submission of an Excavation Work Plan to the New York State Department of Environmental Conservation (NYSDEC) that will be performed in compliance with the EP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan. This Excavation Plan is designed to be used in conjunction with a NYSDEC approved Site Management Plan (SMP). To the extent that discrepancies exist between this EP and the SMP, the SMP shall control.

New York State Electric and Gas Corporation (NYSEG) and all associated parties who prepare remedial documents for submission to the State and parties who perform this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavation.

2.0 Notification

NYSEG or their representative will submit a notification to the NYSDEC at least 10 days prior to the start of any activity that is reasonably anticipated to encounter remaining contamination. Note that the potentially impacted soils exists at depths of greater than 6 feet and that the gas mains under Ferris Avenue are at a depth of approximately 30 inches, therefore any work on the gas mains will not require NYSDEC notification unless the excavation is anticipated to go below 6 feet. Currently, this notification will be made to:

John Spellman
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233-7013

This notification should include:

- A detailed description of the work to be performed, including the location and areal extent, plans for Site re-grading, intrusive elements or utilities to be installed below the soil cover, or any work that may impact an engineering control;
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work;
- A statement that the work will be performed in compliance with this EP and 29 CFR 1910.120;
- A copy of the contractor's HASP and CAMP;
- Identification of disposal facilities for potential waste streams;
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

3.0 Material Handling

3.1 Soils Screening Methods

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all excavations into residual Site contamination. Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during remediation and during Site development, such as excavations for foundations and utility work in the areas where residual contamination is suspected.

Since the most contaminated portion of the Site has been excavated to the bedrock surface and the contaminated soils were disposed off-site, only soils around the gas mains in Excavation Area 5 and soils under the building may exhibit contaminants of concern (COCs) above the Site Cleanup Goals (SCGs) and would require management as per methods described in this section. Soils will be segregated, based on previous environmental data and screening results, into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

3.2 Stockpile Methods

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be placed on polyethylene liners and kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced. Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and will be available for inspection by NYSDEC.

3.3 Materials Excavation and Load Out

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material. NYSEG and its contractors are solely responsible for safe execution of all invasive and other work performed under the submitted work plan.

The presence of utilities and easements on the Site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

A truck decontamination pad will be operated on-site. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be decontaminated at the truck wash before leaving the Site until the activities performed under this section are completed. Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and New York State Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements). Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

3.4 Materials Transport Off-Site

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 New York Codes Rules and Regulations (NYCRR) Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used. All trucks will be washed prior to leaving the Site. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Truck transport routes will be identified to: (1) limit transport through residential areas and past sensitive sites; (2) use city-mapped truck routes; (3) minimize off-site queuing of trucks entering the Site; (4) limit total distance to major highways; and (5) promote safety in access to highways.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site. Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials, during Site excavation.

Due to location of the residual contaminated area (Excavation Area 5) near the entrance of the Site, some off-site queuing of trucks may be necessary. The number and duration of trucks lined up outside the Site entrance will be minimized through efficient scheduling and staging at a remote location.

3.5 Materials Disposal Off-Site

All soil/fill/solid waste excavated and removed from the areas of potential residual soil contamination on Site will be treated as contaminated and regulated material and will be transported and disposed of in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with work plan will be made to the NYSDEC. Unregulated off-site management of materials from this Site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate (e.g. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, construction and demolition recycling facility). Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historical fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste pursuant to 6NYCRR Part 360-1.2. Material that does not meet the SCGs for commercial or industrial use will not be taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility) without a beneficial use determination issued by NYSDEC.

3.6 Materials Reuse On-Site

Any excavated materials that are potentially reusable onsite (that do not contain visible tar) must be sampled and proven suitable prior to reuse. Excavated materials must be stockpiled and secured on-site in accordance with the materials management practices stated above prior to sampling. Stockpiles shall be limited to a maximum size of 500 cubic yards for sampling. A three point composite sample will be collected from each stockpile and submitted for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) PAHs. This section is applicable only for the areas where potential contaminated soils are left in place. The excavation and reuse of material in the areas already remediated do not have to be managed per these requirements.

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-Site material, including historical fill and contaminated soil, that is acceptable for re-use on-site will be placed below a demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site will not be reused on-site.

3.7 Fluids Management

All liquids to be removed from the Site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the Site, but will be managed either via a temporary treatment system or transported to an off-site disposal facility.

4.0 Site Restoration

4.1 Backfill from Off-Site Sources

All materials proposed for import onto the Site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP, applicable regulations (6NYCRR 375-6.7(d)) and guidance prior to receipt at the Site. Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site. All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d).

Trucks entering the Site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

5.0 Stormwater Pollution Prevention

Soil disturbing activities will be limited and exposed soils will be covered to the extent practicable to minimize erosion. Sediment controls (e.g., silt fence, hay bales, check dams) will be installed downgradient from all disturbed areas to capture sediment and prevent it from leaving the Site and entering the Anthony Kill. Any streambank disturbance will require NYSDEC approval.

Erosion protection, silt barriers and check dams will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

The soils and remaining contamination will be prevented from entering the Anthony Kill by placing a siltation fence along the top of the bank, building a sand bag cofferdam, and installing a turbidity curtain.

6.0 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes, unless the Site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in daily and periodic electronic media reports.

Appendix B

Quality Assurance Project Plan

AECOM Environment

Prepared for:
New York State Electric and Gas Corp
18 Link Drive
P. O. Box 5224
Binghamton, NY 13902

Prepared by:
AECOM
Latham, NY
Project 60135689
April 2011

Quality Assurance Project Plan
Mechanicville Central Avenue Former MGP Site
Mechanicville, New York
NYSDEC Site # 5-46-033

Final

Contents

List of Attachments

1.0 Introduction

This Quality Assurance Project Plan (QAPP) provides a description of the sampling and laboratory procedures/protocols to be used in support of Site Management activities associated with the Mechanicville North Central Avenue former manufactured gas plant (MGP) site located in the City of Mechanicville, Saratoga County, New York. The fundamental purpose of the QAPP is to ensure that quality analytical data will be generated to support the project in a manner consistent with the Data Quality Objectives as specified herein. This QAPP is designed to be used in conjunction with a New York State Department of Environmental Conservation (NYSDEC) approved Site Management Plan (SMP) with regards to specific project objectives and field sampling activities. To the extent that discrepancies exist between this QAPP and the SMP, the SMP shall take precedence.

2.0 Data Quality Objectives

Data quality objectives are statements, expressed in either qualitative or quantitative terms, which address the appropriate level of data quality for a project. The quality of data generated must be suitable to support the decisions used to achieve the overall goals as delineated in the SMP. The general project data quality objectives are summarized in this section, with detailed information given throughout this QAPP and associated sections of the SMP. The overall data quality objectives of the project are:

- To ensure that samples collected are representative of the sample population.
- To provide detection limits for the selected analytical methods, which are below the established cleanup objectives or regulatory limits.
- To measure and document precision and accuracy using procedures established by the laboratories, the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) and U.S. Environmental Protection Agency (EPA) approved analytical methods.
- To ensure that a NYSDOH ELAP and NYSDOH ELAP CLP certified laboratory will conduct all soil and water analyses.

3.0 Sample Collection

3.1 Soils

No soil samples will be collected as part of the SMP. In the event that a soil removal action will be required where potentially impacted soils remain at the site, a soil sampling plan will be included with the soil removal work plan submitted to the NYSDEC for approval prior to any soil removal activities.

3.2 Groundwater Sampling

Groundwater samples will be collected as described in the appropriate sections of the SMP. These sections describe the collection procedures, sampling equipment, locations and frequencies for the groundwater samples.

Samples will be transferred directly into pre-cleaned sample collection containers, which are supplied by the laboratory performing the analyses. All necessary preservatives will be added to the sample containers at the laboratory prior to being shipped to the site (see Section 3.3). Samples will be stored at 4° Celsius until delivered to, and analyzed by the laboratory.

3.3 Sample Containers and Preservatives

Sample containers and preservatives will be provided by the contracted laboratories and stored on-site in a clean and dry location. Sample containers and preservatives by matrix and analysis are listed in Table A.

TABLE A
SAMPLE CONTAINERS & PRESERVATIVES

Analysis	**Matrix**	**Container**	**Preservative**
Semivolatiles	Water	1000 ml amber glass	4^{o} Celsius
Volatiles	Water	40 ml glass	4^{o} Celsius or HCl to pH < 2
Total Cyanide	Water	500 ml Plastic	4^{o} Celsius NaOH to pH > 12

Note: All glass containers will be sealed with Teflon liner caps. All water samples for organic fractions will be collected in duplicate.

3.4 Sampling Holding Times

Table B identifies samples holding times.

TABLE B GROUNDWATER SAMPLES		
Sample Type	**Matrix**	**Holding Time**
Semivolatiles	Water	5 days to extraction 40 days after extraction
Total Cyanide	Water	14 days
Volatiles	Water	14 days

4.0 Sample Custody, Identification, and Tracking

4.1 Holding Times and Sample Transport

Since the samples will be analyzed at standard turn around, no exceedance of holding time is expected. Holding times will be calculated from the time the sample is collected to the subsequent extraction, if necessary, or analysis. All samples will be delivered to the laboratory by same day courier or overnight delivery in sealed coolers with ice.

4.2 Chain-of-Custody

A Chain-of-Custody will accompany all samples from the point of sampling to delivery of the samples to the laboratory. The COC will be a record of the location where the sample was collected, the data and time collected, number of containers collected, type(s) of analyses requested, special remarks or requests, and the signature of each custodian of the samples. The complete COC will be included in all hard copies of reports.

Upon sample receipt, laboratory personnel will be responsible for sample custody. The laboratory sample custodian will verify sample integrity and compare the cooler contents against the field COC. If a sample container is broken or leaking, it will be noted on the COC and NYSEG project personnel will be immediately notified. If the sample custodian observes any labeling or descriptive errors, NYSEG project personnel will be contacted immediately to resolve any discrepancies. After all discrepancies (if any) are resolved, the laboratory will acknowledge receipt of the samples (i.e., by signing and dating the COC and the completed COC will be included in all hard copies of reports and become a permanent part of the project records.

4.2.1 Sample Identification

Each sample collected during the project will have a unique identification number. This number, date of collection and type of analysis will be placed on each sample container after the sample is collected. See Attachment 1 for sample identification naming convention for air, water, and confirmatory samples.

4.3 Laboratory Sample Tracking

Each laboratory has an internal tracking mechanism to ensure that each sample received has a unique identification number and that results generated and reported for each sample correspond to the identification number assigned at the laboratory.

5.0 Calibration Procedures

Each analysis will be performed in accordance with NYSDOH ELAP (Environmental Laboratory Approval Program) sanctioned methods or equivalent U.S. EPA analytical procedures. Each procedure specifies the method of frequency of calibration necessary to perform accurate and precise analyses. Each analytical instrument verifies the Method Detection Limit at least every six months as prescribed by the NYSDOH ELAP. The calibration of the instruments is verified at the beginning and end of each auto sampler run. Gas Chromatograph/Mass Spectrometers are tuned and calibrated every 12 hours, at a minimum.

All field equipment, for real time air analyses will be calibrated daily, in accordance with manufacturer's recommendations. All equipment will be calibrated more frequently if conditions warrant. The total organic analyzer equipped with a photo ionization detector (PID) used to measure volatile organic vapors will be calibrated to benzene with a 100 ppm isobutylene air standard. The DataRam™ or a Thermo Andersen ADR-1200s used to measure particulates will be calibrated to zero with filtered air sample.

6.0 Analytical Procedures

6.1 Laboratory Analyses

The following Table shows the analytical method to be used for each analyte or group of analytes for the Project:

TABLE C
ANALYTICAL METHODS

Analyte	Analytical Method
Total Volatiles	SW 846 Method 8260
Total Semivolatiles	SW 846 Method 8270
Total Cyanide	SW 846 9012

6.2 Laboratory Selection

The laboratory chosen for the project must be certified, and maintain certification, under the NYSDOH ELAP and NYSDOH ELAP CLP for analyses of solid and hazardous waste. Only analytical laboratories that have experience in MGP projects or similar projects will be considered for use. NYSEG has contracted with (To Be Determined) to perform laboratory services for Site Management.

7.0 Data Reduction, Validation and Reporting

7.1 Data Reduction

7.1.1 Field Data Collection

Real time field data collected during sampling events will include qualitative information regarding the texture, appearance, odors, and any other observations made while water samples are being collected. Meteorological data and current site activity will be noted while collecting data for real time air monitoring. These observations will be recorded in the field logbook.

7.1.2 Laboratory Data Collection and Reduction

A significant portion of the analyses performed requires the use of automated laboratory instrumentation. Raw data collected from the instruments detectors will be converted to standard units of mg/L for water. All raw data will be stored in electronic form and in laboratory notebooks, in case the analysis needs to be recreated. Raw data for all analyses will be archived for a minimum of four years.

7.2 Data Review

All analytical data will be verified for precision and accuracy utilizing the laboratory's in-house Quality Assurance/Quality Control programs. In addition, all data packages will be reviewed by NYSEG project personnel to ensure that all data deliverables have been properly provided.

7.3 Full Data Validation

The full third party data validation process consists of a formal systematic review of analytical results and quality control documentation with regards to the parameters cited in Section 8.3. On the basis of this review, a third party data validator will make judgments and express concerns on the quality and limitations of the specific data and the validity of the data package as a whole. The data validator prepares documentation of his or her review using the standard USEPA Inorganics Regional Assessment and Organics Regional Assessment forms to summarize deficiencies and general laboratory performance. These forms are accompanied by appropriate supplementary documentation, which identifies specific problems.

Since a full data validation would typically be used for the purposes of litigation, this level of review may surpass the scope of work necessary for the project. Therefore, any full data validation for analytical results of samples will be performed at NYSEG's discretion. Sampling data will be archived in the event that it becomes necessary to perform a full data validation at a future date.

7.4 Data Usability Summary Report

A Data Usability Summary Report (DUSR) provides a thorough review and evaluation of analytical data without the formality of a full third party data validation. A DUSR for the analytical results of samples will be generated in lieu of a full data validation to verify that the proper data deliverables and procedures have been rendered in accordance with the data quality objectives of the SMP.

7.5 Reporting

Final reports for analytical data will be reviewed and accepted by NYSEG prior to submission to the NYSDEC. Reports for analyses performed under the ELAP protocol will contain results sheets for the sample analyzed. These reports must include a minimum:

- NYSEG Sample ID number;
- Laboratory sample ID number;
- Sample collection date;
- Extraction or digestion date (if applicable);
- Date Analyzed;
- Analytical method;
- Analytical results (with units clearly identified);
- Results of laboratory blank and field blanks;
- Results of spikes, matrix spikes, and duplicates;
- Surrogate recoveries (if applicable);
- Complete Chain-of-Custody forms; and
- File log sheets (if available)

8.0 Quality Control Checks

8.1 Field Quality Control

8.1.1 Decontamination Procedures for Sampling

The following decontamination procedure will be followed for all non-disposal sampling equipment before being reused.

- Equipment will be washed thoroughly with a non-phosphate detergent.
- The equipment will then be rinsed with analyte-free water.

After decontamination, equipment will be carefully stored to avoid contamination between sampling events.

8.2 Laboratory Quality Control

Each laboratory is NYSDOH Certified for the analyses they will perform. Each analyst must complete a start-up proficiency procedure to demonstrate their capability to perform accurate and precise analyses on each type of instrument they operate. In addition, each laboratory must accurately analyze samples provided by NYSDOH on a semi-annual basis to maintain certification. The laboratories have internal quality control officers that review all methodologies and implement corrective action, including reanalyzing samples, which do not pass, established laboratory quality control criteria.

Laboratory quality control procedures are specified in the analytical methods. These specifications include the type of laboratory quality control check required, compounds, and concentrations to be used, and laboratory quality control acceptance criteria.

Laboratory quality control checks will include (where specified by method):

- Calibration Standards
- Methods Blanks
- Matrix Spike/Matrix Spike Duplicates
- Surrogate Spikes
- Internal Standards
- Laboratory Duplicates
- Calibration Check Standards
- Laboratory Control Samples

9.0 Preventive Maintenance

9.1 Field Instruments and Equipment

Equipment instruments, tools, gauges, and other items requiring preventative maintenance will be serviced in accordance with the manufacturer's specified recommendations or written procedures developed by the operators. All field equipment service will be conducted by qualified personnel. Prior to any field sampling, each piece of field equipment will be inspected to ensure that it is operational. If the equipment is not operational, it must be repaired prior to use. All equipment which required charging or batteries will be fully charged or have fresh batteries at the start of the project. An equipment repair/maintenance log will be kept for each field instrument. Any non-operational/non-repairable field equipment will be replaced.

9.2 Laboratory Instruments and Equipment

Each laboratory has an instrument/equipment maintenance program, which includes procedures for daily, weekly, monthly, or annual routine maintenance. In addition, maintenance is performed if the accuracy and/or precision of the instrument are in question.

9.2.1 Instrument Maintenance

Preventative maintenance of laboratory instruments will be conducted in accordance with the manufacturer's guidelines or written procedures developed by the operators. All instrument service will be performed by qualified personnel. To minimize potential downtime, the laboratory will maintain a sufficient supply of critical spare parts for its instruments and, where practical, maintain a service contract for rapid instrument repair. Wherever possible, the laboratory will retain backup instrumentation. An instrument repair/maintenance log will be maintained for each instrument.

9.2.2 Equipment Monitoring

On a daily basis, the operation of the laboratory equipment (e.g., balances, ovens, refrigerators, water purification systems) will be checked and documented. Any discrepancies will be immediately reported to the appropriate laboratory personnel for resolution.

Attachment 1

Sample Identification

SAMPLE IDENTIFICATION

NAMING CONVENTION FOR SOIL AND WATER SAMPLES

SYSTEM CODING

First & Second = Site	Mechanicville-Central Ave.	MC
Third & Fourth = Source	Excavation	EX
	Stockpile	SP
	Frac Tank	FT
	Poly Container	PC
	Metal Barrel	MB
	Roll Off Container	RO
	Waste Wrangler	WW
	Test Pit	TP
	Boring	BO
	Geoprobe	GP
	Monitoring Well	MW
Fifth & Sixth = Location	Sidewall Sample	SW
	Bottom Sample	BM
	Waste Soil	WS
	Wastewater	WW
	Surface water	SW
	Groundwater	GW
	Debris	DB
Seventh & Eighth = Relative Depth	Surface Soil	00
	Depth below Ground	02
	Non-Applicable	NA
Ninth, Tenth & Eleventh =	Sample Number	005

EXAMPLE: Mechanicville-Central Avenue; Groundwater from Monitoring Well MW-17; and sample number

SAMPLE IDENTIFICATION: MCMWGWNA017

FORMER MANUFACTURED GAS PLANT SITE OR FORMER MANUFACTURED GAS PLANT SITE DISPOSAL AREA	
Site	**Code**
Albion Ingersoll Street	AI
Auburn Clark Street	AC
Auburn Green Street	AG
Auburn McMaster Street	AM
Binghamton Court Street	BC
Binghamton – Johnson City	BJ
Binghamton Washington Street	BW
Clyde Lock Street	CL
Corning Chestnut Street	CC
Cortland/Homer South Main Street	CH
Dansville Ossian Street	DO
Elmira Madison Avenue	EM
Elmira Water Street	EW
Geneva Border City	GB
Geneva Wadsworth Street	GW
Goshen West Main Street	GS
Granville North Street	GR
Ithaca Cayuga Inlet	II
Ithaca Court Street	IC
Ithaca First Street	IF
Lockport State Road	LS
Lockport Transit Street	LT
Lyons Water Street	LW
Mechanicville Central Avenue	**MC**
Mechanicville Coons Crossing	ME
Mechanicville Willow Glen MGP Disposal Site	MW
Newark Water Street	NW
Norwich Birdsall Street	NB
Oneonta James Georgeson Avenue (Gas Ave.)	OG
Owego East Main Street	OE
Palmyra Park Drive	PP
Penn Yan Jackson Street	PJ
Penn Yan Water Street	PW
Plattsburgh Bridge Street	PB
Plattsburgh Saranac Street	PS
Seneca Falls Fall Street	SF
Warsaw Court Street	WC
Waterloo East Main Street	WE
Waterloo Babbott Street	WB

Appendix C

Monitoring Well Purge Sheet

Monitoring Well Purging/Sampling Form

Project Name and Number: NYSEG Mechanicville Former MGP S

Monitoring Well Number: _____ Date: _____

Samplers: _____

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: _____

1. L = Total Well Depth:	_____	feet
2. D = Riser Diameter (I.D.):	_____	feet
3. W = Static Depth to Water (TOC):	_____	feet
4. C = Column of Water in Casing:	_____	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	_____	gal
6. D2 = Pump Setting Depth (ft):	_____	feet
7. C2 = Column of water in Pump/Tubing (ft):	_____	feet
8. Tubing Volume = C2(0.005737088)	_____	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using _____

Parameter	**Units**	**Readings**						
Time	24 hr							
Water Level (0.33)	feet							
Volume Purged	gal							
Flow Rate	mL / min							
Turbidity (+/- 10%)	NTU							
Dissolved Oxygen (+/- 10%)	%							
Dissolved Oxygen (+/- 10%)	mg/L							
Eh / ORP (+/- 10)	MeV							
Specific Conductivity	mS/cm^c							
Conductivity (+/- 3%)	mS/cm							
pH (+/- 0.1)	pH unit							
Temp (+/- 0.5)	C							
Color	Visual							
Odor	Olfactory							

Comments:

* Three consecutive readings within range indicates stabilization of that parameter.

Appendix D

Monitoring Well Construction Diagrams

Mechanicville Former MGP Site
Monitoring Well Inventory 1/3/11

On-Site Wells					
Wells	**Screen Interval (ft bgs)**	**Type of Screen**	**TOC Elevation ft MSL**	**Surface Elevation ft MSL**	**Part of Sampling/ Monitoring Program**
TW-1	24 to 75	Open Hole	NA	89.56	Monitor for NAPL
TW-2I	30 to 75	Open Hole	NA	86.7	Monitor for NAPL
TW-2S	18 to 28	Open Hole	86.34	86.68	Sample Groundwater
TW-3	15 to 75	Open Hole	87.15	87.52	Monitor for NAPL
TW-4	15 to 75	Open Hole	87.17	87.51	Measure Water Level
MW-2	11.2 to 14.35	Screen	91.31	91.6	Sample Groundwater
MW-2I	11.28 to 32.2	Open Hole	88.32	88.6	Sample Groundwater
MW-12	14.5 to 25.5	Screen	98.46	98.3	Measure Water Level
MW-12S	11 to 26	Screen	93.67	93.88	Measure Water Level
MW-13	44.7 to 55.5	Screen	98.48	98.6	Measure Water Level
MW-14	30 to 41	Screen	98.93	98.7	Measure Water Level
MW-14D	91 to 121.7	Open Hole	94.07	94.46	Measure Water Level
MW-14S	10 to 25	Screen	94.45	94.09	Measure Water Level
MW-15IR	16 to 75	Open Hole	87.86	87.44	Measure Water Level
MW-22IR	16 to 75	Open Hole	87.36	87.05	Measure Water Level
MW-25I	27 to 47	Open Hole	93.8	94.17	Measure Water Level
MW-25S	11 to 16	Screen	93.35	93.76	Measure Water Level
MW-29IR	17.1 to 75	Open Hole	86.75	86.42	Measure Water Level
MW-30D	90 to 121	Open Hole	92.87	93.19	Measure Water Level
MW-30S	10 to 25	Screen	92.99	93.22	Measure Water Level
MW-32D	91 to 111.5	Open Hole	89.77	87.23	Measure Water Level
MW-44I	19 to 75	Open Hole	87.87	87.37	Monitor for NAPL
MW-45I	23.5 to 75	Open Hole	89.13	88.74	Monitor for NAPL
MW-46I	16.5 to 75	Open Hole	88.33	87.93	Sample Groundwater
Off-Site Wells					
MW-1	11.6 to 16.85	Screen	98.56	95.9	Measure Water Level
MW-1D	121 to 155.2	Open Hole	90.65	90.99	Monitor for NAPL
MW-1I	45 to 75	Open Hole	90.45	90.83	Measure Water Level
MW-10	8.7 to 19.5	Screen	96.49	96.7	Measure Water Level
MW-10D	82 to 114	Open Hole	92.67	92.88	Monitor for NAPL
MW-10I	22 to 43	Open Hole	92.22	92.58	Measure Water Level
MW-17	13 to 23	Screen	98.18	NA	Sample Groundwater
MW-17D	121 to 142.5	Open Hole	93.6	93.55	Sample Groundwater
MW-17I	23 to 45	Open Hole	93.29	93.55	Sample Groundwater
MW-18	28 to 38	Screen	98.12	NA	Measure Water Level
MW-20D	90 to 110.1	Open Hole	96.37	94.87	Measure Water Level
MW-33D	119.7 to 140.5	Open Hole	93.8	94.34	Monitor for NAPL
MW-34D	100 to 120.5	Open Hole	93.66	94.26	Monitor for NAPL
MW-35I	12.5 to 38	Open Hole	80.6	80.94	Monitor for NAPL
MW-36D	140 to 161	Open Hole	94.22	94.58	Measure Water Level
MW-36I	20 to 45	Open Hole	94.2	94.61	Measure Water Level
MW-38D	150 to 170.1	Open Hole	78.64	78.96	Sample Groundwater
MW-38I	90 to 120	Open Hole	78.66	78.9	Sample Groundwater
MW-39D	130.4 to 150.4	Open Hole	91.9	92.22	Sample Groundwater
MW-40D	140 to 170	Screen	93.92	94.18	Sample Groundwater
MW-42D	140 to 175	Open Hole	93.46	93.72	Monitor for NAPL

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BOREHOLE LOG

BORING ID #: **TW-1**

START DATE: 7/22/09 END DATE: 8/4/09

PROJECT NAME: **NAPL Test Well** PROJECT NO.: **94560** PROJECT MANAGER: **Scott Underhill**
SITE LOCATION: **NYSEG-Mechanicville, NY** BORING LOCATION: **TW-1**
DRILLING CO.: **Nothnagle Drilling** DRILLER: **Bush** DRILLING METHOD: **HSA/Wash Rotary**
BOREHOLE DIAMETER: **6 inches** DEPTH TO BEDROCK: 20.0 ft bgs TOTAL DEPTH DRILLED: **75.0 ft**
TOTAL DEPTH REACHED: **75.0 ft bgs** INSPECTOR: Catherine Kielb WEATHER CONDITIONS: **70's, cloudy, humid**

FIELD SAMPLE INFORMATION								HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
							WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
							FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
							TYPE	**Automatic**	**Split Spoon**				
							ID/OD		**2"**				
DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	GEOLOGIC DESCRIPTION					LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS
							Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock.						7/29/2009 1220
5													
10													
15													
							-Layers of concrete and rip-rap on top of bedrock						
20							20.0 ft bgs						1345
							TOP OF BEDROCK - Advance 6 1/4 inch HSA to 20.0 ft bgs and set 8" temporary steel casing - Drilled with 7 7/8" wash rotary rock socket from 20.0 ft to 24.0 ft bgs						
25							24.0 ft bgs						
							BOTTOM OF 6" PERMANENT STEEL CASING - Grout in 6" permanent steel casing at 24.0 ft bgs						7/30/2009 815
75							75.0 ft bgs						8/6/2009
							Advance 5 7/8" wash rotary rock socket for a td of 75.0 ft bgs						950

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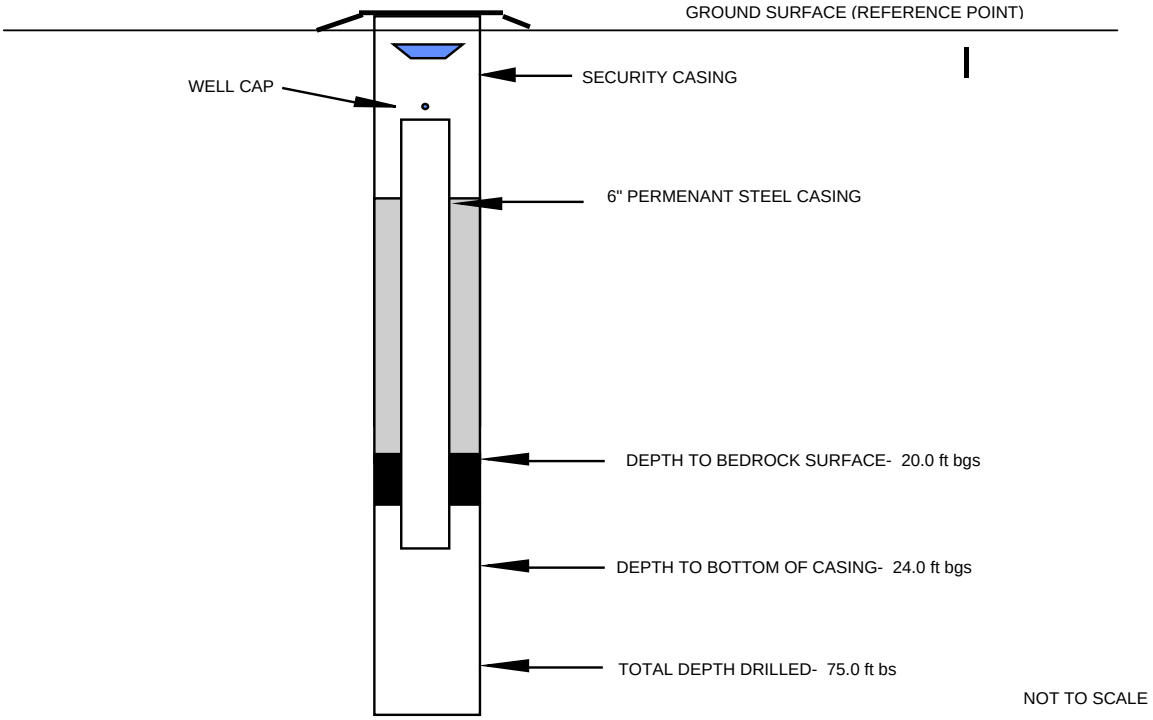
WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: TW-1 TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 7/29/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 8/6/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:



Notes:

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BOREHOLE LOG

BORING ID #: **TW-2I**

START DATE: 8/10/09 END DATE: 8/11/09

PROJECT NAME:	**NAPL Test Well**	PROJECT NO.:	**94560**	PROJECT MANAGER:	**Scott Underhill**
SITE LOCATION:	**NYSEG-Mechanicville, NY**	BORING LOCATION:	**TW-2I**		
DRILLING CO.:	**Nothnagle Drilling**	DRILLER:	**Bush**	DRILLING METHOD:	**HSA/Wash Rotary**
BOREHOLE DIAMETER:	**6 inches**	DEPTH TO BEDROCK:	15.5 ft bgs	TOTAL DEPTH DRILLED:	**75.0 ft**
TOTAL DEPTH REACHED:	**75.0 ft bgs**	INSPECTOR:	Catherine Kielb	WEATHER CONDITIONS:	**High 70's, sunny**

FIELD SAMPLE INFORMATION

	HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
TYPE	**Automatic**	**Split Spoon**				
ID/OD		**2"**				

DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	GEOLOGIC DESCRIPTION	LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS
							Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock.		8/10/2009 1300
5									
10									
15							15.5 ft bgs TOP OF BEDROCK - Advance 6 1/4 inch HSA to 17.5 ft bgs and set 8" temporary steel casing		1325
20							-Drilled 7 7/8" wash rotary rock rocket to 30.0 ft bgs		
25									
30							30.0 ft bgs BOTTOM OF 6" PERMANENT STEEL CASING - Grout in 6" permanent steel casing at 30.0 ft bgs		1830
75							75.0 ft bgs Advance 5 7/8" wash rotary rock socket for a td of 75.0 ft bgs		8/11/2009 1550

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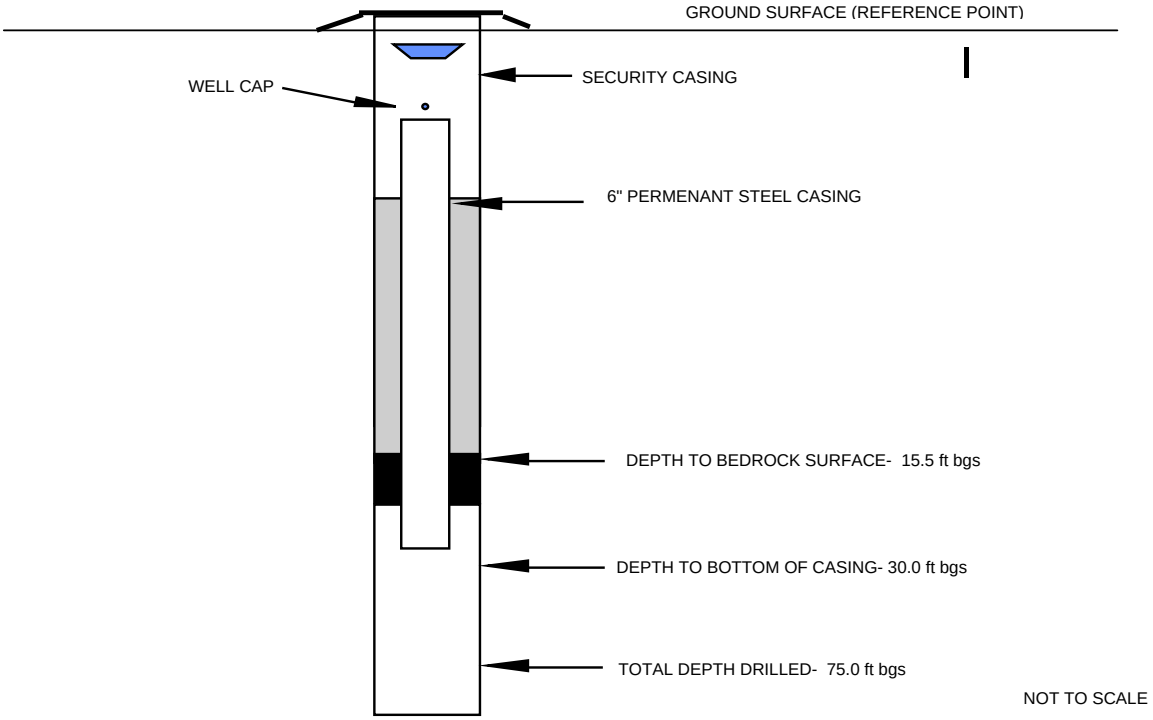
WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: TW-2I TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 8/10/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 8/11/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:



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BOREHOLE LOG

BORING ID #: **TW-2S**

START DATE: 7/20/09 END DATE: 7/28/09

PROJECT NAME: **NAPL Test Well**
SITE LOCATION: **NYSEG-Mechanicville, NY**
DRILLING CO.: **Nothnagle Drilling**
BOREHOLE DIAMETER: **6 inches**
TOTAL DEPTH REACHED: **28.0 ft bgs**

PROJECT NO.: **94560**
BORING LOCATION: **TW-2S**
DRILLER: **Bush**
DEPTH TO BEDROCK: 14.0 ft bgs
INSPECTOR: Catherine Kielb

PROJECT MANAGER: **Scott Underhill**
DRILLING METHOD: **HSA/Wash Rotary**
TOTAL DEPTH DRILLED: **28.0 ft**
WEATHER CONDITIONS: **High 70's, sunny**

FIELD SAMPLE INFORMATION								HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
							WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
							FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
							TYPE	**Automatic**	**Split Spoon**				
DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	ID/OD		**2"**				

GEOLOGIC DESCRIPTION	LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS
Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock.		7/20/2009 1420
14.0 ft bgs TOP OF BEDROCK - Advance 6 1/4 inch HSA to 14.0 ft bgs and set 8" temporary steel casing		
17.8 ft bgs - Drilled with 7 7/8" wash rotary rock socket from 14.0 ft to 19.0 ft bgs -Drilling became soft at 19.0 ft bgs -At 19.3 ft bgs when flushing out casing, visible NAPL was collected. -Approximately 1.3 ft of product at the bottom of rock socket -Added crusher run up to 17.6 ft bgs -Grouted in 6" permanent steel casing at 17.8 ft bgs		7/21/2009 800
-While drilling into bedrock, some coal tar odor was observed by no visible NAPL 28.0 ft bgs		7/28/2009 1300
Advance 5 7/8" wash rotary rock socket for a td of 28.0 ft bgs		

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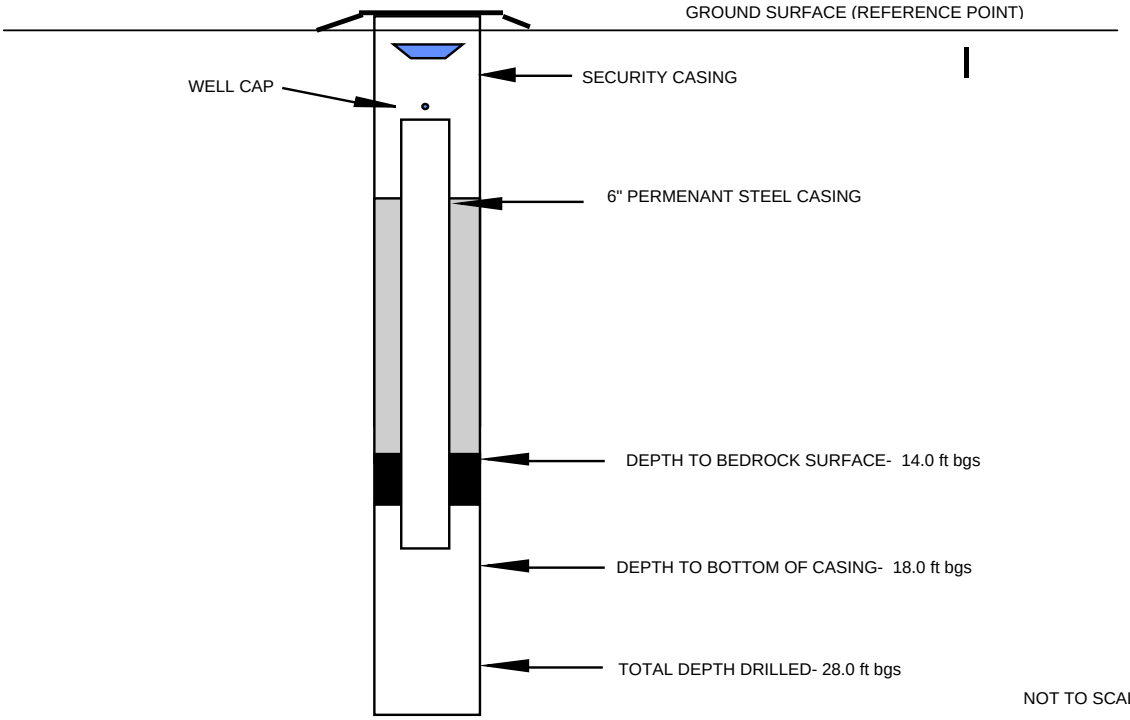
WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: TW-2S TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 7/20/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 7/29/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:



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BOREHOLE LOG

BORING ID #: **TW-3**

START DATE: 7/22/09 END DATE: 8/4/09

PROJECT NAME: **NAPL Test Well** PROJECT NO.: **94560** PROJECT MANAGER: **Scott Underhill**
SITE LOCATION: **NYSEG-Mechanicville, NY** BORING LOCATION: **TW-3**
DRILLING CO.: **Nothnagle Drilling** DRILLER: **Bush** DRILLING METHOD: **HSA/Wash Rotary**
BOREHOLE DIAMETER: **6 inches** DEPTH TO BEDROCK: 10.0 ft bgs TOTAL DEPTH DRILLED: **75.0 ft**
TOTAL DEPTH REACHED: **75.0 ft bgs** INSPECTOR: Catherine Kielb WEATHER CONDITIONS: **High 70's, sunny**

FIELD SAMPLE INFORMATION								HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
							WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
							FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
							TYPE	**Automatic**	**Split Spoon**				
DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	ID/OD		**2"**				

GEOLOGIC DESCRIPTION	LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS
Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock.		7/22/2009 1530
10.0 ft bgs		1545
TOP OF BEDROCK - Advance 6 1/4 inch HSA to 12.5 ft bgs and set 8" temporary steel casing - Drilled with 7 7/8" wash rotary rock socket from 12.5 ft to 15.5 ft bgs		
15.0 ft bgs		7/23/2009
BOTTOM OF 6" PERMANENT STEEL CASING - Grout in 6" permanent steel casing at 15.0 ft bgs		820
75.0 ft bgs		8/4/2009 1030
Advance 5 7/8" wash rotary rock socket for a td of 75.0 ft bgs		

AECOM

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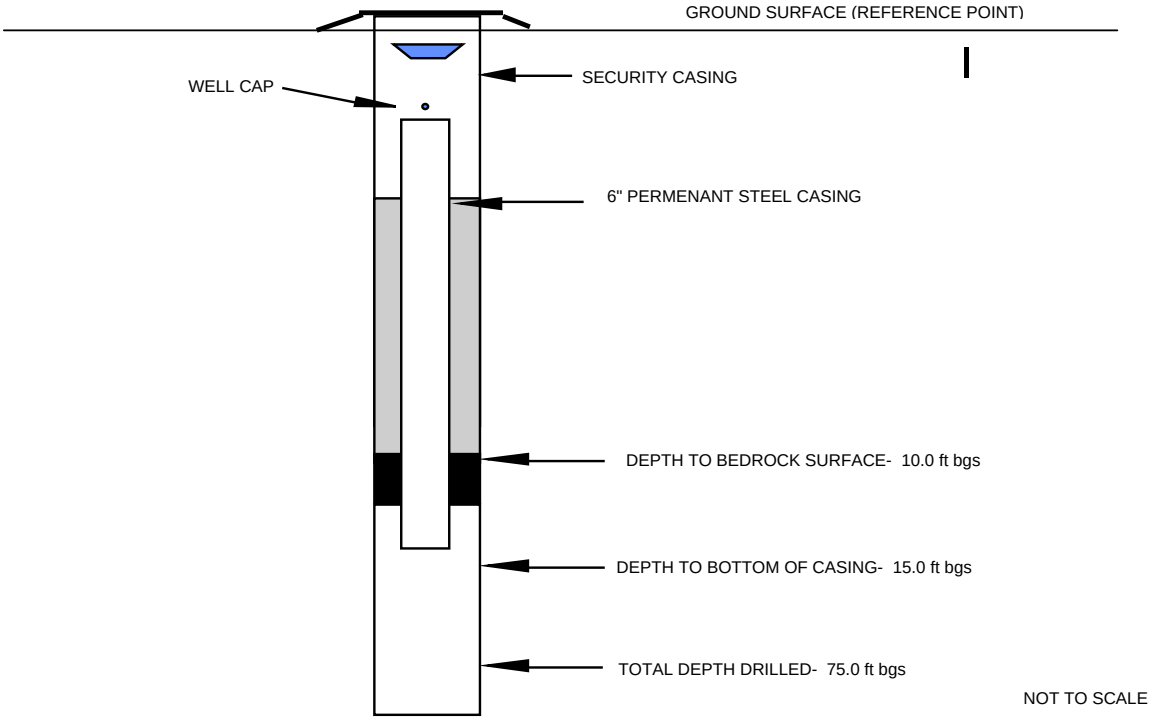
British American Blvd. Latham, NY 12110
Phone (518) 951-2200 Fax (518) 951-2300

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: TW-3 TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 7/22/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 8/4/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:



Notes:

AECOM
40 British American Boulevard
Latham, New York 12110
Phone: (518) 951-2200
Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **TW-3**

START DATE: 7/22/09 END DATE: 8/4/09

PROJECT NAME: **NAPL Test Well** PROJECT NO.: **94560** PROJECT MANAGER: **Scott Underhill**
SITE LOCATION: **NYSEG-Mechanicville, NY** BORING LOCATION: **TW-3**
DRILLING CO.: **Nothnagle Drilling** DRILLER: **Bush** DRILLING METHOD: **HSA/Wash Rotary**
BOREHOLE DIAMETER: **6 inches** DEPTH TO BEDROCK: 10.5 ft bgs TOTAL DEPTH DRILLED: **75.0 ft**
TOTAL DEPTH REACHED: **75.0 ft bgs** INSPECTOR: Catherine Kielb WEATHER CONDITIONS: **High 70's, sunny**

FIELD SAMPLE INFORMATION								HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
							WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
							FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
							TYPE	**Automatic**	**Split Spoon**				
							ID/OD		**2"**				
DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	GEOLOGIC DESCRIPTION					LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS

Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock. — 7/23/2009 1445

10.5 ft bgs — 1545

TOP OF BEDROCK
- Advance 6 1/4 inch HSA to 12.5 ft bgs and set 8" temporary steel casing

- Drilled with 7 7/8" wash rotary rock socket from 12.5 ft to 15.5 ft bgs

15.0 ft bgs — 7/23/2009 1730

BOTTOM OF 6" PERMANENT STEEL CASING
- Grout in 6" permanent steel casing at 15.0 ft bgs
-Upon flushing out 8" temporary steel casing, NAPL was collected in poly-tank. No measureable amount existed other than a sheen

-At approximately 18.0 ft bgs, some DNALP was recovered while drilling

75.0 ft bgs — 7/29/2009 1045

Advance 5 7/8" wash rotary rock socket for a td of 75.0 ft bgs

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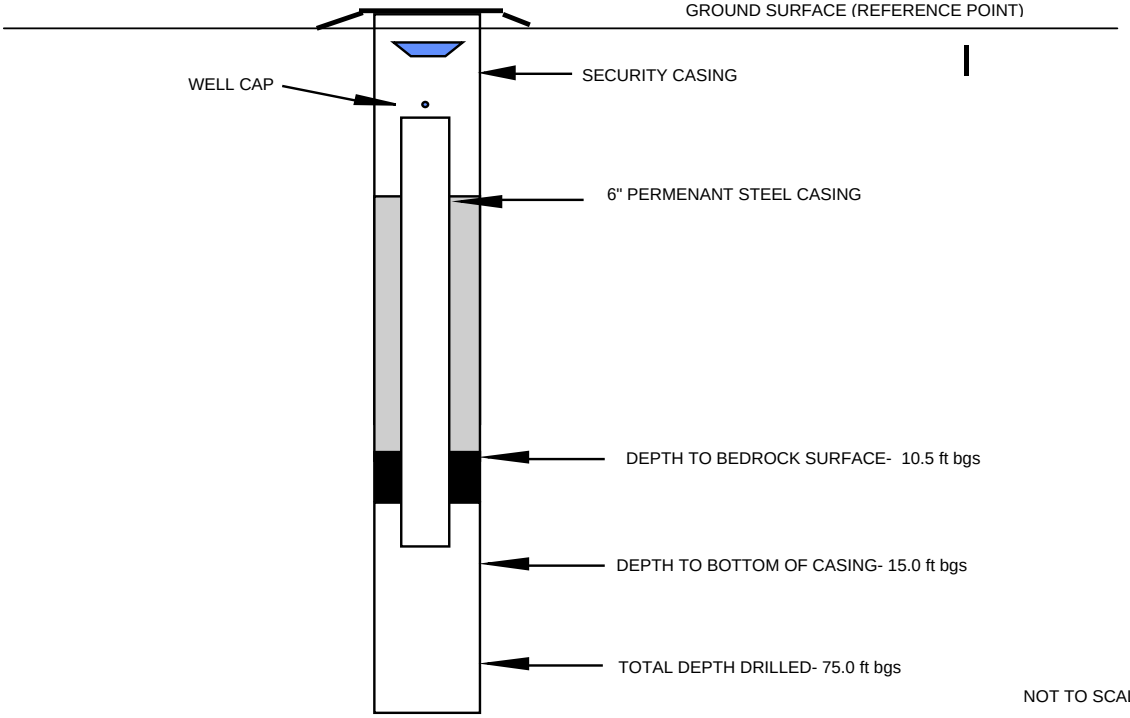
WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: TW-4 TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 7/23/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 7/29/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:

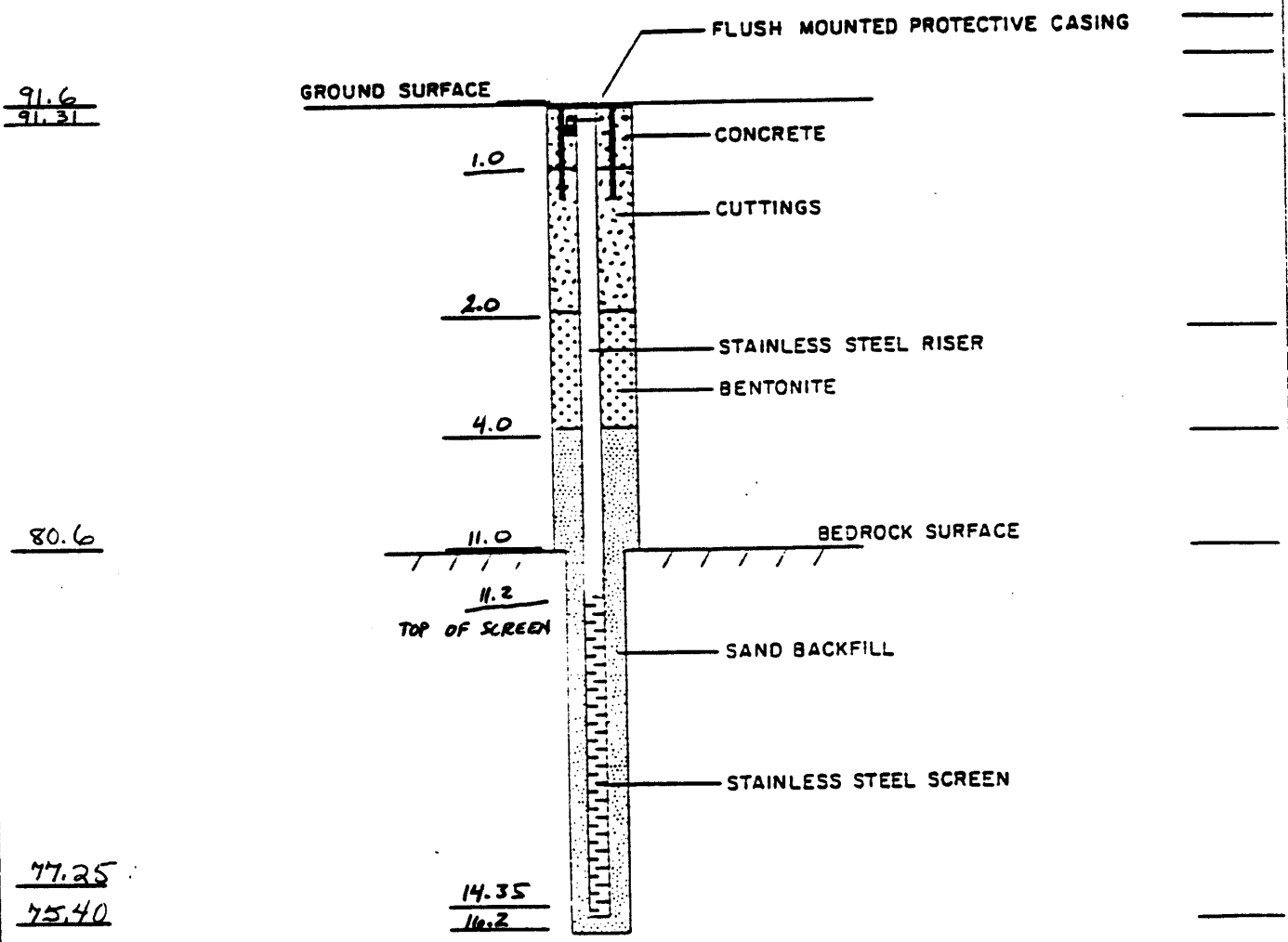


Notes:

MONITORING WELL INSTALLATION DIAGRAM

PROJECT NO. 4945-02	PROJECT NAME NYSEG MECHANICVILLE	WELL NO. MW-2
INSTALLED BY L. ESPY S. WIBBY	DATE INSTALLED 8/1/86	BORING DIAMETER 8.75"
WELL DIAMETER 2.0"	WELL MATERIAL SS	BACKFILL MATERIAL #3 JERSEY SAND

ELEV, FT. DEPTH, FT.



EC JORDAN CO

LOG OF BORING

URS

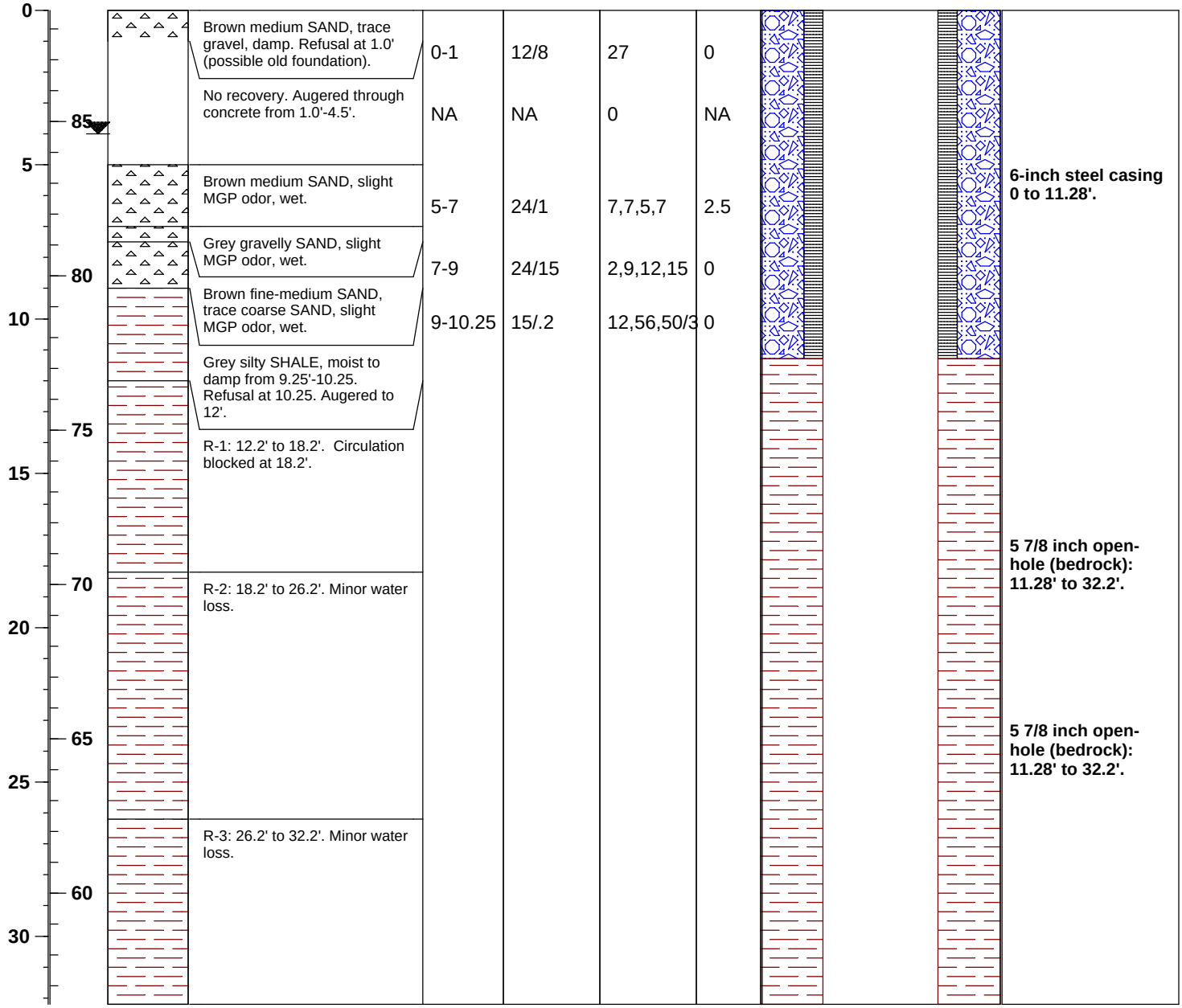
Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

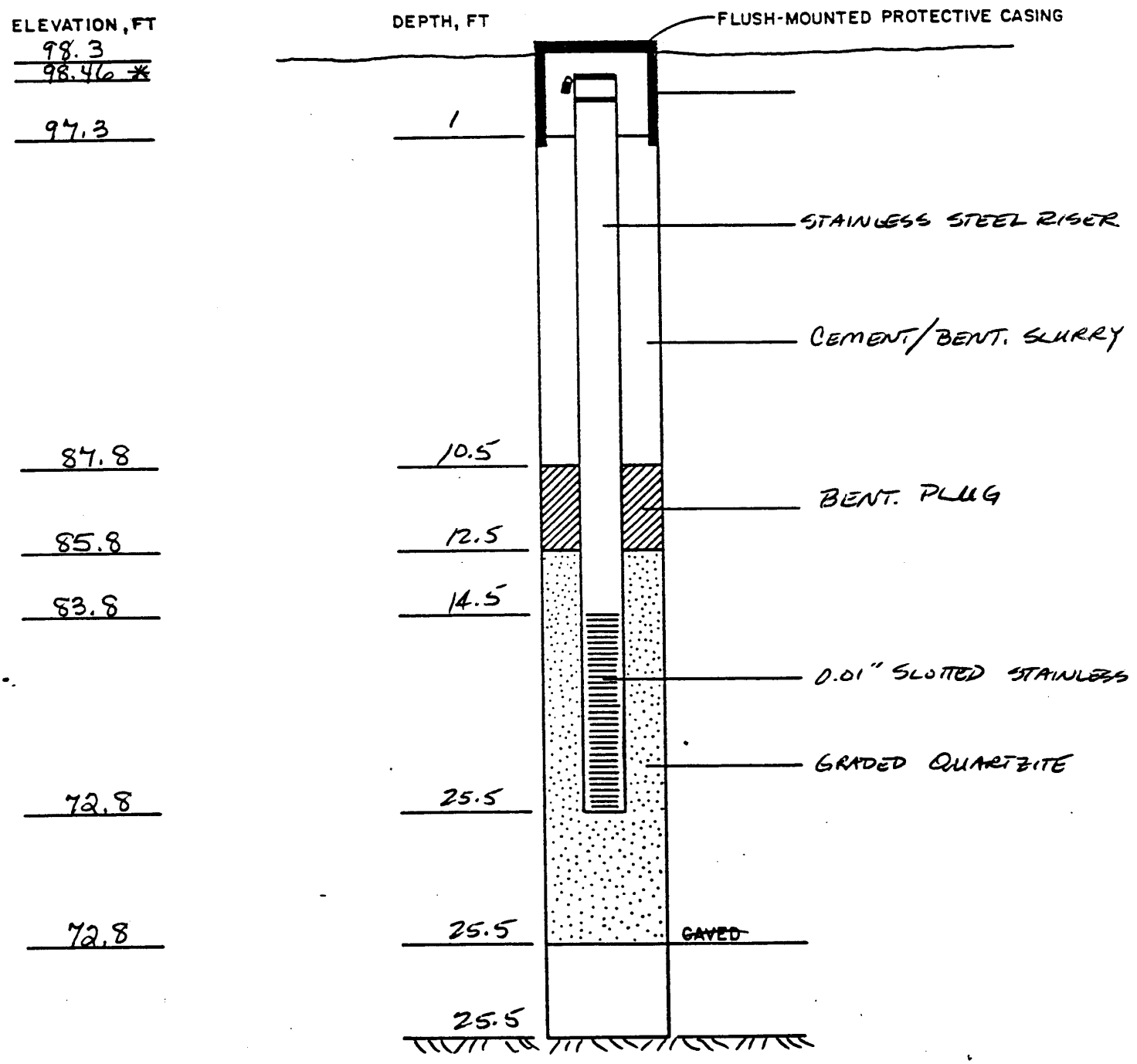
PROJECT:	NYSEG	**ELEVATION:**	TOC 88.32 / GRD 88.60
BORING NO.:	MW-2I	**BORING LOCATION:**	N 1,484,843/E 709,495
DATE:	4/16/01	**METHOD OF DRILLING:**	4.25 inch Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	2 inch x 2 foot Split Spoon
BORING DEPTH:	32.2 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 85		Brown medium SAND, trace gravel, damp. Refusal at 1.0' (possible old foundation).	0-1	12/8	27	0		
		No recovery. Augered through concrete from 1.0'-4.5'.	NA	NA	0	NA		
5 / 80		Brown medium SAND, slight MGP odor, wet.	5-7	24/1	7,7,5,7	2.5		
		Grey gravelly SAND, slight MGP odor, wet.	7-9	24/15	2,9,12,15	0		
10 / 75		Brown fine-medium SAND, trace coarse SAND, slight MGP odor, wet.	9-10.25	15/.2	12,56,50/3	0		
		Grey silty SHALE, moist to damp from 9.25'-10.25. Refusal at 10.25. Augered to 12'.						
15 / 70		R-1: 12.2' to 18.2'. Circulation blocked at 18.2'.						
20 / 65		R-2: 18.2' to 26.2'. Minor water loss.						
25 / 60		R-3: 26.2' to 32.2'. Minor water loss.						
30								



WELL INSTALLATION DETAILS

PROJECT NO. 4945-03	PROJECT NAME NYSEG MECHANICVILLE TASK3	WELL NO. MW-12
INSTALLED BY NORTH STAR DRILLING	DATE INSTALLED 11-18-87	BORING DIAMETER 6"
WELL DIAMETER 2"	WELL MATERIAL SCH 40, 304 STAINLESS STEEL	BACKFILL MATERIAL GRADED QUARTZITE



* Riser is slightly above the ground surface

LOG OF BORING

URS

Clifton Park, New York

NYSEG

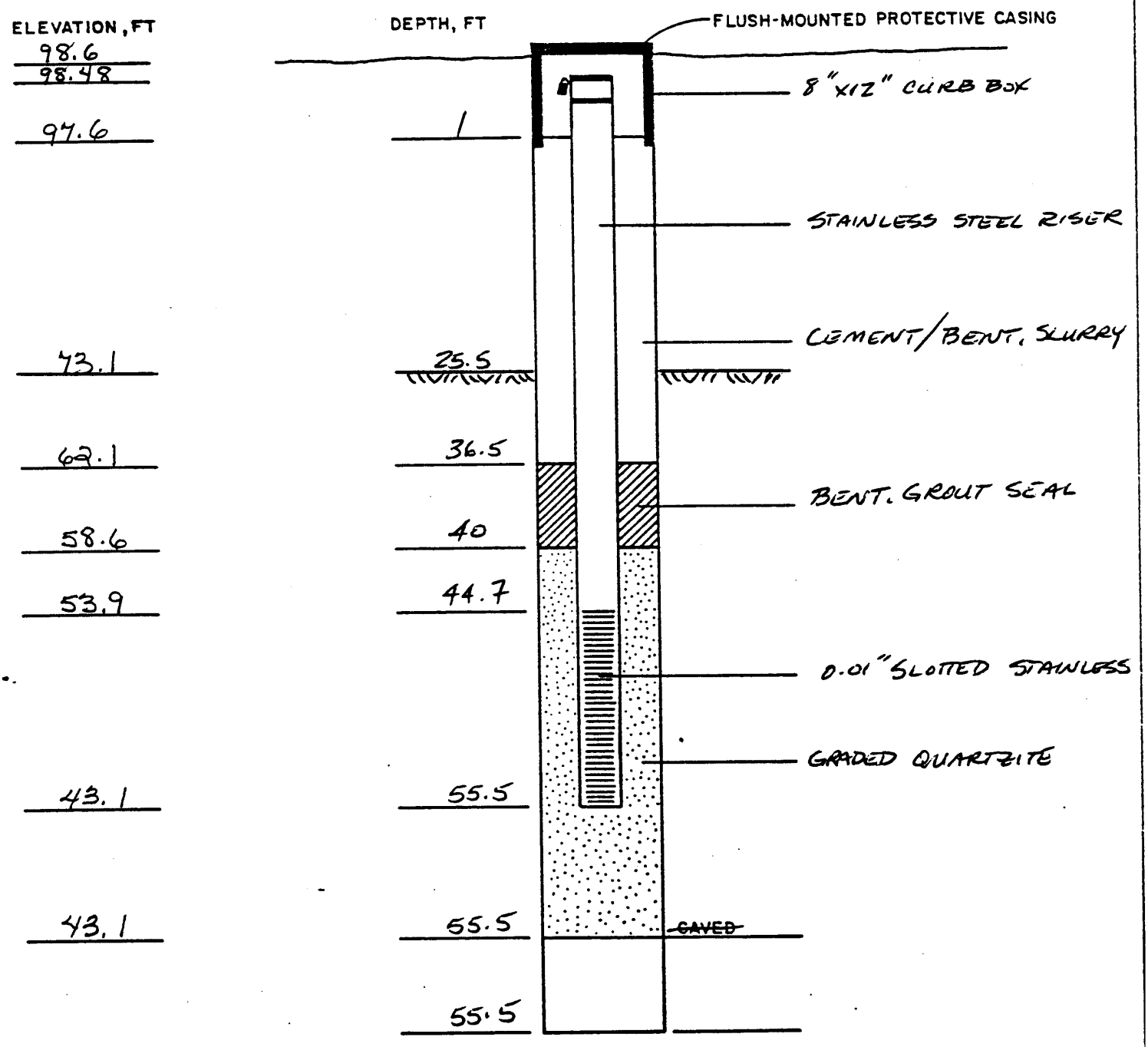
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.67 / GRD 93.88
BORING NO.:	MW-12S	**BORING LOCATION:**	N 1484813.90 / E 709651.04
DATE:	4/10/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	4.5 inches	**SAMPLE TYPE:**	3 inch x 2 foot split spoon
BORING DEPTH:	28 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		Brown medium SAND, some coal fragments, trace ash-like material and blue grains, damp.	0-2	24/20	6,8,9,9	5.2	Cement	
		Grey brown gravelly SAND, trace ash-like material, damp.	2-4	24/12	7,9,11,12	0	Cement/Bentonite Grout	
5		Same as 2'-4' moist.	4-6	24/14	9,7,6,7	3.3	4" Sch. 40 PVC casing.	
		Brown medium SAND, trace gravel, moist.	6-8	24/2	38,36, 46,56	1.4		
		Same as 4.67' to 6'.					Bentonite Chips	
10 / 85		Red brick fragment in nose.	8-10	10/0	66,50/4	NA		
		No recovery	10-12	9/0	78,50/3	NA		
		No recovery. Spoon wet at 13'.	12-14	24/0	45,29, 35,32	NA		
15 / 80		Grey brown gravelly SAND, some NAPL (red), wet.	14-16	24/10	13,16, 36,32	109	#1 Sand	
		Same as 14' to 16'. Saturated, NAPL throughout.	16-18	24/NA	49,48, 24,58	NA		
		Same as 16' to 18'.						
20 / 75		Brown grey medium SAND, trace gravel, trace clay, MGP odor, possible NAPL.	18-20	24/12	51,71, 47,25	22.3		
		Brown grey medium SAND, trace gravel, wet. NAPL at 21'.	20-22	24/18	2,5,6,8	9		
		Same as 20' to 22'. NAPL at 23.2'. Clay lense at 23.3'.	22-24	24/20	8,7,6,7	4.2	4" Sch. 40 PVC 0.020" slot screen 11'-26'.	
25 / 70		Grey brown fine SAND, trace medium sand, wet.	24-26	24/20	2,3,2,3	4.2		
		Same as 23.17' to 24'. Trace wood chips at 25.9'.	26-26.3	3/3	100/3	45	Bentonite 4" Sch. 40 PVC Riser (sump) 26'-28'.	
		Same as 24' to 25.9.						
		Grey silty SHALE, NAPL. Augered to 28'.						

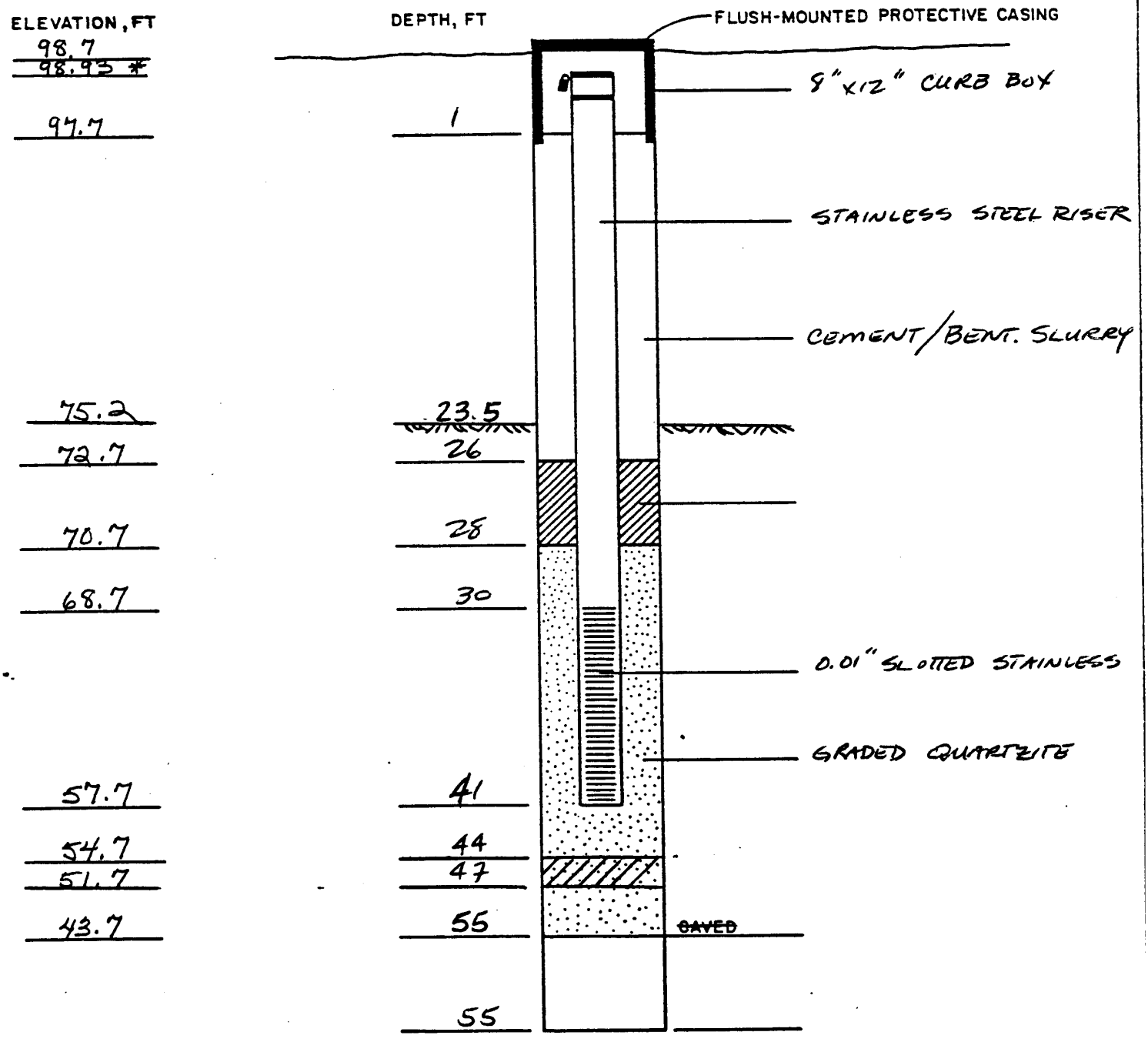
WELL INSTALLATION DETAILS

PROJECT NO. 4945-03	PROJECT NAME NYSEG MECHANICVILLE TASK 3	WELL NO. MW-13
INSTALLED BY NORTH STAR DRILLING	DATE INSTALLED 11-18-87	BORING DIAMETER 10" Soil 4" & 3" IN Rock
WELL DIAMETER 2"	WELL MATERIAL SCH. 40, 304 STAINLESS STEEL	BACKFILL MATERIAL GRADED QUARTZITE



WELL INSTALLATION DETAILS

PROJECT NO. 4945-03	PROJECT NAME NYSEG MECHANICVILLE TASK 3	WELL NO. MW-14
INSTALLED BY NORTH STAR DRILLING	DATE INSTALLED 11-19-87	BORING DIAMETER 11" SOIL 4" & 3" IN ROCK
WELL DIAMETER 2"	WELL MATERIAL SCH 40, 304 STAINLESS STEEL	BACKFILL MATERIAL GRADED QUARTZITE



* Riser is slightly higher than the ground surface.

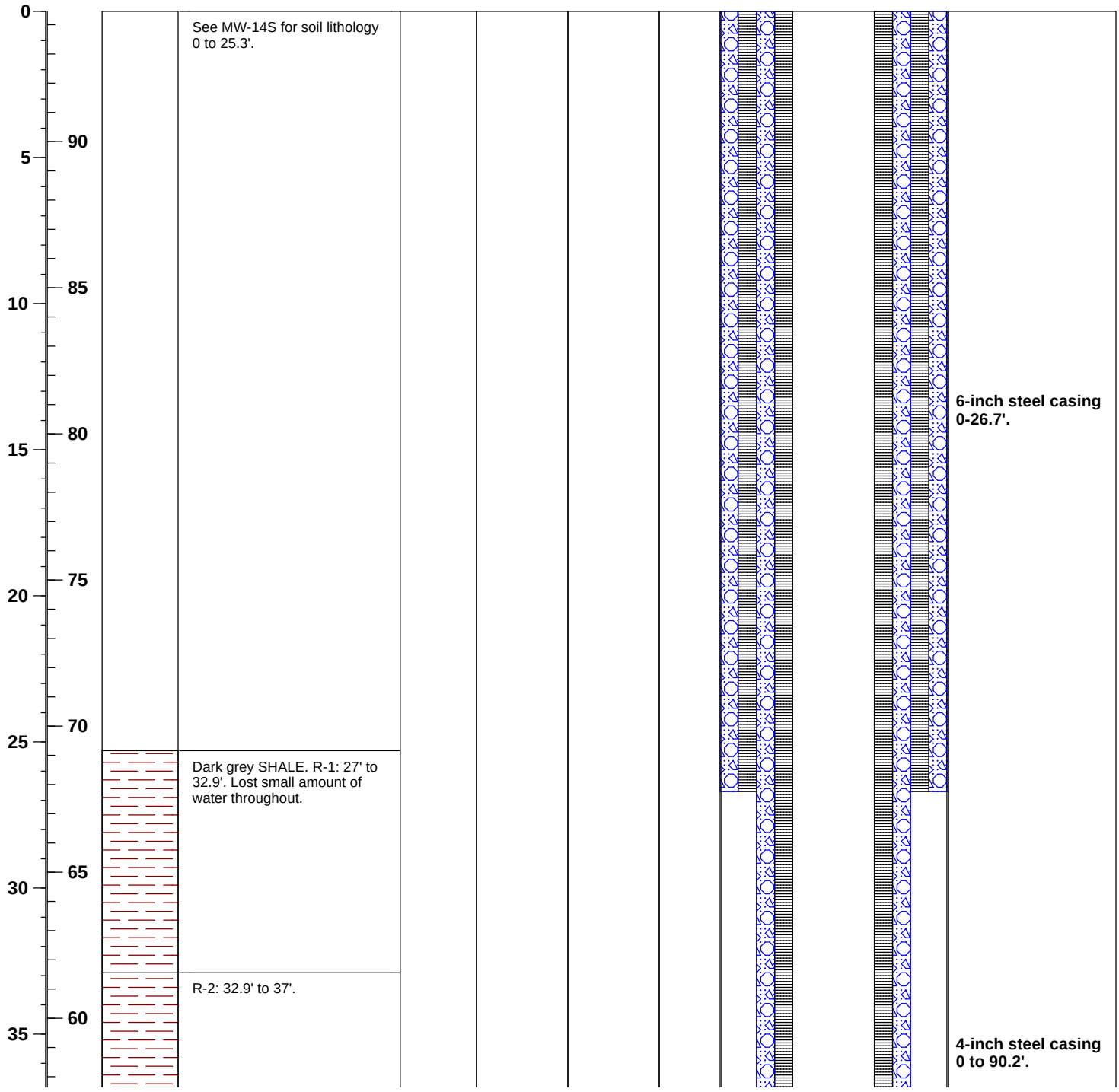
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.07 / GRD 94.46
BORING NO.:	MW-14D	**BORING LOCATION:**	N 1484886.74 / E 709667.26
DATE:	6/29/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	121.5 feet	**SURFACE CONDITIONS:**	Gravel

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



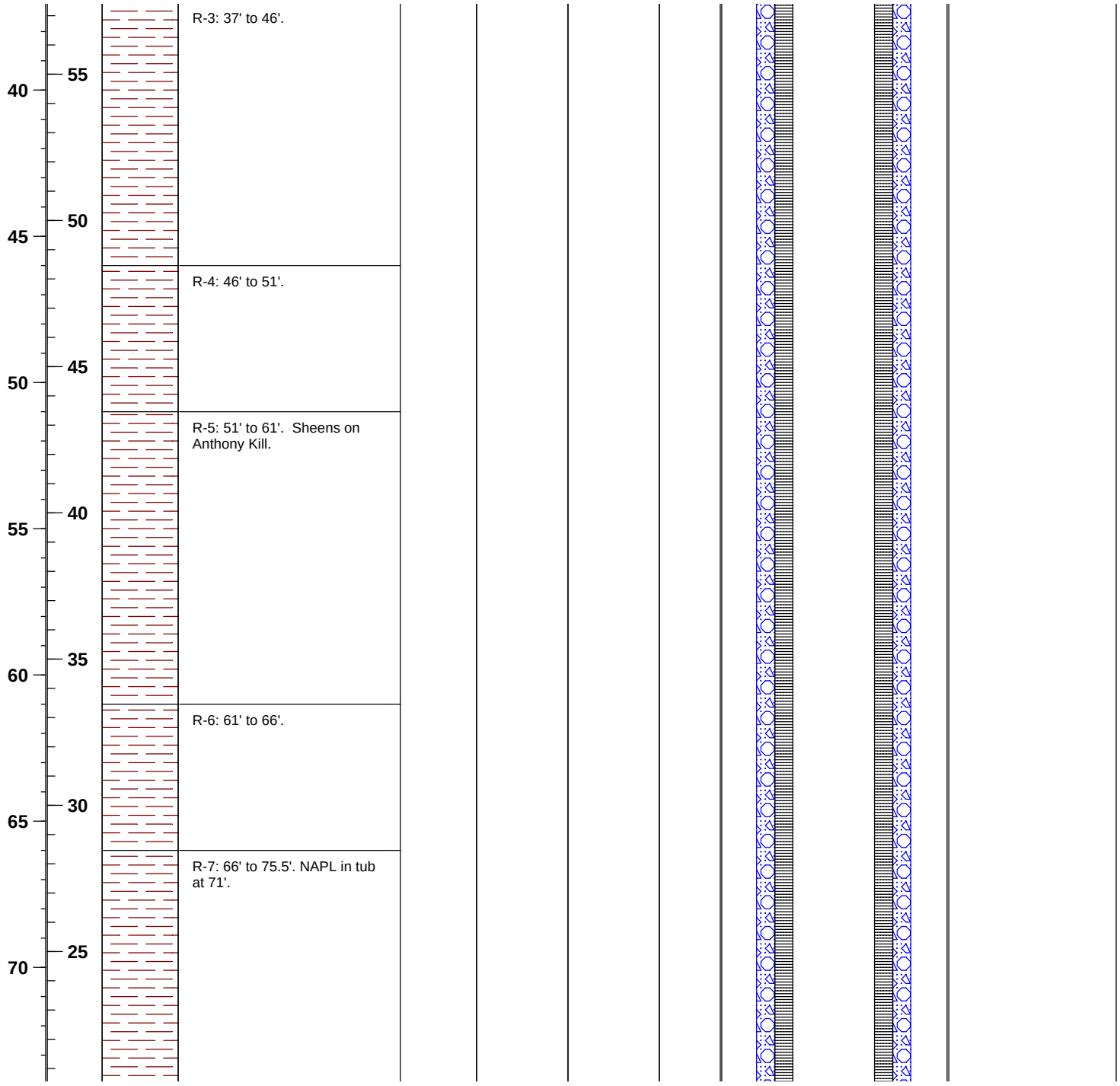
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.07 / GRD 94.46
BORING NO.:	MW-14D	**BORING LOCATION:**	N 1484886.74 / E 709667.26
DATE:	6/29/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	121.5 feet	**SURFACE CONDITIONS:**	Gravel

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



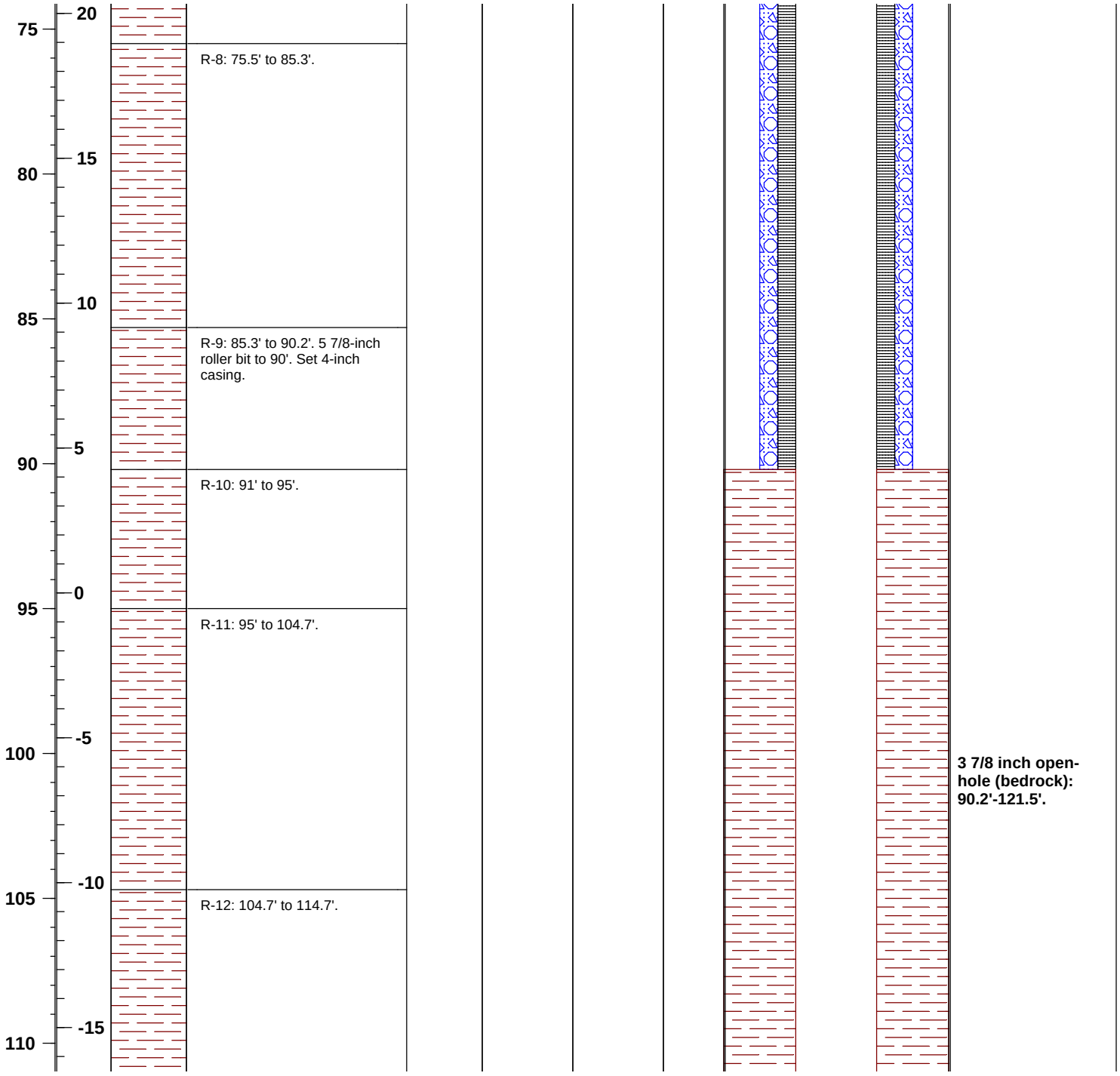
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.07 / GRD 94.46
BORING NO.:	MW-14D	**BORING LOCATION:**	N 1484886.74 / E 709667.26
DATE:	6/29/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	121.5 feet	**SURFACE CONDITIONS:**	Gravel

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



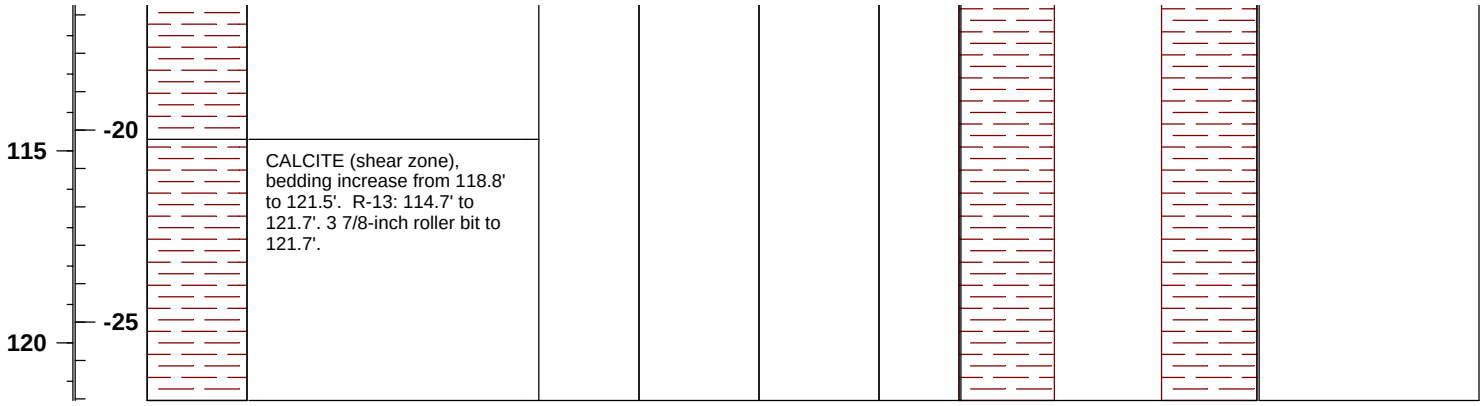
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.07 / GRD 94.46
BORING NO.:	MW-14D	**BORING LOCATION:**	N 1484886.74 / E 709667.26
DATE:	6/29/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	121.5 feet	**SURFACE CONDITIONS:**	Gravel

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.45 / GRD 94.09
BORING NO.:	MW-14S	**BORING LOCATION:**	N 1484891.37 / E 709665.25
DATE:	4/9/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	4.5 inches	**SAMPLE TYPE:**	3 inch x 2 foot split spoon
BORING DEPTH:	25.3 ft.	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		Brown medium SAND, trace brick, moist.	0-2	24/20	5,7,7,20	0		Cement
		Black fine coal fragments, some brick, moist.	2-4	24/18	17,10, 12,10	0		Cement/Bentonite Grout
		Same as 0' - 1'.						
5 / 85		Brown silty SAND, trace coal fragments and brick, damp to moist.	4-6	24/18	6,6,7,9	0		2" Sch.40 PVC casing.
		Same as 2.25' to 4'.	6-8	24/20	6,6,6,9	0		Bentonite Chips
		Brown silty SAND, trace roots, moist	8-10	24/20	4,6,6,18	0		
10 / 80		Same as 6' to 8', moist.						
		Same as 6' to 8', rock in nose of split spoon, moist to wet.	10-12	24/4	3, 14,19,20	0		
		Brown medium SAND, some coarse gravel, rock in nose of split spoon, moist to wet.	12-14	24/4	20,22 21,26	0		#1 Sand
15 / 75		No recovery, possibly sand.	14-16	24/0	25,24, 31,26	NA		
		No recovery, possibly sand.	16-18	24/0	7, 13,15,19	NA		
		Dark brown to black fine SAND, trace coarse sand, wet.	18-20	24/4	17,15, 12,18	0		2" Sch. 40 PVC 0.010" slot screen: 10'-25'
20 / 70		Dark grey to brown medium SAND, trace silty clay , and shale fragments, MGP odor, wet.	20-22	24/24	7,8,7,7	0		
		Same as 20' to 22'.	22-24	24/18	7, 12,13,18	0		
25		Dark grey medium SAND, some shale fragments, wet.	24-25.3	15/12	4,8,6	4.5		
		Same as 22.75' to 24'. Wet.						

AECOM

40 British American Boulevard
Latham, New York 12110
Phone: (518) 951-2200
Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **MW-15IR**

START DATE: 7/23/09 END DATE: 8/3/09

PROJECT NAME: **NAPL Test Well** PROJECT NO.: **94560** PROJECT MANAGER: **Scott Underhill**
SITE LOCATION: **NYSEG-Mechanicville, NY** BORING LOCATION: **MW-15IR**
DRILLING CO.: **Nothnagle Drilling** DRILLER: **Bush** DRILLING METHOD: **HSA/Wash Rotary**
BOREHOLE DIAMETER: **6 inches** DEPTH TO BEDROCK: 11.6 ft bgs TOTAL DEPTH DRILLED: **75.0 ft**
TOTAL DEPTH REACHED: **75.0 ft bgs** INSPECTOR: Catherine Kielb WEATHER CONDITIONS: **High 70's, cloudy**

FIELD SAMPLE INFORMATION								HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
							WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
							FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
							TYPE	**Automatic**	**Split Spoon**				
DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	ID/OD		**2"**				

GEOLOGIC DESCRIPTION	LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS
Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock.		7/23/2009 950
11.6 ft bgs TOP OF BEDROCK - Advance 6 1/4 inch HSA to 13.0 ft bgs and set 8" temporary steel casing - Drilled with 7 7/8" wash rotary rock socket from 13.0 ft to 16.0 ft bgs		1010
16.0 ft bgs BOTTOM OF 6" PERMANENT STEEL CASING -While flushing out casing at 16.0 ft bgs, small amounts of NAPL sheen were observed in poly-tank - Grout in 6" permanent steel casing at 16.0 ft bgs		1230
-From approximately 60.0 ft bgs to 75.0 ft bgs, there was NAPL on the drill rocks when removed from borehole.		
75.0 ft bgs Advance 5 7/8" wash rotary rock socket for a td of 75.0 ft bgs		8/3/2009 1545

AECOM

AECOM

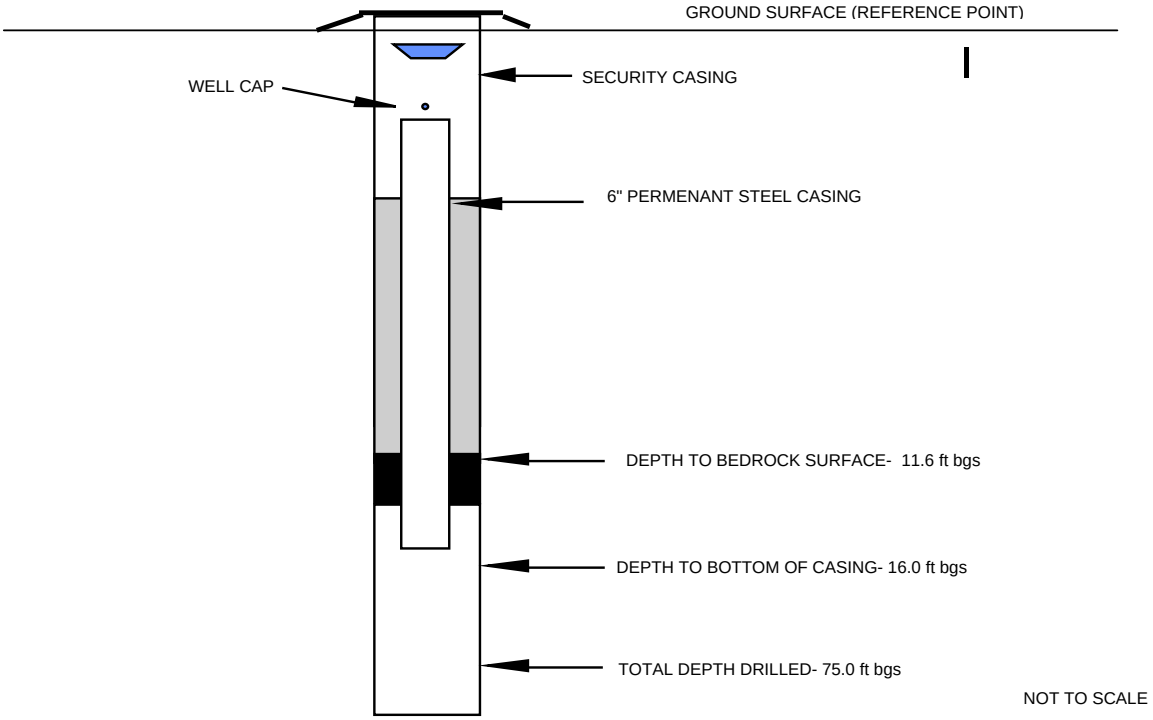
British American Blvd. Latham, NY 12110
Phone (518) 951-2200 Fax (518) 951-2300

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: MW-15IR TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 7/23/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 8/3/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:



Notes:

AECOM

40 British American Boulevard
Latham, New York 12110
Phone: (518) 951-2200
Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **MW-22IR**

START DATE: 7/22/09 END DATE: 8/4/09

PROJECT NAME:	**NAPL Test Well**	PROJECT NO.:	**94560**	PROJECT MANAGER:	**Scott Underhill**
SITE LOCATION:	**NYSEG-Mechanicville, NY**	BORING LOCATION:	**MW-22IR**		
DRILLING CO.:	**Nothnagle Drilling**	DRILLER:	**Bush**	DRILLING METHOD:	**HSA/Wash Rotary**
BOREHOLE DIAMETER:	**6 inches**	DEPTH TO BEDROCK:	11.3 ft bgs	TOTAL DEPTH DRILLED:	**75.0 ft**
TOTAL DEPTH REACHED:	**75.0 ft bgs**	INSPECTOR:	Catherine Kielb	WEATHER CONDITIONS:	**70's, cloudy**

FIELD SAMPLE INFORMATION								HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
							WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
							FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
							TYPE	**Automatic**	**Split Spoon**				
							ID/OD		**2"**				
DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	GEOLOGIC DESCRIPTION					LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS
							Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock.						7/22/2009 1000
5													
10													
							11.3 ft bgs						1010
							TOP OF BEDROCK - Advance 6 1/4 inch HSA to 113.3 ft bgs and set 8" temporary steel casing - Drilled with 7 7/8" wash rotary rock socket from 13.3 ft to 16.0 ft bgs -Some NAPL sheen was observed, also coal tar odor						
15							16.0 ft bgs						1230
							BOTTOM OF 6" PERMANENT STEEL CASING - Grout in 6" permanent steel casing at 16.0 ft bgs						
20													
75							75.0 ft bgs						8/4/2009 1630
							Advance 5 7/8" wash rotary rock socket for a td of 75.0 ft bgs						

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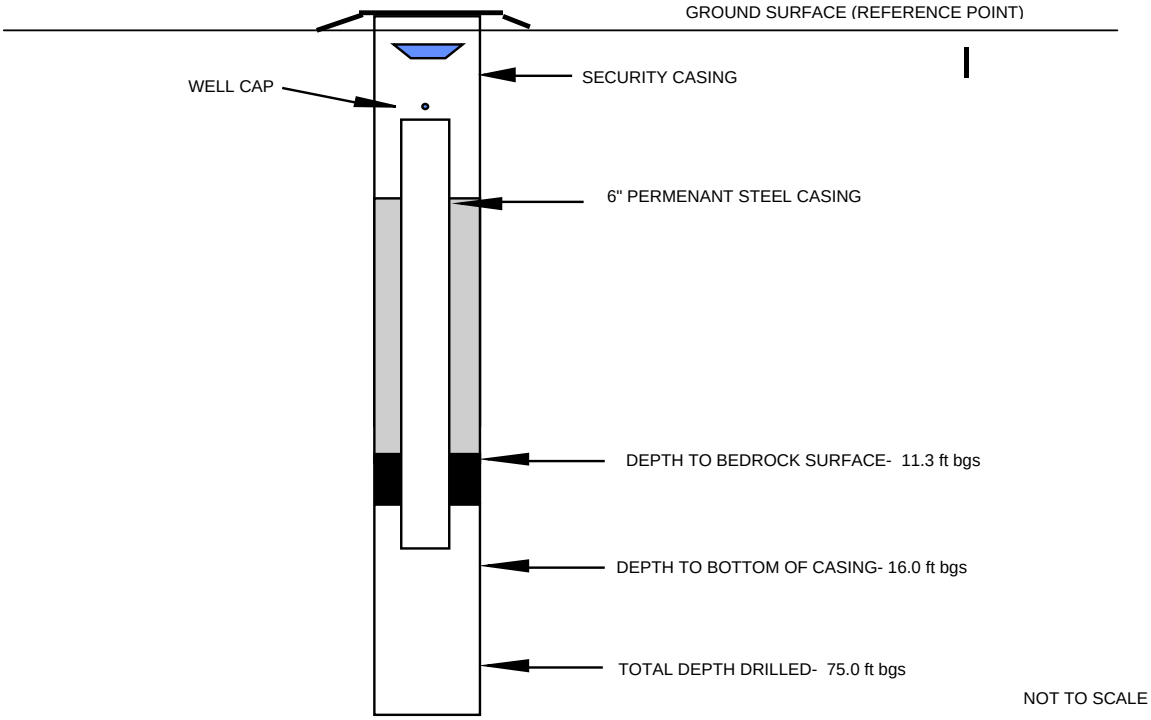
WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: MW-22IR TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 7/22/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 8/14/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:



Notes:

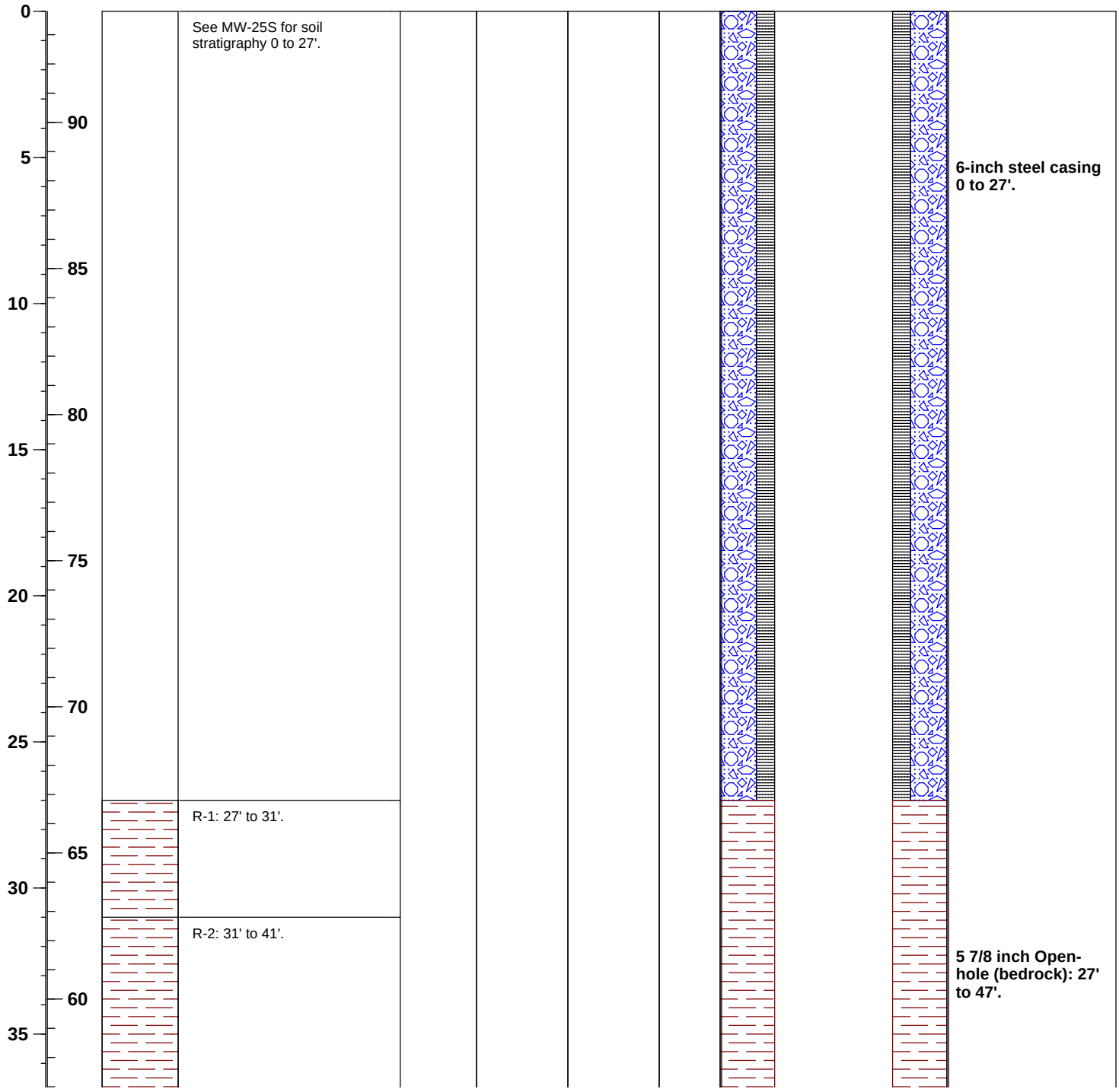
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.8 / GRD 94.17
BORING NO.:	MW- 25I	**BORING LOCATION:**	N 1,484,852 / E 709,663
DATE:	7/10/01	**METHOD OF DRILLING:**	NA
BORING DIAMETER:	10.25 inches	**SAMPLE TYPE:**	HQ coring
BORING DEPTH:	47 feet	**SURFACE CONDITIONS:**	Gravel

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.8 / GRD 94.17
BORING NO.:	MW- 25I	**BORING LOCATION:**	N 1,484,852 / E 709,663
DATE:	7/10/01	**METHOD OF DRILLING:**	NA
BORING DIAMETER:	10.25 inches	**SAMPLE TYPE:**	HQ coring
BORING DEPTH:	47 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
55 40 50 45		R-3: 41' to 47'. Significant water loss at 43.5'. 5 7/8-inch roller bit to 47'.						

LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.35 / GRD 93.76
BORING NO.:	MW-25S	**BORING LOCATION:**	N 1484852.78 / E 709654.82
DATE:	4/10/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	4.5 inches	**SAMPLE TYPE:**	3 inch x 2 foot split spoon
BORING DEPTH:	28 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		Brown medium SAND, trace wood, trace coal fragments, moist.	0-2	24/28	5,8,20,10	0		Cement
		Same as above, moist.	2-4	24/12	NA	0		Cement/Bentonite Grout
5 / 85		Brown medium SAND, trace roots, moist.	4-6	24/3	3,7,17,20	9.5		2" Sch. 40 PVC casing.
		Same as above, some gravel, moist.	6-8	28/12	8,11,12,13	0		
10 / 80		Brown to light brown medium SAND, trace clay, trace gravel, moist.	8-10	24/12	17,15,15,12	0		Bentonite Chips
		Same as above	10-12	24/12	8,9,10,14	0		
		Gravel, trace medium SAND.	12-14	24/3	13,15,23,15	0		
15 / 75		3" Brown medium SAND, trace gravel, wet. 15" Grey-brown medium SAND, trace clay, trace gravel, slight MGP odor.	14-16	24/18	WOH,5,4,5	0		#1 Sand
		3" Grey stained medium SAND, trace clay, moist, trace NAPL. 21" Brown clayey SAND, some silt, damp, MGP odor, possible NAPL.	16-18	24/24	4,6,4,5	22.7		
20 / 70		Grey-brown sandy CLAY, some coarse SAND, wet, slight MGP odor.	18-20	24/22	3,4,10,10	6.3		
		Brown/grey medium SAND, layers of silty clay, NAPL throughout, wet, MGP odor.	20-22	24/24	6,5,8,7	29.9		2" Sch. 40 PVC 0.020" slot screen: 11'-26'.
25		Brown/grey fine SAND, NAPL throughout, wet.	22-24	24/24	6,5,6,8	49.9		
		Same as 22' to 24': Augered to 28'.	24-26	24/20	6,5,8,50/4	11.8		Bentonite 2" Sch. 40 PVC Riser (sump): 26'-28'.

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BOREHOLE LOG

BORING ID #: **MW-29IR**

START DATE: 7/21/09 END DATE: 8/5/09

PROJECT NAME:	**NAPL Test Well**	PROJECT NO.:	**94560**	PROJECT MANAGER:	**Scott Underhill**
SITE LOCATION:	**NYSEG-Mechanicville, NY**	BORING LOCATION:	**MW-29IR**		
DRILLING CO.:	**Nothnagle Drilling**	DRILLER:	**Bush**	DRILLING METHOD:	**HSA/Wash Rotary**
BOREHOLE DIAMETER:	**6 inches**	DEPTH TO BEDROCK:	12.5 ft bgs	TOTAL DEPTH DRILLED:	**75.0 ft**
TOTAL DEPTH REACHED:	**75.0 ft bgs**	INSPECTOR:	Catherine Kielb	WEATHER CONDITIONS:	**High 70's, sunny**

FIELD SAMPLE INFORMATION								HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
							WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
							FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
							TYPE	**Automatic**	**Split Spoon**				
							ID/OD		**2"**				

DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	GEOLOGIC DESCRIPTION	LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS
							Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock.		7/21/2009 1505
5									
10									1545
							12.5 ft bgs		1515
							TOP OF BEDROCK - Advance 6 1/4 inch HSA to 14.0 ft bgs and set 8" temporary steel casing		
15							- Drilled with 7 7/8" wash rotary rock socket from 14.0 ft to 17.1 ft bgs		
							17.1 ft bgs		1717
20							BOTTOM OF 6" PERMANENT STEEL CASING - Grout in 6" permanent steel casing at 17.1 ft bgs		
75							-While very little sheen was brought up when flushing borehole, NAPL and sheen were bubbling up in the Anthonykill. Rods were covered in product as well		
							75.0 ft bgs		8/5/2009
							Advance 5 7/8" wash rotary rock socket for a td of 75.0 ft bgs		1000

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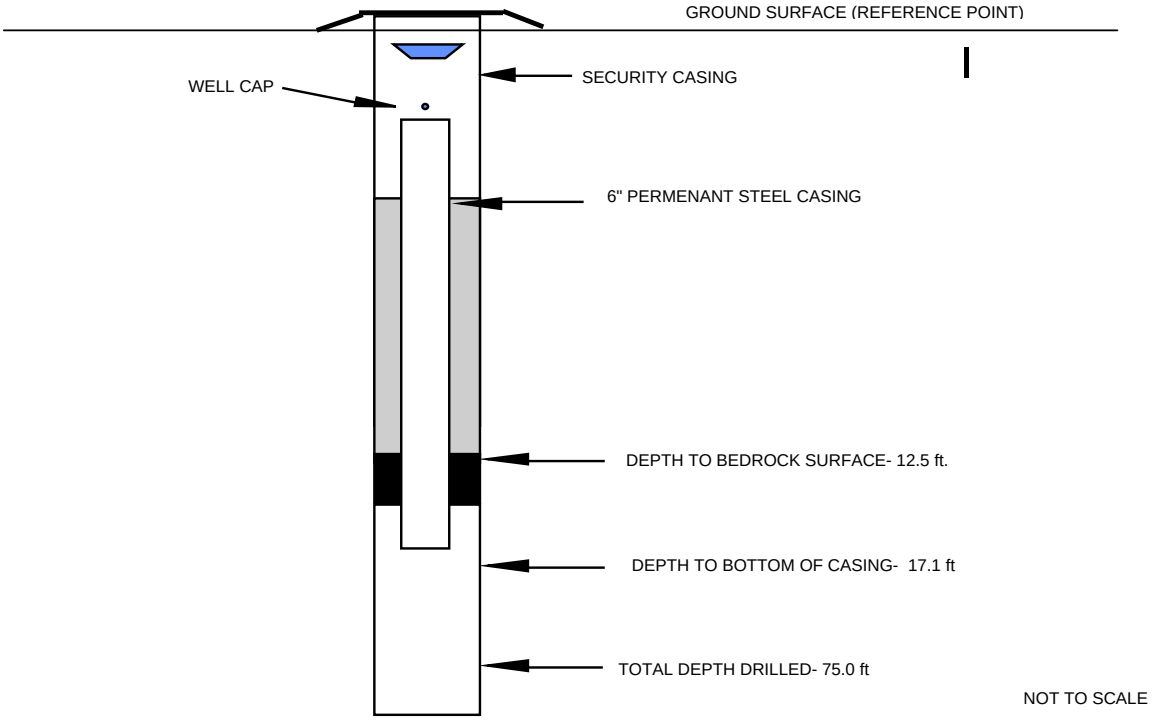
WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: MW-29I TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 7/21/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 8/5/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:



Notes:

LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 92.87 / GRD 93.19
BORING NO.:	MW-30D	**BORING LOCATION:**	N 1484778.10 / E 709647.49
DATE:	7/2/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	3 inch x 2 foot split spoon
BORING DEPTH:	101.1 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		Dark brown medium SAND, some gravel, trace glass, trace ash-like material, damp.	0-2	24/24	11,13,11,11	0		
		Grey silty angular SHALE, dry.	2-4	24/16	9,7,12,11	0		
5 / 85		Dark brown medium-fine SAND, trace silt, trace coal fragments, grading to medium brown medium-fine SAND, trace ash-like material and pebbles, damp.	4-6	24/9	5,16,13,13	0		
			6-8	24/9	12,23,18,13	0		
10 / 80		Medium brown coarse to fine SAND with pebbles, damp, concrete stuck in tip.	8-10	24/8	8,9,20,64	0		
		Same as 6'-8', damp, rock stuck in tip, coal fragments.	10-12	24/18	27,25,15,18	0		
		Same as 6'-8', damp, trace coal fragments.	12-14	24/8	23,24,19,24	80.2		
15 / 75		Same as 6'-8', wet, NAPL.	14-16	24/0	34,23,7,10	NA		
		No recovery, spoons wet, NAPL on spoons and in water.	16-18	24/12	15,9,11,7	68.1		
		Medium grey sandy SILT, with trace pebbles, NAPL, wet.	18-20	24/2	18,16,12,17	228		
20 / 70		Medium grey SAND with pebbles, NAPL, wet.	20-22	24/24	16,7,7,7	61.1		
		Dark grey silty fine SAND, trace pebbles, NAPL, wet.	22-24	24/24	2,2,2,2	64.6		
25 / 65		Grey coarse to fine SAND, trace silt, pebbles, NAPL, wet.	24-24.25	3/3	100/3	9.9		
		Grey angular SHALE, trace silt, wet.						
30 / 60		9 7/8" roller bit to 28'						
		R-1: 28.5' to 34.5', NAPL encountered immediately beneath casing at 28.5'. Water loss throughout.						
35		R-2: 34.5' to 39.5. Water loss throughout.						8-inch steel casing 0-28'.

LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 92.87 / GRD 93.19
BORING NO.:	MW-30D	**BORING LOCATION:**	N 1484778.10 / E 709647.49
DATE:	7/2/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	3 inch x 2 foot split spoon
BORING DEPTH:	101.1 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
55 / 40		R-3: 39.5' to 49.3'.						6-inch steel casing 0-90'.
50 / 45		R-4: 49.3' to 51'. Re-set temp. casing roller bit to 51'.						
45 / 50		R-5: 51' to 59'.						
40 / 55								
35 / 60		R-6: 59' to 69.3'.						6-inch steel casing 0-90'.
30 / 65								
25 / 70		R-7: 69.3' to 79.5'. NAPL observed at 70.5'.						
20								

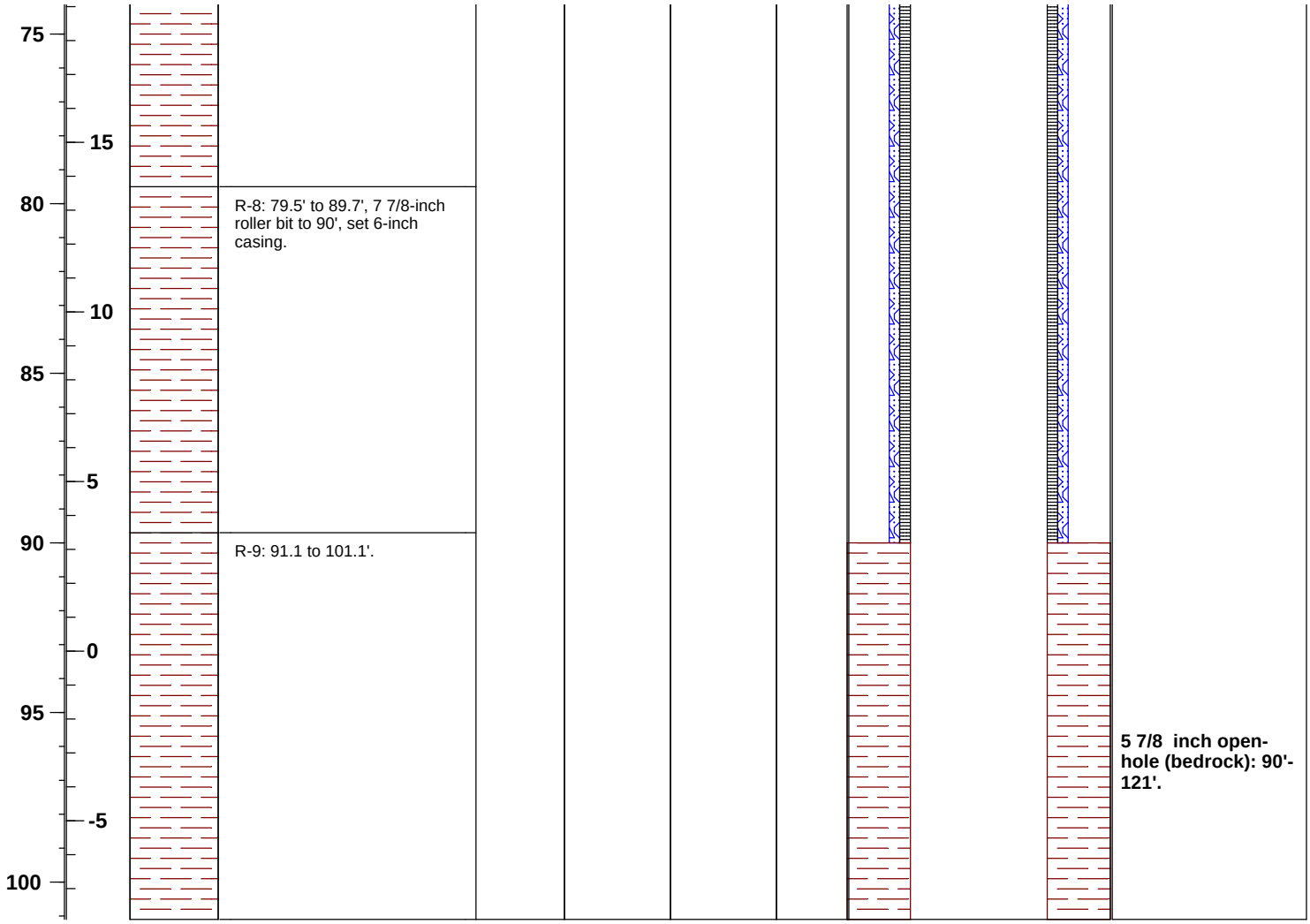
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 92.87 / GRD 93.19
BORING NO.:	MW-30D	**BORING LOCATION:**	N 1484778.10 / E 709647.49
DATE:	7/2/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	3 inch x 2 foot split spoon
BORING DEPTH:	101.1 feet	**SURFACE CONDITIONS:**	Gravel

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



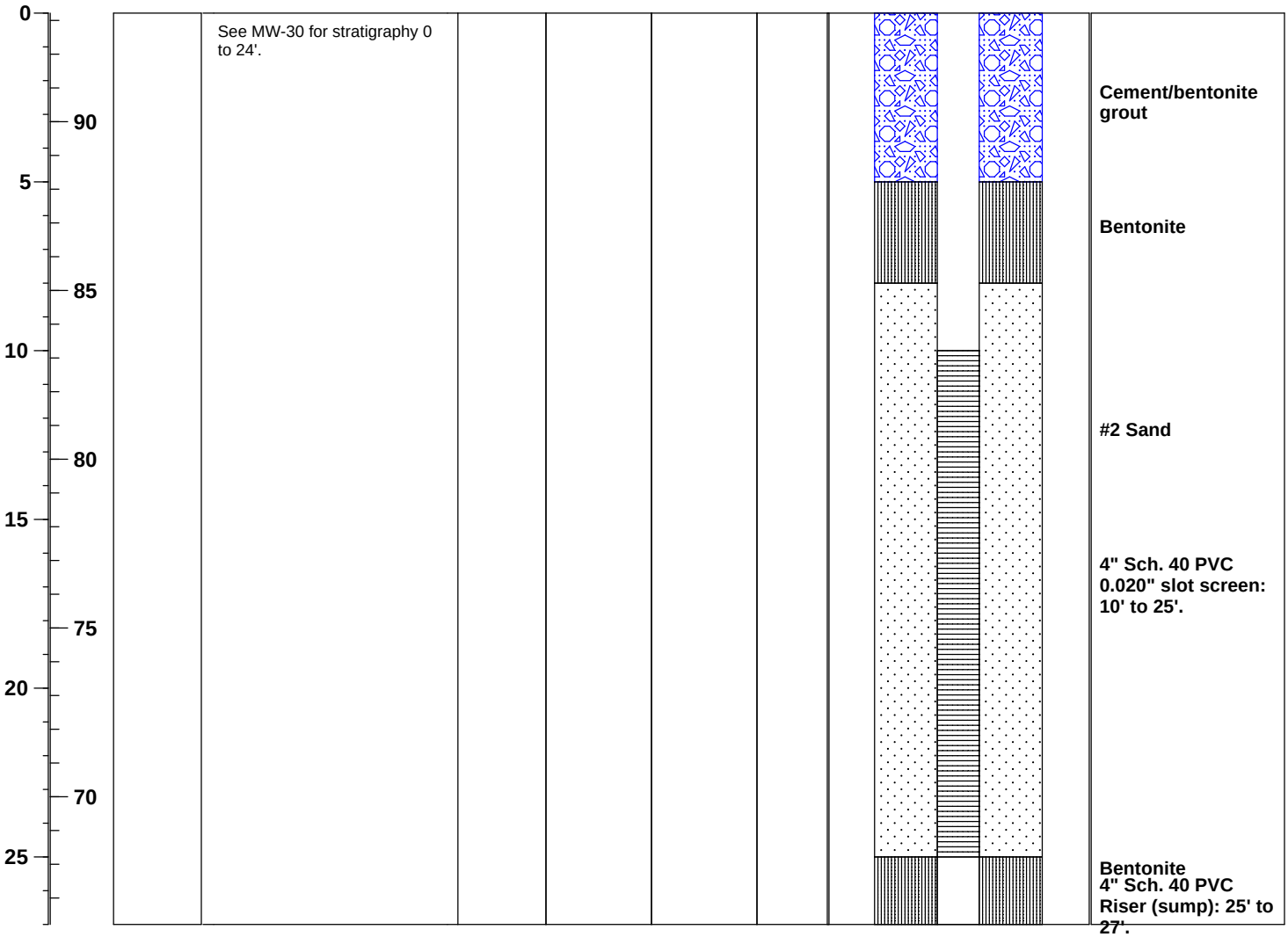
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 92.99 / GRD 93.22
BORING NO.:	MW-30S	**BORING LOCATION:**	N 1484772.19 / E 709646.89
DATE:	8/15/01	**METHOD OF DRILLING:**	6.25" I.D. Hollow Stem Auger
BORING DIAMETER:	6.5 inches	**SAMPLE TYPE:**	NA
BORING DEPTH:	27 feet	**SURFACE CONDITIONS:**	Gravel

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



LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 89.77 / GRD 87.23
BORING NO.:	MW-32D	**BORING LOCATION:**	N 1484963.72 / E 709401.77
DATE:	7/24/01	**METHOD OF DRILLING:**	HQ Coring
BORING DIAMETER:	14.25"	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	111.5 feet	**SURFACE CONDITIONS:**	Gravel and Dirt

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 85		Brown coarse to fine SAND, some gravel. Grading to black coal fragments, moist.	0-2	24/19	2,7,10,11	0		
		White ash-like material, some rock fragments, grading to coarse to fine SAND with coal fragments. Grading to brown silt with trace coal fragments, moist, musty odor.	2-4	24/19	5,4,4,4	0		
5 / 80		Brown SILT with thick pebbles and coal fragments, Grading to coarse to fine Sand with coal fragments, white ash-like material, wet at 6', organic odor.	4-6	24/17	2,4,4,1	0		8-inch steel casing 0 to 11.5'.
		White ash-like material to 6.2'. Grading to Tan SILT with trace pebbles, slight odor. 7.7' Black-grey rock fragments (BEDROCK) Wet.	6-8	24/24	3,7,18,80	0		
10 / 75		Grey-Black weathered, broken, rock, trace of SAND and SILT, wet. Refusal at 9.75 feet.	8-9.75	21/16	62,100, 91, 100/3"	0		
15 / 70		Dark grey SHALE. See bedrock core log.						
		R-1: 11.95' to 16.45'.						
20 / 65		R-2: 16.45' to 22.1'. Circulation blocked at 22.1'.						6-inch steel casing 0 to 91'.
25 / 60		R-3: 22.1' to 27.9'. Circulation blocked at 27.9'.						
30 / 55		R-4: 27.9' to 34'. Circulation blocked at 34'.						
35		R-5: 34; to 37.6'. Circulation blocked at 37.6'						

LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 89.77 / GRD 87.23
BORING NO.:	MW-32D	**BORING LOCATION:**	N 1484963.72 / E 709401.77
DATE:	7/24/01	**METHOD OF DRILLING:**	HQ Coring
BORING DIAMETER:	14.25"	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	111.5 feet	**SURFACE CONDITIONS:**	Gravel and Dirt

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
50 / 40		R-6: 37.6' to 46'. Circulation blocked at 46.0'.						
45 / 40		R-7: 46' to 52.7'. Circulation blocked at 52.7'. Significant water loss at 49'.						
50 / 35		R-8: 52.7' to 56'. Lost water thoughout run.						
55 / 30		R-9: 56' to 66'. Lost water thought out run.						
60 / 25								
65 / 20		R-10: 66' to 71'. Lost water thoughout run.						
70 / 15		R-11: 71' to 81. Lost water thoughout run.						

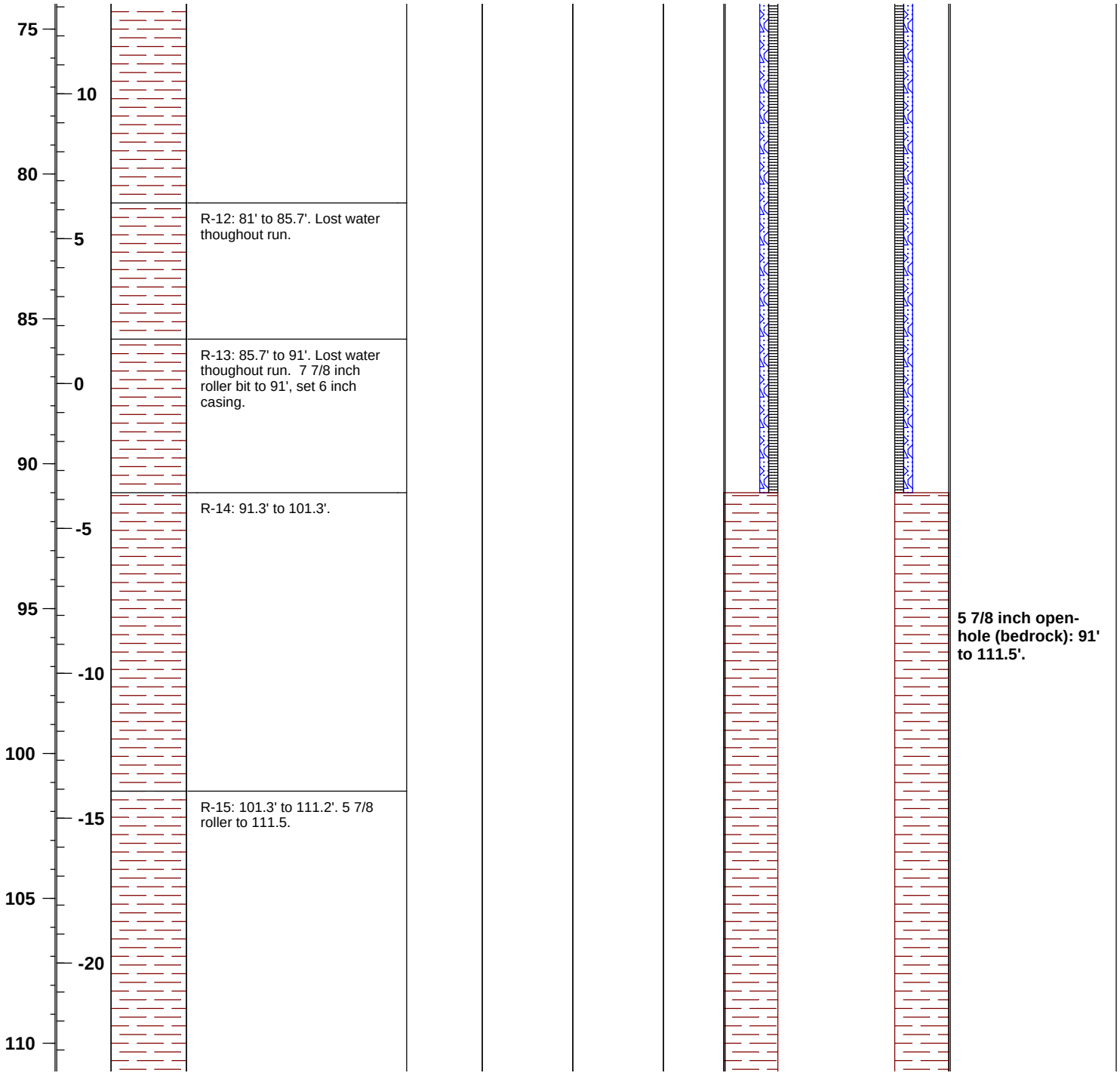
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 89.77 / GRD 87.23
BORING NO.:	MW-32D	**BORING LOCATION:**	N 1484963.72 / E 709401.77
DATE:	7/24/01	**METHOD OF DRILLING:**	HQ Coring
BORING DIAMETER:	14.25"	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	111.5 feet	**SURFACE CONDITIONS:**	Gravel and Dirt

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 89.77 / GRD 87.23
BORING NO.:	MW-32D	**BORING LOCATION:**	N 1484963.72 / E 709401.77
DATE:	7/24/01	**METHOD OF DRILLING:**	HQ Coring
BORING DIAMETER:	14.25"	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	111.5 feet	**SURFACE CONDITIONS:**	Gravel and Dirt

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

AECOM

40 British American Boulevard
Latham, New York 12110
Phone: (518) 951-2200
Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **MW-44I**

START DATE: 7/27/09 END DATE: 8/5/09

PROJECT NAME:	**NAPL Test Well**	PROJECT NO.:	**94560**	PROJECT MANAGER:	**Scott Underhill**
SITE LOCATION:	**NYSEG-Mechanicville, NY**	BORING LOCATION:	**MW-44I**		
DRILLING CO.:	**Nothnagle Drilling**	DRILLER:	**Bush**	DRILLING METHOD:	**HSA/Wash Rotary**
BOREHOLE DIAMETER:	**6 inches**	DEPTH TO BEDROCK:	15.2 ft bgs	TOTAL DEPTH DRILLED:	**75.0 ft**
TOTAL DEPTH REACHED:	**75.0 ft bgs**	INSPECTOR:	Catherine Kielb	WEATHER CONDITIONS:	**mis 70's, cloudy, rain possible**

FIELD SAMPLE INFORMATION								HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
							WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
							FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
							TYPE	**Automatic**	**Split Spoon**				
							ID/OD		**2"**				

DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	GEOLOGIC DESCRIPTION	LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS
							Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock.		7/27/2009 1200
5									
10									
15							15.2 ft bgs TOP OF BEDROCK - Advance 6 1/4 inch HSA to 16.0 ft bgs and set 8" temporary steel casing - Drilled with 7 7/8" wash rotary rock socket from 16.0 ft to 19.0 ft bgs		1302
20							19.0 ft bgs BOTTOM OF 6" PERMANENT STEEL CASING - Grout in 6" permanent steel casing at 19.0 ft bgs		1405
75							75.0 ft bgs Advance 5 7/8" wash rotary rock socket for a td of 75.0 ft bgs		8/5/2009 1408

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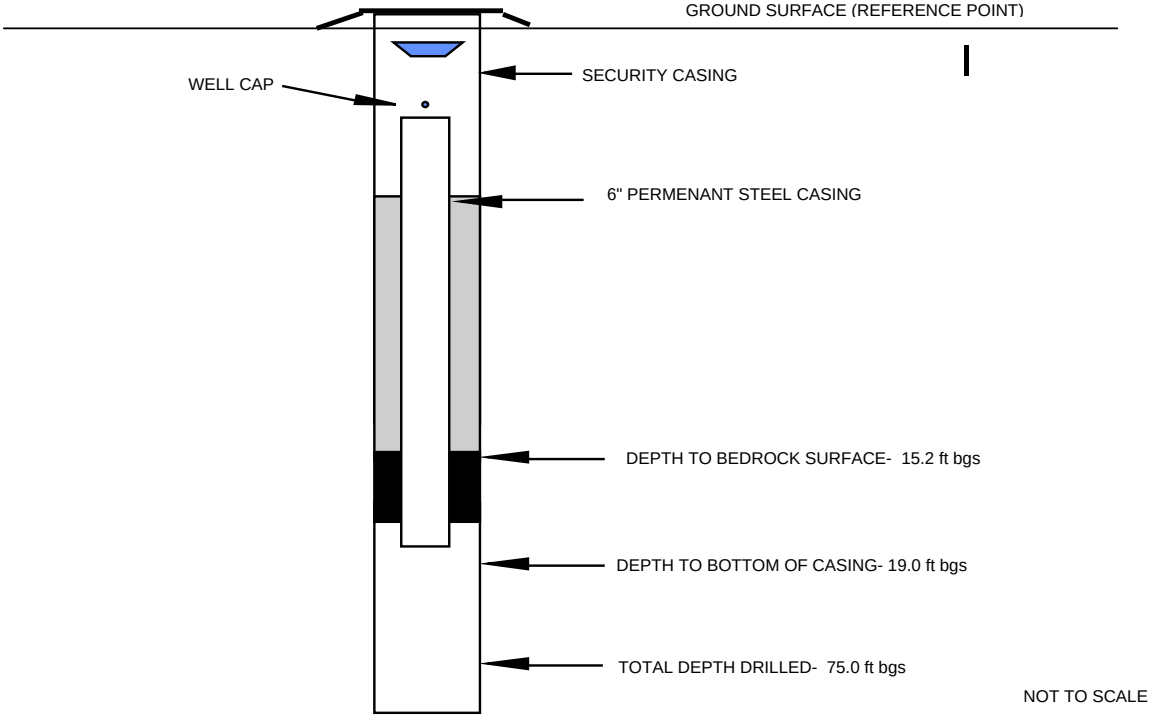
British American Blvd. Latham, NY 12110
Phone (518) 951-2200 Fax (518) 951-2300

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: MW-44I TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 7/27/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 8/5/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:



Notes:

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40 British American Boulevard
Latham, New York 12110
Phone: (518) 951-2200
Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **MW-45I**

START DATE: 7/30/09 END DATE: 8/6/09

PROJECT NAME:	**NAPL Test Well**	PROJECT NO.:	**94560**	PROJECT MANAGER:	**Scott Underhill**
SITE LOCATION:	**NYSEG-Mechanicville, NY**	BORING LOCATION:	**MW-45I**		
DRILLING CO.:	**Nothnagle Drilling**	DRILLER:	**Bush**	DRILLING METHOD:	**HSA/Wash Rotary**
BOREHOLE DIAMETER:	**6 inches**	DEPTH TO BEDROCK:	19.5 ft bgs	TOTAL DEPTH DRILLED:	**75.0 ft**
TOTAL DEPTH REACHED:	**75.0 ft bgs**	INSPECTOR:	Catherine Kielb	WEATHER CONDITIONS:	**70's, partly cloudy**

FIELD SAMPLE INFORMATION								HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
							WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
							FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
							TYPE	**Automatic**	**Split Spoon**				
							ID/OD		**2"**				

DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	GEOLOGIC DESCRIPTION	LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS
							Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock.		7/30/2009 1030
5									
10									
15									
							19.5 ft bgs		
20							TOP OF BEDROCK - Advance 6 1/4 inch HSA to 20.0 ft bgs and set 8" temporary steel casing - Drilled with 7 7/8" wash rotary rock socket from 20.0 ft to 23.5 ft bgs		1500
							23.5 ft bgs		7/31/2009
25							BOTTOM OF 6" PERMANENT STEEL CASING - Grout in 6" permanent steel casing at 23.5 ft bgs -Some LNAPL and DNAPL recovered when flushing borehole		700
75							75.0 ft bgs Advance 5 7/8" wash rotary rock socket for a td of 75.0 ft bgs		8/6/2009 1425

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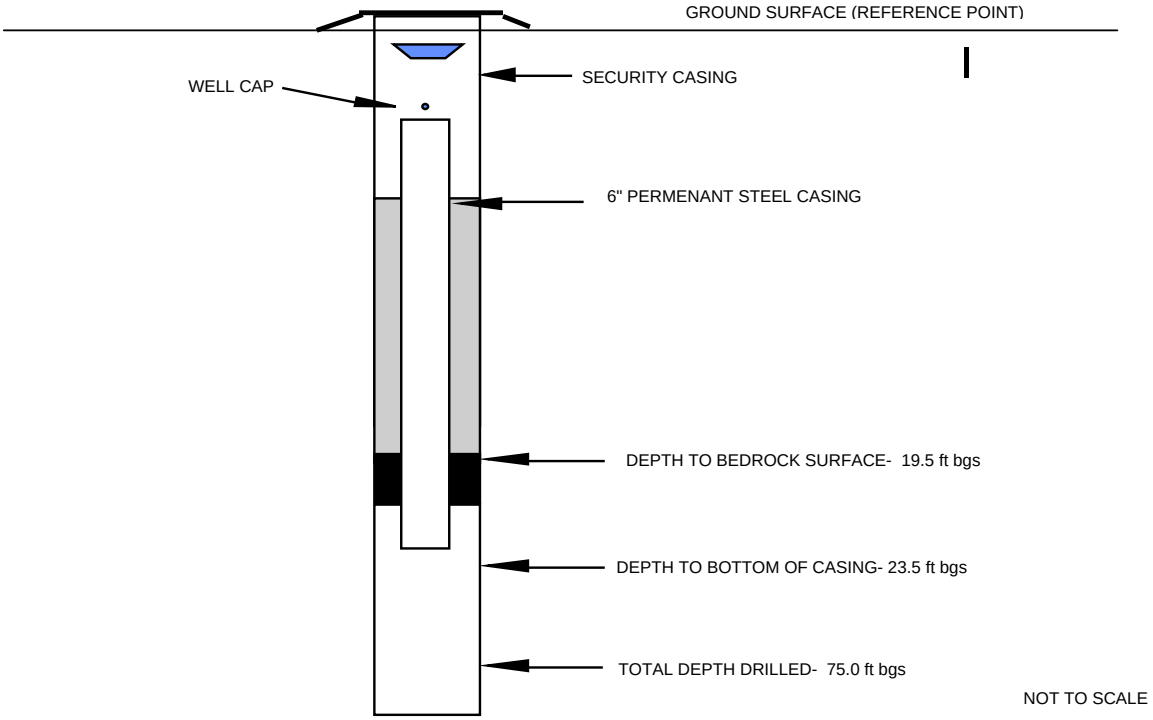
WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: MW-45I TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 7/30/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 8/6/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:



Notes:

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40 British American Boulevard
Latham, New York 12110
Phone: (518) 951-2200
Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **MW-46I**

START DATE: 7/28/09 END DATE: 8/7/09

PROJECT NAME:	**NAPL Test Well**	PROJECT NO.:	**94560**	PROJECT MANAGER:	**Scott Underhill**
SITE LOCATION:	**NYSEG-Mechanicville, NY**	BORING LOCATION:	**MW-46I**		
DRILLING CO.:	**Nothnagle Drilling**	DRILLER:	**Bush**	DRILLING METHOD:	**HSA/Wash Rotary**
BOREHOLE DIAMETER:	**6 inches**	DEPTH TO BEDROCK:	12.0 ft bgs	TOTAL DEPTH DRILLED:	**75.0 ft**
TOTAL DEPTH REACHED:	**75.0 ft bgs**	INSPECTOR:	Catherine Kielb	WEATHER CONDITIONS:	**Low 70's, sunny**

FIELD SAMPLE INFORMATION								HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
							WEIGHT(S)	**140 lbs**			DATE 2:	DEPTH 2:	TIME 2:
							FALL	**30"**		CASING	TUBE	CORE	RIG TYPE:
							TYPE	**Automatic**	**Split Spoon**				
							ID/OD		**2"**				

DEPTH (feet bgs)	SAMPLE ID	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	GEOLOGIC DESCRIPTION	LITHOLOGY/ SOIL TYPE	WATER LEVEL / REMARKS
							Advance 6 1/4 inch HSA through clean backfill soil to top of bedrock.		7/28/2009 740
5									
10							12.0 ft bgs		755
							TOP OF BEDROCK - Advance 6 1/4 inch HSA to 12.5 ft bgs and set 8" temporary steel casing		
15							- Drilled with 7 7/8" wash rotary rock socket from 12.5 ft to 16.5 ft bgs 16.5 ft bgs		930
							BOTTOM OF 6" PERMANENT STEEL CASING - Grout in 6" permanent steel casing at 16.5 ft bgs		
20							-Driller K. Bush noted around 16.0 ft bgs rock became soft		
75							75.0 ft bgs		8/7/2009 830
							Advance 5 7/8" wash rotary rock socket for a td of 75.0 ft bgs		

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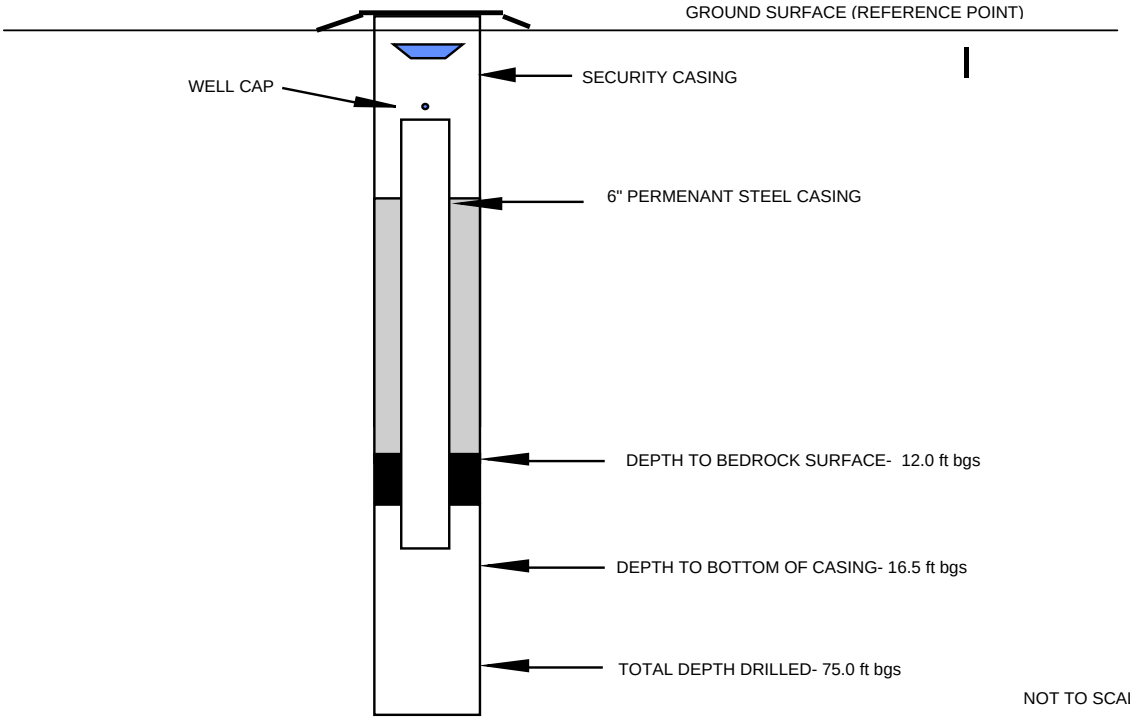
WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

PROJECT NAME: NAPL Test Well Installation LOCATION: Mechanicville, NY
FIELD REPRESENTATIVE: Catherine Kielb TYPE OF FILTER PACK: Inudstrial QuartzSand
DRILLING CONTRACTOR: Nothnagle Drilling GRADATION: # 0.
DRILLING TECHNIQUE: HSA/Wash Rotary AMOUNT OF FILTER PACK USED: NA
AUGER SIZE AND TYPE: 6.25" Hollow Stem Auger

BOREHOLE/ WELL IDENTIFICATION: MW-46I TYPE OF BENTONITE: Pure Gold Ben. Chips
BOREHOLE DIAMETER: 6 Inches AMOUNT BENTONITE USED:

WELL CONSTRUCTION START DATE: 7/28/09 TYPE OF CEMENT: None
WELL CONSTRUCTION COMPLETE DATE: 8/7/09 AMOUNT CEMENT USED:
SCREEN MATERIAL: NA - Open Hole Bedrock Well
SCREEN DIAMETER: NA GROUT MATERIALS USED: None
STRATUM-SCREENED INTERVAL (FT): 5.0 - 15.0 Ft. DIMENSIONS OF SECURITY CASING:
CASING MATERIAL: Steel TYPE OF WELL CAP:
CASING DIAMETER: 6 inches TYPE OF END CAP:
COMMENTS:

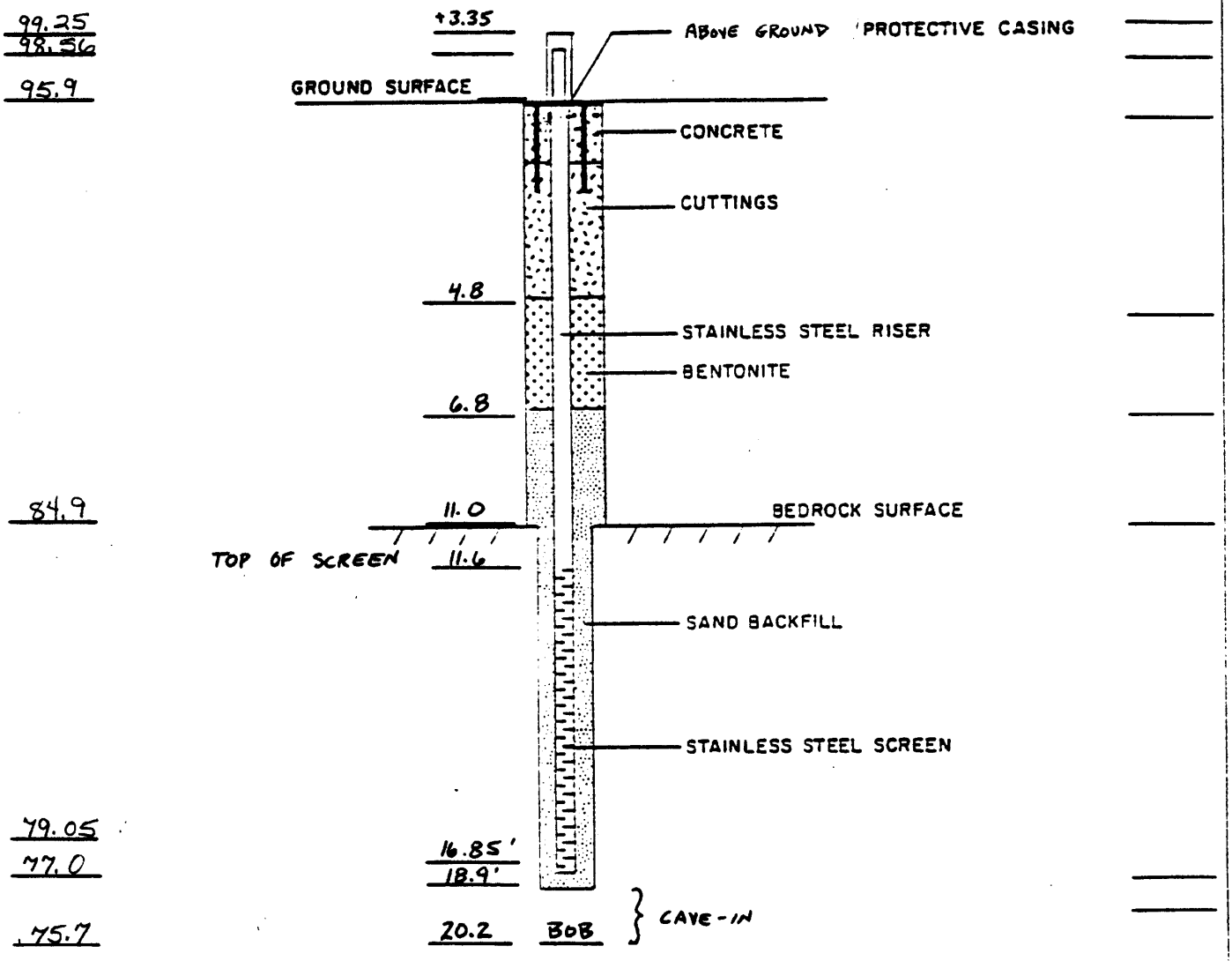


Notes:

MONITORING WELL INSTALLATION DIAGRAM

PROJECT NO.	PROJECT NAME NYSEG	WELL NO.
4945-02	MECHANICVILLE	MW-1
INSTALLED BY L. ESPY, S. WIBBY	**DATE INSTALLED** 8/1/86	**BORING DIAMETER** 8.75"
WELL DIAMETER 2.0"	**WELL MATERIAL** SS	**BACKFILL MATERIAL** #3 JERSEY SAND

ELEV., FT. DEPTH, FT.



EC JORDAN CO.

LOG OF BORING

URS

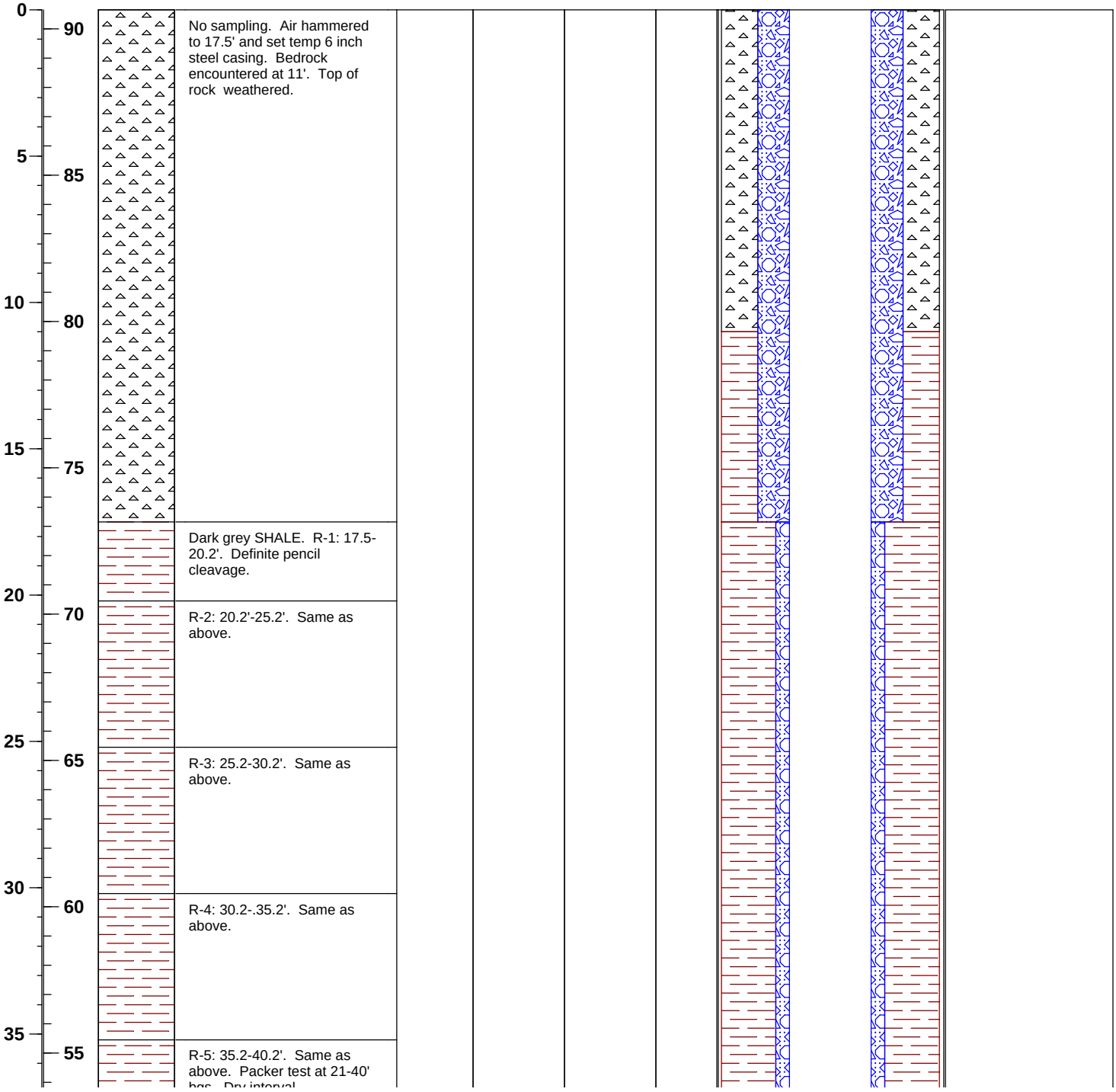
Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 90.65 / GRD 90.99
BORING NO.:	MW-1D	**BORING LOCATION:**	N 1484740.96 / E 709557.53
DATE:	4/10/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	155.2 feet	**SURFACE CONDITIONS:**	Gravel

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 90.65 / GRD 90.99
BORING NO.:	MW-1D	**BORING LOCATION:**	N 1484740.96 / E 709557.53
DATE:	4/10/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	155.2 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
40 / 50		R-6: 40.2-45.2'.						
45 / 45		R-7: 45.2-50.2'.						
50 / 40		R-8: 50.2-55.2'. LNAPL at 50.9 to 51.2'.						
55 / 35		R-9: 55.2-60.2'.						
60 / 30		R-10: 60.2-65.2'.						
65 / 25		R-11: 65.2-70.2'.						
70 / 20		R-12: 70.2-75.2'.						

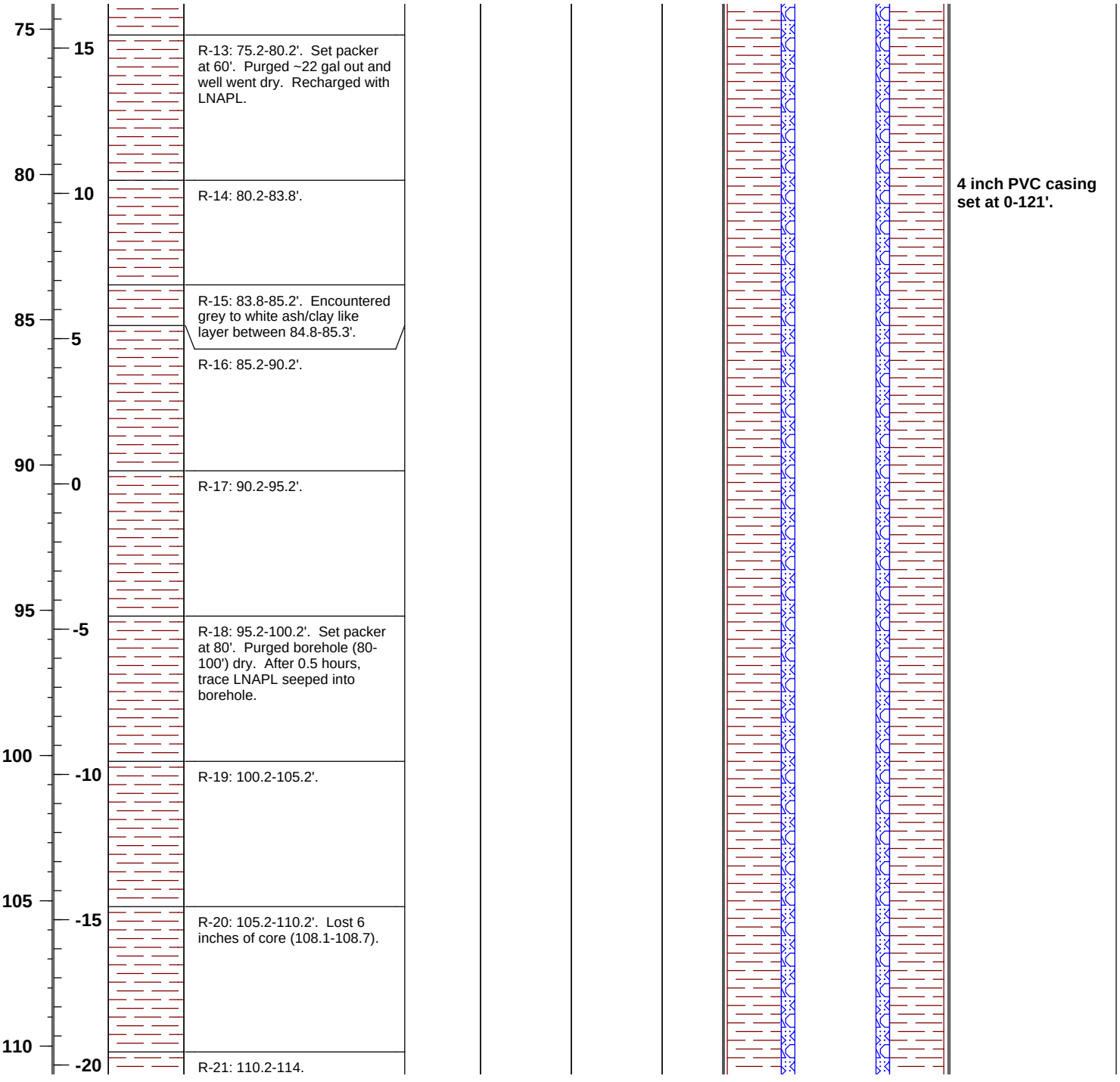
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 90.65 / GRD 90.99
BORING NO.:	MW-1D	**BORING LOCATION:**	N 1484740.96 / E 709557.53
DATE:	4/10/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	155.2 feet	**SURFACE CONDITIONS:**	Gravel

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



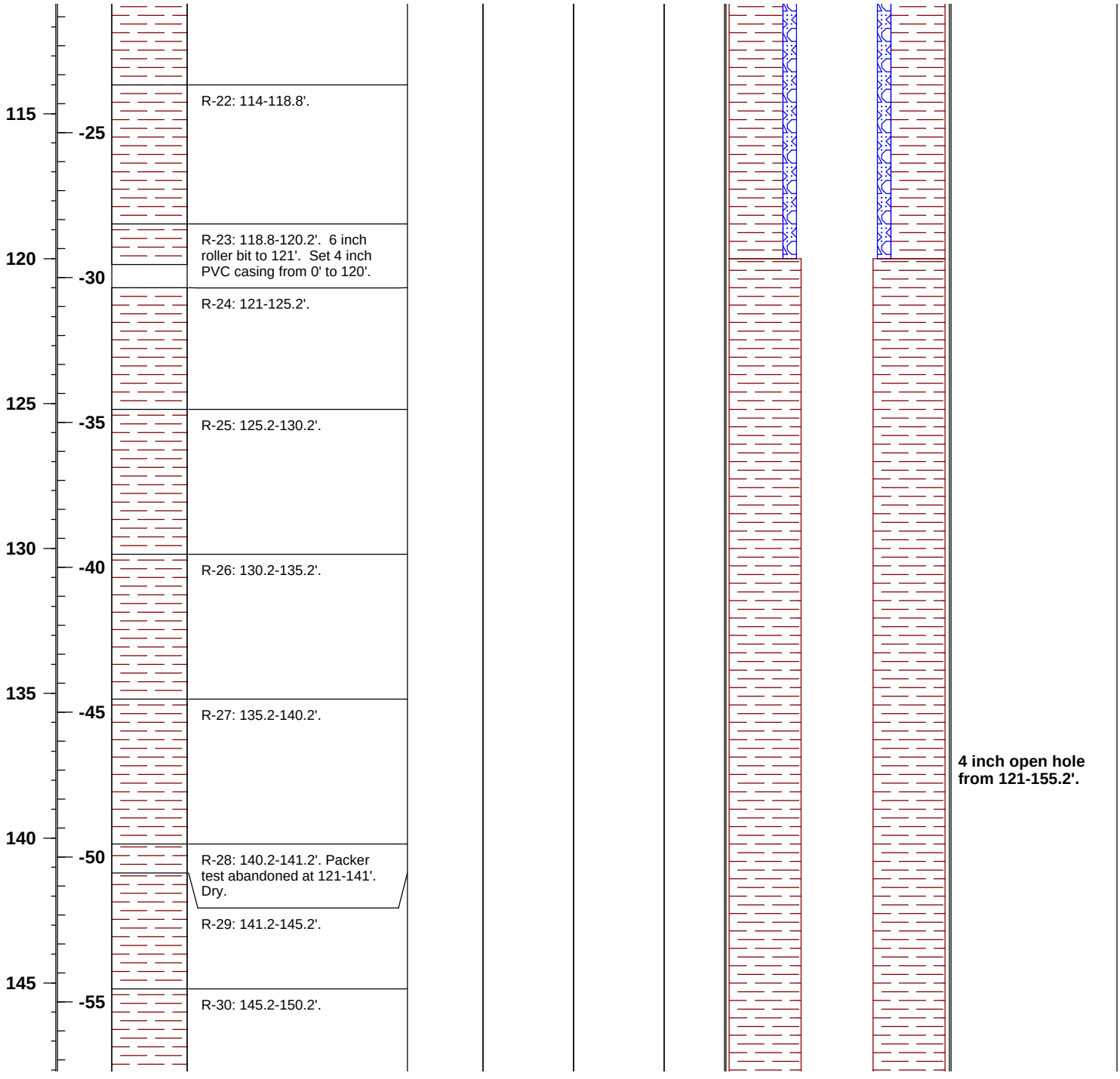
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 90.65 / GRD 90.99
BORING NO.:	MW-1D	**BORING LOCATION:**	N 1484740.96 / E 709557.53
DATE:	4/10/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	155.2 feet	**SURFACE CONDITIONS:**	Gravel

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



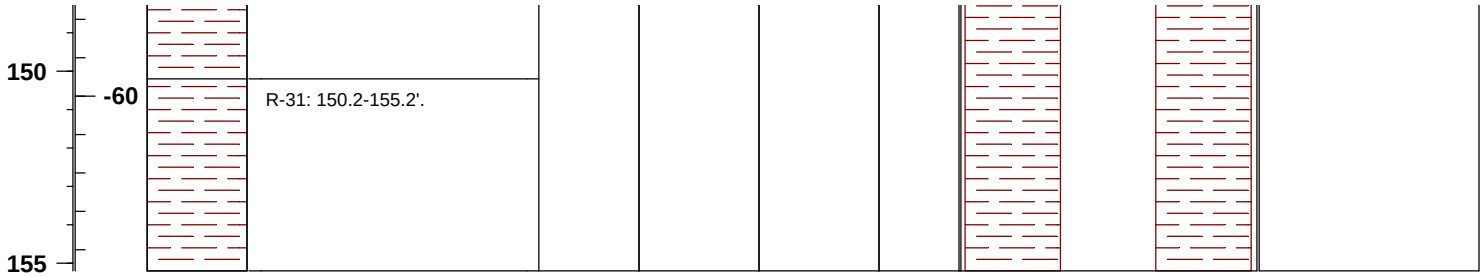
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 90.65 / GRD 90.99
BORING NO.:	MW-1D	**BORING LOCATION:**	N 1484740.96 / E 709557.53
DATE:	4/10/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	155.2 feet	**SURFACE CONDITIONS:**	Gravel

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



LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 90.45 / GRD 90.83
BORING NO.:	MW-1I	**BORING LOCATION:**	N 1484745.85 / E 709550.55
DATE:	5/20/02	**METHOD OF DRILLING:**	4 inch Spin Casing
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	2' x 2" Split spoons
BORING DEPTH:	75 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		Brown gravel, some medium sand, damp.	0-2	24/18	NA	0		
		Black coarse SAND, some coal granulas, trace ash like material, damp.	2-4	24/12	NA	0		
5 / 85		Black granular coal like material. Some coarse gravel, little brown sand, damp.	4-6	24/12	NA	0		
		Same as above with musty mold odor.	6-8	24/0	NA	NA		
		Spoon was wet.						
10 / 80		Brown coarse SAND, wet, musty odor.	8-10	24/8	NA	0		
		Angular dark grey SHALE fragments, trace medium sand, wet.	10-11.2	24/.5	NA	0		
		Weathered shale from 9.5-11.2'. Refusal.						
15 / 75		Air hammered to 17.5'. Tar encountered at 16.5'. Set 6 inch temp steel casing.						
20 / 70		5 3/4 inch air hammered to 45'. Grout 4 inch PVC casing to 45'. Removed 6 inch casing.						**4 inch PVC casing to 45'.**
25 / 65								
30 / 60								
35 / 55								

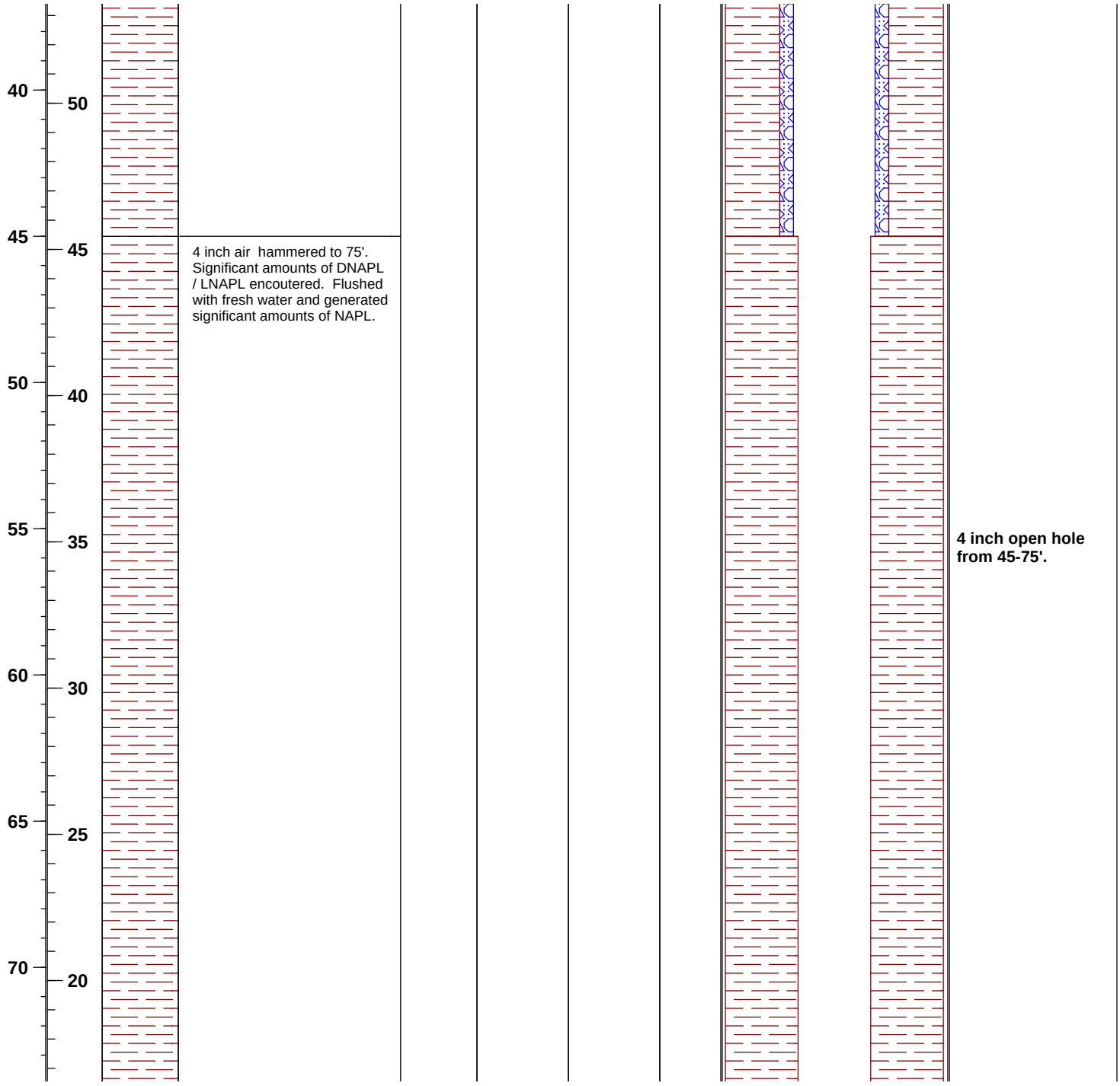
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 90.45 / GRD 90.83
BORING NO.:	MW-1I	**BORING LOCATION:**	N 1484745.85 / E 709550.55
DATE:	5/20/02	**METHOD OF DRILLING:**	4 inch Spin Casing
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	2' x 2" Split spoons
BORING DEPTH:	75 feet	**SURFACE CONDITIONS:**	Gravel

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

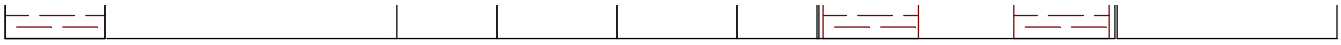


LOG OF BORING

URS
Clifton Park, New York

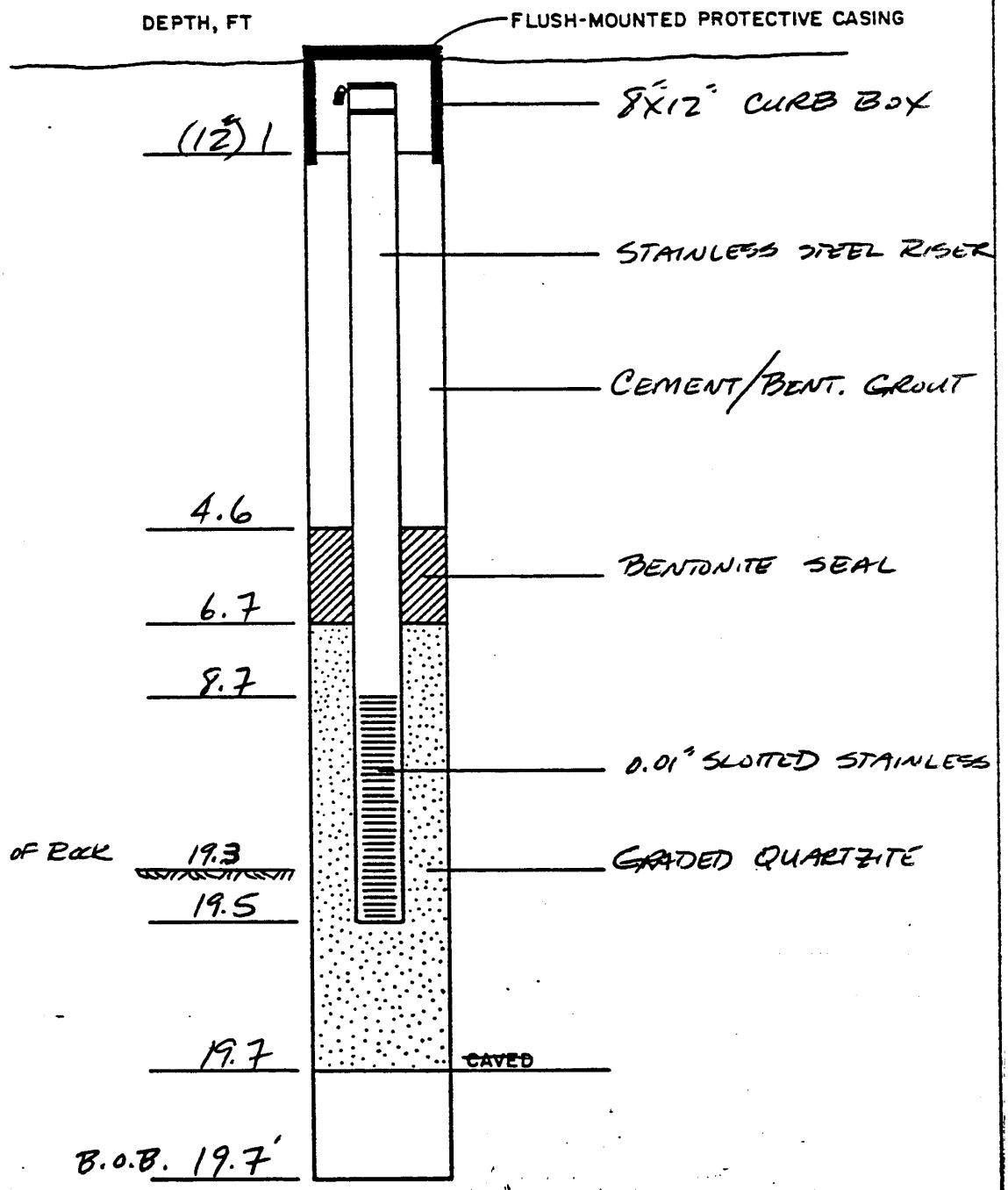
NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 90.45 / GRD 90.83
BORING NO.:	MW-1I	**BORING LOCATION:**	N 1484745.85 / E 709550.55
DATE:	5/20/02	**METHOD OF DRILLING:**	4 inch Spin Casing
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	2' x 2" Split spoons
BORING DEPTH:	75 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
75								

WELL INSTALLATION DETAILS

PROJECT NO. 4945-03	PROJECT NAME NYSEG MECHANICVILLE TASK 3	WELL NO. MW-10
INSTALLED BY NORTH STAR DRILLING	DATE INSTALLED 11-12-87	BORING DIAMETER 6"
WELL DIAMETER 2"	WELL MATERIAL SCHEDULE 40 304 STAINLESS STEEL	BACKFILL MATERIAL #4 Q-Rck GRADED QUARTZITE



LOG OF BORING

URS

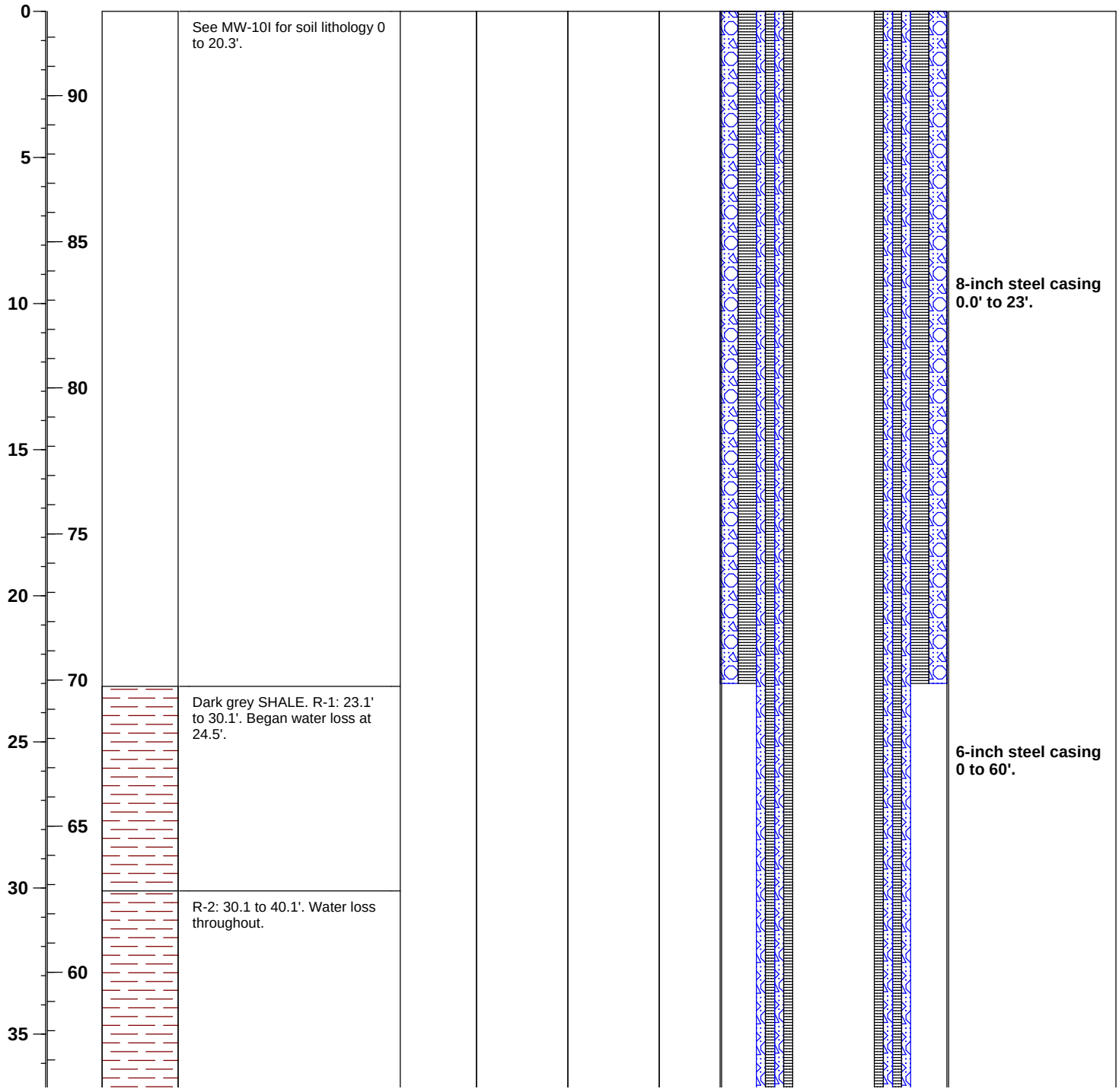
Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 92.67 / GRD 92.88
BORING NO.:	MW-10D	**BORING LOCATION:**	N 1,484,711/E 709,645
DATE:	6/6/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ coring
BORING DEPTH:	114 feet	**SURFACE CONDITIONS:**	Gravel

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



LOG OF BORING

URS

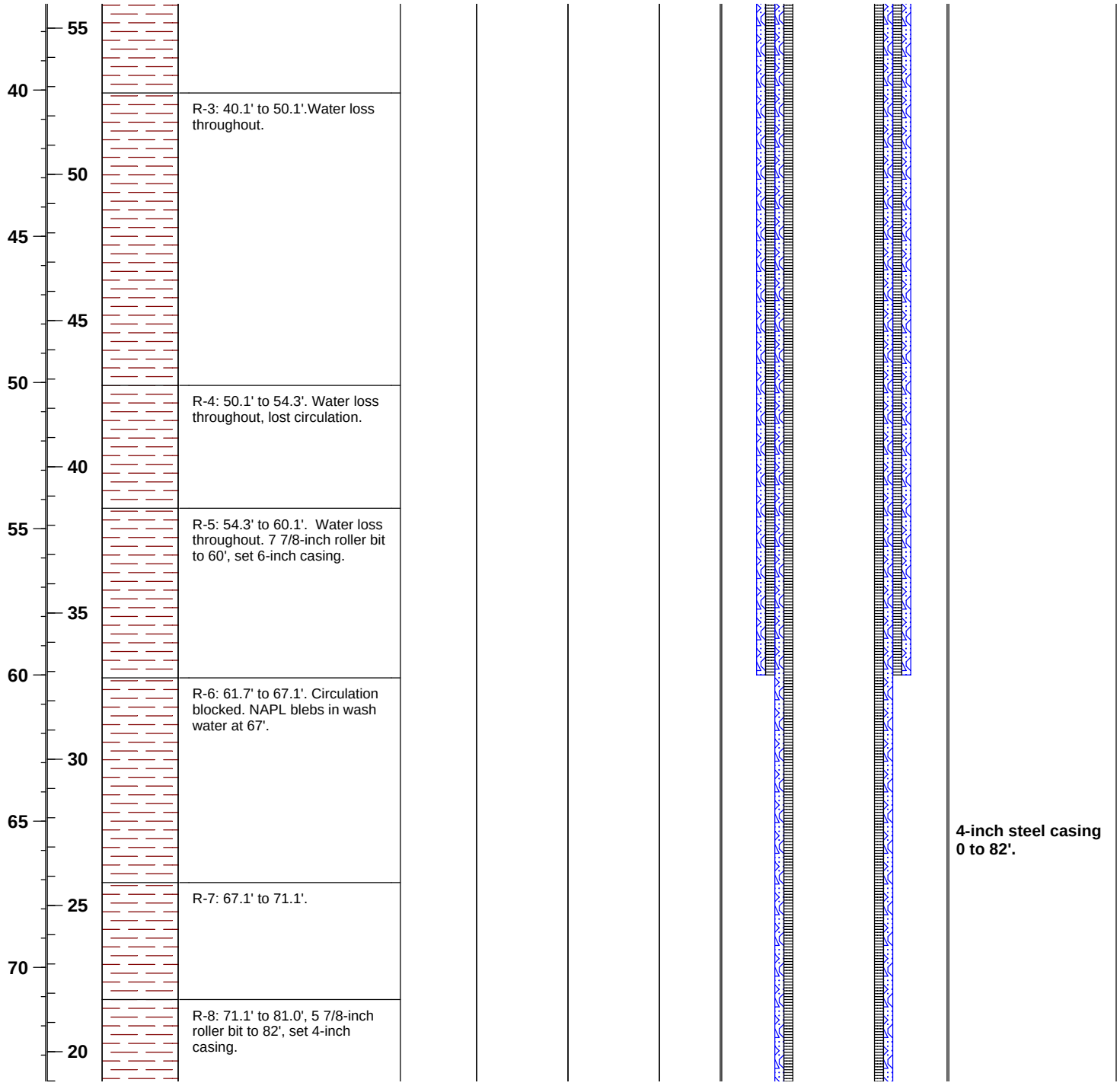
Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 92.67 / GRD 92.88
BORING NO.:	MW-10D	**BORING LOCATION:**	N 1,484,711/E 709,645
DATE:	6/6/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ coring
BORING DEPTH:	114 feet	**SURFACE CONDITIONS:**	Gravel

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



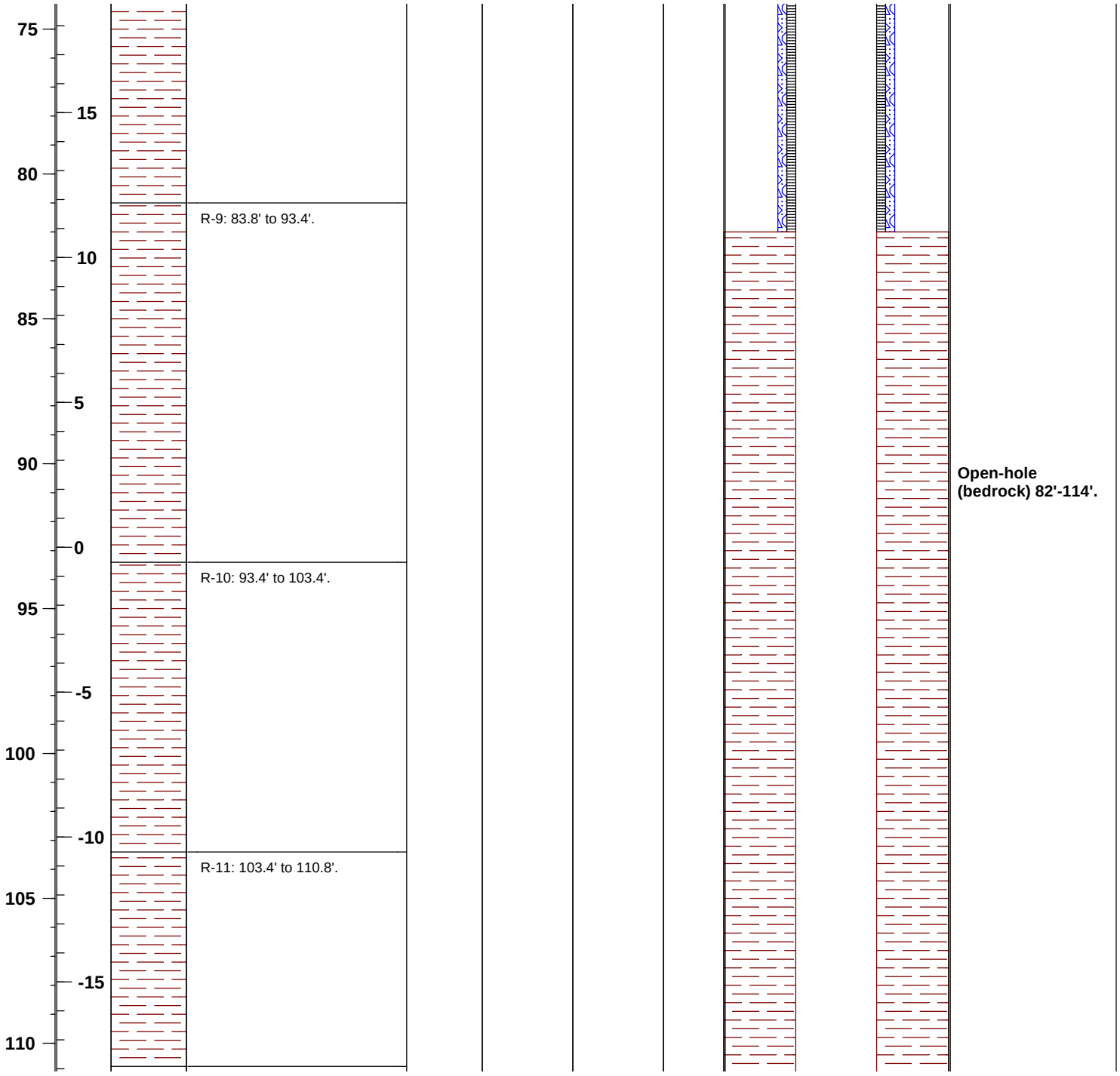
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 92.67 / GRD 92.88
BORING NO.:	MW-10D	**BORING LOCATION:**	N 1,484,711/E 709,645
DATE:	6/6/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ coring
BORING DEPTH:	114 feet	**SURFACE CONDITIONS:**	Gravel

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 92.67 / GRD 92.88
BORING NO.:	MW-10D	**BORING LOCATION:**	N 1,484,711/E 709,645
DATE:	6/6/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ coring
BORING DEPTH:	114 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
-20		R-12: 110.8' to 115'.						

LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 92.22 / GRD 92.58
BORING NO.:	MW-10I	**BORING LOCATION:**	N 1,484,714/E 709,638
DATE:	6/19/01	**METHOD OF DRILLING:**	4.25 inch Hollow Stem Auger
BORING DIAMETER:	8. 25 inches	**SAMPLE TYPE:**	2 inch x 2 foot Split Sploon
BORING DEPTH:	43 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		Brown medium SAND, trace gravel grading to black fine SAND, some coal fragments, trace brick, moist.	0-2	24/18	5,18,24,12	0		
5 / 85		Brown medium SAND, some ash-like material and coal fragments, trace brick, damp. (ODOR-hydrocarbon)	2-4	24/18	10,7,7,6	0		
			4-6	24/12	5,4,2,2	0		6-inch steel casing grouted 0' to 22'.
		Brown medium SAND, little ash-like material and coal fragments, trace brick, damp.	6-8	24/10	4,3,2,6	0		
10 / 80		Brownish orange silty SAND, damp.	8-10	24/12	4,1,6,7	0		
			10-12	24/6	12,7,6,15	0		
		Brownish orange silty SAND, some coarse sand, staining with NAPL @13.8', wet. (ODOR)(SHEEN)	12-14	24/6	23,16,12,9	0		
15 / 75		Brown medium to fine SAND, some fine gravel, trace coarse gravel, stained, wet. (ODOR)	14-16	24/4	9,8,7,11	2.6		
		Grey green SAND grading to light brown SILT (stained), trace medium to coarse sand in nose of split spoon, wet (ODOR)(SHEEN)	16-18	24/14	14,4,6,8	0		
20 / 70			18-20	24/0	26,23,18,20	0		
		No recovery.	20-20.25	3/3	50/.3'	NA		
		Brown fine SAND, trace silt, moist to wet. (ODOR) Refusal @20.25'.						
25 / 65		Dark Grey SHALE. 5 7/8-inch rollerbit to 43'.						
30 / 60		Dark Grey Shale						5 7/8 inch open-hole (bedrock) 22'-43'.
35								

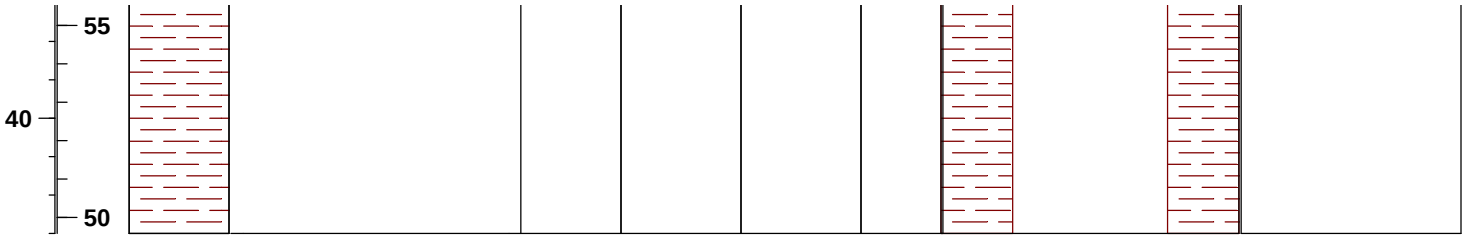
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 92.22 / GRD 92.58
BORING NO.:	MW-10I	**BORING LOCATION:**	N 1,484,714/E 709,638
DATE:	6/19/01	**METHOD OF DRILLING:**	4.25 inch Hollow Stem Auger
BORING DIAMETER:	8. 25 inches	**SAMPLE TYPE:**	2 inch x 2 foot Split Sploon
BORING DEPTH:	43 feet	**SURFACE CONDITIONS:**	Gravel

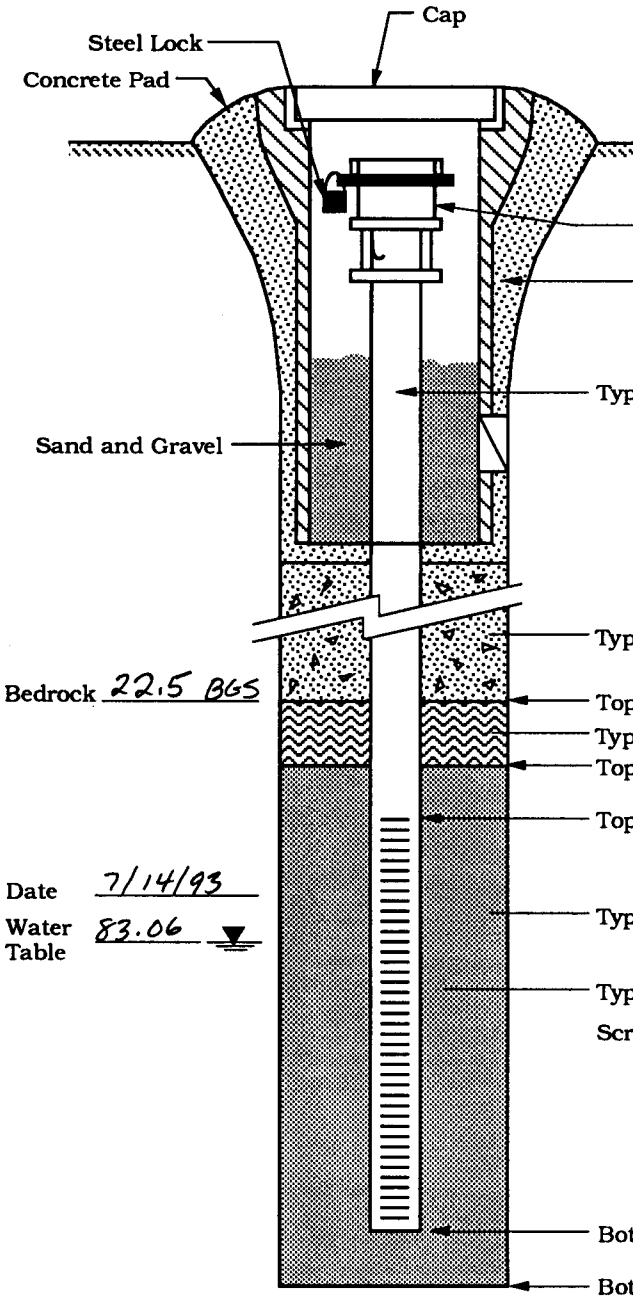
Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description



FLUSH MOUNT MONITORING WELL INSTALLATION DIAGRAM

WELL I.D.: MW-17 (B-17)

Client: **NYSEG - Mechanicville Site**	Boring Diameter: ≈ 1'	Project No.: 4945-10
	Well Inside Diameter: 2"	Date Installed: 5/18/93
Drilling Co.: **Empire Soils, Inc.**	Well Material: Stainless Steel	Drilling Method: HSA
Field Scientist: NSG	Top of Well Elevation: 98.18	Development Method: Pump & Surge



	Depth (feet, bgs)	Elevation (feet, Relative)
Ground Surface		98.18
Top of Riser		
Portland Cement Minimum 2 Foot Thick		
Type of Riser 2" ID Stainless Steel		
Type of Grout Bentonite/Cement		
Top of Seal	8.5	89.7
Type of Seal Bentonite Pellets		
Top of Sand Pack	10.5	87.7
Top of Screen	12.5	85.7
Type of Sand Pack Morie #0 Silica Sand		
Type of Screen 2" ID Stainless Steel		
Screen Slot Size 0.010		
Bottom of Screen	22.5	75.7
Bottom of Borehole	22.5	75.7

NOT TO SCALE

9307053D

ABB Environmental Services, Inc.

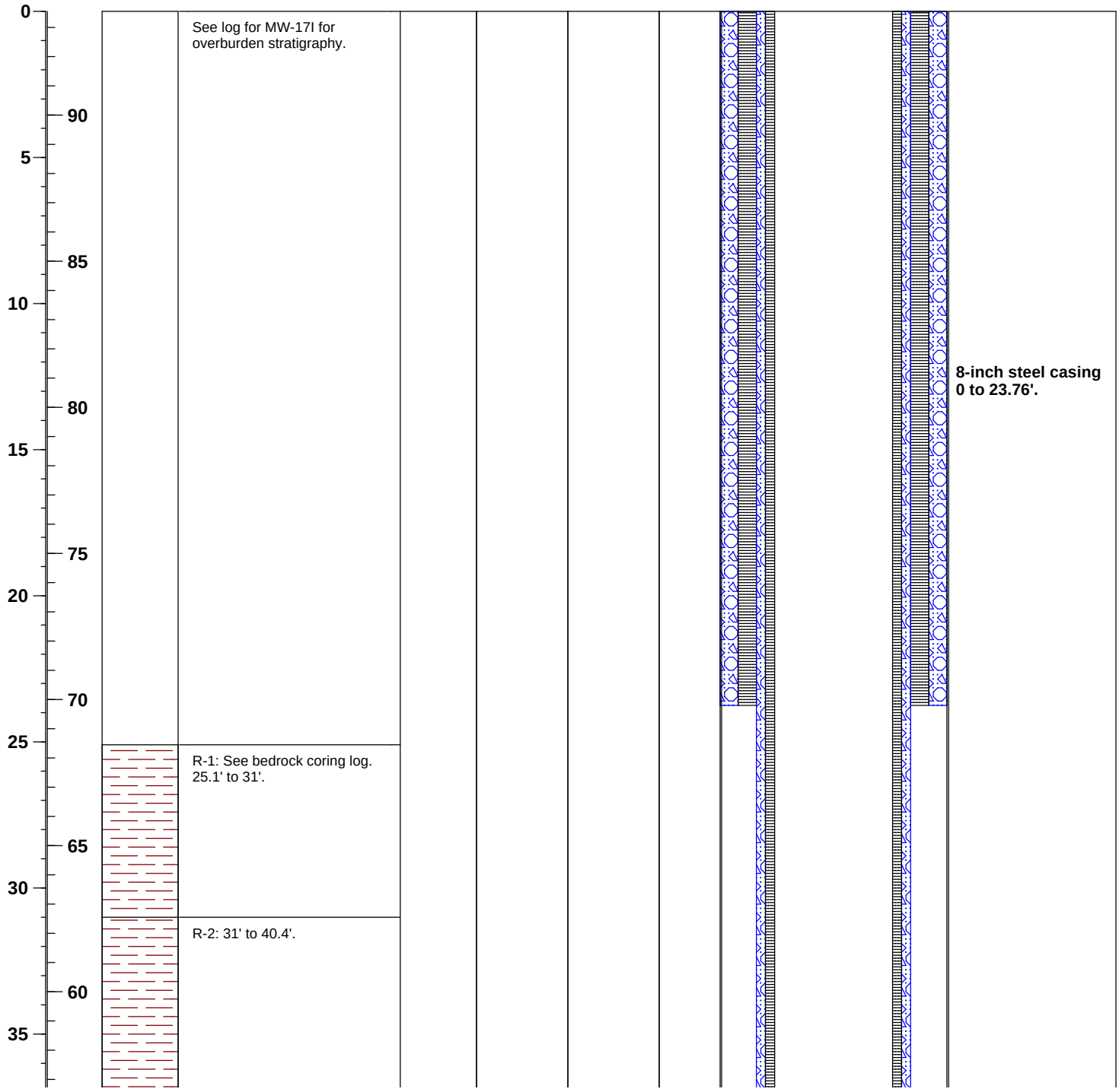
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.60 / GRD 93.55
BORING NO.:	MW-17D	**BORING LOCATION:**	N 1484872.01 / E 709765.43
DATE:	8/22/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ coring
BORING DEPTH:	142.2 feet	**SURFACE CONDITIONS:**	Asphalt

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.60 / GRD 93.55
BORING NO.:	MW-17D	**BORING LOCATION:**	N 1484872.01 / E 709765.43
DATE:	8/22/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ coring
BORING DEPTH:	142.2 feet	**SURFACE CONDITIONS:**	Asphalt

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
40 / 55		R-3: 40.4' to 50.6'. Minor water loss at 45'.						6-inch steel casing 0 to 121'.
45 / 50								
50 / 45		R-4: 50.6' to 60.6'. MGP odor at 58'.						
55 / 40								
60 / 35		R-5: 60.6' to 71'.						
65 / 30								
70 / 25		R-6: 71' to 81'.						

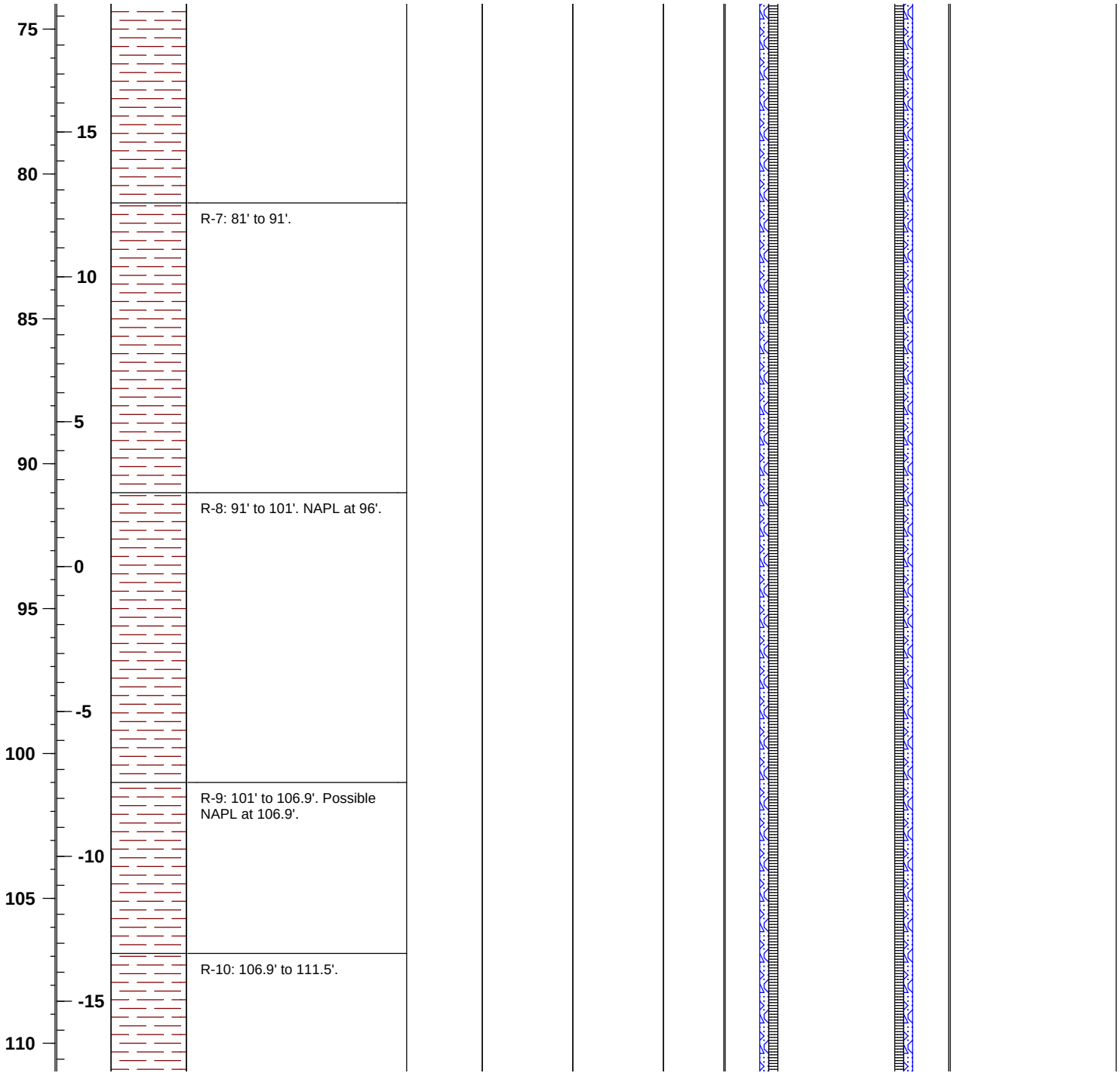
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.60 / GRD 93.55
BORING NO.:	MW-17D	**BORING LOCATION:**	N 1484872.01 / E 709765.43
DATE:	8/22/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ coring
BORING DEPTH:	142.2 feet	**SURFACE CONDITIONS:**	Asphalt

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



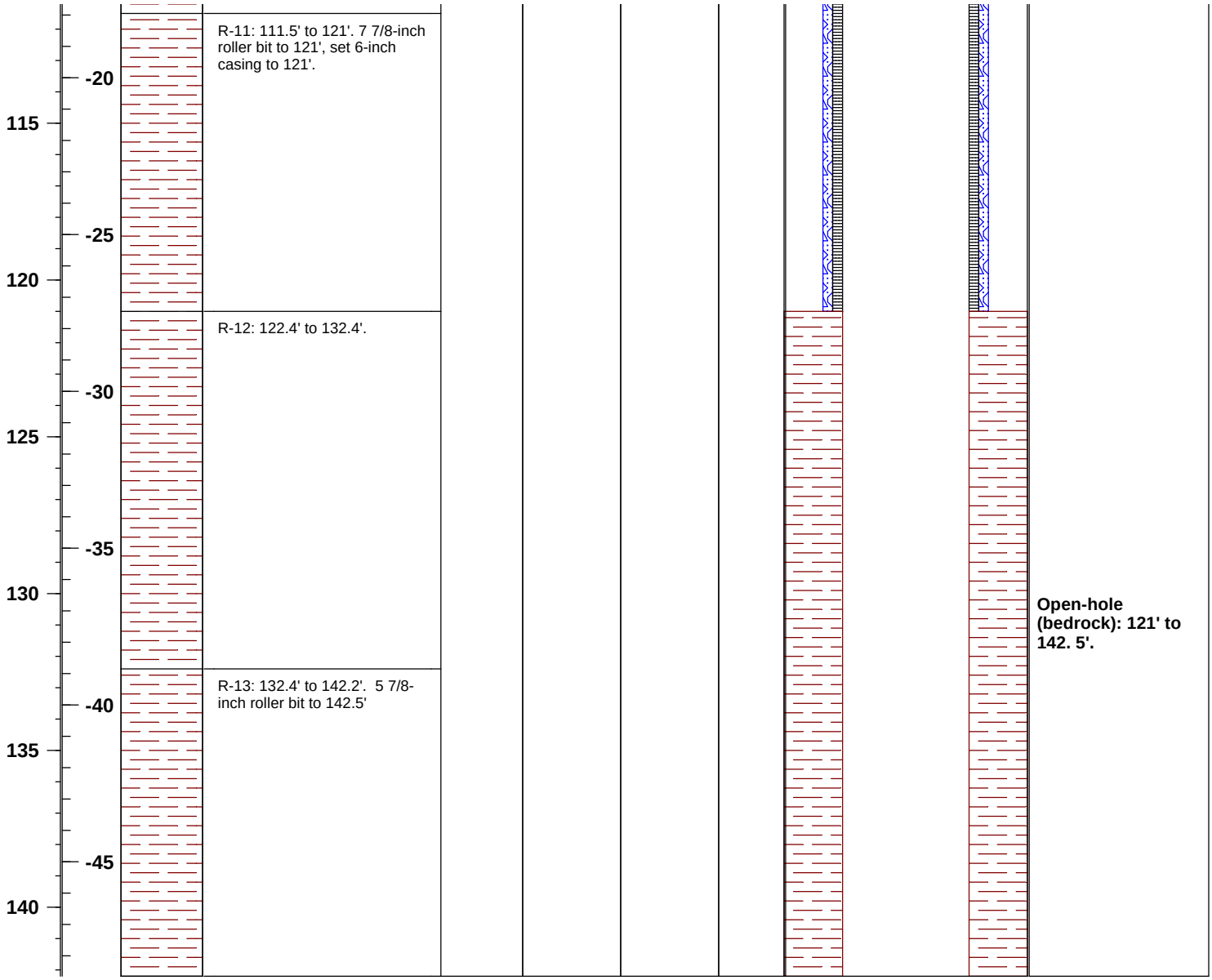
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.60 / GRD 93.55
BORING NO.:	MW-17D	**BORING LOCATION:**	N 1484872.01 / E 709765.43
DATE:	8/22/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ coring
BORING DEPTH:	142.2 feet	**SURFACE CONDITIONS:**	Asphalt

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



LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.29 / GRD 93.55
BORING NO.:	MW-17I	**BORING LOCATION:**	N 1484870.22 / E 709772.76
DATE:	4/23/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	3 inch x 2 foot split spoon
BORING DEPTH:	45 feet	**SURFACE CONDITIONS:**	Asphalt

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		Augered through 0.5' of asphalt.	0.5-2	18/12	4,4,1,0	0		
		Brown medium SAND, some ash, trace gravel, damp.	2-4	24/.8	13,22,13,9	0		
5 / 85		Brown medium SAND and gravel, trace silt and slag, damp, musty swamp odor.	4-6	24/2	10,15,15,12	0		6-inch steel casing 0 to 23'.
		Brown medium SAND, trace gravel, moist.	6-8	24/.2	10,7,9,10	0		
		Brown medium SAND, some shale fragments, trace brick, trace ash-like material, moist.	8-10	24/.5	12,10,6,7	0		
10 / 80		Brown medium SAND, moist.						
		Brown medium SAND, some silt, trace gravel, wet, musty/swamp odor.	10-12	24/20	5,5,7,25	0		
		Light brown medium-fine SAND, some silt, little shale fragments, wet, musty/swamp odor.	12-14	24/18	WOH,3,6,9	0		
15 / 75			14-16	24/20	5,7,7,10	4.1		
		Grey-green fine SAND (marbled), trace gravel, trace organics, swamp odor, wet.	16-18	24/12	17,17,13,7	4.1		
20 / 70			18-20	24/20	2,7,8,15	2.9		
		Same as 16' to 19.8' with silty shale fragments, wet.	20-21.3	16/16	12,52,50/4"	5.2		
		Grey-green silty SAND, some shale, wet.						
25 / 65		Grey silty shale fragments, wet. (Refusal at 21.3').						
		Grey SHALE						
30 / 60		5 7/8 inch roller bit to 45'.						5 7/8 inch open-hole (bedrock): 23' to 45'.
35								

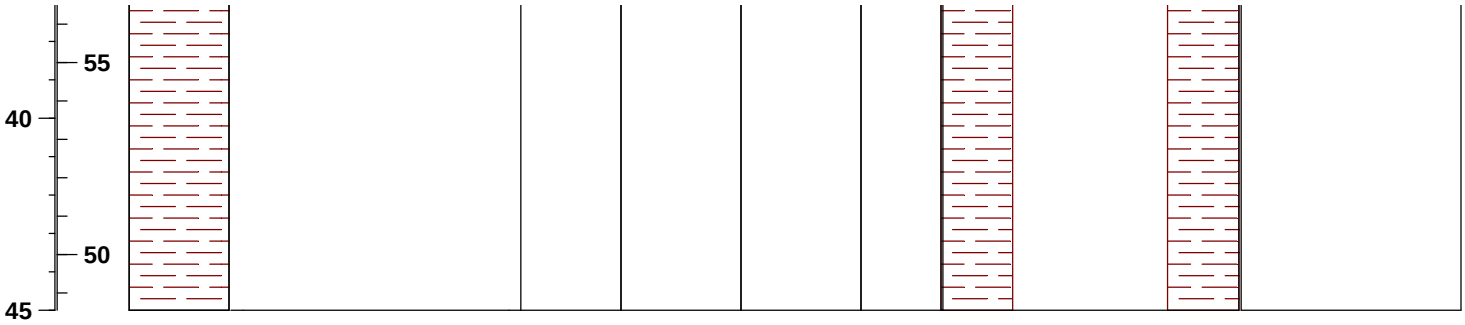
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.29 / GRD 93.55
BORING NO.:	MW-17I	**BORING LOCATION:**	N 1484870.22 / E 709772.76
DATE:	4/23/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	3 inch x 2 foot split spoon
BORING DEPTH:	45 feet	**SURFACE CONDITIONS:**	Asphalt

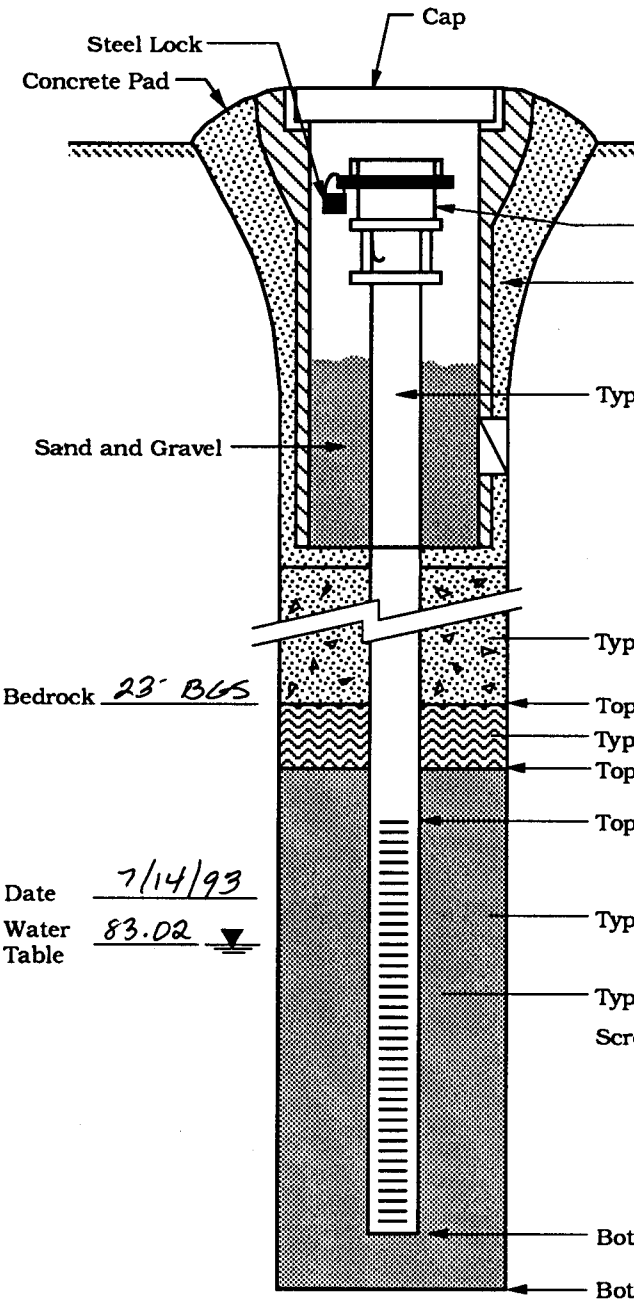
Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description



FLUSH MOUNT MONITORING WELL INSTALLATION DIAGRAM

WELL I.D.: MW-18 (B-18)

Client: **NYSEG - Mechanicville Site**	Boring Diameter: ≈ 1'	Project No.: 4945-10
	Well Inside Diameter: 2" ID	Date Installed: 5/19/93
Drilling Co.: **Empire Soils, Inc.**	Well Material: Stainless Steel	Drilling Method: HSA
Field Scientist: NSG	Top of Well Elevation: 98.12	Development Method: Pump & Surge



	Depth (feet, bgs)	Elevation (feet, Relative)
Top of Riser		98.12
Portland Cement Minimum 2 Foot Thick		
Type of Riser 2" ID Stainless Steel		
Sand and Gravel		
Type of Grout Bentonite/Cement		
Bedrock 23' BGS		
Top of Seal	24	74.1
Type of Seal Bentonite Pellets		
Top of Sand Pack	26	72.1
Top of Screen	28	70.1
Date 7/14/93		
Water Table 83.02 ▼		
Type of Sand Pack Morie Ø Silica Sand		
Type of Screen 2" ID Stainless Steel		
Screen Slot Size 0.010"		
Bottom of Screen	38	60.1
Bottom of Borehole	38	60.1

NOT TO SCALE

9307053D

ABB Environmental Services, Inc.

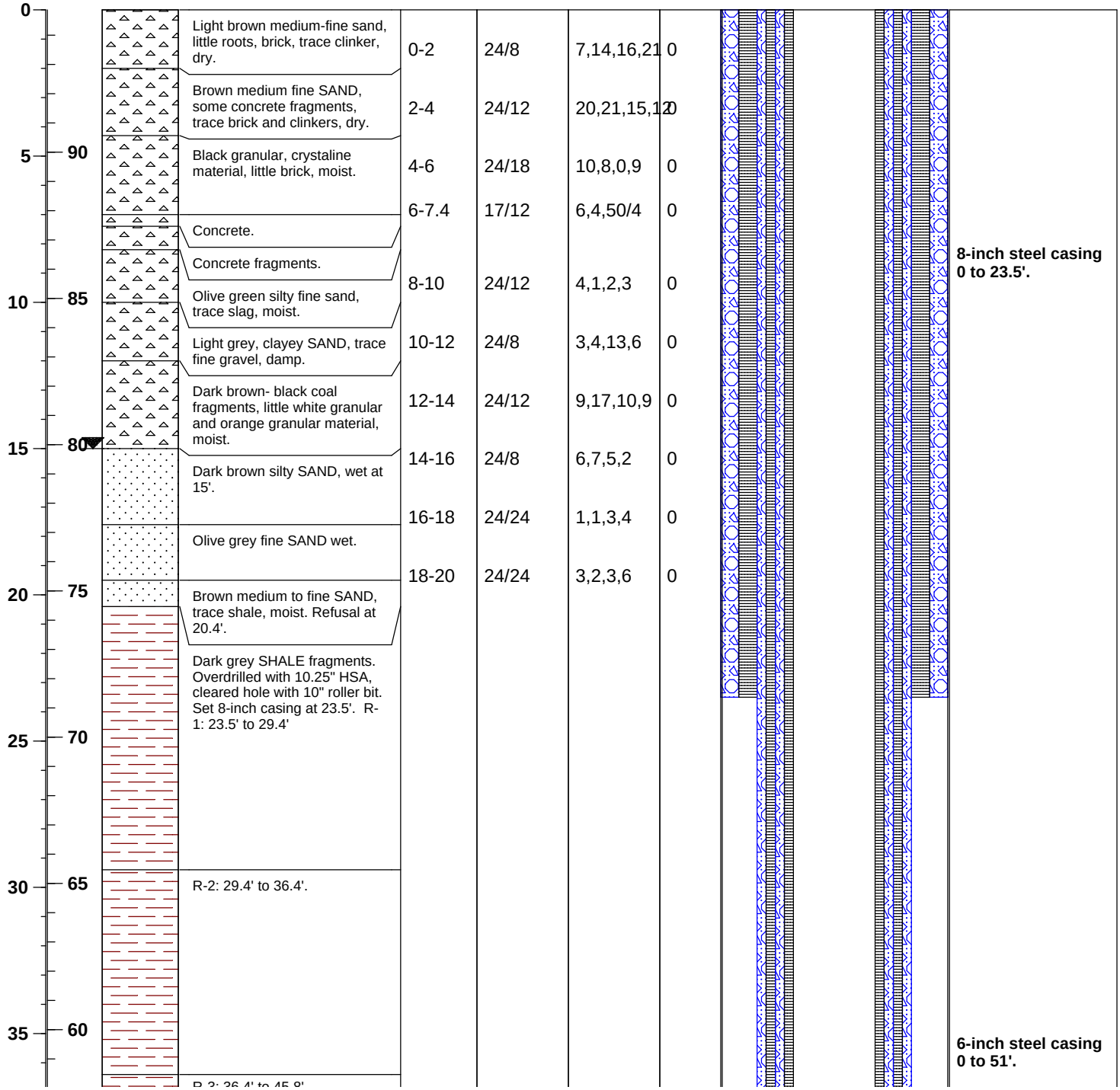
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 96.37 / GRD 94.87
BORING NO.:	MW-20D	**BORING LOCATION:**	N 1485096.99 / E 709437.96
DATE:	8/20/01	**METHOD OF DRILLING:**	3.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	5.25 inches	**SAMPLE TYPE:**	2 inch x 2 foot split spoon
BORING DEPTH:	110.1 feet	**SURFACE CONDITIONS:**	Weeds

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		Light brown medium-fine sand, little roots, brick, trace clinker, dry.	0-2	24/8	7,14,16,21	0		
		Brown medium fine SAND, some concrete fragments, trace brick and clinkers, dry.	2-4	24/12	20,21,15,12	0		
5 / 85		Black granular, crystaline material, little brick, moist.	4-6	24/18	10,8,0,9	0		
			6-7.4	17/12	6,4,50/4	0		
		Concrete.						
		Concrete fragments.						
10 / 80		Olive green silty fine sand, trace slag, moist.	8-10	24/12	4,1,2,3	0		
		Light grey, clayey SAND, trace fine gravel, damp.	10-12	24/8	3,4,13,6	0		
		Dark brown- black coal fragments, little white granular and orange granular material, moist.	12-14	24/12	9,17,10,9	0		
15 / 75		Dark brown silty SAND, wet at 15'.	14-16	24/8	6,7,5,2	0		
		Olive grey fine SAND wet.	16-18	24/24	1,1,3,4	0		
20 / 70		Brown medium to fine SAND, trace shale, moist. Refusal at 20.4'.	18-20	24/24	3,2,3,6	0		
		Dark grey SHALE fragments. Overdrilled with 10.25" HSA, cleared hole with 10" roller bit. Set 8-inch casing at 23.5'. R-1: 23.5' to 29.4'						
25 / 65		R-2: 29.4' to 36.4'.						
30 / 60								
35 / 55		R-3: 36.4' to 45.8'						



LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 96.37 / GRD 94.87
BORING NO.:	MW-20D	**BORING LOCATION:**	N 1485096.99 / E 709437.96
DATE:	8/20/01	**METHOD OF DRILLING:**	3.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	5.25 inches	**SAMPLE TYPE:**	2 inch x 2 foot split spoon
BORING DEPTH:	110.1 feet	**SURFACE CONDITIONS:**	Weeds

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
40 / 55								
45 / 50		R-4: 45.8' to 51.4'. Significant water loss, stopped coring at 51.4'. 7 7/8 inch roller bit to 51'. Set 6 inch casing at 51'.						
50 / 45		R-5: 52' to 55'.						
55 / 40		R-6: 55' to 60.7'. Minor water loss.						
60 / 35		R-7: 60.7' to 65'.						4-inch steel casing 0 to 90'.
65 / 30		R-8: 65' to 75'.						
70 / 25								

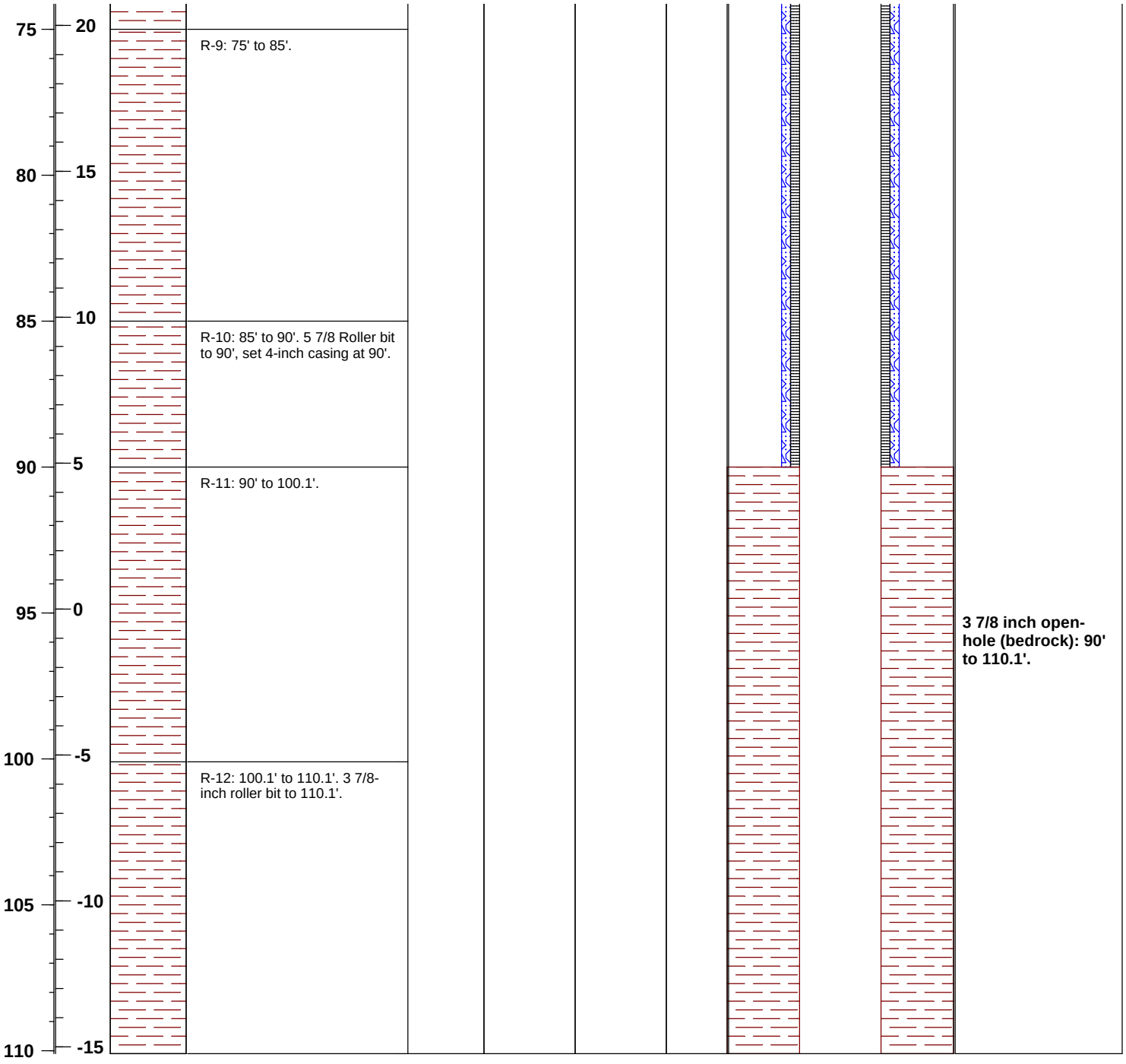
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 96.37 / GRD 94.87
BORING NO.:	MW-20D	**BORING LOCATION:**	N 1485096.99 / E 709437.96
DATE:	8/20/01	**METHOD OF DRILLING:**	3.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	5.25 inches	**SAMPLE TYPE:**	2 inch x 2 foot split spoon
BORING DEPTH:	110.1 feet	**SURFACE CONDITIONS:**	Weeds

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



LOG OF BORING

URS

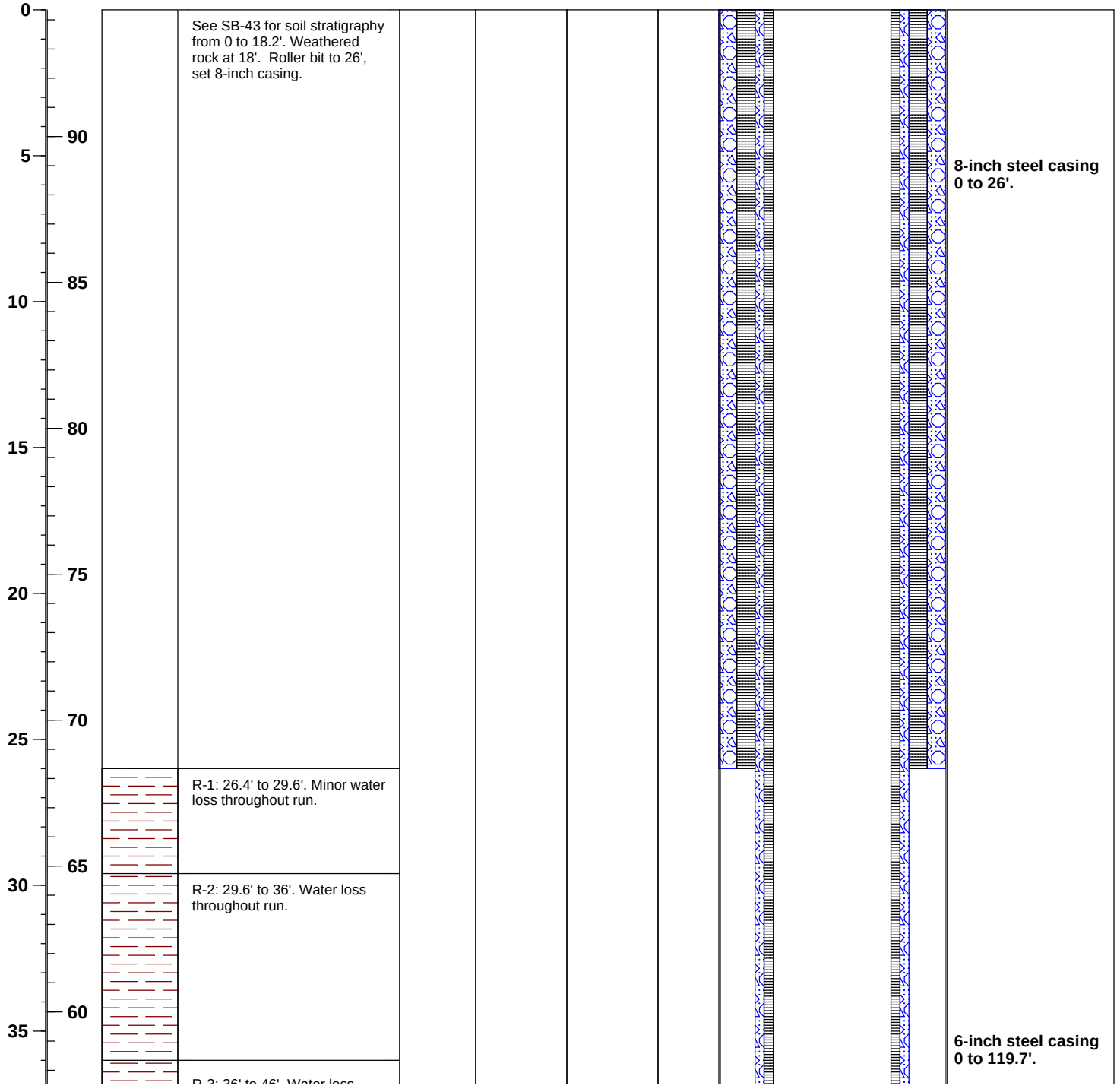
Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.80 / GRD 94.34
BORING NO.:	MW-33D	**BORING LOCATION:**	N 1484713.06 / E 709752.83
DATE:	8/20/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	140.5 feet	**SURFACE CONDITIONS:**	Asphalt

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



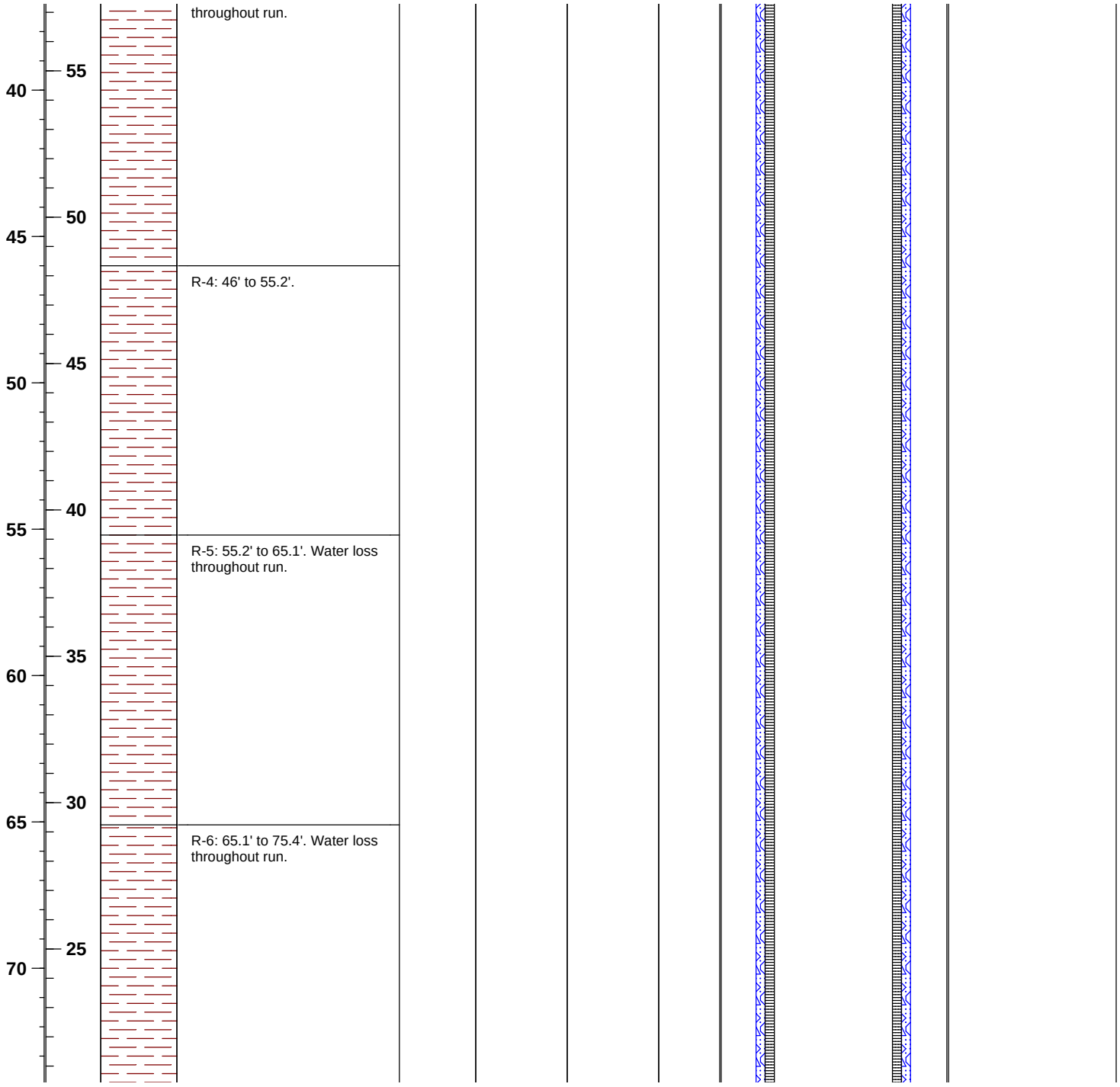
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.80 / GRD 94.34
BORING NO.:	MW-33D	**BORING LOCATION:**	N 1484713.06 / E 709752.83
DATE:	8/20/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	140.5 feet	**SURFACE CONDITIONS:**	Asphalt

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



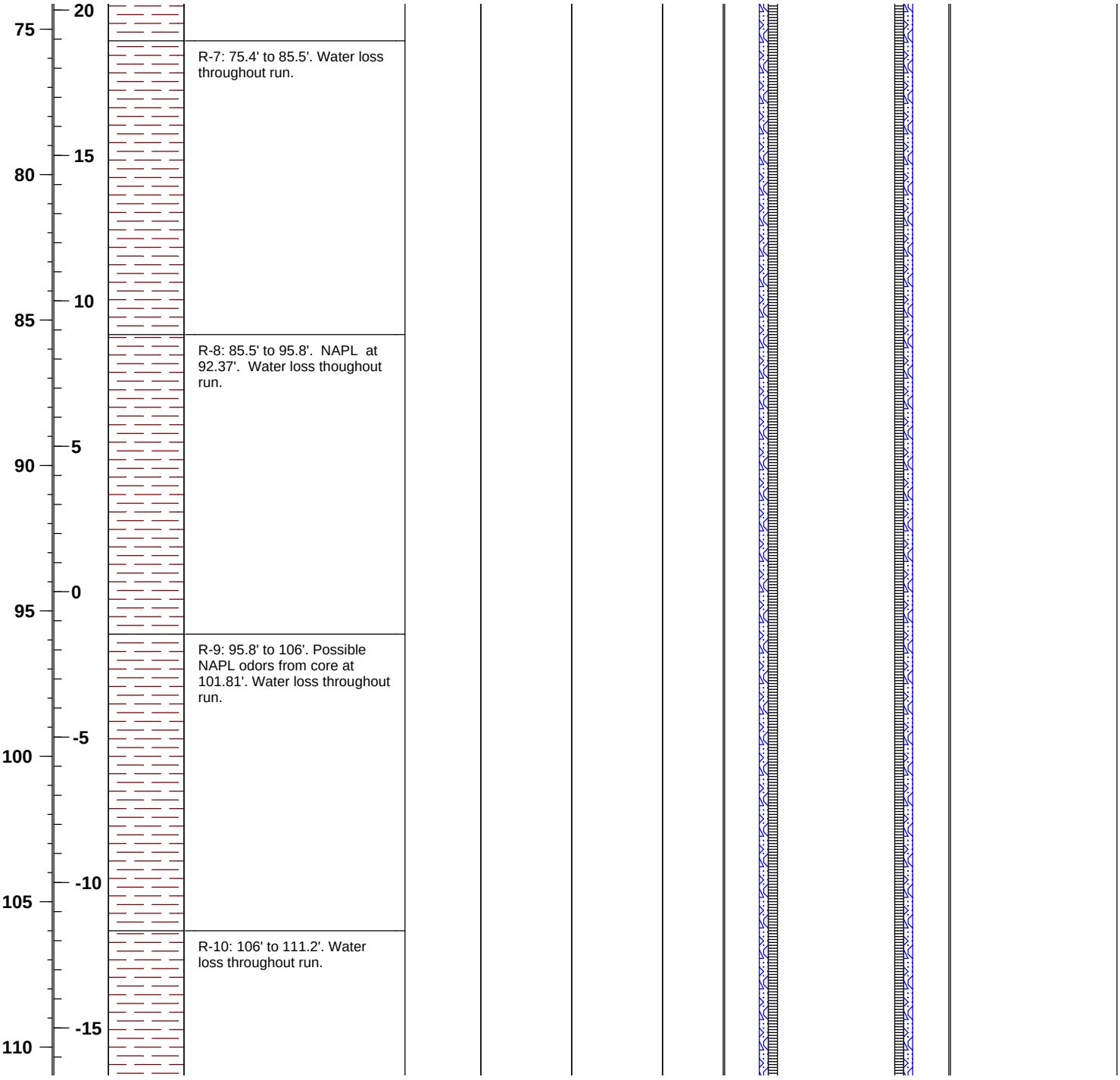
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.80 / GRD 94.34
BORING NO.:	MW-33D	**BORING LOCATION:**	N 1484713.06 / E 709752.83
DATE:	8/20/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	140.5 feet	**SURFACE CONDITIONS:**	Asphalt

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



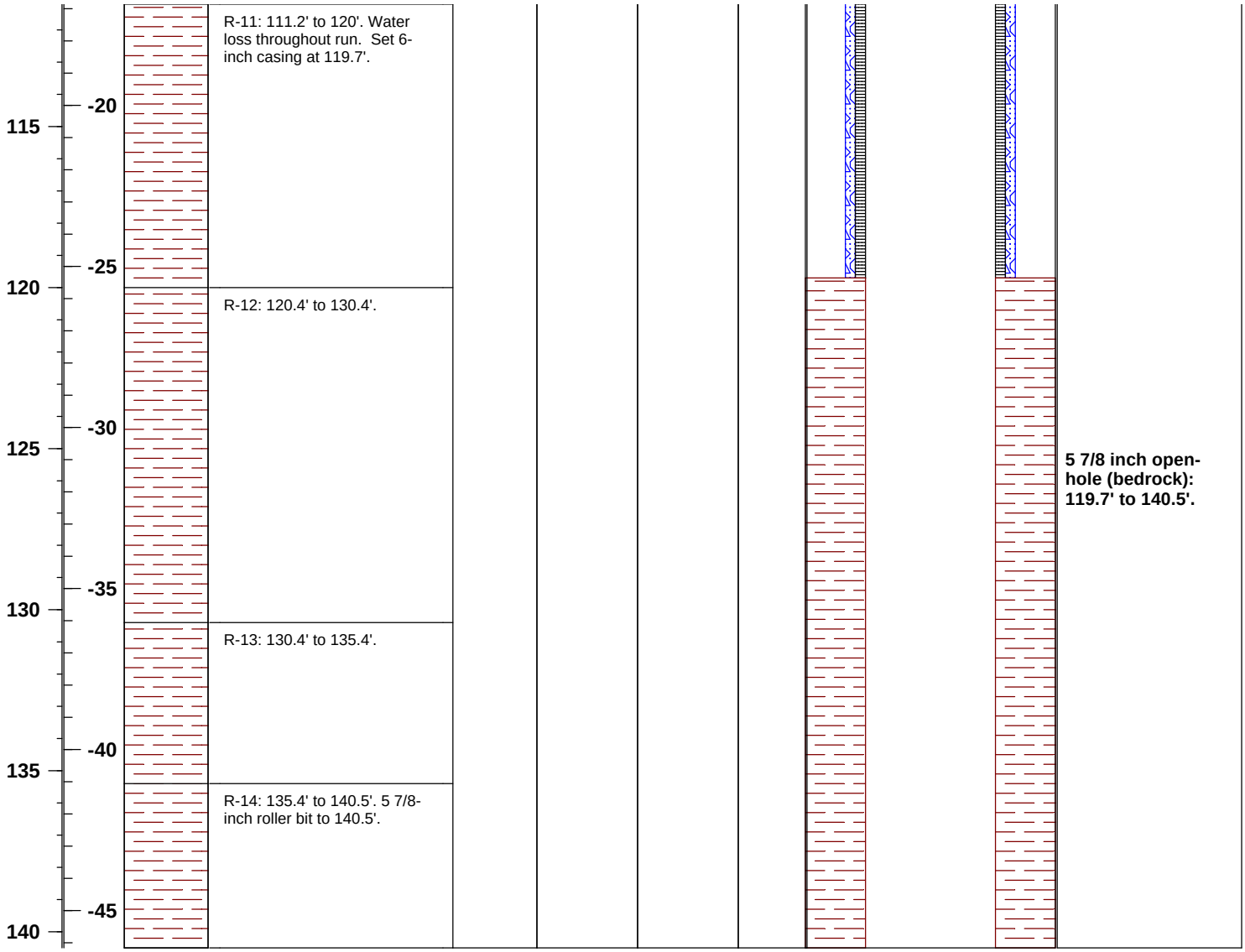
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.80 / GRD 94.34
BORING NO.:	MW-33D	**BORING LOCATION:**	N 1484713.06 / E 709752.83
DATE:	8/20/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14.25 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	140.5 feet	**SURFACE CONDITIONS:**	Asphalt

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



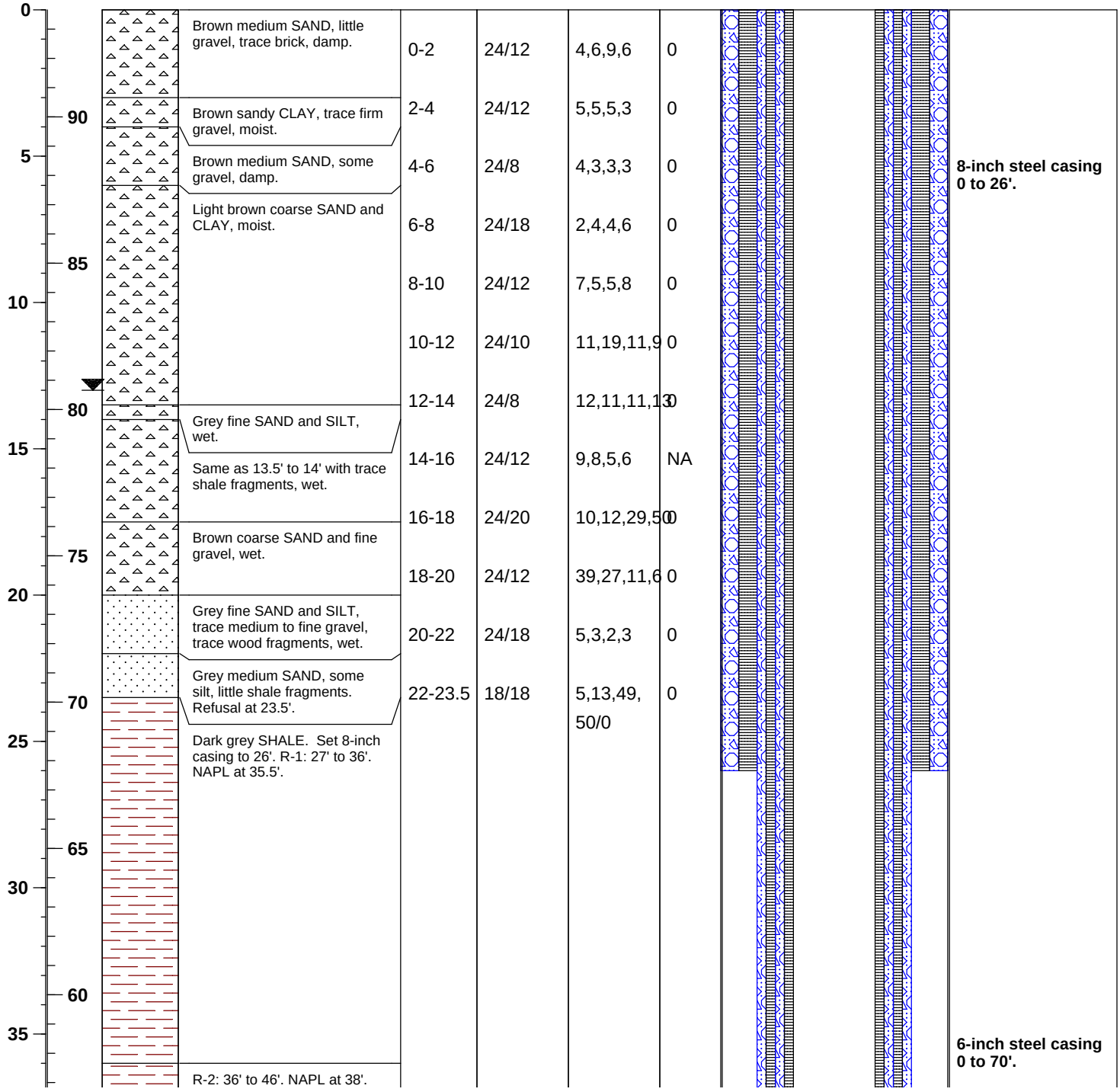
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.66 / GRD 94.26
BORING NO.:	MW-34D	**BORING LOCATION:**	N 1481996.84 / E 709676.61
DATE:	9/10/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	2 inch x 2 foot split spoon
BORING DEPTH:	120.5 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		Brown medium SAND, little gravel, trace brick, damp.	0-2	24/12	4,6,9,6	0		
5 / 85		Brown sandy CLAY, trace firm gravel, moist.	2-4	24/12	5,5,5,3	0		
		Brown medium SAND, some gravel, damp.	4-6	24/8	4,3,3,3	0		
		Light brown coarse SAND and CLAY, moist.	6-8	24/18	2,4,4,6	0		
10			8-10	24/12	7,5,5,8	0		
			10-12	24/10	11,19,11,9	0		
80			12-14	24/8	12,11,11,13	0		
15		Grey fine SAND and SILT, wet.	14-16	24/12	9,8,5,6	NA		
		Same as 13.5' to 14' with trace shale fragments, wet.	16-18	24/20	10,12,29,50	0		
75		Brown coarse SAND and fine gravel, wet.	18-20	24/12	39,27,11,6	0		
20		Grey fine SAND and SILT, trace medium to fine gravel, trace wood fragments, wet.	20-22	24/18	5,3,2,3	0		
		Grey medium SAND, some silt, little shale fragments. Refusal at 23.5'.	22-23.5	18/18	5,13,49, 50/0	0		
70								
25		Dark grey SHALE. Set 8-inch casing to 26'. R-1: 27' to 36'. NAPL at 35.5'.						
65								
30								
60								
35		R-2: 36' to 46'. NAPL at 38'.						



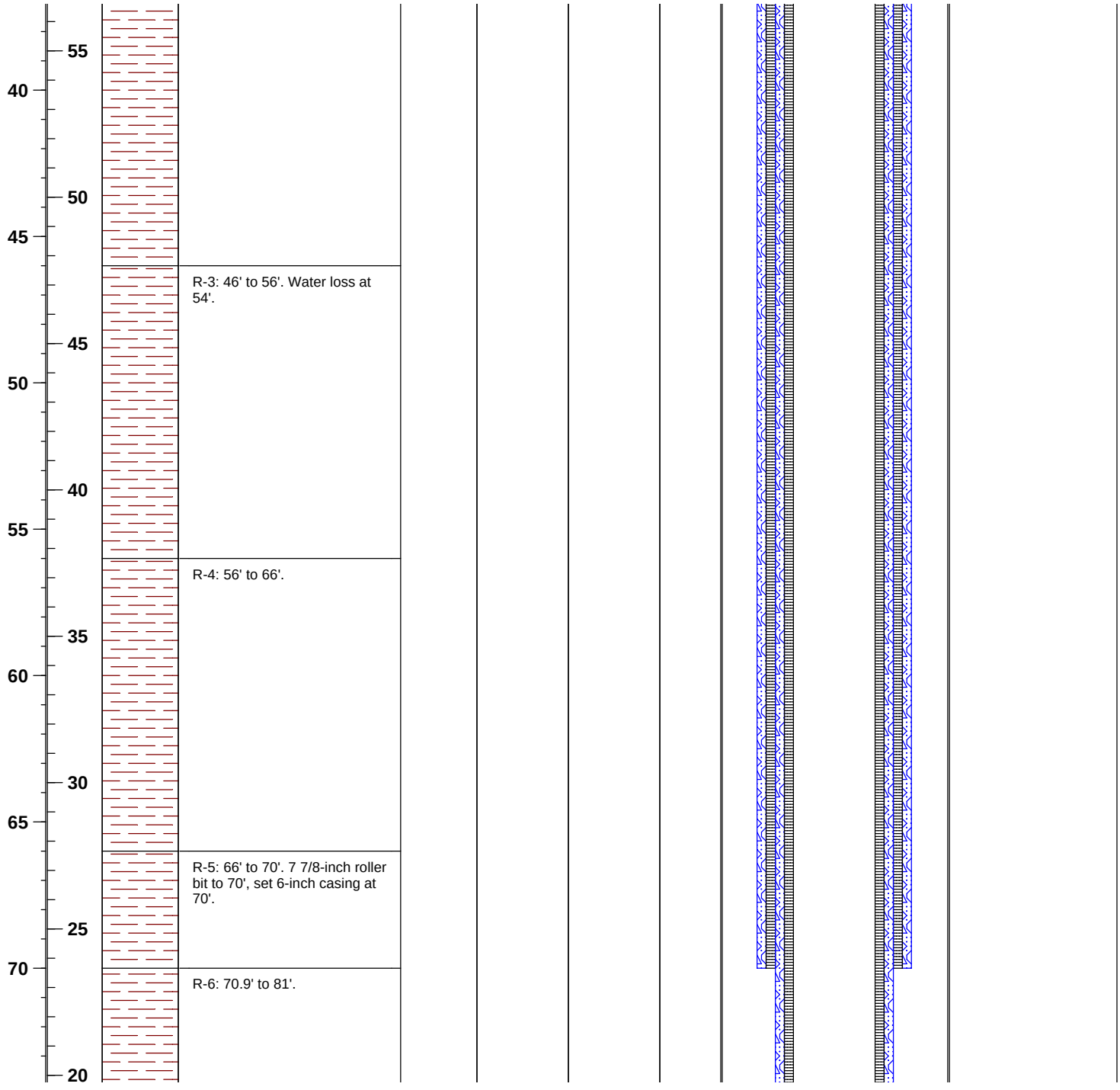
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.66 / GRD 94.26
BORING NO.:	MW-34D	**BORING LOCATION:**	N 1481996.84 / E 709676.61
DATE:	9/10/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	2 inch x 2 foot split spoon
BORING DEPTH:	120.5 feet	**SURFACE CONDITIONS:**	Gravel

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.66 / GRD 94.26
BORING NO.:	MW-34D	**BORING LOCATION:**	N 1481996.84 / E 709676.61
DATE:	9/10/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
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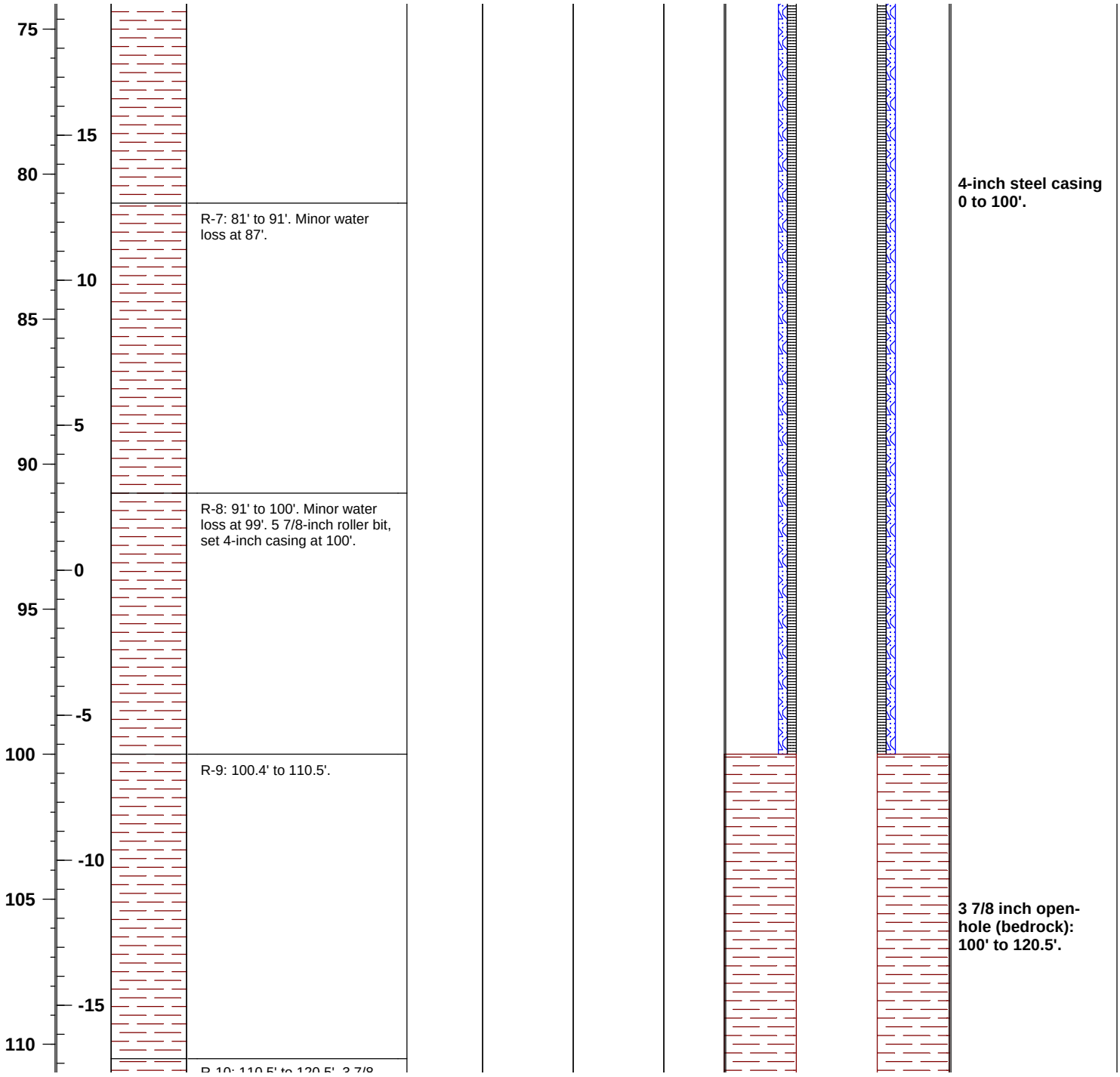
BORING DEPTH:	120.5 feet	**SURFACE CONDITIONS:**	Gravel

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.66 / GRD 94.26
BORING NO.:	MW-34D	**BORING LOCATION:**	N 1481996.84 / E 709676.61
DATE:	9/10/01	**METHOD OF DRILLING:**	4.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	8.25 inches	**SAMPLE TYPE:**	2 inch x 2 foot split spoon
BORING DEPTH:	120.5 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
-20 / 115		inch roller bit to 120.5'.						
-25 / 120								

LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 80.6 / GRD 80.94
BORING NO.:	MW-35 I	**BORING LOCATION:**	N 1485020 / E 709610
DATE:	4/16/01	**METHOD OF DRILLING:**	10.25 inch I.D. Hollow Stem Auger
BORING DIAMETER:	14 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	38 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 80		Augered to 10.5'.						
5 / 75								8 inch steel casing: 0'-12.5'.
10 / 70		Air rotary drilled from 10.5' to 12.5'. Set 4 inch casing. Map odors.						
		Begin run at 13.3'. Trace NAPL at 13.3'.						
15 / 65		R-1, sheens and MGP odors thoughout run.	13.3-17.3	48/48				7 7/8 inch open-hole (bedrock): 12.5' to 34.5'.
		R-2, Sheens visible on Anthony Kill at 16.5'.						
20 / 60			17.3-24.3	84/84				
25 / 55		R-3, Significant NAPL accumalation in borehole between runs 2 and 3. Minor water loss thoughout run.						
30 / 50			24.3-34.3	120/116				Well drilled to 38' on 11/15/02.
35 / 45		7 7/8 inch roller bit to 34.5'.						
		8" air hammer to 38'. Significant NAPL generated. Strong MGP and solvent like	34.3-38	NA				

LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 80.6 / GRD 80.94
BORING NO.:	MW-35 I	**BORING LOCATION:**	N 1485020 / E 709610
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Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
		odors also noted.						

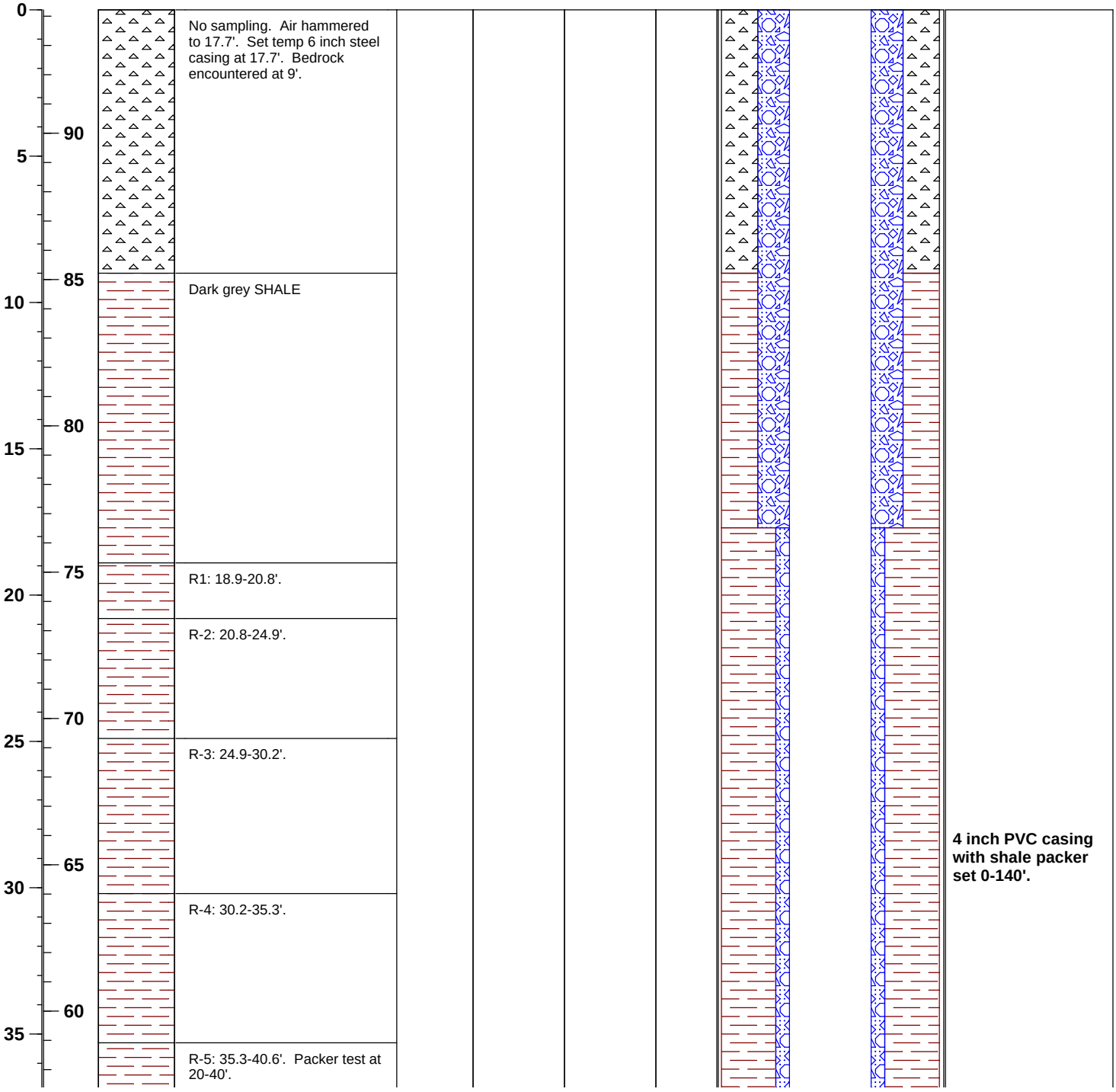
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.22 / GRD 94.58
BORING NO.:	MW-36D	**BORING LOCATION:**	N 1485184.72 / E 709628.59
DATE:	5/17/02	**METHOD OF DRILLING:**	7 7/8 inch Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	161 feet	**SURFACE CONDITIONS:**	Asphalt

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



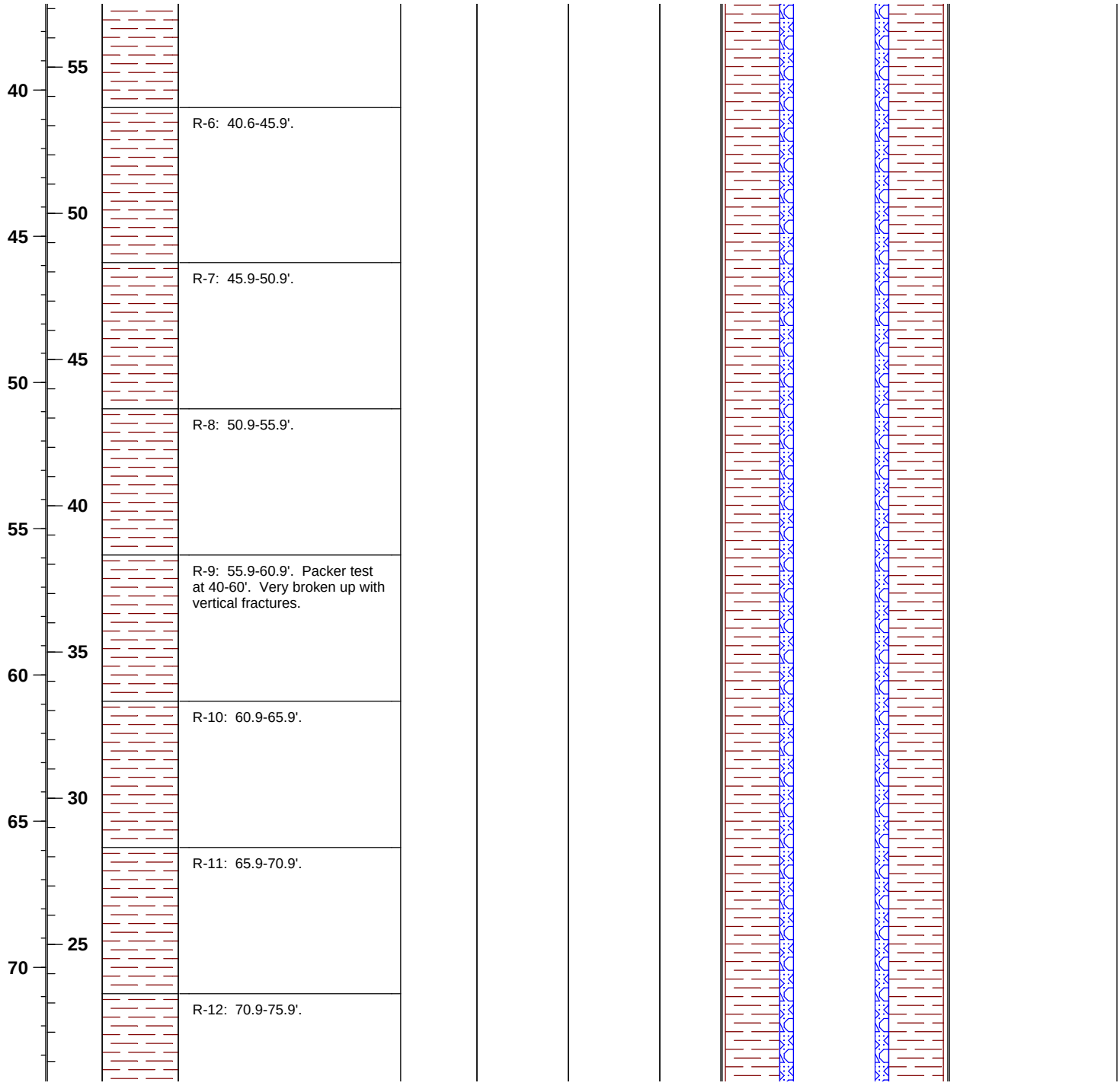
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.22 / GRD 94.58
BORING NO.:	MW-36D	**BORING LOCATION:**	N 1485184.72 / E 709628.59
DATE:	5/17/02	**METHOD OF DRILLING:**	7 7/8 inch Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	161 feet	**SURFACE CONDITIONS:**	Asphalt

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
40 / 55		R-6: 40.6-45.9'.						
45 / 50		R-7: 45.9-50.9'.						
50 / 45		R-8: 50.9-55.9'.						
55 / 40		R-9: 55.9-60.9'. Packer test at 40-60'. Very broken up with vertical fractures.						
60 / 35		R-10: 60.9-65.9'.						
65 / 30		R-11: 65.9-70.9'.						
70 / 25		R-12: 70.9-75.9'.						



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.22 / GRD 94.58
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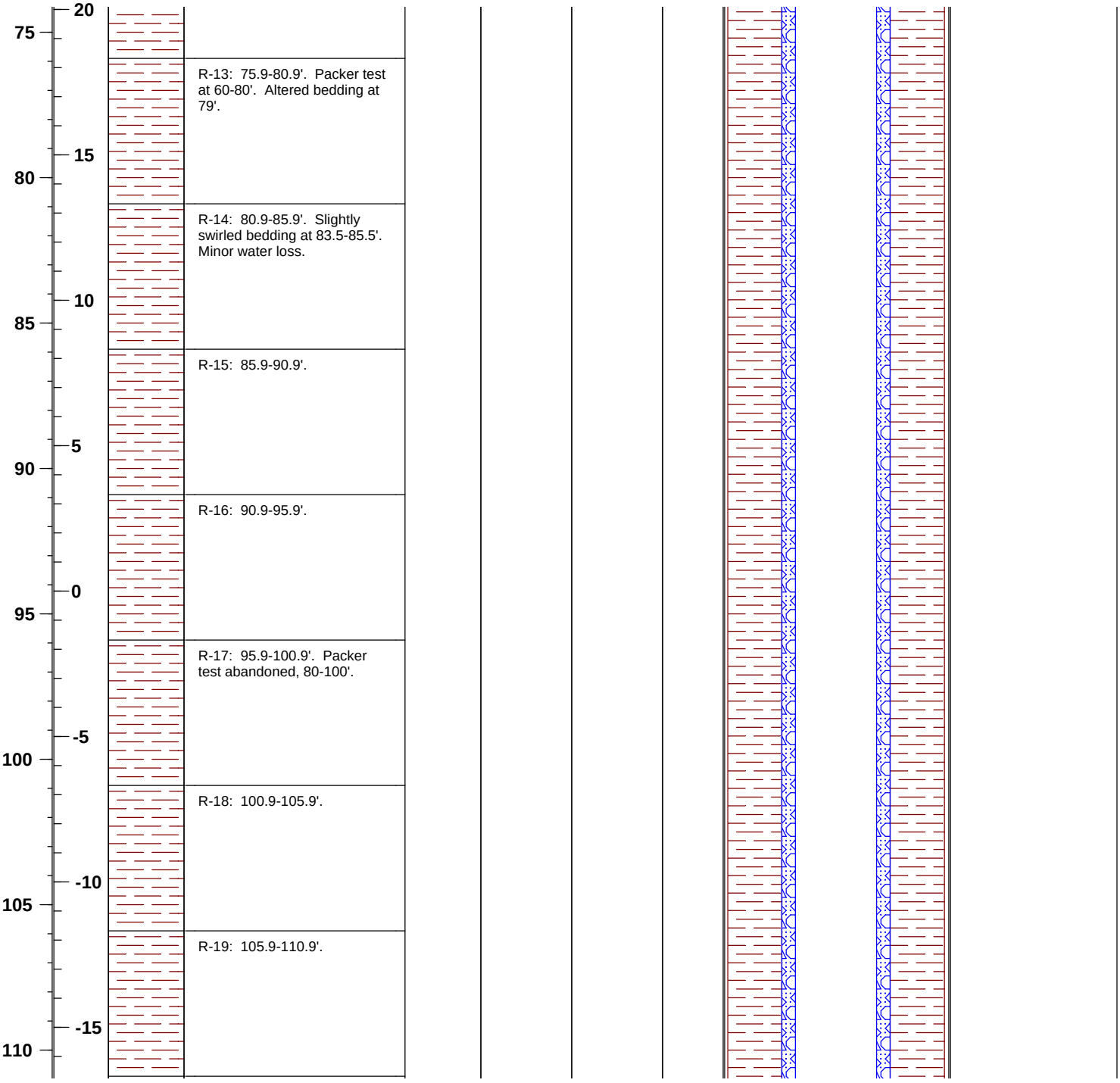
Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.22 / GRD 94.58
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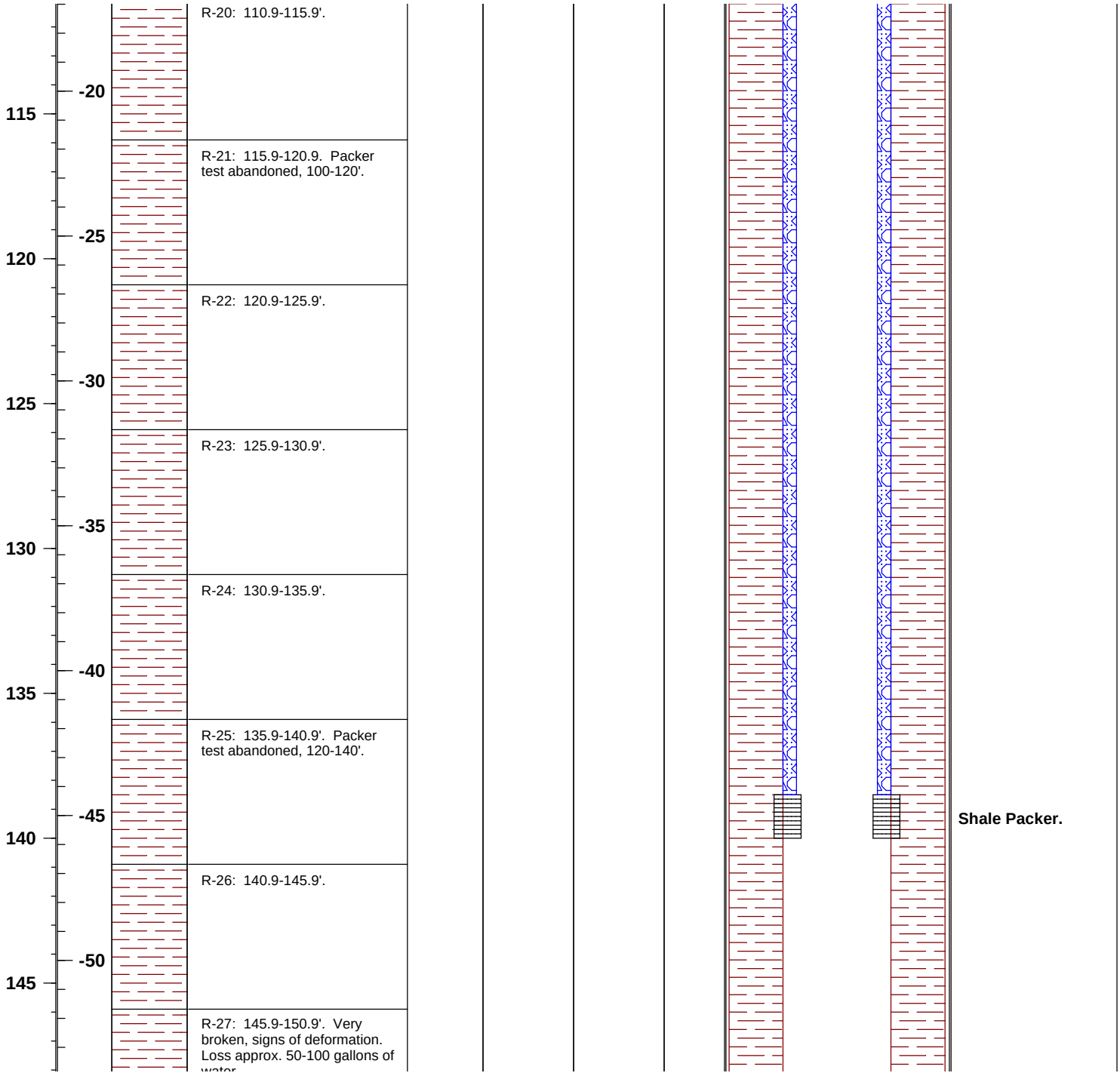
Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

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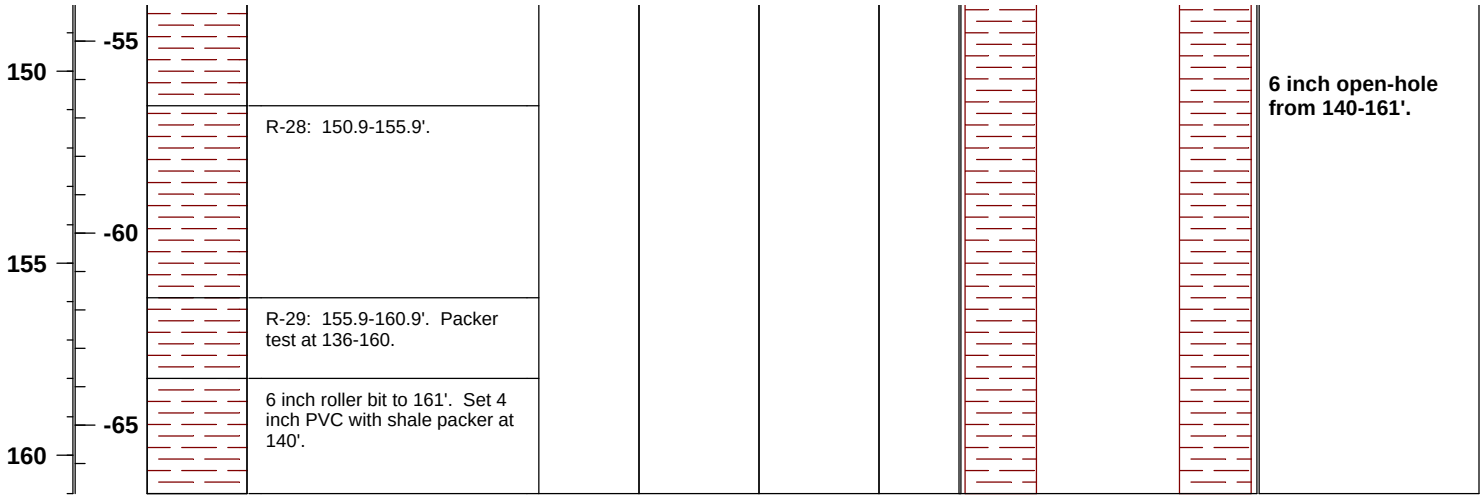
Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description



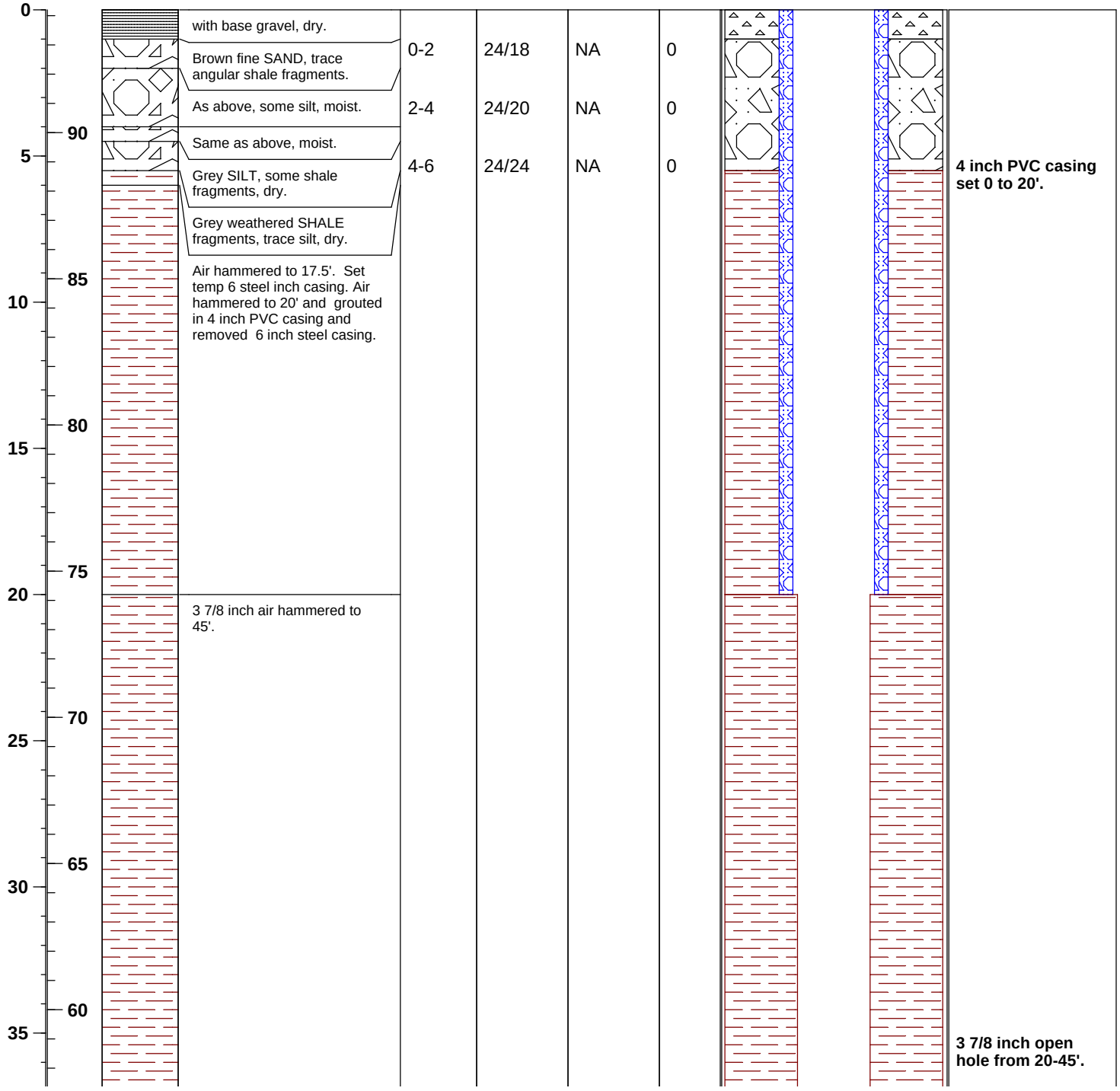
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.2 / GRD 94.61
BORING NO.:	MW-36I	**BORING LOCATION:**	N 1485190.59 / E 709627.29
DATE:	6/5/02	**METHOD OF DRILLING:**	4 inch Spin Casing
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	45 feet	**SURFACE CONDITIONS:**	Asphalt

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		with base gravel, dry.	0-2	24/18	NA	0		
		Brown fine SAND, trace angular shale fragments.						
		As above, some silt, moist.	2-4	24/20	NA	0		
5 / 85		Same as above, moist.						
		Grey SILT, some shale fragments, dry.	4-6	24/24	NA	0		
		Grey weathered SHALE fragments, trace silt, dry.						
10 / 80		Air hammered to 17.5'. Set temp 6 steel inch casing. Air hammered to 20' and grouted in 4 inch PVC casing and removed 6 inch steel casing.						
15 / 75								
20 / 70		3 7/8 inch air hammered to 45'.						
25 / 65								
30 / 60								
35								



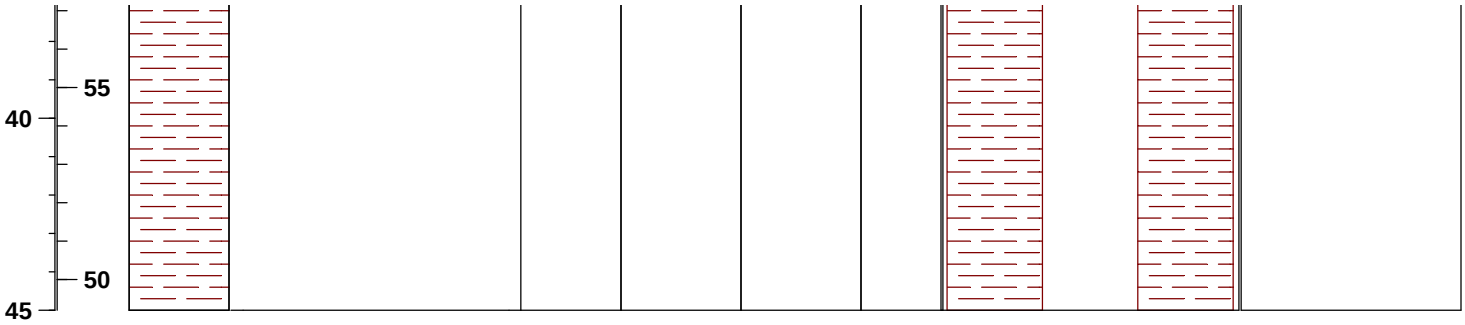
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 94.2 / GRD 94.61
BORING NO.:	MW-36I	**BORING LOCATION:**	N 1485190.59 / E 709627.29
DATE:	6/5/02	**METHOD OF DRILLING:**	4 inch Spin Casing
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	45 feet	**SURFACE CONDITIONS:**	Asphalt

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



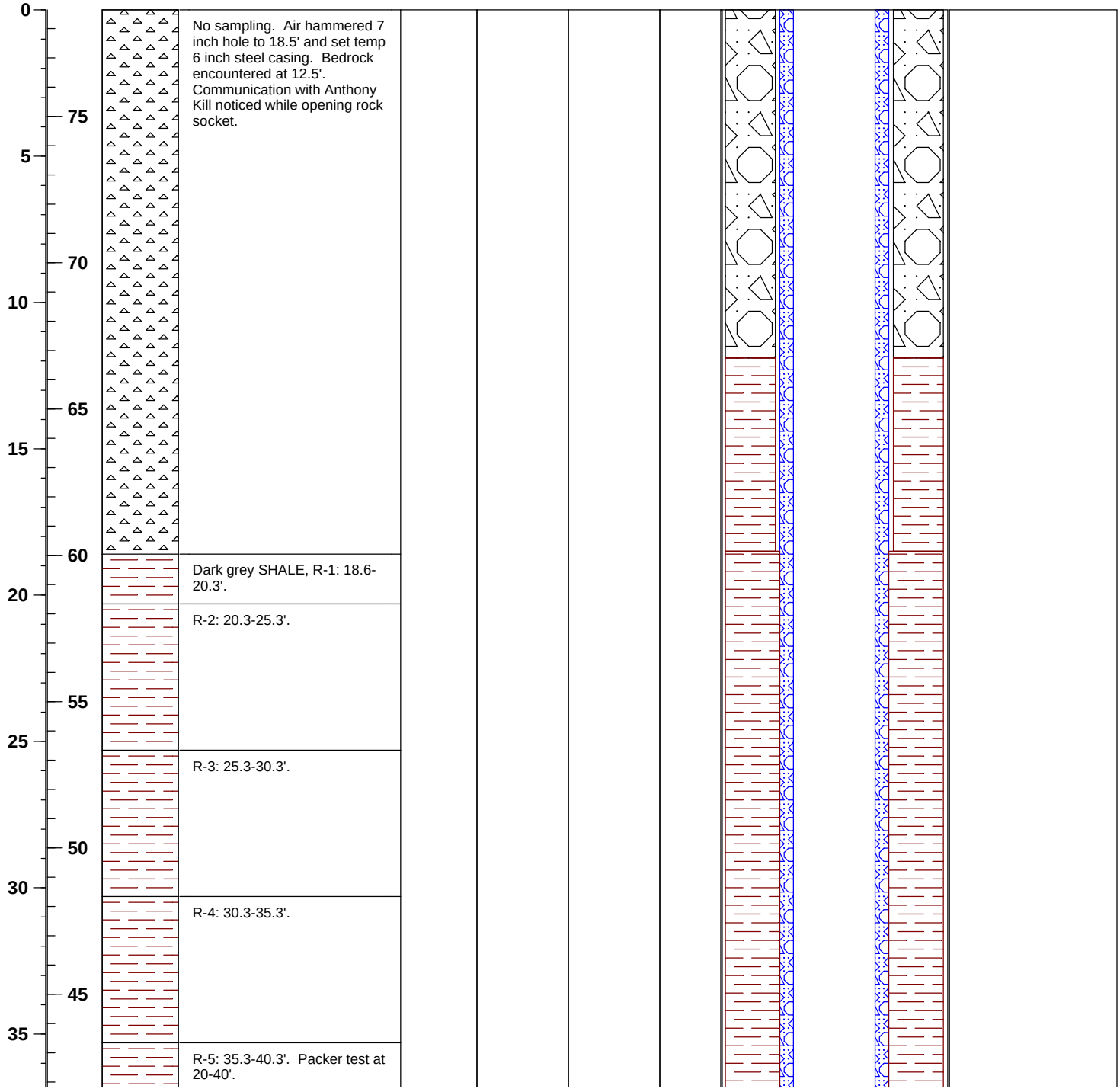
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 78.64 / GRD 78.96
BORING NO.:	MW-38D	**BORING LOCATION:**	N 1484677.57 / E 710050.18
DATE:	5/6/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	170.1 feet	**SURFACE CONDITIONS:**	Asphalt

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 78.64 / GRD 78.96
BORING NO.:	MW-38D	**BORING LOCATION:**	N 1484677.57 / E 710050.18
DATE:	5/6/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	170.1 feet	**SURFACE CONDITIONS:**	Asphalt

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
40 / 40		R-6: 40.3-45.3'.						
45 / 35		R-7: 45.3-50.3'.						
50 / 30		R-8: 50.3-55.3'.						
55 / 25		R-9: 55.3-60.3'. Packer test taken at 40-60'.						
60 / 20		R-10: 60.3-65.3'.						
65 / 15		R-11: 65.3-70.3'.						
70 / 10		R-12: 70.3-75.3'. Many high angle vertical fractures.						
5								

LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 78.64 / GRD 78.96
BORING NO.:	MW-38D	**BORING LOCATION:**	N 1484677.57 / E 710050.18
DATE:	5/6/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
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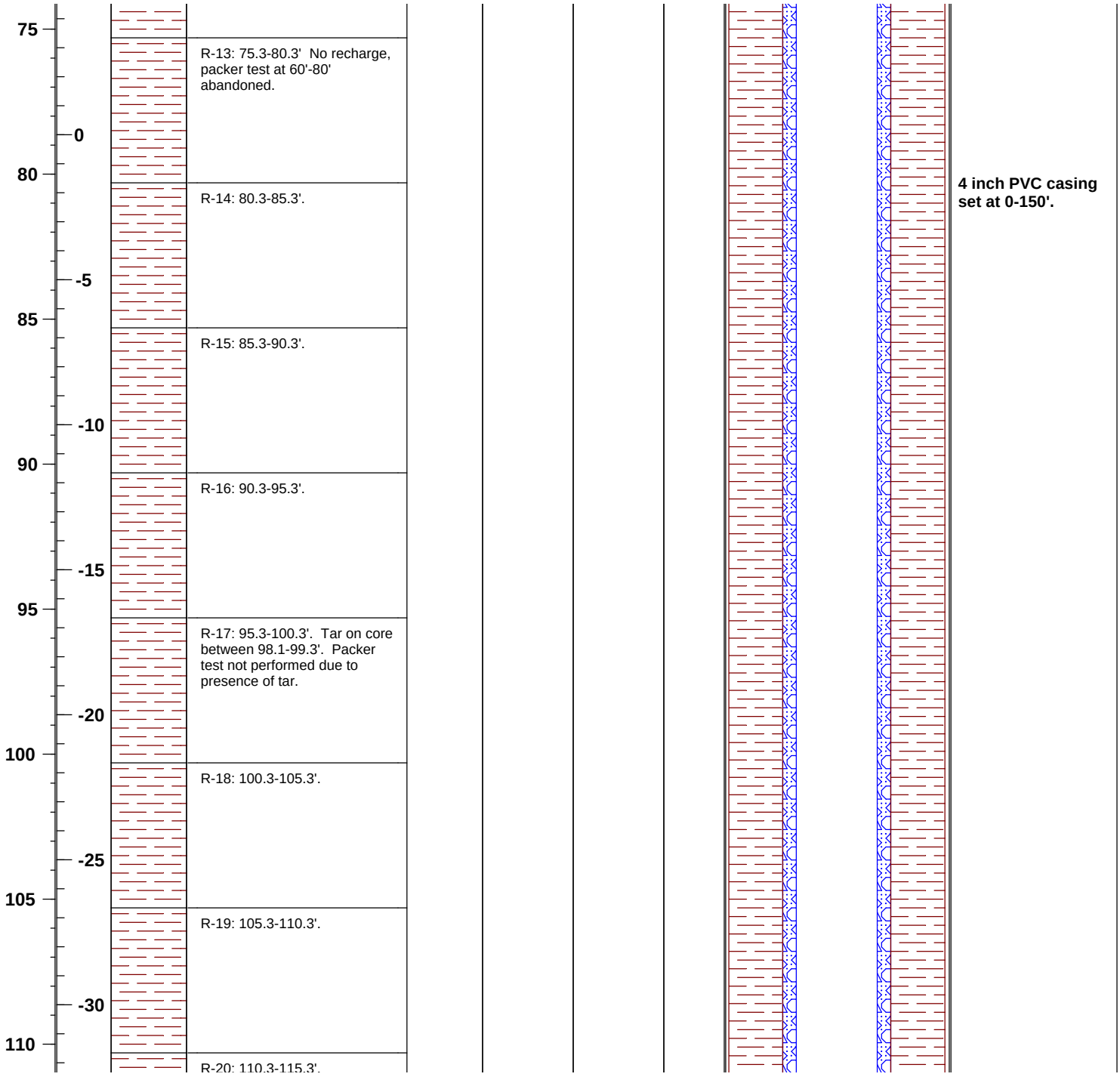
Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 78.64 / GRD 78.96
BORING NO.:	MW-38D	**BORING LOCATION:**	N 1484677.57 / E 710050.18
DATE:	5/6/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
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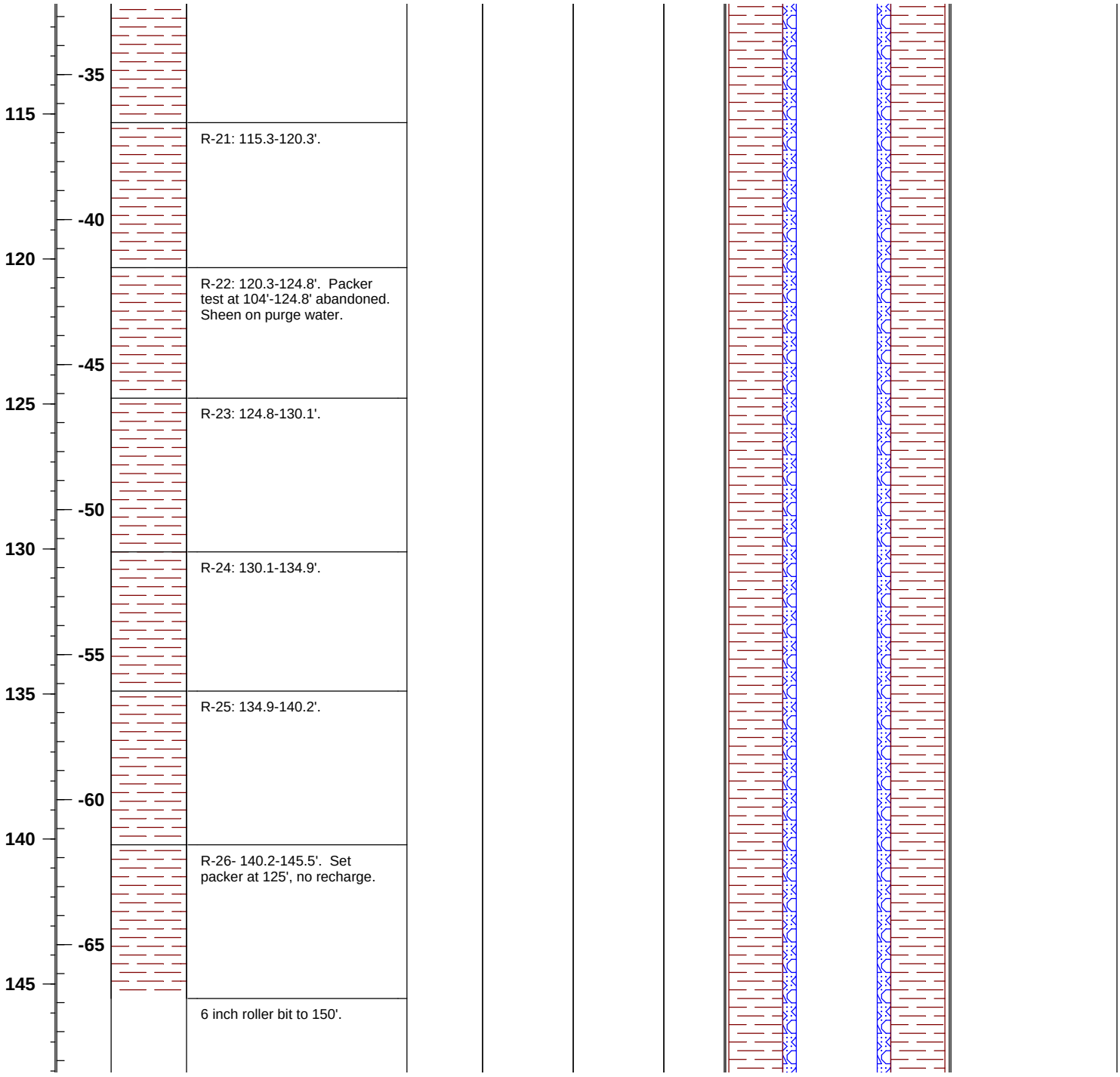
BORING DEPTH:	170.1 feet	**SURFACE CONDITIONS:**	Asphalt

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



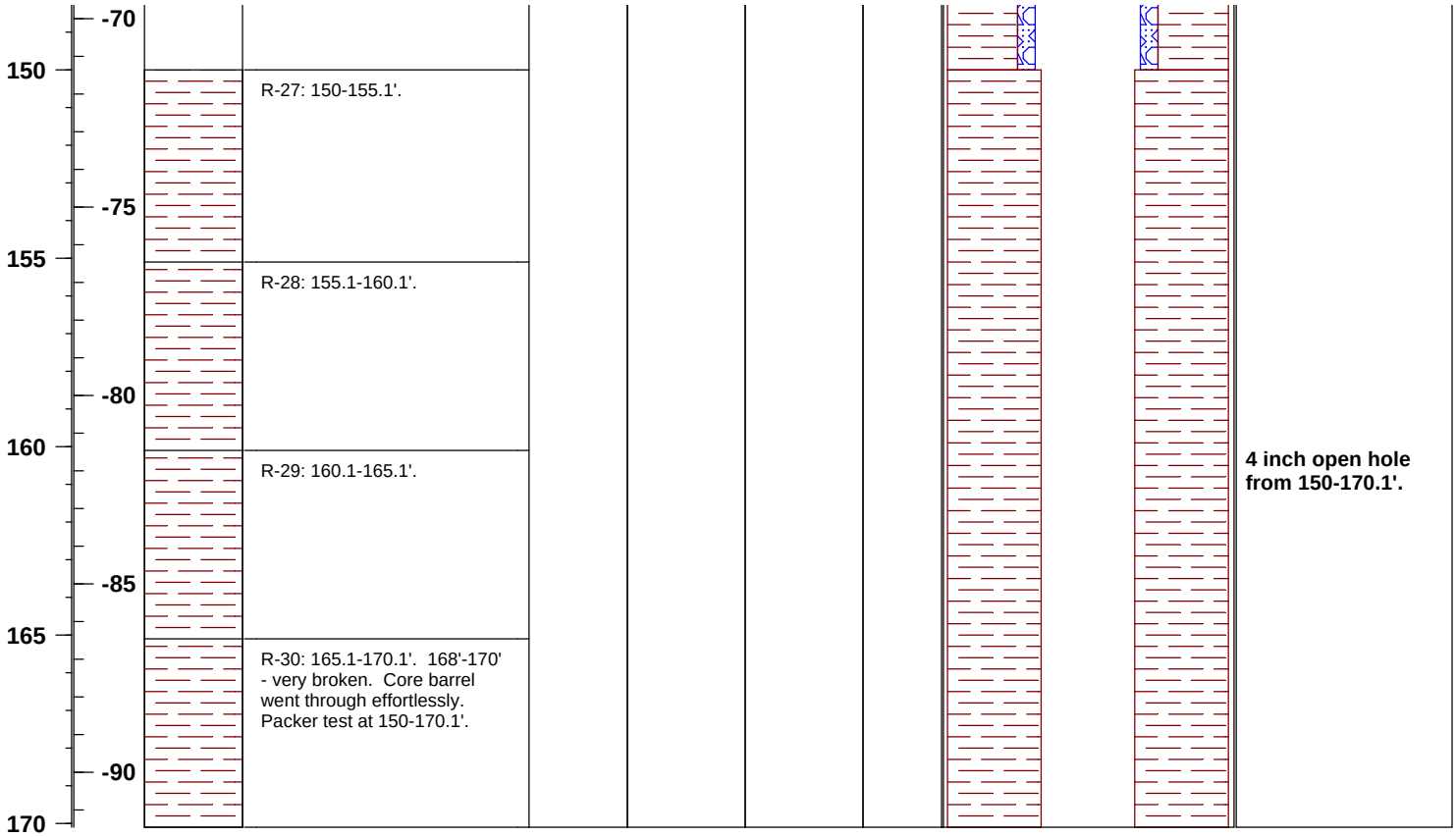
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 78.64 / GRD 78.96
BORING NO.:	MW-38D	**BORING LOCATION:**	N 1484677.57 / E 710050.18
DATE:	5/6/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	170.1 feet	**SURFACE CONDITIONS:**	Asphalt

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 78.66 / GRD 78.9
BORING NO.:	MW-38I	**BORING LOCATION:**	N 1484669.89 / E 710053.64
DATE:	5/30/02	**METHOD OF DRILLING:**	4 inch Spin Casing
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	2' x 2" Split spoons
BORING DEPTH:	120 feet	**SURFACE CONDITIONS:**	Asphalt

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 75		Asphalt and base material.	0-2	24/10	NA	0		
		Brown coarse SAND, trace gravel, dry.						
5 / 70		Light brown stiff CLAY, some fine gravel. Very compact, dry.	2-4	24/10	NA	0		
		Brown fine SAND, trace organics, damp.	4-6	24/4	NA	0		
		Same as above.	6-8	24/24	NA	0		
10 / 65		Grey to brown SILT, trace wood and roots, wet.	8-10	24/12	NA	0		
		Same as above wtih round gravel at 9'. Wet.						
		Shale fragments, some silt, wet.	10-11.9	24/12	NA	0		
15 / 60		Shale fragments, some silt. Refusal at 11.9'.						
		Dark grey SHALE. Air hammered to 18'. Set temp 6 inch steel casing.						
20 / 55		6 inch roller bit to 90'. Set 4 inch PVC casing. Removed temp 6 inch steel casing.						
25 / 50								
30 / 45								
35								
								4 inch PVC casing to 90'.

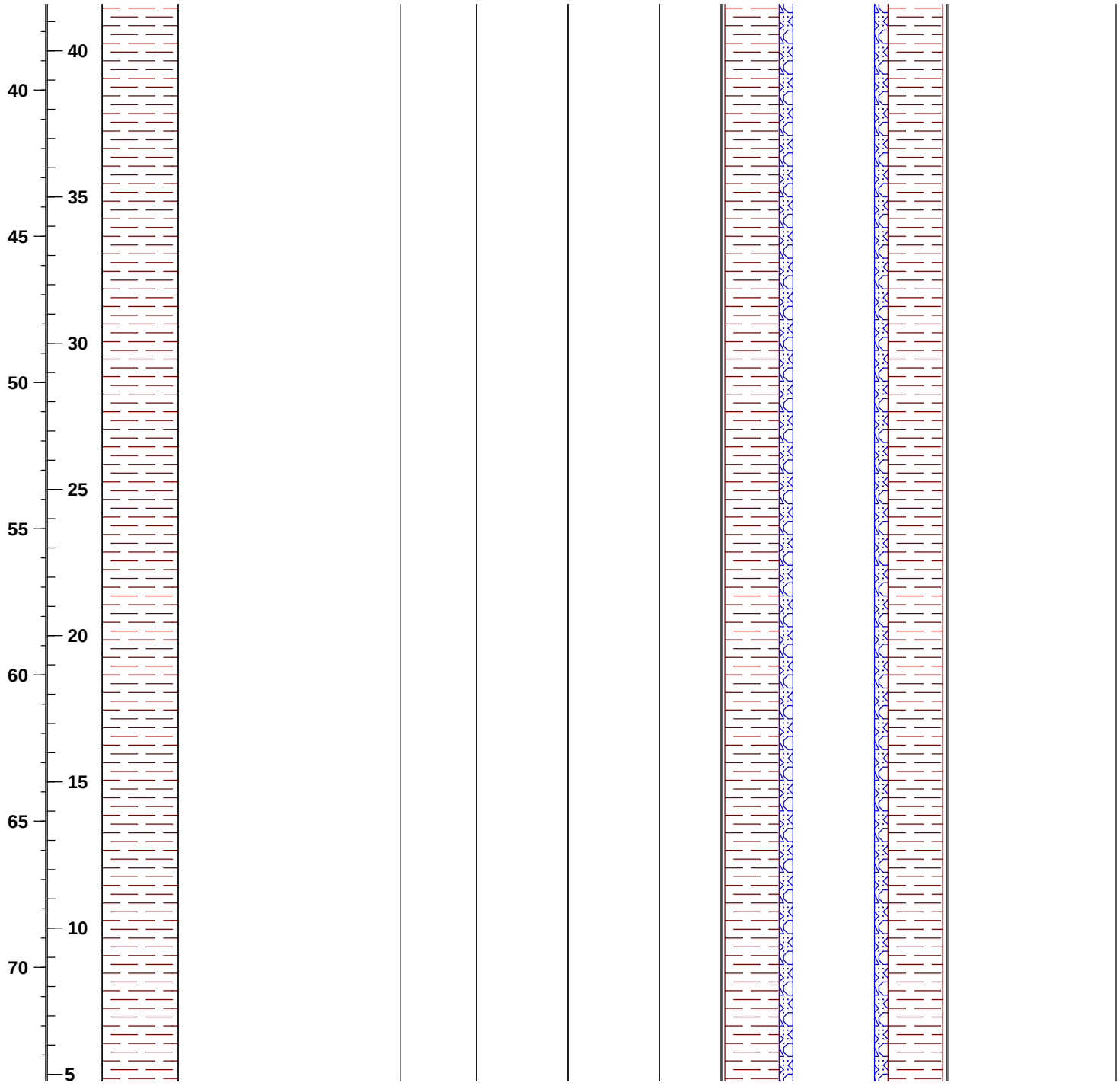
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 78.66 / GRD 78.9
BORING NO.:	MW-38I	**BORING LOCATION:**	N 1484669.89 / E 710053.64
DATE:	5/30/02	**METHOD OF DRILLING:**	4 inch Spin Casing
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	2' x 2" Split spoons
BORING DEPTH:	120 feet	**SURFACE CONDITIONS:**	Asphalt

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



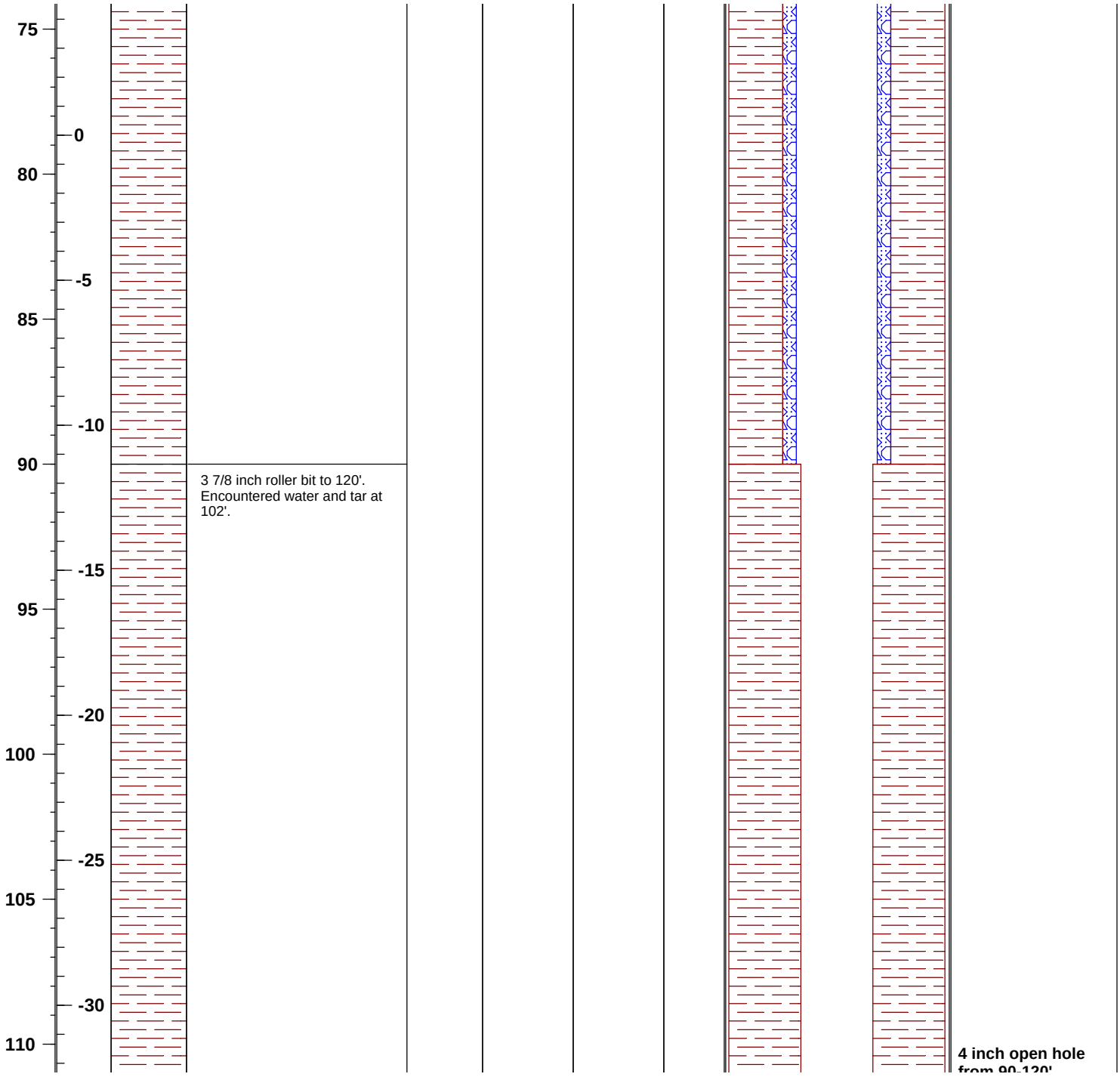
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 78.66 / GRD 78.9
BORING NO.:	MW-38I	**BORING LOCATION:**	N 1484669.89 / E 710053.64
DATE:	5/30/02	**METHOD OF DRILLING:**	4 inch Spin Casing
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	2' x 2" Split spoons
BORING DEPTH:	120 feet	**SURFACE CONDITIONS:**	Asphalt

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 78.66 / GRD 78.9
BORING NO.:	MW-38I	**BORING LOCATION:**	N 1484669.89 / E 710053.64
DATE:	5/30/02	**METHOD OF DRILLING:**	4 inch Spin Casing
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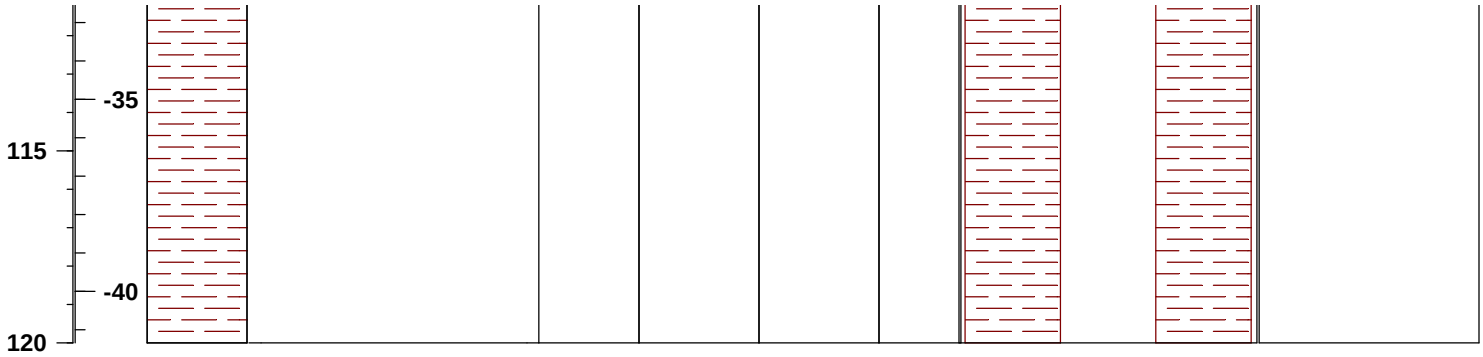
Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description



LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 91.9 / GRD 92.22
BORING NO.:	MW-39D	**BORING LOCATION:**	N 1484572 / E 709896.41
DATE:	5/3/02	**METHOD OF DRILLING:**	4 inch Spin Casing
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	150.4 feet	**SURFACE CONDITIONS:**	Asphalt

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		Brown medium SAND. some fine gravel, dry.	0-2	24/24	NA	0		
		Dark brown SILT and SAND, some angular fine gravel, damp.	2-4	24/18	NA	0		
5 / 85			4-6	24/0	NA	NA		
		Brown SILT and SAND, some fine angular gravel. Trace white particles, moist.	6-8	24/8	NA	0		
		Light brown to grey fine SAND, trace silt. Dry.	8-10	24/10	NA	0		
10 / 80		Grey brown SILT and SAND, some ash, trace broken ceramics, wet.	10-12	24/8	NA	0		
		Very little recovery. Appears to be same as above.	12-14	24/2	NA	0		
15 / 75			14-16	24/0	NA	NA		
		Grey brown SILT and SAND, some ash, wet.	16-18	24/6	NA	0		
		Grey green SAND and SILT, slightly marbled (brown), wet.	18-20	24/20	NA	0		
20 / 70		Same as above.	20-22	24/20	NA	0		
		Dark brown fine SAND, wet.	22-24	24/22	NA	0		
		Same as above, wet.	24-26	24/3	NA	0		
		Light brown SILT, moist.	26-28	24/10	NA	0		
25 / 65		Very little recovery. Broken shale fragments in nose of spoons.	28-30	24/18	NA	0		
		Grey coarse SAND, some shale fragments, wet.	30-32	24/12	NA	0		
		Grey coarse SAND, little silt, wet.						
30 / 60		Same as above with shale fragments. Bedrock encountered at 32'. Drilled to 33' and set temp. 6 inch casing.						
		R-1: 33.1-35.4'.						
35 / 55		R-2: 35.4-40.4'.						

LOG OF BORING

URS
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NYSEG
Central Avenue
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BORING DEPTH:	150.4 feet	**SURFACE CONDITIONS:**	Asphalt

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
40 / 50		R-3: 40.4-45.4'.						
45 / 45		R-4: 45.4-50.4'. Packer test sample taken at 35.8'.						
50 / 40		R-5: 50.4-55.4'.						
55 / 35		R-6: 55.4-60.4'.						
60 / 30		R-7: 60.4'-65.4'.						
65 / 25		R-8: 65.4-70.4'. Packer test set at 50-70.4', no recovery.						
70 / 20		R-9: 70.4-75.4'.						

LOG OF BORING

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Central Avenue
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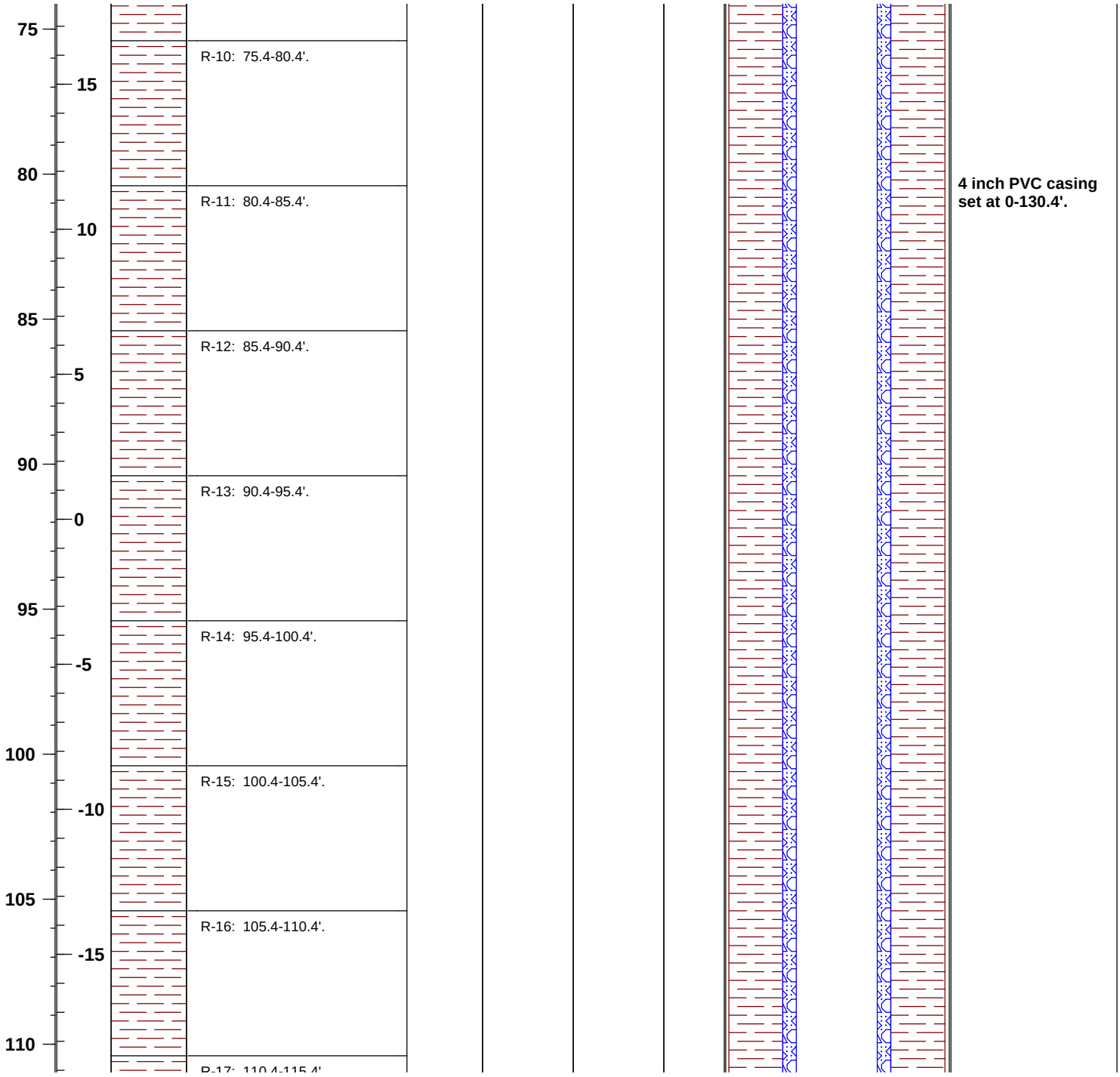

LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

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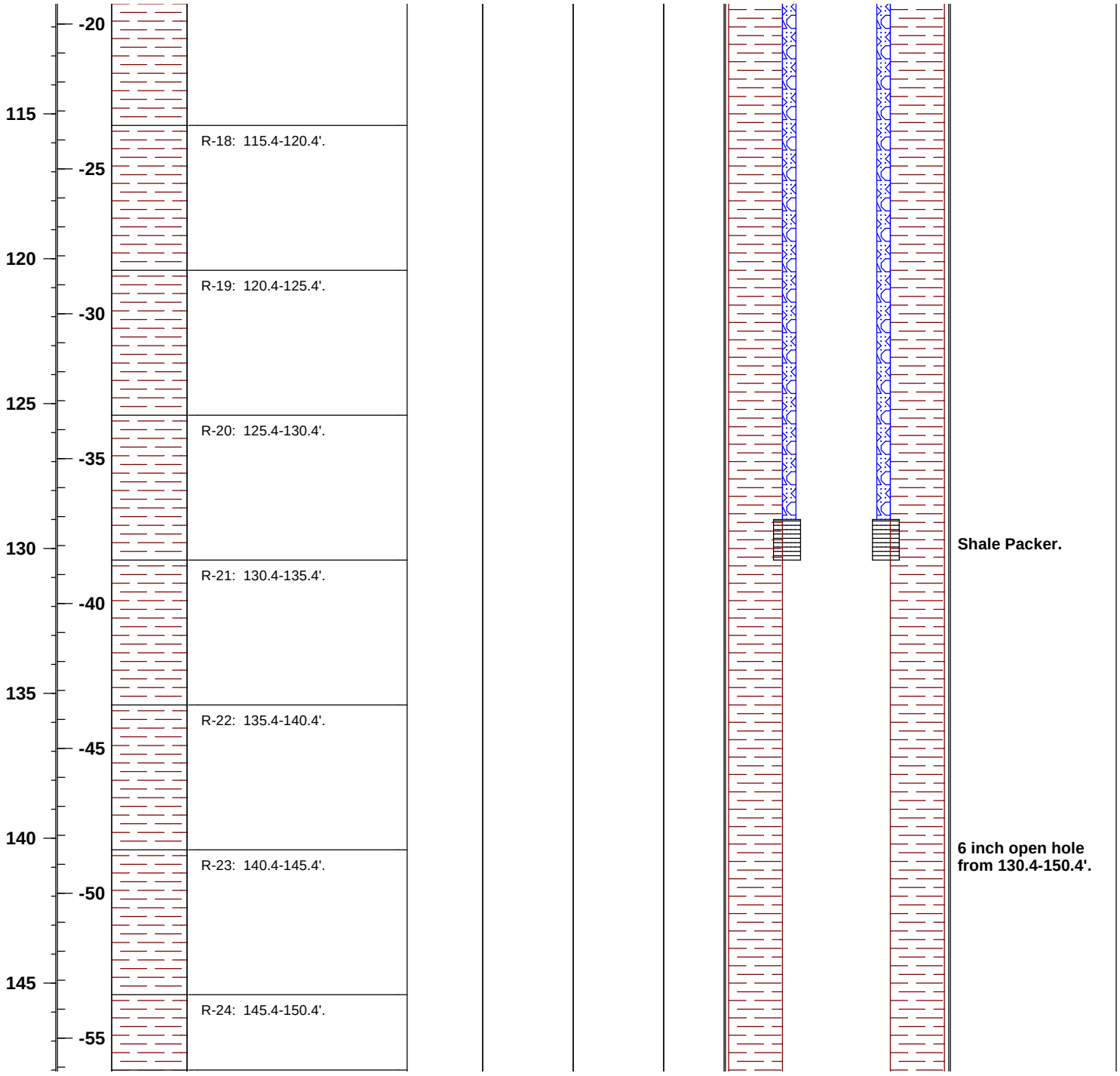
Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

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Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
150		6 inch roller bit to 150.4'. Set 4 inch PVC with shale packer at 130.4'.						

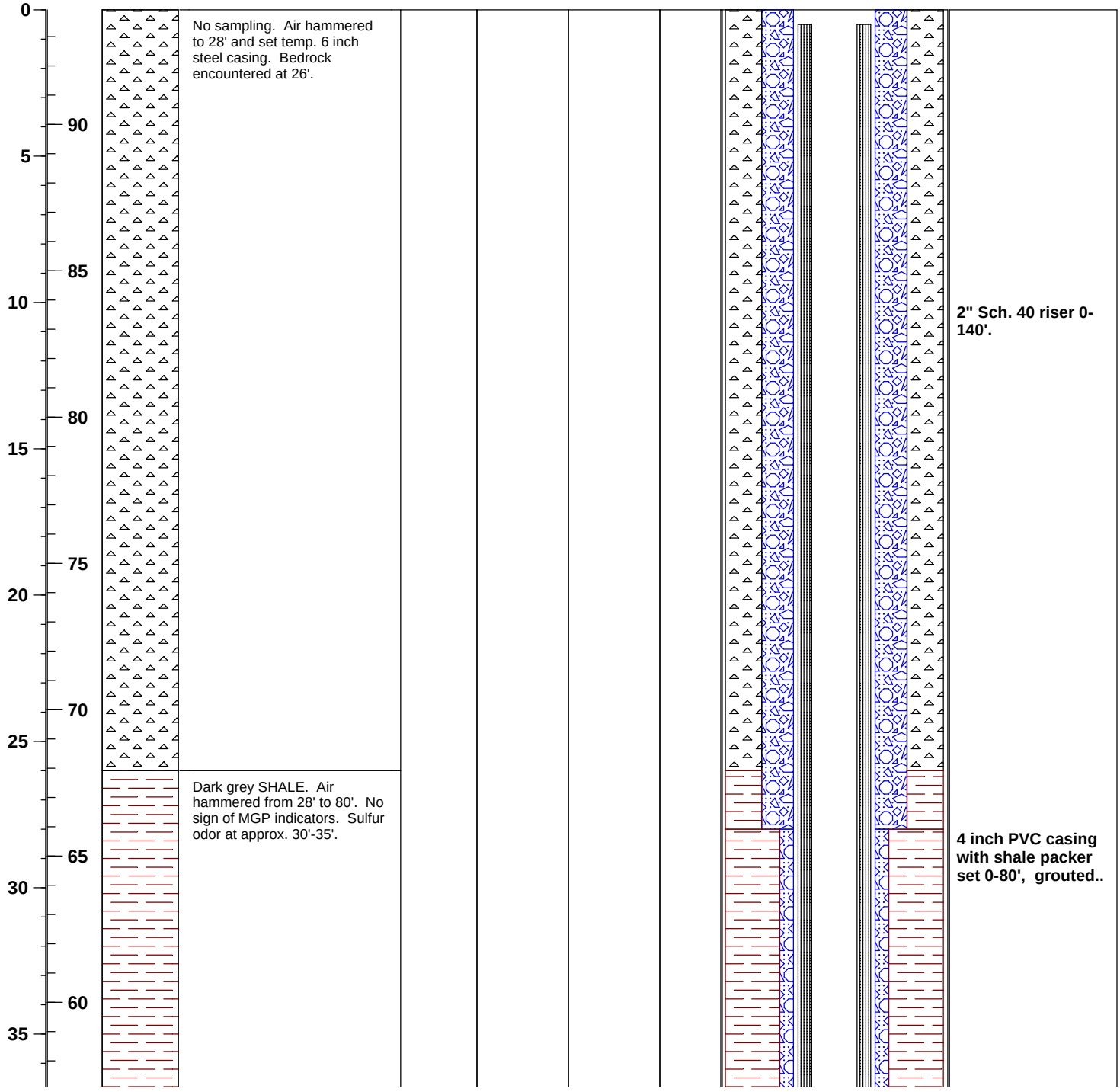
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.92 / GRD 94.18
BORING NO.:	MW-40D	**BORING LOCATION:**	N 1484689.48 / E 709662.89
DATE:	11/26/02	**METHOD OF DRILLING:**	7 7/8 inch Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	170 feet	**SURFACE CONDITIONS:**	Gravel

Depth / Elevation	Soil Symbols	Soil Description	Sample Depth (ft bg)	Driven/ Recovery (in.)	Blows per/ (6 in.)	PID (ppm)	Well Construction	Well Description
0 / 90		No sampling. Air hammered to 28' and set temp. 6 inch steel casing. Bedrock encountered at 26'.						
5 / 85								
10 / 80								
15 / 75								
20 / 70								
25 / 65		Dark grey SHALE. Air hammered from 28' to 80'. No sign of MGP indicators. Sulfur odor at approx. 30'-35'.						
30 / 60								
35								



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.92 / GRD 94.18
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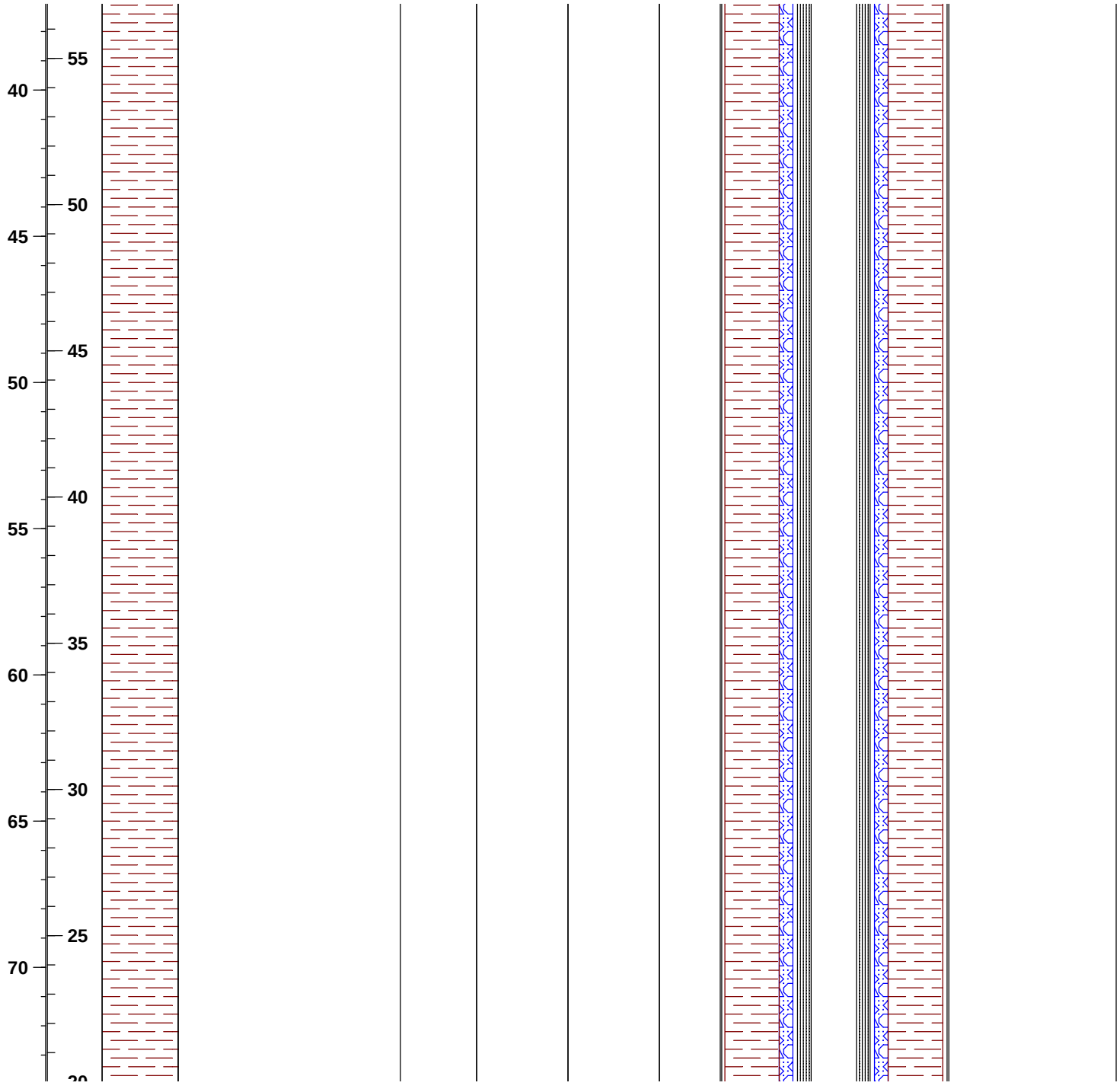

LOG OF BORING

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NYSEG
Central Avenue
Mechanicville, New York

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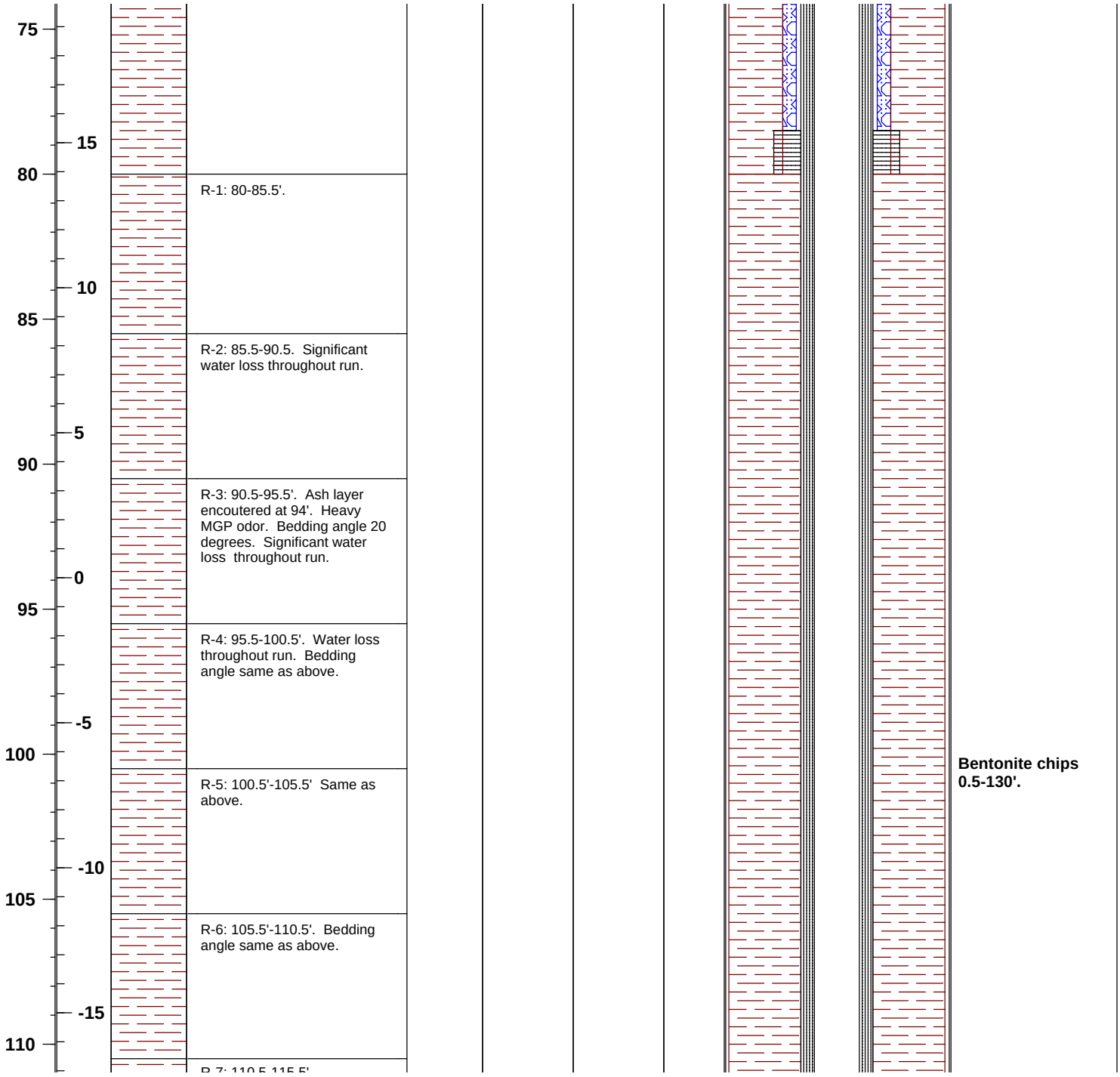

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Central Avenue
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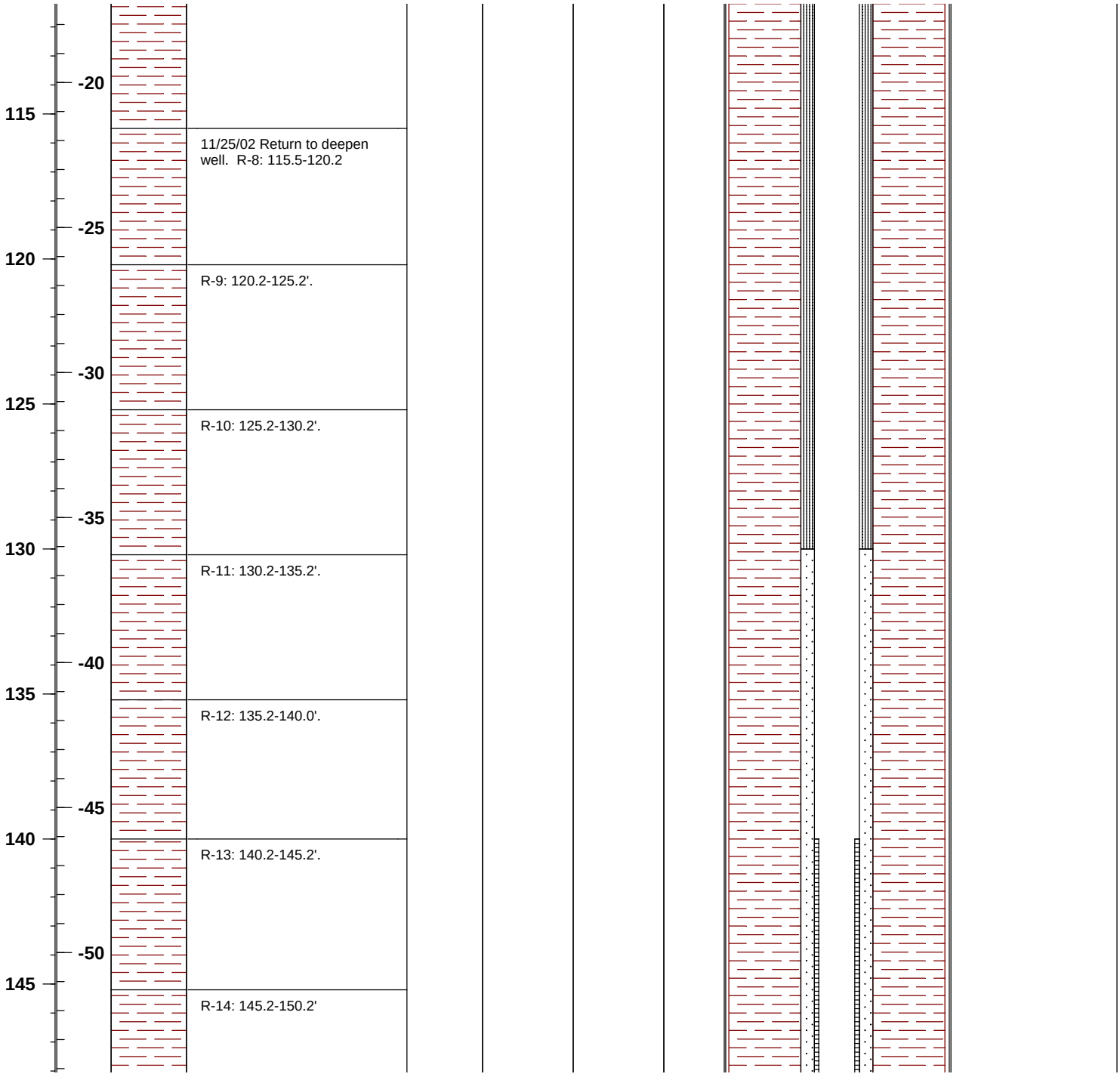

LOG OF BORING

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Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

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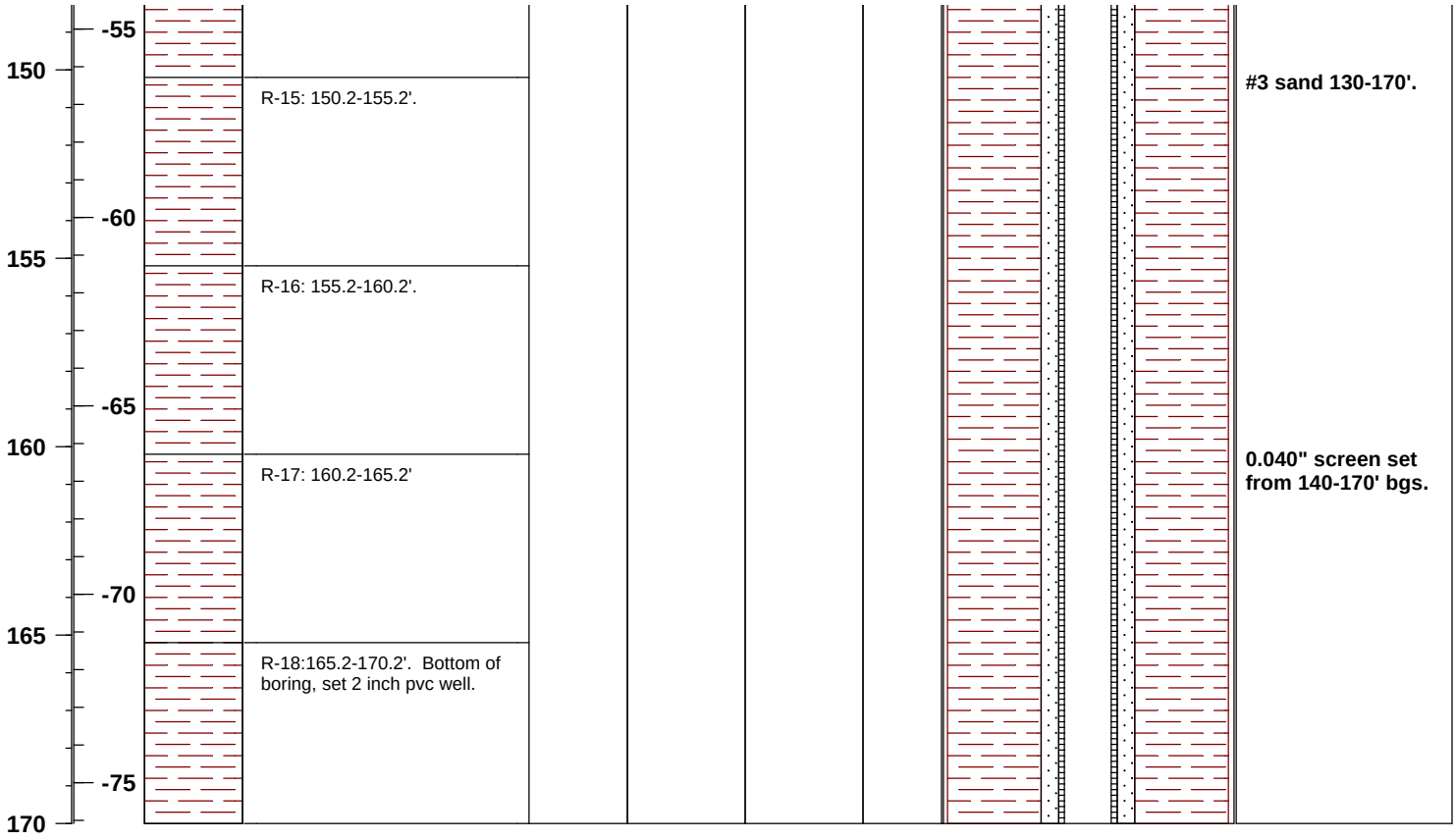


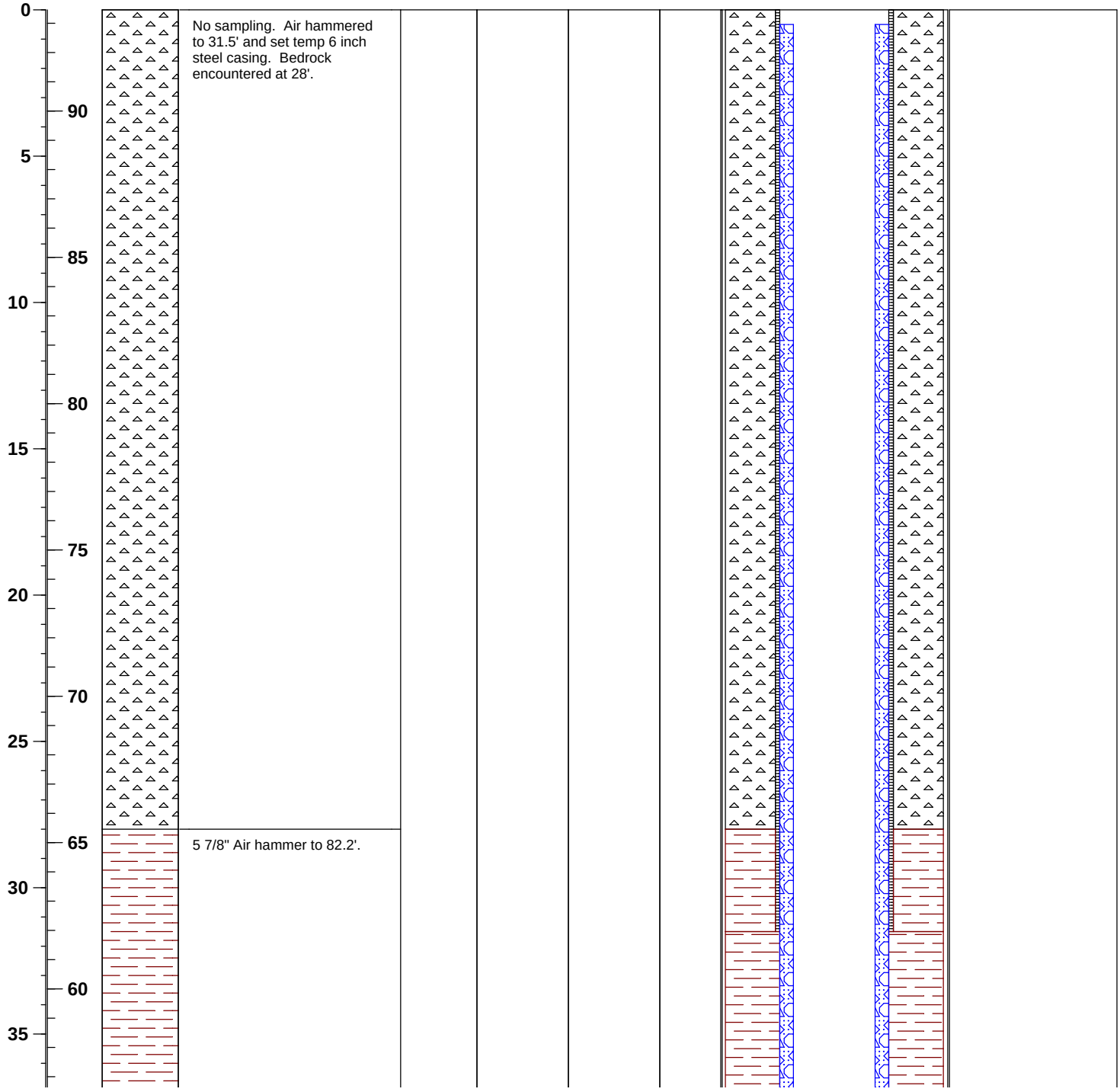
LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.46 / GRD 93.72
BORING NO.:	MW-42D	**BORING LOCATION:**	N 1484627.59 / E 709733.68
DATE:	11/18/02	**METHOD OF DRILLING:**	7 7/8 Air Hammer
BORING DIAMETER:	7 7/8 inches	**SAMPLE TYPE:**	HQ Core
BORING DEPTH:	175 Feet	**SURFACE CONDITIONS:**	Asphalt

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



LOG OF BORING

URS
Clifton Park, New York

NYSEG
Central Avenue
Mechanicville, New York

PROJECT:	NYSEG	**ELEVATION:**	TOC 93.46 / GRD 93.72
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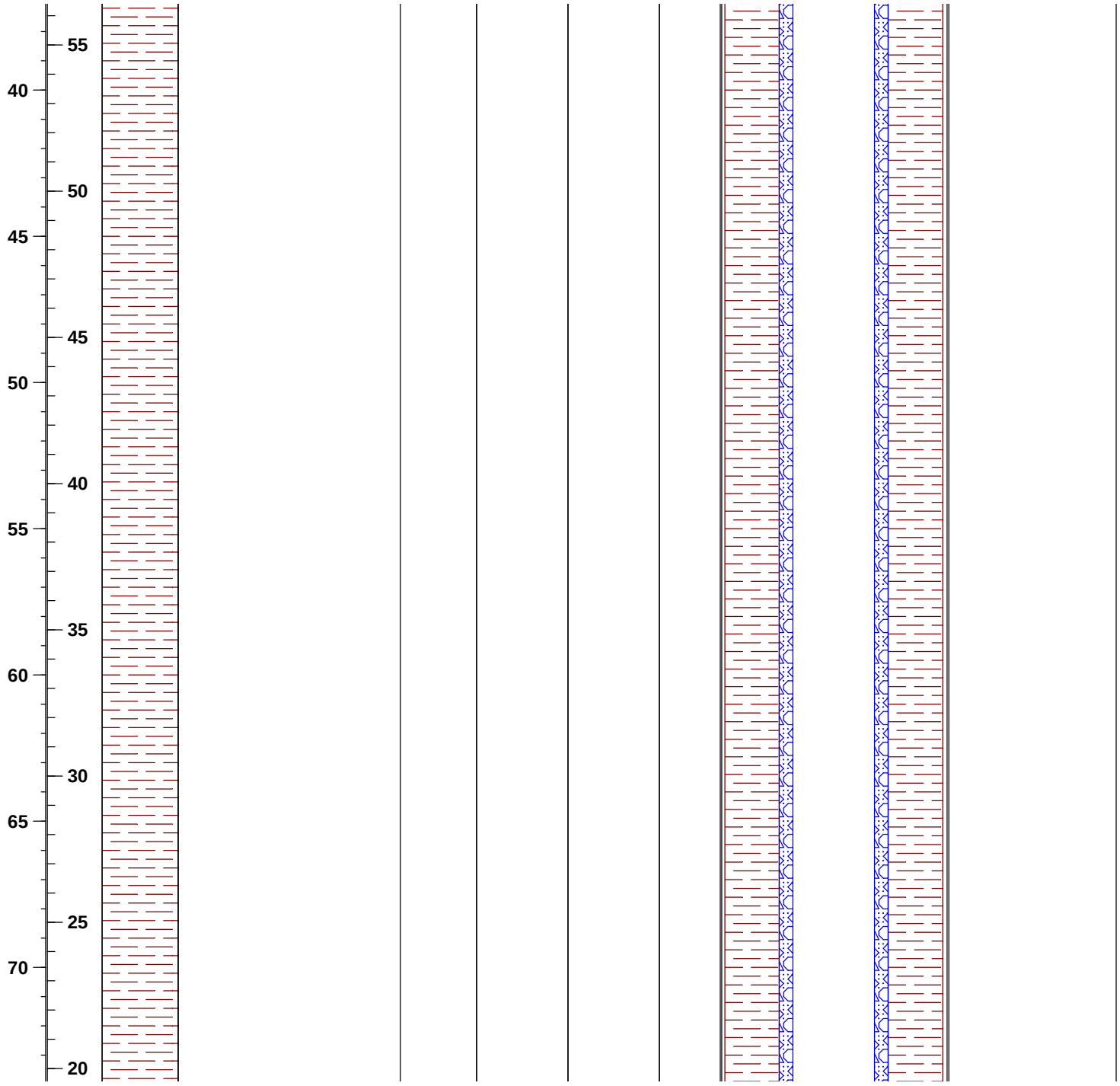

LOG OF BORING

URS

Clifton Park, New York

NYSEG

Central Avenue
Mechanicville, New York

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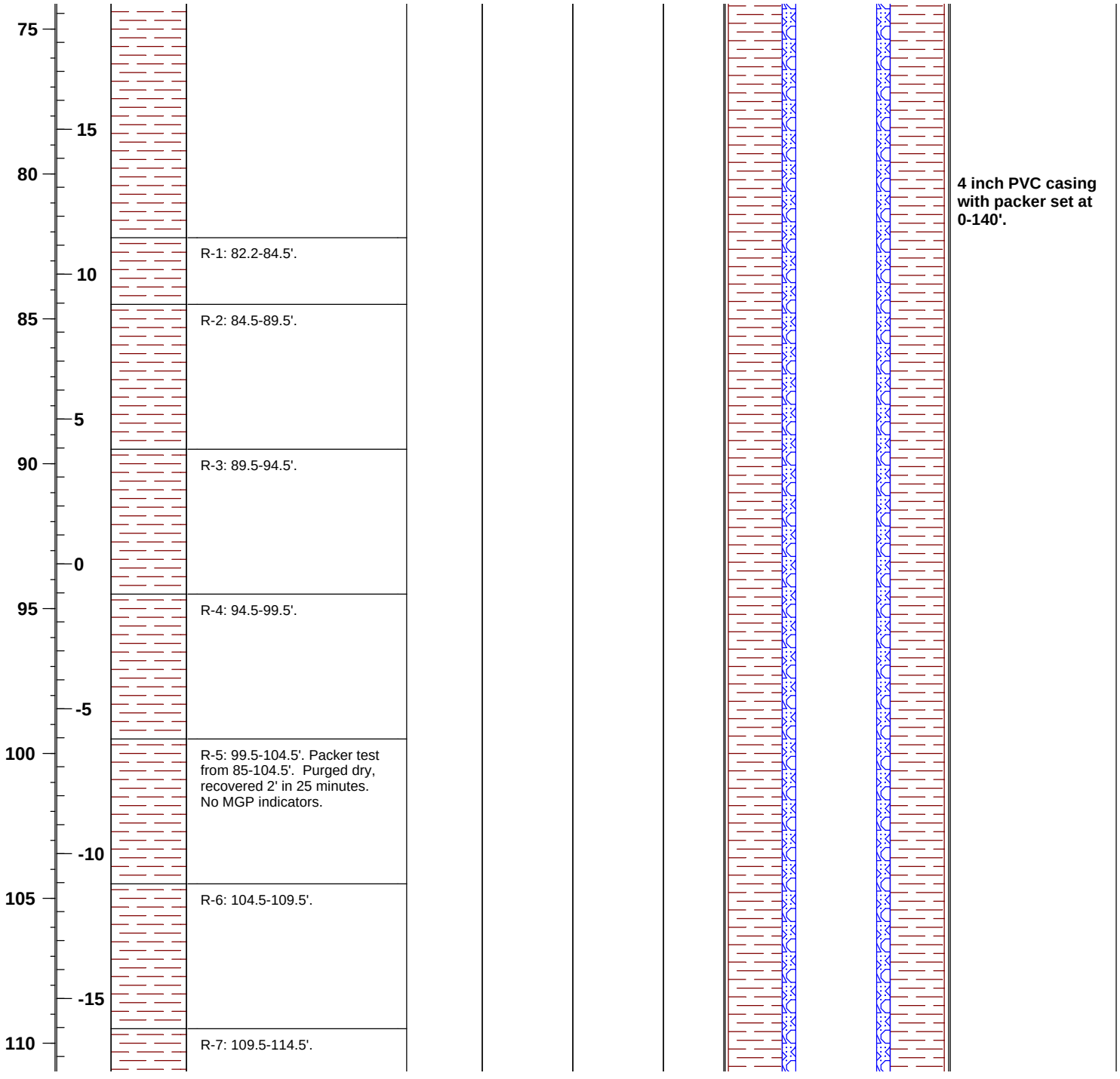

LOG OF BORING

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NYSEG
Central Avenue
Mechanicville, New York

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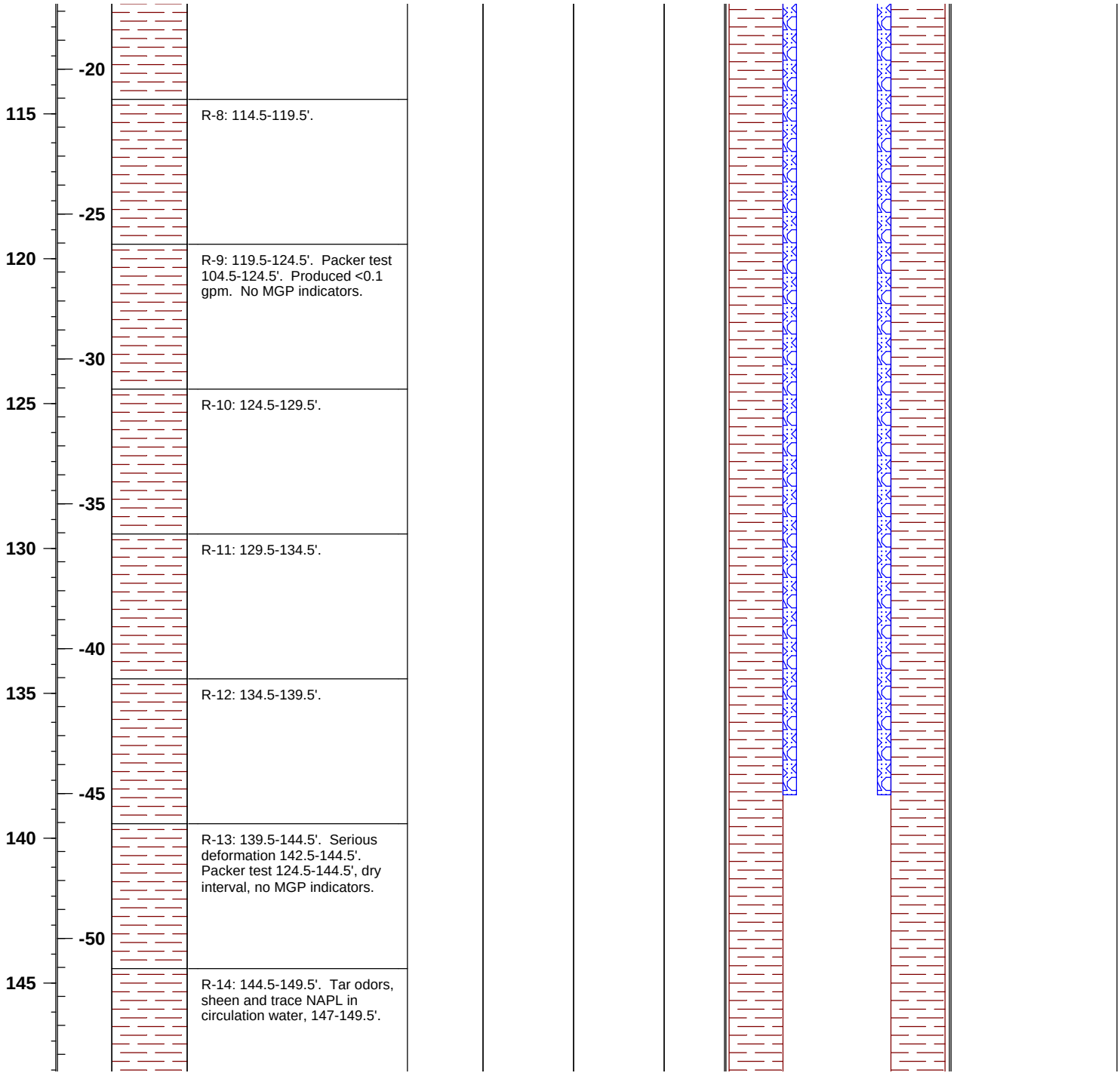

LOG OF BORING

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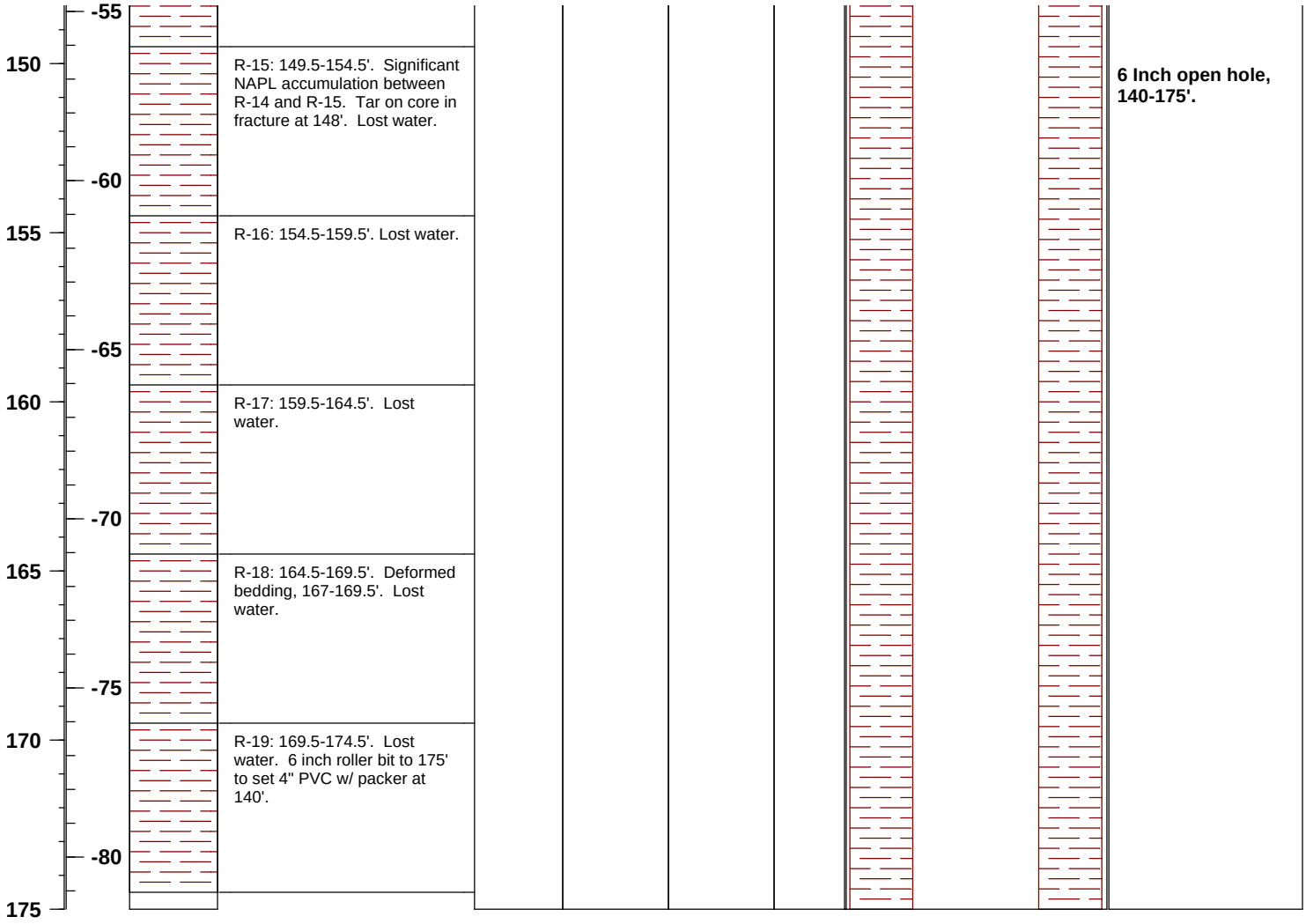

Appendix E

Site Inspection Form

Site-Wide Annual Inspection Form

Mechanicville Former MGP Site
North Central Avenue
Mechanicville, New York

Inspection Date:_____

Item	Yes	No	N/A	Comments
Where applicable, is the perimeter fence in good condition?				
Are there any signs of erosion on site or along stream bank?				
Is 95% of the streambank covered with natural vegetation?				
Has remedial performance criteria been achieved or maintained?				
Has sampling and analysis of appropriate media been performed during the monitoring event?				
Has the maintenance checklist been completed? (If a system is installed)				
Are site records including the Site Management Plan complete and up-to-date?				
If applicable, have there been any modifications made to the remedial or monitoring system?				
If applicable, does the remedial or monitoring system need to be changed or altered at this time?				
Has there been any intrusive activity, excavation, or construction occurred at the site?				
Were the activities mentioned above, performed in accordance with the SMP?				
Are the monitoring wells in good condition (e.g, covers, casings)?				
Was the Anthony Kill Creek monitored for Oily Blebs during this time?				
Was there a change in the use of the site or were there new structures constructed on the site?				
If the answer above is YES, was a vapor intrusion evaluation done?				
Were new mitigation systems installed based on monitoring results?				
What was their any NAPL collected from wells during this period?				
Are there any NAPL drums on-site that need disposal?				

Note: Upon completion of the form any non-conforming items warranting corrective action should be identified here within.

Name of Inspector: _____ Signature of Inspector: _____

Inspector's Company: _____ Date: _____