

United States Environmental Protection Agency
EPA New England
One Congress Street, Suite 1100
Boston, MA 02114-2023

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EPA NEW ENGLAND
JUL 20 2000
BY: [Signature]

July 19, 2000

Mr. Andrew T. Silfer, P.E.
Corporate Environmental Programs
General Electric Company
100 Woodlawn Avenue
Pittsfield, Massachusetts 01201

**RE: Conditional Approval of GE's Proposal to Address the Presence of DNAPL in Cell G1
Upper 1/2-Mile Reach Removal Action
General Electric-Housatonic River Site, Pittsfield, Massachusetts**

Dear Mr. Silfer:

On July 11, 2000, GE submitted a document entitled *GE-Pittsfield/Housatonic River Site, Upper 1/2-Mile Reach Removal Action (GEC800), Results of Cell G1 DNAPL Investigation and Proposal to Address the Presence of DNAPL in Cell G1*. This document is subject to the terms and conditions specified in the Consent Decree that was lodged in District Court on October 7, 1999 (the "Consent Decree"). Pursuant to Paragraph 73(b) of the Consent Decree, EPA, after consulting with the Massachusetts DEP, approves the above-referenced submittal subject to the following conditions:

1. GE states on page 3 of the submittal that the actual alignment of the proposed containment barrier may be adjusted in the field. EPA believes that some adjustment may be necessary to ensure that there is a smooth transition of riverbank restoration activities both upstream and downstream of the proposed containment barrier. Therefore, the final alignment of the containment barrier shall be subject to EPA approval.
2. GE shall excavate a minimum of one to three inches of sediments throughout the entire section of Cell G1 (per discussions with Bill Horne, GE, regarding the temporary discontinuance of dewatering in Cell G1).
3. EPA observed DNAPL in the current surficial sediments at locations G1SB-6 and G1SB-12 prior to and during the DNAPL investigation program. Therefore, GE shall extend the initial areas to be excavated upstream at least as far as locations G1SB-6 and G1SB-12. Furthermore, if DNAPL is observed in areas upstream of these two locations, then the lateral extent of the excavation may need to be extended all the way to the upstream cut-off wall.

4. Page Section 3, Section IV of the Report states that "A portion of this area will also be excavated further to an elevation of 965." The area to be excavated to elevation 965 is not clearly identified on any of the Figures. Pursuant to discussions with Bill Horne, GE, this is the area described on Figure 6 as the "proposed additional excavation area to a maximum elevation of 963' based on visual observations".
5. GE shall conduct a post-excavation survey of the remaining portion of Cell G1 and the 25-foot long section of Cell G2 to document the actual depths of excavation and to confirm that the minimum depths of excavation specified in the Upper ½-Mile Reach Removal Action Work Plan have been achieved. Note that EPA and GE have not agreed on the minimum excavation depths (exclusive of DNAPL) required in the area adjacent to outfall 005B in Cell G1 and that GE has not yet submitted the baseline survey and proposed excavation depths for the 25-foot long section of Cell G2. GE and EPA need to agree on the minimum depths of excavation in all areas of Cell G1 and in the 25-foot long section of Cell G2 prior to implementing the proposed plan.
6. The Upper ½-Mile Reach Removal Action Work Plan specifies that a sediment cap isolation layer sample be collected at the base of the excavation in the general vicinity of boring G1-SB9. This is an area where excavation may proceed to an elevation of 963 feet above mean sea level (AMSL). If it is impractical to collect a representative sample in this location, then EPA will select an alternate location within Cells G1/G2. In addition, pursuant to Section 7.4.4 of the Upper ½-Mile Reach Removal Action Work Plan, EPA may require an additional sediment cap isolation layer sample be collected in areas where residual DNAPL remains.
7. GE shall install three monitoring wells as shown on the attached Figure. The two perimeter wells shall be advanced to approximately 963 feet AMSL and the screens shall extend from approximately 963 feet AMSL to 973 feet AMSL. The center well shall be advanced to the top of till and shall be screened from the top of till to approximately 973 feet AMSL. GE shall initially monitor the perimeter wells on a weekly basis to confirm that DNAPL is not present outside the limits of the containment barrier. GE shall also monitor the center well for the presence of DNAPL and shall assess and propose whether or not additional investigative or response actions are required. The timing of the well installation shall be coordinated with the proposed DNAPL response actions in order to prevent the well installation from adversely affecting the sheetpile sealant/grout.
8. EPA's contractor, Roy F. Weston, prepared their own boring logs/notes based on observations made during the DNAPL investigation. These logs differ from those submitted by GE and are included as attachment in lieu of EPA commenting on the accuracy of each individual boring log, location of NAPL, sample description etc. provided by GE. No response from GE is expected to address these differences.

EPA's approval of this submittal does not preclude EPA from requiring additional investigations

and response activities pursuant to the Consent Decree and/or the *Statement of Work for Removal Actions Outside the River* (Appendix E to the Consent Decree) in the future. Furthermore, in the event the Consent Decree does not get entered by the Court, EPA reserves the right to require additional investigations and response activities pursuant to its statutory and regulatory authorities reserved under the Consent Decree including, but not limited to, the Resource Conservation and Recovery Act ("RCRA") and the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA").

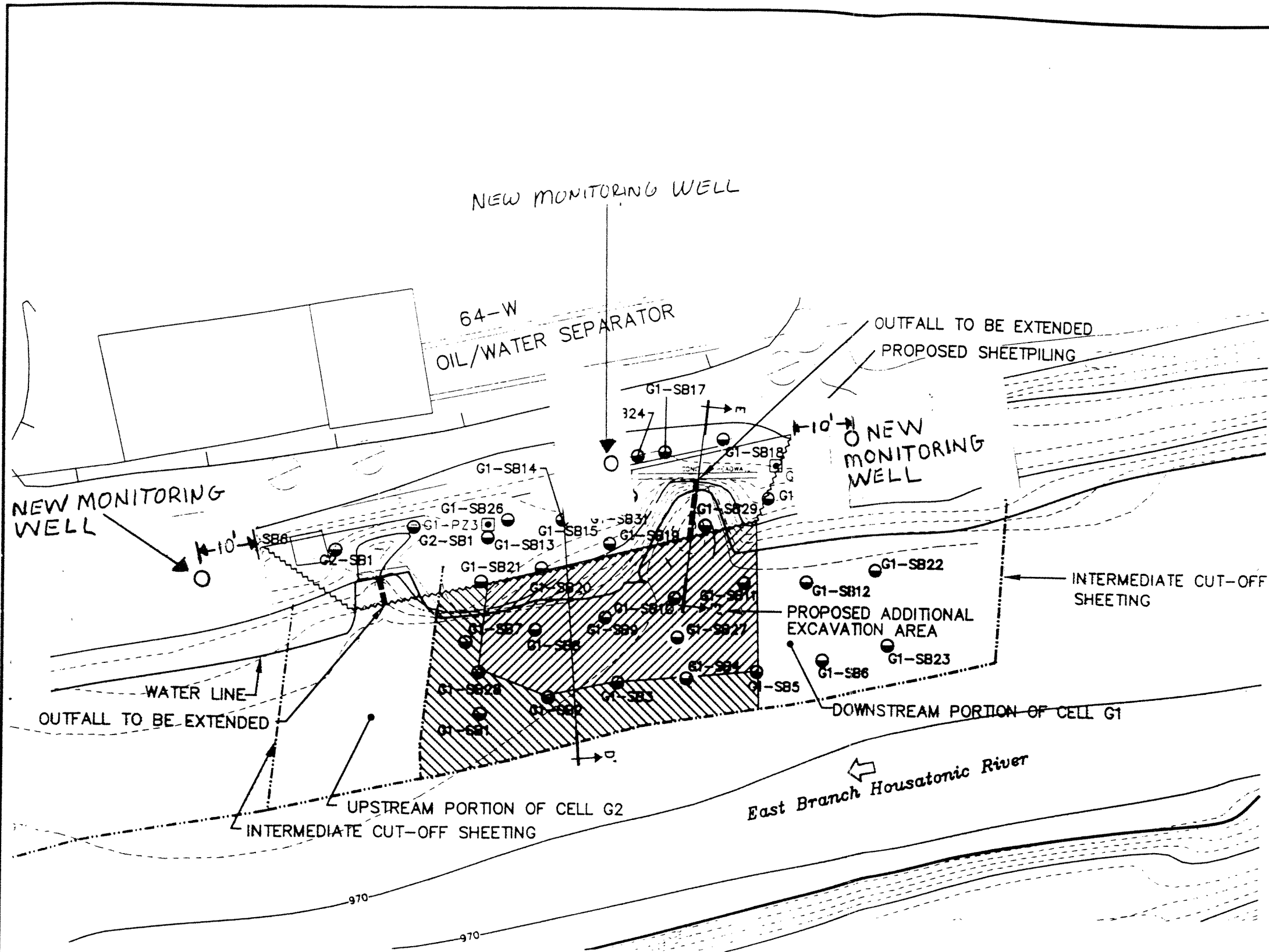
If you have any questions, please contact me at (617) 918-1282 or (413) 236-0969.

Sincerely,


Dean Tagliaferro

Attachments

cc: Tim Conway, EPA
Bryan Olson, EPA
Holly Inglis, EPA
Mike Nalipinski, EPA
Ray Goff, USACE
K.C. Mitkevicius, USACE
Dawn Veilleux, Weston
Alan Weinberg, DEP
Robert Bell, DEP
J. Lyn Cutler, DEP
Sue Steenstrup, DEP
James Milkey, MA AG
Thomas La Rosa, MA EOE
Mark Barash, DOI
Anton Giedt, NOAA
Charles Fredette, CT DEP
Mayor Gerald Doyle, City of Pittsfield
Andrew Thomas, GE
William Horne, GE
Public Information Repositories
Site File

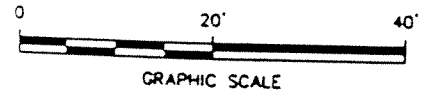


LEGEND:

- EXCAVATION SHEETPILE
- G1-SB1 ● BORING LOCATION FOR DNAPL INVESTIGATION
- G1-SB17 ● BORING LOCATION WHERE DNAPL OBSERVED
- G1-PZ1 □ PIEZOMETER
- 980— GROUND ELEVATION CONTOUR (PRIOR TO EXCAVATION)
- [Hatched Box] PROPOSED ADDITIONAL EXCAVATION AREA TO MAXIMUM ELEVATION OF 963' BASED ON VISUAL OBSERVATIONS
- [White Box] WORK AREA
- [Diagonal Hatched Box] PROPOSED ADDITIONAL EXCAVATION AREA TO MAXIMUM DEPTH OF 4' BASED ON VISUAL OBSERVATIONS
- C D' ↑ ↑ CROSS-SECTION LOCATION

NOTES:

1. BASE MAP BY DESIGN GROUP, INC. 2 FEDERICO DRIVE, PITTSFIELD, MASSACHUSETTS 01201, "SKETCH PLAN OF G1 AND G2 BORING LOCATIONS", DATED JUNE 23, 2000.



GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
REMOVAL ACTION
UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

**CELL G1 DNAPL AREA
PROPOSED ACTIVITIES**

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE
6

E: NONE
L: ON-REF
P: STD-PCP/BL
7/11/00 SYR-54-JER RCB KMD
20197071/20187003.0WG

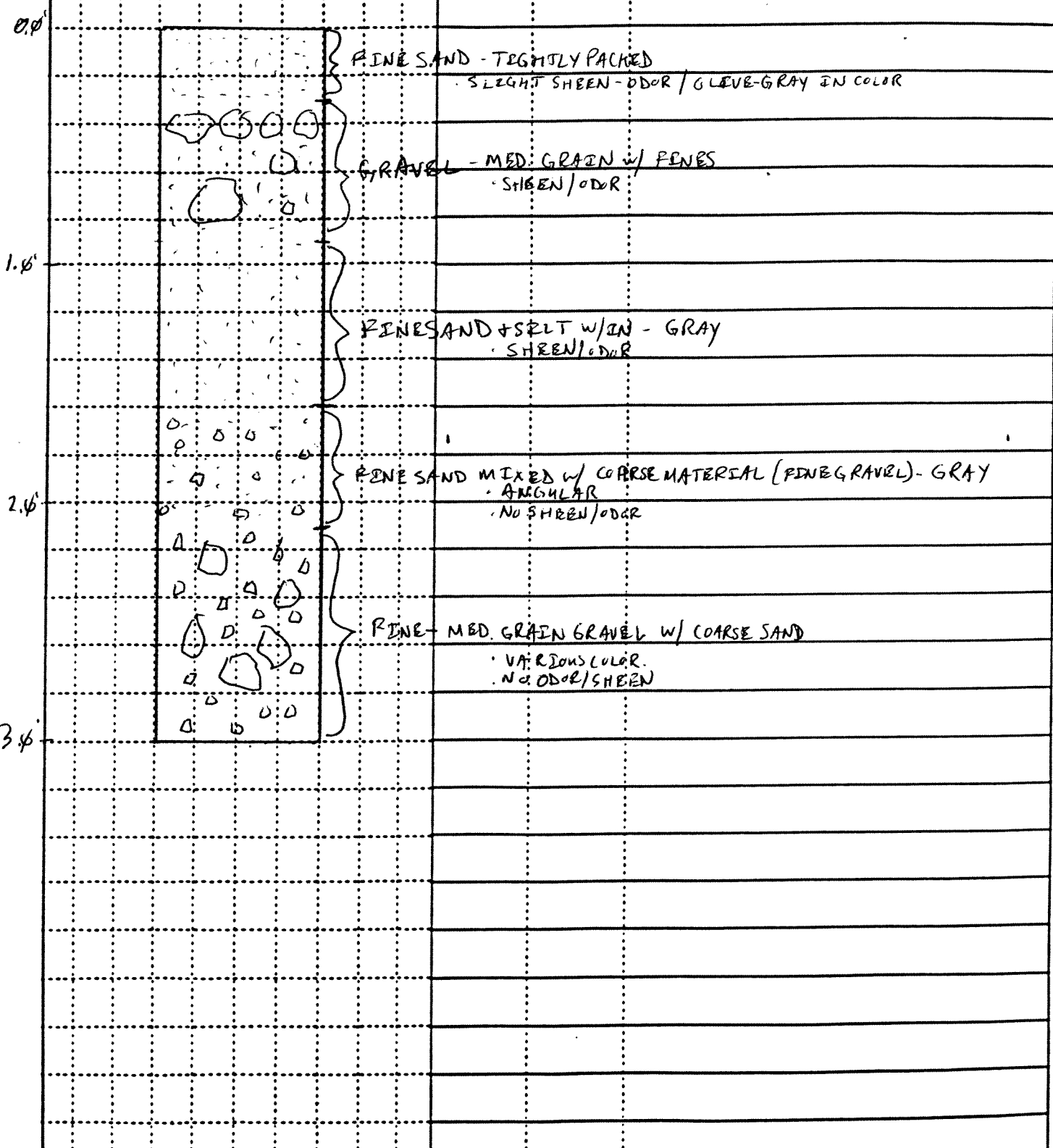
GEOLIS, Notes and Sketches Form

COMPANY: RF Weston Inc.
 PROJECT: H.R. Site
 PROPERTY: 1/2 M. W. - GE
 SITE/AREA: Source Beach 1

LOCATION NO.: CELL G1 HR-G1 SB-9
 DATE: 6/5/00
 LOGGER: Ryan Jendrasick
 SIGNATURE: [Signature]



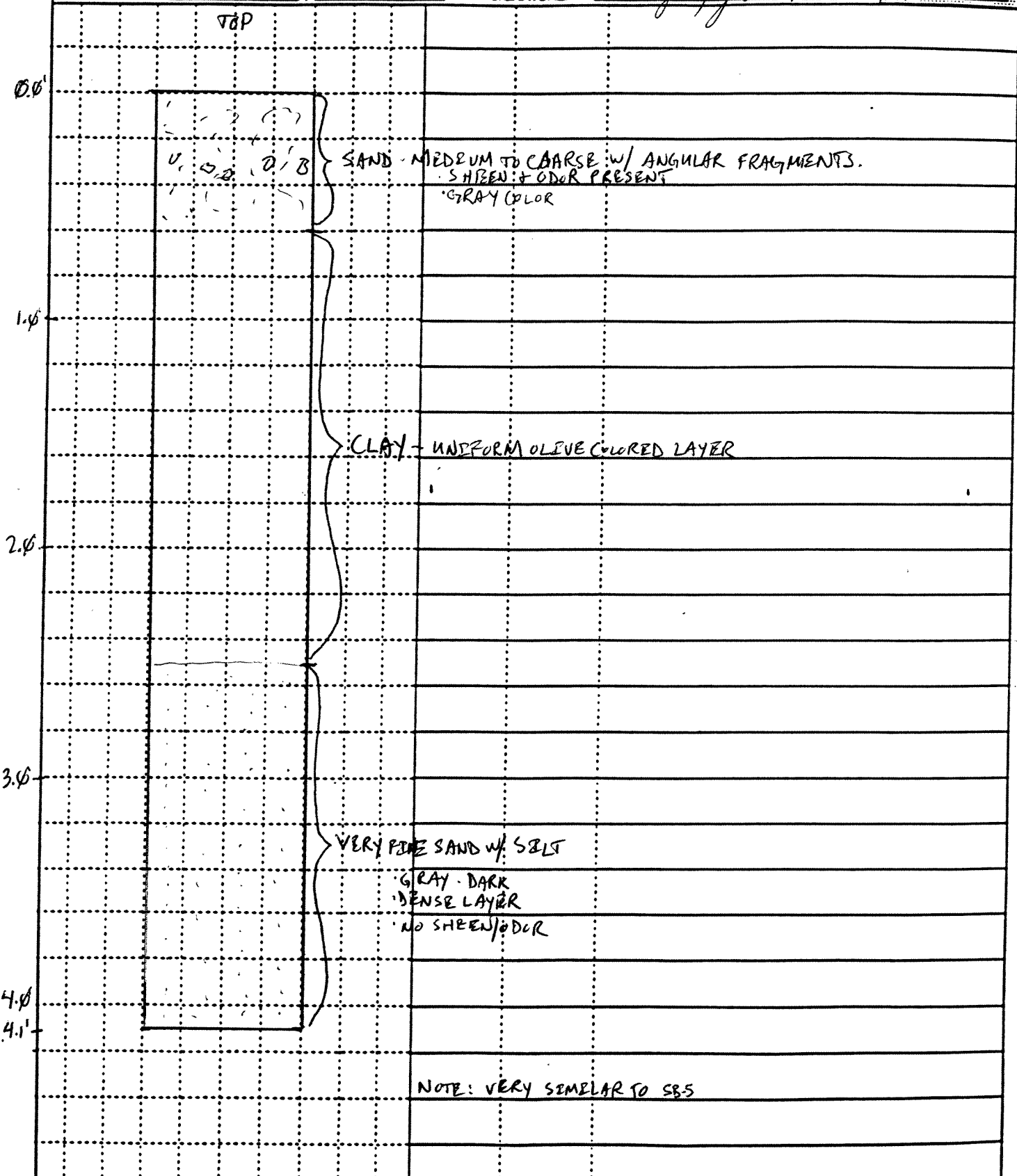
TOP



GEOLIS, Notes and Sketches Form

COMPANY: RF Weston Inc
 PROJECT: H.R. Site
 PROPERTY: 1/2 M. W - GIZ
 SITE/AREA: Source Reach 1

LOCATION NO.: CELL G1 HRG1-SB-6
 DATE: 6/5/00
 LOGGER: Ryan Jendrasiak
 SIGNATURE: [Signature]



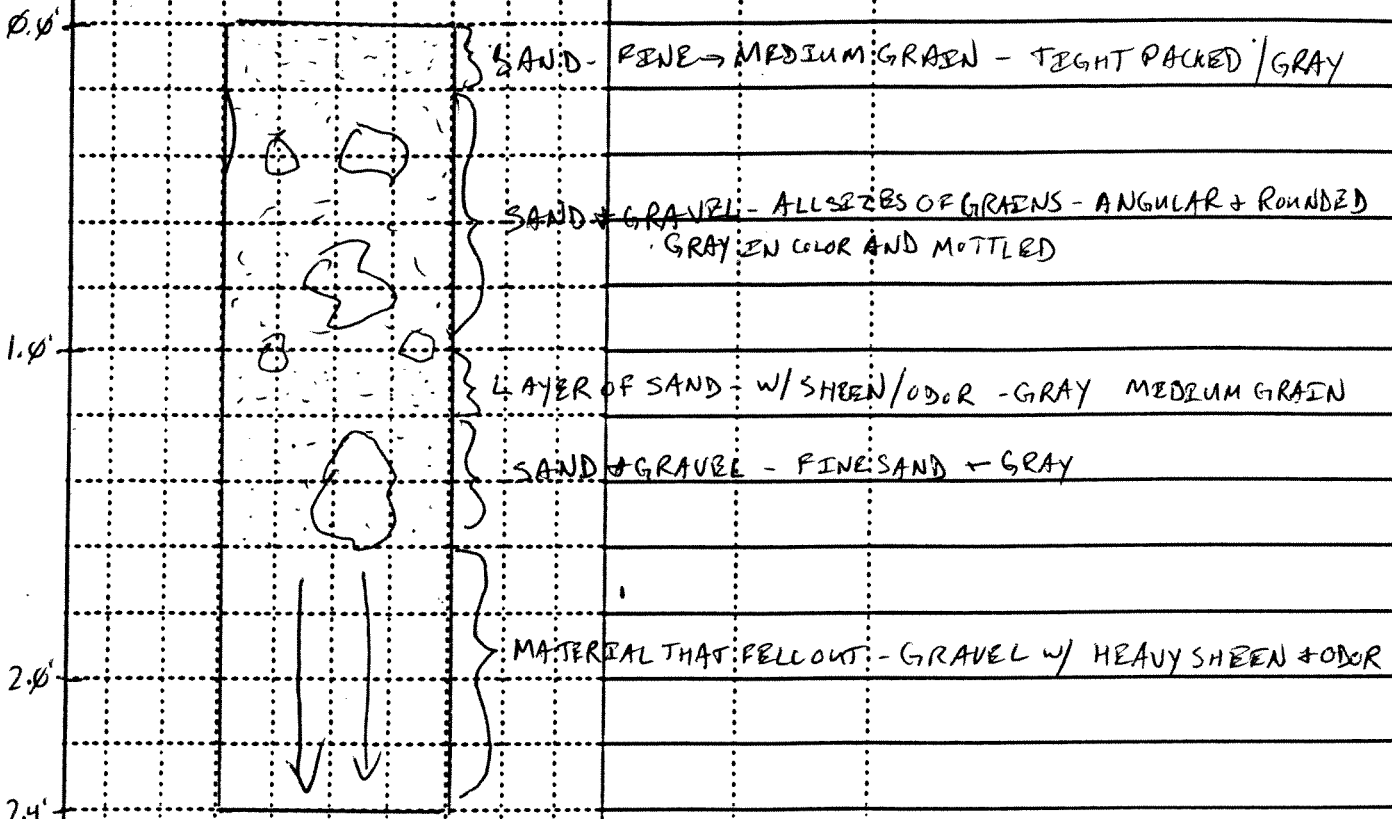
GEOLOGICAL Notes and Sketches Form

COMPANY: R.F. Weston Inc.
 PROJECT: H.R. Site
 PROPERTY: 1/2 M. W. - GE
 SITE/AREA: Source Reach 1

LOCATION NO.: CELL G1 HR-G1-SB-7
 DATE: 6/5/00
 LOGGER: Ryan Jendrasak
 SIGNATURE: [Signature]



TOP



SAND - FINE → MEDIUM GRAIN - TIGHT PACKED / GRAY

SAND & GRAVEL - ALL SIZES OF GRAINS - ANGULAR & ROUNDED
GRAY IN COLOR AND MOTTLED

LAYER OF SAND - w/ SHEEN / ODOR - GRAY MEDIUM GRAIN

SAND & GRAVEL - FINE SAND - GRAY

MATERIAL THAT FELL OUT - GRAVEL w/ HEAVY SHEEN & ODOR

COMMENTS:

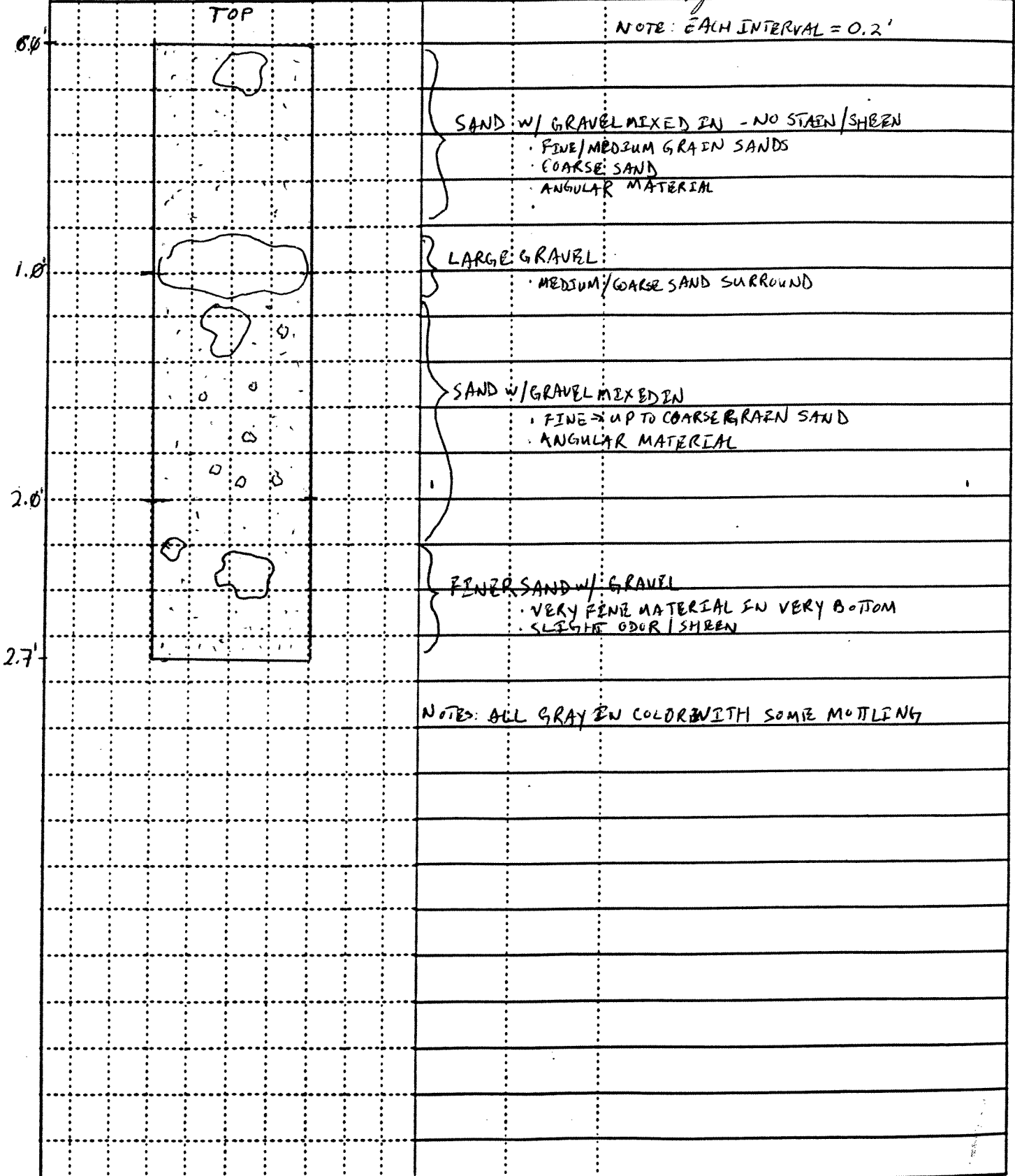
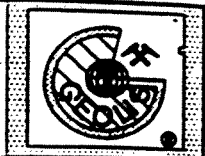
NOTE: WHILE CUTTING THIS CORE THE BOTTOM FELL OUT
 INTO FIVE GALLON BUCKET - LAST 9/10' FELL OUT
 - THIS MATERIAL APPEARS TO BE VERY CONT.
 AMINATED - SHEEN & ODOR!
 - THIS MATERIAL IS MOSTLY GRAVEL - SMALL →
 LARGE GRAIN

- NAPL OF CONCERN

GEOLOGICAL Notes and Sketches Form

COMPANY: RF Weston Inc
 PROJECT: HR Site
 PROPERTY: 1/2 M. W. - GE
 SITE/AREA: Storage Pouch 1

LOCATION NO.: CELL G1 - HR G1-SB1
 DATE: 6/5/00
 LOGGER: Ryan Jendrasiak
 SIGNATURE: [Signature]



GEOLOGICAL Notes and Sketches Form

COMPANY: RF Weston Inc.
 PROJECT: H.R. Site
 PROPERTY: 1/2 M.W. - GE
 SITE/AREA: Source Reach 1

LOCATION NO.: (225) HR-61-582
 DATE: 6/5/00
 LOGGER: Ryan Jendrasich
 SIGNATURE: [Signature]



TOP

0.6'

SILT AND VERY FINE SAND - GRAY IN COLOR

1.0'

SAND - FINE → COARSE WITH LARGE GRAVEL MIXED IN

- GRAY WITH MOTTLED (WHITE/TAN) GRAVEL
- ANGULAR + ROUNDED MATERIAL
- GRAVEL MORE CONCENTRATED AT BOTTOM
- SLIGHT ODOR (SHEEN NOT PRESENT)

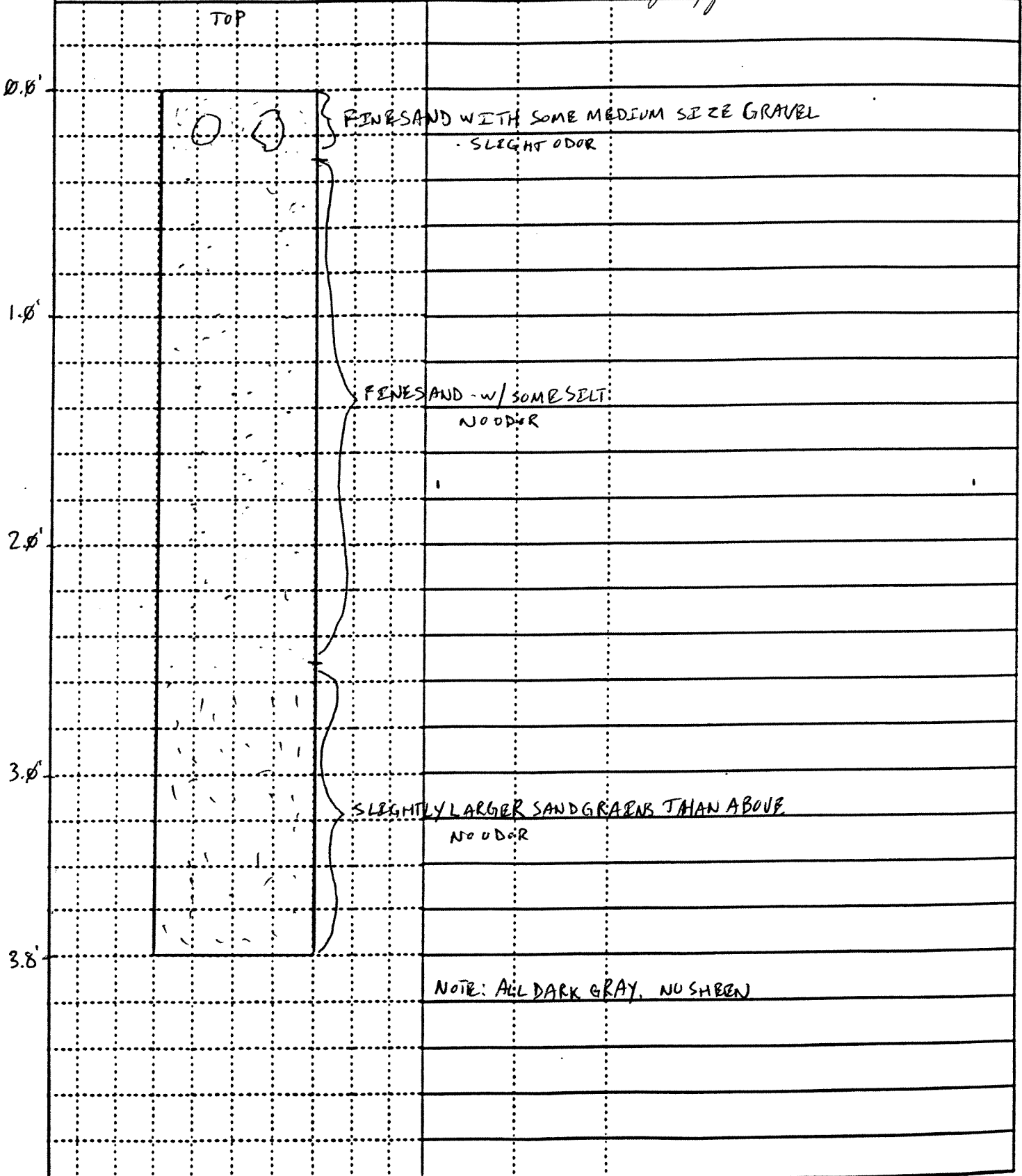
2.0'

2.2'

GEOLOGICAL Notes and Sketches Form

COMPANY: R.F. Weston Inc.
 PROJECT: H.R. Site
 PROPERTY: 1/2 Mile - G.E.
 SITE/AREA: Source Reach - 1

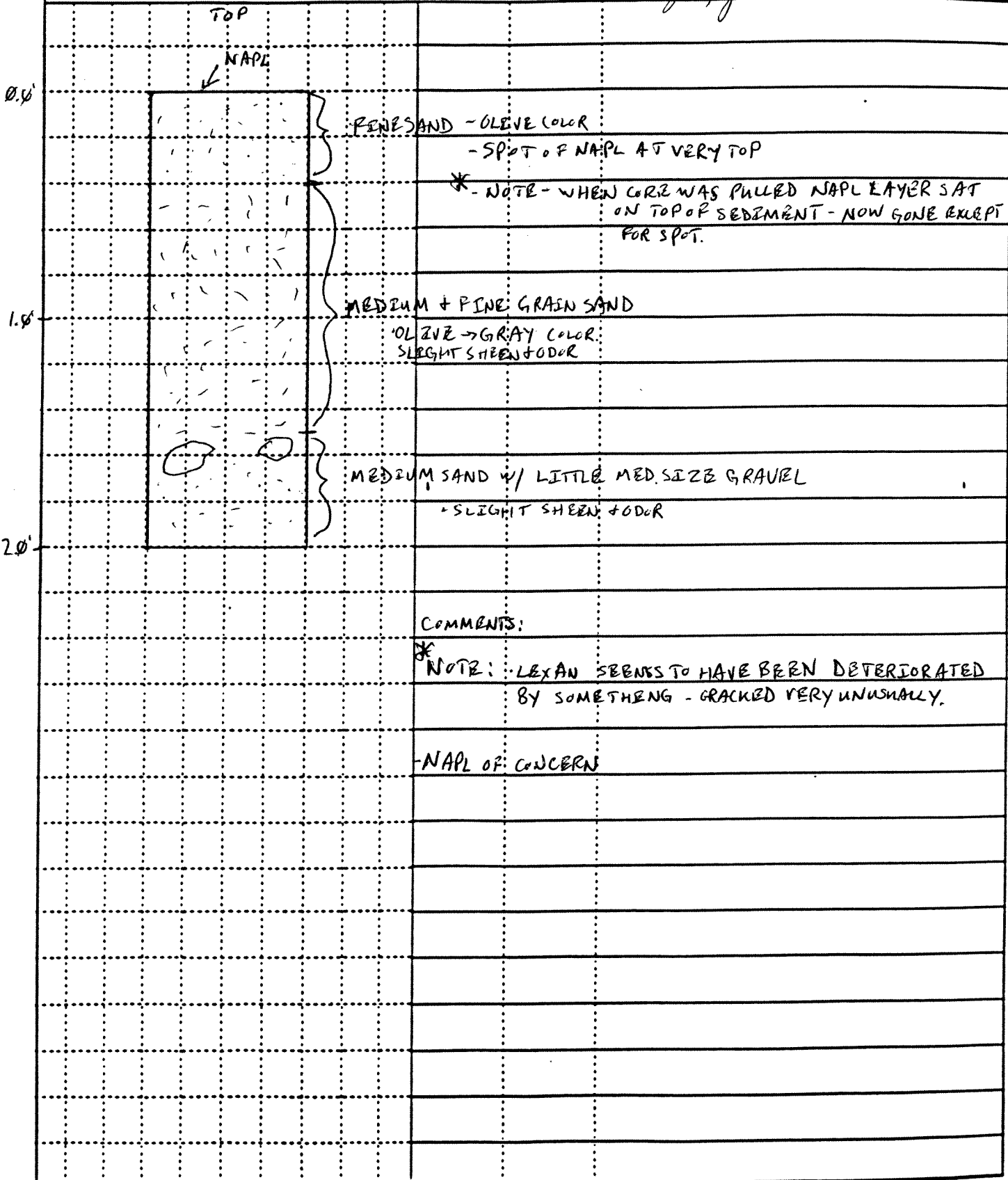
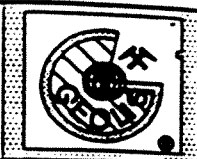
LOCATION NO.: CELL G1 - HR G1 - SBS
 DATE: 6/5/00
 LOGGER: Ryan Jendrasiah
 SIGNATURE: [Signature]



GEOLOGICAL Notes and Sketches Form

COMPANY: RF Weston Inc.
 PROJECT: H.R. Site
 PROPERTY: 1/2 Mile - GE
 SITE/AREA: Source Reach 1

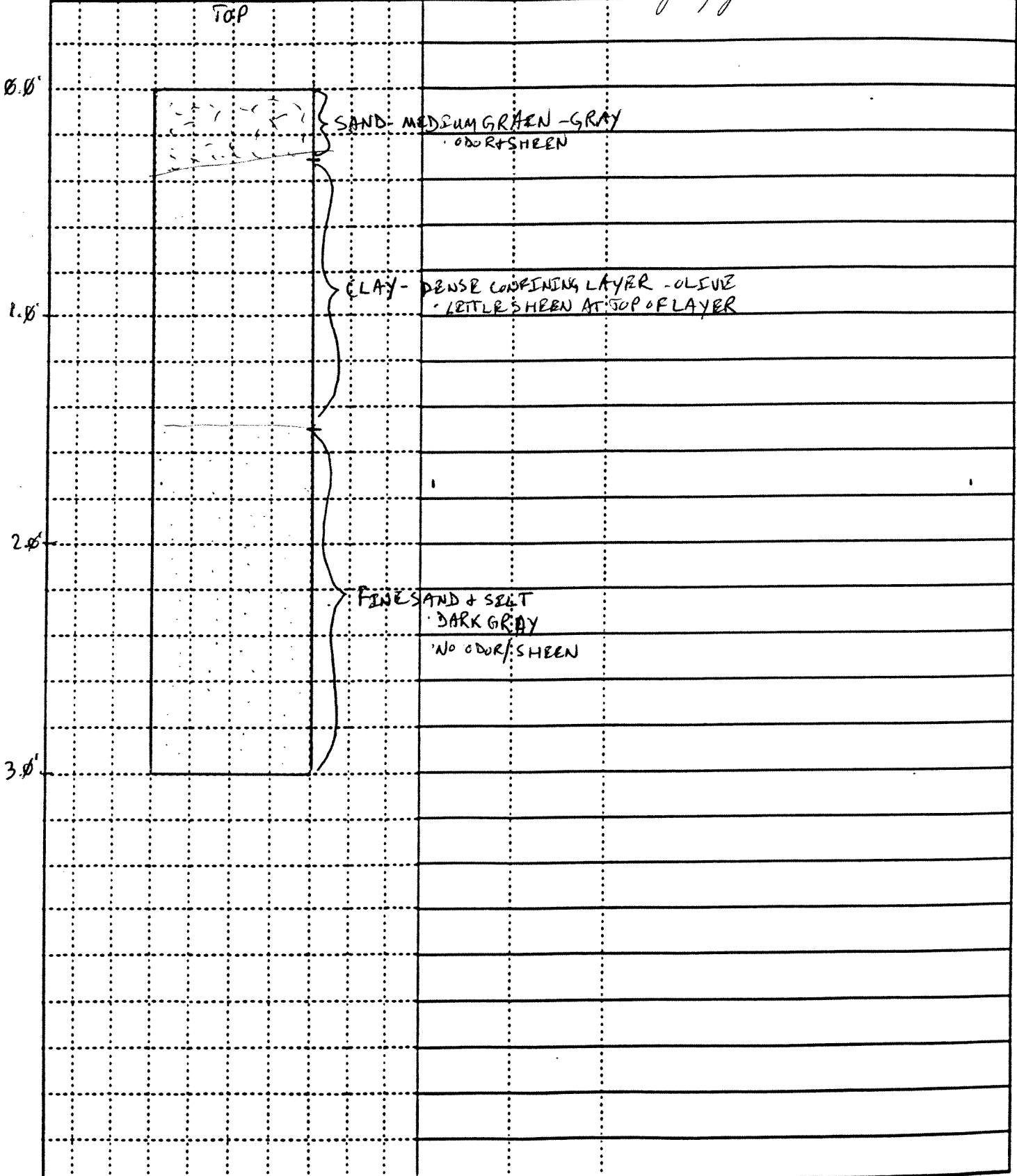
LOCATION NO.: CELL G1 HR-G1-SB-4
 DATE: 6/5/00
 LOGGER: Ryan Sundrasiah
 SIGNATURE: [Signature]



GEOLOGICAL Notes and Sketches Form

COMPANY: R.F. Weston Inc.
 PROJECT: H.R. Site
 PROPERTY: 1/2 M.W. - G2
 SITE/AREA: Source Reach 1

LOCATION NO.: CBLG1 HR.G1-SB-5
 DATE: 6/5/00
 LOGGER: Ryan Jendrasak
 SIGNATURE: [Signature]



GEOLOGICAL Notes and Sketches Form

COMPANY: R.F. Weston Inc.
 PROJECT: H.R. Site
 PROPERTY: 1/2 Mile - G12
 SITE/AREA: Savage Reach 1

LOCATION NO.: CELL G1 HR. G1-SB10
 DATE: 6/5/00
 LOGGER: Ryan Jendrasiah
 SIGNATURE: [Signature]



TOP

0.0'

FINE SAND + SILT - ODR/SHEEN
 - GRAY

1.0'

FINE SAND/SILT w/ CLAY
 - OLIVE/GRAY
 - SLIGHT ODR/SHEEN
 - BARRIER LAYER - TIGHT MATERIAL

2.0'

FINE SAND - GRAY
 - SOME SILT
 - NO SHEEN/ODR

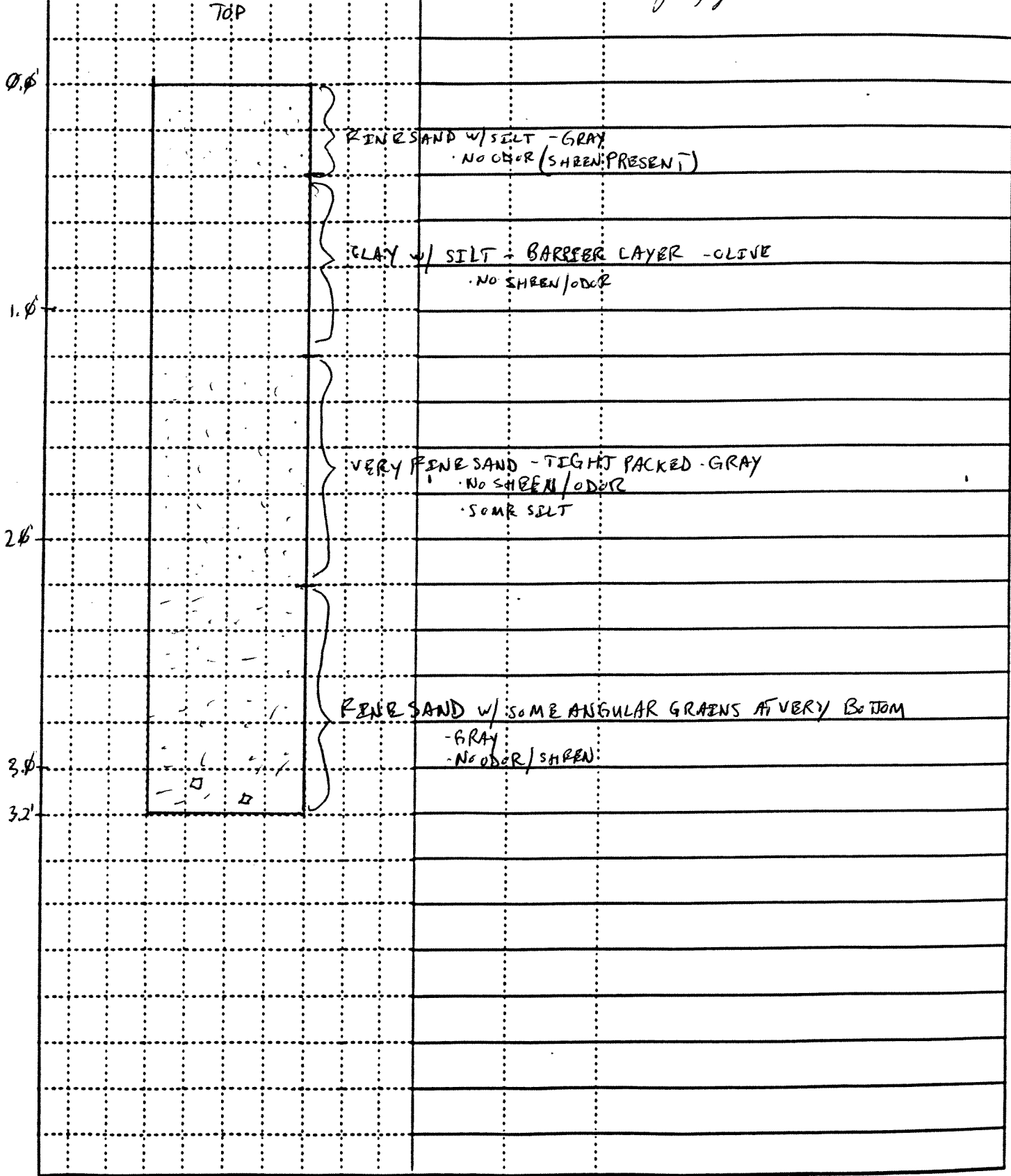
3.0'

FINE - MED SAND w/ ANGULAR FINE GRAVEL
 - NO SHEEN/ODR (PRESENT - TRACE)
 - GRAY

3.9'

GEOLOGICAL Notes and Sketches Form

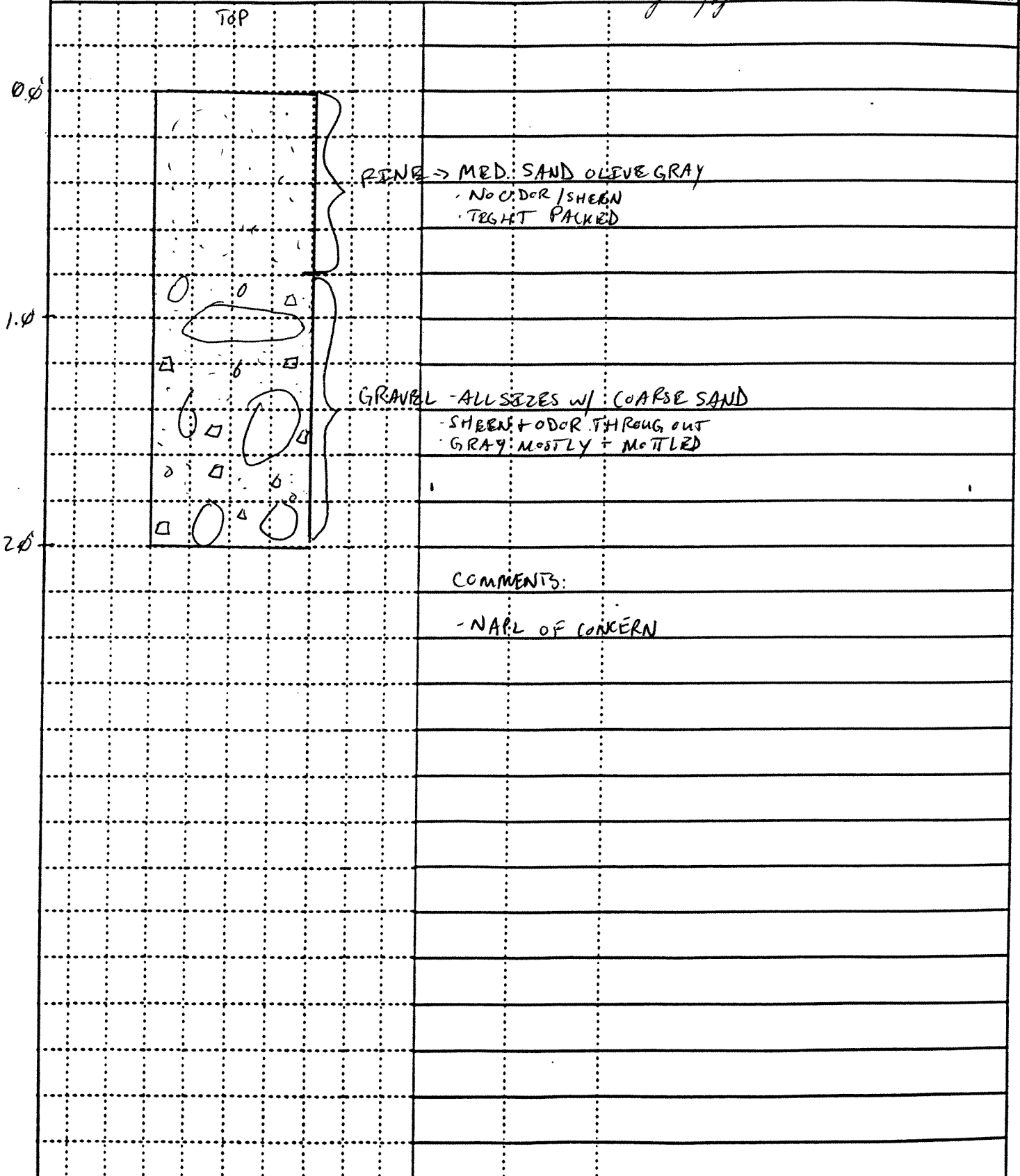
COMPANY:	RF Weston Inc.	LOCATION NO.:	CELL G1 HR G1 SB11
PROJECT:	H.R. Site	DATE:	10/5/00
PROPERTY:	1/2 Mile - G E	LOGGER:	Ryan Jendrasiak
SITE/AREA:	Source Reach 1	SIGNATURE:	<i>[Signature]</i>



GEOLOGICAL Notes and Sketches Form

COMPANY: R.F. Weston Inc.
 PROJECT: H.R. Site
 PROPERTY: 1/2 Mile - G.E.
 SITE/AREA: Source Reach 1

LOCATION NO.: CELL G1 HR. G1 SB12
 DATE: 6/5/00
 LOGGER: Ryan Jendrasiak
 SIGNATURE: [Signature]



GEOLIS Notes and Sketches Form

COMPANY: Roy F. Weston Inc.
 PROJECT: Housatonic River Project
 PROPERTY: GE Plant Area
 SITE/AREA: CELL G1 - 1 BANK

LOCATION NO.: HR-G1-SB-13
 DATE: June 6, 2000
 LOGGER: Ryan Jendrasiak
 SIGNATURE: [Signature]



Depth (ft)	Soil Description	Recovery
0.0	TOP	
0.0 - 4.0	FINE SAND w/ SILT - NO ODOR / SHEEN	0'-4': 2.6'
4.0 - 4.8	FINE SANDS - NO ODOR / SHEEN	4'-8': 3.1'
4.8 - 5.6	FINE SAND w/ SILT - NO ODOR / SHEEN	8'-12': 2.1'
5.6 - 6.4	FINE SAND w/ GRAVEL - NO ODOR / SHEEN	12'-16': 2.8'
6.4 - 7.2	FINE SAND w/ SMALL GRAIN GRAVEL - ROUNDED & ANGULAR *NAPL SUSPECT - NO ODOR; SLIGHT SHEEN; GRAY IN COLOR	
7.2 - 8.0	SAME AS ABOVE w/ MORE GRAVEL w/ A BLACK POCKET @ 1.3'-1.7' *NAPL SUSPECT	
8.0 - 12.0	MED/COARSE SAND w/ ANGULAR GRAVEL; SHEEN / TRACE ODOR *NAPL SUSPECT - GRAY - BLACK IN COLOR	
12.0 - 16.0	ALL GRAIN SIZES OF SAND w/ GRAVEL - NO ODOR / SHEEN - OLIVE COLOR	

GEOLIS, Notes and Sketches Form

COMPANY:	Roy F. Weston Inc.	LOCATION NO.:	HR-G1-SB-14
PROJECT:	Housatonic River Project	DATE:	June 6, 2000
PROPERTY:	GE Plant Area	LOGGER:	Ryan Tendvasiuk
SITE AREA:	Cell G1 - 1 BANK	SIGNATURE:	<i>[Signature]</i>



DEPTH	SOIL DESCRIPTION	RECOVERY
0.0'	TOP	
0.0' - 4.0'	FINE SAND/SILT W/ LARGE GRAVEL - NO ODOR/SHEEN	0'-4': 2.2'
4.0' - 8.0'	FINE SAND - NO ODOR/SHEEN FINE SAND W/ SILT - NO ODOR/SHEEN FINE SAND W/ SILT + SOME CLAY W/ GRAVEL MIXED IN - NO ODOR/SHEEN	4'-8': 3.2' 8'-12': 0.7' 12'-16': 1.3'
8.0' - 12.0'	SILT + SOME CLAY W/ GRAVEL SMALL GRAIN - SLIGHT SHEEN/ODOR - OLIVE GRAY IN COLOR	
12.0' - 16.0'	FINE SAND W/ ANGULAR GRAVEL - NO ODOR/SHEEN - GRAY/OLIVE COLOR	

GEOLIS, Notes and Sketches Form

COMPANY: Roy F. Weston Inc.
 PROJECT: Housatonic River Project
 PROPERTY: GIS Plant Area
 SITE AREA: Cell G1 - / BANK

LOCATION NO.: HR-G1-SB-15
 DATE: June 6, 2000
 LOGGER: Ryan Jendrasick
 SIGNATURE: [Signature]

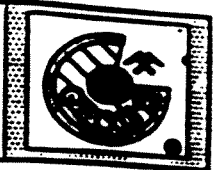


DEPTH (ft)	SOIL DESCRIPTION	RECOVERY
0.0'	TOP	
0.0' - 4.0'	FINE SAND/SILT w/ ORGANICS + LARGE GRAVEL - NO ODOR / SHEEN	0'-4': 1.7' 4'-8': 3.7'
4.0' - 8.0'	FINE/MED SAND - NO ODOR/SHEEN	8'-12': 4' 12-16': 3'
8.0' - 12.0'	DENSE SILT + CLAY, NO ODOR / SHEEN	
12.0' - 16.0'	SMALL GRAVEL WITH FINE GRAIN SAND ANGULAR GRAVEL	
	SMALL GRAIN GRAVEL w/ FINE SAND + SILT + SOME CLAY NO ODOR / SHEEN	
	SMALL GRAIN GRAVEL w/ FINE SAND; SLIGHT ODOR + SHEEN	
	FINE-MED GRAIN w/ SAND - ODOR + SHEEN	
	FINE SAND/GRAVEL - POCKET OF NAPL - FREE PHASE PRODUCT! CLAY + SILT LAYER - ODOR + SHEEN - GREY/OLIVE COLOR	* NAPL PRESENT
	SAND - ALL GRAIN SIZES - ODOR / NO SHEEN	

GEOLOGICAL Notes and Sketches Form

COMPANY: Roy F. Weston Inc.
PROJECT: Housatonic River Project
PROPERTY: GR Plant Area
SITE AREA: Cell G1 - BANK

LOCATION NO.: HR-G1-SB-16
DATE: June 6, 2000
LOGGER: Ryan Jendrasiak
SIGNATURE: [Signature]

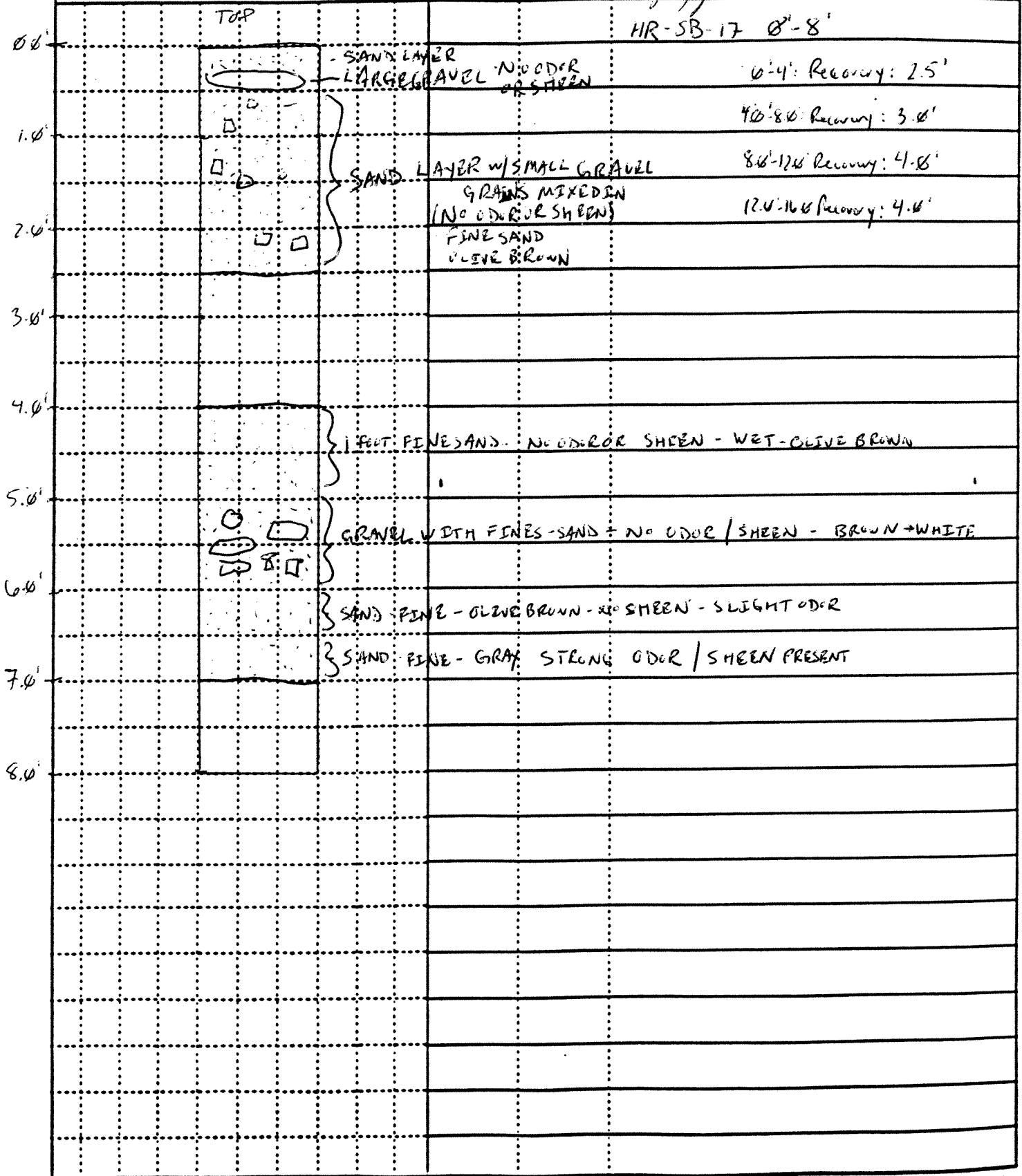
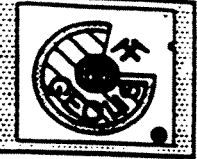


DEPTH	SOIL SAMPLE	DESCRIPTION	RECOVERY
0.0'	TOP		
0.0' - 4.0'	[Sketch: Fine sand and silt with organic matter]	FINE SAND + SILT - NO ODOR/SHEEN - ORGANICS MIXED IN	0'-4': 2.5' 4'-8': 3.8'
4.0' - 8.0'	[Sketch: Sand - fine grain w/ gravel]	SAND - FINE GRAIN W/ GRAVEL; NO ODOR/SHEEN	8'-12': 2.3' 12'-16': 4'
8.0' - 12.0'	[Sketch: Fine sand and silt w/ some clay]	FINE SAND AND SILT W/ SOME CLAY; NO ODOR/SHEEN	
12.0' - 16.0'	[Sketch: Gravel w/ silt + some clay]	GRAVEL W/ SILT + SOME CLAY; GRAY COLOR; NO ODOR/SHEEN	
	[Sketch: Fine/med sand w/ angular gravel]	FINE/MED SAND W/ ANGULAR GRAVEL; SHEEN/NO ODOR	
	[Sketch: Fine sand]	FINE SAND - ODOR/NO SHEEN	
	[Sketch: All grain sizes sand]	ALL GRAIN SIZES SAND - NO ODOR OR SHEEN	
	[Sketch: Fine sand w/ silt + some clay]	FINE SAND W/ SILT + SOME CLAY - GRAY/OLIVE COLOR - NO ODOR/SHEEN	

GEOLOGICAL Notes and Sketches Form

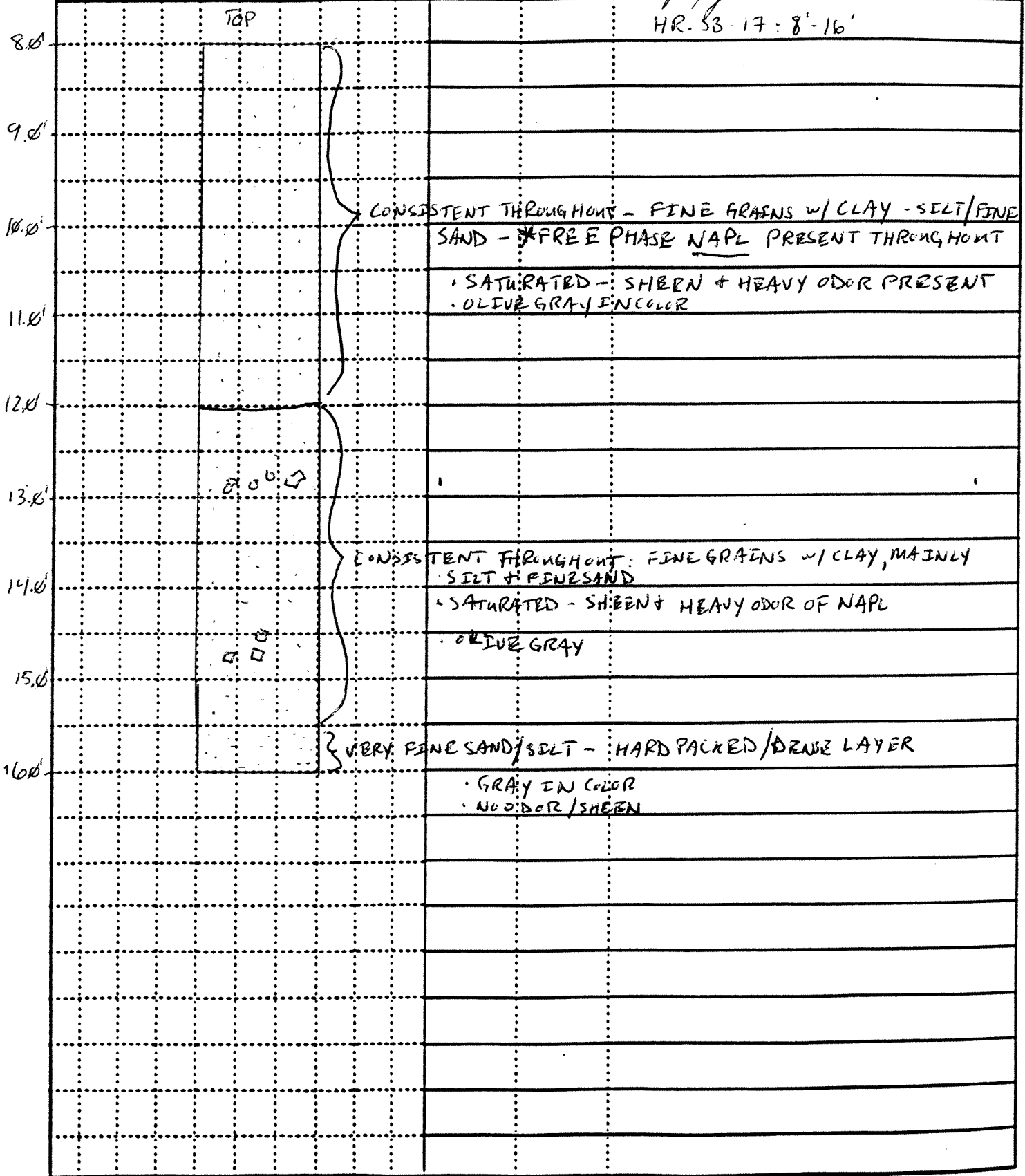
COMPANY: RF Weston Inc
 PROJECT: Pittsfield MA House #200
 PROPERTY: GZ Plat
 SITE/AREA: CELL G1 / HR SB 17 6'-8'

LOCATION NO.: CELL G1 Bank HR-SB-17
 DATE: 6/12/00
 LOGGER: Ryan Jendrasinski
 SIGNATURE: [Signature]



GEOLIS, Notes and Sketches Form

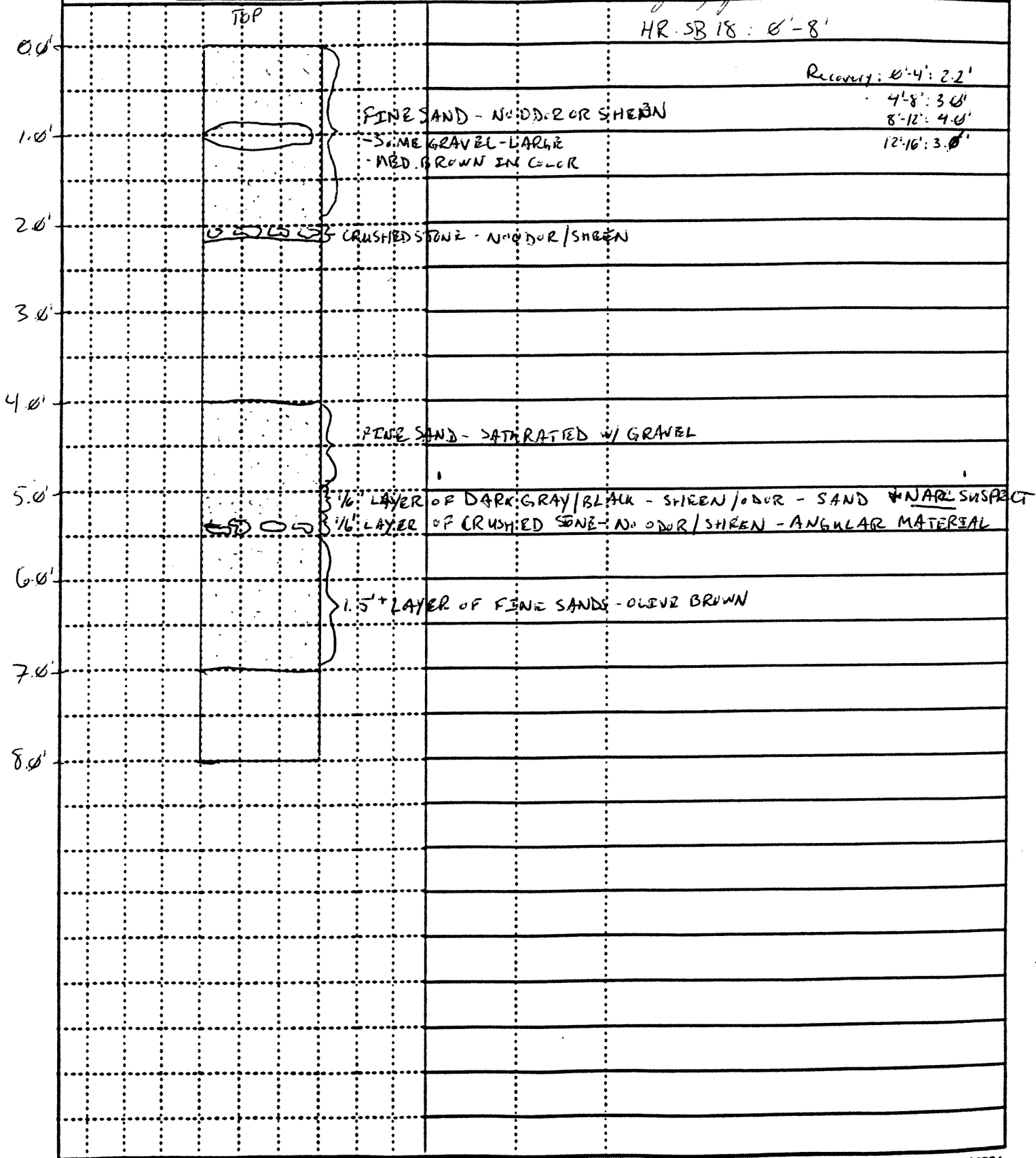
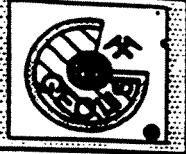
COMPANY:	RF Weston Inc.	LOCATION NO.:	CELL G1 Bank
PROJECT:	Pittsfield, MA Hanxtonic	DATE:	6/12/00
PROPERTY:	G&E Plant	LOGGER:	Ryan Jendrasick
SITE/AREA:	CELL G1 /	SIGNATURE:	<i>[Signature]</i>



GEOLOGICAL Notes and Sketches Form

COMPANY: RF Weston Inc.
 PROJECT: Pittsfield MA Maintenance
 PROPERTY: GE Plant
 SITE/AREA: Cell G1 - 1 HR SB 18

LOCATION NO.: CELL G1 Bank HR SB 18
 DATE: 6/12/00
 LOGGER: Ryan Jandrasich
 SIGNATURE: [Signature]

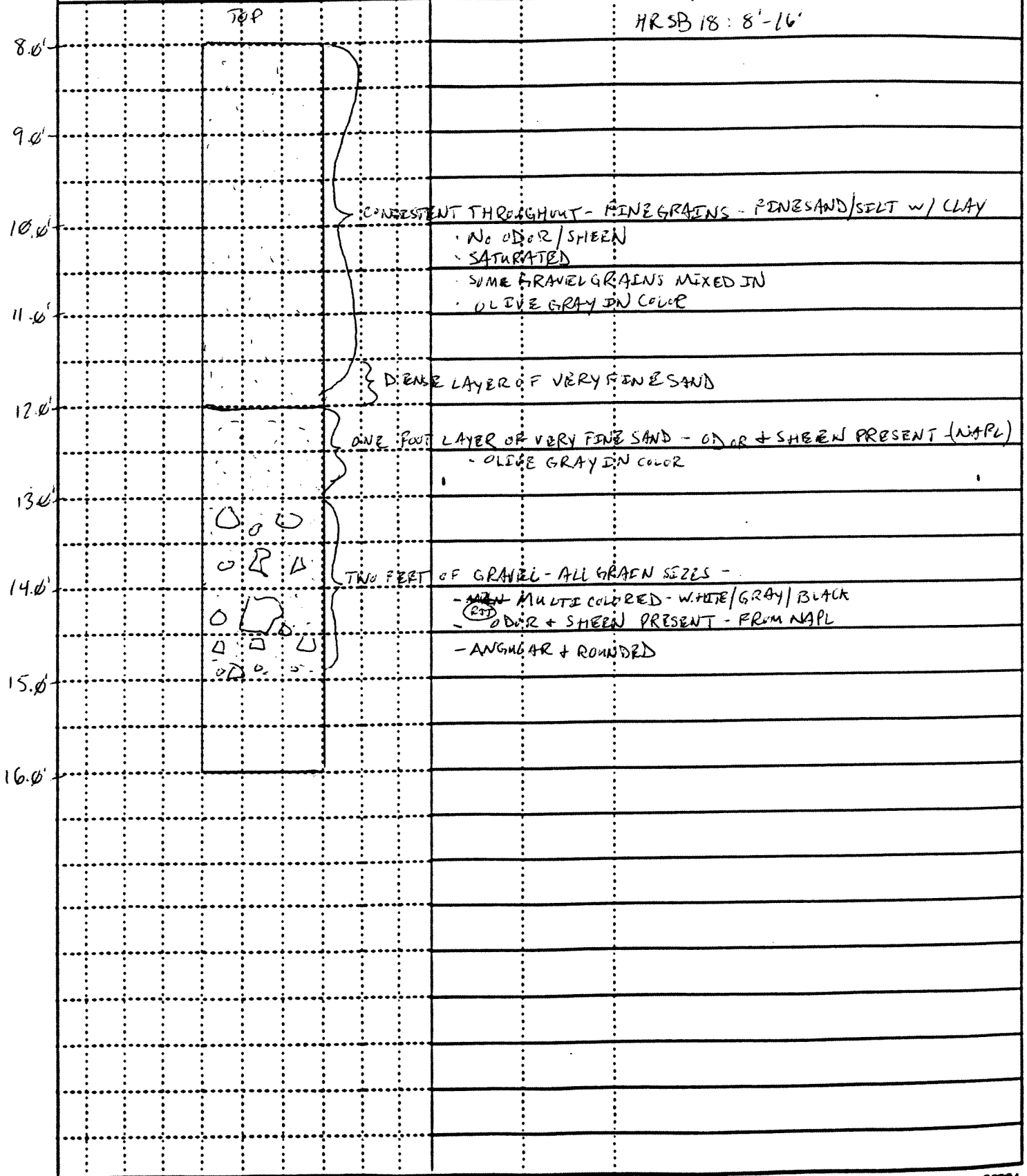


Recovery: 0'-4': 2.2'
 4'-8': 3.0'
 8'-12': 4.0'
 12'-16': 3.0'

GEOLOGICAL Notes and Sketches Form

COMPANY: RF Weston Inc.
 PROJECT: Pittsfield MA renovation
 PROPERTY: GE Plant
 SITE/AREA: CELLG1 - 1

LOCATION NO.: CELLG1 Bank
 DATE: 12/12/00
 LOGGER: [Signature]
 SIGNATURE: Ryan Sandrasiak



GEOLIS, Notes and Sketches Form

COMPANY: RF Weston Inc
 PROJECT: Housatonic River Project
 PROPERTY: GIB Plant
 SITE AREA: CELL 61 / "Shelf"

LOCATION NO.: HR-G15B-19
 DATE: June 14, 2000
 LOGGER: Ryan Soudrasiah
 SIGNATURE: [Signature]



Depth (ft)	Soil Description	Notes	Recoveries
0.0	TOP		
0.0 - 1.0	FINE SAND / ORGANICS NO ODOR OR SHEEN	BROWN	0.4' : 2.9'
1.0 - 2.0	FINE SAND / ORGANICS / NO ODOR OR SHEEN		4'-8' : 3.2'
2.0 - 3.0	FINES - SATURATED SILT + FINE SAND	NO ODOR OR SHEEN GRAY	
3.0 - 4.0			
4.0 - 5.0			
5.0 - 6.0	FINES w/ SOME GRAVEL - SOME CLAY / SILT + FINE SAND	GRAY IN COLOR NO ODOR OR SHEEN	NO SAMPLES
6.0 - 7.0	SAND + GRAVEL - SATURATED	GRAY IN COLOR - ROUNDED + ANGULAR - NO ODOR OR SHEEN	
7.0 - 8.0	FINE SAND - ODOR / LIGHT SHEEN		
8.0 - 9.0	GRAVEL + SAND - ODOR STRONG / HEAVY SHEEN	SUSPECT NAPL	SAMPLE TAKEN HR-G15B-19 8'-10'
9.0 - 10.0	FINE SAND - ODOR / SHEEN		
10.0 - 11.0	SAND + GRAVEL - ODOR + SLIGHT SHEEN		SAMPLE TAKEN HR-G15B-19 10'-12'
11.0 - 12.0			

NOTE: ODOR + SHEEN ACROSS ENTIRE 8'-12' INTERVAL
 2 SAMPLES TAKEN

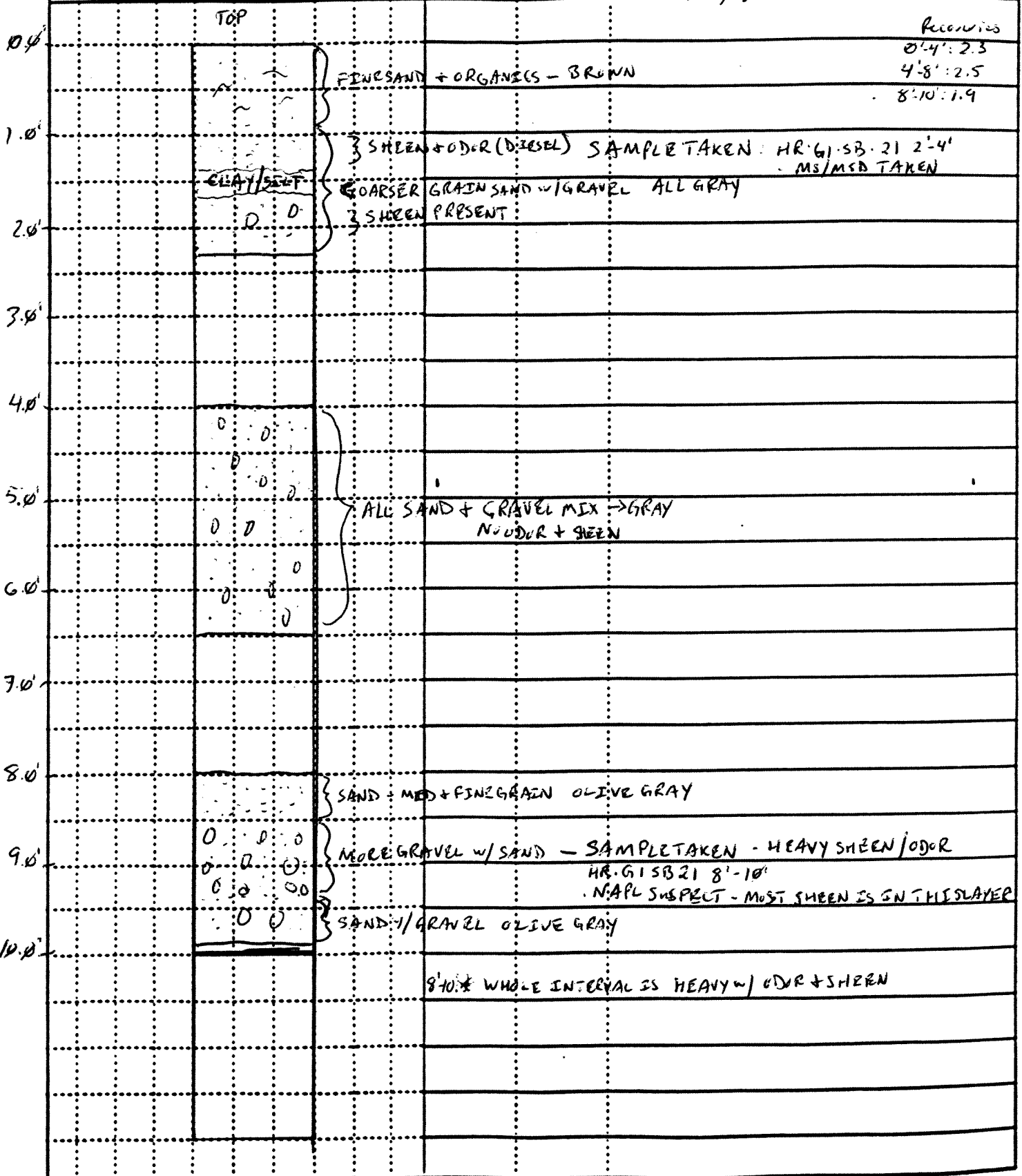
GEOLIS, Notes and Sketches Form

COMPANY:	<u>Roy F. Weston Inc</u>	LOCATION NO.:	<u>HR-G1SB-20</u>	
PROJECT:	<u>Housatonic River Project</u>	DATE:	<u>June 14, 2000</u>	
PROPERTY:	<u>GE Plant</u>	LOGGER:	<u>Ryan Scudvinski</u>	
SITE AREA:	<u>cell G1 - 1 "shelf"</u>	SIGNATURE:	<u>[Signature]</u>	

0.0'	TOP		Recovery
0.4'	} FINES/Organisms - Brown		0.4': 3.1'
1.0'			4.8': 1.8'
1.8'			8.2': 2.0'
2.0'	} FINES - COMBUSTIBLE/SILT FINE SAND GRAY - SOME ODOR 16" DOWN FOR 2"-4" - SAMPLED		
2.4'			
3.0'	} GRAVEL SATURATED GRAY NO ODOR OR SHEEN		
3.4'			
4.0'		NOTE: 16" FROM TOP - STAINING + ODOR - SAMPLE TAKEN HR-G1-SB-20 2'-4'	
4.4'	} 3" CLAY LAYER GRAVEL SATURATED W/ FINES MIXED IN - GRAY		NO ODOR OR SHEEN
5.0'			ROUNDED GRAVEL → SAMPLE TAKEN HR-G1-SB-20 6'-8' DUPLICATE TAKEN
5.4'	} SAME AS ABOVE BUT TURNS BLACK!		
6.0'			
7.0'			
8.0'			
9.0'	} ALL SAND FINE TO MED. GRAIN W/ GRAVEL - NO ODOR OR SHEEN - BROWN + OLIVE IN COLOR		
9.4'			
10.0'			
11.0'			
12.0'			

GEOLIS, Notes and Sketches Form

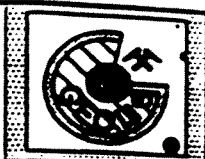
COMPANY:	RF Weston Inc.	LOCATION NO.:	HR-G1-SB-21	
PROJECT:	Housatonic River Project	DATE:	June 14, 2000	
PROPERTY:	GE Plant	LOGGER:	Ryan Jendryak	
SITE AREA:	Cell G1 - 1 "Shell"	SIGNATURE:	<i>[Signature]</i>	



GEOLIS, Notes and Sketches Form

COMPANY: RF Weston Inc.
 PROJECT: Housatonic River Project
 PROPERTY: GE Plant
 SITE AREA: Cell 61 /

LOCATION NO.: HR G1 SB 22
 DATE: June 14, 2000
 LOGGER: Ryan Jendryaszek
 SIGNATURE: [Signature]



<p>0.0'</p> <p>TOP</p> <p>1.0'</p> <p>2.0'</p> <p>2.25'</p>		<p>RECOVERY 2.25/4.5 RET</p> <p>FINE GRAIN MATERIAL - SATURATED - SILT / FINE SAND</p> <ul style="list-style-type: none"> • OLIVE / GRAY IN COLOR • ODOR: / NO SHEEN <p>GRAVEL + SAND - GRAVEL OF ALL SIZES - ROUNDED w/ SOME ANGULAR</p> <ul style="list-style-type: none"> • ODOR: / STAINING • SUSPECT NAPL * SAMPLE TAKEN @ 14" - 16" Interval - SAND OF ALL GS <p>6" - COLOR CHANGE - NOT GRAY LIKE ABOVE BUT MORE OLIVE</p> <p>SAME MATERIAL AS ABOVE - GRAVEL w/ SOME SAND</p> <p>* NOTE: TOP 15" UNCONSOLIDATED MATERIAL SHOULD BE ELIMINATED - AFTER INSPECTING CORE - TOP FOOT SEEMS TO BE ABOVE GRADE</p> <p>* SAMPLE COLLECTED @ 14" - 16" FROM TOP OF CORE @ WHAT APPEARS TO BE MOST CONTAMINATION</p>
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GEOLIS, Notes and Sketches Form

COMPANY: RF Weston Inc.
 PROJECT: Housatonic River Project
 PROPERTY: GE Plant
 SITE AREA: CELL 61 /

LOCATION NO.: HRGISB 23
 DATE: June 14, 2000
 LOGGER: Ryan Jondrasink
 SIGNATURE: [Signature]



	TOP:		RECOVERY: 3.7'/6.0'
0.0'		GRAVEL TOP	
		FINE SAND	NO NO ODOR / SHEEN - OLIVE GRAY IN COLOR - SLIGHT ODOR - SLIGHT BLACK STAIN
		FINE SAND + SELT	NO ODOR / SHEEN
1.0'		MIXED GRAVEL	→ FINE SAND - OLIVE GRAY IN COLOR
		GRAVEL IN LAYER	- ANGULAR MATERIAL NO ODOR OR SHEEN
2.0'		SELT W/ SOME CLAY	OLIVE GRAY IN COLOR - NO ODOR OR SHEEN
3.0'		VERY DENSE LAYER OF FINE SAND / SELT	- DARK GRAY IN COLOR - NO ODOR OR SHEEN
3.7'			
NOTE: TOP TWO (2) FEET SHOULD BE ABOVE THE ACTUAL GRADE ELEVATION NEEDED			
* BECAUSE THE TOP 2' IS GOING TO BE EXCAVATED			
NO SAMPLING OF SUSPECT CONTAMINATION IN THE TOP LAYER OF FINE SAND			
EPA/GE - AGREE			

GEOLIS, Notes and Sketches Form

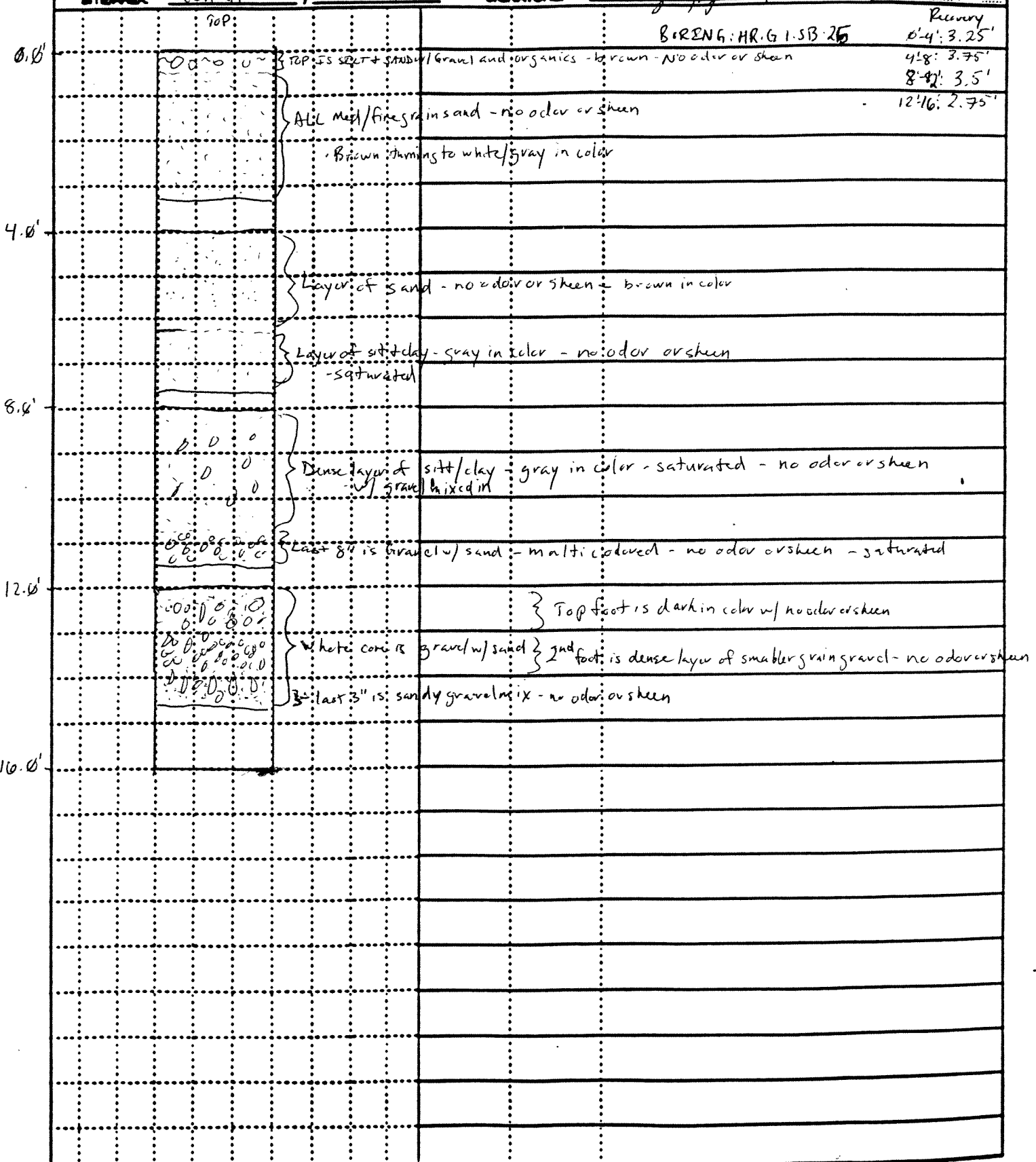
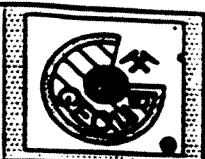
COMPANY:	Roy F. Weston Inc.	LOCATION NO.:	HR.G1.SB.24	
PROJECT:	Housatonic River Project	DATE:	6/23/00	
PROPERTY:	GRE Plant	LOGGER:	Ryan Jendrasiak	
SITE AREA:	Cell G1 / BANK	SIGNATURE:	<i>[Signature]</i>	

0.0'	TOP	Large Cobbles on Surface	BORING HR.G1.SB.24	Recovery: 0'-4" : 3.5' 4'-8" : 2' 8'-12" : 3.75' 12'-16" : 3.0'
	Some Gravel	Layer of fine sand/silt ± 6" no odor/shuen light brown in color		
		Layer of fine/med sined - no odor/shuen Brown in color		
	Crushed stone	concrete possible - white in color - no odor/shuen - angular material	*SAMPLE TAKEN: HR.G1.SB.24 2'-4" (Because of odor below)	
8.0'		All sand - med/fine sand; STRONG ODOR throughout; NO SHEEN	*SAMPLES TAKEN	
		- Light GRAY IN COLOR - Some Iron stain in middle foot		
		- 2 samples taken: one from top foot, one from bottom foot IDs: HR.G1.SB.24 4'-6" + 6'-8"		
		Entire core saturated	* SAMPLES TAKEN	
		Fines - silt/clay; Gray in color; Heavy odor + slight sheen present		
		2 samples taken: one from top 1.85' + one from second 1.85' IDs: HR.G1.SB.24 8'-10" + HR.G1.SB.24 10'-12"		
12.0'	Layer w/ Gravel Angular	Last 6"		
	Fines w/ Gravel mixed in	* Heavy odor and slight sheen	*SAMPLES TAKEN	
		Gray in color	*SAMPLE ID: HR.G1.SB.24 12'-14"	
	ALL SILT + CLAY - dense layer: Gray in color - heavy odor - 6" layer			
	* NAPL PRESENT - Free phase - Gravel w/ silt + clay - 6" layer at bottom		* NAPL SUSPECT - SAMPLE Taken at this 6" - HR.G1.SB.24 14'-16"	
16.0'				
		NOTE: All samples taken over intervals ≈ 4"-6" long not homogenized over entire half of core length FOCUS on areas of suspect NAPL		

GEOLIS, Notes and Sketches Form

COMPANY: RF Weston Inc
 PROJECT: Housatonic River Project
 PROPERTY: GE Plant
 SITE AREA: Cell G1 - 1 BANK

LOCATION NO.: HR.G1.SB.25
 DATE: 6/23/00
 LOGGER: Ryan Sundrasich
 SIGNATURE: [Signature]



GEOLOG Notes and Sketches Form

COMPANY: R.F. Weston Inc **LOCATION NO.:** HR-G1-SB-26
PROJECT: Housatonic River Project **DATE:** 6/23/00
PROPERTY: GRE Plant **LOGGER:** Ryan Jendrasich
SITE AREA: Cell G1 - 1 Bank **SIGNATURE:** [Signature]

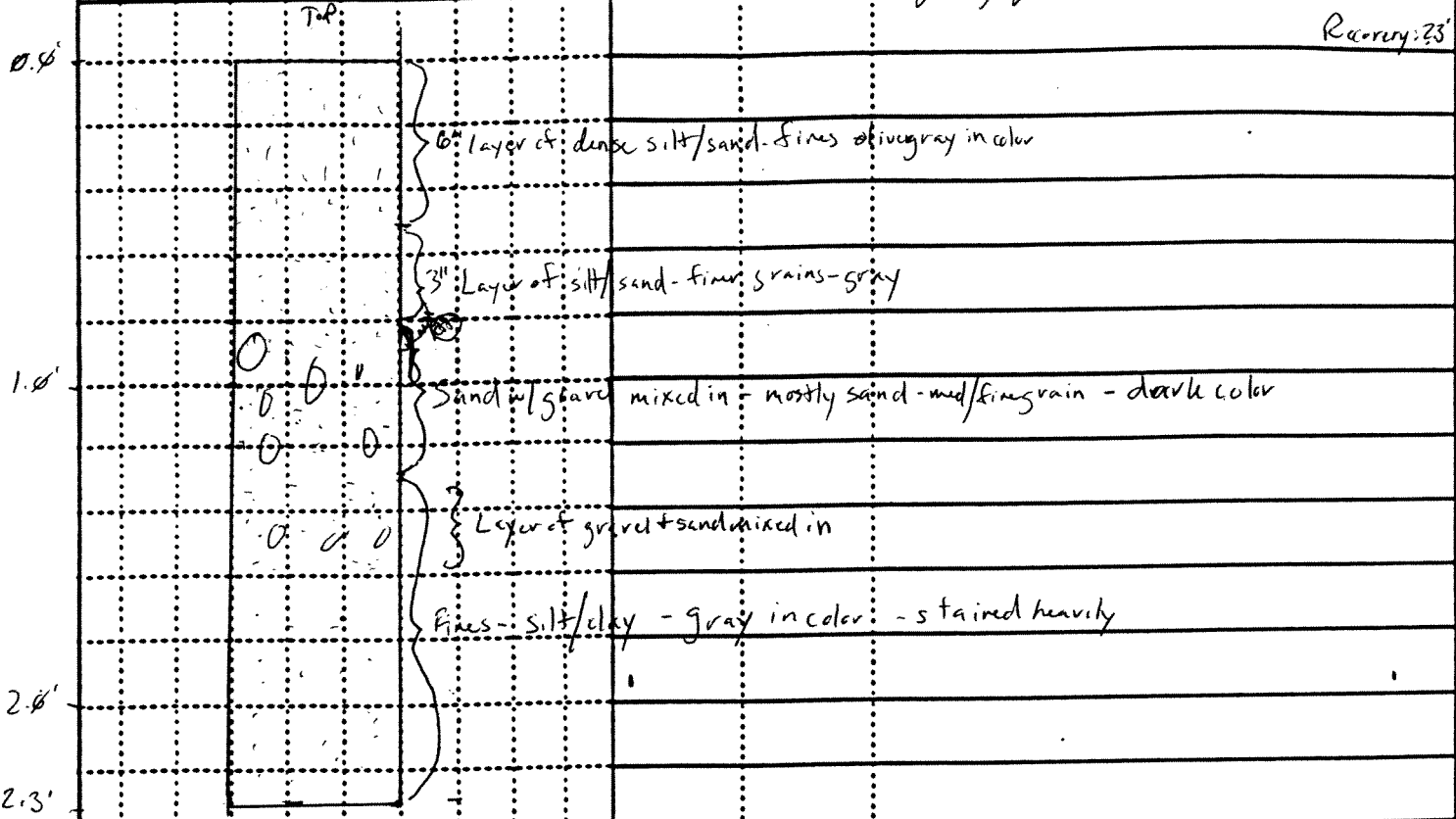


Depth (ft)	Soil Description	Notes	Recovery
0.0	6" organic sand + silt - no odor or sheen - brown 3" silt sand - fresh stain - no odor or sheen		0'-4': 2' 4'-8': 3' 8'-12': 2'
0.0 - 1.0	Fine sand - very consistent - no odor or sheen - olive brown in color		12'-16': 2.5'
4.0	Fine med sand - no odor/sheen - gray/brown		
4.0 - 5.0	Silt/clay layer - dense - saturated - no odor/sheen - gray in color		
5.0 - 6.0	Gravel mixed in silt/clay - gray in color - no odor/sheen - rounded material		
8.0	Clay + silt w/ gravel - slight odor/no sheen - gray - saturated	*SAMPLE TAKEN HR-G1-SB-26 8'-10'	
8.0 - 10.0	Sand w/ gravel - Black in color - strong odor/no sheen - Mostly sand - med/fine grains	*SAMPLE TAKEN HR-G1-SB-26 10'-12'	
12.0	Same as 9'-10' layer above - sand w/ gravel - Black in color - odor (slight) no sheen 1.25' in length	*SAMPLE TAKEN HR-G1-SB-26 12'-14'	
12.0 - 14.0	Gravel sand mix - no odor/no sheen - brown - mix colors		

GEOLIS, Notes and Sketches Form

COMPANY: R.F. Weston Inc.
 PROJECT: Housatonic River Project
 PROPERTY: GE Plant
 SITE AREA: Cell G1 / River Bed

LOCATION NO.: HR. G1-SB-27
 DATE: 6/23/06
 LOGGER: Ryan Jendrasak
 SIGNATURE: [Signature]



NOTE: Lexan tube deteriorated by chemical reaction from substance w/in core - seems to have shattered

* NAPL PRESENT - FREE PHASE THROUGHOUT CORE TUBE

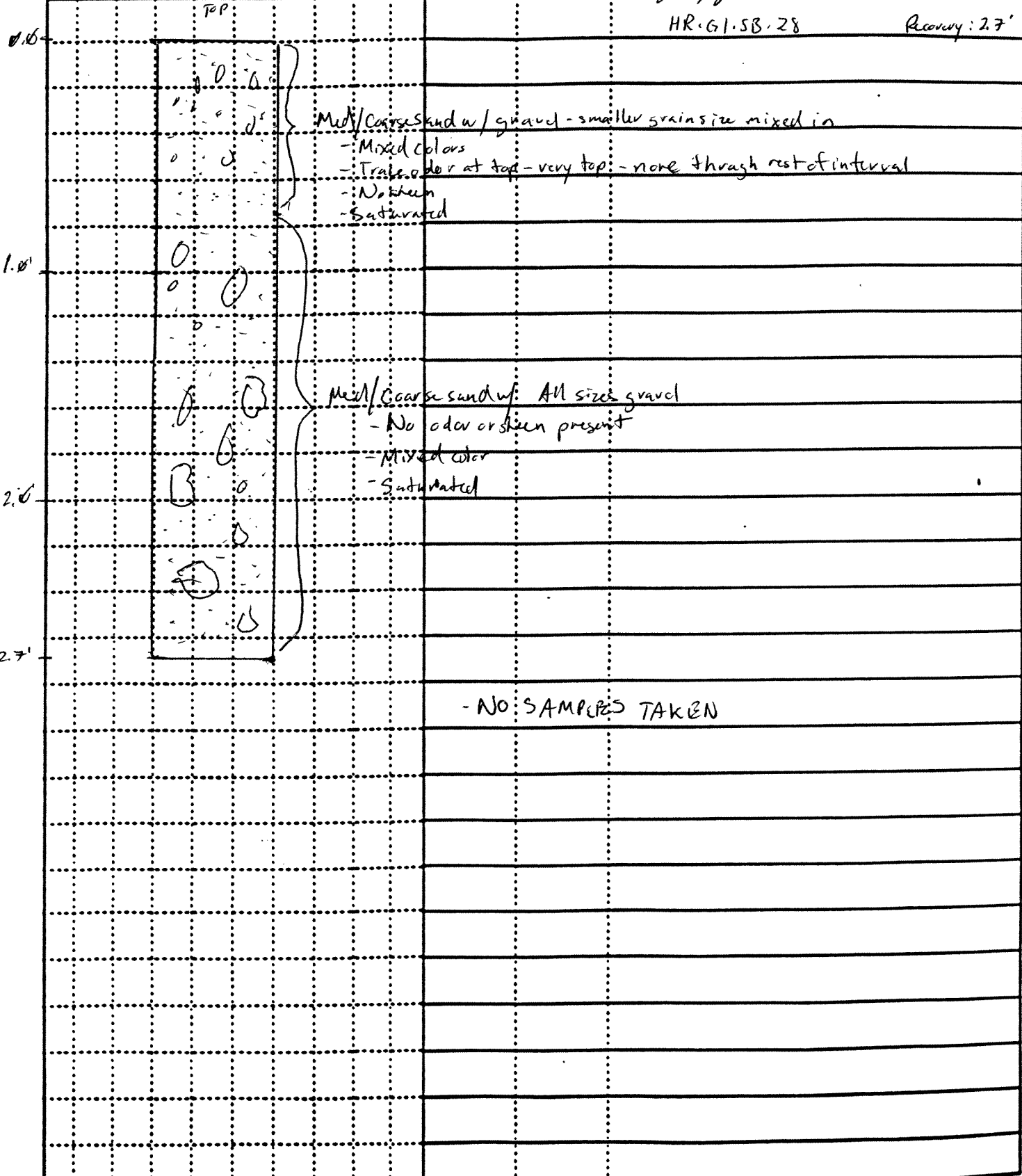
* STRONG ODOR - SHBEN

* SAMPLES TAKEN FROM TOP FOOT PLUS + BOTTOM FOOT PLUS AT AREAS OF WORST CONTAMINATION

GEOLIS, Notes and Sketches Form

COMPANY: Ray F. Weston Inc.
 PROJECT: Housatonic River Project
 PROPERTY: GE Plant
 SITE/AREA: Cell G1 - 1 River Bed

LOCATION NO.: HR-G1-SB-28
 DATE: 6/23/00
 LOGGER: Ryan Jendrasiak
 SIGNATURE: [Signature]



HR-G1-SB-28

Recovery: 2.7'

Med/Coarse sand w/ gravel - smaller grain size mixed in
 - Mixed colors
 - Trace color at top - very top - none through rest of interval
 - No skew
 - Saturated

Med/Coarse sand w/ All sizes gravel
 - No color or skew present
 - Mixed color
 - Saturated

- NO SAMPLES TAKEN

GEOLIS, Notes and Sketches Form

COMPANY:	<u>R F Weston, Inc</u>	LOCATION NO.:	<u>Cell G HR-G1-SB-29</u>
PROJECT:	<u>Pittsfield, MA Monsanto</u>	DATE:	<u>6/28/00</u>
PROPERTY:	<u>GE Plant</u>	LOGGER:	<u>IZABELA ZHISEK</u>
SITE/AREA:	<u>Cell G-1 / HR-SB-29</u>	SIGNATURE:	



			HR-G1-SB-29
			0'-4' Recovery 3.2'
0.0'	TOP	coarse sand, olive drab gray gravel	slight odor, v. wet no sheen
1.0'		coarse sand, gravel some organic	
2.0'		drift: staining	slight odor, wet no sheen
3.0'		fine, very fine sands	material coarser on top thin out towards the bottom.
4.0'	Bottom	olive gray	

* samples collected for analytical 0-2' + 2-3.2'

GEOLIS, Notes and Sketches Form

COMPANY:	RF Weston Inc.	LOCATION NO.:	CELL G2 HR-G2-SB-1
PROJECT:	Housatonic River Project	DATE:	6/16/00
PROPERTY:	GE Plant	LOGGER:	Ryan Jondrasich
SITE AREA:	CELL G2 - 1 BANK	SIGNATURE:	<i>[Signature]</i>



0.0'	TOP			Recovery:
2.0'		5.14% Organics w/ no odor/sheen - brown Gravel - crushed stone Silt/Fine sand w/ some gravel	NO SAMPLES	0'-4': 2' 4'-8': 1.4' 8'-12': 3.3' 12'-15': 0'
4.0'		SAMPLE: - TOP 2" - SILT/FINE SAND - NO ODOR OR SHEEN - NEXT 6" - BLACK - ODOR/SHEEN - GRAVEL W/ SAND MIXED IN → SUSPECT - BOTTOM 8" - FINE SILT/GRAVEL MIX NO ODOR OR SHEEN IS PRESENT		
5.0'			- SAMPLE TAKEN: HR-G2-SB-1 (Duplicate Taken: HR-G2-SB-1) - TAKEN FROM MIDDLE 6" - called 4'-0" (PES)	
8.0'		NO ODOR OR SHEEN - TOP 3" - FINE MESS SAND - GRAY - NO ODOR/SHEEN - NEXT 1' - GRAVEL - SATURATED - GRAY/OLIVE - ANGRY - NEXT 6" - SAND & GRAVEL - SMALL GRAY GRAVEL - GRAY - TO BOTTOM - SAND W/ SOME SILT MAYBE CLAY - GRAY	NO SAMPLES	
12.0'				NO RECOVERY - SEE NOTE
13.0'			*NOTE: MATERIAL FELL OUT OF LEXANE BUT STILL IN CORE TUBE - NO ODOR OR SHEEN - ALL MED SAND - GRAY IN COLOR	

GEOLIS, Notes and Sketches Form

COMPANY:	R F Weston Inc.	LOCATION NO.:	HR-G2-SB-2	
PROJECT:	Housatonic River Project	DATE:	6/16/00	
PROPERTY:	FE Plant	LOGGER:	Ryan Jendrasiah	
SITE/AREA:	CELL G2 / BANK	SIGNATURE:	<i>[Signature]</i>	

0.0'	TOP	}	TOP 2" - Organics, s.H. w/ large gravel ALL SAND: Fine to med. grain w/ pockets of silt NO ODOR OR SHEEN LIGHT BROWN	Recovery 0.4' : 3' 4.8' : 8.5' 8.12' : 4' 12' - 14.5' -
4.0'			FINE - MED. GREEN SAND - LIGHT BROWN → GRAY NO ODOR OR SHEEN	
8.0'		}	FINE SAND - w/ slight prevol. odor / no sheen - SAMPLE TAKEN: 6'-8' ID: HR-G2-SB-2 - Gray to olive - SAMPLE TAKEN OVER LAST 15' OF CORE (Duplicate: HR-G2-SB-DUP-2 + MS/MSD: SAME AS ^{THIS} ORIGINAL)	
12.0'			ALL-SAND + silt - fine grain material - saturated - gray throughout - some clay at last 6" of interval NO ODOR OR SHEEN PRESENT	
14.5'			→ NO RECOVERY - SEE NOTE * NOTE: SAMPLE FOR 12'-14.5' NOT IN LEXAN BUT STAYED IN CORE TUBE - MATERIAL IS FINE SAND/SILT - GRAY - THEN MOVES INTO GRAVEL SAND MIX - SATURATED - NO ODOR OR SHEEN IN ANY MATERIAL	

GEOLIS, Notes and Sketches Form

COMPANY:	<u>RF Western Inc</u>	LOCATION NO.:	<u>HR-G2-SB-3</u>
PROJECT:	<u>Mausa River Project</u>	DATE:	<u>6/10/00</u>
PROPERTY:	<u>GIE Plant</u>	LOGGER:	<u>Ryan Jendrasiah</u>
SITE AREA:	<u>CELL G2 / BANK</u>	SIGNATURE:	<u>[Signature]</u>



0.0'	TOP		<ul style="list-style-type: none"> - TOP IS ORGANICS + SAND + FINE - BROWN - Rest of core is all fine/med sand w/ some silt - getting larger in grain size as you go down the core - gray in color - NO ODOR/SHEEN - NO SAMPLES 	<p>Recovery</p> <p>0'-4' 2.5'</p> <p>4'-8' 3.0'</p> <p>8'-12' 4.0'</p> <p>12'-14.5' 3.25'</p>
4.0'		}	<ul style="list-style-type: none"> - TOP foot is fine sand dense layer no odor/sheen - gray - 2nd foot is silt w/ iron stain - gray w/ orange - no odor/sheen - 3rd foot is very fine sand/silt - gray - last 6" has odor no sheen 	
8.0'			<ul style="list-style-type: none"> - Entire length of core is fines - very fine to fine sand w/ silt - Mainly gray in color w/ more olive coloring @ bottom - NO ODOR OR SHEEN 	
12.0'		}	<ul style="list-style-type: none"> - ALL SAND/SILT - FINES - DENSE LAYER - SATURATED AT THE RP -> 2.5 feet - NO ODOR OR SHEEN - GRAY/OLIVE IN COLOR 	
14.5'				

GEOLIS Notes and Sketches Form

COMPANY:	R.F. Weston Inc.	LOCATION NO.:	HR-G2-SB-4
PROJECT:	Houstonia River Project	DATE:	6/16/00
PROPERTY:	GE Plant	LOGGER:	Ryan J. Janssick
SITE AREA:	CELL G2 - 1 BANK	SIGNATURE:	<i>[Signature]</i>



0.0'	TOP		<ul style="list-style-type: none"> - TOP FOOT - Dense brown silt/fine sand - no odor/sheen - Next 6" - Silt w/ sand - dense layer - light brown - no odor/sheen - Next 6" - Sand w/ silt - no odor/sheen - Last 6" - Med grain sand - no odor/sheen 	Recovery: 0-4' : 2.5' 4-8' : 3.2' 8-12' : 4.0' 12-14.5' : 3.5'
4.0'		} Lst. Brown } ALL SAND - w/ coarser sand in middle part - gray/var. } No odor no sheen } Gray		
8.0'		} SAND - 2' - Gray / No odor/sheen - med/fine grain		
12.0'		} Silt + dense layer - cl. brown - no odor/sheen - slight stain at top of layer } Fine sand - brown/gray - no odor or sheen		
14.5'		} some staining @ 13.5' } slight odor @ 1st 1.5' / No sheen -- SAMPLE TAKEN ID: HR-G2-SB-4 12'-14.5'		

CLIENT/SUBJECT EPA/AEOE Housatonic River/GE SITE W.O. NO. _____

TASK DESCRIPTION Piezometer Installation Oversight TASK NO. _____

PREPARED BY IJ DEPT _____ DATE 6/28/00

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

CELL G1/GE PLANT

6/28/00

Piezometers: P1: Referenced to soil boring locations 16 & 18

✓ #1 * start screening 963 or 15' drive to 962.25 or 15.75'

ID: HR-G1-PZ1

- 15-11' screened
- 11-10' gap (solid PVC)
- 10-6' screened
- 6'-0' PVC riser

}

2 screens
1 PVC riser

* Elev. 978 was chosen to be the reference for the top of the piezometer thinking that the location of it falls bet. soil boring 18 (elev. 978.72) + 16 (elev. 976.92)

✓ #2 P2: Referenced to soil boring locations 17, 15, 24

* start screening 962.25 or 16' drive to 961.5 or 16.75'

ID: HR-G1-PZ-2

* we used elevation from soil boring #24 (978.29) piezometer location is about the same level as that soil boring.

- 16-12' - screened
- 12-11' - gap (solid PVC)
- 11-7' - screened
- 7-6' - gap (solid PVC)
- 6-2' - screened
- 2-0' - PVC riser

}

3 screens inst. in order to be able to screen interval 6-2' which we felt should be monitored.

P3: Referenced to soil boring locations 13 & 26

✓ #3 * start screening 964 or 14' drive to 963.25 or 14.75'

ID: HR-G1-PZ-3

- 14-10' screened
- 10-9' gap (solid PVC)
- 9'-5' screened
- 5'-0' PVC riser

}

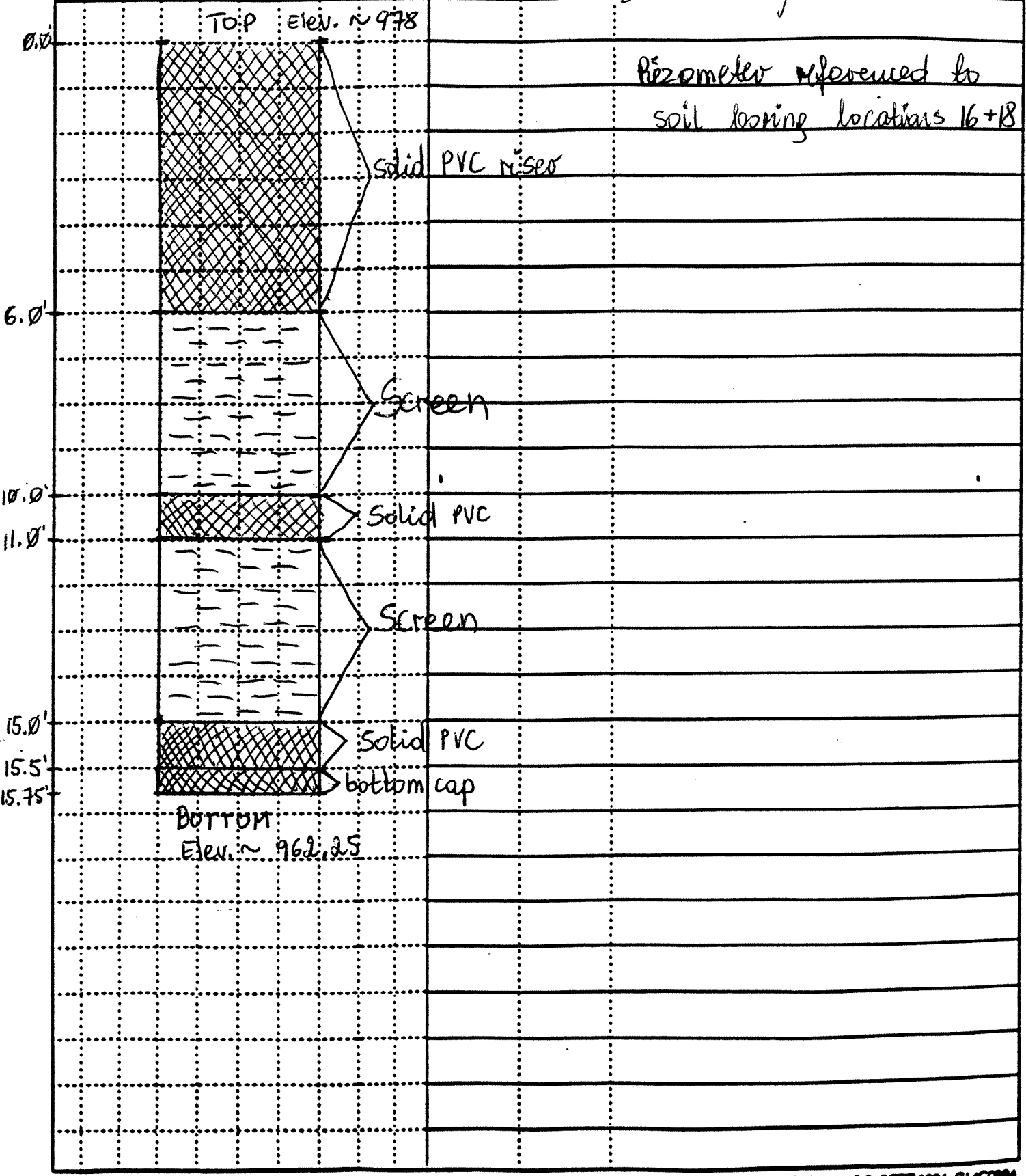
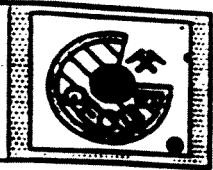
* we chose elevation 978 as a reference for choosing the depth we determined that based on soil boring 13 (elev. 977.73) + 26 (elev. 978.01)

We chose to begin screening @ 14' because we wanted to be able to monitor 6-5' which was described in previous notes as containing suspect NAPL.

GEOLIS Notes and Sketches Form

COMPANY: R. F. WESTON
 PROJECT: Hudson River Project
 PROPERTY: GE SITE
 SITE AREA: cell G.1 1

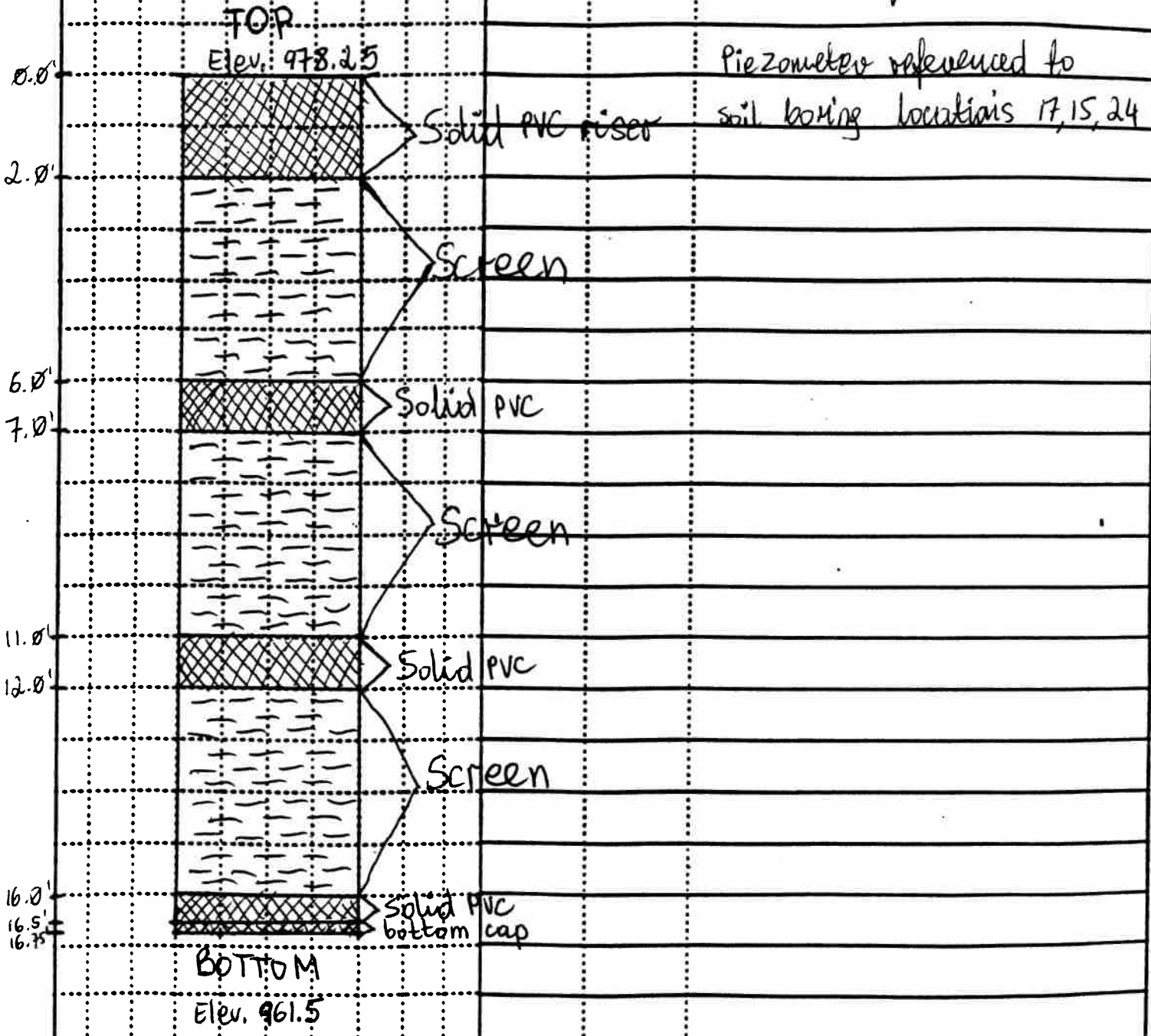
LOCATION NO.: HR-G1-P21
 DATE: 6/28/00
 LOGGER: JZ
 SIGNATURE: Trabille P. Lynde



GEOLIS, Notes and Sketches Form

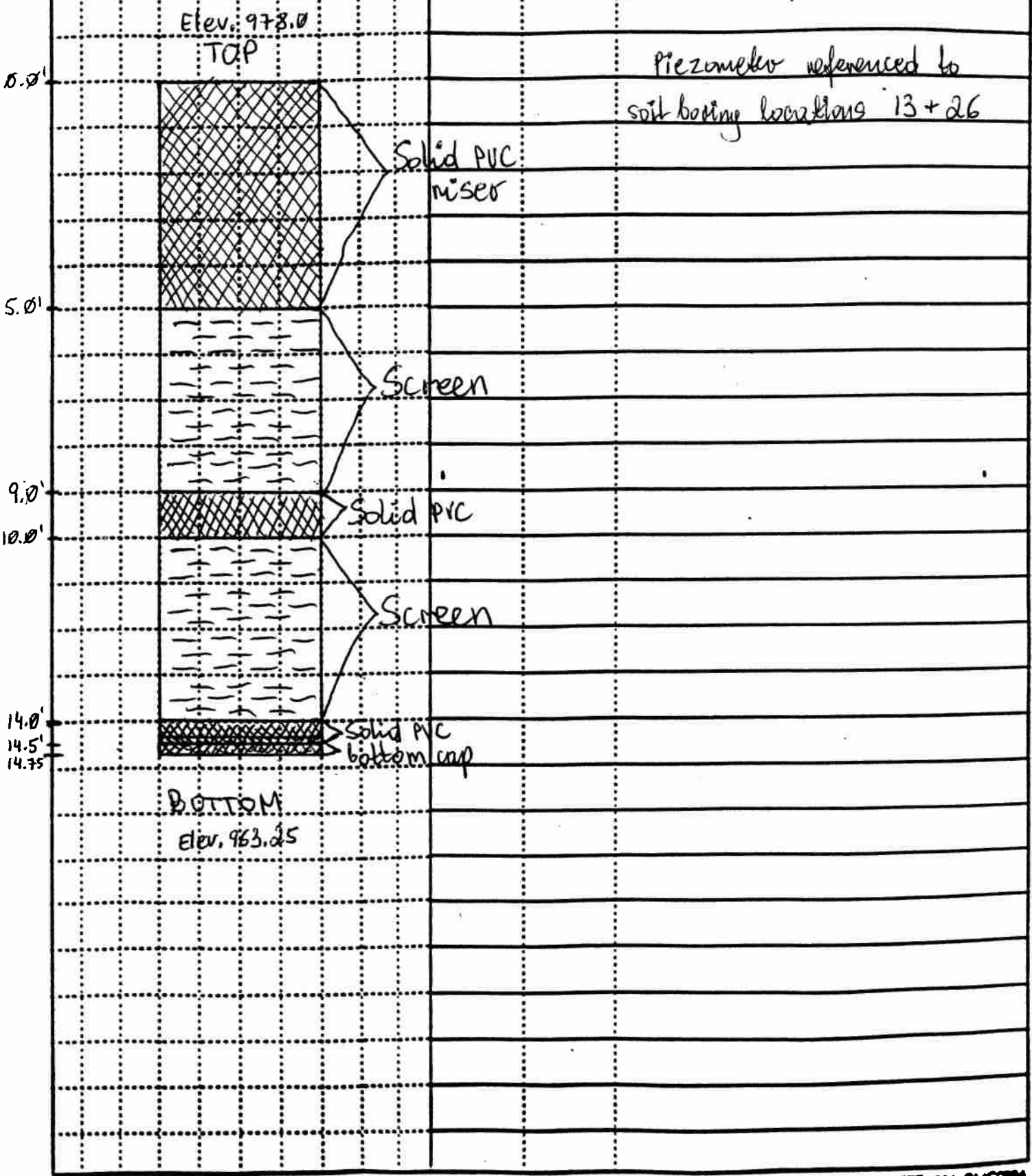
COMPANY: R. F. WESTON
 PROJECT: Hovsakovice River Project
 PROPERTY: GE SITE
 SITE AREA: Cell G-1 1

LOCATION NO.: HR-G1-PZ2
 DATE: 6/28/00
 LOGGER: JZ
 SIGNATURE: Trabekle P. Zemek



GEOLOGICAL Notes and Sketches Form

COMPANY:	R. F. WESTON	LOCATION NO.:	HR-G1-P23
PROJECT:	Housatonic River Project	DATE:	6/28/00
PROPERTY:	GE SITE	LOGGER:	JZ
STREAM:	Cell G4 1	SIGNATURE:	Judith P. Zupalla



CLIENT/SUBJECT EPA/AEOE Housatonic River/GE SITE W.O. NO. _____

TASK DESCRIPTION Piezometer Installation Oversight TASK NO. _____

PREPARED BY IZ DEPT _____ DATE 6/28/00

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

CELL G-1/GE PLANT

6/28/00

Piezometers: P1: Referenced to soil boring locations 16 + 18

✓ #1 * start screening 963 or 15' drill to 962.25 or 15.75'

ID: HR-G1-PZ1

- 15-11' screened
- 11-10' gap (solid PVC)
- 10-6' screened
- 6'-0' PVC riser

}

2 screens
1 PVC riser

* Elev. 978 was chosen to be the reference for the top of the piezometer thinking that the location of it falls bet. soil boring 18 (elev. 978.73) + 16 (elev. 976.82)

✓ #2 P2: Referenced to soil boring locations 17, 15, 24

* start screening 962.25 or 16' drill to 961.5 or 16.75'

ID: HR-G1-PZ-2

* we used elevation from soil boring #24 (978.29) piezometer location is about the same level as that soil boring.

- 16-12' - screened
- 12-11' - gap (solid PVC)
- 11-7' - screened
- 7-6' - gap (solid PVC)
- 6-2' - screened
- 2-0' - PVC riser

}

3 screens inst. in order to be able to screen interval 6-2' which we felt should be monitored.

P3: Referenced to soil boring locations 13 + 26

✓ #3 * start screening 964 or 14' drill to 963.25 or 14.75'

ID: HR-G1-PZ-3

- 14'-10' screened
- 10-9' gap (solid PVC)
- 9'-5' screened
- 5'-0' PVC riser

}

* we chose elevation 978 as a reference for choosing the depth we determined that based on soil boring 13 (elev. 977.73) + 26 (elev. 978.01)

We chose to begin screening @ 14' because we wanted to be able to monitor 6-5' which was described in previous notes as containing suspect NAPL.