## Pelton, Jason M (DEC)

From: Hannon, ED [US] (AS) <Edward.Hannon@ngc.com>

**Sent:** Tuesday, May 11, 2021 1:23 PM

**To:** Pelton, Jason M (DEC)

Cc: Wolfert, Mike

**Subject:** FW: RW-21 Area Monitoring Wells - 13 - 14 - 15 - 16-OU3

Attachments: Table 2A\_ Well Survey and Construction Details.pdf; MW-14 Well Construction Log.pdf; MW-15 Well

Construction Log.pdf; MW-16 Well Construction Log.pdf; MW-13 Well Construction Log.pdf; RW-21 \_VP-16.pdf; RW-21\_VP-13.pdf; RW-21\_VP-14.pdf; RW-21\_VP-15.pdf; RW-21\_VP-16 geophysical log.pdf; RW-21\_VP-13 Geophysical Log.pdf; RW-21\_VP-14 Geophysical Log.pdf; RW-21\_VP-15

Geophysical Log.pdf

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### Jason

Attached are the well construction logs, soil logs, geophysical logs, and a table summarizing well construction and survey details that you requested for NG OU3 Monitoring Wells RW-21-MW-13, 14, 15, and 16.

These wells were not part of the original Hot Spot drilling (they were installed later) and therefore, were not included in the PDI report for the OU3 Hot Spot.

Let us know if you have any questions or require any additional information.

Regards

Ed

From: Pelton, Jason M (DEC) < <u>jason.pelton@dec.ny.gov</u>>

Sent: Friday, May 7, 2021 7:57 AM

To: Hannon, ED [US] (AS) < <a href="mailto:Edward.Hannon@ngc.com">Edward.Hannon@ngc.com</a>; Wolfert, Mike < <a href="mailto:Mike.Wolfert@arcadis.com">Mike.Wolfert@arcadis.com</a>>

Subject: EXT: RW-21 Area Monitoring Wells - 13 - 14 - 15 - 16

#### Ed and Mike:

Do you know if there was a separate report that captured the drilling and installation of monitoring wells RW-21-MW-13, RW-21-MW-14, RW-21-MW-15, and RW-21-MW-16? I am looking for the boring logs, monitoring well construction details, and the geophysical logs for these wells. I am not seeing any documentation on these wells in the 2/2016 PDI report.

If there was a separate report for these borings/wells could you please send me a copy. If there was no report, could you just send me copies of the boring logs, monitoring well construction details, and the geophysical logs for these wells?

Thanks for the help and call with any questions.

### Jason Pelton, P.G.

Project Manager, Division of Environmental Remediation

### **New York State Department of Environmental Conservation**

625 Broadway, Albany, NY 12233

P: (518) 402-9478 | C: (518) 669-0424 | F: (518) 402-9773 | jason.pelton@dec.ny.gov







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Table 2A Monitoring Well Construction Details, RW-21 Project Area, **Northrop Grumman Systems Corporation** Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.



Well Identification	Casing/Screen Material <sup>(1)</sup>	Well Diameter (in)	Surface Casing	Land Surface Elevation (ft msl)	Measuring Point Elevation <sup>(2)</sup> (ft msl)	Monitoring Well Screened Interval (ft bls)	Monitoring Well Screened Elevation <sup>(3)</sup> (ft msl)	Total Depth (ft bls)	Installation Date	Easting	Northing
RW-21_MW-1	Sch. 80 PVC/SS	4	FM	101.20	101.29	615 - 625	-513.71523.71	630	9/2/2015	208881.8951	1127553.4758
RW-21_MW-2	Sch. 80 PVC/SS	4	FM	96.30	96.28	600 - 610	-503.72513.72	615	9/10/2015	208791.7513	1128067.7396
RW-21_MW-3-1	Sch. 80 PVC/SS	4	FM	97.30	97.37	556 - 566	-458.63468.63	568	3/23/2015	208817.2785	1128668.6002
RW-21_MW-3-2	Sch. 80 PVC/SS	4	FM	97.50	97.53	595 - 605	-497.47507.47	610	6/5/2015	208825.3031	1128671.0207
RW-21_MW-4	Sch. 80 PVC/PVC	4	FM	102.30	102.31	369 - 384	-266.69281.69	389	12/2/2014	209294.5626	1129040.9556
RW-21_MW-5-1	Sch. 40 PVC/SS	2	FM	96.80	96.84	300 - 310	-203.16213.16	315	5/20/2015	207865.1152	1127799.8648
RW-21_MW-5-2	Sch. 40 PVC/SS	2	FM	96.80	96.84	560 - 570	-463.16473.16	575	5/20/2015	207865.1824	1127799.6306
RW-21_MW-6	Sch. 80 PVC/SS	4	FM	94.00	94.02	604 - 624	-509.98529.98	629	7/8/2015	208130.2012	1128363.4712
RW-21_MW-7	Sch. 80 PVC/PVC	4	FM	96.60	96.57	580 - 590	-483.43493.43	595	3/19/2015	208050.2982	1128845.8452
RW-21_MW-8	Sch. 80 PVC/SS	4	Stick Up	96.60	98.51	460 - 470	-361.49 -371.49	475	11/21/2015	207946.307	1129530.4140
RW-21_MW-9	Sch. 80 PVC/PVC	4	FM	91.60	91.60	630 - 640	-538.40548.40	645	4/23/2015	207306.0451	1128312.9746
RW-21_MW-11	Sch. 80 PVC/PVC	4	FM	94.30	94.35	638 - 648	-543.65553.65	653	3/25/2015	207341.3501	1128811.6969
RW-21_MW-12-1	Sch. 40 PVC/SS	2	FM	74.80	74.69	415 - 425	-340.31350.31	430	10/23/2015	207768.9912	1130115.4222
RW-21_MW-12-2	Sch. 40 PVC/SS	2	FM	74.80	74.69	590 - 600	-515.31525.31	605	10/23/2015	207768.8816	1130115.6128
RW-21_MW-13	Sch. 80 PVC/SS	4	FM	87.40	87.48	716 - 726	-628.52638.52	731	9/1/2016	205575.3196	1129021.8756
RW-21_MW-14	Sch. 80 PVC/SS	4	FM	85.10	85.26	630 - 640	-544.74554.74	645	10/11/2016	206626.7755	1129583.3380
RW-21_MW-15	Sch. 80 PVC/SS	4	FM	92.00	92.20	676 - 686	-583.80593.80	691	10/10/2016	206379.8848	1128831.0956
RW-21_MW-16	Sch. 80 PVC/SS	4	FM	89.40	89.46	636 - 646	-546.54556.54	651	10/11/2016	206381.8293	1129323.7567

#### Notes and Abbreviations:

Elevations were surveyed to North American Vertical Datum (NAVD) (1988). Northing and easting surveyed to North American Datum (NAD) (1983).

(1) All monitoring wells have a 0.01 in. slot screen openings. (2)

Measuring point elevation is top of inner casing.

(3) Screen elevation calculated using measuring point elevation.

ft bmp Feet below measuring point Feet relative to mean sea level ft msl

Sch. Schedule

PVC Polyvinyl chloride Stainless steel SS FM Flush mount



## WELL CONSTRUCTION LOG (Unconsolidated)

8" Flushmount Manhole	Project Northrop Grumman OU3 Well R	\\\_21 \\\\\\_13					
LAND SURFACE		VV-21_IVIVV-13					
ИИ	Town/City Bethpage, NY						
	County Nassau State	NY					
8 inch diameter drilled hole	Permit No. NA						
A B	Land-Surface (LS) Elevation and Datum:						
	Not surveyed yet feet S	Surveyed					
Well casing,	E	stimated					
4 inch diameter,	Installation Date(s) 9/1/2016						
И И ———	Drilling Method Mud Rotary						
Backfill							
X Grout Cement	Drilling Contractor Uni-Tech Drilling						
	Drilling Fluid Portable Water and Ber	ntonite					
2 10 ft*							
Notation Makes	Development Technique(s) and Date(s)						
Bentonite X slurry							
676 ft* pellets	Air-lifiting with surge block,						
686ft*	followed by pump & surge using submersible pump	p					
#0 sand							
696 ft*	Fluid Loss During Drilling~500	gallons					
716 ft*	Water Removed During Development 7000	gallons					
Wall Quarter	Static Depth to Water 50.53 fe	et below M.P.					
Well Screen.  4 inch diameter	Pumping Depth to Water52.53fe	et below M.P.					
Sch 80 , 20 slot Stainless Steel	Pumping Duration 9 hours						
	Yieldgpm Date	9/8/2016					
Gravel Pack	Specific Capacitygpm/ft						
X Sand Pack #1 Sand							
Formation Collapse	Well Purpose Monitoring Well						
726 ft*							
731 ft*							
740 ft*	Remarks Borehole was drilled to 945ft.						
<del></del>	Backfilled from 945 ft up to 920 ft with high solids b						
Measuring Point is	chips; from 920 ft to 770ft using #1 sand; from 770-	-/50 tt with					
Top of Well Casing Unless Otherwise Noted.	high solids bentonite chips; 750ft to 740ft with #1 sa	and.					
* Depth Below Land Surface	Prepared by Xuan Xu						

## **WELL CONSTRUCTION LOG**

(Unconsolidated)



	Project Northrop Grumn	man OU3	Well RW-21_I	MW-14				
LAND SURFACE	Town/City	Bethpage, NY						
ЯЯ	County Nassau		State NY	,				
8.5 inch diameter	Permit No. NA							
drilled hole	Land-Surface (LS) Elevation and Datum:							
<b>4 8</b>	Not surveyed yet	feet	Surveye	d				
Well casing,			Estimate	d				
4inch diameter,	Installation Date(s)	0/18/2016 - 10	/21/201					
Sch80 PVC	Drilling Method	Mud Rotary						
Backfill								
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Drilling Contractor	Uni-Tech Drill	ing					
99	Drilling Fluid	Bentonite Sar	d					
ft*								
#00 Sand Slurry	Development Technique(s) and Date(s)							
590 ft* ☐pellets	Pump and srge 10/24/16 - 10/26/16							
#0 sand	Tamp and orge 10/2 // 10	10/20/10						
—————————————————————————————————————								
ft*	Fluid Loss During Drilling		nal	lons				
630 ft*	Water Removed During D							
	_	43						
Well Screen.								
4 inch diameter Stainless , 0.02 slot	Pumping Depth to Water			W IVI.P.				
V-Wire	Pumping Duration		ours					
	Yield	_0,	ate					
Gravel Pack	Specific Capacity	gr	om/ft					
X Sand Pack #1 Sand								
Formation Collapse	Well Purpose	Monitoring W	ell					
C40 #*								
640 ft*								
645 ft*	Remarks							
IL								
Measuring Point is								
Top of Well Casing Unless Otherwise Noted.								
* Depth Below Land Surface	Prepared by	Steven Lama	nte					



# WELL CONSTRUCTION LOG (Unconsolidated)

8" Flushmount Manhole	
LAND SURFACE	Project Northrop Grumman OU3 Well RW-21_MW-15
LAND SURFACE	Town/CityBethpage, NY
ИИ	County Nassau State NY
8 inch diameter	Permit No. NA
drilled hole	Land-Surface (LS) Elevation and Datum:
	Not surveyed yet feet Surveyed
Well casing,	Estimated
4 inch diameter,	<u>——</u>
Sch80 PVC	Drilling Method Mud Rotary
Backfill	
⊠Grout <u>Cement</u>	Drilling Contractor Uni-Tech Drilling
99	Drilling Fluid Portable Water and Bentonite
35 ft*	
	Development Technique(s) and Date(s)
Bentonite X slurry	
616 ft* pellets	Air-lifiting with surge block,
#00 sand 636_ft*	followed by pump & surge using submersible pump
<b>←</b> #0 sand	
656ft*	Fluid Loss During Drilling ~300gallons
676 ft*	Water Removed During Development 4750 gallons
Well Screen.	·
4 inch diameter Sch 80 . 20 slot	Pumping Depth to Water 52.76 feet below M.P.
Stainless Steel	Pumping Duration16 hours
	Yieldgpm Date 8/16-8/17/16
Gravel Pack	Specific Capacity 7.7 gpm/ft
X Sand Pack #1 Sand	
Formation Collapse	Well Purpose Monitoring Well
I omation collapse	World dipose Monitoring Well
686ft*	
691 ft*	
740 ft*	Remarks Borehole was drilled to 840ft bls.
	Backfilled from 840ft to 780ft with #1 sand; from 780ft to 740ft
Measuring Point is	with high solids bentonite chips; from 740ft to 700ft with #1
Top of Well Casing Unless Otherwise Noted.	sand.
* Depth Below Land Surface	Prepared by Kevin Swiadek



## WELL CONSTRUCTION LOG (Unconsolidated)

8" Flushmount Manhole		
LAND SURFACE	Project Northrop Gru	umman OU3 Well RW-21_MW-16
N N	Town/City	Bethpage, NY
ИИ	County Nassau	State NY
8inch diameter	Permit No. NA	A
drilled hole	Land-Surface (LS) Elev	vation and Datum:
0 0	Not surveyed yet	
Well casing,		Estimated
ИИ	Installation Data(a)	<u> </u>
4 inch diameter, Sch80 PVC	Installation Date(s)	
□Backfill	Drilling Method	Mud Rotary
X Grout Cement	Drilling Contractor	Uni-Tech Drilling
99 -	Drilling Fluid	Portable Water and Bentonite
20 ft*		
1 23 1	Development Technica	(a) and <b>D</b> ata(a)
Bentonite X slurry	Development Techniqu	ue(s) and Date(s)
576 ft* pellets	Air-lifiting with surge blo	ock,
<b>←</b> #00 sand		
<u></u>	followed by pump & su	urge using submersible pump
#0 sand 616 ft*	-	
636 ft*	Fluid Loss During Drilling	nggallons
030 11	Water Removed During	g Development gallons
	Static Depth to Water	feet below M.P.
Well Screen.  4 inch diameter	Pumping Depth to Wat	ter feet below M.P.
Sch 80 , 20 slot		
Stainless Steel	Pumping Duration	hours
	Yield	gpm Date
Gravel Pack	Specific Capacity	gpm/ft
X Sand Pack #1 Sand		
Formation Collapse	Well Purpose	Monitoring Well
Tormation Collapse	weii i dipose	Worldoning Well
646 ft*		
GE4 #*		
651 ft*	Remarks Bo	orehole was drilled to 760ft.
	Backfilled from 760 ft u	up to 740 ft with high solids bentonite
Monouring Point is	chips; from 740 ft to 65	offt using #1 sand.
Measuring Point is Top of Well Casing		
Unless Otherwise Noted.  * Depth Below Land Surface	Prepared by	Kate Duffy/Patricia Prezorski



Well/Boring	RW-21	_VP-13	Proje	ct Name and No.		NY001496.2515					
Site Location			Bethpage, N	Υ		Drilling Started			Drilling Completed		
Total Depth	Drilled	947	feet	Hole Diameter	8	inches	Sampling	Interval		feet	
Length and of Sampling		2ft	/ 2 in	-	Туре	of Samplin	g Device		Split spoon		
Drilling Met	hod	Mud	-rotary	_		Drilling l	Fluid Used		Portable water and be	entonite	
Drilling Con	tractor	Uni-Ted	h Drilling	Driller				Helper			
Prepared By					Hamme Weigh			_1101001	Hammer Drop	inches	
	e Depth land surface)	Sample Recovery	Time/Hydraulid Pressure or Blows per 6	:							
From	То	(feet)	inches			Sample D	escription			PID (ppm)	
20	25	N/A		-	brounde	ed, some	(21-35%),		oorly-sorted, low -20%), Very Coarse		
25	30	N/A		cuttings, some	(21-35) tle (10-2	%), granı 20%), Ver	ıle, poorly y Coarse	y-sorted, Sand, po	rounded, Auger low sphericity, orly-sorted, low		
30	35	N/A		(21-35%), very	coarse Coarse	sand, po	oorly-sorte	ed, low s	Auger cuttings, some phericity, subangular, sphericity, angular,		
35	40	N/A		Same as above	e, Auge	cuttings	,,,, ,,,,				
40	45	N/A		Auger cuttings 20%), small pe				rted, sul	orounded, little (10-		
45	55	N/A		Medium Pebble subrounded, s							
55	60	N/A		-					36-50%), granule, ledium Pebble, Coarse		
60	65	N/A		Medium Sand, subrounded, li		-	-	•	6), coarse sand,		
65	70	N/A		Coarse Sand, Granule, suba		•	0%), med	ium sand	, round, little (10-20%),		
70	75	N/A		Auger cuttings some (21-35%)				•	%), fine sand, round,		
75	80	N/A		Auger cuttings sand, subrour			and, angu	ılar, som	e (21-35%), medium		
80	85	N/A			tle (10-2	20%), Sm			(36-50%), granule, jular, trace (< 10%),		
85	90	N/A		Medium Sand, subrounded, s subrounded, t	ome (21	-35%), V	ery Coars	e Sand,			
90	95	N/A		medium sand,	poorly and, po	-sorted, l orly-sort	ow spheri	city, sub	pangular, and (36-50%), pangular, little (10-20%), ace (< 10%), Granule,		
95	100	N/A		Same as above			,,,, ,,,,				
200	205	N/A		Fine Sand, posilt,, wet, poor					gular, some (21-35%), icaceous, ,,,,		



Well/Boring RW-21 VP-13 Project Name and No. NY001496.2515 Prepared Time/Hydraulic Sample Depth (feet below land surface Sample Pressure or Recovery Blows per 6 From (feet) inches Sample Description PID (ppm) Very Coarse Sand, Auger cuttings, Coarse Sand, well-sorted, high 201.5 205 N/A sphericity, subrounded, and (36-50%), coarse sand, well-sorted, high sphericity, subrounded, little (10-20%), Granule, low sphericity, subrounded, trace (< 10%), Small Pebble, 205 210 N/A Auger cuttings, Coarse Sand, well-sorted, high sphericity, subrounded, and (36-50%), very coarse sand, well-sorted, high sphericity, subrounded, little (10-20%), trace (< 10%), Small Pebble, Granule, low sphericity, subrounded,, ,,,, 210-211.5: Fine Sand, poorly-sorted, low sphericity, subangular, some 210 212 1.5 (21-35%), very fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), poorly-sorted, low sphericity, subangular, little (10-20%), Clay, wet, poorly-sorted, med dense 220 222 220-221: Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), very fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), Medium Sand, poorly-sorted,, poorly-sorted, subrounded, wet, poorly-sorted, loose, micaceous,, 225 Ν/Δ Auger cuttings, Very Coarse Sand, subrounded, and (36-50%), coarse 220 sand, high sphericity, subrounded, little (10-20%), Medium Sand, high sphericity, round,, ,,,, 225 230 N/A Same as above, Auger cuttings,,,, ,,,, 240 N/A 235 Auger cuttings, Granule, low sphericity, angular, little (10-20%), very coarse sand, high sphericity, round, trace (< 10%), Small Pebble, low sphericity, subrounded, micaceous, ,,,, 240 240-241: Fine Sand, poorly-sorted, low sphericity, subangular, little (10-20%), very fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), Silt, wet, poorly-sorted, loose, no odor, micaceous, ,,,, Tan 240 245 N/A Auger cuttings, Fine Sand, low sphericity, subangular, little (10-20%), very fine sand, low sphericity, subangular, little (10-20%), Silt,, ,,,, 245 250 N/A Same as above, Auger cuttings,,,, ,,,, 250 255 N/A Same as above, Auger cuttings,,,, ,,,, 255 260 N/A Same as above, Auger cuttings,,,, ,,,, 260-261: Fine Sand, poorly-sorted, low sphericity, subangular, some (21 260 262 1 35%), silt, little (10-20%), Very Fine Sand, poorly-sorted, low sphericity subangular, trace (< 10%), clay, wet, loose, micaceous, ,,,, tan/buff 260 265 N/A Auger cuttings, Fine Sand, low sphericity, subangular, some (21-35%), very fine sand, low sphericity, subangular, trace (< 10%), Clay,, ,,,, 270 265 N/A Auger cuttings, Fine Sand, low sphericity, subangular, little (10-20%), silt, trace (< 10%), Clay,, ,,,, 270 275 N/A Auger cuttings, Very Fine Sand, low sphericity, subangular, and (36-50%), clay,,, ,,, 275 280 N/A Auger cuttings, Fine Sand, low sphericity, subangular, some (21-35%), clay, little (10-20%) lignite,, ,,,, dark gray 280 282 0.5 280-280.5: Very Fine Sand, poorly-sorted, low sphericity, subangular, and (36-50%), silt, some (21-35%), Clay, trace (< 10%), Fine Sand, moist, poorly-sorted, dense, very stiff, micaceous, ,,,, 280 282 1.5 280.5-281.5: Silt, some (21-35%), very fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Clay, wet, soft, low plasticity, micaceous, ,,,, Medium grey 285 280 N/A Auger cuttings, Very Fine Sand, low sphericity, subangular, some (21-35%), silt, little (10-20%), Clay,, ,,,, 285 290 N/A Auger cuttings, Clay, some (21-35%), silt, little (10-20%), Very Fine Sand, trace (< 10%), Very Coarse Sand,, ,,,, 295 290 N/A Same as above, Auger cuttings,,,, ,,,, 295 300 N/A Auger cuttings, Clay, little (10-20%), silt, little (10-20%), Very Fine Sand,, ,,,, 300 302 0.5 300-300.5: Fine Sand, poorly-sorted, low sphericity, subangular, little (10-20%), medium sand, poorly-sorted, low sphericity, subrounded, little (10-20%), Very Fine Sand, poorly-sorted, low sphericity, subangular, wet, poorly-sorted, med dense, micace



	e Depth land surface)	Sample	Time/Hydraulic	:	
(reet below	iana surrace)	Recovery	Blows per 6		
From	To	(feet)	inches	Sample Description	PID (ppm)
300	305	N/A		Auger cuttings, Fine Sand, low sphericity, subangular, some (21-35%), silt, little (10-20%), Clay,, ,,,,	
305	310	N/A		Clay, some (21-35%), very fine sand,,, ,,,, Dark grey	
310	315	N/A		Auger cuttings, Fine Sand, low sphericity, subangular, little (10-20%), medium sand, low sphericity, subangular,,,,,,,	
315	320	N/A		Same as above, Auger cuttings,,,, ,,,,	
320	322	0.75		320-320.75: Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), very fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), Medium Sand, poorly-sorted, low sphericity, subangular, lignite seam @ 320.7, ,,,, Tan 330-330.33:	
330	332	0.33		330-330.33: Fine Sand, poorly-sorted, low sphericity, subangular, little (10-20%), very fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Medium Sand, poorly-sorted, low sphericity, subangular, wet, med dense, ,,,, tan/buff	
330	335	N/A		Auger cuttings, Clay, some (21-35%), silt, little (10-20%), Fine Sand,, ,,,,	
335	340	N/A		Auger cuttings, Silt, some (21-35%), very fine sand, low sphericity, subangular, some (21-35%), Clay,, ,,,,	
340	342	0.75		340-340.75: Very Fine Sand, poorly-sorted, low sphericity, angular, and (36-50%), clay, some (21-35%), Silt, trace (< 10%), Fine Sand, poorly-sorted, low sphericity, angular, wet, med dense, stiff, ,,,, Grey 340.75-341.5: Very Fine Sand, poorly-sorted, low sphericity, angular, and (36-50%), silt, little (10-20%), Clay, wet, med dense,	
340	345	N/A		Auger cuttings, Silt, and (36-50%), very fine sand, low sphericity, subangular, some (21-35%), Clay,, ,,,,	
345	350	N/A		Auger cuttings, Very Fine Sand, low sphericity, subangular, and (36-50%), silt, some (21-35%), Clay,, ,,,,	
350	355	N/A		Auger cuttings, Clay, some (21-35%), silt, little (10-20%), Very Fine Sand,, ,,,, Light grey	
355	360	N/A		Same as above, Auger cuttings,,,, ,,,,	
360	362	0.66		360-360.66: Very Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Medium Sand, poorly-sorted, low sphericity, subangular, wet, med dense, micaceous, lignite, seams	
360	365	N/A		Auger cuttings, Fine Sand, low sphericity, subangular, some (21-35%), silt,,lignite, ,,,,	
365	370	1		Same as above, Auger cuttings,,,, ,,,,	
370	375	1.1		Auger cuttings, Fine Sand, and (36-50%), silt, little (10-20%), Clay,, ,,,,	
375	380	N/A		Same as above, Auger cuttings,,,, ,,,,	
380	382	1.2		380-381.2: Fine Sand, poorly-sorted, low sphericity, subangular, and (36-50%), very fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Silt, Medium Sand, low sphericity, subangular, moist, med dense, micaceous, ,,,, Light grey	
400	402	0.66		400-400.66: Very Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Silt, moist, med dense, micaceous, lignite, ,,,, light brown	
400	405	1.5		400.66-405: Auger cuttings, Fine Sand, some (21-35%), very fine sand, little (10-20%), Silt,,	
405	410	N/A		Auger cuttings, Clay, some (21-35%), very fine sand, some (21-35%), Silt,, ,,,,	
410	415	N/A		Auger cuttings, Clay, little (10-20%), very fine sand, lignite,, ,,,,	
415	420	N/A		Same as above, Auger cuttings,,,, ,,,,	
420	422	1.5		420-421.5: Silt, and (36-50%), very fine sand, poorly-sorted, low sphericity, subangular, some (21-35%), Clay, trace (<10%), Fine Sand, poorly-sorted, low sphericity, subangular, moist, stiff, low plasticity, ,,,, Medium grey	



	e Depth land surface)	Sample Recovery	Time/Hydraulio Pressure or Blows per 6		
From 420	то 430	(feet) N/A	inches	Sample Description Same as above, Auger cuttings,,,, ,,,,	PID (ppm)
420	430	IN/A		Same as above, Auger cuttings,,,, ,,,,	
430	432	0.75		430-430.75: Fine Sand, poorly-sorted, low sphericity, subangular, little (10-20%), very fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Medium Sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Silt, wet, loose, micac	
430	440	N/A		Auger cuttings, Fine Sand, low sphericity, subangular, some (21-35%), very fine sand, low sphericity, subangular,lignite,, ,,,,	
440	442	0.5		440-440.5: Fine Sand, poorly-sorted, low sphericity, subangular, little (10-20%), very fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Medium Sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Silt,, ,,,, Light grey	
445	447	0.5		445-445.5: Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), medium sand, poorly-sorted, low sphericity, subangular, little (10-20%), Very Fine Sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Silt, wet, loose	
445	450	N/A		Auger cuttings, Fine Sand, some (21-35%), medium sand,,, ,,,,	
450	455	N/A		Auger cuttings, Fine Sand, low sphericity, subangular, some (21-35%), very fine sand,	
455	460	N/A		Same as above, Auger cuttings,	
460	462	0.75		460-460.75: Fine Sand, poorly-sorted, low sphericity, subangular, very fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Medium Sand, poorly-sorted, low sphericity, subangular, wet, loose, micaceous, lignite, ,,,, Medium grey	
480	482	0.5		480-480.5: Very Fine Sand, poorly-sorted, low sphericity, subangular, little (10-20%), fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), Silt, wet, med dense, micaceous, ,,,, Medium grey	
480	485	N/A		Auger cuttings, Fine Sand, some (21-35%), clay,,, ,,,,	
485	490	N/A		Same as above, Auger cuttings,,,, ,,,,	
490	495	N/A		Auger cuttings, Medium Sand, some (21-35%), coarse sand, trace (< 10%), Clay,, ,,,,	
495	500	N/A		Same as above, Auger cuttings,,,, ,,,,	
500	502	0.66		500-500.66: Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), very fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), Medium Sand, poorly-sorted, low sphericity, subangular, wet, loose, micaceous, ,,,, Light grey	
500	505	N/A		Medium Sand, low sphericity, subangular, Auger cuttings, some (21-35%), fine sand, trace (< 10%), Coarse Sand,, ,,,,	
505	510	N/A		Same as above, Auger cuttings,,,, ,,,,	
510	515	N/A		Auger cuttings, Coarse Sand, low sphericity, subangular, some (21-35%), very coarse sand, low sphericity, subangular, some (21-35%) lignite,, ,,,,	
515	520	N/A		Same as above, Auger cuttings,,,, ,,,,	
520	522	0.6		520-520.6: Very Fine Sand, poorly-sorted, low sphericity, subangular, and (36-50%), silt, trace (< 10%), Fine Sand, poorly-sorted, low sphericity, subangular, wet, med dense, micaceous, ,,,, Medium grey	
520	525	N/A		Auger cuttings, Medium Sand, and (36-50%) lignite, trace (< 10%), Coarse Sand, trace (< 10%), clay,, ,,,,	
525	530	N/A		Same as above, Auger cuttings,,,, ,,,,	
530	535	N/A		Same as above, Auger cuttings,,,, ,,,,	
535	540	N/A		Coarse Sand, some (21-35%), medium sand,,, ,,,,	
L		1	1		L



	land surface)	Sample Recovery	Pressure or Blows per 6		DID (
From 540	то 545	(feet) N/A	inches	Sample Description  Coarse Sand, some (21-35%), medium sand,,, ,,,,	PID (ppm)
340	343	N/A		Coarse Sand, Some (21-33%), medium Sand,,,,,,,,	
545	550	N/A		Same as above, Auger cuttings,,,, ,,,,	
550	552	0.1		550-500.1: Fine Sand, poorly-sorted, low sphericity, subangular, little (10-20%), medium sand, poorly-sorted, low sphericity, subangular,,, ,,,, Medium grey	
570	572	2		570-572: Very Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), silt, trace (< 10%), Clay, trace (< 10%), Fine Sand, poorly-sorted, low sphericity, subangular, wet, poorly-sorted, med dense, low plasticity, ,,,, Light grey	
570	580	N/A		Auger cuttings, Coarse Sand, low sphericity, subangular, some (21-35%), medium sand, low sphericity, subangular, trace (< 10%), Clay.	
580	585	N/A		Coarse Sand, low sphericity, subangular, some (21-35%) lignite, little (10-20%), medium sand, low sphericity, subangular,,,,,,	
585	590	N/A		Same as above, Auger cuttings,,,, ,,,,	
590	592	1		590-591: Very Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Medium Sand, poorly-sorted, low sphericity, subangular,, ,,,, Grey	
590	595	N/A		Auger cuttings, Coarse Sand, some (21-35%) lignite, little (10-20%), Medium Sand, trace (< 10%), Very Coarse Sand,, ,,,,	
595	600	N/A		Same as above, Auger cuttings,,,, ,,,,	
600	605	N/A		Same as above, Auger cuttings,,,, ,,,,	
605	610	N/A		Same as above, Auger cuttings,,,, ,,,,	
610	612	0.6		610-610.6: Very Fine Sand, poorly-sorted, low sphericity, subangular, trace (< 10%), fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Silt, wet, loose, micaceous, ,,,, tan/buff	
630	632	1		630-631: Fine Sand, poorly-sorted, low sphericity, angular, and (36-50%), very fine sand, poorly-sorted, low sphericity, angular, little (10-20%), Silt, trace (< 10%), Medium Sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Clay, wet	
650	652	0.5		650-650.5: Fine Sand, poorly-sorted, low sphericity, subangular, little (10-20%), very fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), Medium Sand, poorly-sorted, low sphericity, subangular, moist, loose, ,,,, Light grey	
650	655	N/A		Auger cuttings, Very Coarse Sand, low sphericity, angular, some (21-35%), coarse sand, low sphericity, angular, little (10-20%), Clay, little (10-20%), Granule, trace (< 10%), Small Pebble,, ,,,, tan/buff	
655	660	N/A		Auger cuttings, Very Coarse Sand, low sphericity, angular, some (21-35%), clay, little (10-20%), Silt, little (10-20%), Coarse Sand, low sphericity, angular, trace (< 10%), Granule,, ,,,,	
660	665	N/A		Auger cuttings, Coarse Sand, low sphericity, angular, some (21-35%), very coarse sand, low sphericity, angular, little (10-20%), Small Pebble, little (10-20%), Silt, Clay, trace (< 10%), Medium Pebble,, ,,,, Dark grey	
665	670	N/A		Same as above, Auger cuttings,,,, ,,,,	
670	672	0.5		670-670.5: Medium Sand, poorly-sorted, low sphericity, angular, some (21-35%), fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), coarse sand, poorly-sorted, low sphericity, angular, trace (< 10%), Granule, poorly-sorted, low sphericity	-
670	675	N/A		Auger cuttings, Very Coarse Sand, poorly-sorted, low sphericity, subangular, some (21-35%), coarse sand, low sphericity, subangular, little (10-20%), Granule,, ,,,	
675	680	N/A		Auger cuttings, Very Coarse Sand, little (10-20%), granule, little (10-20%), Small Pebble,, ,,,,	
680	685	N/A		Auger cuttings, Small Pebble, some (21-35%), medium pebble, some (21-35%), Very Coarse Sand,, ,,,,	



	e Depth land surface)	Sample Recovery	Time/Hydraulic Pressure or Blows per 6		
From	То	(feet)	inches	Sample Description	PID (ppm)
685	690	N/A		Auger cuttings, Coarse Sand, low sphericity, angular, some (21-35%), very coarse sand, low sphericity, angular, little (10-20%), Small Pebble,, ,,,,	
690	692	0.5		690-690.5: Very Fine Sand, poorly-sorted, low sphericity, subangular, and (36-50%), fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Clay, trace lignite, wet, med dense, micaceous, ,,,, tan/buff	
690	695	N/A		Auger cuttings, Very Coarse Sand, low sphericity, angular, some (21-35%), coarse sand, low sphericity, subangular, little (10-20%), Clay, trace (< 10%), Granule,, ,,,,	
695	700	N/A		Same as above, Auger cuttings,,,, ,,,,	
700	705	N/A		Auger cuttings, Very Coarse Sand, low sphericity, subangular, and (36-50%), coarse sand, low sphericity, subangular, little (10-20%), Granule, trace (< 10%), Small Pebble.,	
705	710	N/A		Same as above, Auger cuttings,,,, ,,,,	
710	712	0.4		710-710.4: Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), medium sand, poorly-sorted, low sphericity, subangular, some (21-35%), Clay, trace (< 10%), Coarse Sand, poorly-sorted, low	
710	715	N/A		Auger cuttings, Very Coarse Sand, low sphericity, angular, some (21-35%), granule, low sphericity, subangular, little (10-20%), Medium Pebble, poorly-sorted, subrounded,, ,,,,	
715	720	N/A		Same as above, Auger cuttings,,,, ,,,,	
720	725	N/A		Same as above, Auger cuttings,,,, ,,,,	
725	730	N/A		Same as above, Auger cuttings,,,, ,,,,	
730	732	0.4		730-730.4: Coarse Sand, poorly-sorted, low sphericity, angular, some (21-35%), very coarse sand, poorly-sorted, low sphericity, angular, little (10-20%), granule, poorly-sorted, low sphericity, angular, little (10-20%), Small Pebble, poorly-sorted, I	
735	740	N/A		Auger cuttings, Very Coarse Sand, poorly-sorted, low sphericity, subangular, and (36-50%), coarse sand, low sphericity, angular, little (10-20%), Granule, little (10-20%), Small Pebble, low sphericity, subangular, trace (< 10%), Medium Pebbl	
740	745	N/A		, Auger cuttings, Coarse Sand, low sphericity, angular,, some (21-35%), very coarse sand, low sphericity, angular, some (21-35%), Granule, low sphericity, subangular, little (10-20%), Small Pebble, low sphericity, subangular, trace (< 10%),	
745	750	N/A		Same as above, Auger cuttings,,,, ,,,,	
750	752	0.5		750-750.2: Clay, some (21-35%), very coarse sand, poorly-sorted, low sphericity, angular, little (10-20%), Very Large Pebble, poorly-sorted, low sphericity, round, trace (< 10%), Medium Pebble, poorly-sorted, low sphericity, subrounded, trace (< 10%),	
755	757	0.5		755-755.5: Clay, and (36-50%), silt, some (21-35%), very fine sand, poorly-sorted, low sphericity, subangular, some (21-35%), Very Large Pebble, low sphericity, subrounded, little (10-20%), Medium Pebble, low sphericity, subrounded,, ,,,,, White	
755	760	N/A		Auger cuttings, Clay,,,, ,,,,	
760	765	N/A		Auger cuttings, Clay,,,, ,,,, Dark grey	
765	770	N/A		Auger cuttings, Small Pebble, low sphericity, subrounded, some (21-35%), medium pebble, low sphericity, subrounded, little (10-20%), Clay, little (10-20%), Coarse Sand,, ,,,, White	
770	772	0.5		770-770.5: Clay, trace (< 10%), silt, trace (< 10%) lignite,, ,,,, Medium grey	
775	777	0.5		775-775.5: Silt, and (36-50%), very fine sand, poorly-sorted, low sphericity, subangular,,, ,,,, Light grey	
775	780	N/A		Auger cuttings, Silt, some (21-35%), very fine sand, little (10-20%), Medium Sand,, ,,,,	
780	785	N/A		Same as above, Auger cuttings,,,, ,,,,	



	e Depth land surface)	Sample Recovery	Time/Hydraulid Pressure or Blows per 6		
From	То	(feet)	inches	Sample Description	PID (ppm)
785	790	N/A		Same as above, Auger cuttings,,,, ,,,,	
790	792	0.5		790-790.5: Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), very fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), Medium Sand, poorly-sorted, low sphericity, subangular, little (10-20%), Clay, trace (< 10%),	
790	795	N/A		Auger cuttings, Silt, some (21-35%), very fine sand, trace (< 10%), Clay,, ""	
795	800	N/A		Same as above, Auger cuttings,,,, ,,,,	
800	805	N/A		Same as above, Auger cuttings,,,, ,,,,	
805	810	N/A		Same as above, Auger cuttings,,,, ,,,,	
810	812	1.5		810-811.5: Very Fine Sand, poorly-sorted, low sphericity, angular, some (21-35%), silt, little (10-20%), Fine Sand, low sphericity, angular, trace (< 10%), Clay, trace (< 10%), Medium Sand, low sphericity, subangular, wet, loose, ,,,, Light grey	
830	832	1		830-830.66: Silt, and (36-50%), clay, little (10-20%), Very Fine Sand, low sphericity, subangular,, ,,,, Medium grey 830.6-831: Clay,,, dry, hard, med plasticity, ,,,, Medium grey	
835	840	N/A		Auger cuttings, Silt, and (36-50%), very fine sand, little (10-20%), Fine Sand, trace (< 10%), Clay,, ,,,,	
840	845	N/A		Same as above, Auger cuttings,,,, ,,,,	
845	850	N/A		Same as above, Auger cuttings,,,, ,,,,	
850	852	1.33		850-851.33: Silt, and (36-50%), very fine sand, low sphericity, subangular, trace (< 10%), Fine Sand, poorly-sorted, low sphericity, angular, trace (< 10%) lignite, wet, stiff, nonplastic, micaceous, ,,,, Grey	
850	855	N/A		Auger cuttings, Silt, some (21-35%), very fine sand, little (10-20%) lignite,, ,,,,	
855	860	N/A		Auger cuttings, Silt, and (36-50%), very fine sand, little (10-20%), Fine Sand,, ,,,,	
860	865	N/A		Auger cuttings, Silt, some (21-35%), very fine sand, little (10-20%) lignite, trace (< 10%), Clay,, ,,,,	
865	870	N/A		Same as above, Auger cuttings,,,, ,,,,	
870	872	1		870-871: Clay,,, dry, hard, low plasticity, no dilatancy, ,,,, Grey	
875	877	1.5		875-876.5: Silt, and (36-50%), very fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Fine Sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Clay, trace (< 10%) lignite, moist, medium stiff, micaceous, ,,,, Light grey	
880	882	1.5		880-881.5: Silt, and (36-50%), very fine sand, poorly-sorted, low sphericity, subangular,, moist, poorly-sorted, stiff, micaceous, ,,,, Light grey	
885	887	1.5		885-886.5: Same as above,,,, ,,,,	
890	892	2		890-892: Silt, and (36-50%), very fine sand, poorly-sorted, low sphericity, angular, trace (< 10%), Fine Sand, low sphericity, subangular, wet, medium stiff, nonplastic, micaceous, ,,,, Light grey	
895	897	1.33		895-896.33: Silt, and (36-50%), very fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Fine Sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Clay,,,,,, Light grey	
900	902	1.5		900-901.5: Very Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), Clay, trace (< 10%), Silt, wet, loose, soft, ,,,, Medium	
905	907	1.25		905-906.25: Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), very fine sand, poorly-sorted, low sphericity, little (10-20%), Medium Sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Coarse Sand, poorly-sorted, low sphericity	



Well/Boring RW-21\_VP-13 Project Name and No. NY001496.2515 Prepared Ву Sample Depth Time/Hydraulic Sample Pressure or (feet below land surface) Blows per 6 Recovery PID (ppm) (feet) Sample Description From 912 910-912: Fine Sand, poorly-sorted, low sphericity, subangular, some (21 910 2 35%), very fine sand, poorly-sorted, low sphericity, little (10-20%), Medium Sand, poorly-sorted, low sphericity, subangular, trace (< 10%) Coarse Sand, subangular, trace (< 10%) 915 917 0.5 915-915.5: Fine Sand, poorly-sorted, low sphericity, subangular, little (10-20%), very fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), Silt, trace (< 10%), Clay, wet, loose, micaceous, ,,,, 920 920-920.8: Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), very fine sand, poorly-sorted, low sphericity, subangular, little (10-20%), Medium Sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Granule, poorly-sorted, 925 927 1.5 925-926.5: Fine Sand, poorly-sorted, low sphericity, subangular, some (21-35%), very fine sand, poorly-sorted, low sphericity, subangular, trace (< 10%), Medium Sand, poorly-sorted, low sphericity, subangular trace (< 10%), Clay,, ,,,, Grey 932 930 930-931: Clay, trace (< 10%), silt,trace (< 10%) lignite, dry, hard, slight red hue, ,,,, Dark grey 935 937 0.33 935-935.33: Clay,,,, ,,, Light grey 939 0.5 937 937-937.5: Clay,,, dry, very stiff, ,,,, Medium grey 939 941 0.66 939-939.66: Clay,,, dry, very stiff, ,,,, Medium grey 943 0.5 941-941.5: Clay, little (10-20%) lignite,,, ,,,, Dark grey 941 943 945 1.5 943-944.5: Clay, little (10-20%), silt,, dry, very stiff, ,,,, Medium grey 945-946: Clay, trace (< 10%), silt,,, ,,,, Medium grey 945 947 1

Well/Boring	K VV-21	_VP-14	_ Proje	ect Name and No.				N 1 00 14	96.2313	
Site Location			Bethpage, N	Υ		rilling tarted			Drilling Completed	
Total Depth	Drilled	791.5	feet	Hole Diameter	8in	ches	Sampling	Interval		_feet
-	Length and Diameter of Sampling Device  2ft / 2 in  Drilling Method  Mud-rotary		-	Type of Sampling Device Split spoon						
Drilling Metl			l-rotary	_	Di	rilling F	Fluid Used		Portable water and b	entonite
Drilling Con	tractor	Uni-Te	ch Drilling	Driller				Helper		
Prepared By					Hammer Weight			<u> </u>	Hammer Drop	inches
(feet below	le Depth land surface) To	Sample Recovery	Time/Hydraulid Pressure or Blows per 6 inches		8.6	ample D	escription			DID (nom)
From	1	(feet)	Inches	0						PID (ppm)
0	20	N/A			poorly-sor				unded, some (21-35%), nded,, wet, very loose,	
20	40	N/A		Coarse Sand, little (10-20%),		-	-		ngular, subrounded, prown	
40	60	N/A		Silt, poorly-so subrounded,, v	-		-	-	ly-sorted, subangular, ,, light brown	
60	80	N/A		60-68', Silty Sa soft, med plas	-				, poorly-sorted,,, wet,	
80	100	N/A			Medium Sand, Fine Sand, poorly-sorted, subangular, subrounded, little (10-20%), silt,, wet, loose, no odor, ,,,, light brown					
100	110	N/A		Auger cuttings	s, Small Col	bble,	poorly-sor	ted, and	(36-50%), granule,,, ,,,,	
100	110	N/A		Coarse Sand, trace (< 10%),			-	-	ngular, subrounded, rown	
110	115	N/A			•		•	•	sphericity, subangular, angular, Clay,, ,,,, Grey	
110	130	N/A		Medium Sand, (21-35%), silt,,		•	•	_	ılar, subrounded, some own	
115	120	N/A		Same as above	e, Auger cut	tings,	,,,,,,			
120	125	N/A		Same as above	e, Auger cut	tings,	,,,,,,			
125	130	N/A				-	-		sphericity, subangular, ır, Silt, Clay,, ,,,, light	
130	150	N/A						•	50%), silty clay, ose, no odor, ,,,, Dark	
130	135	N/A		Auger cuttings poorly-sorted,	-		-	• •	oangular, granule, ay,, ,,,,	
135	140	N/A			poorly-sor	ted, lo	ow spheric	ity, suba	angular, some (21-35%), angular, little (10-20%),	
140	145	N/A		Auger cuttings poorly-sorted,	-		-	• •	oangular, fine sand,	



Prepared				ect Name and No. NY001496.2515	
			_		
Зу					
_					
Sample I	Depth		Time/Hydraulic		
(feet below lar	nd surface)	Sample	Pressure or		
		Recovery	Blows per 6		
From	То	(feet)	inches	Sample Description	PID (ppm
145	150	N/A		Auger cuttings, Clay, little (10-20%), fine sand, poorly-sorted, low	
				sphericity, subangular,,, ,,,,	
150	155	N/A		Auger cuttings, Clay, some (21-35%), medium sand, subangular, little (10-	
				20%), Fine Sand, subangular,, ,,,,	
150	170	N/A		Medium Sand, Fine Sand, poorly-sorted, subangular, subrounded, some	
				(21-35%), clay, interbedded,, wet, loose, no odor, ,,,, Dark grey	
155	160	N/A		Same as above, Auger cuttings,,,, ,,,,	
165	170	N/A		Auger cuttings, Fine Sand, low sphericity, subangular, some (21-35%),	
				medium sand, low sphericity, subangular, little (10-20%), Coarse Sand,	
				low sphericity, subangular, trace (< 10%), Clay,, ,,,,	
170	180	N/A		Same as above, Auger cuttings,,,, ,,,,	
				, , , , , , , , , , , , , , , , , , , ,	
170	190	N/A		Same as above,	
	~ <del>=</del>	]			
180	190	N/A		Same as above, Auger cuttings,,,, ,,,,	
				gg	
190	210	N/A		Coarse Sand, Medium Sand, poorly-sorted, subangular, subrounded,,,	
130	210	'''		wet, loose, no odor, ,,,, light brown	
				litot, 10000, 110 odot, ,,,, ngiti brown	
210	230	N/A		Same as above,,,, ,,,,	
210	230	13/2			
230	250	N/A	-	Sama an abaya	
230	230	I IN/A		Same as above,,,, ,,,,	
250	270	NI/A		Madium Cand Fine Cand manufus conted subspension subsequented come	
250	270	N/A		Medium Sand, Fine Sand, poorly-sorted, subangular, subrounded, some	
				(21-35%) lignite fragments,,, ,,,, Medium grey	
070	000	NI/A		Citic Cond. accepts and all outside and accepts and ac	
270	290	N/A		Silty Sand, poorly-sorted, subangular, subrounded,,, wet, no odor, ,,,,	
				Medium grey	
310	311	1		Medium Sand, Fine Sand, well-sorted, subangular, subrounded, little (10-	
				20%), silty clay,, moist, med dense, no odor, ,,,, light brown	
330	331.5	1.5		330-331.5: Same as above,,,, ,,,,	
340	341.5	1.5	]	340-341.5: Same as above,,,, ,,,,	
350	351	1		350-350.2, gray Clay	
				350.2-351, Coarse Sand, Medium Sand, well-sorted, subangular,	
				subrounded,,, moist, dense, no odor, ,,,, light brown	
370	372	N/A		Auger cuttings, Coarse Sand,,, wet, poorly-sorted, ,,,, light brown	
				· · · · · · · · · · · · · · · · · · ·	
390	392	2		390-392: Fine Sand, Silty Sand, well-sorted, subangular, subrounded,,,	Ī
				moist, med dense, no odor, ,,,, light gray	
				· · · · · · · · · · · · · · · · · · ·	
410	411.5	1		Coarse Sand, Medium Sand, well-sorted, subangular, subrounded, little	
		l .		(10-20%), silt,, moist, loose, no odor, ,,,, light brown	
				(1	
430	431	0.7		Same as above,,,, ,,,,	
+30	431	"'		Jame 45 45076,,,, ,,,,	
J	451.5	NI/A		Madium Cond. Fine Cond. well conted subsequents subsequents	
450		N/A	1	Medium Sand, Fine Sand, well-sorted, subangular, subrounded, some	I
450	451.5			(21-35%), silt,, moist, med dense, no odor, ,,,, light brown	



Well/Boring RW-21\_VP-14 Project Name and No. NY001496.2515 **Prepared** Ву Time/Hydraulic Sample Depth (feet below land surface) Sample Pressure or Recovery Blows per 6 PID (ppm) From (feet) inches **Sample Description** Coarse Sand, Medium Sand, well-sorted, subangular, subrounded, little 460 461 1.5 (10-20%), silt,, moist, med dense, no odor, ,,,, light brown Coarse Sand, well-sorted, subangular, subrounded, little (10-20%), silt,, 471.5 N/A 470 moist, loose, no odor, ,,,, Light grey 491.5 1.5 Medium Sand, Fine Sand, well-sorted, subangular, subrounded, little (10-490 20%), silt., moist, med dense, no odor, ..., light brown 511.5 Medium Sand, Fine Sand, poorly-sorted, subangular, subrounded, some 510 8.0 (21-35%), silty clay black, interbedded,, moist, med dense, no odor, ,,,, light brown 520 521.5 1.5 Coarse Sand, Medium Sand, poorly-sorted, subangular, subrounded, some (21-35%), clay medium plasticity,, moist, dense, no odor, ,,,, light 530 531.5 8.0 Coarse Sand, well-sorted, subangular, subrounded, trace (< 10%), silt,, moist, loose, no odor, ,,,, light brown 541.5 Coarse Sand, well-sorted, subangular, subrounded, trace (< 10%), silt,, 540 0.6 moist, loose, no odor, ,,,, light brown Medium Sand, Fine Sand, well-sorted, subangular, subrounded, some 550 551 0.9 (21-35%), clay. orange,, moist, med dense, no odor, ,,,, light brown 560 561 0.7 Coarse Sand, well-sorted, subangular, subrounded,,, moist, loose, no odor, ,,,, light brown N/A 570 571 570-570.5: Clay, med plasticity, stiff 570 1 570-571: Medium Sand, Fine Sand, poorly-sorted, subangular, subrounded 600 601.5 1 Coarse Sand, well-sorted, subangular, subrounded, trace (< 10%), silt,, moist, loose, no odor, ,,,, light brown 610.5 0.5 Fine Gravel, Coarse Sand, poorly-sorted, subangular, subrounded, and 610 (36-50%), clay, med plasticity, stiff,, moist, no odor, ,,,, light brown 630 Coarse Sand, Medium Sand, well-sorted, subangular, subrounded, little 1 (10-20%), clay, dark gray, med plasticity,, moist, loose, no odor, ,,,, light 650 651 1 650-650.4: Clay, gray, dense Coarse Sand, Silty Sand, poorly-sorted, subangular, subrounded,,, 670 671 1 moist, loose, soft, no odor, ,,,, Grey 691.5 1.5 690-691: Medium Sand, Silty Sand, poorly-sorted, subangular, 690 subrounded Coarse Sand, Medium Sand, poorly-sorted, subangular, subrounded, 701 700 1 little (10-20%), clay,, moist, loose, no odor, ,,,, Light brown Coarse Gravel, Fine Gravel, poorly-sorted, subangular, subrounded, N/A 710 711 some (21-35%), silt,, wet, very loose, no odor, ,,,, Light brown 720-720.5: SAA 720 Medium Sand, Fine Sand, well-sorted, subangular, subrounded, some 730 731 (21-35%), silt,, moist, loose, no odor, ,,,, Light brown 751.5 750 1 750-750.5: Clay, gray, dense, med plasticity 770 771.5 1.5 Medium Sand, Fine Sand, well-sorted, subangular, subrounded, and (36-50%), silt,, moist, loose, no odor, ,,,, light brown 790 791.5 1.2 Same as above,,,, ,,,,

Well/Boring	RW-21	_VP-15	Proje	ect Name and No.				NY0014	96.2515	
Site Location			Bethpage, N	Y		Drilling Started			Drilling Completed	
Total Depth	Drilled	842	feet	Hole Diameter	8	inches	Sampling I	nterval		feet
Length and of Sampling		2ft	/ 2 in		Туре с	of Sampling	) Device		Split spoon	
Drilling Metl	nod	Mud	-rotary			Drilling I	Fluid Used		Portable water and be	entonite
Drilling Con	tractor	Uni-Tec	h Drilling	Driller				Helper		
Prepared By					Hamme Weigh				Hammer Drop	inches
•	le Depth land surface)	Sample Recovery	Time/Hydraulic Pressure or Blows per 6	:						
From	То	(feet)	inches			Sample D	escription			PID (ppm)
0	40	N/A					-	-	se Sand, Coarse Sand, 6/8 reddish yellow	
40	60	N/A			ebble, g	granule, v			sorted, subrounded, nded, round,,, ,,,,	
60	80	N/A		Auger cuttings,	Coars	e Sand, I			sorted, angular, ,, loose, no odor, ,,,,	
80	100	N/A		Auger cuttings,	r, suba	ngular, la	rge pebble	, mediur	Medium Sand, well- n pebble, small pebble, .50YR 4/8 red	
100	105	N/A			Coars	e Sand, li	ttle (10-20%	6), medi	um sand,, wet, well-	
105	110	N/A			0%), G	ranule, w	et, well-so		medium sand, fine ed dense, subangular,	
110	120	N/A								
120	130	N/A		Auger cuttings, subangular, su		_		-	y-sorted, angular,	
130	140	N/A			rse san	d, poorly	-sorted, a	ngular, s	subrounded, some (21- subangular, trace (< 0Y 5/6 olive	
150	160	N/A		Auger cuttings, trace (< 10%), subangular, ,,,,	Medium	Sand, w	et, poorly-	sorted, I	rse sand, coarse sand, oose, angular,	
160	170	N/A			tle (10-2	20%), Me	dium Sand	, wet, po	l, and (36-50%), very porly-sorted, loose, ow	
180	190	N/A			, Granu Medium	ile, and (3 Sand, we	6-50%), ve et, poorly-s	ry coars sorted, l	e sand, little (10-20%),	
200	210	N/A		Auger cuttings,					eddish black	
210	212	1.5			50YR 3/ , and (3	/1 very da 6-50%), s	rk gray ilt, trace (<	: 10%), F	lasticity, slow Fine Sand, moist, 0YR 3/1 very dark gray	
220	222	2			-35%), s	silt, trace	(< 10%), F	ine Sand	, moist, very stiff, low	
230	232	2		sorted, dense, 231-232: Mediu	,,,, 5.00 m Sand	G 7/1 ligh I, little (10	t greenish -20%), coa	gray rse sand	%), Clay, moist, well- l, trace (< 10%), Fine angular, ,,,, 2.50Y 4/1	



Well/Boring _	RW-21	_VP-15	Proje	ect Name and No. NY001496.2515	
Prepared By _					
Sample I	Depth		Time/Hydraulic		
(feet below lar	nd surface)	Sample	Pressure or		
From	То	Recovery (feet)	Blows per 6 inches	Sample Description	PID (ppm)
240	242	2		Medium Sand, some (21-35%), coarse sand, little (10-20%), Silt, wet, well-sorted, med dense, angular, subangular, ,,,, 7.50YR 7/6 reddish yellow	
250	255	N/A		Auger cuttings, Coarse Sand, some (21-35%), very coarse sand, trace (< 10%), Granule, wet, poorly-sorted, loose, angular, subangular, organic, ,,,, 10.00YR 5/1 gray	
255	260	N/A		Auger cuttings, Very Coarse Sand, some (21-35%), coarse sand, little (10-20%), Granule, wet, poorly-sorted, loose, angular, subangular, ,,,, 10.00YR 6/2 light brownish gray	
260	262	1.1		260-261.1: Medium Sand, some (21-35%), coarse sand, trace (< 10%), Very Fine Sand, Silt, wet, well-sorted, dense, angular, subangular, ,,,, 7.50YR 8/4 pink	
270	280	N/A		Auger cuttings, Very Coarse Sand, and (36-50%), granule, little (10-20%), Coarse Sand, wet, poorly-sorted, loose, angular, subangular, ,,,, 2.50YR 5/2 weak red	
280	282	2		Fine Sand, some (21-35%), medium sand, little (10-20%), Very Fine Sand, Silt, wet, well-sorted, dense, angular, subangular, ,,,, 10.00YR 7/4 very pale brown	
290	295	N/A		Auger cuttings, Granule, some (21-35%), very coarse sand, little (10-20%), Coarse Sand, wet, poorly-sorted, loose, angular, ,,,, 2.50Y 6/8 olive yellow	
300	302	2		Fine Sand, some (21-35%), very fine sand, little (10-20%), Silt, wet, well-sorted, dense, subangular, subrounded, ",, 2.50Y 6/4 light yellowish brown	
305	310	N/A		Auger cuttings, Fine Sand, and (36-50%), very fine sand, little (10-20%), Coarse Sand, wet, well-sorted, med dense, subangular, subrounded, ,,,, 2.50Y 7/8 yellow	
315	320	N/A		Auger cuttings, Fine Sand, some (21-35%), very fine sand, trace (< 10%), Coarse Sand, Medium Sand, wet, well-sorted, med dense, subangular, ,,,, 2.50Y 7/8 yellow	
320	322	1.2		320-321.2: Fine Sand, and (36-50%), very fine sand, trace (< 10%), Silt, wet, well-sorted, dense, subangular, subrounded, ,,,, 10.00YR 5/6 yellowish brown	
340	342	1.5		340-341.5: Medium Sand, little (10-20%), fine sand, poorly-sorted, subrounded,, wet, dense, no odor, ,,,, 10.00YR 5/6 yellowish brown	
350	355	N/A		Auger cuttings, Coarse Sand, Medium Sand, well-sorted, subangular, subrounded, some (21-35%), fine sand,, no odor, ,,,, 10.00YR 5/6 yellowish brown	
360	362	1.5		360-361.5: Very Fine Sand, and (36-50%), very fine sand, silt, well-sorted,, wet, dense, no odor, ",, 5.00Y 6/2 light olive gray	
380	382	2		380-381.6: Very Fine Sand, and (36-50%), silt, some (21-35%), Very Fine Sand, wet, loose, no odor, parting, seam, laminated, ,,,, 5.00Y 6/1 light gray/gray	
385	390	N/A		Same as above, Auger cuttings,,,, ,,,, 5.00Y 6/1 light gray/gray	
400	402	1.7		400-401.7: Medium Sand, little (10-20%), fine sand, trace (< 10%), Very Fine Sand, Silt, well-sorted, subangular, subrounded, wet, loose, no odor, seam, layer, ,,,, 5.00Y 6/1 light gray/gray	
405	410	N/A		Auger cuttings, Coarse Sand, Medium Sand, poorly-sorted, angular, some (21-35%), fine sand, very fine sand, silt, well-sorted, subangular, subrounded,, no odor, ,,,, 5.00Y 6/1 light gray/gray	
420	422	2		Same as above,,,, ,,,, 10.00YR 6/4 light yellowish brown	
440	442	1.8		440-441.8: Medium Sand, and (36-50%), fine sand, very fine sand, trace (< 10%), Silt, well-sorted, subangular, subrounded, wet, loose, seam, ,,,, 10.00YR 6/1 light gray/gray	
460	462	1.4		460-461.4: Medium Sand, some (21-35%), very fine sand, well-sorted, angular, subangular, trace (< 10%), Silt, wet, dense, no odor, ,,,, 10.00YR 6/1 light gray/gray	



Well/Boring _	RW-21	_VP-15	Proje	ect Name and No NY001496.2515	
Prepared By			_		
Sample D (feet below lan	-	Sample	Time/Hydraulic Pressure or		
- ·	_	Recovery	Blows per 6		DID (mmm)
480	то 482	(feet)	inches	Sample Description  Medium Sand, trace (< 10%), fine sand, very fine sand, silt, well-sorted,	PID (ppm)
				angular, subangular, wet, med dense, no odor, ,,,, 10.00YR 6/1 light gray/gray	
485	490	N/A		Same as above, Auger cuttings,,,, ,,,, 10.00YR 6/1 light gray/gray	
500	502	2		Coarse Sand, little (10-20%), medium sand, fine sand, poorly-sorted, angular, subangular,, wet, med dense, no odor, seam, ,,,, 10.00YR 6/1 light gray/gray	
520	522	2		520-521.5: Very Fine Sand, and (36-50%), silt, little (10-20%), Fine Sand, trace (< 10%), Medium Sand, poorly-sorted, subangular, wet, med dense, no odor, parting, seam, laminated, ,,,, 2.50Y 5/1 gray	
525	530	N/A		Same as above, Auger cuttings,,,, ,,,, 5.00Y 6/1 light gray/gray	
540	542	2		Medium Sand, trace (< 10%), fine sand, very fine sand, silt, well-sorted, angular,, wet, loose, no odor, homogeneous, ,,,, 5.00Y 6/2 light olive gray	
550	552	2		550-550.5: Medium Sand, little (10-20%), fine sand, well-sorted, angular, subangular,, wet, loose, no odor, ,,,, 550.5-552: Coarse Sand, trace (< 10%), medium sand, well-sorted,, wet,	
560	562	2		560-561: Medium Sand, well-sorted, angular, subangular, trace (< 10%), fine sand, silt, well-sorted, subangular, moist, no odor, laminated, ,,,, 2.50Y 7/1 light gray 561-561.3: Very Fine Sand, Silt, well-sorted,,, moist, laminated, ,,,, 2.50Y 2/1 black 561.3-561.4: Medium Sand, well-sorted, angular, subangular, Coarse Sand,,, moist, no odor, ,,,, 10.00YR 5/6 yellowish brown 561.4-561.6: Same as above,,,, ,,,, 5.00Y 6/3 pale olive 561.6-562: Medium Sand, well-sorted, angular, subangular, trace (< 10%), fine sand, very fine sand, silt, well-sorted, moist, no odor, ,,,, GLEY 1 7/N	
565	570	N/A		light gray Same as above, Auger cuttings,,,, ,,,, GLEY 1 7/N light gray	
580	582	1.8		580-581.8: Very Fine Sand, Silt, some (21-35%), fine sand, very fine sand, trace (< 10%), Clay, dry, medium stiff, low plasticity, no odor, ,,,, GLEY 1 2/N greenish black	
585	587	2		Coarse Sand, Medium Sand, well-sorted, angular, subangular, little (10-20%), fine sand, subangular,, wet, loose, no odor, ,,,, GLEY 1 6/N greenish gray	
590	592	2		Coarse Sand, Medium Sand, well-sorted, angular, subangular,,, moist, med dense, no odor, layer, ,,,, GLEY 1 6/N greenish gray	
600	602	0		···· ···	
605	607	2		Medium Sand, well-sorted, subangular, little (10-20%), fine sand, well-sorted, subangular,, moist, med dense, no odor, laminated, ,,,, 10.00YR 7/1 light gray	
605	610	N/A		Auger cuttings, Very Coarse Sand, Coarse Sand, Medium Sand, poorly-sorted, angular, subangular, little (10-20%), fine sand, very fine sand, silt, well-sorted,, no odor, ,,,, 10.00YR 7/1 light gray	
610	615	N/A		Auger cuttings, Small Pebble, Granule, Very Coarse Sand, poorly-sorted, angular, subangular, and (36-50%), coarse sand, medium sand,, no odor, ,,,, 5.00Y 7/1 light gray	
620	622	2		Coarse Sand, Medium Sand, well-sorted, subangular, trace (< 10%), fine sand, very fine sand,, moist, well-sorted, med dense, no odor, ,,,, 5.00Y 7/1 light gray	
620	625	N/A		Same as above, Auger cuttings,,,, ,,,, 5.00Y 7/1 light gray	
625	630	N/A		Auger cuttings, Medium Sand, well-sorted, little (10-20%), fine sand, very fine sand,, well-sorted, no odor, ,,,, 10.00YR 7/2 light gray	
640	642	0		No recovery,,,, ,,,,	
640	645	N/A		Auger cuttings, Fine Sand, Very Fine Sand, and (36-50%), silt,,, ,,,, 10.00YR 7/2 light gray	



Vell/Boring _	RW-21	_VP-15	_ Projec	t Name and No. NY001496.2515	
repared					
By _					
Cammia	Danith		Time/Uvdraulia		
Sample (feet below la	-	Sample	Time/Hydraulic Pressure or		
(**************************************	,	Recovery	Blows per 6		
From	То	(feet)	inches	Sample Description	PID (ppn
660	662	2		60-660.7: Coarse Sand, Medium Sand, poorly-sorted, angular,	
				subangular, some (21-35%), fine sand, poorly-sorted, trace (< 10%), Silt,	
				Clay, moist, med dense, no odor, ,,,, 10.00YR 7/3 very pale brown	
				660.7-661: Silt, little (10-20%), fine sand, very fine sand, clay, trace (<	
				0%), Very Fine Sand, moist, soft, low plasticity, slow dilatancy, no	
				odor, ,,,, 5.00Y 7/1 light gray	.
				61-662: Granule, Very Coarse Sand, poorly-sorted, angular, subangular come (21-35%), medium sand, fine sand, well-sorted, angular,	,
				subangular, little (10-20%), Silt, moist, poorly-sorted, med dense, no	
				odor, ,,,, GLEY 1 7/N light gray	
680	682	2		Fine Sand, Very Fine Sand, some (21-35%), silt, trace (< 10%), Clay,	+
	002	_		noist, poorly-sorted, ,,,, 5.00Y 6/1 light gray/gray	
700	702	2		Coarse Sand, and (36-50%), medium sand, some (21-35%), Very Coarse	
			s	Sand, wet, well-sorted, dense, angular, subangular, ,,,, 10.00Y 6/2 light	
			g	grayish olive	
710	715	N/A		Auger cuttings, Small Pebble, and (36-50%), medium pebble, some (21-	
				5%), Large Pebble, Coarse Sand, wet, poorly-sorted, loose, angular, ,,,	,
				0.00YR 6/6 brownish yellow	
720	722	2		Granule, and (36-50%), small pebble, some (21-35%), Medium Pebble,	
				Coarse Sand, wet, poorly-sorted, loose, subangular, subrounded, ,,,,	
725	730	N/A		Auger cuttings, Granule, some (21-35%), coarse sand, some (21-35%),	
				Silt, Clay, wet, poorly-sorted, med dense, subangular, subrounded, ,,,,	
				2.50YR 8/2 pinkish white	
730	740	N/A		Auger cuttings, Small Pebble, and (36-50%), silt, clay, some (21-35%),	
				Medium Pebble, Granule, wet, poorly-sorted, dense, angular, subangular, ,,,, 2.50YR 8/1 white	
740	742	1.5	7	40-741.5: No recovery from split spoon, likely fine sands were washed ou	t
745	747	1.7	7	45-746.7 Very Fine Sand, and (36-50%), clay, some (21-35%), Silt, moist,	
			v	vell-sorted, very dense, subangular, subrounded, ",, 5.00YR 6/1 light	
			g	gray/gray	
755	760	N/A	<u> </u>	Auger cuttings, Clay, some (21-35%), silt,, very stiff, high plasticity, slow	v
			d	lilatancy, no odor, ,,,,	
700	700		<del>                                     </del>	Class little (40,200) - silt trace / .400/ Norw Fine Cond. majet .com. stiff	
760	762	2		Clay, little (10-20%),  silt, trace (< 10%),  Very Fine Sand, moist,  very stiff, ned plasticity,  slow dilatancy, ,,,, 7.50YR 4/1 dark gray	
765	767	1.1		65-766.1: Clay, some (21-35%), silt, little (10-20%), Very Fine Sand, dry,	
				rery stiff, med plasticity, slow dilatancy, no odor, ,,,, 5.00YR 6/1 light	
			g	gray/gray	
766	770	N/A	,,	ııı ıııı	
780	782	1.2	7	80-781.2: Coarse Sand, and (36-50%), medium sand, some (21-35%), Fin	е
			s	Sand, wet, well-sorted, med dense, no odor, subangular, subrounded,	
			,,	,,, 5.00YR 8/1 white	
800	802	2	<del>                                     </del>	Medium Sand, little (10-20%), coarse sand, fine sand, trace (< 10%), Very	
				Fine Sand, Silt, wet, well-sorted, dense, subangular, subrounded, ,,,,	
				GLEY 1 8/N pale green	
820	822	2		Fine Sand, some (21-35%), medium sand, little (10-20%), Very Fine Sand,	+
	<b></b> -	_		Silt, wet, well-sorted, dense, subangular, ,,,, 5.00YR 7/1 light gray	
840	842	2		Fine Sand, some (21-35%), clay, little (10-20%), Very Fine Sand, wet, well	-
3.3		_		sorted, dense, no odor, subangular, subrounded, ,,,, 5.00YR 6/1 light	
		I		ıray/gray	

Well/Boring	RW-21	_VP-16	Proje	ect Name and No.		NY00149	96.2515						
Site Location			Bethpage, N	Υ	Drilling Started		Drilling Completed						
Total Depth	Drilled	680.7	_feet	Hole Diameter	8 inches	Sampling Interval		feet					
Length and I of Sampling		2ft	/ 2 in	-	Type of Sampling	Device	Split spoon						
Drilling Meth	od	Mud	-rotary	-	Drilling F	Fluid Used	Portable water and be	entonite					
Drilling Cont	ractor	Uni-Ted	ch Drilling	Driller		Helper							
Prepared By					Hammer Weight		Hammer Drop	inches					
(feet below I	e Depth and surface)	Sample Recovery	Time/Hydraulic Pressure or Blows per 6	:	01.0			DID (comp)					
From 20	То <b>25</b>	(feet)	inches	Auger cuttings		escription nd Coarse Sand	poorly-sorted, angular,	PID (ppm)					
20	23	N/A		subangular, so	me (21-35%), sm	all pebble, granule 10.00YR 5/4 yellow	, poorly-sorted,						
25	35	N/A		angular, suban		35%), coarse sand,	se Sand, poorly-sorted, medium sand, poorly-						
35	50	N/A		Auger cuttings, subangular, su	, Large Pebble, I ibrounded, some	Medium Pebble, po (21-35%), small pe	orly-sorted, bble, granule, little (10- , 7.50YR 5/8 strong						
50	65	N/A				,,, ,,,, 5.00YR 5/8 yel							
65	70	N/A				•	0%), Medium Sand, lor, ,,,, 10.00YR 2/1 black						
70	80	N/A		sorted, subang	gular, some (21-3		Medium Sand, well- medium pebble, small R 4/8 red						
80	100	N/A		Same as above	, Auger cuttings,,	,,, ,,,, 2.50YR 4/8 red							
100	120	N/A		subangular, su	ibrounded, some oorly-sorted, littl	(21-35%), granule,	anule, poorly-sorted, very coarse sand, n Sand, Fine Sand, no						
120	140	N/A		Auger cuttings, subangular, so	, Granule, Very (	·	y-sorted, angular, sand, poorly-sorted,						
140	160	N/A		subangular, and	d (36-50%), medi	• •	ly-sorted, angular, pebble, granule, little						
160	180	N/A		subangular, so	me (21-35%), coa	Coarse Sand, poorlarse sand, medium ed,, no odor, ,,,, Me	sand, poorly-sorted,						
180	200	N/A			•	• •	ly-sorted, subangular, ule, poorly-sorted,,, ,,,,						
200	202	0.7		Medium Sand, well-sorted, subangular, and (36-50%), fine sand,, wet, no odor, ,,,, light brown									
205	215	N/A		Same as above, Auger cuttings,,,, ,,,,									
220	222	N/A		Medium Sand, fine sand, silt,,		-sorted, subrounde	ed, trace (< 10%), very						
225	235	N/A		Same as above	, Auger cuttings,,	,,,,,							



epared					
,					
Sample (feet below I	•	Sample	Time/Hydraulic Pressure or		
(reet below i	and surrace)	Recovery	Blows per 6		
From	То	(feet)	inches	Sample Description	PID (pp
240	242	0.75		Fine Sand, well-sorted, subrounded,,,, ,,,, Medium red	
245	255	N/A		Auger cuttings, Fine Sand, well-sorted, subrounded, little (10-20%), very	
				fine sand,,, ,,,, light brown	
260	262	1.33		Fine Sand, Very Fine Sand, well-sorted, subrounded, trace (< 10%),	
200	202	1.33		medium sand, silt,, parting, laminated, reddish brown color change, ,,,,	
				Light grey	
265	275	N/A	1	Same as above, Auger cuttings,,,, ,,,,	
				gg	
280	280.5	N/A		Very Fine Sand, Silt, some (21-35%), clay,, soft, low plasticity, no odor,	
				,,,, dark gray	
280	282	0.7		Coarse Sand, Medium Sand, well-sorted, subangular,,, moist, loose, ,,,,	
				reddish brown	
205	200	N1/4		Accordance Madison Cond. Fire Cond. (see / 400/)	
285	300	N/A		Auger cuttings, Medium Sand, Fine Sand, trace (< 10%), coarse sand,	
				well-sorted,,, ,,,, light brown	
300	302	1		Fine Sand, well-sorted, subrounded, little (10-20%), clay, note clay is thin	
300	302			1" layer with interbedded sand, approximately 4 inches from bottom of	
				spoon, trace (< 10%), Medium Sand, wet, no odor, layer clay, medium	
310	312	N/A		Medium Sand, well-sorted, trace (< 10%), coarse sand, fine sand,	
0.0	0.2	''''		subangular, subrounded,, wet, no odor, ,,,, light brown	
				3. 4, 14. 14. 14. 1, 11. 14. 1, 11.	
320	321	0.3		Medium Sand, well-sorted, subangular, subrounded, trace (< 10%), fine	
				sand, very fine sand, silt,, wet, no odor, ,,,, reddish brown	
330	332	8.0		Medium Sand, Fine Sand, well-sorted, subrounded, little (10-20%), very	
				fine sand, silt,, wet, no odor, laminated, ,,,, Light grey	
340	342	0.4		Medium Sand, well-sorted, subangular, subrounded, some (21-35%),	
				fine sand, trace (< 10%), Very Fine Sand,, ,,,, orange brown	
200	204 F	0.0		Course Courd Medium Courd well conted subspecular and (20 500/) along	
360	361.5	0.3		Coarse Sand, Medium Sand, well-sorted, subangular, and (36-50%), clay, little (10-20%), Silt, wet, soft, med plasticity, no odor, gray clay,, ,,,,	
				reddish brown	
380	382	0.7		Coarse Sand, Medium Sand, well-sorted, subangular, subrounded, little	
000	002	"		(10-20%), silt, clay,, wet, soft, low plasticity, no odor black colored sand	
				bottom recoery, ,,,, Grey	
385	395	N/A		Auger cuttings, Medium Sand, well-sorted, subangular, subrounded,,,	
				wet, loose, no odor, ,,,, light gray	
400	402	1.3		Fine Sand, Very Fine Sand, Silt, well-sorted, subrounded, some (21-	
				35%), clay,, wet, laminated, ,,,, light gray	
401	401.5	N/A		Medium Sand, well-sorted, subangular, subrounded, trace (< 10%), fine	
				sand, very fine sand, silt,, wet, no odor, ,,,, orange brown	
404.5	400	N./A		Madium Cand wall parted autonomic 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
401.5	402	N/A		Medium Sand, well-sorted, subangular, subrounded, trace (< 10%), fine	
				sand, very fine sand,, wet, parting, homogeneous, ,,,, light gray	
420	124 4	0.5		Madium Sand, well-corted subangular subrounded little (40 200/) fire	
420	421.1	0.5		Medium Sand, well-sorted, subangular, subrounded, little (10-20%), fine sand, very fine sand, trace (< 10%), Silt, wet, well-sorted, no odor, ,,,,	
				tan/buff	
425	440	N/A		Same as above, Auger cuttings,,,, ,,,, light gray	
720	-T-V	'''^		same as abore, rager callings,,,, ,,,, light gray	
		I	1		

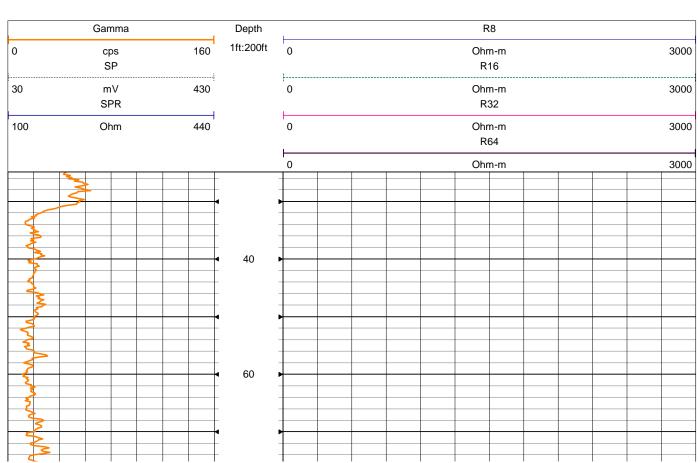


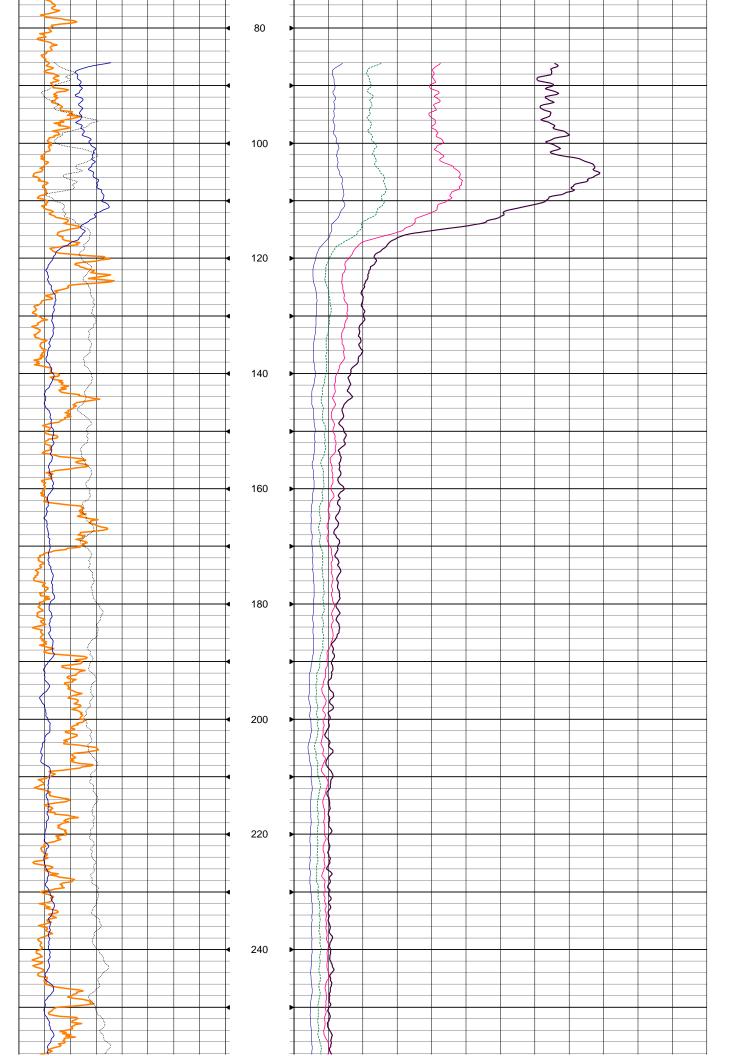
Well/Boring	RW-21	_VP-16	Proje	ect Name and No NY001496.2515	
Prepared			_		
Ву					
Sample	Denth		Time/Hydraulic		
(feet below la		Sample	Pressure or		
		Recovery	Blows per 6		
From	то 441.3	(feet)	inches	Sample Description	PID (ppm)
440	441.3	0.7		Medium Sand, poorly-sorted, subangular, subrounded, little (10-20%), very fine sand, silt, clay, trace (< 10%), Coarse Sand, wet, dense, no	
				odor, laminated, ,,,, Medium grey	
445	455	N/A		Auger cuttings, Medium Sand, Fine Sand, little (10-20%), very coarse	
				sand, coarse sand, poorly-sorted,, wet, no odor, ,,,, Medium grey	
460	461.2	1		Coarse Sand, well-sorted, subangular, subrounded, some (21-35%),	
				medium sand, trace (< 10%), Fine Sand, moist, no odor, ,,,, Medium grey	
462	480	N/A		Auger cuttings, void, fluid loss approximately 1300-1500 gallons,,,, ,,,,	
702	400			Auger cuttings, void, nata 1833 approximately 1866 1866 gallons,,,, ,,,,	
480	481.3	0.5		Medium Sand, Fine Sand, poorly-sorted, subrounded, little (10-20%),	
				coarse sand, trace (< 10%), Silt, wet, dense, no odor, ,,,, Brown	
500	501.4	1		Very Coarse Sand, Coarse Sand, poorly-sorted, subangular,	
				subrounded, little (10-20%), medium sand, fine sand, trace (< 10%), Silt, wet, no odor, parting, ,,,, Light grey	
520	520.9	0.5		Silt, little (10-20%), fine sand, very fine sand, trace (< 10%), Clay, soft,	
	0_0.0			nonplastic, low plasticity, no odor, ,,,, Light grey	
540	542	1		Coarse Sand, Medium Sand, well-sorted, subrounded, trace (< 10%), fine	
				sand,, wet, no odor, ,,,, Light grey	
FFO	FF0 0	0.0		Madium Cand wall parted arrester subspecial a subspecial little (40	
550	550.8	0.8		Medium Sand, well-sorted, angular, subangular, subrounded, little (10-20%), coarse sand, fine sand,, wet, parting, laminated, ,,,, Light grey	
				2070), course suita, fine suita,, wet, parting, familiatea, ,,,, Light grey	
560	560.8	0.5		Coarse Sand, Medium Sand, well-sorted, angular, subangular,	
				subrounded, trace (< 10%), fine sand,, wet, no odor, ,,,, Grey	
580	580.9	0.5		Silt, little (10-20%), clay,, moist, medium stiff, nonplastic, slow dilatancy,	
				no odor, ,,,, dark gray	
580.2	580.9	N/A		Medium Sand, well-sorted, subangular, subrounded, little (10-20%), fine	
000.2	000.0	197		sand, well-sorted, moist, very dense, no odor, ,,,, Dark tan	
				•	
600	600.8	N/A		Fine Sand, Very Fine Sand, well-sorted, little (10-20%), silt,, wet, no	
				odor, laminated, ,,,, Light grey	
242	040.0	4.4			
610	610.9	1.1		Medium Sand, Fine Sand, poorly-sorted, angular, subangular, and (36-50%), coarse sand, silt, poorly-sorted, angular, subangular, little (10-	
				20%), Very Coarse Sand, trace (< 10%), Clay, wet, poorly-sorted, no	
620	621.3	2		Medium Sand, well-sorted, angular, subangular, subrounded, little (10-	
				20%), coarse sand, trace (< 10%), Silt, wet, no odor, ,,,, Light brown	
620.7	621	N/A		Very Fine Sand, Silt, little (10-20%), medium sand, trace (< 10%), Clay,	
				moist, low plasticity, slow dilatancy, no odor, parting, laminated, ,,,, Light grey	
621	621.3	N/A	1	Medium Sand, well-sorted, subangular, subrounded, trace (< 10%), fine	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	J£ 1.J	'"^		sand, subangular, subrounded,, wet, no odor, ,,,, Light grey	
				, , , , , , , , , , , , , , , , , , ,	
640	640.9	0.8		Medium Sand, well-sorted, subangular, subrounded, little (10-20%), fine	
				sand, well-sorted, subangular, subrounded, trace (< 10%), Coarse Sand,	
				Very Fine Sand, Silt, wet, no odor, homogeneous, ,,,, Light grey	
645	646.8	1.2		Medium Sand, Fine Sand, well-sorted, subangular, subrounded, trace (<	
				10%), coarse sand, very fine sand, silt, clay,, wet, well-sorted, no odor, seam, ,,,, Light grey	
650	650.5	N/A		Silt, trace (< 10%), fine sand, very fine sand, clay,,, ,,,, Grey	
		<u>L</u>			

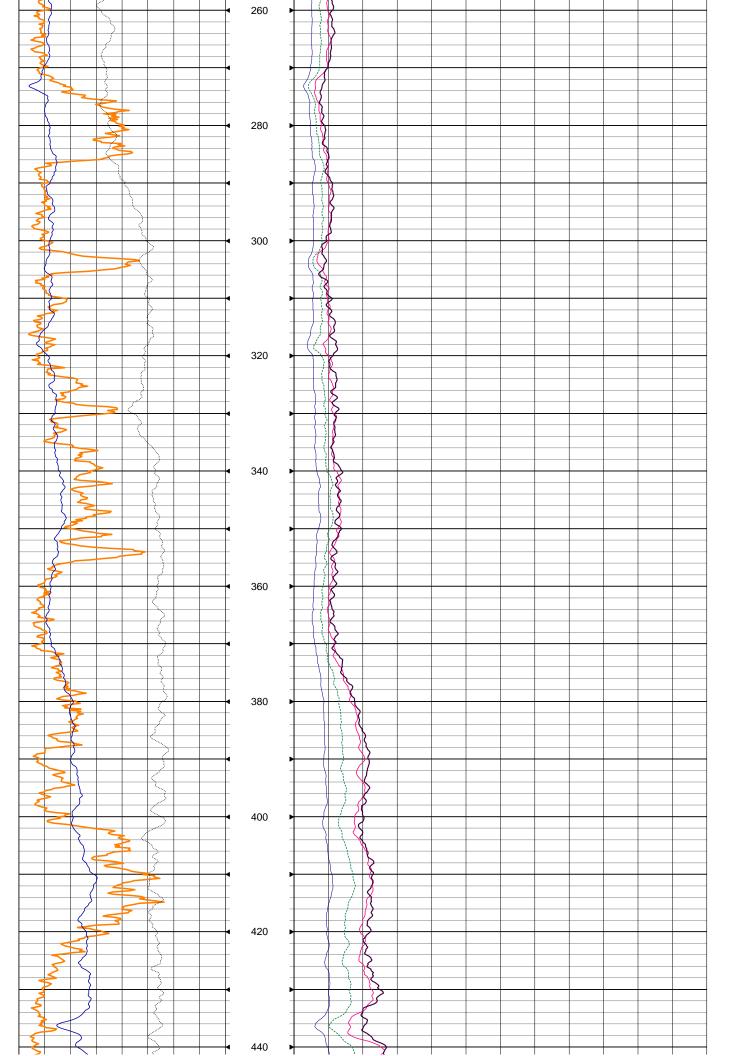


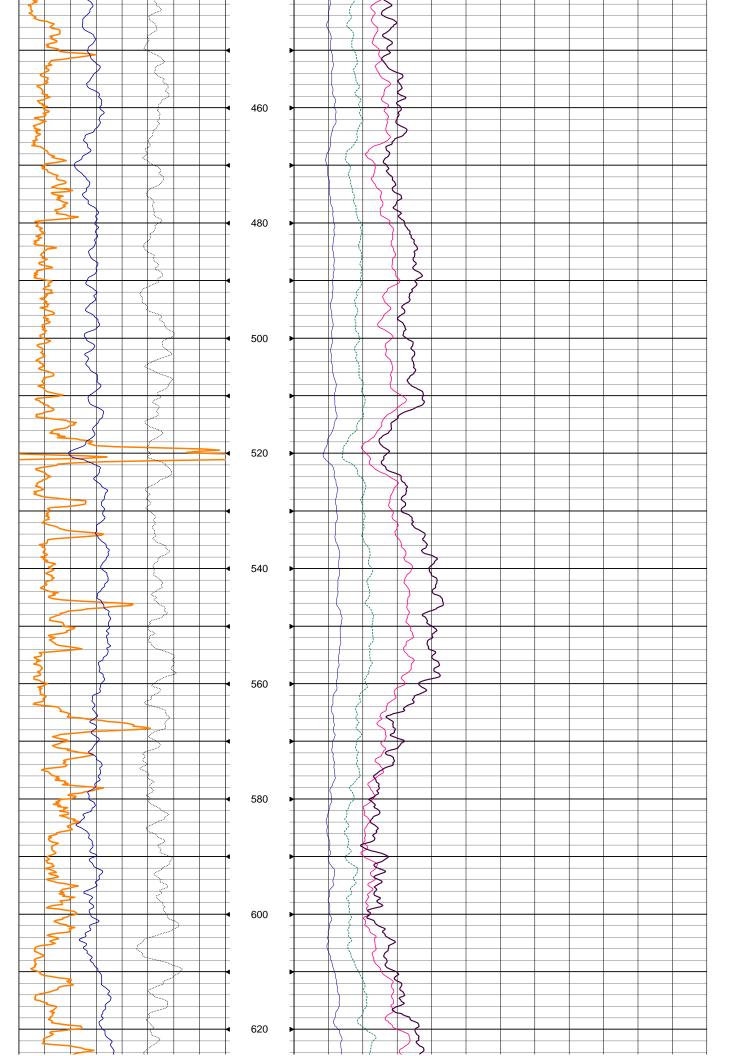
Well/Boring _	RW-21	_VP-16	_ Proje	ct Name and No	NY001496.2515	
Prepared By						
Sample (feet below la	•	Sample	Time/Hydraulic Pressure or			
		Recovery	Blows per 6			
From	To	(feet)	inches		Sample Description	PID (ppm)
650	652	2		little (10-20%), n Small Pebble, G	Coarse Sand, Coarse Sand, poorly-sorted, subangular, nedium sand, fine sand, poorly-sorted, trace (< 10%), tranule, wet, poorly-sorted, no odor, ,,,, Grey	
651	651.5	N/A		medium sand, v	rly-sorted, subangular, subrounded, little (10-20%), ery fine sand, silt, trace (< 10%), Clay, moist, poorly- , parting, laminated, ,,,, Dark grey	
651.5	652	N/A		·	well-sorted, subangular, subrounded, little (10-20%), fine -sorted, no odor, homogeneous, ,,,, Grey	
655	657	2		Same as above,,	,, ,,,, Grey	
655	655.7	N/A		little (10-20%), n Sand, wet, no o		
655.7	656.2	N/A		_	nd, poorly-sorted, subangular, subrounded, little (10- nd, medium sand, trace (< 10%), Silt, wet, poorly-sorted,	
656.2	656.7	N/A		Silt, and (36-50% no odor, ,,,, Gre	%), clay, trace (< 10%), Granule, dry, soft, med plasticity, y	
656.7	657	N/A		(21-35%), very c	Granule, poorly-sorted, subangular, subrounded, some coarse sand, little (10-20%), Medium Sand, Fine Sand, Silt, ed, no odor, ,,,, Medium brown	
660	661	0.8			fledium Sand, trace (< 10%), fine sand, well-sorted, gular,, wet, well-sorted, no odor, ,,,, Grey	
660.7	661	N/A		(< 10%), granule	nd, Coarse Sand, well-sorted, angular, subangular, trace e, coarse sand, medium sand, fine sand,, wet, very homogeneous, ,,,, Grey	
665	666.4	1		subrounded, littl	Coarse Sand, poorly-sorted, angular, subangular, le (10-20%), small pebble, coarse sand, poorly-sorted, gular, subrounded, trace (< 10%), Medium Sand, Fine	
665.3	666.4	N/A		Same as above,,	" ",, orange brown	
670	671	1.2		·	well-sorted, subangular, subrounded, trace (< 10%), fine ed., wet, well-sorted, very dense, no odor, laminated, ,,,,	
675	676	1		Same as above,,	" "" Light grey	
680	680.7	0.1			ranule, well-sorted, angular, trace (< 10%), large pebble, subangular,, wet, loose, no odor, ,,,, Light grey	

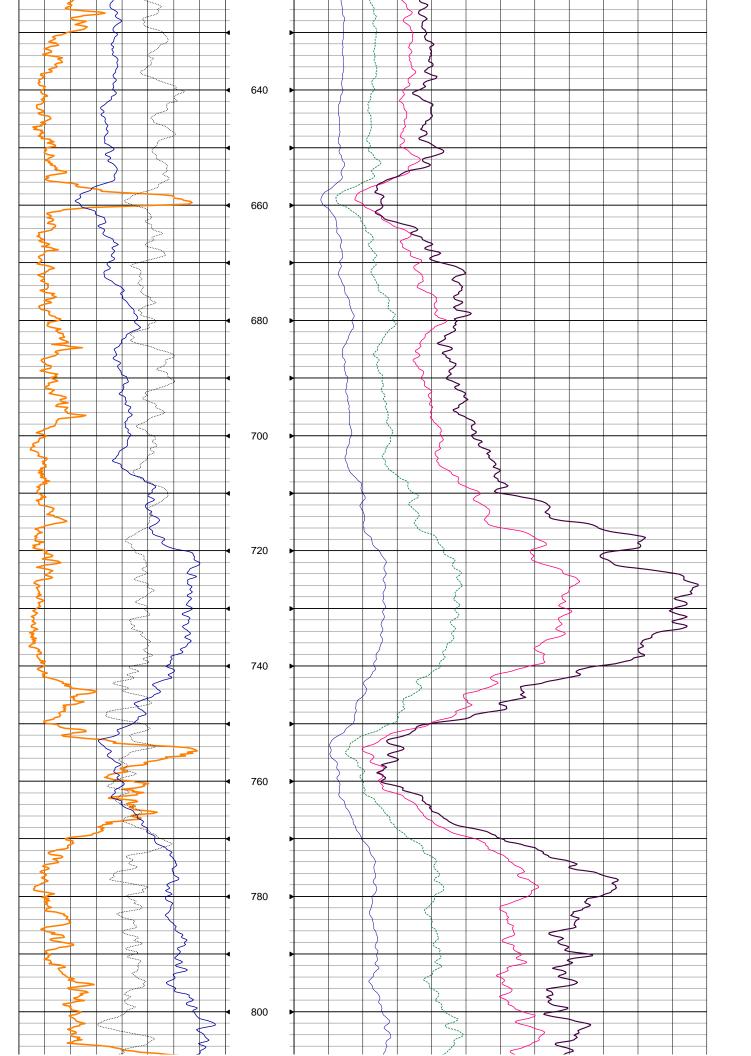
86 FEET		0 FEET	PVC	10 INCH	TOTAL DEPTH	86 FEET	6 INCH	
ТО		FROM	WGT.	SIZE	ТО	FROM	BIT	NO.
	-	_	CORD	CASING RECORD		ECORD	BOREHOLE RECORD	RUN
					AS	AARON MAAS	EDBY	WITNESSED BY
					RICE	BENJAMIN RICE	ED BY	RECORDED BY
							OPERATING RIG TIME	OPERATI
						I	TOP LOGGED INTERVAL	TOP LOG
						AL .	BTM LOGGED INTERVAL	BTM LOC
			. TEMP.	MAX. REC. TEMP.		941 FEET	OGGER	DEPTH-LOGGER
				LEVEL		947 FEET	RILLER	DEPTH-DRILLER
			Y	DENSITY			(J	TYPE LOG
			TY	SALINITY	INUTE	16 FEET / MINUTE	SPEED	LOGGING SPEED
	BENTONITE		D IN HOLE	TYPE FLUID IN HOLE	, 2016	AUGUST 11, 2016		DATE
	G.L.					1	DRILLING MEAS. FROM	DRILLING
	D.F.		M	ABOVE PERM. DATUM		GROUND SURFACE	S. FROM	LOG MEAS. FROM
	K.B.			ELEVATION			PERMANENT DATUM	PERMAN
				RGE	TWP	SEC		
ICES	OTHER SERVICES				/ILSON	LOCATION BROADWAY & WILSON		
<u>~</u>	NEW YORK	STATE	ST		BETHPAGE			TOWN
			ŕ	CT AREA	RW 21 PROJECT AREA		CT	PROJECT
					RW-21_VP13		ID	WELL ID
					ARCADIS		YNY	COMPANY
					N.C.	AQUA TERRA GEOPHYSICS INC.	A TERRA	AQU

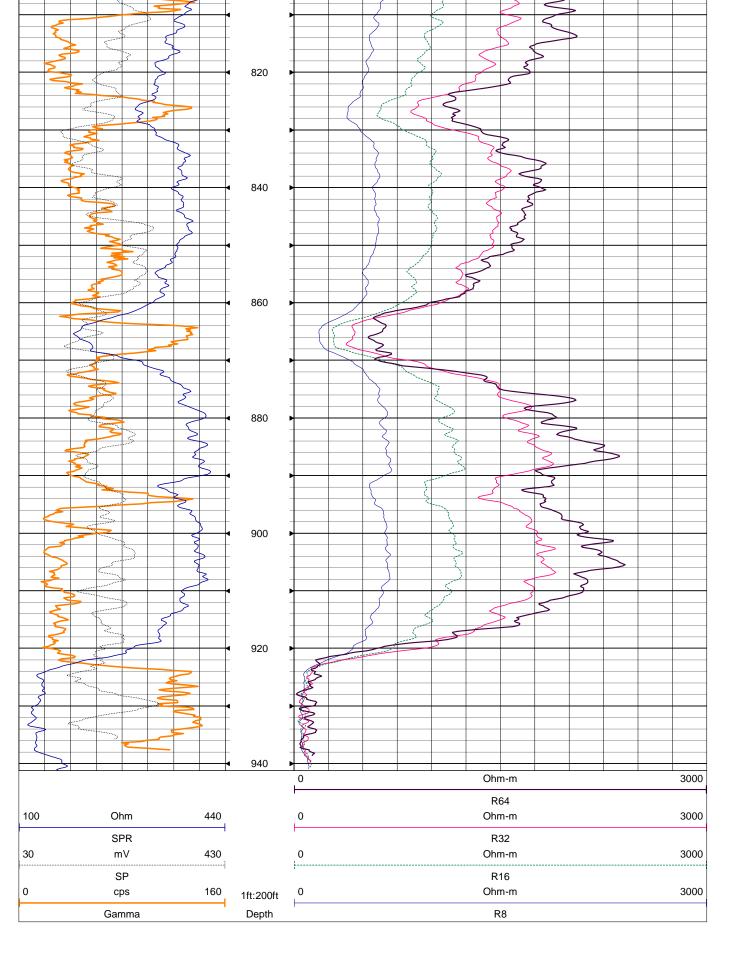




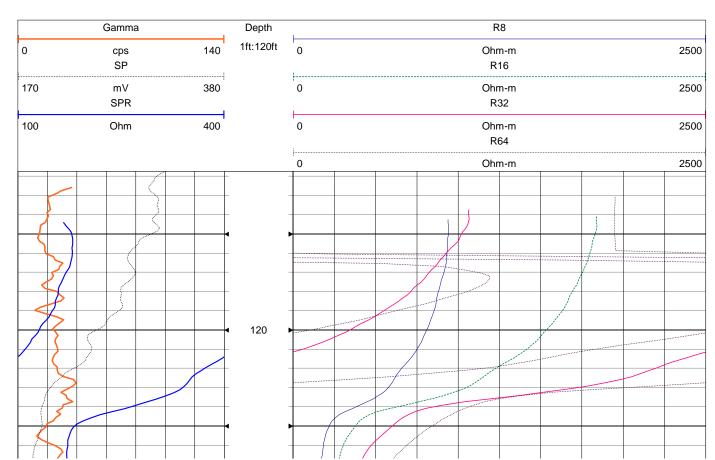


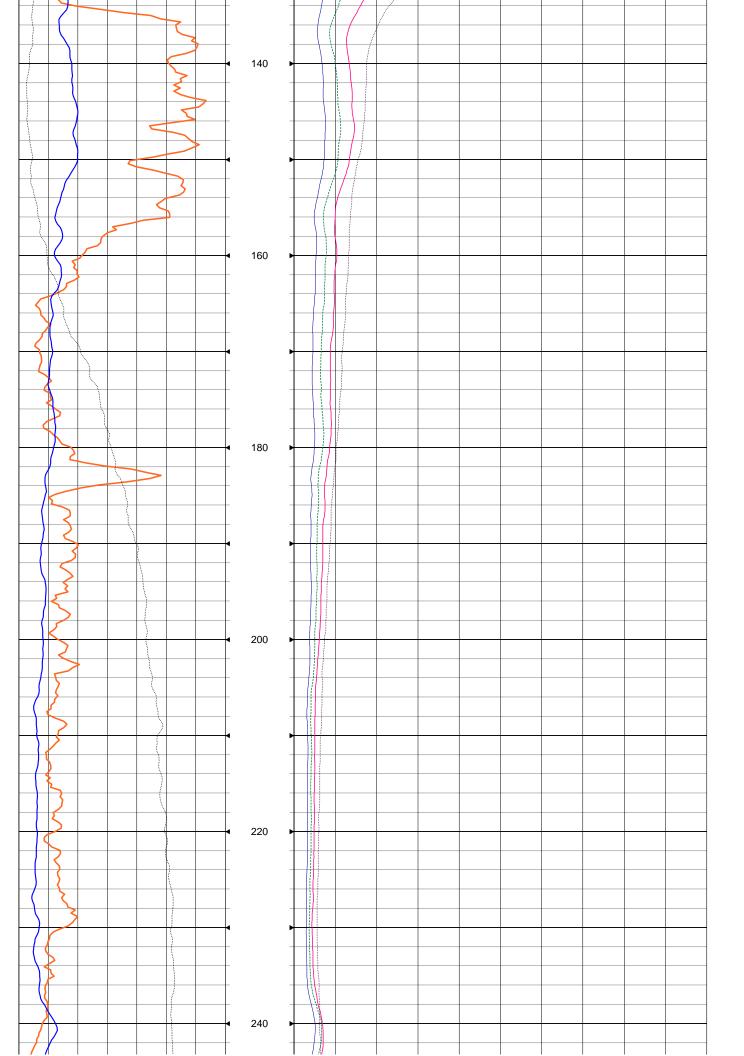


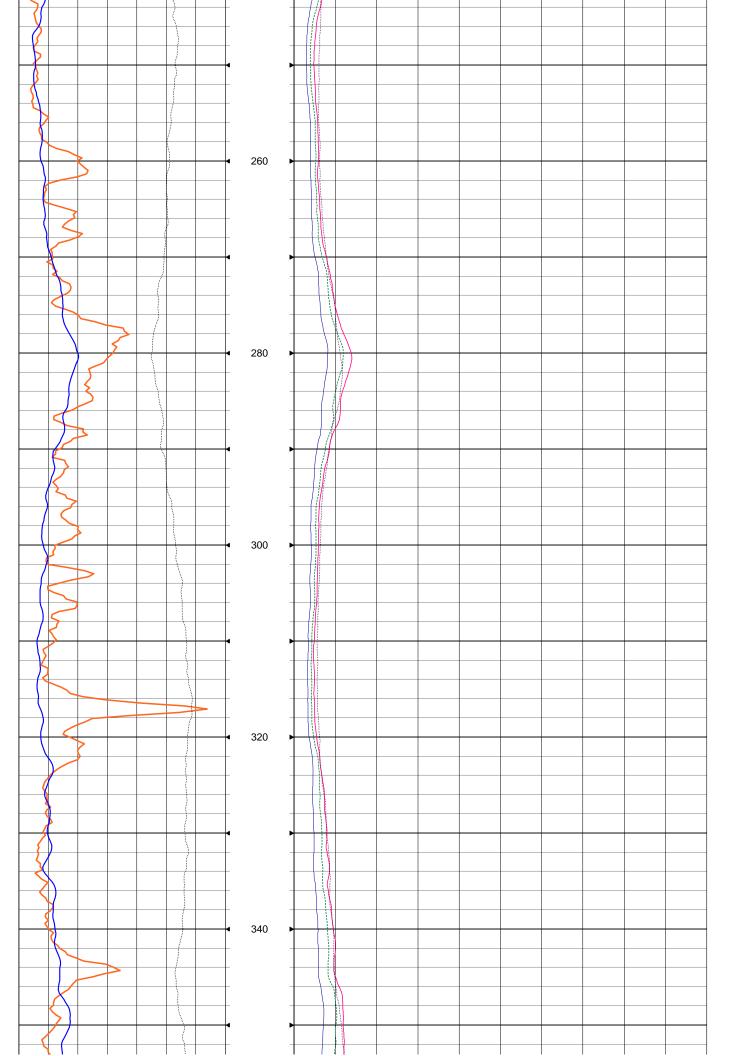


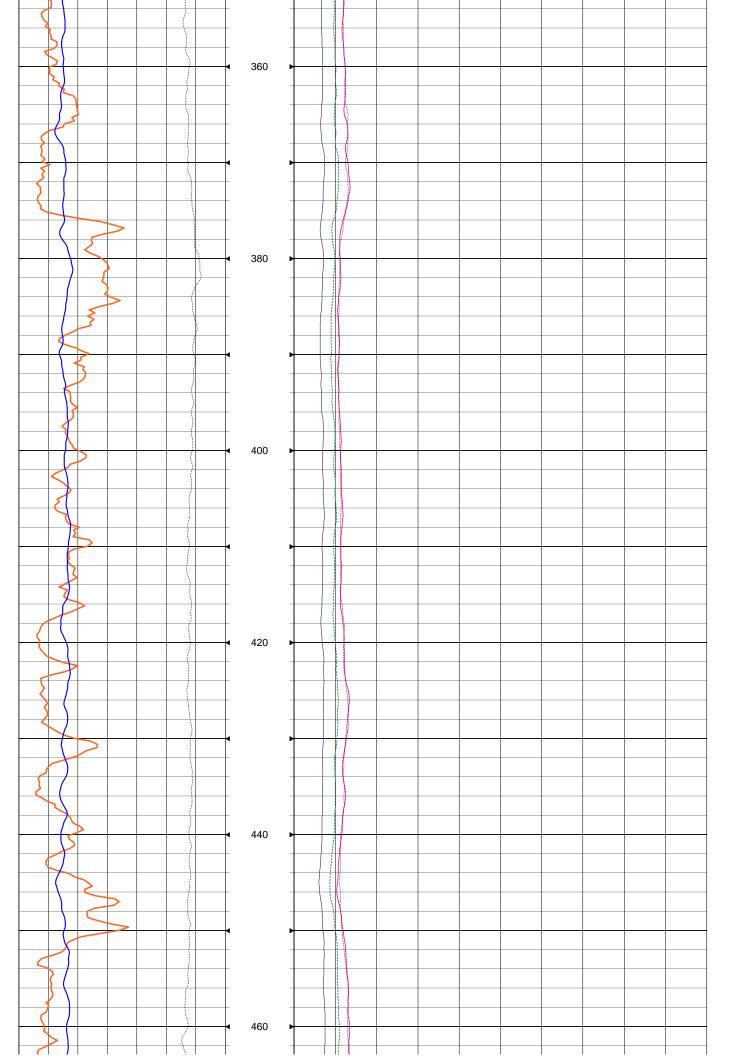


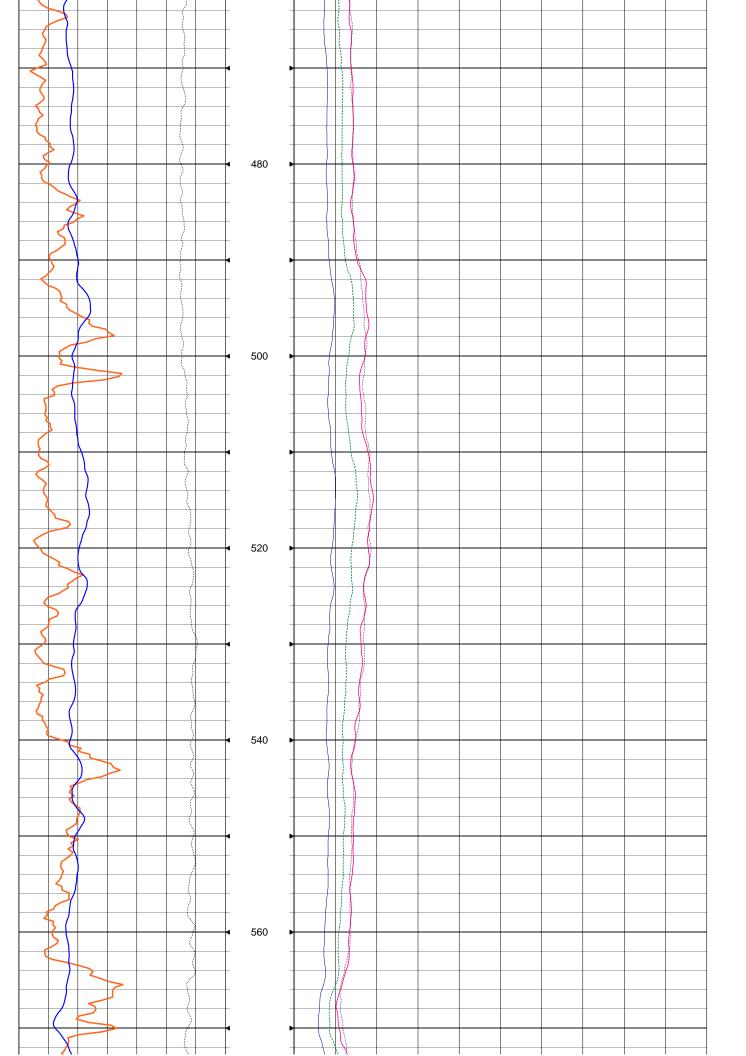
	6 INCH 100 FEET		RUN BOREHOLE RECORD	WITNESSED BY	RECORDED BY	OPERATING RIG TIME	TOP LOGGED INTERVAL	BTM LOGGED INTERVAL	DEPTH-LOGGER	DEPTH-DRILLER	TYPE LOG	RUN No	DATE	DRILLING MEAS. FROM	LOG MEAS. FROM GF	PERMANENT DATUM	CO WELL FLD CTY STE FILING No	1.0	Q	F	W	С	A	•
	ÆET	Z	RD	JEFF SPRADLIN	BENJAMIN RICE				783 FEET	790 FEET		DOWN	OCTOBER 5, 2016		GRADE		С	LOCATION	COUNTRY	FIELD	WELL ID	COMPANY .		
	TOTAL DEPTH	ТО		LIN	RICE								, 2016		ABOVE		TWP				RW21_VP-14	ARCADIS		ן
	10 INCH		CASING RECORD						MAX. REC. TEMP.	LEVEL	DENSITY	SALINITY	TYPE FLUID IN HOLE		ABOVE PERM. DATUM	ELEVATION	RGE							
	PVC	WGT.	CORD						TEMP.		Y	Y	D IN HOLE		X				STATE					
	0 FEET	FROM																	TE					
													BENTONITE	G.L.	D.F.	K.B.		OTHER SERVICES						
	100 FEET	ТО																/ICES						

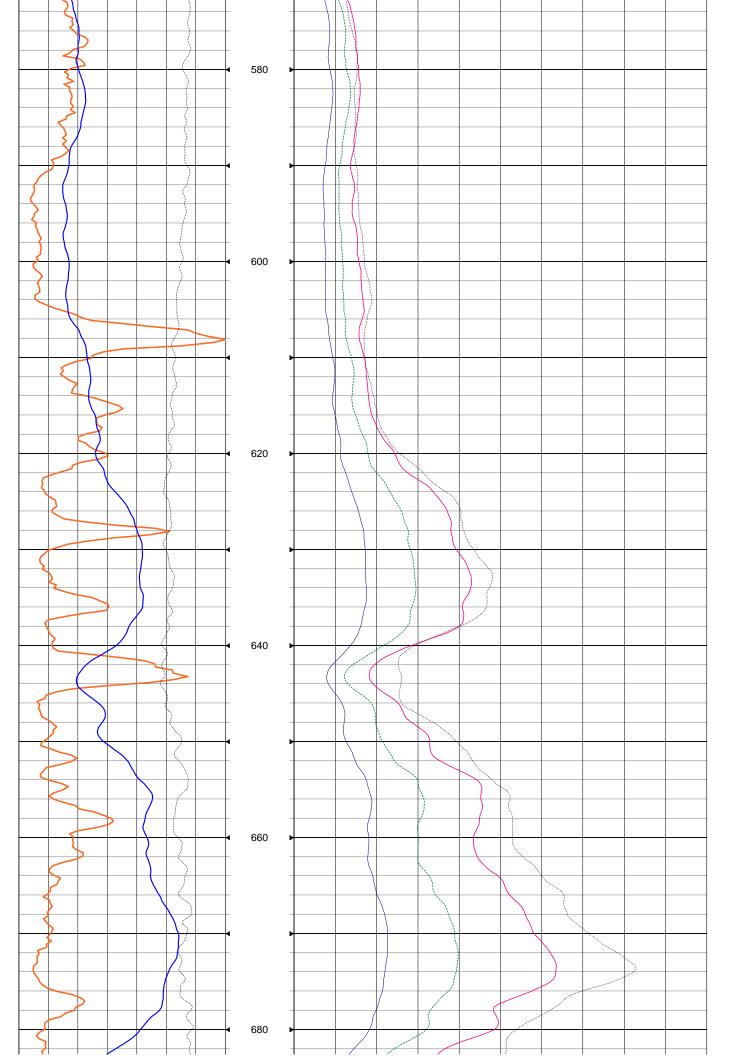


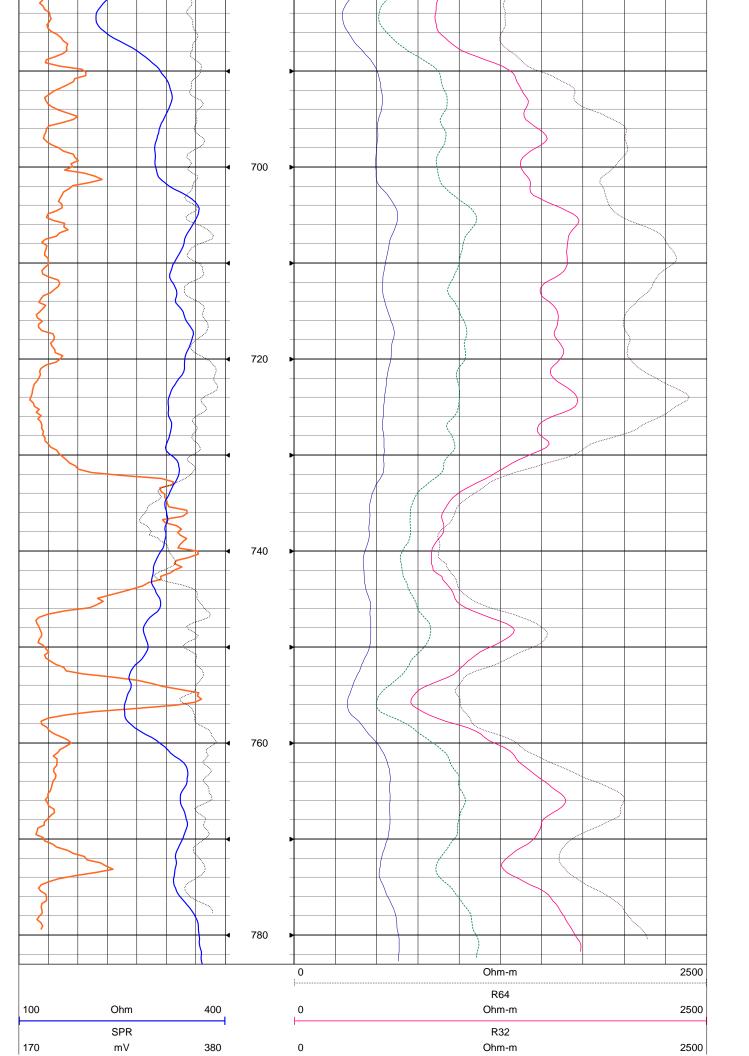






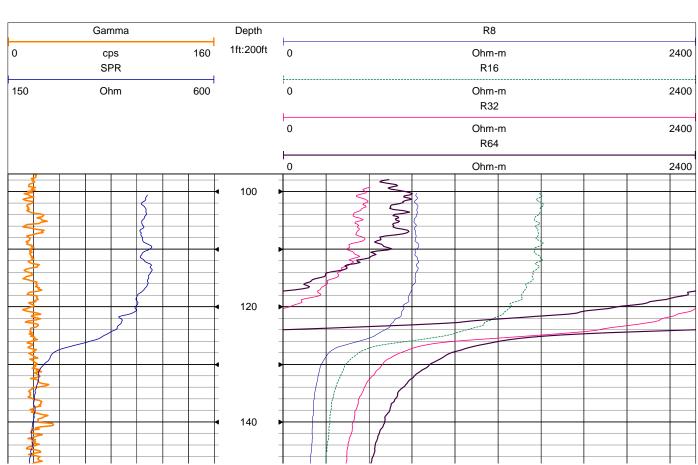


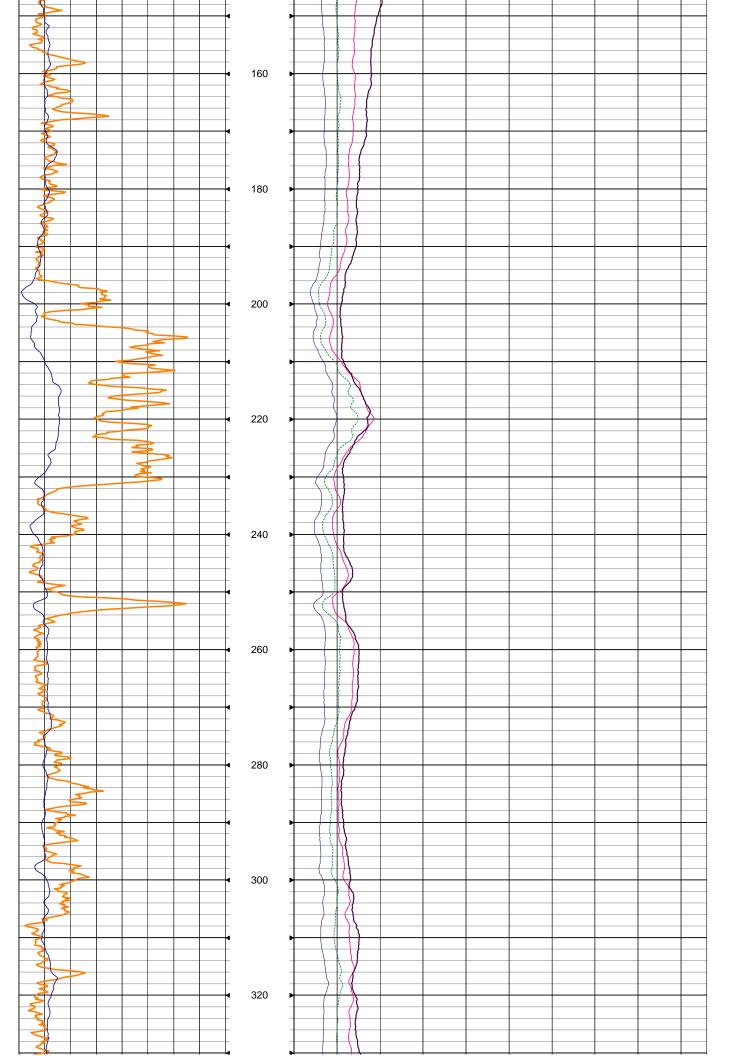


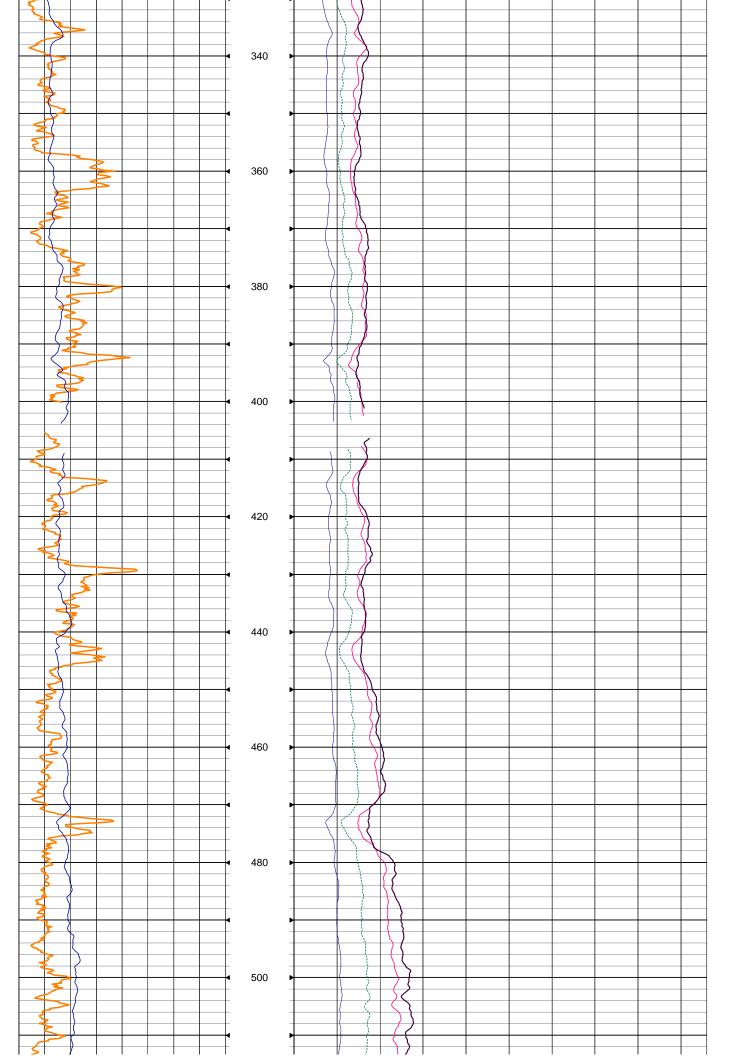


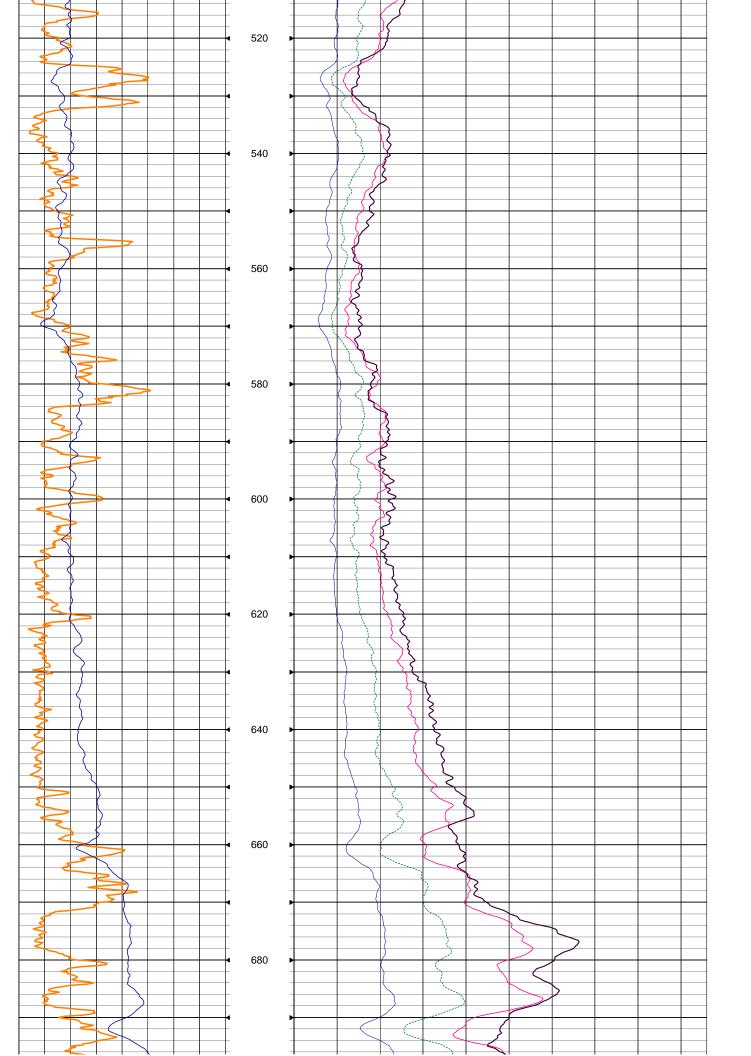
SP		R16							
0 cps 140	1ft:120ft	0 Ohm-m 2500							
Gamma	Depth	R8							

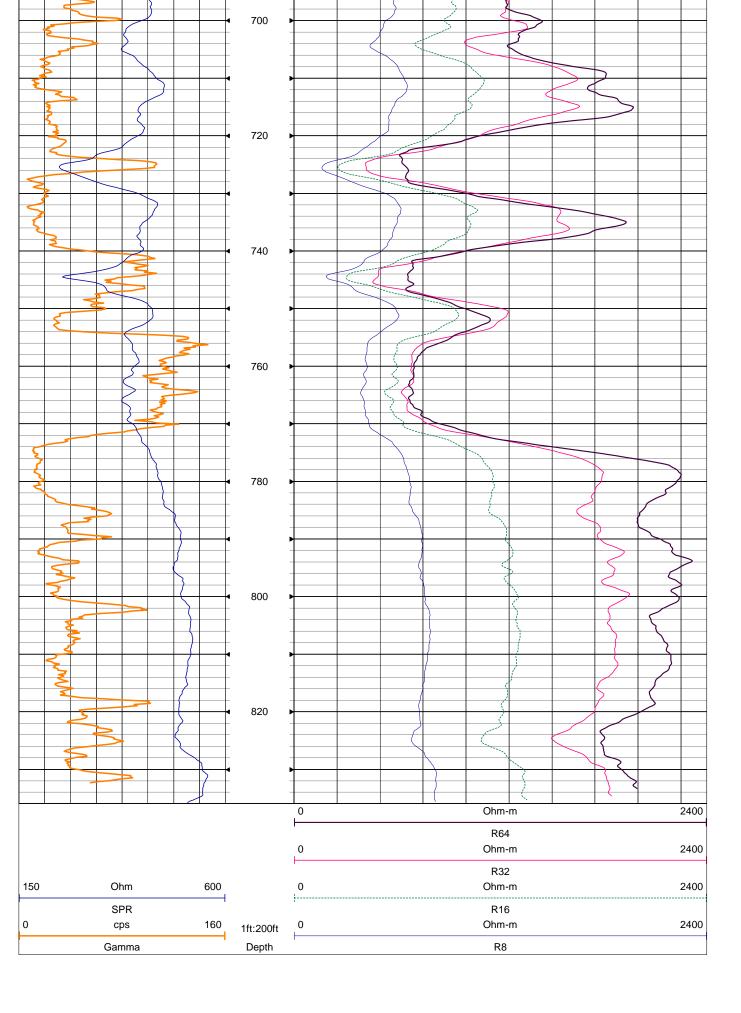
AQUA TERRA GEOPHYSICS INC.  COMPANY  CO	APANY									
BDREHOLE RECORD   STATE   NEW YOR   NCH   PVC   PEET   NCH   NCH   PVC	APANY									
BOREHOLE RECORD   BERJAMIN RICE   BORD   BROWN   BENJAMIN RICE   BORD   BROWN   BR	QUA TERRA GEOPHYSICS INC.	98 FEET	ET	0 FE	PVC	10 INCH	TOTAL DEPTH	98 FEET	СН	
ROGGED INTERVAL   SEC   TWP   FLUID IN HOLE	QUA TERRA GEOPHYSICS INC.  #PANY  #PANY  #PANY  #PANY  #PANY  #PARCADIS  LLID  LOCATION  #BETHPAGE  #PAGE  LOCATION  #PARCADIS  LOCATION  #PARCADIS  LOCATION  #PARCADIS  #PARCADIS  #PARCADIS  #PARCADIS  #PARCADIS  #PARCADIS  #PARCADIS  #PARCADIS  #PARCATION  #PARCADIS  ##PARCADIS	TO	X	FRO	WGT.	SIZE	TO	ROM	BIT	NO.
NY ARCADIS D RW21_VP15 T BETHPAGE STATE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  NT DATUM MEAS. FROM MEAS. FROM MEAS. FROM AUGUST 5, 2016 SPEED INTERVAL ED INTERVAL ED INTERVAL DBY KEVIN SWIADDEC  TYPE FLUID IN HOLE SALINITY DENSITY LLEVEL MAX. REC. TEMP.  MAX. REC. TEMP.	NY ARCADIS D RW21_VP15 T BETHPAGE STATE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  NT DATUM ROUND SURFACE ABOVE PERM. DATUM  MEAS. FROM MEAS. FROM  MEAS. FROM SPEED IG FEET MINUTE DENSITY  LLER 840 FEET LEVEL  ED INTERVAL ED INTERVAL DBY KEVIN SWIADDEC  STATE  ARCADIS  STATE  STATE  STATE  LEVATION  AUGUST 5, 2016 DENSITY DENSITY DENSITY LLEVEL MAX. REC. TEMP.  MAX. REC. TEMP.				CORD	CASING RI		CORD	BOREHOLE RI	RUN
NY ARCADIS D RW21_VP15  T  BETHPAGE  STATE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  NI DATUM  MEAS. FROM  MEAS. FROM  MEAS. FROM  SPEED  AUGUST 5, 2016  SPEED  16 FEET / MINUTE  SED INTERVAL  ED INTERVAL  GRIG TIME  BENJAMIN RICE  SALANTY  MAX. REC. TEMP.  GRIG TIME  BENJAMIN RICE  BENJAMIN RICE	NY ARCADIS D RW21_VP15 T BETHPAGE STATE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  NT DATUM  MEAS. FROM MEAS. FROM  MEAS. FROM  SPEED  LOCATION BROADWAY & ARTHUR  SPEED  AUGUST 5, 2016 SPEET  LOCATION  AUGUST 5, 2016 SPEET  LEVATION  BENJAMIN RICE  MAX. REC. TEMP.  GRIG TIME BENJAMIN RICE  BENJAMIN RICE						ADEC	KEVIN SWI	EDBY	WITNESS
NY ARCADIS D RW21_VP15  TT BETHPAGE STATE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  NI DATUM ELEVATION  MEAS. FROM GROUND SURFACE ABOVE PERM. DATUM  MEAS. FROM AUGUST 5, 2016 TYPE FLUID IN HOLE  SPEED SED INTERVAL B40 FEET MINUTE SALINITY  LLEVEL DENSITY  LLEVEL MAX. REC. TEMP.  GRIG TIME MAX. REC. TEMP.	N TERRA GEOPHYSICS INC.  NY ARCADIS  D RW21_VP15  T  BETHPAGE  LOCATION BROADWAY & ARTHUR  SEC  TWP  ELEVATION  MEAS. FROM  AUGUST 5, 2016 SPEED  AUGUST 5, 2016 SPEED  AUGUST 5, 2016 SPEED  I 16 FEET / MINUTE SPEED  GGER  836 FEET  MAX. REC. TEMP.  GRIG TIME  GRIG TIME  GRIG TIME  ON TO ARCADIS  BETHPAGE  STATE  STATE  STATE  STATE  STATE  ARCADIS  STATE  STATE  STATE  ABOVE PERM. DATUM  MAX. REC. TEMP.  MAX. REC. TEMP.						RICE	BENJAMIN	ED BY	RECORDI
NY ARCADIS D RW21_VP15 TT BETHPAGE STATE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  NT DATUM ELEVATION \$. FROM GROUND SURFACE ABOVE PERM. DATUM  MEAS. FROM  MEAS. FROM  AUGUST 5. 2016 SPEED SALINITY  DED INTERVAL  ED INTERVAL  ED INTERVAL  MAX. REC. TEMP.	N TERRA GEOPHYSICS INC.  NY ARCADIS  D RW21_VP15  T  BETHPAGE  LOCATION BROADWAY & ARTHUR  SEC  TWP  ELEVATION  MEAS. FROM  AUGUST 5, 2016 SPEED  AUGUST 5, 2016 SPEED  I 16 FEET / MINUTE SPEED  SED INTERVAL  ED INTERVAL  ED INTERVAL  ED INTERVAL  ED INTERVAL  MAX. REC. TEMP.								NG RIG TIME	OPERATI
NTERRA GEOPHYSICS INC.  NY  ARCADIS  D  RW21_VP15  T  BETHPAGE  SEC  TWP  RGE  NTDATUM  SEC  TWP  LLEVATION  S. FROM  GROUND SURFACE  ABOVE PERM. DATUM  MEAS. FROM  MEAS. FROM  SPEED  AUGUST 5, 2016  TYPE FLUID IN HOLE  SPEED  AUGUST 5, 2016  SPEET  LLEVEL  GGER  836 FEET  MAX. REC. TEMP.	NTERRA GEOPHYSICS INC.  NY  ARCADIS  D  RW21_VP15  TT  BETHPAGE  BETHPAGE  BETHPAGE  STATE  LOCATION  BROADWAY & ARTHUR  SEC  TWP  RGE  NT DATUM  SFROM  GROUND SURFACE  ABOVE PERM. DATUM  MEAS. FROM  AUGUST 5, 2016  TYPE FLUID IN HOLE  SPEED  AUGUST 5, 2016  AUGUST 5, 2016  SALINITY  DENSITY  ILLEY  BED INTERVAL  RGE  TYPE FLUID IN HOLE  SALINITY  DENSITY  LEVEL  MAX. REC. TEMP.								GED INTERVAI	TOP LOG
NY ARCADIS D RW21_VP15 T  BETHPAGE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE NT DATUM  SEC TWP ELEVATION S. FROM MEAS. FROM AUGUST 5, 2016 TYPE FLUID IN HOLE SPEED AO FEET MINUTE SALINITY DENSITY LLEVEL  MAX REC TEMP.	NTERRA GEOPHYSICS INC.  NY ARCADIS D RW21_VP15  TT  BETHPAGE STATE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  NT DATUM ELEVATION  S. FROM GROUND SURFACE ABOVE PERM. DATUM  MEAS. FROM  AUGUST 5, 2016 TYPE FLUID IN HOLE  SPEED AHOFEET MINUTE SALINITY  DENSITY  LLEVEL  MAX REC TEMP.								GED INTERVA	BTM LOG
NTERRA GEOPHYSICS INC.  NY ARCADIS D RW21_VP15 T BETHPAGE STATE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  NT DATUM ELEVATION S. FROM GROUND SURFACE ABOVE PERM. DATUM  MEAS. FROM  AUGUST 5, 2016 TYPE FLUID IN HOLE SPEED 16 FEET / MINUTE SALINITY DENSITY  ILLER 840 FEET   DENSITY	NTERRA GEOPHYSICS INC.  NY ARCADIS D RW21_VP15 T BETHPAGE SEC TWP RGE NT DATUM SEC TWP ELEVATION S. FROM GROUND SURFACE ABOVE PERM. DATUM MEAS. FROM AUGUST 5, 2016 TYPE FLUID IN HOLE SPEED 16 FEET / MINUTE SALINITY DENSITY  ILLER 840 FEET   DENSITY ILLER 1 540 FEET   TYPE   DENSITY				TEMP.	MAX. REC		836 FEET	OGGER	DEPTH-L
NTERRA GEOPHYSICS INC.  NY ARCADIS D RW21_VP15 T BETHPAGE LOCATION BROADWAY & ARTHUR  SEC TWP RGE NT DATUM SEC TWP ELEVATION S. FROM GROUND SURFACE ABOVE PERM. DATUM MEAS. FROM AUGUST 5, 2016 TYPE FLUID IN HOLE SPEED 16 FEET / MINUTE SALINITY DENSITY	NY ARCADIS D RW21_VP15 T BETHPAGE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE NT DATUM SEC TWP ELEVATION S. FROM GROUND SURFACE ABOVE PERM. DATUM MEAS. FROM AUGUST 5, 2016 SPEED AGGIVE SALINITY DENSITY  TERRA GEOPHYSICS INC.  ARCADIS BETHPAGE STATE					LEVEL		840 FEET	RILLER	DEPTH-D
QUA TERRA GEOPHYSICS INC.    PANY   ARCADIS	PANY ARCADIS L IID RW21_VP15  JECT  WN BETHPAGE STATE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  ANENT DATUM  GEAS. FROM GROUND SURFACE ABOVE PERM. DATUM  JING MEAS. FROM  AUGUST 5, 2016 TYPE FLUID IN HOLE  ING SPEED IO FEET / MINUTE SALINITY				Y	DENSIT			<b>G</b> 2	TYPE LOC
QUA TERRA GEOPHYSICS INC.    PANY	PANY ARCADIS L ID RW21_VP15  JECT  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  ANNENT DATUM GROUND SURFACE ABOVE PERM. DATUM JING MEAS. FROM AIGUST 5 2016 TYPPE H IID IN HOLE				TY	SALINI	INUTE	16 FEET / M	SPEED	LOGGING
ARCADIS RW21_VP15  BETHPAGE  LOCATION BROADWAY & ARTHUR  SEC  TWP  ELEVATION ELEVATION GROUND SURFACE  ABOVE PERM. DATUM	ARCADIS RW21_VP15  BETHPAGE  LOCATION BROADWAY & ARTHUR  SEC  TWP  ELEVATION ELEVATION GROUND SURFACE  ABOVE PERM. DATUM		BENTONI		D IN HOLE	TYPE FLUI	2016	AUGUST 5.		DATE
ARCADIS RW21_VP15  BETHPAGE  LOCATION BROADWAY & ARTHUR  SEC  TWP  ELEVATION  ELEVATION  GROUND SURFACE  ABOVE PERM. DATUM	GEOPHYSICS INC.  ARCADIS  RW21_VP15  BETHPAGE  LOCATION  BROADWAY & ARTHUR  SEC  TWP  RGE  ELEVATION  GROUND SURFACE  ABOVE PERM. DATUM		G.L.						3 MEAS. FROM	DRILLING
ARCADIS RW21_VP15  BETHPAGE  LOCATION BROADWAY & ARTHUR  SEC TWP RGE  ELEVATION ELEVATION	GEOPHYSICS INC.  ARCADIS  RW21_VP15  BETHPAGE  LOCATION  BROADWAY & ARTHUR  SEC TWP RGE  ELEVATION		D.F.		M	PERM. DATI		GROUND SURFA	S. FROM	LOG MEA
ARCADIS RW21_VP15  BETHPAGE  LOCATION BROADWAY & ARTHUR  SEC  TWP  RGE	ARCADIS RW21_VP15  BETHPAGE  LOCATION BROADWAY & ARTHUR  SEC  TWP  RGE		K.B.			ELEVATION			ENT DATUM	PERMANI
ARCADIS RW21_VP15  BETHPAGE  LOCATION BROADWAY & ARTHUR	ARCADIS RW21_VP15  BETHPAGE  LOCATION BROADWAY & ARTHUR					RGE	TWP	SEC		
ARCADIS RW21_VP15 BETHPAGE STATE	ERRA GEOPHYSICS INC.  ARCADIS  RW21_VP15  BETHPAGE  STATE	N VICES	CITENSE				RTHUR	BROADWAY & A		
ERRA GEOPHYSICS INC.  ARCADIS  RW21_VP15	ERRA GEOPHYSICS INC.  ARCADIS  RW21_VP15	)RK	NEW YO	ATE	SI		BETHPAGE			TOWN
ERRA GEOPHYSICS I	ERRA GEOPHYSICS I								CT	PROJE
ERRA GEOPHYSICS I	ERRA GEOPHYSICS I						RW21_VP15		ID	WELL
AQUA TERRA GEOPHYSICS INC.	AQUA TERRA GEOPHYSICS INC.						ARCADIS		YNY	COMP. <sup>A</sup>
							NC.	EOPHYSICS 1	A TERRA G	AQU











	6	NO. B	RUN B	WITNESSED BY	RECORDED BY	OPERATING	TOP LOGGI	BTM LOGG	DEPTH-LOGGER	DEPTH-DRILLER	TYPE LOG	RUN No	DATE	DRILLING 1	LOG MEAS. FROM	PERMANENT DATUM	CO WELL FLD									
	6 INCH	BIT	BOREHOLE RECORD	) BY	BY	OPERATING RIG TIME	TOP LOGGED INTERVAL	BTM LOGGED INTERVAL	GER	LLER				DRILLING MEAS. FROM	. FROM	NT DATUM	CTY STE FILING No							<b> </b>	<b>&gt;</b>	
	93 FEET	FROM	ECORD	MA	BEN		L	T.	761	765		DOWN	OCT	1	GROUND		SEC	LOCATION	COUNTRY	FIELD	WELL ID	COMPANY	-		7	
	TO	ТО		MAG RYCHTECKA	BENJAMIN RICE				761 FEET	765 FEET		VN	OCTOBER 3, 2016		GROUND SURFACE			Z							7	
	TOTAL DEPTH			KA									6		ABOVE		TWP		BETHPAGE	21 PROJI	RW-21_VP16	ARCADIS			4	
	10 INCH	SIZE	CASING RECORD						MAX. REC. TEMP.	LEVEL	DENSITY	SALINITY	TYPE FLUID IN HOLE		ABOVE PERM. DATUM	ELEVATION	RGE			RW 21 PROJECT AREA						
	PVC	WGT.	ECORD						. TEMP.		Y	ГҮ	D IN HOLE		M											
	0 FEET	FROM																	STATE 1							
													BENTONITE	G.L.	D.F.	K.B.		OTHER SERVICES	NEW YORK							
	93 FEET	TO																VICES	ίΚ							

