Northrop Grumman OU-3
LABORATORY TESTING DATA SUMMARY

	BORING NO.	DEPTH (ft)	D2216 WATER CONTENT (%)	USCS SYMBOL. (1)	D2974 ORGANIC CONTENT (burnoff) (%)	D854 SOIL PARTICLE DENSITY (-)	D5084 SOIL BULK DENSITY (pcf)	D5084 SOIL DRY DENSITY (pcf)	D5084 COEFFICIENT OF PERMEABILITY (K) @ 20° C (2) (cm/sec)	CALCULATED TOTAL SOIL POROSITY (-)	CALCULATED AIR-FILLED SOIL POROSITY (-)	CALCULATED WATER-FILLED SOIL POROSITY (-)	CALCULATED SATURATION (%)	REMARKS
F-8	~~PZ-1~~	40-42												
F-8	~~PZ-1~~	40.25	19.6											
F-8	~~PZ-1~~	40.8	20.5											
F-8	~~PZ-1~~	41.35	20.1											
F-8	~~PZ-1~~	41.6	19.1	SP-SM	0.7	2.646	128.2	107.6	1.2E-4	0.35	0.02	0.33	95	
F-8	~~PZ-1~~	41.9	16.4											

Notes: (1) Based on visual observation
(2) See permeability test for details

Arcadis
Northrop Grumman OU-3
SUMMARY OF LABORATORY PERMEABILITY TESTS PERFORMED ON THIN-WALLED TUBE SAMPLES

BORING NO.	WATER CONTENTS	TOTAL UNIT WEIGHT	DRY UNIT WEIGHT	STRESSES	DURING CONSOLIDATION	DURING TEST	COEFFICIENT OF PERMEABILITY	REMARKS
	INITIAL	INITIAL	INITIAL	EFFECTIVE	TIME	PERMEANT	(K)	
	PRE-TEST (%)	PRE-TEST (pcf)	PRE-TEST (pcf)	BACK PRESSURE (psi)	VOLUMETRIC STRAIN (days, %)	INITIAL GRADIENT	@ 20° C (cm/sec)	
F-8 PZ-1	19.1	128.2	107.6	30.0	overnight	tap water	1.2E-4	P7775
	19.2	130.5	109.5	100.0	1.7	3		

Prepared by: RV Reviewed by: GET Date: 7/19/2006

CONSTANT HEAD HYDRAULIC CONDUCTIVITY TEST
ASTM D 5084 - 90

Project No. **31737876** BORING: ~~PZ-1~~ F-8

Project Name: **Northrop Grumman OU-3** SAMPLE: C DEPTH (ft): 41.6 Test No.: **P7775**

Specimen - Apparatus set-up - Test Information Apparatus No. C-2 Cell No. P-3 Stage 4

1) Specimen Tested in :	x	Triaxial Cell or		Compaction Mold or		
		with stones or		Stones with filter paper or		top + bottom
2) Specimen orientation for:	x	Vertical or		Horizontal permeability determination		
3) During saturation: Water flushed up sides of specimen to remove air:			x	No		Yes
4) During consolidation:	x	Top and bottom drainage or		Top		Bottom only
5) Direction of permeant :	x	Up during or		Down during permeation		
6) Permeant: water used	x	Tap		Distilled		
		Demineralized		0.005 N calcium sulfate (CaSO4)		

Consol Stage-Trial No.	Temp. °C	Date	Time hr	Time min	Time sec	Initial σ_c psi	Initial Ub psi	Dial Indicator in	Pressure Head Reading Mercury (inch)	Pressure Head Reading Gage (psi)	Flow Reading (cm)	Flow Vol (cm3) Rate (cm3/sec)	Fluid Head Reading Head (cm)	Fluid Head Reading Tail (cm)	Total Head Uncorrected / Correction / Corrected (cm)	Gradient	Permeability Preliminary / Final at 20°C cm/sec
initial	23.0	6/16/06	10	03	00	130.0	100.0	0.360			4.40	20.68	65.80	36.30	29.50		
final	23.0	6/16/06	10	25	42						5.40	0.0152	65.80	36.30	0.10		1.25E-04
1	RT = 0.930	dT =		22.70 min		σ'_c =	4.3 ksf						65.8	36.3	29.40	2.93	1.16E-04
initial	23.0	6/16/06	00	00	00	130.0	100.0	0.360			4.00	31.02	65.80	36.30	29.50		
final	23.0	6/16/06	00	33	18						5.50	0.0155	65.80	36.30	0.10		1.28E-04
2	RT = 0.930	dT =		33.30 min		σ'_c =	4.3 ksf						65.8	36.3	29.40	2.93	1.18E-04
initial	23.0	6/16/06	00	00	00	130.0	100.0	0.360			4.20	26.884	65.80	36.30	29.50		
final	23.0	6/16/06	00	29	18						5.50	0.0153	65.80	36.30	0.10		1.26E-04
3	RT = 0.930	dT =		29.30 min		σ'_c =	4.3 ksf						65.8	36.3	29.40	2.93	1.16E-04
initial	23.0	6/16/06	00	00	00	130.0	100.0	0.360			4.25	46.53	65.80	36.30	29.50		
final	23.0	6/16/06	00	48	00						6.50	0.0162	65.80	36.30	0.11		1.33E-04
4	RT = 0.930	dT =		48.00 min		σ'_c =	4.3 ksf						65.8	36.3	29.39	2.93	1.23E-04

Preliminary Length/Area Calculations

Lo =	3.975	in	Lo=	10.097	cm
Ao=	6.523	in^2	Ao =	42.09	cm^2
Vo=	25.932	in^3	Vo =	424.95	cm^3
Lc =	10.028	cm	Vc =	416.29	cm^3
Ac=	41.511	cm^2			

Tested By: DT Reviewed By: GET

TEST SUMMARY

Final Specimen and Test Conditions

Lc = 10.028 cm ε_{axial} = 0.7%

Ac = 41.664 cm^2

Vc= 417.82 cm^3 ε_{vol} = 1.7%

	w (%)	γ_τ (pcf)	γ_d (pcf)	S (%)
Initial	19.10	128.2	107.6	94.5
PreTest	19.24	130.5	109.5	100.0

HYDRAULIC CONDUCTIVITY SUMMARY

Averages for trials: 1-4

ave K @ 20 °C: **1.18E-04** cm/sec

(i_o)ave = 2.93

HYDRAULIC CONDUCTIVITY TEST

Arcadis
Northrop Grumman OU-3
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	D2216 WATER CONTENT (%)	USCS SYMBOL (1)	D2974 ORGANIC CONTENT (burnoff) (%)	D854 SOIL PARTICLE DENSITY (-)	D5084 SOIL BULK DENSITY (pcf)	D5084 SOIL DRY DENSITY (pcf)	D5084 COEFFICIENT OF PERMEABILITY (K) @ 20° C (2) (cm/sec)	CALCULATED TOTAL SOIL POROSITY (-)	CALCULATED AIR-FILLED SOIL POROSITY (-)	CALCULATED WATER-FILLED SOIL POROSITY (-)	CALCULATED SATURATION (%)	REMARKS
H-3-SB		48-50					127.2							
H-3-SB		48.6	18.8	SC										
H-3-SB		49.15	24.0	CL										
H-3-SB	C	49.4	18.6	CL top SP bottom	2.4	2.659	127.2	107.2	4.3E-8	0.35	0.03	0.32	90	
H-3-SB		49.7	16.3	SC										
H-7-SB		52-54					117.1							Top disturbed
H-7-SB		52.7	22.9	CL										
H-7-SB		53.25	21.0	CL										
H-7-SB		53.8	26.3	CL										
H-7-SB	D	54.05	25.9	CL	9.1	2.586	122.4	97.2	2.5E-8	0.40	0.00	0.40	102	
I-4-SB		48-50					123.3							
I-4-SB		48.65	21.1											
I-4-SB		49.2	18.4											
I-4-SB	C	49.45	19.4		3.5	2.673	132.0	110.6	4.1E-8	0.34	0.00	0.34	102	P7972
I-4-SB		49.75	16.3											

Notes: (1) Based on visual observation.
(2) See permeability test for details

Arcadis
Northrop Grumman OU-3
SUMMARY OF LABORATORY PERMEABILITY TESTS PERFORMED ON THIN-WALLED TUBE SAMPLES

BORING NO.	WATER CONTENTS	TOTAL UNIT WEIGHT	DRY UNIT WEIGHT	STRESSES	DURING CONSOLIDATION	DURING TEST	COEFFICIENT OF PERMEABILITY	REMARKS
	INITIAL	INITIAL	INITIAL	EFFECTIVE	TIME	PERMEANT	(K)	
	PRE-TEST (%)	PRE-TEST (pcf)	PRE-TEST (pcf)	BACK PRESSURE (psi)	VOLUMETRIC STRAIN (days, %)	INITIAL GRADIENT	@ 20° C (cm/sec)	
H-3-SB	18.6	127.2	107.2	30.0	Overnight	tap water	4.3E-8	P7975
	19.2	131.0	109.9	100.0	2.4	21		
H-7-SB	25.9	122.4	97.2	30.0	Overnight	tap water	2.5E-8	P7976
	26.4	121.3	96.0	100.0	-1.3	24		
I-4-SB	19.4	132.0	110.6	30.0	overnight	tap water	4.1E-8	P7972
	18.8	131.9	111.1	100.0	0.4	27		

Prepared by: RV Reviewed by: GET Date: 11/21/2006

PERMEABILITY TEST: FALLING HEAD - CONSTANT VOLUME U-TUBE

ASTM D 5084 - 90

Project No.: 31737876 | BORING: H-3-SB | Test No.: P7975

Project Name: Northrop Grumman OU-3 | SAMPLE: C | DEPTH (ft): 49.4

Specimen - Apparatus set-up - Test Information | Cell No. P-3 | Apparatus No. 4 | Stage No.: 4

Preliminary Length/Area Calculations

Lo =	4.018	in	Lo=	10.205	cm
dLc=	0.062	in	Ao =	41.71	cm^2
Lc=	3.956	in	Vo =	425.64	cm^3
			Lc=	10.048	cm
dVc = 3 Vo * (dLc/Lo)			dVc=	19.70	cm^3
			Vc =	405.93	cm^3
Sc =	0.249	cm^{-1}	Ac=	40.401	cm^2

Equations Used

Kt = - 0.0000750 * Sc/dT(min) * ln (ho/hf)

RT = (-0.02452*(ave. temp in C) + 1.495)

K @ 20 °C = RT * Kt TubeC= 1.3181

TEST SUMMARY

Final Specimen and Test Conditions

Lc =	10.048	cm	ε_{axial} =	1.5%	
Ac =	41.329	cm^2			
Vc=	415.26	cm^3	ε_{vol} =	2.4%	
Sc =	0.243	cm^{-1}	Sc = Lc / Ac , final		

	w (%)	γ_t (pcf)	γ_d (pcf)	S (%)
Initial	18.61	127.2	107.2	90.3
PreTest	19.19	131.0	109.9	100.0

HYDRAULIC CONDUCTIVITY SUMMARY

Averages for trials: 1-4

ave K @ 20 °C: **4.35E-08** cm/sec

(i_o)ave = 21.5

Tested By: DT Reviewed By: G. Thomas

1) Specimen Tested in : x Triaxial Cell or ___ Compaction Mold or ___

x with stones or ___ Stones with filter paper or ___ top + bottom

2) Specimen orientation for: x Vertical or ___ Horizontal permeability determination

3) During saturation: Water flushed up sides of specimen to remove ai x No ___ Yes

4) During consolidation: x Top and bottom drainage or ___ Top ___ Bottom only

5) Direction of permeant : x Up during or ___ Down during permeation

6) Permeant: water used x Tap ___ Distilled

or ___ Demineralized ___ 0.005 N calcium sulfate (CaSO4)

Consol Stage-Trial No.	Temp. ° C	Date	Time hr	Time min	Time sec	Initial σ_c psi	Initial Ub psi	U-tube Reading Head (cm) (cc)	U-tube Reading Tail (cm) (cc)	Flow in/out gradient	Permeability Preliminary Final at 20°C cm/sec Dev. from Ave.
initial	21.8	10/26/06	09	39	00	130.0	100.0	61.90	44.83	0.95	4.59E-08
final	21.8	10/26/06	10	42	00			60.04	45.45		4.31E-08
1	RT = 0.960	dT =		63.00 min		σ'_c =	4.3 ksf	0.139	0.145	io= 21.4	-1%
initial	21.8	10/26/06	10	44	00	130.0	100.0	62.00	44.80	1.02	4.65E-08
final	21.8	10/26/06	11	40	00			60.30	45.33		4.36E-08
2	RT = 0.960	dT =		56.00 min		σ'_c =	4.3 ksf	0.127	0.124	io= 21.5	0%
initial	21.8	10/26/06	11	42	00	130.0	100.0	62.00	44.80	0.98	4.56E-08
final	21.2	10/26/06	12	50	00			60.00	45.45		4.31E-08
3	RT = 0.968	dT =		68.00 min		σ'_c =	4.3 ksf	0.149	0.152	io= 21.5	-1%
initial	21.2	10/26/06	12	51	00	130.0	100.0	62.00	44.80	1.02	4.61E-08
final	21.0	10/26/06	13	50	00			60.23	45.35		4.40E-08
4	RT = 0.978	dT =		59.00 min		σ'_c =	4.3 ksf	0.132	0.129	io= 21.5	1%

PERMEABILITY TEST: FALLING HEAD - CONSTANT VOLUME U-TUBE

ASTM D 5084 - 90

Project No.: 31737876 | BORING: H-7-SB | Test No.: P7976

Project Name: Northrop Grumman OU-3 | SAMPLE: D | DEPTH (ft): 54.05

Specimen - Apparatus set-up - Test Information | Cell No. 5 | Apparatus No. 1 | Stage No.: 4

Preliminary Length/Area Calculations

Lo =	4.011	in	Lo=	10.187	cm
dLc=	0.013	in	Ao =	41.60	cm^2
Lc=	3.998	in	Vo =	423.74	cm^3
			Lc=	10.154	cm
dVc = 3 Vo * (dLc/Lo)			dVc=	4.12	cm^3
			Vc =	419.62	cm^3
Sc =	0.246	cm^{-1}	Ac=	41.326	cm^2

1) Specimen Tested in :	x	Triaxial Cell or		Compaction Mold or			
	x	with stones or		Stones with filter paper or		top + bottom	
2) Specimen orientation for:	x	Vertical or		Horizontal permeability determination			
3) During saturation: Water flushed up sides of specimen to remove ai			x	No		Yes	
4) During consolidation:	x	Top and bottom drainage or		Top		Bottom only	
5) Direction of permeant :	x	Up during or		Down during permeation			
6) Permeant: water used	x	Tap		Distilled			
or		Demineralized		0.005 N calcium sulfate (CaSO4)			

Equations Used

Kt = - 0.0000757 * Sc/dT(min) * ln (ho/hf)

RT = (-0.02452*(ave. temp in C) + 1.495)

K @ 20 °C = RT * Kt TubeC= 1.3127

Consol Stage-Trial No.	Temp. ° C	Date	Time hr	Time min	Time sec	Initial σ_c psi	Initial Ub psi	U-tube Reading Head (cm) (cc)	U-tube Reading Tail (cm) (cc)	Flow in/out gradient	Permeability Preliminary Final at 20°C cm/sec Dev. from Ave.
initial	21.4	11/2/06	09	47	00	130.0	100.0	57.50	38.25	1.04	2.65E-08
final	21.4	11/2/06	11	26	00			55.57	38.83		2.51E-08
1	RT = 0.970	dT =		99.00 min		σ'_c =	4.3 ksf	0.145	0.139	io= 23.8	-1%
initial	21.4	11/2/06	11	27	00	130.0	100.0	57.73	38.14	0.95	2.73E-08
final	21.2	11/2/06	12	51	00			56.00	38.71		2.59E-08
2	RT = 0.973	dT =		84.00 min		σ'_c =	4.3 ksf	0.130	0.137	io= 24.3	2%
initial	21.2	11/2/06	12	53	00	130.0	100.0	58.07	38.05	1.00	2.66E-08
final	21.0	11/2/06	14	09	00			56.50	38.54		2.54E-08
3	RT = 0.978	dT =		76.00 min		σ'_c =	4.3 ksf	0.118	0.117	io= 24.8	0%
initial	21.0	11/2/06	14	10	00	130.0	100.0	58.10	38.04	0.97	2.63E-08
final	21.2	11/2/06	15	45	00			56.18	38.66		2.51E-08
4	RT = 0.978	dT =		95.00 min		σ'_c =	4.3 ksf	0.144	0.149	io= 24.8	-1%

TEST SUMMARY

Final Specimen and Test Conditions

Lc =	10.154	cm	ε_{axial} =	0.3%
Ac =	42.265	cm^2		
Vc=	429.16	cm^3	ε_{vol} =	-1.3%
Sc =	0.240	cm^{-1}	Sc = Lc / Ac , final	

	w (%)	γ_τ (pcf)	γ_d (pcf)	S (%)
Initial	25.94	122.4	97.2	101.4
PreTest	26.39	121.3	96.0	100.0

HYDRAULIC CONDUCTIVITY SUMMARY

Averages for trials: 1-4

ave K @ 20 °C: **2.54E-08** cm/sec

(i_o)ave = 24.4

Tested By: DT Reviewed By: G. Thomas

PERMEABILITY TEST: FALLING HEAD - CONSTANT VOLUME U-TUBE

ASTM D 5084 - 90

Project No.: 31737876 | BORING: I-4-SB | Test No.: P3972

Project Name: Bethpage, NY | SAMPLE: C | DEPTH (ft): 49.45

Specimen - Apparatus set-up - Test Information | Cell No. 5 | Apparatus No. 1 | Stage No.: 5

Preliminary Length/Area Calculations

Lo =	4.011	in	Lo=	10.188	cm
dLc=	0.063	in	Ao =	41.88	cm^2
Lc=	3.948	in	Vo =	426.72	cm^3
			Lc=	10.028	cm
dVc = 3 Vo * (dLc/Lo)			dVc=	20.11	cm^3
			Vc =	406.61	cm^3
Sc =	0.247	cm^{-1}	Ac=	40.546	cm^2

1) Specimen Tested in :	x	Triaxial Cell or		Compaction Mold or			
	x	with stones or		Stones with filter paper or		top + bottom	
2) Specimen orientation for:	x	Vertical or		Horizontal permeability determination			
3) During saturation: Water flushed up sides of specimen to remove ai	x	No		Yes			
4) During consolidation:	x	Top and bottom drainage or		Top		Bottom only	
5) Direction of permeant :	x	Up during or		Down during permeation			
6) Permeant: water used	x	Tap		Distilled			
or		Demineralized		0.005 N calcium sulfate (CaSO4)			

Equations Used

Kt = - 0.0000757 * Sc/dT(min) * ln (ho/hf)

RT = (-0.02452*(ave. temp in C) + 1.495)

K @ 20 °C = RT * Kt TubeC= 1.3127

Consol Stage-Trial No.	Temp. ° C	Date	Time hr	Time min	Time sec	Initial σ_c psi	Initial Ub psi	U-tube Reading Head (cm) (cc)	U-tube Reading Tail (cm) (cc)	Flow in/out gradient	Permeability Preliminary Final at 20°C cm/sec Dev. from Ave.
initial	21.5	10/24/06	09	28	00	130.0	100.0	58.86	37.85	1.05	4.44E-08
final	21.6	10/24/06	10	08	00			57.41	38.28		4.11E-08
1	RT = 0.967	dT =		40.00 min		σ'_c =	4.3 ksf	0.109	0.103	io= 26.3	1%
initial	21.6	10/24/06	10	10	00	130.0	100.0	59.18	37.70	0.93	4.55E-08
final	21.6	10/24/06	10	49	00			57.70	38.20		4.20E-08
2	RT = 0.965	dT =		39.00 min		σ'_c =	4.3 ksf	0.111	0.120	io= 26.9	4%
initial	21.6	10/24/06	10	50	00	130.0	100.0	59.10	37.72	1.04	4.21E-08
final	21.6	10/24/06	11	24	00			57.90	38.08		3.89E-08
3	RT = 0.965	dT =		34.00 min		σ'_c =	4.3 ksf	0.090	0.086	io= 26.8	-4%
initial	21.6	10/24/06	11	25	00	130.0	100.0	59.47	37.60	0.95	4.34E-08
final	21.6	10/24/06	11	55	00			58.35	37.97		4.01E-08
4	RT = 0.965	dT =		30.00 min		σ'_c =	4.3 ksf	0.084	0.089	io= 27.4	-1%

TEST SUMMARY

Final Specimen and Test Conditions

Lc =	10.028	cm	ε_{axial} =	1.6%
Ac =	42.364	cm^2		
Vc=	424.85	cm^3	ε_{vol} =	0.4%
Sc =	0.237	cm^{-1}	Sc = Lc / Ac , final	

	w (%)	γ_τ (pcf)	γ_d (pcf)	S (%)
Initial	19.37	132.0	110.6	101.7
PreTest	18.80	131.9	111.1	100.0

HYDRAULIC CONDUCTIVITY SUMMARY

Averages for trials: 1-4

ave K @ 20 °C: **4.05E-08** cm/sec

(i_o)ave = 26.9

Tested By: DT Reviewed By: G. Thomas

Arcadis
Northrop Grumman OU-3
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	D2216 WATER CONTENT (%)	USCS SYMBOL (1)	D2974 ORGANIC CONTENT (burnoff) (%)	D854 SOIL PARTICLE DENSITY (-)	D5084 SOIL BULK DENSITY (pcf)	D5084 SOIL DRY DENSITY (pcf)	D5084 COEFFICIENT OF PERMEABILITY (K) @ 20° C (2) (cm/sec)	CALCULATED TOTAL SOIL POROSITY (-)	CALCULATED AIR-FILLED SOIL POROSITY (-)	CALCULATED WATER-FILLED SOIL POROSITY (-)	CALCULATED SATURATION (%)	REMARKS
I-2	6B	41-43					125.1							
I-2	6B	41.3	28.2											
I-2	6B	41.85	20.9											
I-2	6B / B	42.1	21.1	CL	4.4	2.682	128.0	105.7	3.1E-8	0.37	0.01	0.36	97	
I-2	6B	42.4	22.3											
I-3	6B	41-43					126.0							
I-3	6B	41.65	23.3											
I-3	6B	42.2	17.8											
I-3	6B / C	42.45	19.1	CL	2.7	2.683	129.2	108.5	1.9E-8	0.35	0.02	0.33	94	
I-3	6B	42.75	14.9											
I-3	6-B	48-50					119.6							
I-3	6-B	48.45	18.4											
I-3	6-B	49.0	13.5											
I-3	6-B / B	49.25	11.7	SP-SM	1.5	2.649	119.2	106.7	1.1E-5	0.35	0.15	0.20	56	

Notes: (1) Based on visual observation and sieve reported
(2) See permeability test for details

Arcadis
Bethpage, NY
SUMMARY OF LABORATORY PERMEABILITY TESTS PERFORMED ON THIN-WALLED TUBE SAMPLES

BORING NO.	SAMPLE NO.	DEPTH	WATER CONTENTS	TOTAL UNIT WEIGHT	DRY UNIT WEIGHT	STRESSES	DURING CONSOLIDATION	DURING TEST	COEFFICIENT OF PERMEABILITY (K) @ 20° C	
			INITIAL	INITIAL	INITIAL	EFFECTIVE	TIME	PERMEANT		
			PRE-TEST	PRE-TEST	PRE-TEST	BACK PRESSURE	VOLUMETRIC STRAIN	INITIAL GRADIENT		
		(ft)	(%)	(pcf)	(pcf)	(psi)	(days, %)		(cm/sec)	
I-2	6B	42.10	21.1	128.0	105.7	30.0	3	tap water	3.1E-8	
	B		20.9	129.8	107.4	100.0	1.5	23		
I-3	6B	42.45	19.1	129.2	108.5	30.0	3	tap water	1.9E-8	
	C		18.5	132.7	112.0	100.0	3.1	21		
I-3	6B	49.25	11.7	119.2	106.7	30.0	3	tap water	1.1E-5	
	B		20.0	129.7	108.1	100.0	1.3	13		

Prepared by: RV Reviewed by: GET Date: 6/5/2007

PERMEABILITY TEST: FALLING HEAD - CONSTANT VOLUME U-TUBE

ASTM D 5084 - 90

Project No.: 31737876 | BORING: I-2 | Test No.: P8083

Project Name: Bethpage, NY | SAMPLE: 6B B | DEPTH (ft): 42.1

Specimen - Apparatus set-up - Test Information | Cell No. 4 | Apparatus No. 2 | Stage No.: 4

Preliminary Length/Area Calculations

Lo =	3.893	in	Lo=	9.887	cm
dLc=	0.043	in	Ao =	17.93	cm^2
Lc=	3.850	in	Vo =	177.26	cm^3
			Lc=	9.778	cm
dVc = 3 Vo * (dLc/Lo)			dVc=	5.87	cm^3
			Vc =	171.38	cm^3
Sc =	0.558	cm^{-1}	Ac=	17.528	cm^2

1) Specimen Tested in :	x	Triaxial Cell or		Compaction Mold or		
	x	with stones or		Stones with filter paper or		top + bottom
2) Specimen orientation for:	x	Vertical or		Horizontal permeability determination		
3) During saturation: Water flushed up sides of specimen to remove ai	x	No		Yes		
4) During consolidation:	x	Top and bottom drainage or		Top		Bottom only
5) Direction of permeant :	x	Up during or		Down during permeation		
6) Permeant: water used	x	Tap		Distilled		
or		Demineralized		0.005 N calcium sulfate (CaSO4)		

Equations Used

Kt = - 0.0000746 * Sc/dT(min) * ln (ho/hf)

RT = (-0.02452*(ave. temp in C) + 1.495)

K @ 20 °C = RT * Kt TubeC= 1.3214

Consol Stage-Trial No.	Temp. ° C	Date	Time hr	Time min	Time sec	Initial σ_c psi	Initial Ub psi	U-tube Reading Head (cm) (cc)	U-tube Reading Tail (cm) (cc)	Flow in/out gradient	Permeability Preliminary Final at 20°C cm/sec Dev. from Ave.
initial	23.4	4/23/07	09	31	00	130.0	100.0	60.25	42.87	0.99	3.43E-08
final	24.5	4/23/07	11	21	00			59.11	43.24		3.06E-08
1	RT = 0.908	dT =		110.00 min		σ'_c =	4.3 ksf	0.085	0.086	io= 22.3	-1%
initial	24.5	4/23/07	11	22	00	130.0	100.0	60.35	42.85	0.98	3.50E-08
final	23.5	4/23/07	13	08	00			59.22	43.22		3.12E-08
2	RT = 0.907	dT =		106.00 min		σ'_c =	4.3 ksf	0.084	0.086	io= 22.5	1%
initial	23.5	4/23/07	13	10	00	130.0	100.0	60.67	42.73	0.99	3.46E-08
final	23.8	4/23/07	15	10	00			59.38	43.15		3.11E-08
3	RT = 0.915	dT =		120.00 min		σ'_c =	4.3 ksf	0.096	0.097	io= 23.1	0%
initial	23.8	4/23/07	15	12	00	130.0	100.0	60.90	42.65	0.99	3.48E-08
final	23.8	4/23/07	16	55	00			59.76	43.02		3.12E-08
4	RT = 0.911	dT =		103.00 min		σ'_c =	4.3 ksf	0.085	0.086	io= 23.5	0%

TEST SUMMARY

Final Specimen and Test Conditions

Lc =	9.778	cm	ε_{axial} =	1.1%
Ac =	17.850	cm^2		
Vc=	174.53	cm^3	ε_{vol} =	1.5%
Sc =	0.548	cm^{-1}	Sc = Lc / Ac , final	

	w (%)	γ_τ (pcf)	γ_d (pcf)	S (%)
Initial	21.10	128.0	105.7	97.0
PreTest	20.86	129.8	107.4	100.0

HYDRAULIC CONDUCTIVITY SUMMARY

Averages for trials: 1-4

ave K @ 20 °C: **3.10E-08** cm/sec

(i_o)ave = 22.8

Tested By: DT Reviewed By: G. Thomas

PERMEABILITY TEST: FALLING HEAD - CONSTANT VOLUME U-TUBE

ASTM D 5084 - 90

Project No.: 31737876 | BORING: I-3 | Test No.: P8082

Project Name: Northrop Grumman OU-3 | SAMPLE: 6B C | DEPTH (ft): 42.45

Specimen - Apparatus set-up - Test Information | Cell No. 5 | Apparatus No. 3 | Stage No.: 4

Preliminary Length/Area Calculations

Lo =	4.058	in	Lo=	10.306	cm
dLc=	0.045	in	Ao =	18.16	cm^2
Lc=	4.013	in	Vo =	187.17	cm^3
			Lc=	10.192	cm
dVc = 3 Vo * (dLc/Lo)			dVc=	6.23	cm^3
			Vc =	180.94	cm^3
Sc =	0.574	cm^{-1}	Ac=	17.753	cm^2

1) Specimen Tested in :	x	Triaxial Cell or		Compaction Mold or			
	x	with stones or		Stones with filter paper or		top + bottom	
2) Specimen orientation for:	x	Vertical or		Horizontal permeability determination			
3) During saturation: Water flushed up sides of specimen to remove ai	x	No		Yes			
4) During consolidation:	x	Top and bottom drainage or		Top		Bottom only	
5) Direction of permeant :	x	Up during or		Down during permeation			
6) Permeant: water used	x	Tap		Distilled			
or		Demineralized		0.005 N calcium sulfate (CaSO4)			

Equations Used

Kt = - 0.0000755 * Sc/dT(min) * ln (ho/hf)

RT = (-0.02452*(ave. temp in C) + 1.495)

K @ 20 °C = RT * Kt TubeC= 1.3132

Consol Stage-Trial No.	Temp. ° C	Date	Time hr	Time min	Time sec	Initial σ_c psi	Initial Ub psi	U-tube Reading Head (cm) (cc)	U-tube Reading Tail (cm) (cc)	Flow in/out gradient	Permeability Preliminary Final at 20°C cm/sec Dev. from Ave.
initial	23.4	4/23/07	09	32	00	130.0	100.0	64.10	47.56	0.93	2.14E-08
final	23.2	4/23/07	12	37	00			63.00	47.93		1.97E-08
1	RT = 0.924	dT =		185.00 min		σ'_c =	4.3 ksf	0.082	0.088	io= 20.4	2%
initial	23.2	4/23/07	12	38	00	130.0	100.0	64.35	47.48	0.99	2.15E-08
final	23.8	4/23/07	15	13	00			63.40	47.78		1.97E-08
2	RT = 0.919	dT =		155.00 min		σ'_c =	4.3 ksf	0.071	0.072	io= 20.8	2%
initial	23.8	4/23/07	15	15	00	130.0	100.0	64.42	47.46	0.93	2.13E-08
final	23.8	4/23/07	17	05	00			63.74	47.69		1.94E-08
3	RT = 0.911	dT =		110.00 min		σ'_c =	4.3 ksf	0.051	0.055	io= 20.9	0%
initial	23.8	4/23/07	17	06	00	130.0	100.0	64.86	47.33	1.01	1.97E-08
final	21.5	4/24/07	09	16	00			60.10	48.80		1.85E-08
4	RT = 0.940	dT =		970.00 min		σ'_c =	4.3 ksf	0.356	0.351	io= 21.6	-4%

TEST SUMMARY

Final Specimen and Test Conditions

Lc =	10.192	cm	ε_{axial} =	1.1%
Ac =	17.796	cm^2		
Vc=	181.38	cm^3	ε_{vol} =	3.1%
Sc =	0.573	cm^{-1}	Sc = Lc / Ac , final	

	w (%)	γ_τ (pcf)	γ_d (pcf)	S (%)
Initial	19.06	129.2	108.5	94.1
PreTest	18.48	132.7	112.0	100.0

HYDRAULIC CONDUCTIVITY SUMMARY

Averages for trials: 1-4

ave K @ 20 °C: **1.93E-08** cm/sec

(i_o)ave = 20.9

Tested By: DT Reviewed By: G. Thomas

PERMEABILITY TEST: FALLING HEAD - CONSTANT VOLUME U-TUBE

ASTM D 5084 - 90

Project No.: 31737876 | BORING: I-3 | Test No.: P8081

Project Name: Bethpage, NY | SAMPLE: 6B / B | DEPTH (ft): 49.25

Specimen - Apparatus set-up - Test Information | Cell No. 3 | Apparatus No. 4 | Stage No.: 4

Preliminary Length/Area Calculations

Lo =	4.043	in	Lo=	10.269	cm
dLc=	0.030	in	Ao =	17.32	cm^2
Lc=	4.013	in	Vo =	177.89	cm^3
			Lc=	10.193	cm
dVc = 3 Vo * (dLc/Lo)			dVc=	3.96	cm^3
			Vc =	173.93	cm^3
Sc =	0.597	cm^{-1}	Ac=	17.064	cm^2

1) Specimen Tested in :	x	Triaxial Cell or		Compaction Mold or			
	x	with stones or		Stones with filter paper or		top + bottom	
2) Specimen orientation for:	x	Vertical or		Horizontal permeability determination			
3) During saturation: Water flushed up sides of specimen to remove ai	x	No		Yes			
4) During consolidation:	x	Top and bottom drainage or		Top		Bottom only	
5) Direction of permeant :	x	Up during or		Down during permeation			
6) Permeant: water used	x	Tap		Distilled			
or		Demineralized		0.005 N calcium sulfate (CaSO4)			

Equations Used

Kt = - 0.0000750 * Sc/dT(min) * ln (ho/hf)

RT = (-0.02452*(ave. temp in C) + 1.495)

K @ 20 °C = RT * Kt TubeC= 1.3181

Consol Stage-Trial No.	Temp. ° C	Date	Time hr	Time min	Time sec	Initial σ_c psi	Initial Ub psi	U-tube Reading Head (cm) (cc)	U-tube Reading Tail (cm) (cc)	Flow in/out gradient	Permeability Preliminary Final at 20°C cm/sec Dev. from Ave.
initial	23.4	4/23/07	00	00	00	130.0	100.0	57.00	46.40	0.99	9.43E-06
final	23.4	4/23/07	00	01	46			54.50	47.20		8.61E-06
1	RT = 0.921	dT =		1.77 min		σ'_c =	4.3 ksf	0.186	0.187	io= 13.1	-21%
initial	23.4	4/23/07	00	00	00	130.0	100.0	57.00	46.40	1.00	1.48E-05
final	23.4	4/23/07	00	01	25			54.00	47.35		1.35E-05
2	RT = 0.921	dT =		1.42 min		σ'_c =	4.3 ksf	0.224	0.223	io= 13.1	23%
initial	23.4	4/23/07	00	00	00	130.0	100.0	57.00	46.40	1.01	1.18E-05
final	23.4	4/23/07	00	02	10			53.50	47.50		1.08E-05
3	RT = 0.921	dT =		2.17 min		σ'_c =	4.3 ksf	0.261	0.258	io= 13.1	-1%
initial	23.4	4/23/07	00	00	00	130.0	100.0	57.00	46.40	0.98	1.18E-05
final	23.4	4/23/07	00	02	36			53.00	47.70		1.08E-05
4	RT = 0.921	dT =		2.60 min		σ'_c =	4.3 ksf	0.298	0.305	io= 13.1	-1%

TEST SUMMARY

Final Specimen and Test Conditions

Lc =	10.193	cm	ε_{axial} =	0.7%
Ac =	17.220	cm^2		
Vc=	175.52	cm^3	ε_{vol} =	1.3%
Sc =	0.592	cm^{-1}	Sc = Lc / Ac , final	

	w (%)	γ_τ (pcf)	γ_d (pcf)	S (%)
Initial	11.73	119.2	106.7	56.5
PreTest	19.98	129.7	108.1	100.0

HYDRAULIC CONDUCTIVITY SUMMARY

Averages for trials: 1-4

ave K @ 20 °C: **1.09E-05** cm/sec

(i_o)ave = 13.1

Tested By: DT Reviewed By: G. Thomas

ARCADIS G&M

Sample/Core Log

Boring/Well: WP-1 Project/No.: NY001348.0304.00002 Page: 1 of 1

Site Location: Bethpage, NY Drilling Started: 7/20/04 Drilling Completed: 7/21/04

Total Depth Drilled: 110 Feet Hole Diameter: 6 inches Drilling Method: HSA

Length and Diameter of Coring Device: 2' X 2" Type of Coring/Sampling Device: Split Spoon

Sampling Interval: Every 10' From WT feet Drilling Fluid Used: Water

Drilling Contractor: Delta

Prepared By: SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
60	62	2'		Tan F-Med Sand, TRACE Silt (Saturated)	0.0
70	72	2'		Top 1'6" - Tan-Orange / White Fine Sand, SOME Silt	0.0
				1'6" - 2' - Tan-Red Fine Sand WITH Silt	
80	82	2'		Tan-Orange F-Med Sand, SOME Silt	0.0
90	92	2'		Top 4" - White Soft Clay WITH Fine Sand (Mixed)	0.0
				4" - 2' - Light Tan / Yellow F-Med Sand, SOME Silt	
100	102	2'		Top 1' - Gray Fine Sand, TRACE Silt.	0.0
				1' - 1'3" - Dark Gray Fine Sand, WITH Silt	
				1'3" - 2' - Light Gray / White Fine Sand, TRACE Silt	
110	112	2'		Top 5" - Light Gray / White Fine Sand, TRACE Silt	0.0
				5" - 2' - Yellow-Orange Fine Sand, TRACE Silt	

End of Boring

ARCADIS G&M

Sample/Core Log

Boring/Well VP-2 Project/No. NY001348.0304.00002 Page 1 of 1

Site Location Bethpage, NY Drilling Started 7/22/04 Drilling Completed 7/22/04

Total Depth Drilled 110 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device Split Spoon

Sampling Interval Every 10' (From WT) feet Drilling Fluid Used Water

Drilling Contractor Delta

Prepared By SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
65	67	2'		Tan F-Med Sand, SOME Silt, TRACE Coarse Sand	0.0
75	77	2'		Tan/White F-Med Sand, TRACE Coarse Sand	0.0
85	87	2'		Tan/Orange F-Med Sand.	0.0
95	97	2'		Top 8" Light Tan/White F-Med Sand, WITH Silt	
				8"-1' - White Med Clay	
				1'-1'8" - Light Tan/Pink Fine Sand, SOME Silt	
				1'8"-2' - Color Banded Silt (Clayey) - Dark Orange/Light Orange/Tan	
105	107	1'6"		Top 4" White Fine Sand	0.0
				4"-10" Tan Fine Sand AND Silt. Light Pink and Dark Orange Colorations	
				10"-1'6" - Light Grey/Dark Grey Fine Sand WITH Silt	
107 1/2	109 1/2	1'2"		Light Grey/White Fine Sand, SOME Silt.	0.0

End of Boring

ARCADIS G&M

Sample/Core Log

Boring/Well MP-3 Project/No. NY001348.0304.00002 Page 1 of 2

Site Location Bethpage, NY Drilling Started 7/23/04 Drilling Completed 7/26/04

Total Depth Drilled 115 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device Split Spoon

Sampling Interval Every 10' from WT feet Drilling Fluid Used Water

Drilling Contractor Delta

Prepared By SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
60	62	2'	Saturated	Top 8" White F-Med Sand Trace Coarse Sand.	6.0
				8"- 2' Tan Orange F-Med Sand, WITH Silt, SOME Coarse Sand.	
70	72	2'	TOC Taken	Tan - Light Orange Med Sand, TRACE Coarse Sand and Silt	0.0
80	82			White - Light Tan F-Med Sand	0.0
				1" Layer of Tan Orange Fine Sand, WITH Silt @ 1' 8"	
90	92			Top 8"- Tan - Light Orange F-Med Sand, TRACE Silt	0.0
				8"- 1'7"- White - Light Orange F-Med Sand, SOME Silt	
				1'7"- 2'- Brown - Grey Fine Sand, WITH Silt	
100	102	1'10"		Top 2"- Light Tan/White Fine Sand	
				2"- 7" - Dark Orange - Light Grey Clayey Fine Sand.	
				Fine Sand WITH Clay	
				7"- 1'1" - White Med - STIFF Clay	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-3 Project/No. NY001348.0304.00002 Page 2 of 2

Site Location Bethpage, NY Drilling Started 7/23/04 Drilling Completed 7/26/04

Total Depth Drilled 115 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' x 2'' Type of Coring/Sampling Device Split Spoon

Sampling Interval Every 10' From WT feet Drilling Fluid Used Water

Drilling Contractor Delta

Prepared By SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
100	107			Continued	
				1'1" - 1'10" - Mult Color Banded Fine Sand AND Silt - Dark Orange, Tan-Orange, Dark Brown	
105	107	2'		Top 1' - Tan Orange Fine Sand and Silt.	0.0
				1'-1'2" - White Medium STIFF Clay	
				1'2" - 2' - Light Gray - F-Med Sand, SOME Silt	
110	1182 (SR)	2'		Tan - Light Yellow Fine Sand, TRACE Silt.	0.0
				End of Boring	

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well VP-3B Project/No. NY001349.0806.00002 Page 1 of 1

Site Location Bethpage, NY Drilling Started 5/4/06 Drilling Completed 5/4/06

Total Depth Drilled 75 Feet Hole Diameter 6 inches Type of Sample/ Coring Device Drill Cuttings

Length and Diameter of Coring Device NA Sampling Interval Continuous (Cuttings) feet

Land-Surface Elev. 126 feet ☐ Surveyed ☒ Estimated Datum

Drilling Fluid Used None Drilling Method HSA

Drilling Contractor Delta Driller Conrad Helper Brian

Prepared By P. Prezorski Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description	PID
0	5		Hand Dig	Grass. Then topsoil and coarse to fine gravel, subrounded, quartzite	0
10	15			Fine Brown sand with coarse to fine gravel, quartz, subrounded	0
15	20			Brown sand, fine and coarse to fine gravel, quartzite, subrounded	0
20	25			Moist, Coarse to fine light brown sand with fine gravel, quartzite, subrounded	0
25	30			Moist, Light Brown fine sand with fine gravel, quartzite, subrounded	0
35	35			Moist, Same as above	0
40	50			Moist, Very fine dark brown sand; trace fine gravel, subrounded, quartzite	0
50	60			Moist, Very fine dark brown sand, trace fine gravel, subrounded, quartzite	0
60	65			Moist, Very fine dark brown sand	0
65	70			Moist, Same as above	0
70	75			Moist, Dark Brown very fine sand	0
				End of Boring	

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ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SP-3C Project/No. NY001348.0806.00002 Page 1 of 1

Site Location Bethpage Community Park Drilling Started 05/05/06 Drilling Completed 05/08/06

Total Depth Drilled 150 Feet Hole Diameter 4 1/4 inches Type of Sample/ Coring Device Drill Cuttings

Length and Diameter of Coring Device NA Sampling Interval NA feet

Land-Surface Elev. 126 feet ☐ Surveyed ☒ Estimated Datum

Drilling Fluid Used Water Drilling Method Hollow Stem Augers

Drilling Contractor Delta Driller Conrad Stiebel Helper Bryan Quilty

Prepared By John Corral Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
0	35	cuttings		Med to course sand, light brown, subrounded, qtz with some fine gravel (30%), 1" - 2" and some little course gravel 1" diameter (5%)
35	50	cuttings		Med to course sand, moist, brown subrounded, qtz with some fine gravel (20%) and little course gravel 1" diameter
50	62	cuttings		fine to medium brown sand, subrounded, qtz, moist
62	75	cuttings		fine to medium brown sand, subrounded, qtz, wet
75	85	cuttings		fine to medium brown sand, subrounded, qtz, wet
85	100	cuttings		fine to medium brown sand, subrounded, qtz, wet

Samplelg.xls.xls

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well VP-3C Project/No. NY001348.0806.00002 Page 1 of 2

Site Location Bethpage Community Park Drilling Started 05/05/06 Drilling Completed 05/08/06

Total Depth Drilled 150 Feet Hole Diameter 4 1/4 inches Type of Sample/ Coring Device Drill Cuttings

Length and Diameter of Coring Device NA Sampling Interval NA feet

Land-Surface Elev. ____ feet ☐ Surveyed ☐ Estimated Datum ____

Drilling Fluid Used Water Drilling Method Hollow Stem Augers

Drilling Contractor Delta Driller Jim Pederson Helper Bryan Quilty

Prepared By John Corral Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description	PID
100	110	Drill	Cuttings	Medium to fine brown sand, subangular, qtz, wet	
110	120		"	Med to course brown sand, subangular, qtz, wet	0.0
120	130		"	Med to course brown sand, subangular, qtz, wet	0.
130	140		"	Med to course brown sand, subangular, qtz, wet	0.
140	150		"	Med to course brown sand, sub angular, qtz, wet	0.0

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ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well VP-3C (70'-75') Project/No. NY001348.0806.00002 Page 1 of 2

Site Location NGC - Bethpage NY Drilling Started 6/27/06 Drilling Completed 6/27/06

Total Depth Drilled 75 Feet Hole Diameter ____ inches Type of Sample/ Coring Device ____

Length and Diameter of Coring Device ____ Sampling Interval ____ feet

Land-Surface Elev. ____ feet ☐ Surveyed ☐ Estimated Datum ____

Drilling Fluid Used water Drilling Method HSA

Drilling Contractor Delta Driller Jim Helper Brian

Prepared By Scherlin Hammer Weight ____ Hammer Drop ____ ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
0	5		Handdig	M/C sand, brown/tan and gravel, Quartzite, subrounded, plus some peat, dry (SW/PT) PID=0.0ppm
5	10		cuttings	M/C sand, brown/tan and gravel, Quartzite, subrounded, dry (SW) PID=0.0ppm
10	15			M/C sand, brown/tan and gravel, Quartzite, subrounded, dry (SW) PID=0.0ppm
15	20			M/F Sand, brown/light tan some gravel, Quartzite, (SM) dry PID=0.0
20	25			M/F Sand, brown/light tan with some silt and some gravel, Quartzite, (SM), dry PID=0.0ppm.
25	30			M/F sand, brown/light tan, with some silt and some gravel, Quartzite dry, (SM) PID=0.0ppm.
30	35			M/C Sand, brown and gravel, some Q, Quartzite, subrounded, dry, (GP) PID=0.0ppm
35	40			M/C sand, brown and gravel, Quartzite, dry, (GP) PID=0.0ppm.

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Sample/Core Log (Cont.d)

Boring/Well VP-3C (70'-75')

Page 2

Prepared by SC

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
40	45			M/C sand, brown/tan and gravel, Quartzite, Subrounded, dry, (GP) PID=0.0ppm	0.0
45	50			M/C sand, brown/tan and gravel, Quartzite, Subrounded, dry, (GP) PID=0.0ppm.	0.0
50	55			Gravel, Subrounded, Quartzite, dry, (GP), PID=0.0ppm	0.0
55	60			M/F sand, brown with some silt and some gravel, Quartzite, subrounded, damp, (SP) PID=0.0	0.0
60	65			F/sand, brown with some silt and some M/C sand, brown with some gravel, Quartzite, damp (SM),	0.0
65	70			F/sand, tan with some silt and some C/sand, Quartzite, damp (SM/SW)	0.0
70	75			F/sand, tan with some silt and some C/sand, Quartzite, damp (SM/SW)	0.0

ARCADIS GERAGHTY & MILLER

Sample/Core Log

NY001348.0806.00002

Boring/Well VP-3D Project/No. Grumman 003 Page 1 of 2

Site Location Bethpage, NY Drilling Started 5/19/06 Drilling Completed 5/19/06

Total Depth Drilled 110 Feet Hole Diameter 6 inches Type of Sample/ Coring Device Auger

Length and Diameter of Coring Device 5' long x 6" Sampling Interval — feet

Land-Surface Elev. — feet ☐ Surveyed ☐ Estimated Datum —

Drilling Fluid Used None Drilling Method HSA

Drilling Contractor Delta Driller Jim Helper Brian

Prepared By P. Prezorski Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample/Core Description	PID ppm
0	5		cuttings	Grass. Topsoil then soil & Brown sand	0
5	10		cuttings	Fine to med rust-brown sand, and fine to coarse gravel, subrounded, quartzite	0
10	15		cuttings	Fine to coarse rust-brown sand, and fine gravel, quartzite	0
15	20		cuttings	Fine to coarse rust-brown sand, some fine gravel, angular, subrounded, quartzite	0
20	25		cuttings	Fine to coarse rust-brown sand and fine to coarse gravel, angular subrounded quartzite	0
25	30		cuttings	Same as above	0
30	35		cuttings	Fine to coarse rust-brown sand, some fine to coarse gravel, angular subrounded quartzite	0
35	40		cuttings	Same as above	0
40	45		cuttings	Fine rust-brown sand, little fine gravel, angular subrounded quartzite	0
45	50		cuttings	fine to med rust-brown sand, little fine gravel angular subrounded quartzite	0
50	55		cuttings	Coarse gravel, subrounded, quartzite	0
55	60		cuttings	Coarse to fine rust-brown sand, some fine gravel, angular subrounded, quartzite	0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-3D

Page 2

Prepared by P. Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
60	65		cuttings	Moist. Fine to med rust colored sand, trace fine gravel, subrounded quartzite	0
65	70		cuttings	Moist. Fine sand, rust colored, trace fine gravel, quartzite	0
70	75		cuttings	Moist. Fine sand, rust colored	0
75	80		cuttings	Moist. Fine sand, rust colored	0
80	85		cuttings	Same as above	0
85	90		cuttings	Moist. Fine Brown Sand	0
90	95		cuttings	Wet. Fine Brown sand	0
95	100		cuttings	Wet. Fine to med brown sand	0
100	105		cuttings	Wet. Fine Brown Sand	0
105	110		cuttings	Very wet. Very Fine Brown sand.	0
				End of Boring	

ARCADIS G&M

Sample/Core Log

Boring/Well: VP-4 Project/No.: NY001348.0304.00002 Page 1 of 2

Site Location: Bethpage, NY

Drilling Started: 7/27/04 Drilling Completed: 7/27/04

Total Depth Drilled: 110 Feet Hole Diameter: 6 inches Drilling Method: HSA

Length and Diameter of Coring Device: 2' x 2" Type of Coring/Sampling Device: Split Spoon

Sampling Interval: Every 10' From WT feet Drilling Fluid Used: Water

Drilling Contractor: Delta

Prepared By: SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
60	62	2'	Saturated	Light Tan F-Med Sand, SOME Silt.	0.0
70	72	2'		Top 1' 8" - Dark Gray Med-Coarse Sand, SOME Fine Sand and Silt 1'8" - 2'0" - Dark Tan - Brown Fine Sand AND Silt	0.0
80	82	2'	Toc sample	Top 9" - Light Tan/White F-Med Sand, TRACE Silt. 9" - 1' - White/Orange Soft Clay, SOME Fine Sand (Mixed) 1' - 2' - Tan - Orange F-Med Sand, SOME Silt 1/2" Layer of White Soft Clay @ 1'6"	0.0
90	92	2'		Tan Med Sand SOME Fine Sand, TRACE Silt	0.0
100	102	2'		Tan Fine Sand, SOME Silt	0.0
~~102~~ 105 (SH)	107	1'10"		Top 1' - Tan Fine Sand, TRACE Silt.	0.0

ARCADIS G&M

Sample/Core Log

Boring/Well VP-4 Project/No. NY001348.0304.00002 Page 2 of 2

Site Location Bethpage, NY Drilling Started 7/27/04 Drilling Completed 7/27/04

Total Depth Drilled 110 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device Split Spoon

Sampling Interval Every 10' From WT feet Drilling Fluid Used Water

Drilling Contractor Delta

Prepared By SA

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
105	107	1'10"		Continued	0.0
				1'-1'5" - Tan - Orange Fine Sand. SOME Silt.	
				1'5" - 1'10" - Red - Orange Fine Sand	
			END	OF BORING	

ARCADIS G&M

Sample/Core Log

Boring/Well: UP-5 Project/No.: NY001348.0304.00002 Page 1 of 1

Site Location: Bethpage, NY Drilling Started: 7/28/04 Drilling Completed: 7/29/04

Total Depth Drilled: 110 Feet Hole Diameter: 6 inches Drilling Method: HSA

Length and Diameter of Coring Device: 2' x 2" Type of Coring/Sampling Device: Split Spoon

Sampling Interval: Every 10' From WT feet Drilling Fluid Used: Water

Drilling Contractor: Delta

Prepared By: SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
60	62	2'	Toc Sampling Saturated	Tan F-Med Sand, SOME Silt. TRACE Coarse Sand.	0.0
70	72	2'		Light Tan - White Med Sand, SOME Fine Sand, TRACE Silt.	0.0
80	82	2'		Light Tan Fine Sand, SOME Med Sand.	0.0
90	92	2'		Dark Orange F-Med Sand, SOME Silt.	0.0
100	102	2'		Top 1'7" Tan F-Med Sand, TRACE Coarse Sand 1'7"-2' Tan Orange Fine Sand, WITH Silt	0.0
105	107	2'		Light Orange - Yellow Fine Sand, SOME Silt	0.0
107	109	2'		Light Grey - White Fine Sand TRACE Silt	0.0
				End of Boring	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-6 Project/No. NY001348.0304.00002 Page 1 of 1

Site Location Bethpage, NY Drilling Started 7/30/04 Drilling Completed 7/30/04

Total Depth Drilled 110 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device Split Spoon

Sampling Interval Every 10' From WT feet Drilling Fluid Used Water

Drilling Contractor Delta

Prepared By SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
60	62	1'	Saturated	Tan Med Sand, SOME Coarse Sand, TRACE Fine Sand.	0.0
70	72	2'		Tan F-Med Sand SOME Silt.	0.0
80	82	2'		~~Tan-Brown F-Med Sand~~	0.0
			SP	Tan-Orange F-Med Sand, TRACE Silt and Coarse Sand.	
90	92	2'	TOC Sample	Top 8" - Light Tan - White Fine Sand	0.0
				8"-1'6" - Dark Orange F-Med Sand WITH Silt, TRACE Clay	
				1'6"-2'. Dark Orange Fine Sand AND Silt.	
100	102	1'2"		Tan-Orange F-Med Sand, WITH Silt.	0.0
105	107	2'		Light Grey - White Fine Sand, SOME Med Sand	0.0
				End of Boring	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-7 Project/No. NY001348.0304.00002 Page 1 of 2

Site Location Bethpage, NY Drilling Started 8/2/04 Drilling Completed 8/2/04

Total Depth Drilled 115 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device Split Spoon

Sampling Interval Every 10' From WT feet Drilling Fluid Used Water

Drilling Contractor Delta

Prepared By SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
65	67	1'	TOC Sample	Light Tan - White F-Med Sand	0.0
				TRACE Silt	
67 1/2	69 1/2	2'		Light Tan - White to Tan Orange F-Med Sand	0.0
75	77	2'	Top 1'	Light Tan - White . F-Med Sand	0.0
				1'-2' - Tan-Orange Fine Sand,	
				WITH Silt	
77 1/2	79 1/2		TOC Sample	Tan - Orange Fine Sand, SOME	
				Silt.	
85	87	2'		Light Tan - Orange F-Med Sand	0.0
				TRACE Silt.	
87 1/2	89 1/2	2'	TOC Sample	Tan - Orange F-Med Sand,	0.0
				TRACE Silt	
95	97	2'		Top 1' 7" - White Fine Sand, SOME	0.0
				Silt.	
				1'7" - 2' - Dark Tan - Brown	
				Fine Sand AND Silt	
				2" Lense of Soft Clay And	
				Silt @ 7"	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-7 Project/No. NY001348.0304.00002 Page 2 of 2

Site Location Bethpage, NY Drilling Started 8/2/04 Drilling Completed 8/2/04

Total Depth Drilled 115 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' & 2" Type of Coring/Sampling Device Split Spoon

Sampling Interval Every 10' From WT feet Drilling Fluid Used Water

Drilling Contractor Delta

Prepared By SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
97'/2	99'/2	2'		Top 11"- White / Light Gray Fine Sand, WITH Silt, TRACE Clay	0.0
				11"-2'- Light Gray Fine Sand, WITH Silt	
105	107	2'		Top 1'7"- Light ~~Tan~~ Gray / White, Fine Sand WITH Silt / (Black).	0.0
				1'7"-2'- Light Gray / White Fine Sand	
110	112	2'	TOC Sample	Dark Gray Fine Sand.	0.0
			END	OF BORING	

ARCADIS G&M

Sample/Core Log

Boring/Well VP. 8 Project/No. NORTHROP GRUMMAN N4001348.3014 Page 1 of 4

Site Location BATHPAGE, NY Drilling Started 09/07/04 Drilling Completed 9/9/04

Total Depth Drilled 300 Feet Hole Diameter 8 inches Drilling Method H.S.A

Length and Diameter of Coring Device 2'x2" S.S. Type of Coring/Sampling Device SPLIT SPOON

Sampling Interval 10 Ft feet Drilling Fluid Used NONE

Drilling Contractor DELTA WELL REGRIND. 140lb 30inDrop.

Prepared By SPOON

SEE LOG
BG - Background.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
L.S.	30	CUTTINGS		SAND Med. Coarse, some gravel med Brown - No odors, Moist. Gravel rounded to Sub rounded med. to coarse.	<BG
30	50	CUTTINGS		30-50 COARSE - MED GRAVEL FROM.	
50	60	CUTTINGS		SAND, SOME GRAVEL FINER CUTTINGS NO ODOR GRAYISH BROWN, MOIST HIT SATURATION 58 Ft	<BG
58	60	14,15,22,28 0.8		SAND (SP) medium to Coarse little gravel Fine angular to Subrounded, Saturated Undifferentiated.	<BG
60	68	CUTTINGS		SAND Medium to Coarse, some gravel subrounded, Saturated.	
68	70	12,17,16,21		SAME AS 68-69 (1.2 ft rec.)	<BG
70	78	CUTTINGS		SAND, medium to Coarse, Saturated gray-BROWN	
78	80	10,14,17,20 2.0 Ft		SAND (SP) medium to COARSE Undifferentiated trace mafics Saturated, gray-brown	BG

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-8 9/7/04 Page 2/4

Prepared by STEN

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
80	88	CUTTINGS		SAND, medium to fine, gray-brown	B.G.
88	90	12,15,20,18		SAND (SP) medium to fine gray brown	B.G.
		2.0 Ft		Saturated CLAY (CL) Laminae	
				@ 87 @ 89.5 gray, Frt	
				@ 89.7 - 90 Sand color orange	B.G.
90	98	CUTTINGS		SAND medium to fine - gray brown.	
98	100	11,14,14,16		SAND (SP) medium Coarse, laminated	
		2 Ft.		Silts + clay w/ micaceos silt	
				throughout, GRAY + BLACK	
				LAMINAE SANDS GRAY TO GRAY-BROWN	
				SATURATED. 2 Ft	
100	108	CUTTINGS		SAND, medium to Coarse Saturated	B.G
				GRAY-BROWN.	
108	110	8,10,9,10		SAND (SP) medium to Coarse	BG
		2 Ft.		gray-BROWN, UNDifferentiated	
				Saturated	
110	118	CUTTINGS		SAND, medium to fine gray brown	BG
				Saturated. undifferentiated	
118	120	7,9,9,12		SAND, medium to fine, gray brown	B.G
		2.0 Ft		Saturated undifferentiated.	
120	128	CUTTINGS		SAND, medium to fine, gray brown	BG
				Saturated	
128	130	10,11,11,15		SAND (SP) medium to Coarse	B.G.
		1.5 Ft		Undifferentiated, gray-brown. Saturated	
130	138	CUTTINGS		SAND, medium to Coarse, BROWN	
				TO BROWN GRAY	
138	140	12,14,18,18		SAND (SP) medium to fine	BG
				gray, undifferentiated. Saturated	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-8 Project/No. 114001348.0304 Page 3 of 4

Site Location Bethpage, NY Drilling Started 9/7/04 Drilling Completed 9/9/04

Total Depth Drilled 300 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device

Sampling Interval Every 10' From WT feet Drilling Fluid Used Water

Drilling Contractor Delta

Prepared By SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
150	152	2'		Light Tan/Orange Med Sand, SOME Silt - Top 1'6"	Reinn
				1'6" - 2' White F-Med Sand, SOME Silt. 1/2" Lense of white sandy Clay @ 1'11"	
160	162	1'4"		Light Tan/Orange Med-Coarse Sand, SOME Fine Sand, TRACE Silt.	Reinn
170	172	2'		Light Orange Fine Sand, TRACE Silt.	
180	182	2'		Top 6" - Light Red Med-Coarse Sand, TRACE Silt	
				6" - 2' Light Red/Orange Fine Sand, WITH Silt.	
190	192	2'1.5"		Light Orange/Red Fine Sand SOME Silt	
200	202	2'		Fine Sand WITH Silt - Multiple Colors - Bands of Light Red/Orange/Tan	
210	212	2'		Light Tan/Orange F-Med Sand	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-8 Project/No. NY001348.0304.TY Page 4 of 4 (SA)

Site Location Bethpage, NY Drilling Started 9/7/04 Drilling Completed 9/9/04

Total Depth Drilled 300 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device Split Spoon

Sampling Interval Every 10' From WT feet Drilling Fluid Used Water

Drilling Contractor Delta

Prepared By SA

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
220	222	1'		Black Silt, Med, Dry. TRACE Fine Sand in Matrix	Running
230	232	2'		Top 1'8" - Dark Brown F-Med Sand, TRACE Silt	
				1'8"- 2' - Orange Fine Sand WITH Silt.	
240	242	2'		Light Tan - Tan/Light Orange F-Med Sand WITH Silt.	
				Mere Red Coloring @ 2'	
250	252	2'		Light Orange/Tan F-Med Sand, TRACE Silt	
260	262	2'		Brown Med Sand, SOME Fine Sand, TRACE Silt	
270	272	2'		Top 1' - Same	Ran Stopped Humid
				1'-2' - Light Orange F-Med Sand, SOME Silt	
280	282	2'		Top 1'6" Light Orange F-Med Sand, SOME Silt	
				1'6"- 2' Light Tan/White Fine Sand, SOME Silt	
295	297	2'		Tan/Light Brown F-Med Sand	

Screen 295 - 300

G:\TECHNICL\FIELD LOGS\Sample Core Log.XLS- Sheet1

297'/2 299'/2 2' Same ← END OF BORING

ARCADIS G&M

Sample/Core Log

Boring/Well VP-9 Project/No. NY001348.0304.00002 Page 1 of 6

Site Location Bethpage, NY Drilling Started 8/9/04 Drilling Completed 8/9/04

Total Depth Drilled 300 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10' from WT feet Drilling Fluid Used water

Drilling Contractor Delta (Mike / Jason)

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
60'	62'	2'	Top sample saturated	Top 2" - Light Orange Silt, SOME Fine Sand 2"-2' - Light Tan - Light Orange Fine Sand, SOME Silt. Black Layering @ 1'6" (Thin Lenses)	0.0
70	72'	2'		Top 10" → light tan medium sand SOME fine sand TRACE silt. 10" - 2' → light tan - orange medium sand SOME fine sand TRACE silt	0.0
80	82'	2'		Top 8 1/2" ~~light~~ tan medium sand SOME fine sand TRACE silt 8 1/2" to 14" light tan medium fine sand WITH Silt 14" to 21" orange medium fine sand WITH Silt 21" - 2" white/purple soft clay some Sand in matrix	0.0
90'	92'	2'		3" tan brown fine sand WITH Clay	0.0

ARCADIS G&M

Sample/Core Log

Boring/Well VP-9 Project/No. NY001348.0304.00002 Page 2 of 6

Site Location Bethpage, NY Drilling Started 8/9/04 Drilling Completed 8/13/04

Total Depth Drilled 300 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2" x 2' Type of Coring/Sampling Device Split Spoon

Sampling Interval every 10' feet Drilling Fluid Used water

Drilling Contractor Rejig

Prepared By KFJ

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
90	92'	2'		3" to 2' Hard black/dark grey clay (dry)	0.0
95'	97'	2'		8'/2" Hard black/dark grey clay (dry)	0.0
				8'/2" 13'/2" tan fine sand	
				13'/2" - 2' tan fine sand w/ Lenses of red, orange, grey fine sands	
100'	102'	2'		4" dark tan fine sands in a black soft clay matrix	0.0
				4" to 10" medium stiff black clay (dry)	
				10" to 12" fine tan sand in a medium stiff black clay	
				12" to 15" light grey hard clay WITH fine light tan sands in matrix	
				15" to 2" fine grain sands WITH Lenses of orange, yellowish-orange, tan, grey, and yellow	
110'	112'	2'		2" tan fine sands	0.0
				2" to 15" tan fine sands in a soft black clay matrix	
				15" to 17" orange and light tan fine sands in a medium stiff light tan clay	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-9 Project/No. NY001348.0304.00002 Page 3 of 6

Site Location Bethpage, NY Drilling Started 8/9/04 Drilling Completed 8/13/04

Total Depth Drilled 300 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2" X 2' Type of Coring/Sampling Device split spoon

Sampling Interval every 10 feet Drilling Fluid Used water

Drilling Contractor Delta

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
110'	112'	2'		17" to 2' light tan medium sand WITH fine sand	0.0
120'	122'	1'8"		16" light tan medium sand WITH fine sand	
				16"-20" NO recovery	
				20"-2' light tan medium stiff clay fine orange and light tan sands in matrix	
130	132'	2'		12" light grey medium sand	0.0
				12" to 2' yellow medium sand SOME fine sand	
140'	142'	2'		2' yellow medium sand some fine sand	0.0
150'	152'	2'		9" light grey medium sand SOME fine sand	0.0
				9" to 2' pale yellow medium sand SOME fine sand	
160	162'	2'		13" orange, pale yellow medium sand	0.0
				SOME fine sand	
				13" to 15", brown-red medium sand WITH	
				Some Lenses of orange and pale yellow	
				19" to 2' light grey soft clay WITH fine	
				orange, brown, yellow sands in matrix	
170	172'	2'		9" pale yellow medium sand WITH fine sand	0.0
				9"-13" light grey soft clay with fine sand	
				lenses of orange and red in matrix	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-5 Project/No. NY001348.0304.00002 Page 4 of 6

Site Location Bethpage, NY Drilling Started 8/9/04 Drilling Completed 8/13/04

Total Depth Drilled 300 Feet Hole Diameter 6" inches Drilling Method HSA

Length and Diameter of Coring Device 2'x2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10' feet Drilling Fluid Used water

Drilling Contractor Reltg

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
cont 170	172	2		13" to 20" orange red medium sand	0.0
				20" to 2' pale yellow medium sand SOME	
				red medium sand	
180	182'	2'		2' yellowish orange medium sand	0.0
190	192'	2'		2' pale yellow medium sand SOME	0.0
				orange medium sand	
200	202'	2'		6" yellow fine sand	0.0
				6" to 11" light brownish grey fine sand TRACE	
				silt	
				11" to 15" yellow medium sand SOME orange	
				medium sand	
				15" to 20" yellow fine sand with red-orange	
				lenses	
				20" to 2' red-orange medium sand	
210	212'	2'		20" yellow fine sand TRACE silt	0.0
				20" to 2' yellowish brown medium sand WITH	
				yellowish brown fine	
220'	222'	10½"		10½" yellowish brown medium sand WITH	0.0
				yellowish brown fine	

ARCADIS G&M

Sample/Core Log

Boring/Well VF-9 Project/No. NY000348.0304.00004 Page 5 of 6

Site Location Delhpase, NY Drilling Started 8/9/04 Drilling Completed 8/13/04

Total Depth Drilled 300 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2'x2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10' feet Drilling Fluid Used water

Drilling Contractor Delta

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
230	232	2'		2' yellowish brown medium sand WITH yellowish brown fine sand	0.0
240	242'	2'		14 1/2" reddish yellow medium sand WITH reddish yellow fine sand	0.0
				14 1/2" to 15" brownish yellow medium sand WITH fine brownish yellow sand	
				15" to 2' light brown medium sand WITH fine light brown sand	
250	252'	2'		2' yellow medium sand WITH fine yellow sand	0.0
260	262'	1'2"		10" to 20" yellow medium sand WITH fine yellow sand TRACE SILT	no PID rain
				20" to 2' medium yellow sand SOME fine yellow sand in a soft light grey clay matrix	
270	272'	2'		15" yellow medium sand WITH fine sand	no PID
				15" to 20" grey and yellow fine sand TRACE SILT	rain
				20" to 2' orange/red fine sands in a soft grey clay matrix	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-9 Project/No. NY001348.0304 Page 6 of 6

Site Location bethpage, NY Drilling Started 8/9/04 Drilling Completed 8/13/04

Total Depth Drilled 300 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10 feet Drilling Fluid Used water

Drilling Contractor Delta

Prepared By KFT / SH

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
275	277'	2'		12" yellow medium sand	0.0
				12" to 2' grey fine sand WITH orange lenses some silt	
295	297'	2'	TOC sample	Top 8" Clayey sand - light tan	
				orange fine sand WITH soft tan clay mixed	
				8"-1' alternating lenses of black and	
				light grey and silt (Dry)	
				1'-2' Light Tan-orange F-med sand	
				Trace Silt	
	300'			end of boring	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-10 Project/No. NY001348 0304.00004 Page 1 of 2

Site Location bethpage, ny Drilling Started 8/17/04 Drilling Completed 8/18/04

Total Depth Drilled 150 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10 feet Drilling Fluid Used water

Drilling Contractor delta

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
55'	57'	0		no recovery not in water	
60'	62'	2'		10 1/2" yellow fine sand SOME medium yellow sand TRACE silt	0.0
				10 1/2" to 2' olive yellow medium sand SOME fine sand	
65'	67'	2'		10" med-fine yellow sand	0.0
				10"-17" med-fine brownish yellow sand	
				17"-2' med-fine grey sand	
75'	77'	2'		2' fine light yellowish brown sand TRACE silt	0.0
85'	87'	2'		5" tan medium-fine sand	0.0
				5"-8" soft white clay WITH fine orange yellow sand TRACE silt	
				8"-2' Tan-orange medium sand	
95'	97'	2'		5" yellow medium sand	0.0
				5"-8" fine tan sand WITH orange and red lenses	
				8"-2' fine/med brown sand	
105'	107'	1'7"		0-5" no recovery; 5"-17" fine/med brown sand	0.0
				17"-19" soft white clay WITH Red Orange fines in matrix	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-10 Project/No. NY001348.0304.00004 Page 2 of 2

Site Location Bethpage, NY Drilling Started 8-17-04 Drilling Completed 8-18-04

Total Depth Drilled 150 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device split spoon

Sampling Interval 10 feet Drilling Fluid Used water

Drilling Contractor Delta

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
cont'd 105	107	1'7"		19"-22" fine black, orange, yellowish-tan sands SOME silt	
				22"-24" yellow, orange, tan fine/med sands	
115'	117'	2'	TOC sample	8" medium tan sand	0.0
				8"-10" soft white clay WITH fine red orange sands	
				10"-21" medium tan sand	
				21"-22" Orange medium sand TRACE silt	
				22"-23" soft white clay WITH fine orange/tan sands in matrix	
				23"-2' medium tan sand	
125'	127'	2'		2' yellow med-fine sand	—
				@ 14 1/2" black lense of fine sand	
135'	137'	1'5"		7" NO recovery; 1'5" fine-med tan sand TRACE silt	—
145'	147'	1'6"		1'6" yellow medium sand TRACE silt	—
147'	149'	2'		19" yellow medium sand	—
				19"-2' yellow orange medium sand	
150	152'	2'		17" yellow med-fine sand	—
				17"-2' orange-yellow med-fine sand TRACE silt	

end of boring

ARCADIS G&M

Sample/Core Log

NY001348.0806.00002

Boring/Well VP-10A Project/No. Grumman 003 Page 1 of 2

Site Location Bethpage, NY Drilling Started 6/12/06 Drilling Completed 6/12/06

Total Depth Drilled 65 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 5' x 6" Type of Coring/Sampling Device Auger

Sampling Interval Variable feet Drilling Fluid Used None

Drilling Contractor Delta Well & Pump

Prepared By Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5	cuttings	Hand dig	Grass, brown topsoil. Then light tan silty clay; wet.	0
5	10	cuttings		Fine to coarse brown sand, and fine to coarse gravel, subrounded, quartzite	0
10	15	cuttings		Med to coarse orange rust colored sand, and fine to coarse gravel, quartzite	0
15	20	cuttings		Med to coarse rust colored sand, and fine to coarse gravel, subrounded, quartzite Then med to coarse brown sand, and fine to coarse gravel, quartzite	0
20	25	cuttings		Coarse to fine gravel, subrounded, quartzite, and coarse to med brown sand.	0
25	30	cuttings		Fine to coarse light brown sand, and fine gravel, quartzite	0
30	35	cuttings	Moist.	Fine to coarse light brown sand, some fine gravel, quartzite. Then fine to coarse light brown sand, and fine gravel, quartzite.	0
35	40	cuttings		Med to coarse light brown sand, trace fine gravel, quartzite.	0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-10A

Page 2

Prepared by Prezotti

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
40	45	cuttings		fine to med light brown sand; trace fine gravel, angular, subrounded, quartzite	0
50	55	cuttings		fine rust colored sand, quartz.	0
55	60	cuttings		fine darker rust colored sand, quartz.	0
60	65	cuttings		fine brown sand. Then fine to coarse brown sand; trace fine gravel, quartzite.	0
				End of Boring	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-11 Project/No. NY001348.0304.00004 Page 1 of 2

Site Location hethpage, ny Drilling Started 8-23-04 Drilling Completed 8-24-04

Total Depth Drilled 150 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10' feet Drilling Fluid Used water

Drilling Contractor delta

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
60	62'	2'		2' tan med sand some coarse sand	0.0
70	72'	2'	TOC	2' tan med sand some fine sand	0.0
80	82'	2'		1' orange-tan med sand with fine sand some silt	0.0
				1' to 2' tan medium sand	
90	92'	1'		1' Tan med sand some fine orange	0.0
				sand Trace Silt.	
100'	102'	2'	TOC	10" tan med sand some fine grey black	6.0
				orange sand Trace Silt	
				10" to 13" tan-orange med sand trace silt.	
				13" to 2' orange-red med. sand Trace	
				Silt	
110'	112'	1'		6" med tan sand	0.0
				6" to 6½" fine-med tan sand in a soft	
				clay matrix	
				6½" to 1' yellow fine sand	
110'	112'	19"		16" tan med. sand	0.0
				16" to 19" orange-tan medium sand	
				Trace Silt.	
120'	122'	2'		13" tan-orange med-fine sand Trace Silt	
				13"-2' tan med-fine sand TRACE Silt	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-11 Project/No. NJ1001348 0304.00004 Page 2 of 2

Site Location bethpage, ny Drilling Started 8-23-04 Drilling Completed 8-24-04

Total Depth Drilled 150 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10 feet Drilling Fluid Used water

Drilling Contractor delta

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
130	132	2'		13" tan med - fine sand TRACE silt	0.0
				13" to 16" tan fine sand in a very soft	
				clay matrix TRACE silt	
				16" to 2' grey medium sand w/TH	
				Lenzes of orange medium sand @	
				18" to 19" and 22" to 23" TRACE silt	
140	142	21"	TOC	17 1/2" grey tan medium sand	0.0
				17 1/2" to 21" orange tan fine sand in	
				a soft white clay matrix	
145	147	1'		1' light grey med. sand	0.0
147	149	2'		10" tan yellow medium sand	0.0
				10" to 19" orange tan medium sand	
				19" - 22 1/2" orange fine - medium sand	
				22 1/2 - 2' tan fine sand TRACE orange	
				fine sand TRACE silt	
150	152	6"		6" light grey med. sand	0.0
			end	of boring	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-12 Project/No. NY001348.0304.00004 Page 1 of 3

Site Location bethpage, ny Drilling Started 8-25-04 Drilling Completed 8-27-04

Total Depth Drilled 155 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2'X2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10 feet Drilling Fluid Used water

Drilling Contractor delta

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
60'	62'	2'		2' tan medium - coarse sand	0.0
70'	72'	2'		2' tan medium - coarse sand @ 14" to 14 1/2" orange medium sand lense	0.0
80'	82'	2'	TOC	15" tan medium - coarse sand	0.0
				15" to 2' orange-yellow med - fine sand	
90'	92'	1'	see	8" tan-orange medium - fine sand	0.0
			picture	8" to 10" some tightly compacted sandstone (red dark) WITH orange medium fine sand	
				10" - 1' orange fine sand SOME SILT	
100	102'	2'		9" tan orange medium fine sand	0.0
				9" to 10" black tan medium fine sand	
				10" to 2' tan medium sand	
110'	112'	1'5"		7" no recovery	
				7" to 19" dark tan medium sand WITH fine sand	0.0
				19" to 2' tan grey fine sand SOME medium sand TRACE SILT	
120	122'		TOC	12" tan medium - fine sand	0.0
			sample	12" to 13" orange yellow medium fine sand TRACE SILT	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-12 Project/No. NY001348.0304.00004 Page 2 of 3

Site Location bethpage, ny Drilling Started 8-25-04 Drilling Completed 8-27-04

Total Depth Drilled 155 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10 feet Drilling Fluid Used water

Drilling Contractor delta

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
120'	122		(cont'd)	13" to 17" pale red medium fine sand	0.0
			TOC	TRACE Silt	
			sample	17" to 18" orange yellow medium fine sand	
				TRACE Silt	
				18" to 2' dark tan medium fine sand TRACE	
				Silt	
130'	132'	1'3"		1'3" tan medium sand SOME pale red	0.0
				fines	
140'	142'	2'		21" gray tan medium - fine sand	0.0
				21" to 23" light tan fine sand TRACE	
				Silt	
				23" to 2' gray-tan medium fine sand TRACE	
				Silt	
145'	147'	2'		3" tan medium sand some orange fines TRACE	0.0
				Silt	
				3" to 16" tan orange fine sand SOME Silt	
				16" to 2' tan medium sand TRACE Silt	
147	149'	2'	T	10" tan medium sand	0.0
				10" to 18" tan medium sand SOME tan soft clay	
				18" to 2' tan medium - fine sand TRACE Silt	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-12 Project/No. NY001348.0304.00004 Page 3 of 3

Site Location bethpage, NY Drilling Started 8-25-04 Drilling Completed 8-27-04

Total Depth Drilled 155 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10 feet Drilling Fluid Used water

Drilling Contractor delta

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
150	152'	2'	TOC	17" tan medium sand some fine sand	0.0
			sample	17" to 2' grey light tan medium sand	
				some fine sand	
152'	154'	2'		2' med tan/grey sand some fine	0.0
				sand	
				end of boring	

ARCADIS G&M

Sample/Core Log

NY 001348.0806.00002

Boring/Well VP-12A Project/No. Grumman OU3 Page 1 of 2

Site Location Bethpage, NY Drilling Started 6/8/06 Drilling Completed 6/8/06

Total Depth Drilled 75 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 5' x 6" Type of Coring/Sampling Device Auger

Sampling Interval Variable feet Drilling Fluid Used NONE

Drilling Contractor Delta

Prepared By Prezorski

* Above Background

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5		cuttings	Grass, topsoil, block of wood. Then coarse to fine brown sand, and fine to coarse gravel, subrounded, quartzite	0
5	10		cuttings	Coarse to fine brown sand, and fine gravel, subrounded, quartzite	0
10	15		cuttings	Fine to coarse light brown sand, and fine to coarse gravel, subrounded, quartz.	0
15	20		cuttings	Med to coarse brown sand, and coarse gravel, angular, subrounded, quartzite	0
20	25		cuttings	Med to coarse rust colored sand, quartz, some fine gravel, subrounded, quartzite	0
25	30		cuttings	Fine to coarse rust colored sand, and fine to coarse gravel, angular, subrounded, quartzite	0
30	35		cuttings	Fine to med rust-brown sand, trace fine gravel, subrounded, quartzite. Then fine rust-brown sand.	0
35	40		cuttings	Fine brown sand, and fine to coarse gravel, subrounded, quartzite	0

* Background PID readings .3ppm, .2ppm, .6ppm

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-12A

Page 2

Prepared by Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
40	45		cuttings	Fine to coarse brown sand, and fine to coarse gravel, subrounded, quartzite	0
				Then coarse gravel, subrounded, quartzite,	
				some fine to med brown sand	
45	50		cuttings	Coarse gravel, subrounded, quartzite	0
				(2 individual quartzite rocks stained	
				black, No odor. PID 0ppm),	
				some fine to med brown sand,	
				clump of fine sand stained black	
				No odor, PID 0ppm. Then gravel, coarse, quartzite	
50	55		cuttings	Fine to med brown sand; trace	0
				fine gravel, subrounded, quartzite. Moist.	
55	60		cuttings	Fine to med brown sand. Moist	0
60	65		cuttings	Fine to med brown sand. Moist	0
65	70		cuttings	Fine to med brown sand; trace	0
				fine gravel, subrounded, angular, quartzite	
70	75		cuttings	Fine to med brown sand; trace	0
				fine gravel, subrounded, angular,	
				quartzite.	
				End of Boring	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-13 Project/No. NY001348.0304.4 Page 1 of 2

Site Location bethpage, NY Drilling Started 12/20/04 Drilling Completed 12/20/04

Total Depth Drilled 110 Feet Hole Diameter 24 inches Drilling Method HSA (3¼" augers)

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval every 10 feet Drilling Fluid Used water

Drilling Contractor delta (Shaun / Conrad)

Prepared By YFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	no PID snow, cold PID (ppm)	blows
0	10		cuttings	SAND med-coarse tan SOME rounded gravel		
10	20		cuttings	SAND med tan red TRACE gravel		
20	30		cuttings	Same as above		
30	40		cuttings	same as above		
40	50		cuttings	same as above		
50	60		cuttings	SAND med tan red	↓	
60	62	1'	spoon	1' no recovery	0.1	11,19,20,23
				1'-2' SAND med tan SOME rounded gravel	↓	
60	70		cuttings	SAND med brown	0.1	12,12,19,24
70	72'	1'6"	spoon	6" no recovery	0.1	↓
				6"-19" SAND med tan	↓	
				19"-2' SAND fine red TRACE gravel	↓	
70	80		cuttings	SAND med brown	0.0	
80	82'	2'	spoon	2'SAND med-fine tan TRACE gravel	0.0	13,19,20,2
80	90		cuttings	SAND med brown		
90	92'	2'	spoon	SAND med-fine tan	0.0	17,10,19,24
90	100		cuttings	SAND med brown	0.0	
100	102	2'	spoon	top 5" sand med-fine tan	0.0	
				5"-7" SAND fine tan orange	↓	- did not get blows
				7"-11" Clay soft grey WITH orange tan lines	↓	

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-13 Page 2

Prepared by KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)	
100	102	2'	cont'd	11" - 16" SAND med. fine orange tan	0.0	
				16" - 2' CLAY grey soft some fines orange, black tan	0.0	
105	107'	2'	spoon	top 14" SAND med. fine tan	0.0	11, 15', 18, 21
				14" - 20" SAND med tan orange		
				20" - 22" SAND med - fine orange red		
				22" - 23' SAND med - fine tan black orange		
				23" - 2' SAND med - fine orange some silt		
108	110	2'	spoon	2' SAND med tan - Yellow	0.0	8', 13', 17', 23'
end of borehole				600 gal used		

G:\TECHNICL\FIELD LOGS\Sample Core Log.XLS- Sheet1

ARCADIS G&M

Sample/Core Log

Boring/Well VP-14 Project/No. NY001348.0304.00004 Page 1 of 1

Site Location bethpage, NY Drilling Started 12/16/04 Drilling Completed 12/17/04

Total Depth Drilled 120 Feet Hole Diameter ~9 inches Drilling Method HSA (3¼" augers)

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device split spoon

Sampling Interval 10 feet Drilling Fluid Used water

Drilling Contractor delta (Shaun / Conrad)

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)	
0	10'		cuttings	SAND med coarse tan some rounded gravel	0.0	
10	20		cuttings	same as above	0.3	
20	30		cuttings	" " "	0.3	
30	40		cuttings	" " "	0.3	
40	50		cuttings	SAND med tan red	0.0	recollected PID
50	60		cuttings	" " " "	0.0	
60	70		cuttings	" " " "	0.0	blows:
70	72		TOC spoon	SAND med tan saturated TRACE fines	00	8/8, 20, 26
70	80		cuttings	SAND med tan red	0.0	
80	82'	2'	spoon	top 14" SAND med tan	0.0	11, 17, 20, 21
				14"-2' SAND med laminations black, yellow, tan	0.0	
80	90		cuttings	SAND med tan red saturated	0.0	
90	92'	2'	TOC spoon	SAND med - coarse tan yellow saturated	0.0	
90	100		cuttings	SAND med tan red saturated	0.0	
100	102	2'	TOC spoon	Sand med. coarse tan yellow	0.0	9, 18, 22, 27
100	110		cuttings	SAND med tan saturated	0.0	
110	112	2'	TOC spoon	SAND med - fine tan	6.1	9, 17, 23, 20
115	117'	2'	Spoon	SAND med - fine light tan (sat)	0.0	
118	120	2'	Spoon	same as above		

end boring 120'

275 gallons of water used + 200 gallons used when bailing w/ Melissa on friday 12/17 = total water used 475 gal

G:\TECHNICL\FIELD LOGS\Sample Core Log.XLS- Sheet1

ARCADIS G&M

Sample/Core Log

NY001348.0806.00002

Boring/Well VP-14A Project/No. Grumman OU3 Page 1 of 2

Site Location Bethpage NY Drilling Started 6/21/06 Drilling Completed 6/21/06

Total Depth Drilled 75 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 5' x 6" Type of Coring/Sampling Device Auger

Sampling Interval Variable feet Drilling Fluid Used None

Drilling Contractor Delta Well & Pump

Prepared By Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	6	cuttings	Hand dig	3" asphalt. Then fill materal: brown soil, brown sand (med), and coarse to fine gravel, angular, subrounded, quartzite	0
6	10	cuttings		Coarse to fine brown sand; and coarse to fine gravel, angular, subrounded quartzite	0
10	15	cuttings		Coarse to fine gravel, subrounded, quartzite; and coarse to med brown sand	0
15	20	cuttings		Fine to coarse brown sand; and fine to coarse gravel, quartzite.	0
20	25	cuttings	Moist	Fine to coarse brown sand; and fine gravel, angular, subrounded, quartzite. Then med to coarse brown sand; and fine to coarse gravel, subrounded, quartzite.	0
25	30	cuttings	slightly Moist	Fine to coarse light brown sand; and fine gravel, angular, subrounded quartzite.	0
30	35	cuttings	slightly Moist	Fine to coarse light brown sand; some	0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-14A

Page 2

Prepared by Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
				fine gravel, angular, subrounded,	
				quartzite	
35	40	cuttings	Moist	Fine Brown sand	0
40	45	cuttings	Moist	Fine red-orange sand	0
45	50	cuttings		Same as above	0
50	55	cuttings		Fine red-orange sand. Then moist	0
				darker red-orange fine sand	
55	60	cuttings	Moist	Fine Brown sand	0
60	65	cuttings	Moist	Fine Brown sand; trace clumps	0
				of dark yellow-tan with bands of dark	
				orange clay. (~~Trace~~ Trace clumps of grey clay)	
65	70	cuttings	Moist	Fine dark brown sand	0
70	75	cuttings	wet	Fine to med Dark brown sand	0
				End of Boring	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-15 Project/No. NY/001348.0304.00004 Page 1 of 2

Site Location bethpage, ny Drilling Started 12/14/04 Drilling Completed 12/14/04

Total Depth Drilled 110 Feet Hole Diameter 4 inches Drilling Method HSA (3 1/4" augers)

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval 10 feet Drilling Fluid Used water

Drilling Contractor delta (Conrad / Shaun)

Prepared By KET

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)	blow
0	10		cuttings	SAND med coarse tan SOME rounded gravel	0.0	
10	20		cuttings	SAND med coarse tan TRACE gravel	0.0	
20	30		cuttings	same as above	0.0	
30	40		cuttings	same as above	0.0	
40	50		cuttings	SAND med coarse tan SOME rounded gravel	0.0	
50	60		cuttings	~~same as above~~ SAND med red brown	0.0	
60	62	6"	spoon	1'6" no recovery		15,22,24,3
				1'6"-2' SAND med-coarse sand WITH	0.1	
				rounded gravel		
60	70		cuttings	SAND med-fine red brown	0.0	
70	72'	2'	spoon	top 18" SAND med-coarse tan	0.0	21,35,37,4
				18"-20" SAND med-coarse tan some fine orange	0.0	
				sand	0.0	
				20"-2' SAND med-coarse tan	0.0	
70	80		cuttings	SAND med ~~fine~~ red brown TRACE gravel	0.0	
80	82'	1'2"	spoon	top 10" no recovery		6,14,19,2
				10"-2' SAND med coarse tan	0.0	
80	90		cuttings	SAND med tan saturated	0.0	
90	92'	2'	spoon	2' SAND med yellow saturated	0.0	
90	100		cuttings	SAND med tan saturated	0.0	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-15 Project/No. NY001348.0304.00004 Page 2 of 2

Site Location Bethpage, NY Drilling Started 12/14/04 Drilling Completed 12/14/04

Total Depth Drilled 110 Feet Hole Diameter 4 inches Drilling Method HSA (3 1/4" augers)

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval 10' feet Drilling Fluid Used water

Drilling Contractor delta (Conrad Shaun)

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)	blows
100	102	2'	spoon	top 17" SAND med yellow saturated	0.5	
				17"-21" SAND med fine yellow orange sat	0.3	
				21"-2' SAND fine grey, orange some	0.3	
				fines		
105	107	2'	spoon	top 7" SAND med-fine tan saturated	0.3	9,17,16,21
				7"-13" clay soft grey WITH fines tan	0.3	
				13"-2' sand fine orange, tan, grey, red	0.3	
108	110	2'	spoon	1' SAND med-fine tan saturated	0.2	
				1'-19" - clay very soft tan some fines	0.3	
				19"-22" - SAND med-fine tan saturated	0.3	
				22"-2' - clay soft grey SOME fines	0.3	
	end	boring				
	400 gallons of		water used for drilling.			
				end of boring		

ARCADIS G&M

Sample/Core Log

NY001348.0806.00002

Boring/Well VP-15A Project/No. Grumman OU3 Page 1 of 2

Site Location Bethpage, NY Drilling Started 6/23/06 Drilling Completed 6/23/06

Total Depth Drilled 65 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 5' x 6" Type of Coring/Sampling Device Augers

Sampling Interval Variable feet Drilling Fluid Used None

Drilling Contractor Delta Well & Pump

Prepared By Pazorski / Scheslin

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5	cutting	Hand dig	Grass, Then topsoil. Then brown sand (med); and coarse to fine gravel, subrounded, angular, quartzite. Then	0
				fine to coarse light brown sand; and fine gravel, subrounded, angular, quartzite	
				Then fine to coarse light brown sand,	0
				and coarse to fine gravel, subrounded, angular, quartzite with trace large clumps of gray clay.	
				Then fine to coarse brown sand; and	0
				fine gravel, subrounded, angular, quartzite	
5	10	cuttings		Fine to coarse light tan sand; and	0
				fine gravel, ~~coarse to fine~~ angular, subrounded, quartzite	
10	15	cuttings		Fine to med light tan sand; and	0
				fine gravel, angular, subrounded, quartzite	0
15	20	cuttings		Fine to med brown sand; and	0
				fine to coarse gravel, subrounded, quartzite	
20	25			M/F sand, brown, fine and gravel, Quartzite, subrounded, dry, (GP) (SP)	0.0
25	30			M/F sand, brown, fine and gravel, Quartzite, subrounded, dry, (GP) (SP)	0.0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well UP-15A

Page 2

Prepared by Prezorski / Cherlin

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
30	35		cuttings	M/C sand, brown/tan and gravel, Quartzite, subrounded, dry, (GP)(SP)	0.0
35	40			M/C sand, brown/tan and gravel, Quartzite, subrounded, dry (GP)(SP)	0.0
40	45			M/C sand, brown/tan and gravel, Quartzite, subrounded with mudstone, subangular, dark grey/dark red, dry, (GP)(SP)	0.0
45	50			M/F sand, orange/tan, and gravel, Quartzite, subrounded with mudstone, subangular, dark grey/dark red, damp, (SP)/(SM).	0.0
50	55			M/F sand, orange/tan and gravel, Quartzite, subrounded with mudstone, subangular, dark grey/dark red, damp, (SP)/(SM).	0.0
55	60			M/F sand, orange/tan and gravel, Quartzite, subrounded with mudstone, subangular, dark grey/dark red/damp, (SP)/(SM).	0.0
60	65			Fine sand, brown/orange with a little silt, damp, (SM)	0.0
				End of Boring	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-16 Project/No. NY001348.0304.00004 Page 1 of 2

Site Location bethpage, ny Drilling Started 12/10/04 Drilling Completed 12/10/04

Total Depth Drilled 110 Feet Hole Diameter ~6 inches Drilling Method HSA (3¼" diameter)

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval 10 feet Drilling Fluid Used water

Drilling Contractor delta (Conrad/Shawn)

Prepared By KPT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)	
0	10'		cuttings	SAND med-coarse tan SOME rounded gravel	–	rain
10	20'		cuttings	SAND med-coarse tan-brown	–	
20	30'		cuttings	SAND med tan-brown SOME fines	–	
30	40'		cuttings	SAND med tan-brown some fines	–	
40	50'		cuttings	same as above	–	
50	60'		cuttings	" " "	–	blows
60	62'	1'	spoon	1' no recovery	–	8,12,23,26
				1'-2' SAND med coarse tan-yellow SW	–	
60	70'		cuttings	sand med tan-brown SW	–	
70	72'	1'	TOC spoon	1' no recovery	–	—
				1'-2' sand med coarse tan yellow SOME	–	
				angular gravel while SW	–	
70	80		cuttings	SAND med tan-brown SW	–	
80	82'	2'	spoon	2' SAND med coarse tan yellow SW	–	—
80	90		cuttings	sand med tan-brown SW	–	—
90	92'	2'	TOC spoon	2' sand med coarse tan yellow SW	–	19,27,14,3
90	100		cuttings	SAND med coarse light brown SW saturated	–	
100	102'	2'	TOC spoon	0-5" sand med coarse tan yellow SW	–	12,24,14,1
				5"-1' SAND fine red, orange, grey SM	–	
				1'-2' SAND fine tan, grey, orange SM	–	

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-16

Page 2 of 2

Prepared by KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm) for	blows
105	107	2'	spoon	top 5" SAND med coarse tan yellow SW	–	13,16,19,23
				5"-10" sand fine tan, grey, orange SM		
				10"-2' SAND fine tan, red, orange and		
				med sand SM		
108	110	2'	spoon	2' SAND med coarse tan/yellow SW	–	P/8,22,20
end	boring					
				end of boring		

ARCADIS G&M

Sample/Core Log

NY00 1348.0806.0002

Boring/Well VP-16A Project/No. Grumman OU3 Page 1 of 2

Site Location Bethpage, NY Drilling Started 6/19/06 Drilling Completed 6/19/06

Total Depth Drilled 65 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 5' x 6" Type of Coring/Sampling Device Auger

Sampling Interval Variable feet Drilling Fluid Used None

Drilling Contractor Delta Well & Pump

Prepared By Prazorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5	cuttings		Grass. Then topsoil. Then dark brown sand, coarse to med. and coarse to fine gravel, angular, subrounded, quartzite. Then dark brown sand, coarse to fine some coarse to fine gravel, angular, subrounded, quartzite. Then brown med to coarse sand, and fine gravel, quartzite.	0
5	10	cuttings		Fine to coarse brown sand, and fine to coarse gravel, subrounded, quartzite.	0
10	15	cuttings		same as above	0
15	20	cuttings		Fine to coarse rust colored sand, and fine gravel, quartzite	0
20	25	cuttings	Moist	Fine Brown Sand	0
25	30	cuttings	Moist	Fine Brown sand, Trace clumps grey fine sand.	0
30	35	cuttings	Moist	same as above	0
35	40	cuttings		Med to coarse brown sand, and fine gravel, subrounded, angular, quartzite	0
40	45	cuttings		Fine to coarse rust colored sand.	0
45	50	cuttings	Moist	Dark rust-orange fine to coarse sand, some fine gravel, subrounded, angular, quartzite.	0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-16A

Page 2

Prepared by Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
				Then med rust orange sand.	0
50	55	attempt	Moist	Fine rust orange sand.	0
55	60	attempt	Slight Moist	Fine rust orange sand.	0
60	65	attempt	Slight Moist	Darker rust orange fine sand.	0
				End of Boring	

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ARCADIS G&M

Sample/Core Log

Boring/Well VP-17 Project/No. NY001348.0304.00004 Page 1 of 1

Site Location bethpage, ny Drilling Started 11/15/04 Drilling Completed 11/16/04

Total Depth Drilled 110 Feet Hole Diameter 6 inches Drilling Method HSA (4.75" augers)

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device split spoon

Sampling Interval 10 feet Drilling Fluid Used water

Drilling Contractor delta (Conrad/Bobby)

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)	blows
0	10		cuttings	saturated from rain on Fri. brown med-fine sand	0.0	
10	25		cuttings	(dry) brown fine-med sand TRACE grav	0.0	
25	45		cuttings	tan brown med-fine sand	0.0	
45	60		cuttings	same as above	0.0	
60	62	1'*	split spoon	1' yellow med-fine sand TRACE silt	0.0	8,9,11,12
62	70		cuttings	brown-yellow med sand	0.0	
70	72'	1'*	spoon	1' yellow med sand TRACE clay @ 7"	0.0	4,7,5,13
72	80		cuttings	brown-yellow med sand	0.0	
80	82'	1'5"	spoon	top 7" no recovery	0.1	8,12,10,18
				7"-1'4" yellow med sand	0.0	
				1'4"-2' black-orange-tan fine sand	0.0	
				TRACE SILT		
82	90		cuttings	brown-yellow med sand	0.0	
90	92'	2'	spoon	2' yellow med sand	0.0	7,9,8,17
92	100		cuttings	tan med sand	0.0	
100	102	1'3"	spoon	9" no recovery	0.0	12,13,17,23
				9"-2' yellow med sand some fine sand	0.0	
105	107	2'	spoon	2' yellow med sand SOME fine sand	0.0	13,13,7,11
107	109		spoon	2' yellow med sand SOME fine sand	0.0	

110 end boring

* NOTE: 60-62' and 70-72' were 1-2' recovery. top 1' no recovery

ARCADIS G&M

Sample/Core Log

Boring/Well VP-18 Project/No. NY001348.0304.00001 Page 1 of 2

Site Location bethpage, ny Drilling Started 11/17/04 Drilling Completed 11/18/04

Total Depth Drilled 111 Feet Hole Diameter ~6 inches Drilling Method HSA (4.25" augers)

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval 10 feet Drilling Fluid Used water

Drilling Contractor delta (Conrad | Bob P.)

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)	blows
0	5		cuttings	brown med sand some gravel	0.0	
5	30		cuttings	light brown med - fine sand TRACE gravel	0.0	
30	40		cuttings	same as above	0.0	
40	50		cuttings	red light brown med - fine sand	0.0	
50	60		cuttings	same as above	0.0	
60	62	1'	spoon	top 1' no recovery	0.0	11, 15, 14, 11
			TOC	1'-18" yellow med - fine sand	0.0	
			sample	18"-2' red yellow med - fine sand	0.0	
62	70		cuttings	red light brown med - fine sand	0.0	
70	72'	2'	spoon	2' yellow med coarse sand PID up to 33	100 ppm	11, 13, 15, 17
80	82'	2'	spoon	2' yellow med coarse sand TRACE	0.1	16, 18, 17, 19
			TOC	fine sand		
			sample			
82	90		cuttings	tan med sand	0.0	
90	92	2'	spoon	2' yellow med - coarse sand TRACE	0.0	12, 13, 12,
				fine sand		
92	100		cuttings	tan med sand	0.0	
100	102	2'	spoon	2' tan - yellow med - fine sand	0.0	12, 10, 13, 14
			TOC sample			
102	105		cuttings	tan med sand	20	

* look @ daily log → cuttings from 72 - 80' were getting pin hits up to 17 ppm

ARCADIS G&M

Sample/Core Log

Boring/Well VP-18 Project/No. 05/1001348.0304.00004 Page 2 of 2

Site Location Bethpage, NY Drilling Started 10/17/01 Drilling Completed 10/18/01

Total Depth Drilled 111 Feet Hole Diameter ~6 inches Drilling Method HSA (4.25" augers)

Length and Diameter of Coring Device 2'X2" Type of Coring/Sampling Device split spoon

Sampling Interval 10 feet Drilling Fluid Used water

Drilling Contractor delta (Conrad / bob devine II)

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)	blows
105	107	2'	split spoon	2' tan yellow med sand SOME FINES	0.0	11,13,13,16
109	111'	2'	" "	2' tan yellow med sand SOME FINES	0.0	15,14,14,2
end	boring					

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ARCADIS G&M

Sample/Core Log

Boring/Well VP-18A Project/No. NY001348.0806.00002 Grumman OU3 Page 1 of 2

Site Location Bethpage, NY Drilling Started 6/6/06 Drilling Completed 6/6/06

Total Depth Drilled 65 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 5' x 6" Type of Coring/Sampling Device Auger

Sampling Interval Variable feet Drilling Fluid Used None

Drilling Contractor Delta

Prepared By Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5	cuttings	Hand dig	Grass. Then topsoil. Then coarse to fine brown sand; and coarse to fine gravel, angular, subrounded, quartzite. Then brown soil; some fine gravel, subrounded, quartzite. (clump of grey clay & clumps of rust colored fine sand)	0
5	10	cuttings		Black stained clay. No odor. Then grey clay, no odor. Then Brown clay. Then fine to coarse rust colored sand; and fine gravel, quartzite	0
10	15	cuttings	Moist	Fine to coarse rust colored sand; and fine to coarse gravel, quartzite	0
15	20	cuttings		Fine to coarse rust colored Sand; little fine to coarse gravel, angular, subrounded quartzite	0
20	25	cuttings		Fine to coarse brown sand; little gravel, fine, subrounded, angular, quartzite	0
25	30	cuttings		Fine to coarse brown sand; trace fine gravel, subrounded, angular, quartzite	0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-18A

Page 2

Prepared by Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
30	35	cuttings		Fine to coarse rust colored sand;	0
				Some fine gravel, angular, subrounded	
				quartzite.	
35	40	cuttings		Same as above	0
40	45	cuttings		Coarse gravel, subrounded, quartzite;	0
				trace fine brown sand.	
45	50	cuttings		Same as above	0
50	55	cuttings		Coarse to fine gravel. Then fine to	0
				med rust colored sand.	
55	60	cuttings		Fine rust colored sand	0
60	65	cuttings		Same as above	
				End of Boring	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-19 Project/No. NY001345.0304.00004 Page 1 of 2

Site Location bethpage, ny Drilling Started 12/6/04 Drilling Completed 12/7/04

Total Depth Drilled 110 Feet Hole Diameter 25 inches Drilling Method HSA (3 1/4" auger)

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device split spoon

Sampling Interval 10' feet Drilling Fluid Used water

Drilling Contractor delta (Conrad / Shaun)

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)	
0	10'		cuttings	Red tan med sand WITH gravel SW	—	rain
10	20'		cuttings	tan med sand AND fine sand SW	—	
20	30'		cuttings	tan med sand AND fine sand TRACE gravel GW	—	
30	40'		cuttings	same as above	—	
40	50'		cuttings	" " "	—	
50	60'		cuttings	" " "	—	
60	62'	8"	split spoon	8" sand 10% med-coarse LITTLE fine moist SM	—	blows
60	70'		cuttings	sand coarse brown SOME angular gravel GW	—	16, 17, 19, 2
70	72'	2'	spoon	2' sand med coarse tan moist SW	—	20, 23, 23, 2
70	80'		cuttings	SAND med coarse tan SOME angular gravel		
80	82'	1'6"	spoon	6" no recovery	—	
				6"-2 sand med coarse tan moist SW	—	24, 28, 16, 2
80	90		cuttings	sand med coarse tan saturated SW	—	
90	92'	8"	spoon	1'4" - no recovery	—	13, 19, 27
				8" sand med-coarse tan saturated SW		
90	100'		cuttings	SAND fine med tan saturated	—	
100	102'	1'	spoon	1' no recovery	—	25, 22, 24, 32
				1' SAND fine-med tan saturated SW SOME silt TRACE fine red sand at 1'10"		

ARCADIS G&M

Sample/Core Log

Boring/Well VP-19 Project/No. NY/001346.0304.00004 Page 2 of 2

Site Location Bethpage, NY Drilling Started 12/7/04 Drilling Completed 12/7/04

Total Depth Drilled 110 Feet Hole Diameter 2 inches Drilling Method HSA

Length and Diameter of Coring Device 2' X 2" Type of Coring/Sampling Device Split Spoon

Sampling Interval 10' feet Drilling Fluid Used Water

Drilling Contractor Delta (Shaun / Conrad)

Prepared By KFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)	
105	107'	1'5"	spoon	7" no recovery	—	12,10,20,20
				7"-2' SAND med coarse white saturated	—	
				SW TRACE fine tan silt	—	
108	110'	2'	spoon	2' SAND med coarse white saturated SW	—	12,18,20, 27
				water used 275 gallons		
				end of boring		

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well VP-19A Project/No. NY001348.0806.00002/Grumman 003 Page 1 of 2

Site Location Bethpage, NY Drilling Started 5/11/06 Drilling Completed 5/12/06

Total Depth Drilled 75 Feet Hole Diameter 6 inches Type of Sample/ Coring Device Drill Cuttings

Length and Diameter of Coring Device ~~NA~~ NA Sampling Interval NA feet

Land-Surface Elev. 126 feet ☐ Surveyed ☒ Estimated Datum

Drilling Fluid Used None Drilling Method HSA

Drilling Contractor Delta Driller Jim Helper Brian

Prepared By P. Prezorski Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description	PID
0	5			Grass. Then topsoil and coarse to fine gravel, subrounded, quartzite. Then soil with fine brown sand.	0
5	10			Fine to coarse brown sand with fine gravel, subrounded, quartzite	0
10	15		Moist	Fine to med rust colored sand with coarse to fine gravel, subrounded, quartzite	0
15	20		Moist	Same as above	0
20	25		Moist	Fine to coarse rust-brown sand and fine to coarse gravel, subrounded quartzite	0
25	30		Moist	Same as above	0
30	35		Moist	Fine to med rust-Brown sand with fine gravel, subrounded, quartzite	0
35	40		Moist	Fine light brown sand with fine gravel, subrounded quartzite	0
40	45		Moist	Fine rust colored sand with fine gravel angular, subrounded, quartzite	0
45	50		Moist	Coarse to fine rust colored sand with fine gravel, subrounded, quartzite	0
50	55		Moist	Fine to med rust colored sand with fine gravel,	0

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well VP-19A Project/No. NY001348.0906.00002 Page 2 of 2

Site Location Bethpage, NY Drilling Started 5/11/06 Drilling Completed 5/12/06

Total Depth Drilled 75 Feet Hole Diameter 6 inches Type of Sample/ Coring Device

Length and Diameter of Coring Device Sampling Interval feet

Land-Surface Elev. feet ☐ Surveyed ☐ Estimated Datum

Drilling Fluid Used None Drilling Method HSA

Drilling Contractor Delta Driller Jim Helper Brian

Prepared By P. Prezorski Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description	PID ppm
				Subrounded, quartzite. Then wet, fine to	0
				med brown sand with fine gravel, quartzite	
55	60		wet	fine to med brown sand with fine gravel	0
				quartzite	
60	65		wet	same as above	0
65	70		wet	silty grey clay	.1
70	75		wet	same as above	.2
				End of boring	

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ARCADIS G&M

Sample/Core Log

Boring/Well VPB-20 Project/No. NUY001345.0304.00004 Page 1 of 1

Site Location bethpage, NY Drilling Started 11/10/04 Drilling Completed 11/11/04

Total Depth Drilled 110 Feet Hole Diameter ____ inches Drilling Method HSA

Length and Diameter of Coring Device 2'X2" Type of Coring/Sampling Device split spoon

Sampling Interval 10 feet Drilling Fluid Used wtr

Drilling Contractor delta

Prepared By CFT

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
60	62'	1'	no odor	1' yellow fine med sand SOME silt (sat)	0.0
70	72'	1'		1' yellow med sand	0.0
80	82'	1'4"		1'4" yellow med sand TRACE silt	0.0
90	92'	1'2"		1'2" yellow fine-med sand TRACE	0.0
100	102'	2'		2' yellow fine-med sand	0.0
105	107'	2'		2' yellow fine-med sand	0.0
107	109'	2'		2' yellow fine-med sand TRACE silt	0.0
			END OF BORING		

ARCADIS G&M

Sample/Core Log

Boring/Well VP21 Project/No. NY001348.0805.0001 Page 1 of 2

Site Location Grumman, Bethpage Park Drilling Started 06/02/05 Drilling Completed 06/03/05

Total Depth Drilled 110 Feet Hole Diameter 4.5" inches Drilling Method Holow stem Augers

Length and Diameter of Coring Device 2 feet long, 2" wide Type of Coring/Sampling Device Split Spoon

Sampling Interval 0-20ft (5ft), 60-110 (10ft) feet Drilling Fluid Used Water

Drilling Contractor Delta Well + Pump

Prepared By John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	1	n.a	hand auger	Top soil, brown, dry	0.0
1	3	n.a.	hand auger	fill (course sand + fine gravel), light brown, dry	0.0
3	5	n.a	hand auger	course sand some fine gravel, light brown, dry	0.0
5	7	1ft	split spoon (3,8,18,27)	top 6" = course sand some fine gravel light brown, dry	0.0
				bottom 6" = coase sand some fine gravel dark brown, dry	0.0
7	10	n.a	drill cuttings	course sand, dark brow, dry	0.0
10	12	1ft	split spoon (12,15,18,18)	course sand some fine gravel, brown, dry	0.0
12	15	n.a	drill cuttings	course sand and course gravel, brown, rounded, dry	0.7 / background 0.7
15	17	1ft	split spoon (4,8,10,12)	course sand some fine gravel, light brown, dry	0.0
17	20	n.a	drill cuttings	coarse sand some fine gravel, light brown, dry	0.0
20	22	1ft	split spoon (4,7,9,10)	coarse sand some fine gravel, light brown, dry	0.0
22	25	n.a	drill cuttings	coarse sand some fine gravel, light brown, dry	0.0
25	30	n.a	drill cuttings	a coarse sand, light brown, dry	0.0
30	35	n.a	drill cuttings	course sand some fine gravel, light brown, dry	0.0
35	40	n.a	drill cutting	Coars sand, light brown, dry	0.0
40	45	n.a	drill cuttings	coarse sand some fine gravel, light brown, dry	0.0
45	50	n.a.	drill cuttings	coarse sand some fine gravel, light brown, dry	0.0
50	55	n.a.	drill cutting	fine grain sand, dark brown, moist	0.0
55	60	n.a	drill cutting	fine grain Sand, dark brown, moist	0.0
60	62	0.5ft	split spoon 4,4,5,8	top 2" = course sand some fine gravel, light brown, moist	0.0
				bottom 2" = fine sand, light brown, wet	

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP21

Page 2 of 2

Prepared by John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
62	70	n.a	drill cuttings	medium sand, brown, wet	0.0
70	72	1.5ft	split spoon 4,10,25,28	top 1ft = course sand, light brown, wet bottom .5ft = fine sand, light grey, wet	0.0
72	80	n.a.	drill cuttings	course sand, dark brown, moist	0.0
80	82	1.5ft	split spoon 3,7,18,25	top 7" = fine sand, light grey, wet bottom 8" = fine sand, brown, wet	0.0
82	90	n.a	drill cuttings	medium sand, light brown, moist	6.6
90	92	1.5	split spoon 5,5,7,10	fine sand, light brown, wet	0.0
92	100	n.a	drill cuttings	fine sand, light brown, moist	0.0
100	102	1.5ft	split spoon 5,6,9,8	top 1ft = silt some fine sand trace beds of med sand, layering, light grey trace brown, concrete bottom 6" = silt, light grey, wet	0.0
102	110	n.a	drill cuttings	medium sand, light brown, moist	0.0
110	112	1.5ft	split spoon 5,7,20,25	medium sand, light grey, wet	0.0
				END OF BORING	
Note: 330 gallons of water was used during the drilling of VP-21 to prevent heaving below the water table.					

ARCADIS G&M

Sample/Core Log

Boring/Well VP-22 Project/No. M00[illegible]1348.0805.00001 Page 1 of 3

Site Location BCP-NGC Drilling Started 6/13/05 Drilling Completed 6/13/05

Total Depth Drilled 110 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2 feet in length, 2" diameter Type of Coring/Sampling Device Split Spoon

Sampling Interval 5'/10' feet Drilling Fluid Used water

Drilling Contractor Delta

Prepared By Scherlin (SC)

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
5	7	0.4	20,24,21,30	(0.0-0.4) M/C sand, brown with some gravel, Quartz, subrounded, dry, (SP)	0.3
10	12	0.5	19,18,20,20	(0.0-0.5) M/C sand, brown with some gravel, quartz, subrounded, dry, (SP).	11.7
15	17	0.2	7,12,14,18	(0.0-0.2) M/C sand, brown and gravel, Quartz, subrounded, dry, (SP)	0.0
20	22	0.5	12,14,18,20	(0.0-0.5) M/C sand, light brown and gravel, Quartz, subrounded, dry, (SP).	0.1
25	30	cuttings		M/C sand, brown with some gravel, Quartz, subrounded, dry, (SP).	0.0
30	35	cuttings		F-C Sand, light brown with some gravel, Q, subrounded, dry, (SP).	0.0
35	40	cuttings		f-C sand, light brown with some gravel, Q, subrounded, dry, (SP).	0.0
40	45	cuttings		f-C sand, light brown with some gravel, Q, subrounded, dry, (SP)	0.0
45	50	cuttings		f-C sand, light brown, with	0.0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well MW-22

Prepared by SC

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
45	50	cuttings	cuttings	some gravel, subrounded, dry (SP).	
50	53	N/A	cuttings	F/M sand, dark brown/red with a little gravel, dry, (SM).	0.3
53	55	1.0	11,11,14,15 (0.0-0.4)	F/sand, brown with silt, brown/red, moist, (SM) (0.4-0.5) clay, grey, ½", medium plasticity with some silt, brown/red, moist, (ML). (0.5-1.0) F/sand, brown/red with some silt, brown/red/green and a little gravel, subrounded, moist, (SM).	3.3
7/14/08 58	60	1.8	10,18,29,15	(0.0-0.5) no recovery (0.5-1.8) F-C sand/light brown/grey, with some Q, subrounded, moist, (SM). (1.6-2.0') F/M sand/tan with some silt, tan, moist, (SM).	1.1
68	70	0.4	12,21,23,18	(0.0-1.6) NO recovery. (1.6-2.0) Silt, tan, moist, (ML).	4.2
78	80	2.0	9,11,13,15	(0.0-2.0) F/M Sand, tan with some silt, tan/grey, moist (SM).	3.2
88	90	1.0	21,21,18,17	(0.0-1.0) NO recovery (1.0-1.6) F/M sand, brown/black with some silt, brown/green, dry (SM). (1.6-1.8) clay, grey and some silt, tan, ½" thread, medium plasticity, (CL). (1.8'-2.0) F/M sand, brown/black with	5.5

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well MP-22

Prepared by JC

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
88	90	1.0	21,12,18,17	Silt, brown/green, dry, (SM)	
98.	100	1.0	18,19,29,18	(0.0-1.0) No recovery	0.0
				(1.0-2.0) F/sand, tan/red with some silt, tan/red and a little clay, 1/16" thread, Medium plasticity, grey/green, moist, (ML).	
108	110	0.5	25,21,29,30	(0.0-1.5) No recovery	1.7
				(1.5-2.0) F/M sand, grey with some silt, grey, Quartz subrounded, dry, (SM).	
		END OF BORING			
				~~*~~ Delta used 250 G of water ~~*~~	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-23 Project/No. NGC-043 Page 1 of 2

Site Location BETHPAGE PARK Drilling Started 6/13/05 Drilling Completed 6/14/05

Total Depth Drilled 110 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device SPLIT SPOON

Sampling Interval VARIABLE feet Drilling Fluid Used POTABLE WATER

Drilling Contractor DELTA

Prepared By M. SAUERBORN

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	~1.5	N/A		CONCRETE	
1.5	5	N/A	CUTTINGS	SAND, F-C, LT BROWN, SUB-ROUNDED, QTZ; WITH GRAVEL, F-C, SUB-ROUNDED, QTZITE; DRY. (SP)	N/A
5	7	1	18,20,10,18	SAND, F-M, BROWN, SUB-ROUNDED, QTZ; WITH GRAVEL, F-C, SUB-ROUNDED, GNEISS, QTZITE; DRY.	3.5
10	12	0.5	24,18,22,30	SAND M-C, BROWN, SUB-ROUNDED, QTZ; WITH GRAVEL, F-M, QTZ. DRY. QTZITE ROCK STUCK IN BOTTOM OF SPOON. (SP)	2.3
11	—	—	CUTTINGS	SAND, M-C, STAINED, CO/STRONG ODOR. MOIST. (SP)	11.5 - NO SAMPLE
15	17	0.75	25,20,30,30	SAND, F-M, BROWN, SUB-ROUNDED, QTZ; WITH GRAVEL, F-C, SUB-ROUNDED, QTZITE + GNEISS. DRY (SP)	2.2
20	22	1.25	5,7,10,10	SAND, F-C, BROWN, SUB-ANGULAR, QTZ; WITH GRAVEL, F-M, SUB-ANGULAR, QTZITE, GNEISS; DRY (SP)	1.1

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-23

Page 2 of 2

Prepared by M. SAUERBORN

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
53	55	1.25	20,30,25,30	SAND, LT. BROWN, F-VC, QUARTZ, SUB-ROUNDED; WITH CLAY, ORANGE, SILTY, WET (SP)	2.2.
58	60	1.5	15,25,30,15	SAND, LT BROWN, F-VC, QTZ, SUB-ROUNDED; TRACE SILT, WET. (SW)	N/A
68	70	1.5	7,7,30,30	SAND, LT BROWN, VF-M, SUB-ANG, QTZ, WET. (SP)	1.6
70	75	—	CUTTINGS	CLAY	
78	80		10,30,30,40	SAND, VF-F, TAN, SUB-ANGULAR, QTZ; TRACE SILT; WET. (SP)	2.1
88	90	1.0	12,15,20,13	SAND, VF-V, TAN, SUB-ROUNDED, QTZ; TRACE SILT; WET. (SP)	1.7
98	100	1.25	15,10,10,13	SAND, VF-M, TAN, SUB-ROUNDED, QTZ; WITH CLAY LAYERS, ~1/8" THK, ORANGE, SILTY, LOW PLASTICITY. (SP) WET.	0.9
108	110	1.0	18,18,20,25	SAND, VF-F, TAN & ORANGE, SUB-ROUNDED, QTZ; WITH SILTY CLAY, WET (SP)	1.3
				END OF BORING.	
				USED ~250 gal OF POTABLE WATER.	

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well VP-23A Project/No. M001348.0806.00002 Page 1 of 2

Site Location Bethpage, NY Drilling Started 10/11/06 Drilling Completed 10/11/06

Total Depth Drilled ~67' Feet Hole Diameter ~12" inches Type of Sample/ Coring Device Drill Cuttings

Length and Diameter of Coring Device n/a Sampling Interval n/a feet

Land-Surface Elev. n/a feet ☐ Surveyed ☐ Estimated Datum n/a

Drilling Fluid Used Water Drilling Method HSA

Drilling Contractor Delta Driller Jay F. Helper Jason

Prepared By Scherlin Hammer Weight n/a Hammer Drop n/a ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample/Core Description
0	5			f/m sand, brown and gravel, Quartzite, ~~Gneiss~~ schist, subrounded, PID = 0.0 ppm (SP), Dry
5	10			f/m sand with possible contamination, black/ dark grey and gravel, quartzite, schist, subrounded, PID = 8.0 ppm, (SP) Dry
10	15			M/C sand with possible contaminant, black/dark grey and gravel, quartzite, schist, subrounded, PID = 14.1, ~~damp~~ (SP) ~~dry~~ a little damp
15	20			M/C sand, brown mixed with M/C sand with possible contamination, black/dark grey and gravel, quartzite, schist, subrounded, PID = 10.1, a little damp, (SP).
20	25			M/C sand, brown, with gravel, quartzite, schist, subrounded, PID = 7.6 ppm, dry, (SP).
25	30			M/C sand, brown with gravel, quartzite, schist subrounded, PID = 7.1 ppm, dry, (SP). @ covered with contam.
30	35			M/C sand, brown with gravel, quartzite (@ covered with contaminant), schist, subrounded, PID = 10.1 ppm, dry, (SP).
35	40			M/C sand with possible contamination and gravel, quartzite, schist (@ covered in contaminant), subrounded, PID = 5.1 ppm, dry (SP).

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well MW-33A Project/No. M00137K.0806.00002 Page 2 of 2

Site Location Bethpage, NY Drilling Started 10/11/06 Drilling Completed 10/11/06

Total Depth Drilled ≈67' Feet Hole Diameter ≈12" inches Type of Sample/ Coring Device Drill Cuttings

Length and Diameter of Coring Device n/a Sampling Interval n/a feet

Land-Surface Elev. n/a feet ☐ Surveyed ☐ Estimated Datum n/a

Drilling Fluid Used Water Drilling Method HSA

Drilling Contractor Delta Driller Jay F. Helper Jason

Prepared By Scherlin Hammer Weight n/a Hammer Drop n/a ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
40	45			M/C sand, brown with some f/sand, brown and gravel, quartzite, gneiss, subrounded, dry, 6.8ppm, (SP).
45	50			f/M/C sand mixed with possible contamination and gravel, quartzite, gneiss, subrounded, dry, 2.8ppm, (GP).
50	55			f/sand, brown, and gravel, quartzite, gneiss, subrounded, dry, 1.2ppm (SP).
55	60			f/sand, brown, and gravel, quartzite, gneiss, subrounded, dry, 1.3ppm=PID, (SP).
60	65			f/sand, brown, and gravel, quartzite, gneiss, subrounded, dry, 0.8ppm=PID (SP).
65	67			f/sand, brown, and gravel, quartzite, gneiss, subrounded, dry, 3.0ppm=PID, (SP)

ARCADIS G&M

Sample/Core Log

Boring/Well VP-24 Project/No. NGC 043 Page 1 of 3

Site Location BETHPAGE PARK Drilling Started 6-9-05 Drilling Completed 6-10-05

Total Depth Drilled 110 Feet Hole Diameter ~6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device SPLIT SPOON

Sampling Interval VARIABLE feet Drilling Fluid Used POTABLE WATER

Drilling Contractor DELTA

Prepared By M. SAURBORN

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5	N/A	CUTTINGS	BLACK ASH W/ GRAVEL.	—
5	7	1	4,3,5,3	SAND, BLACK + DK BROWN, VF-F, SUB-ROUNDED; WITH GRAVEL, M-C, ROUNDED QTZ; WITH BLACK ASH, DRY (SP)	0.0
				BOTTOM 3": WOOD FRAGMENTS W/ PETROLEUM ODOR/STAINS.	
10	12	1	13,16,18,16	SAND, BROWN-TAN, VF-M, (SP) SUB-ROUNDED QTZ; WITH GRAVEL, F-M, ROUNDED QTZ; WITH BLACK ASH; DRY. SLIGHT ODOR, NO STAINS	0.0
15	17	1	13,15,4,10	TOP 4": SAND, BROWN, VF-M, SUB-ROUNDED QTZ; WITH (SP) GRAVEL, F-C, ROUNDED QTZ. OVER 4": SAME AS ABOVE, BUT COATED WITH PETROLEUM - FREE PRODUCT, STRONG ODOR, WET; OVER	8.9
				LFT: CLAY, BROWN, HIGH PLASTICITY. (CL)	

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-24

Page 2

Prepared by M. SAURBORN

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
20	22	1.25	20,20,20,20	SAND, BROWN, VF-VC, SUB-ROUNDED; WITH GRAVEL, SUB-ANGULAR; TRACE BLACK ASH. SLIGHT STAINING & ODOR IN TOP 4" DRY (SP)	0.6
~					
53	55	1.25	6,10,30,25	Bottom 1" = silt, light grey, wet 2"-6" - Sand, ~~med~~ light brown, med in, sub-rounded, quartz, wet 6"-13" - sand, light brown, fine with some medium, sub ~~rounded~~ rounded, quartz, wet 12"-15" - sand, medium with some coarse, sub-rounded, quartz wet	0.7 / 0.7 (background)
54	54	n.a.	drill cutting	sand, brown, ~~fine to coarse~~ fine to medium, sub rounded, quartz, moist	0.7/0.7 (background)
58	60	1.25	8,10,20,20	top 5" - sand, light brown med to coarse, sub-round quartz, wet 2" - Sand, brown, med to fine, sub rounded 5" - clay, grey + brownish red, wet 5" - Sand, brown, sub rounded, qtz, wet with some gravel, fine, light grey, sub rounded qtz	1.3/1.3 bkgd
60	68	n.a	drill cutting	Sand, brown, fine to medium, sub rounded, qtz, wet	1.7/1.7
68	70	1.00	10,12,20,8	~~fine~~ top 8" - sand, light brown med to coarse, sub rounded, qtz, wet; bottom 4" - Sand, light brown, med, sub rounded, qtz, wet	1.7/1.7
70	78	n.a	drill cuttings	Sand, brown, fine to medium, sub rounded, qtz, wet	1.9/1.9
78	80	8"	8,7,11,12	Sand, brown, fine to medium, sub rounded, qtz, wet trace amounts of sand, brown, sub rounded, qtz wet in thin layers	1.9/1.9

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-24 Page 3

Prepared by John Carrol

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
80	88	n/a	drill cuttings	sand, brown, med to fine, sub-rounded, qtz, wet	
88	90	1,25	4,5,7,11	top 6" - sand, light grey med to course, sub rounded, qtz, wet bottom 10" - sand, light brown, fine to med, sub rounded qtz, wet	
90	98	n/a	drill cuttings	sand, brown, med to fine, sub rounded, qtz, wet	
98	106	1ft	7,8,8,12	top 6" clay, tan, wet; 4" clay, black, wet, top 2" to silt some fine sand, tan, wet	
100	108	n/a	drill cuttings	sand, brown, med to fine, sub rounded, qtz, wet	
108	110	10"	7,8,11,11	bottom 5", clay, tan + black, wet; 3" silt, grey, to sub rounded, wet with some fine sand, grey, sub rounded qtz; 2" sand, fine to medium, brown, sub angular	
				END OF BORING	
				USED ~400 GAL POTABLE WATER.	

ARCADIS G&M

Sample/Core Log

Boring/Well MP-25 Project/No. NY001358.0805.0000/ Page 1 of 2

Site Location BCP-NGC Drilling Started 6/9/05 Drilling Completed 6/10/05

Total Depth Drilled 110 Feet Hole Diameter 6 inches Drilling Method H.S.A.

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device split spoon

Sampling Interval 5/10 feet Drilling Fluid Used water

Drilling Contractor Delta

Prepared By Scherlin (SC)

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
5	7	0.5	[illegible]	(0.0-0.3) c/sand, light brown with some gravel, subrounded, dry, (GP)	0.0
			18,27,32,36	(0.3-0.5) c/sand, dark brown/black with some gravel, subrounded, slight odor, dry, (GP)	
10	12	0.6	8,25,29,18	(0.0-0.4) c/sand, dark brown/black with some gravel, subrounded, dry, (GP).	0.0
				(0.0-0.6) c/sand, light brown with some gravel, subrounded, dry, (GP).	
15	17	0.4	15,17,13,18	(0.0-0.2) c/sand, dark brown/black with some gravel, subrounded, dry, (GP).	0.0
				(0.2-0.4) c/sand, light brown with some gravel, subrounded, dry (GP)	
20	22	0.6	7,12,25,35	(0.0-0.2) c/sand, dark brown/black, with some gravel, subrounded, dry (GP)	0.0
				(0.2-0.6) c/sand, light brown with some gravel, subrounded, dry, (GP).	
25	30	N/A	cuttings	M/C sand, brown with some gravel,	0.0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well: VP-45

Page 2/2

Prepared by: SC

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
25	30		cuttings	subrounded and a little Q, dry, (GP).	
30	35		cuttings	M/C sand, brown with some gravel,	0.0
				subrounded and a little Q, dry, (GP)	
35	40		cuttings	M/C sand, brown, with some gravel,	0.0
				subrounded, and a little Q, dry, (GP)	
40	45		cuttings	M/C sand, brown, with some gravel,	0.0
				subrounded and a little Q, dry, GP.	
50	53		cuttings	M/C sand, brown with some gravel,	0.0
				subrounded and a little Q, dry, (GP)	
53	55	0.8	8,29,18,30	(0.0-0.8) M/C sand, brown with	0.0
				some gravel, subrounded and a	
				little Q, dry, (GP).	
58	60	0.6	5,13,18,24	(0.0-0.6) F/M sand, tan with some	0.0
				silt, tan/black, moist, (SM)	
68	70	0.8	7,21,15,15	(0.0-0.8) F/M sand, tan, with some silt,	0.0
				tan, moist, (SM).	
78	80	0.8	7,15,12,12	(0.0-0.8) F/M sand, light brown with	0.0
				some Q, subrounded and silt, tan,	
				moist, (SM).	
88	90	0.6	5,13,14,11	(0.0-0.6) F/M sand, light brown with	0.0
				some Q, subrounded and silt, tan,	
				moist, (SM)	
98	100	2.0	10,19,14,13	(0.0-2.0) ~~sand~~ clay, light brown/grey and	0.0
				silt, light brown/green, ~~moist~~, pink,	moist,
				1/32" thread, high plasticity, (SM)	
108	110	2.0		(0.0-2.0) clay, light brown/green ~~with~~ and	0.0
				silt, light brown/green with some orange, odor,	
				moist, (SM).	

* Delta lost ~ 300G of water drilling *

G:\TECHNICL\FIELD LOGS\Sample Core Log.XLS- Sheet1

END OF BORING

ARCADIS G&M

Sample/Core Log

Boring/Well VP-26 Project/No. NGC 013 NY001348.0805.00001 Page 1 of 4

Site Location BETHPAGE PARK Drilling Started 6/6/05 Drilling Completed 6/7/05

Total Depth Drilled 110 Feet Hole Diameter ~6 inches Drilling Method HSA 4.25" ID

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device SPLIT SPOON

Sampling Interval VARIES feet Drilling Fluid Used POTABLE WATER

Drilling Contractor DELTA WELL

Prepared By M. SAURBORN

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5	N/A	HAND DUG	TOP ~6": BLACK ASPHALT OVER SAND, VF-M, SUB-ROUNDED, TAN - LT BROWN, QTZ; SOME SILT, BROWN, NON-PLASTIC; DRY. (SM)	0.0
5	7	1	8,18,35,36	TOP 4": BLACK ASH + F-C GRAVEL - FILL MATERIAL; OVER 2": QUARTZITE ROCK FRAGMENT, OVER 6": SAND, VF-C, SUB-ROUNDED, TAN - LT BROWN, QTZ; SOME GRAVEL, FC SUBROUNDED, QTZ (TAN + WHITE). DRY (SP)	0.0
7	10	N/A	CUTTINGS	SAND, VF-C, SUB-ROUNDED, TAN - LT BROWN, QTZ; TRACE GRAVEL, F-M, SUBROUNDED, WHITE QTZ. DRY. (SP)	N/A
10	12	0	12,20,40,35	NO RECOVERY - DRILLER THINKS THERE'S A ROCK; TRY TO GET PAST.	N/A
12	15	N/A	CUTTINGS	SAND, F-C, SUB-ROUNDED, BROWN, QTZ; WITH [redacted] GRAVEL, F-C, SUBROUNDED, WHITE + TAN QUARTZITE. (SP)	N/A

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well: 11P-26

Page 2/4

Prepared by: M. SAUERBORN / J. Scherlin

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
15	17	Ø	12,24,25,24	NO RECOVERY	N/A
16	18	1.25	13,20,22,25	4": SAND, F-C, SUB-ANGULAR, DRY, WHITE, QTZ; WITH GRAVEL, F-C, SUB-ANG, QUARTZITE, OVER 14": SAND, F-C, SUB-ROUNDED, LT BROWN QTZ; WITH GRAVEL, F-C, SUB-ROUNDED QUARTZITE. (SP)	~~0.0~~ 0.4
20	22	1.0	12,15,20,20	SAND, F-C, SUB-ANGULAR, QTZ WHITE & BROWN; WITH GRAVEL, F-C, QUARTZITE. DRY (SP)	0.0
35	37	N/A	CUTTINGS	SAND, VF-C, SUB-ROUNDED, BROWN, QUARTZ; WITH ~~[illegible]~~ GRAVEL, F-C, WHITE & TAN QUARTZITE. DRY (SP)	0.0
1/7/05					
53	55	0.5	20,29,15,24	Clay, grey, 1/32" thickness, with a little silt, grey, dry, (CH)-(SM)	0.4
58	60	1.0	4,8,16,42	(0.0-0.6) clay, grey, 1/32" thickness with a trace of gravel, subrounded, dry, (CH)-(SM) (0.6-1.0) F/M sand, grey with some clay, grey and some gravel, subrounded, dry, (SC)	2.7
60	68	N/A	cuttings	F/M sand, brown with some gravel, subrounded, dry (SP)	0.0
68	70	1.4	10,18,29,[illegible]	(0.0-0.3) clay, black, 1/32" thread, high plasticity with a trace of gravel, subrounded (CH)-(SM) (0.3-1.4) clay, light brown/grey, 1/32"	1.8

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-26 Page 3/4

Prepared by SC (Cherlin)

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
68	70	1.4	10,18,23,13	high plasticity, with some F/C sand, brown and a little Q, subcanded, dry, (SC)	
78	80	0.5	4,4,6,10	M/C sand, tan with some Q, subrounded, dry and a little silt, tan, dry, (SM)	3.3
80	88		cuttings	F/M sand, grey, with some silt, grey, and a little gravel, subrounded, moist, (SM)	0.0
86	90	1.7	10,13,19,9	(0.0-0.4) clay, grey, 1/32" thread, high plasticity with some silt, grey, dry, (CH) + (SM) (0.4-1.7) F/M sand, brown with some silt, brown, dry, (SM).	0.0
90	98	N/A	cuttings	F/M sand, grey with some silt, grey, and a little gravel, subrounded, moist, (SM).	0.0
98	100	2.0	8,7,16,30	clay, light grey/dark grey, 1/32" thread, high plasticity with some F/sand, brown and some silt, brown, dry, (CH) + (SM)	5.4
100	108	N/A	cuttings	F/M sand, brown with some silt, brown and a little gravel, subrounded, moist, (SM)	1.0
108	110	1.8	4,5,7,10	(0.0-1.0) clay, dark grey/grey, some 1/32" thread, high plasticity with some silt, grey, moist, (CH) + (SM). (1.0-1.8) clay, light grey, 1/32"	0.8

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well MP-26

Prepared by SC

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
10.8	11.0	1.8	4,5,7,10	threaded, high plasticity and silt, brown, dry (CH) (SM).	
			*	Total G of water added ≈ 400 G *	
				END OF BORING	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-27 Project/No. NGC-003 Page 1 of 3

Site Location BETHPAGE PARK Drilling Started 6/15/05 Drilling Completed 6/16/05

Total Depth Drilled 110 Feet Hole Diameter 16 inches Drilling Method HSA

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device SPLIT SPOON

Sampling Interval VARIABLE feet Drilling Fluid Used POTABLE WATER

Drilling Contractor DELTA

Prepared By M. SAURBORN

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5	–	CUTTINGS	SAND, F-C, BROWN, QTZ, SUB-RD;	—
				WITH GRAVEL, F-C, QTZITE, SUB-RD;	0.6 *
				TRACE BLACK ASH. DRY.	
5	7	1.0	30,30,7,5	SAND, F-C, BROWN, SUB-ANG, QTZ,	31.9*
				WITH GRAVEL, F-M, QTZITE, SUB-	
				ANG; WITH BLACK ASH. SLIGHT	
				ODOR, NO STAINS. DRY	
7	10	–	CUTTINGS	AS ABOVE	2.0 *
10	12	–	>50	NO RECOVERY - ROCK IN FRONT OF BIT.	
				DRILL TO 12' AND RE-TRY.	
12	14	0.5	12,30,25,7	SAND, F-M, SUB-RD QTZ; WITH GRAVEL	—
				F-M, QTZITE; WITH BLACK ASH.	76.8*
				SLIGHT STAINING + ODOR; MOIST.	
15	17	1.0	15,20,30,30	SAND, F-M, SUB-RD, LT BROWN, QTZ;	808
				WITH GRVL, SUB-ANG, QTZITE; BLACK	
				ASH IN TOP 8". SLIGHT ODOR, DRY.	
20	22	1.0	10,10,10,5	SAND, F-VC, SUB-ANGULAR, BROWN,	1044
				QTZ; WITH GRVL, F-M, SUB-RD,	
				QTZITE; DRY. STRONG ODOR.	

* PID READING ABOVE BACKGROUND; BACKGROUND READINGS UP TO 2.0 PPM.

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-27

Prepared by M. SAUERBORN

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
20	30	—	CUTTINGS	AS ABOVE, ODOR CONTINUES	—
30	40	-	"	SAND, F-C, LT BROWN, QTZ, W/ GRAVEL, F-M, SUB-RD. STRONG PAINT THINNER ODOR BEGINS ~30'	56.7
40	50	—	CUTTINGS	AS ABOVE, STRONG ODOR CONTINUES, NO STAINING / VISUAL EVIDENCE	301
53	55	0.5	7,8,20,25	TOP 3": CLAY, ORANGE-TAN, TRACE OF SILT, MED-HIGH PLASTICITY. BOT 3": SAND, VF, GRAY, QTZ, SUB-RD, WET, SLIGHT ODOR.	1077
58	60	1.0	8,10,12,15	SAND, VF-F, GRAY & LT. BROWN, SUB-ROUNDED, QTZ; WITH CLAY LAYERS, ORANGE-TAN, ~1/8" THICK, LOW PLASTICITY, WET. SLIGHT ODOR	332
68	70	1.0	4,5,7,10	SAND, VF-F, TAN / ORANGE / GRAY, QTZ, SUB-ROUNDED. SLIGHT ODOR	—
78	80	1.0	3,5,5,7	SAND, VF-F, ORANGE-TAN, QTZ, SUB-RD, WET; WITH ~1/2" WHITE SILTY CLAY @ BASE, WET, MED PLASTICITY. SLIGHT ODOR.	—
88	90	1.5	10,7,8,10	CLAY, HIGH PLASTICITY, V. DENSE, TRACE SILT IN TOP 4". SLIGHT ODOR. COLOR GRADES FROM TAN W/ ORANGE LAYERS AT TOP TO DARK GRAY AT BASE. WET.	1.1
98	100	1.25	15,15,20,20	CLAY, HIGH PLASTICITY, V. DENSE, TRACE SILT @ BASE. SLIGHT ODOR COLOR GRADES FROM DK GRAY AT TOP TO PINKISH TAN @ BASE. WET.	6.6

T.O.C.

T.O.C.

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-27

Prepared by M. SAUERBORN

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
108	110	1.5	3,5,4,4	TOP 12": SAND, VF-M, SUB-ROUNDED, QTZ, TAN; TRACE SILT & SLIGHT ODOR, WET.	0.0
				BOT 6": CLAY, LOW PLASTICITY, WITH SILT, TAN-LT GRAY, WET.	
				END OF BORING.	
				DELTA USED ~300 GAL OF POTABLE WATER.	

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well VP-27A Project/No. NY001348.0806.00002/Grumman 043 Page 1 of 2

Site Location Bethpage, NY Drilling Started 5/16/06 Drilling Completed 5/16/06

Total Depth Drilled 75 Feet Hole Diameter 6 inches Type of Sample/ Coring Device Auger

Length and Diameter of Coring Device 5' Long x 6" Sampling Interval — feet

Land-Surface Elev. — feet ☒ Surveyed ☐ Estimated Datum —

Drilling Fluid Used None Drilling Method HSA

Drilling Contractor Delta Driller Jim Helper Jimmy

Prepared By Prezorski Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description	PID ppm
0	5		wet	Grass, Light Brown topsoil. stained soil. odor.	0
5	10		wet	Black stained soil/sand. odor.	0
10	15			Driller states clay layer 11-13'. Black stained sand. Odor.	0
15	20			stained black fine sand and fine gravel, subrounded quartzite, odor	128
20	25			Fine to med brown sand, with fine to coarse gravel, subrounded, quartzite, with clumps of black stained fine sand & fine gravel, subrounded, quartzite. odor.	80
25	30			same as above	75
30	35			Fine to med Brown sand with fine gravel, subrounded, quartzite. Odor	65
35	40		very wet	Fine brown sand with trace fine gravel with clumps of black material.	95
40	45			Fine to med brown sand with trace fine gravel subrounded, quartzite. odor	273
45	50			Fine to coarse sand. odor	224
50	55			Fine to med brown sand with fine gravel, subrounded quartzite. odor.	316

Samples via via

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well VP-27A Project/No. NY001348.0806.00002 / Grumman 003 Page 2 of 2

Site Location Bethpage, NY Drilling Started 5/16/06 Drilling Completed 5/16/06

Total Depth Drilled 75 Feet Hole Diameter 6 inches Type of Sample/ Coring Device Auger

Length and Diameter of Coring Device 5' Long Sampling Interval — feet

Land-Surface Elev. — feet ☐ Surveyed ☐ Estimated Datum —

Drilling Fluid Used None Drilling Method HSA

Drilling Contractor Delta Driller Jim Helper Jimmy

Prepared By P. Prezorski Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description	PID ppm
55	60			Fine Brown sand; trace fine gravel, subrounded, quartzite. odor	773
60	65			Fine brown sand, trace fine gravel, subrounded quartzite. Then silty Brown-grey clay odor	320 ~~360~~ BP.
65	70		very wet	silty Brown-grey clay with fine gravel, subrounded, quartzite. odor	560
70	75		very, very wet	Grey Clay, some silt, odor	316
				End of Boring	

Samplelg vlc vlc

ARCADIS G&M

Sample/Core Log

Boring/Well MP-28 Project/No. NY001358.0805.00001 Page 1 of 3

Site Location BCP - NGC Drilling Started 6/15/05 Drilling Completed 6/15/05

Total Depth Drilled 110 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' Type of Coring/Sampling Device Split spoon

Sampling Interval 5'/10' feet Drilling Fluid Used water

Drilling Contractor Delta

Prepared By Scherlin (SC)

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
5	7	0.3	4,7,7/10	F-C sand, black and gravel, subrounded, odor, slight sheen, oil material (O.M.), (SM) (0.6-2.0) no	23.1
10	12	0.6	5,5,8/14	(0.0-1.4) no recovery (1.4-2.0) F-C sand, black, and gravel, subrounded, odor, slight sheen, O.M., dry, (SM).	41.2
15	17	0.3	7/9/9/14	F-C sand, black and gravel, subrounded with some peat, odor, slight sheen, O.M., dry, (PT-SM) (1.7-2.0)	36.0
20	22	0.3	11/14/11/12	(0.0-1.7) no recovery (1.7-2.0) F-C sand, black, with gravel, subrounded, odor, slight sheen, O.M., dry, (SM).	12.4
25	30	N/A	cuttings	F-C sand, black and gravel, subrounded, odor, slight sheen, O.M., dry, (SM)	137.0
30	35	N/A	cuttings	F-C sand, black and gravel, subrounded, odor, O.M., dry, (SM).	116.0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well MP-28

Prepared by SC

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
35	40	N/A	cuttings	F-C Sand, black, and gravel, Q, subrounded, odor, O.M., dry, (SM)	
40	45	N/A	cuttings	F-C Sand, black and gravel, Q, subrounded, odor, O.M., dry (SM)	107.0
50	53	N/A	cuttings	F-C sand, brown/black and gravel, Q, sub.rounded, odor, O.M., dry, (SM)	24.7
53	55	1.0	8,11,18,27	(0.0-1.0) No recovery	29.5
				(1.0-1.4) F-C sand, black and gravel, Q, subrounded, odor, O.M., dry, (SM).	
				(1.4-2.0) F/M sand, tan/grey with some silt, tan/grey, dry, (SM)	
56	60	0.3	6,10,10,14	(0.0-1.7) No recovery	2.8
				(1.7-2.0) F-C sand, black/tan with some silt, black/tan and some gravel, subrounded, odor, O.M., moist, (SM).	
68	70	1.2	14,18,21,24	(0.0-0.8) No recovery	8.1
				(0.8-1.2) F/M sand, brown/black with some silt, brown/black, moist, odor, O.M., (SM).	
				(1.2-1.7) Clay, grey, with 1/16" thread, medium plasticity and silt, tan, moist, (CL).	
				(1.7-2.0) F/M sand, tan/grey with some silt, tan/grey, moist, (SM).	
78	80	0.5	6,9,9,7	(0.0-1.5) No recovery	9.7
				(1.5-2.0) F/M sand, black/brown with	

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well MP-28

Page 3/3

Prepared by JC

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
78	80	0.5	6,9,9,7	Some silt, black/brown, ~~mor~~ odor, O.M., moist, (SM).	
88	90	2.0	21,18,27,24	(0.0-1.0) clay, black/dark grey with some silt, tan, 1/32" thread for the clay and high plasticity, moist, (CH)	4.4
				(1.0-2.0) clay, light grey/a little orange, with some silt, tan, 1/32" thread, high plasticity, moist, (CH).	
98	100	0.8	18,24,27,31	(0.0-1.2) no recovery	6.8
				(1.2-2.0) clay, black/dark grey with some silt, brown, 1/32" thread, high plasticity, dry, (CH).	
108	110	0.9	18,29,31,16	~~orgm~~ (0.0-1.1) no recovery	7.1
				(1.1-2.0) clay, black/dark grey with some silt, brown, 1/32" thread, high plasticity, moist, (CH).	
				END OF BORING	

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well VP-28A Project/No. NGC-Ou-3 / NY001348.0806.00002 Page 1 of 2

Site Location Bethpage Community Park Drilling Started 05/30/06 Drilling Completed

Total Depth Drilled ____ Feet Hole Diameter 4 1/4 inches Type of Sample/ Coring Device NA

Length and Diameter of Coring Device NA Sampling Interval Drill cuttings Continuous feet

Land-Surface Elev. 126 feet ☐ Surveyed ☒ Estimated Datum

Drilling Fluid Used Drilling Method Hollow Stem Auger

Drilling Contractor Delta Driller Jason Gucci Helper Brian Quigley

Prepared By John Corral Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description	PID
0	5	hand cleared	cuttings	medium to course dark brown sand, visually stained subrounded, dry	0.0
				asphalt like odor with some fine gravel (.1 - .2" diameter, subangular	
5	7		cuttings	medium to course sand, black, visually stained	0.0
				moist & noticible odor, with some fine gravel	
				(.1" - .2") diameter subangular	
7	10		cuttings	Same as 5-7	
10	15		cutting	medium to course sand, brownish black, visually	0.0
				stained, dry subrounded with some fine gravel	
~~15~~ 20			~~cuttings~~	subangular, dry	
15	20		cuttings	same as 10-15	0.0
20	25		cutting	fine to medium sand, black, cohesive clumps	0.0
				visually stained, moist,	
25	30		cuttings	fine to medium to course sand, black, visually staine,	0.0
				moderate odor, dry with some fine gravel, black,	
				subangular, dry	
30	35		cuttings	med to course sand, black visually stained, moderate	0.0
				odor, dry with some gravel (.5" - 1.0") subrounded,	
				black, dry	
35	40		cuttings	same as 30-35	0.0

Samplelg.vic.vic

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-28A

Page 2 of 2

Prepared by John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
40	45		cuttings	Med to coarse sand, black, moist, visually stained mod odor, with some fine gravel, subrounded, stained moist	0.0
45	50		cuttings	same as 40 to 45	0.0
50	55		cuttings	same as 45 to 50	0.0
55	60		cuttings	Med to coarse sand, black, subrounded, wet, visually stained, mod odor, with some fine gravel (.1-.2" diameter).	0.0

ARCADIS G&M

Sample/Core Log

Boring/Well VP-29 Project/No. NY001348.0805.00002 Page 1 of 2

Site Location Bethpage Park Drilling Started 06/18/05 Drilling Completed 06/20/05

Total Depth Drilled 110 Feet Hole Diameter 4 1/4 inches Drilling Method HSA

Length and Diameter of Coring Device 2'x2" Type of Coring/Sampling Device Stainless Steel Split Spoon

Sampling Interval 5'/10' feet Drilling Fluid Used Water

Drilling Contractor Del-A

Prepared By KS

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	BC Notes:	Sample/Core Description	Initial PID (ppm)	Next Sample 1 min.
0	5		~~20,10,12,17~~	HAND Digging - approximately 1.5' glass/soil over sand/gravel some Silt mix - orange/TAN (outwash)		
5	7	10"	~~12,15,10,12~~ 20,10,12,12	3" DARK BROWN Silt, SAND, Gravel with large Stones (up to 1") over 3" TAN - ORANGE BROWN Silt, Sand Gravel, with trace clay	0.0	0.7
10	12	14"	~~9,4,5,15~~ 12,15,10,12	All F-C SAND (TAN - ORANGE BROWN) with SOM. gravel, little Silt, NOC Clay	0.0	1.3
15	17	12"	~~25,33,36,25~~ ~~9,4,5,15~~	M-C SAND And F-C gravel with trace Silt [redacted] Stones up to 1 1/4" (ORANGE-BROWN/TAN)	0.0	2.2
20	22	16"	~~20,25,24,30~~ 25,33,36,25	M-C SAND and f-c gravel with trace Silt (ORANGE-BROWN/TAN), some large stones	0.0	2.6
53	55	17"	20,25,24,30	SATURATED about 10" in all DARK BR - Grey / TAN / ORANGE / BLACK Well-Sand clay with very little fine SAND in Bottom 6" (1" thick mixed with clay layers)	0.0	4.9
58	60	20"	17,20,9,8	[redacted] 11" DARK Grey - BROWN dense, well-sand clay over 9" orange-brown/tan f-c sand with SOM. gravel, trace silt and trace clay, saturated.	0.0	0.0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-29 cont

Page 2

Prepared by KS

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	BL Notes	Sample/Core Description	Rinsed PID (ppm)	Headspace PID (ppm)
68	70	19	9,6,17,20	4" V. DARK BR - GRAY dense varied clay, wet		
				15" orange/brown/TAN fine to coarse	0.0	2.1
				Sand with sign. silt and some gravel saturated		
78	80	2'	12,21,30,40	14" F-M SAND / Light BROWN/TAN to white in color)	0.0	0.0
				with little gravel, trace silt and occasional		
				Clay layers (white/TAN) grading into		
				10" light-brown/tan M-C sand with some gravel		
				and trace silt.		
88	90	18"	3,3,4,4	FINE - coarse Sand with Sign. silt, little gravel, no	0.0	0.0
				clay.		
98	100	2'	10,12,25,25	18" ORANGE-TAN/white F-C SAND with Sign silt, little gravel	0.0	0.0
				over 2" fine layers of white/TAN V.F SAND/silt & ORANGE clay		
				4" dense, well-sorted white clay & lenses		
				of silt		
108	110	18"		14" f-m sand, orange to tan, with sign silt and	0.0	0.0
				clay mix		
				4" orange/tan - clay and silt layers grading into		
				2" fine to med white to grey sand, trace silt.		
				END OF BORING		

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ARCADIS G&M

Sample/Core Log

Boring/Well UP-30 Project/No. NY001348.0805.00001 Page 1 of 3

Site Location BCP-NGC Drilling Started 6/16/05 Drilling Completed 6/17/05

Total Depth Drilled 110 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device Split spoon

Sampling Interval 5'/10' feet Drilling Fluid Used water

Drilling Contractor Delta

Prepared By Scherlin (JC)

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
5	7	0.5	5,7,7/6	(0.0-1.5) no recovery	2.2
				(1.5-2.0) F-C sand, tan with some	
				gravel, subrounded, dry, (SW)	
10	12	0.3	4,8,6,6	(0.0-1.7) no recovery	2.3
				(1.7-2.0) F-C sand, tan with some	
				gravel, subrounded, dry, (SW)	
15	17	0.5	6,8,6,11	(0.0-1.5) No recovery	2.8
				(1.5-2.0) F-C sand, tan with some	
				gravel, Q, subrounded, dry, (SW)	
20	22	0.6	11,14,18,21	(0.0-1.4) No recovery	1.7
				(1.4-2.0) F-C Sand, tan with some	
				gravel, Q, subrounded, dry, (SW).	
25	30	N/A	cuttings	F-C Sand, tan with some gravel,	1.4
				Q, subrounded, dry (SW)	
30	35	N/A	cuttings	F-C sand, tan with some gravel,	2.1
				Q, subrounded, dry, (SW)	
35	40	N/A	cuttings	F-C sand, tan with some gravel,	1.6
				Q, subrounded, dry (SW)	
40	45	N/A	cuttings	F-C sand, light brown with some	1.2
				gravel, Q, subrounded, dry, (SW)	

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-30

Prepared by SC

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
45	50	N/A	cuttings	F-C sand, light brown with some gravel, Q, subrounded, dry (SW).	2.4
50	53	N/A	cuttings	F-C sand, light brown with some gravel, Q, subrounded, dry (SW).	2.1
53	55	0.7	10,21,15,8	(0.0 - 1.3) No recovery (1.3-1.5) F/M sand brown with some silt, brown and a little gravel, subrounded, dry (SM). (1.5-1.7) Clay, grey with some silt, tan, 1/32" thread, high plasticity, dry (CH). (1.7-2.0) F/M sand, tan with some gravel, Q, subrounded, dry, (SW).	3.0
58	60	1.0	7,19,12,11	(0.0-1.0) No recovery (1.0-2.0) F/M sand, tan/grey with some silt, tan/grey and a little C/ gravel, subrounded, (GM).	0.0
68	70	1.4	8,11,11,8	(0.0-0.6) No recovery (0.6-2.0) F/M sand, tan with brown/black striations, with some silt, tan/brown/black, moist, (SM).	0.0
78	80	0.8	8,8,5,7	(0.0-1.2) No recovery. (1.2-2.0) F/M sand, tan with brown/black striations, and with some silt, tan/brown/black, a trace of f/gravel, Q, subrounded, moist, (SM).	0.0
88	90	1.2	12,14,14,18	(0.0-0.8) No recovery (0.8-2.0) F/M sand, brown/light brown	0.0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well MP-30

Prepared by JC

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
88	90	1.2	13,14,14,18	with some silt, brown/light brown, (SM)	
				(1.8-2.0) Clay, grey, with some silt, brown, ~~mottled~~ ¼" thread, low plasticity, moist (ML).	
98	100	2.0	16,21,24,17	Clay, grey with some F/sand, brown and silt, brown, ~~¼~~ ⅓₂" thread, high plasticity, moist (CH).	0.0
108	110	1.6	18,21,24,27	(0.0-0.4) No recovery.	0.0
				(0.4-0.8) F/M sand, tan with some silt, tan, and a little clay, ¼" thread, low plasticity, moist (SM).	
				(0.8-1.6) clay, grey, with some F/sand, tan and some silt, tan, ⅓₂" thread, high plasticity, moist (CH).	
				* Delta used 200 G water *	
				END OF BORING	

ARCADIS G&M

Sample/Core Log

Boring/Well VP-32 Project/No. NM001348.0805.00002 Page 1 of 2

Site Location Bethpage Drilling Started 06/20/05 Drilling Completed 6/21/05

Total Depth Drilled 90 Feet Hole Diameter 4¼ inches Drilling Method HSA

Length and Diameter of Coring Device 2'x2" Type of Coring/Sampling Device SPLIT SPOON

Sampling Interval 5'/10' feet Drilling Fluid Used POTABLE WATER

Drilling Contractor Delta

Prepared By KS

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	Initial PID (ppm)	Headspace Reading (1 Hour)
0	~~5~~	--	--	cuttings: 5" Asphalt, over	--	
				all f-c SAND (Brown to OR-Brown), gravel, silt		
				and trace clay.		
~~5~~ ~~7~~ 7	~~9~~	0	--			
				NO Recovery - Rock stuck in barrel tip.	--	
7	9	14"		6" ORANGE-Brown M-C SAND with Sm. gravel, some	0.0	0.0
				Silt, over		
				8" TAN-Light-Brown M-VC SAND with Sm. gravel,		
				Crushed stones and ~~trace~~ silt,		
10	12	10"		All OR-ORANGE/Brown TAN M-VC SAND &	0.0	0.0
				Sm. gravel, V. large crushed stones in		
				bottom 3"		
15	17	11"		All TAN-Lt. Brown M-VC SAND & Sm. gravel, little	0.0	0.0
				Silt, no clay		
20	22			F-VC TAN-Lt brown SAND with Sm. gravel,	0.0	0.0
				little Silt.		

ARCADIS G&M

Sample/Core Log

Boring/Well VP-32 Project/No. NGC-003 Page 2 of 2

Site Location BETHPAGE PARK Drilling Started 6/20/05 Drilling Completed 6/21/05

Total Depth Drilled 90 Feet Hole Diameter ~6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' x 2" Type of Coring/Sampling Device SPLIT SPOON

Sampling Interval VARIABLE feet Drilling Fluid Used POTABLE WATER

Drilling Contractor DELTA

Prepared By M. SAUERBORN

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
53	55	1	7,8,20,25	SAND, VF-VC, ORANGE-TAN, SUB-ANGULAR, QTZ; TRACE CLAY, SILT + F GRAVEL. WET.	1.1 *
58	60	1	8,25,30,40	SAND, VF-VC, TAN, SUB-ANGULAR, QTZ; TRACE SILT. WET.	2.7
68	70	1	7,10,25,43	SAND, VF-C, TAN, SUB-ROUNDED, QTZ; TRACE SILT. WET.	0.4
78	80	.5	NA	SAND, VF-F, TAN-ORANGE, SUB-ROUNDED, QTZ; WITH SILTY CLAY LAYERS, ~1/8" THICK, ORANGE + TAN. WET.	1.0
88	90	1.0	NA	SAND, VF-F, TAN-ORANGE, SUB-ROUNDED, QTZ; ~~WITH~~ TRACE SILT, CLAY. WET.	1.1
				END OF BORING	

*PID READINGS ABOVE BACKGROUND.

ARCADIS G&M

Sample/Core Log

Boring/Well VP-33 Project/No. NY001348.0805.00001 Page 1 of 2

Site Location BCP - NGC Drilling Started 6/21/05 Drilling Completed 6/21/05

Total Depth Drilled 90 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 2' Type of Coring/Sampling Device Split Spoon

Sampling Interval 5'/10' feet Drilling Fluid Used Water

Drilling Contractor Delta

Prepared By Scherlin (SC)

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
5	7	0.4	7,8,8,5	(0.0-1.6) No recovery	0.2
				(1.6-2.0) F/M sand, brown with some gravel, subrounded, Qtz, dry, (SM)	
10	12	N/A	8,12,13,11	No recovery	N/A
12	14	N/A	10,12,15,18	No recovery	N/A
15	17	0.4	15,18,25,29	(0.0-1.6) No recovery	1.3
				(1.6-2.0) F/M sand, brown with some gravel, subrounded, Qtz, dry (SM)	
20	22	0.8	10,16,18,20	(0.0-1.2) No recovery	1.5
				(1.2-2.0) F/M sand, brown/tan with some gravel, Qtz, subrounded, dry (SM)	
25	30	N/A	cuttings	F/M sand, brown/tan with some gravel, Q, subrounded, dry (SM)	0.2
30	35	N/A	cuttings	F/M sand, brown/tan with some gravel, Q, subrounded, dry (SM)	0.2
35	40	N/A	cuttings	F/M sand, brown/tan with some gravel, Q, subrounded, dry (SM)	0.3
40	45	N/A	cuttings	F/M sand, brown/tan with some gravel	0.2

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-33

Prepared by JC

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
49	45	N/A	Cuttings	Q, (subrounded, dry, (SM).	
45	50	N/A	cuttings	F/M sand, dark brown/red with a little F/gravel, subrounded, dry, (SM).	0.2
50	53	N/A	cuttings	F/M sand, dark brown/red with a little F/gravel, subrounded, dry, (SM).	0.4
53	55	0.5	7,18,29,24	F/M sand, light brown/tan with some silt, light brown/tan and a little F/gravel, dry, (SM)	1.8
58	60	0.8	5,14,11,10	F/M sand, light brown/tan with some silt, light brown/tan and a little C/gravel, moist, (SM) (0.0-0.8).	0.3
68	70	1.2	10,15,14,14	(0.0-0.8) no recovery (0.8-1.2) F/M sand, light brown with some silt, light brown and a trace of C/gravel, Q, subangular, moist (SM).	1.9
78	80	0.3	14,14,21,16	(0.0-1.7) No recovery (1.7-2.0) F/M sand, light brown/tan with some silt, light brown/tan, moist, (SM).	1.2
88	90	1.0	16,20,24,27	(0.0-1.0) No Recovery (1.0-2.0) F/M sand, brown with some Black/orange Stratons, some silt, brown, moist, (SM)	3.2

* Delta used 150G *

END OF BORING

ARCADIS G&M

Sample/Core Log

NY001348.0806.00002

Boring/Well VP-34 Project/No. Grumman OU3 Page 1 of 2

Site Location Bethpage, NY Drilling Started 6/15/06 Drilling Completed 6/15/06

Total Depth Drilled 67 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 5' x 6" Type of Coring/Sampling Device Auger

Sampling Interval Variable feet Drilling Fluid Used None

Drilling Contractor Delta Well & Pump

Prepared By Brzoski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	2	hand	dug	fine to coarse brown sand, subrounded, qtz, dry	0.0
2	4	hand	dug	med to coarse brown sand, subrounded, qtz dry with some subrounded pebbles .1" to 1" diameter	
5	10	cuttings		Fine soft black silty material, slight odor, Then fine black sand; trace black stained fine gravel, subrounded, quartzite. Slight odor	0
10	15	cuttings		Brown silt and fine gravel, subrounded, quartzite. Then fine to coarse brown sand, trace fine gravel, quartzite.	6.9 - Background
15	20	cutting		Fine to coarse brown sand, and fine to coarse gravel, angular, subrounded, quartzite	4.1 - Background
20	25	cuttings	Moist	Fine to coarse dark brown sand and fine to coarse gravel, angular, subrounded quartzite	3.1 - Background
25	30	cuttings		fine to coarse dark brown sand some fine gravel, quartzite; Moist. Then	2.4 - Background

* Background PID readings = 1.6, 1.3, .6, 3.5, 5.6, 1.9, 2.0, 0, .3 ppm

PID may be effected by sun
PID not steady

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-34 Page 2

Prepared by Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
				dry fine to coarse brown sand; and fine gravel; quartzite	
35	40	cuttings		Fine to med brown sand, dry; some fine gravel, angular, subrounded, quartzite; slight odor. Then fine to med dark brown sand; little gravel, fine, quartzite, dry. slight odor	7.2 - Backgrand 9.3 - Backgrand
40	45	cuttings		orange-red med to coarse sand, dry, slight odor	0
45	50	cuttings		Fine to med dark rust sand	0
50	55	cuttings		Fine to med dark rust sand; some trace fine gravel, quartzite. Then fine dark rust sand	
55	60	cuttings		Dark red fine sand, slightly moist	0
60	65	cuttings	Moist	Dark red fine sand, moist; trace clumps of fine grey sand.	0
65	67	cuttings	wet	Med to fine rust colored sand; and fine gravel, angular, subrounded quartzite	0
				End of Boring	

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well VP-~~03~~35 Project/No. NY001348.0806.00002 Page 1 of 1

Site Location Park, Bethpage N.Y. Drilling Started 10/13/06 9:28 AM Drilling Completed 11:40

Total Depth Drilled 67 Feet Hole Diameter 4" inches Type of Sample/ Coring Device Auger

Length and Diameter of Coring Device 5' Sampling Interval 5 feet

Land-Surface Elev. NA feet ☐ Surveyed ☐ Estimated Datum

Drilling Fluid Used H_2O & 20gal Drilling Method HSA

Drilling Contractor Dolta Driller Jolson Helper Leo

Prepared By D. Zuck Hammer Weight ~~/~~ Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
0	5	—	—	fill from Hand Drging; mix of course → fine sands, Pieces of Brick, moist
5	15	—	—	med → fine sand, sub rounded, moist, (0.0) on PID, some pebbles (Quartz) rounded, Sand: med → Lt. Brown
15	25	—	—	Same as above (0.0)
25	35	—	—	" " (0.1)
35	45			" " (0.0)
45	55			" " (0.0) wet → Saturated @ 52'
55	65			" " (0.0) " " " to 65', mod Brown
65	67			" " Sediments is continuous → 67' (0.0) Slightly Darker Brown
				END of Borehole

ARCADIS G&M

Sample/Core Log

Boring/Well VP-36 Project/No. NY00 1348.0806.00002 Grumman OU3 Page 1 of 2

Site Location Bethpage, NY Drilling Started 6/14/06 Drilling Completed 6/14/06

Total Depth Drilled 67 Feet Hole Diameter 6 inches Drilling Method HSA

Length and Diameter of Coring Device 5' Long, 6" Diameter Type of Coring/Sampling Device Auger

Sampling Interval Variable feet Drilling Fluid Used None

Drilling Contractor Detta

Prepared By Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5	cuttings		2" asphalt. Then 2" concrete.	
				Then fine to coarse rust colored sand;	.3
				and fine to coarse gravel, subrounded,	
				quartzite; slight odor. Then darker rust	.2
				colored fine to med sand; and fine	
				to coarse gravel, subrounded, angular quartzite	
				Then at 3' asphalt layer. Then	
				burnt wood, pieces of metal, metal screws,	0
				wood, burnt material; No odor.	
				Then black stained med to fine sand	8.1
				(heavy fuel odor); some black stained wood,	
				black stained brick pieces, large cement	
				cap, red brick pieces & black stained	7.9
				fill material; odor.	
5	10	—		No cuttings. Coring rock. Augers pushing	—
				any material to side of borehole.	
10	15	cuttings		Soft black heavily stained fibrous	45
				material. strong odor.	
15	20	cuttings		same as above	47
20	25	cuttings		Wet, fine to coarse black stained sand;	13.8

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well VP-36 Page 2

Prepared by Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
				and fine to coarse black stained	
				gravel, subrounded, angular, quartzite. Odor	
25	30	cuttings		Wet. Fine to coarse black stained	13
				sand, and fine black stained gravel,	
				subrounded, quartzite. Odor	
30	35	cuttings		wet. Black stained very soft material	26
				(black stained fine sand); some black stained	
				fine gravel, subrounded, angular, quartzite.	
				Odor.	
35	40	cuttings		Very, very wet. Dark brown fine sand;	9.1
				trace gravel, quartzite	
40	45	cuttings		Wet. Fine brown sand.	5.5
45	50	cuttings		Wet. Fine brown sand.	5.7
50	55	cuttings		Wet. Fine brown sand.	2.4
55	60	cuttings		Wet. Fine brown sand; trace fine gravel,	14
				subrounded, angular, quartzite, odor	
60	65	cuttings		Very, very wet. odor. Fine brown sand.	4.5
65	67	cuttings		same as above.	5.4
				End of Boring	

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP5 Project/No. NY001348080G.0002 Page 1 of 2

Site Location Bethpage Park Access Road, OU3 Drilling Started 5/6/06 8:00am Drilling Completed 5/6/06 9:30am

Total Depth Drilled 50 Feet Hole Diameter 2 1/2" inches Type of Sample/ Coring Device Geoprobe

Length and Diameter of Coring Device 5' long 2 1/2" Diameter Sampling Interval 5 feet

Land-Surface Elev. 126 feet ☐ Surveyed ☒ Estimated Datum NA

Drilling Fluid Used None Drilling Method Direct Push

Drilling Contractor Zebra Environmental Driller Charles Green Helper Luke Caballero

Prepared By Mitch Wiedemann Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
5	10	4½	-	Maximum PID Reading 0.1 ppm
				60% Sand, fine-rust, Medium, semi-round,
				Moist, 40% gravel 0.2-1.5", quartz,
				White, semi-round
10	15	4'	-	Maximum PID Reading 0.6 ppm
				50% Sand 50% gravel, same Makeup
				as previous core
15	20'	3½	-	Maximum PID Reading 0.2 ppm
				50% Sand 50% gravel as previous
20	25'	3½	-	No PID Reading 40% Sand 60%
				gravel, Same Makeup as previous Samples
25	30'	4'	-	No PID Reading. Top 2' of sample
				60% Sand 40% gravel as Previous
				samples. Bottom 2' of sample 80%
				Sand 20% gravel, Same Make-up
				as previous samples
30	35'	3½	-	Maximum PID reading 1.1 ppm
				80% Sand, 20% gravel as previous
				Core Sample
				→

ARCADIS GERAGHTY & MILLER

Sample/Core Log (Cont.d)

Boring/Well SGP5

Prepared by Mitch Werkesman

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
35	40'	2½'	—	NO PID reading 20% Sand, Medium, Semi-rounded, Moist, tan, 80% gravel 0.1-1", quartz, semi-rond, White. One small band (3") of tannish-orange, Medium Sand at bottom of core. Very compacted and hard material
40	45'	2½'	—	NO PID Reading 100% Sand, Moist, tan, ~~white~~ Fine-Medium, hard packed
45	50'	? liner jammed		NO PID Readings 100% Sand as previous

End of Boring

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP6 Project/No. NY001348.0806.0002 Page 1 of 2

Site Location Bethpage Park Drilling Started 6/2/06 8:00 am Drilling Completed 6/2/06 10:15 am

Total Depth Drilled 50' Feet Hole Diameter 2 1/4" inches Type of Sample/ Coring Device Geoprobe

Length and Diameter of Coring Device 5' long 2 1/4" Sampling Interval 5 feet

Land-Surface Elev. 126 feet ☐ Surveyed ☒ Estimated Datum NA

Drilling Fluid Used None Drilling Method Direct Push

Drilling Contractor Zebra Environmental Driller Charles Green Helper Luke Caballero

Prepared By Mitch Weeksmen Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
5'	10'	4'		50% Sand, Medium, Semi-rand, Moist, Tan-Brown, 50% gravel semi-rand, 0.1-1", quartz. One small bed (0.5") of wet silt, tan
10'	15'	4½'		50% Sand, Medium, Semi-round, Moist, Tan-Brown 50% gravel, semi-rand 0.1-0.7", quartz
15'	20'	3'		50% Sand, Medium, Semi-rand, Moist, tan-Brown 50% gravel, semi-rand, quartz, 0.1-1"
20'	25'	3½'		PID Reading of 0.8ppm 60% Sand, Medium, tan-brown, Moist, semi-rand 40% gravel 0.1-1" Quartz, semi-rand
25'	30'	3'		Maximum PID reading of 1.4ppm 70% Sand tan-Brown, Semi-Rand, Moist, quartz 30% gravel 0.1-1" quartz, semi-round
30'	35'	2'		Maximum PID reading of 0.5ppm 80% Sand, tan-Brown, Moist, Semi-Rand Quartz 20% gravel, 0.2-1", semi-round, Quartz, white
35'	40'	2½'		Maximum PID Reading 1.5ppm 50% Sand, Moist, tan-Brown, Medium, semi-round 50% Gravel 0.1-0.5", semi-round, quartz

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ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well: SGPG Project/No.: NY001348.0806.0000

Drilling Started: 5/2/06 8:00am Drilling Completed: 5/2/06 10:15am

Site Location: Bethpage Park

Total Depth Drilled: 50 Feet Hole Diameter: 2¼" inches Type of Sample/Coring Device: Geoprobe

Length and Diameter of Coring Device: 5' long 2¼" Dia Sampling Interval: 5 feet

Land-Surface Elev.: 126 feet ☐ Surveyed ☒ Estimated Datum:

Drilling Fluid Used: None Drilling Method: Direct Push

Drilling Contractor: Zebra Environmental Driller: Charles Green Helper: Luke Caballero

Prepared By: Mitch Wedesner Hammer Weight: NA Hammer Drop: NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample/Core Description
40'	45'	3'		Maximum PID reading 0.4 ppm
				Top 12" of sample wet sand, Medium, Tan,
				Semi-rounded with 20% gravel 0.1-0.5"
				Next 12" of sample 50% Fine sand 50% clay
				Remainder of sample 100% Reddish-gray clay
				← Top | Sand/Gravel | Sand/Clay | Clay | Bottom →
45'	50'	2½'		Maximum PID reading 0.3 ppm
				Top 18" of sample clay, then 4" band of
				fine wet sand, stained grey, the 6" layer of
				clay with remainder of sample fine, packed
				sand, greyish color
				End of Boring

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP7 Project/No. NY00 ~~1403~~ 13400806.0002 Page 1 of 2

Site Location Bethpage Park

Drilling Started 5/3/06 8:00am Drilling Completed 5/3/06 9:15am

Total Depth Drilled 25 Feet Hole Diameter 2 1/4" inches Type of Sample/Coring Device Geoprobe

Length and Diameter of Coring Device 5' long 2 1/4" Diameter Sampling Interval 5 feet

Land-Surface Elev. 126 feet [X] Surveyed [X] Estimated Datum NA

Drilling Fluid Used None Drilling Method Direct Push

Drilling Contractor Zebra Environmental Driller Charles Green Helper Luke Caballero

Prepared By Mitch Woodlsmith Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
5	10	3'		Maximum PID Reading 30ppm - Material wet and visibly stained black with odor of oil. 50% Sand, Medium, wet, semi-round, black 50% gravel 0.1-0.5", semi-round, quartz
10'	15'	3 1/2'		Maximum PID Reading 160ppm + Top half of sample visibly stained black and wet with visible sheen. Material resembles wet Asphalt and smells like oil. Bottom half of sample appears clean but has very high PID readings. (100-150ppm) Material is moist 50% sand 50% gravel as previous sample
15'	20'	3 1/2		Maximum PID reading 350ppm Material appears clean but is moist and smells of oil. PID readings consistently 150ppm or greater 50% sand 50% gravel as previous sample
20'	25'	3 1/2		Maximum PID reading 1480ppm. Reading consistently 500ppm or greater. Notable odor of oil 50% sand 50% gravel as previous samples. Material appears clean and is moist, tan in color

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP7 Project/No. NY001348.0006.0002 Page 2 of 2

Site Location Bethpage Park Drilling Started 8/8/06 8:00 am Drilling Completed 8/8/06 9:15 am

Total Depth Drilled 35 Feet Hole Diameter 2 1/4" inches Type of Sample/ Coring Device Geoprobe

Length and Diameter of Coring Device 5' long 2 1/4" Dia Sampling Interval 5 feet

Land-Surface Elev. 126 feet ☐ Surveyed ☒ Estimated Datum

Drilling Fluid Used None Drilling Method Direct push

Drilling Contractor Zebra Environmental Driller Clarke Green Helper Luke Caballero

Prepared By Mark Wedegaertner Hammer Weight NA Hammer Drop NA ins.

Pictures 145-141

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
25	30'	3 1/2		Maximum PID reading 2000ppm with Readings Consistently 600ppm or greater. Material is moist and not stained, smells of oil very strongly. 50% sand, 50% gravel as previous samples
30'	35'	3 1/2		Maximum PID Reading 2000ppm with. readings consistently 1200ppm or greater Material is moist and unstained, Very strong oder 70% Sand 30% gravel
				Soil Borings Suspended
				End of Boring

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ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP 8 Project/No. NY001348.0006.0002 Page 1 of 2

Site Location Bethpage Park - OU3 Drilling Started 5/4/06 8:00am Drilling Completed 5/4/06 9:45am

Total Depth Drilled 50 Feet Hole Diameter 2½" inches Type of Sample/ Coring Device Geoprobe

Length and Diameter of Coring Device 5' long 2½" Dia Sampling Interval 5 feet

Land-Surface Elev. 126 feet ☒ Surveyed ☒ Estimated Datum NA

Drilling Fluid Used None Drilling Method Direct Push

Drilling Contractor Zebra Environmental Driller Charles Helper Luke

Prepared By Mitch Wadsworth Hammer Weight – Hammer Drop – ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
5	10	2½	-	Maximum PID Reading 1.1ppm
				60% Sand, Brown, Medium, semi-round,
				Moist. 40% gravel 0.2-1.5", Quartz, semi-
				Round, White
10	15	2½	-	Maximum PID Reading 1.3ppm
				Sample Moist to wet, same make up as
				previous - 60% sand 40% gravel
15	20	3½	-	Maximum PID Reading 1.6ppm
				50% Sand, Moist, tan, medium, semi-round
				50% gravel, 0.1 - 0.7", semi-round, quartz
20	25	3½	-	Maximum PID reading ~~2.5ppm~~ ~~90ppm~~ 2.3ppm
				* Problems w/ PID readings
				50% Sand 50% gravel, same Make-up
				as previous Sample
25	30	3½	—	Maximum PID reading 2.5ppm
				* problems w/PID readings
				50% Sand, 50% gravel, same as previous.
				Moist and stained
30	35	3'	-	Maximum PID reading 2.5ppm
				50% Sand, 50% gravel as previous Cores

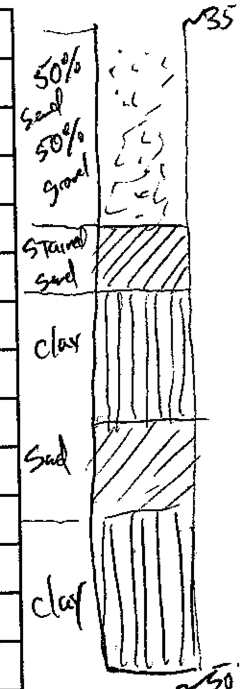
ARCADIS GERAGHTY & MILLER

Sample/Core Log (Cont.d)

Boring/Well: SG18

Prepared by: [signature]

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
35	40	3'	—	Maximum PID reading 1.7ppm
				50% sand 50% gravel as previous
40	45	2½'	-	Maximum PID reading 75ppm
				Top 8" of sample 100% Medium sand,
				stained black, strong odor, wet
				Remainder of sample tan clay, approx
				20" thick
45	50'	~~8'~~ ??	? -	Maximum PID reading 535ppm
		Liner	Jammed	100% Medium Sand for first
				foot of sample, Moist, Semi-round,
				strong odor. Another clay layer
				follows, No PID reading.
				EOB



ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP-9 Project/No. NY001348.0806.0002 Page 1 of 2

Site Location Bethpage Park Drilling Started 4/20/2006 1230 Drilling Completed 4/28/06

Total Depth Drilled 40 Feet Hole Diameter 2 1/2" inches Type of Sample/ Coring Device Geoprobe 5ft Macrocore

Length and Diameter of Coring Device 5' long 2 1/4" Dia Sampling Interval 5 feet

Land-Surface Elev. 125 feet ☐ Surveyed ☒ Estimated Datum NA

Drilling Fluid Used N/A None Drilling Method Direct Push

Drilling Contractor Zebra Environmental Driller Charles Green Helper Luke Caballero

Prepared By Mitch Wecksmed Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
5'	10'	1'		50% Medium Sand, Brown, Moist, Sub-Rounded 30% Fill Material, 20% gravel 0.2-0.6" Dia. quartz, rounded, Moist
10'	15'	3 1/2'		50% Medium-Coarse Sand, Tannish Brown, Moist, sub rounded. 50% Quartz gravel 0.2-0.6"
15'	20'	3 1/2'		Distinct Bands present. Bottom 2' of Sample 50% Medium Sand, Tannish-Brown, Moist Next 6" wet Silt, tan. Next 6" Visually stained gravel with some coarse Sand (Black) PID reading to 10ppm +. Remaining Section of core 50% Medium sand 50% gravel 0.2-0.4" Visually Stained gray to Black
20'	25'	3 1/2'		One Band Visible @ Top of Sample - approx 6" thick. Band consists of 50% Medium Sand 50% 0.2-0.4" gravel. Stained dark Brown. Remaining 3' of Sample (Bottom) consists of 50% Medium Sand, Dry, Sub rounded, tan and 50% 0.2-1.0" quartz gravel
				Continued on Page 2

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ARCADIS GERAGHTY & MILLER

Sample/Core Log

Page 2 of 2

Boring/Well SGP-9 Project/No. NY001348.0806.0002

Site Location Bethpage Park

Drilling Started 4/28/06 12:30 Drilling Completed 4/28/06

Type of Sample/Coring Device Geoprobe 5 ft macrocore

Total Depth Drilled 40' Feet Hole Diameter 2 1/2" inches

Length and Diameter of Coring Device 5' long 2 1/4" diameter

Sampling Interval 5 feet

Land-Surface Elev. 125 feet ☐ Surveyed ☒ Estimated Datum

Drilling Method Geoprobe

Drilling Fluid Used None

Drilling Contractor Zebra Envi Driller Charles Green Helper Luke CaDallero

Prepared By Mitch Wacksman Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
25	30	3 1/2'		50% Medium Sand, Moist, Sub-Rand, tan/ish 50% gravel 0.2"-0.5", quartz, rounded
30	35	3 1/2'		Bottom 18" of sample Fine-medium Sand, Sub rounded, Moist, Yellowish-Rust color Top of Sample 50% Medium Sand, sub-rounded, moist 50% gravel 0.2-1" rounded, Quartz.
35	40	Sample Jammed		Medium-Fine Sand, Whitish, Moist, some Rust colored sand at top of core
				END BORING

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ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP-10 Project/No. NY001348.0806z Page 1 of 1

Site Location Bethpage Park

Drilling Started 4/27/00 8:15 am Drilling Completed 4/27/00 12 noon

Total Depth Drilled 45' Feet Hole Diameter 2 1/2" inches Type of Sample/ Coring Device Geoprobe

Length and Diameter of Coring Device 5' long, 2 1/4" Diameter Sampling Interval 5 feet

Land-Surface Elev. 126 feet ☐ Surveyed ☒ Estimated Datum NA

Drilling Fluid Used None Drilling Method Direct Push

Drilling Contractor Zebra Environmental Driller Charles Green Helper Luke Caballero

Prepared By Mitch Wacksman Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
5'	10'	5'		Sand, Medium, Brown, Sub-Round, Dry 5% 1" gravel to 10% 0.3" gravel - White, Sub Round, Dry
10'	15'	3 1/2'		50% Sand, Medium, Brown Sub-Round, Dry, Quartz 50% gravel 0.3 - 1.0", White, Sub Round, Dry, Quartz
15'	20'	3 1/2'		50% Sand, Medium, Brown, Sub-Round, Dry - Silt on outside of casing. 50% Gravel 0.3"-1.0", White, Sub Round, Dry, Quartz
20'	25'	5 1/2'		70% Sand, Medium, Brown, Sub-Round, Dry, Quartz ~~Bo~~ 20% gravel 0.1-0.4" white, sub-Round, Dry Quartz, 10% gravel 0.5-1" White, sub-Round, Dry Quartz
25'	30'	3 1/2'		40% Sand, Medium Brown, Sub-Round, Dry, Quartz 60% Gravel 0.1-0.5" White, Sub-Round, Dry, Quartz
30'	35'	3'		50% Sand, Medium, Brown, Sub-Round, Dry, Quartz 50% Gravel 0.1-0.5" White, sub Round, Dry, Quartz
35'	40'	Sampler Jammed		90% Sand, Fine, Brown, Sub-Round Dry with some medium sand brown red 10% Sand, Very Fine, Red
40'	45'	Sample Jammed		90% Fine Sand Tan to Reddish with little clay present
				End of Boring

Samplelg vlc vlc

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP1 Project/No. NY001438.0806.00002 Page 1 of 1

Site Location Bethpage Park Access Road OU3 Drilling Started 5/5/06 1100 Drilling Completed 5/5/06 1115

Total Depth Drilled 8 Feet Hole Diameter 2 1/4" inches Type of Sample/ Coring Device Geoprobe

Length and Diameter of Coring Device 5' 1 2 1/4" Dia Sampling Interval 5 feet

Land-Surface Elev. 126 feet ☐ Surveyed ☒ Estimated Datum NA

Drilling Fluid Used None Drilling Method Direct Push, Geoprobe

Drilling Contractor Zebra Environmental Driller Charles Green Helper Luke Caballero

Prepared By Mitch Wieckowski Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
5'	8'	3'	-	No PID Readings
				100% Medium Sand, Moist, Semi-round, tan-rust colored
				END OF BORING

SAMPLELG.XLS.xls
5/4/2006

ARCADIS

Sample Log

NY 01464.0807.0015G

Well/Boring SGP-11A Project Name and No. N-Grumman 003

Site Location Bethpage, NY Drilling Started 3/21/07 Drilling Completed 3/21/07

Total Depth Drilled 35 feet Hole Diameter 2 inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" diameter Type of Sampling Device Macrocore sample

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Charles Green Helper Luke Reiss

Prepared By Prczorski Hammer Weight — Hammer Drop — Inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
0	5	Hand dig	—	Asphalt. Then dark aggregate, silty brown clay, black stained med sand, and fine black stained gravel. Then med brown sandy and fine quartzite gravel. No odor.	0
5	10	4	—	6" black stained fine gravel and black stained med sand, no odor. Then 4" silty brown clay. Then 4" coarse sand. Then 1'2" flc rust sand, and flc quartzite gravel. Then 1'2" flm rust sand, and flc quartzite gravel. Then 4" silty grey clay. Then 1" med rust sand, and fine quartzite gravel	0
10	15	2.83	—	2" med rust sand. Then 10" silty grey clay with interior rust color. Then 5" med to fine rust sand, some fine quartzite gravel. Then 1'2" flm beige sand, some	0

Sample Log (Cont.d)

NY001464.0807.0015G

Well/Boring SGP-11A Project Name and No. N-Grumman 003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
10	15	Cont.	—	fine quartzite gravel.	
15	20	3.25	—	2" beige silt, and med sand, ~~and~~ trace	0
				fine quartzite gravel. Then 7" F/M	0
				rust sand, some fine quartzite gravel.	0
				Then 2.5" F/C rust sand, Then	0
				2.5" fine quartzite gravel, Then 10"	0
				F/M beige sand. Then 4.5" fine	0
				beige sand. Then 4" F/C rust sand.	0
20	25	3.25	—	3" white rock frasments, Then 4.5"	0
				fine rust sand, and fine quartzite gravel	0
				Then 1" white rock fragments, Then 1'5"	0
				F/M beige sand. Then 4" fine brown sand.	0
				Then 5" F/C brown sand.	0
25	30	—	—	(Macrocore in 3 pieces) Silty sand	0
	Refusal at 30', Zebra pivot 180° from borehole. New borehole				
	started 5' south.				
30	35	2.67	—	4" fine light beige sand. Then F/M	0
				light beige sand, some fine quartzite gravel.	0
				Then 4" F/M light beige sand.	0
				End of Boring	

ARCADIS

Sample Log

Well/Boring SGP-11B Project Name and No. NG-L-043 NY001464.0507.0015G

Site Location Bethpage, NY Drilling Started 3/3 (13:29) Drilling Completed 13:35

Total Depth Drilled 8 feet Hole Diameter 2 inches Sampling Interval 5 feet

Length and Diameter of Sampling Device 5' x 2" Type of Sampling Device Geoprobe (Macro Cores)

Drilling Method Geoprobe Drilling Fluid Used None

Drilling Contractor Zebra Driller Lukas Helper Rick

Prepared By D. Zuck / P. Prezorski Hammer Weight / Hammer Drop / inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	2'3"	/	(0→10") Dark gray → Black moist, very fine→ fine, sub angular → sub rounded sand w/ quartz pebbles (.5→2cm) Angular, some coarse sand, med dense, [S	0.0
				(10"→1'6") Med Brown, fine→ very fine sub angular→ sub rounded sand, trace med sand, moist, dense packed	0.0
				(1'6"→2'3") Lt. Brown Fine→ very fine, sub angular→ sub rounded sand, few Rounded pebbles (.5→ 2cm), trace coarse sand, quartzite, Dry	0.0
5	10	4'2"	/	(0→8") SAA	0.0
				(8"→11") Lt Gray to white coarse sub-rounded sand, Quartzite, some fine sand, moist, trace silt, Loose packed	0.0
				(11"→4'2") Lt. → Med Brown Sand (fine→very fine), Sub angular→ sub rounded quartzite, Loose packed, few coarse sand sub angular→ sub rounded, trace silts + pebble (.5→3cm) moist→Dry,	0.0

End of Boring

ARCADIS

Sample Log

NY001464.0807.0015G

Well/Boring SGP-11C Project Name and No. N-Grumman OU3

Site Location Bethpage, NY Drilling Started 3/22/07 Drilling Completed 3/22/07

Total Depth Drilled 8 feet Hole Diameter 2 inches Sampling Interval Continous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Macrocore sampler

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Charles Green Helper Luke Reiss

Prepared By Prazorski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hard dig	—	Black asphalt. Then med brown sand and fine quartzite gravel; very trace slight	0
				sandy brown clay (not compact).	0
5	8	3.42	—	3" f/c rust sand, and fine quartzite gravel. Then 2'7" f/m rust sand, trace fine quartzite gravel. Then 2.5" sandy brown clay. Then Quartzite stones. Then 4" silty grey clay.	0
					0
					0
					0
					0
				End of Boring	0

Sample Log NY001464.0807.001SG

Well/Boring SGP-11D Project Name and No. N-Grumman 003

Site Location Bethpage, NY Drilling Started 3/22/07 Drilling Completed 3/22/07

Total Depth Drilled 50 feet Hole Diameter 2 inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Macrocore sampler

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Charles Green Helper Luke Reiss

Prepared By Prezorski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand dig	—	Asphalt. Then silty black stained sand. No odor	0
5	10	2.92	—	4" black stained sand. Then 3" silty black	0
				stained sand (compact). Then 1'3" black silt	0
				and f/m black stained sand (compact). Then	0
				2" black silt and f/m brown sand. Then	0
				4" f/m brown sand and fine quartzite	0
				gravel (muscovite flakes visible). Then	0
				2" soft dark silty grey clay. Then 5"	0
				quartzite gravel; trace m/coarse brown	0
				sand.	
10	15	3.17	—	2" f/c gravel Then 2.5" silty	0
				black stained sand. Then 10" silty brown	0
				clay with laminations of dark rust & bands	0
				of grey clay. Then 2" quartzite stone.	0
				Then 3" sandy brown clay. Then 2"	0

Sample Log (Cont.d)

NY0014641.0807.00156

Well/Boring SGP-11D Project Name and No. N-Grumman 003

Prepared By Przewoski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
10	15	cont.	—	Silty grey clay (compact). Then 1"	0
				silty brown clay (compact). Then 11"	0
				dark rust to rust f/c sand. Then	0
				3" fine rust sand. Then 5" f/c	0
				rust sand; some fine gravel, quartzite.	0
15	20	3.33	—	1'4" f/c rust sand, and f/c quartzite	0
				gravel. Then 1" fine gravel stained	0
				black; no odor. Then 6" f/m rust	0
				sand; and fine quartzite gravel. Then	0
				1'3" f/m rust sand with (2) 1"	0
				fine quartzite gravel bands.	
20	25	2.59	—	9.5" f/m light rust sand; some fine	0
				quartzite gravel. Then 10" fine beige	0
				sand (with 1 band of orange, 3 dark brown	0
				bands and 6 light brown bands; all fine sand).	0
				Then 3" f/c gravel, quartzite; some	0
				f/m beige sand. Then 8" f/m beige	0
				sand; some fine quartzite gravel. Then	0
				2" fine beige sand.	0
25	30	3.25	—	1'1" f/m rust sand. Then f/c	0
				beige sand; and fine quartzite gravel.	0

Sample Log (Cont.d)

NY001464.0807.100156

Well/Boring SGP-11D Project Name and No. N-Grumman UU3

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
30	35	2.92	—	2" compact black ash and black stained coarse gravel. Then 9" quartzite stone. Then F/M brown silt covered sands, and fine quartzite gravel. Then 1.5" beige fine sand. Then 4" F/M rust sand. Then 9" fine beige sand with thin bands of dark rust fine sand. Then F/M beige sand, some fine quartzite gravel.	0
35	40	2.75	—	3" fine light beige sand. Then 3.5" F/C light beige sand, some fine quartzite gravel. Then 1" red sandstone. Then 1'5" fine beige sand, trace fine ~~quartzite~~ gravel. Then 3" fine quartzite gravel, and fine beige sand. Then 2" F/M rust sand, some fine quartzite gravel.	0
40	45	3.08	—	3" grey silt. Then 2" white rock fragments. Then 2" med brown sand. Then 6" F/M rust sand. Then 1'10" fine rust sand.	0
45	50	1.5	—	Approx 3" loose slight clayey rust sand. Then firm sandy rust clay with irregular bands	0

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Sample Log

Well/Boring: SGP-12

Project Name and No.: N-Grumman OU3 NY001464.0807.00156

Site Location: Bethpage, NY

Drilling Started: 5/29/07

Drilling Completed: 5/29/07

Total Depth Drilled: 8 feet

Hole Diameter: 2 inches

Sampling Interval: continuous feet

Length and Diameter of Sampling Device: 5' Long x 2"

Type of Sampling Device: Macrocore sampler

Drilling Method: Geoprobe Direct Push

Drilling Fluid Used: None

Drilling Contractor: Zebra Env

Driller: Rick Lyons

Helper: Willie Kennedy

Prepared By: Przorski

Hammer Weight: —

Hammer ~~Drop~~ Pressure: 2000 PSI ~~inches~~

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
0	4	3'6"	—	0-5" asphalt, 10" Sand, fine to medium, subrounded, dark brown, quartz; moist. Sand, fine to medium, subrounded, reddish-brown to tan, quartz; some gravel, fine to medium, subrounded, angular, white quartzite; trace cobble quartzite.	0 ↓
4	8	38"		18" Sand, fine to medium, subrounded, reddish-brown to tan, quartz; some gravel, fine to medium, subrounded, angular, white, quartzite; trace cobble quartzite, dry. clay, silty, brown; some gravel, fine to medium, subrounded, angular, white, quartzite, trace cobble quartzite.	0 ↓
				End of Boring	

ARCADIS

Sample Log

Well/Boring: SGP-13

Project Name and No.: NY001464.1907.00156 N-Grumman OU3

Site Location: Bethpage, NY

Drilling Started: 5/29/07

Drilling Completed: 5/29/07

Total Depth Drilled: 25 feet

Hole Diameter: 2" inches

Sampling Interval: continuous feet

Length and Diameter of Sampling Device: 5' Long & 2"

Type of Sampling Device: Macrocore sampler

Drilling Method: Geoprobe Direct Push

Drilling Fluid Used: None

Drilling Contractor: Zebra Env

Driller: Rick Lyons

Helper: Willie Kennedy

Prepared By: Przorski

Hammer Weight: —

Hammer ~~Drop~~ Pressure: 2000 PSI ~~inches~~

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand dig	—	Asphalt, Sand, medium, subrounded, rust	0
				quartz; and fine to coarse, subrounded, white,	
				quartzite, dry, SW.	
5	10	3'4"	—	10" Sand, fine to medium, subrounded, rust	0
				brown, quartz; some gravel, fine, subrounded-	
				angular, white, quartzite; dry, SW.	
				1'10" sandy clay, brown / rust brown;	0
				Some gravel, fine, subrounded, white,	
				quartzite, SC	
				10" Silty clay, rust-brown (slight irregular	0
				grey clay layers), SM	
10	15	3'4"	—	1'3" silty clay, rust-brown, some sandy	0
				grey clay (irregular layered), SC	
				4" same as above but moist.	0
				1'9" Sand, fine to medium, subrounded, rust-brown	0

ARCADIS

Sample Log (Cont.d)

NY 001464.1990700156

Well/Boring SGP-13 Project Name and No. N-Grumman 003

Prepared By Przorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
10	15	cont	—	to brown, quartz, some gravel, fine, sub-rounded, angular, white, quartzite; dry, SW.	0
15	20	7"	—	Sand, fine to medium, sub-rounded, brown, quartz; some gravel, fine, subrounded, white, quartzite; dry, SW.	0
20	25	2'9"	—	Sand, fine to medium, sub-rounded, tan, quartz; some gravel, fine to coarse, sub-rounded, angular, white, quartzite; dry, SW	0
				End of Boring	

ARCADIS

Sample Log

NY001464.0807.0015G

Well/Boring SGP-13 Project Name and No. N - Grumman OU3

Site Location Bethpage, NY Drilling Started 5/31/07 Drilling Completed 5/31/07

Total Depth Drilled 25-50 feet Hole Diameter 2 inches Sampling Interval continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Macrocore sampler

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Env Driller Chad a Green Helper Willie Kennedy

Prepared By Prenorski Hammer Weight / Hammer ~~Drop~~ Pressure 2000 ~~inches~~ PSI

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
25	30	34"	—	5" silt, grey, dry.	0
				29" sand, fine to coarse, subrounded, brown to tan, quartz; some gravel, fine to coarse, subrounded, angular, white, quartzite; dry, SP.	0
30	35	26"	—	5" silt, grey, dry.	0
				21" sand, fine to medium, light brown, sub-rounded, quartz; some gravel, fine, sub-rounded, white, quartzite; dry, SP.	0
35	40	37"		11" silt, brown to grey, dry.	0
				26" Sand, fine to medium, subrounded, tan, quartz; trace gravel, fine, sub-rounded, white, quartzite; dry SP.	
				Gravel, fine to coarse, subrounded, white, quartzite (4" layer within above sand); dry	0

ARCADIS

Sample Log (Cont.d)

NY 001464.0807.0015G

Well/Boring SGP-13 Project Name and No. N-Grumman OU3

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
40	45	29"	—	1" silt, brown, dry	0
				22" sand, fine to coarse, subrounded, brown to light brown, quartz, some gravel, fine to coarse, subrounded, white, quartz; dry, last 11" moist, sp.	0
				5" clay, slightly silty, brown.	6
45	50	16"	—	1" clay, sandy-brown.	0
				15" sand, medium, subrounded, brown, quartz; trace gravel, fine, subrounded, white, quartz; dry	0
				(with irregular rotten banded brown & black clay)	0
				End of Boring	

Sample Log

NY001464.0807.0015G

Well/Boring SGP-14 Project Name and No. N-Grumman OU3

Site Location Bethpage, NY Drilling Started 5/31/07 Drilling Completed 5/31/07

Total Depth Drilled 50 feet Hole Diameter 2 1/4 inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Geoprobe Dual Tube System

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Env Driller Charles Green Helper Willie Kennedy

Prepared By Prezorski Hammer Weight ~~Drop~~ Hammer Pressure 2000 PSI ~~inches~~

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand dig	—	Asphalt, Sand, medium to fine, sub-rounded,	0
				brown, gravel, and gravel, fine to coarse,	
				sub-rounded/angular, white, quartzite, dry, sp.	
				Brown sandy clay	0
5	10	37"	—	20" Sand, fine to medium, sub-rounded, light-brown	0
				to reddish-dark brown, quartz, and gravel, fine to coarse,	
				sub-rounded, angular, white, quartzite, dry, sp.	
				11" sandy clay, light olive gray with irregular bands	0
				of brown sandy clay	
				6" Sand, fine to medium, sub-rounded, dark	0
				reddish brown to light reddish brown, quartz,	
				trace gravel, fine, sub-rounded/angular, white,	
				quartzite, dry, sp	
10	15	33"	—	Sand, coarse to fine, sub-rounded, reddish-brown	0
				to tan, quartz, some gravel, fine, sub-rounded, white	0

ARCADIS

Sample Log (Cont.d)

NY001464.6807.00156

Well/Boring SGP-14 Project Name and No. N-Grumman OU3

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
10	15	Cont	—	quartzite; dry, sp	0
15	20	22"	—	Sand, fine to medium, subrounded, tan,	0
				quartz, some gravel, fine, subrounded angular,	↓
				white quartzite; dry, sp.	↓
20	25	32"	—	Sand, fine to medium, subrounded, reddish	0
				brown to tan, quartz, some gravel fine to coarse,	↓
				subrounded, white, quartzite; dry, sp.	↓
25	30	30"	—	Sand, medium to fine, subrounded, tan,	0
				quartz, and gravel, fine to coarse, sub-rounded	↓
				angular, white, quartzite; dry, sp.	↓
30	35	32"	—	Sand, medium to fine, subrounded, light grey,	0
				quartz; trace gravel, fine, subrounded to angular,	↓
				white, quartzite; dry, sp	↓
35	40	28"	—	Sand, fine to medium, subrounded, tan, quartz,	0
				some gravel, fine, subrounded to angular, white,	↓
				quartzite; dry, sp.	↓
40	45	21"	—	11" Sand, fine to medium, subrounded, tan to	0
				reddish brown, quartz; some gravel, fine to coarse,	↓
				subrounded, angular, white, quartzite; dry sp.	↓
				10" slightly clayey dark brown sand	↓
45	50	3"	Note! from cuttings shoe	Sand, fine, subrounded, reddish brown, quartz; compact; dry.	0
				End of Boring	

ARCADIS

Adjacent Borehole to

Sample Log

NY001464.0807.0015G

Well/Boring SGP-14 Project Name and No. N-Grumman 003

Site Location Bethpage, NY Drilling Started 6/1/07 Drilling Completed 6/1/07

Total Depth Drilled 48 feet Hole Diameter 2 inches Sampling Interval 45-48 feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Macrocore Sampler

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Env Driller Rick Lyons Helper Willie Kennedy

Prepared By Prezorski Hammer Weight / Hammer ~~Drop~~ 2000 ~~inches~~ PSI Pressure

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
45	48	18"	—	Sand, medium to fine, subrounded, reddish-brown	0
				to light brown, quartz, and gravel, fine to	0
				coarse, white, quartz, dry, sp.	0
				End of Boring	

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Sample Log

NY001464.0007.00156

Well/Boring SGP-15 Project Name and No. N-Grumman 003

Site Location Bethpage, NY Drilling Started 6/5/07 Drilling Completed 6/5/07

Total Depth Drilled 35 feet Hole Diameter 2 inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Macrocore Sampler

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra ENV Driller Luke Caballero Helper Willie Kennedy

Prepared By Prezorski Hammer Weight ~~Drop~~ 2000 ~~inches~~ PSI Pressure

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand dig	—	Topsoil, grass, roots. Silty sand, reddish brown, subrounded, quartz,	0
				and gravel, fine to coarse, subrounded, angular,	↓
				white, quartzite; dry, sp.	↓
5	10	41"	—	1" grey silty clay	0
				13" sand, fine to medium, subrounded, reddish-	0
				brown to dark reddish brown, quartz, little gravel,	↓
				fine to coarse, subrounded, angular, white, quartzite; dry, sp	↓
				15" clay, sandy brown to silty grey.	0
				12" Sand, fine to medium, subrounded, reddish brown,	↓
				quartz, and gravel, fine to coarse, subrounded/angular,	↓
				white, quartzite; dry, sp.	↓
10	15	31"	—	Sand, medium to fine, subrounded, reddish brown	0
				to tan, quartz; some gravel, fine to coarse,	↓
				subrounded angular, white, quartzite; dry, sp	↓
15	20	33"	—	Sand, fine to medium, subrounded, tan, quartz, some	0

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Sample Log (Cont.d)

NY001464.0807.00156

Well/Boring SGP-15 Project Name and No. N-Grumman 003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
15	20	60"	—	gravel, fine to coarse, subrounded, angular, white, quartzite, dry, sp.	0
					0
				Gravel, fine, subrounded, angular, white, quartzite;	0
				3" band within above sand.	0
20	25	34"	—	Sand, medium to fine, subrounded, brown, quartz;	0
				some gravel; fine to coarse, subrounded angular,	0
				white, quartzite, dry, sw	0
25	30	30"	—	Sand, medium to fine, subrounded, reddish-brown,	0
				quartz; little gravel, fine to coarse, subrounded,	0
				angular, white, quartzite; sp	0
30	35	35"	—	Sand (compact), fine to medium, subrounded, reddish brown, quartz,	0
				and gravel, fine to coarse, subrounded, angular,	0
				white, quartzite, dry, sp.	0
35	40 OP			End of Boring	

ARCADIS

Sample Log

NY001464.0807.00156

Well/Boring: SGP-15

Project Name and No.: N-Grumman OU3

Site Location: Bethpage, NY

Drilling Started: 6/5/07

Drilling Completed: 6/6/07

Total Depth Drilled: 50 feet

Hole Diameter: 2 1/4 inches

Sampling Interval: 35-50 feet

Length and Diameter of Sampling Device: 5' Long x 2"

Type of Sampling Device: Geoprobe Dual Tube System

Drilling Method: Geoprobe Direct Push

Drilling Fluid Used: None

Drilling Contractor: Zebra Env

Driller: Luke Caballero

Helper: Willie Kennedy

Prepared By: Pirozzetti

Hammer Weight: —

Hammer ~~Drop~~ Pressure: 200 ~~inches~~ PSI

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	35	—	—	See previous sample log	—
35	40	19"	—	Sand, fine, subrounded, ~~tan, quartz~~; trace	0
				gravel, fine to coarse, white, quartzite, moist, SW	0
40	45	51"	—	Sand; medium to fine, subrounded, tan to brown,	0
				quartz; trace gravel, fine to coarse, subrounded, angular,	0
				white, quartzite, moist, SP.	0
45	50	50"	—	44" Sand, medium to fine; subrounded, light	0
				brown to reddish brown, ~~quartz~~ very trace	0
				gravel, fine to coarse, subrounded, angular,	0
				white, quartzite; 22" moist, 22" wet, SP	0
				6" clay, silty brown	0
				End of Boring	

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Sample Log

NY001461.0807.00015 G

Well/Boring SGP-16 Project Name and No. N-Grumman 003

Site Location Bethpage, NY Drilling Started 6/1/07 Drilling Completed 6/4/07

Total Depth Drilled 50 feet Hole Diameter 2 inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Macrocore Samples

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Willie Kennedy 6/1/07

Drilling Contractor Zebra Env Driller Rick Lyons Helper Tom Greeley 6/4/07

Prepared By Prezorski Hammer Weight — Hammer ~~Drop~~ 2000 ~~inches~~ PSI Pressure

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand dig	—	Sand, fine to medium, subrounded, brown,	0
				quartz; and gravel, fine to coarse, subrounded,	0
				white, quartzite; sp. Silty clay, dark brown to gray	0
5	10	41"	—	6" silty brown clay	0
				35" sand, medium to fine, subrounded,	0
				reddish-brown to tan, quartz, and gravel, fine	↓
				to coarse, subrounded angular, white, quartzite; sp	↓
10	15	26"	—	2" sand, medium to fine, subrounded, sp	0
				brown, quartz; some gravel, fine, subrounded	↓
				angular, white, quartzite; sp	↓
				6" silty brown clay	0
				18" sand, medium to fine, subrounded, tan to	0
				reddish-brown, quartz; and gravel, fine to coarse,	0
				subrounded angular, white, quartzite; sp	0
15	20	14"	—	Sand, medium to fine, subrounded, tan, quartz;	0

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Sample Log (Cont.d)

Well/Boring: SGP-16
Project Name and No.: NY001464.0807.00156 N-Grumman OU3
Prepared By: Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
15	20	cont	—	Some gravel, fine to coarse, subrounded	0
				angular, white, quartzite, sp	0
20	25	10"	—	sand, fine to medium, subrounded, tan,	0
				quartz; and gravel, fine to coarse subrounded	0
				& angular, white, quartzite; sp	0
25	30	23"	—	sand, fine to coarse, subrounded, light	0
				brown, quartz; and gravel, fine to coarse,	0
				subrounded & angular, white, quartzite; sp	0
30	35	16"	—	Sand, medium to fine, subrounded, reddish-brown,	0
				quartz; some gravel, fine to coarse, white,	0
				quartzite; sp	0
35	40	19"	—	sand, fine to medium, subrounded, reddish	0
				brown to light brown, quartz; trace gravel,	0
				fine, subrounded / angular, white, quartzite; sp	0
40	45	20"	—	Sand, fine to medium, subrounded, tan,	0
				quartz; sp	0
45	50	27"		Sand (Compact), fine to medium, subrounded, brown to tan,	0
				quartz; some gravel, fine to coarse, subrounded,	0
				angular, white, quartzite; sp	0
				End of Boring	

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Sample Log

NY001464.0807.00156

Well/Boring: SGP-19

Project Name and No.: N-Grumman OU3

Site Location: Bethpage, NY

Drilling Started: 6/11/07

Drilling Completed: 6/11/07

Total Depth Drilled: 20 feet

Hole Diameter: 2 inches

Sampling Interval: continuous feet

Length and Diameter of Sampling Device: 4' long x 2"

Type of Sampling Device: Macrocore sampler

Drilling Method: Geoprobe Direct Push

Drilling Fluid Used: None

Drilling Contractor: Zebra Env

Driller: Luke Ross

Helper: Willie Kennedy

Prepared By: Przorski

Hammer Weight: —

Hammer ~~Drop~~ Pressure 2000 ~~inches~~ PSI

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand Dig	—	Topsoil, grass, roots; sand, medium to fine,	0
				subrounded, brown, quartz; and gravel, fine to	0
				coarse, subrounded/angular, white, quartzite.	0
5	8	45"	—	3" sand, medium to fine, subrounded, dark brown,	0
				quartz; very trace, fine gravel, subrounded,	0
				white quartzite; dry, sp.	0
				Sandy ~~light~~ rust brown to brown clay (muscovite flakes visible)	0
8	12	45"	—	3.5" Sandy light brown clay (muscovite flakes visible)	0
				Next Sand, fine to coarse, subrounded, reddish-orange	0
				orange, quartz; and gravel, fine to coarse,	0
				subrounded/angular, white, quartzite; dry, sp	0
12	16	33"	—	Sand, fine to coarse, subrounded, reddish-brown,	0
				quartz; and gravel, fine to coarse, subrounded/angular	0
				white, quartzite; dry, sp.	0
16	20	29"	—	Sand, fine to coarse, subrounded, reddish-brown	0

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Sample Log (Cont.d)

Well/Boring SGP-19 Project Name and No. N Grumman OU3 NY001464.0807.00156

Prepared By Perzorki

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
16	20	cont	—	to tan, quartz and gravel fine to coarse,	0
				subrounded rangular, white quartzite; dry sp.	0
				End of Boring	

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP-100 Project/No. NY001348.0806.0002 Page 1 of 1

Site Location Bethpage Park OU3 Drilling Started 6/29/06 1300 Drilling Completed 6/29 1315

Total Depth Drilled 8 Feet Hole Diameter 2 1/4 inches Type of Sample/ Coring Device Geoprobe/Liners

Length and Diameter of Coring Device 5' 3" Ø Sampling Interval 5 feet

Land-Surface Elev. — feet ☐ Surveyed ☐ Estimated Datum —

Drilling Fluid Used None Drilling Method DPT

Drilling Contractor Zebra Driller Dan Helper Jim

Prepared By Mitch Wasserman Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
5	8	3		Medium to Coarse sand, damp, yellow to Rust colored. Some gravel present. At approximately 6½' bgs there is a 4" thick layer of tan silt.
				END OF Boring

SAMPLELG.XLS.xls
6/26/2006

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP-101 Project/No. NY000348.0806.0002 Page 1 of 1

Site Location Bethpage Park QS Drilling Started 6/29/06 1000 Drilling Completed 6/29/06 1100

Total Depth Drilled 40' Feet Hole Diameter 3 1/4 inches Type of Sample/ Coring Device Geoprobe Liners

Length and Diameter of Coring Device 5' 3" ø Sampling Interval 5' feet

Land-Surface Elev. — feet ☐ Surveyed ☐ Estimated Datum —

Drilling Fluid Used NONE Drilling Method DPT

Drilling Contractor Zebra Driller Ethan Helper Jim

Prepared By Mitch Mackiewicz Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample/Core Description
05	10	4'		Medium to coarse Sand, Yellow to tan colored, Damp. ONE Sand with some dark staining @ 8'-8'6" bgs. Some gravel present, quartz, White
10	15	4		Top 2' of sample Medium to coarse Sand as previous core. Bottom 2' Fine to Medium Sand, tan Damp with some quartz gravel present
15	20	4		Medium to coarse sand, damp, tan with some gravel present, quartz, White
20	25	3		Same as previous core
20	25			All Medium to Coarse Sand, quartz, Moist.
30	35	3		Medium to coarse Sand, tan, Moist with some gravel present.
				Maximum PID Reading 0.7ppm *
35	40	3'	top 2'	Medium to fine Sand, tan, Moist, NO gravel, Bottom 1' of sample Very fine hard packed Sand, Moist, very tight packed some silt present

Maximum PID Reading 0.3ppm

— Refusal of Equipment, ground very hard and high pressure at depth - Very tight Sand

END OF BOREHOLE

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6/26/2006

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP102 Project/No. NY001348.0806.0002 Page 1 of 1

Site Location Bethpage Park OU3 Drilling Started 6/29/06 0845 Drilling Completed 6/29/06 0900

Total Depth Drilled 8 Feet Hole Diameter 2 1/4 inches Type of Sample/ Coring Device Geoprobe / Liners

Length and Diameter of Coring Device 5' 3" Ø Sampling Interval 5' feet

Land-Surface Elev. — feet ☐ Surveyed ☐ Estimated Datum NA

Drilling Fluid Used NONE Drilling Method Direct Push

Drilling Contractor Zebra ENV Driller Eric Helper Jim

Prepared By Mitch Gadesman Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
5	8	3'		Medium to Coarse Sand, damp, light Brown with some gravel, quartz, White
				End of Boring

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP105 Project/No. NY001348.0806.00002 Page 1 of 2

Site Location Bathpage Park (Sycamore Ave) Drilling Started 6/28/06 9am Drilling Completed 6/28/06 11:45

Total Depth Drilled 45 Feet Hole Diameter 2 1/4 inches Type of Sample/Coring Device DPT w/ liners

Length and Diameter of Coring Device 5' 3" Ø Sampling Interval 5 feet

Land-Surface Elev. NA feet ☐ Surveyed ☐ Estimated Datum NA

Drilling Fluid Used NA Drilling Method DPT

Drilling Contractor Zebra ENV. Driller Ben Helper Jim

Prepared By Mitch MacLeod Hammer Weight — Hammer Drop — ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
0	5	3		Medium to Coarse Sand, tan with some gravel and cobble, semi-rand, quartz, white
5	10	5		Fine to coarse sad, damp, light orange-brown with some medium gravel, quartz, semi-round
10	15	5		Fine to Medium Sad, damp to light Brown with some Medium gravel, quartz, white
15	20	4		(from 15-17 feet sand & gravel as previous 17-19 all fine sand with trace silt, damp, Medium brown
20	25	4		Top 6" Silt with trace clay, wet, tan to Rust colored, Rest of sample fine Sand damp, tan to Reddish/Brown
25	30	3 1/2		Top 8" of Sample Silt with trace clay, Moist, tan colored. Rest of sample fine to Coarse Sand, tan, with some gravel present. Gravel is white, quartz.

ARCADIS GERAGHTY & MILLER

Sample/Core Log (Cont.d)

Boring/Well SGP10S

Page 1 of 2

Prepared by MW

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
30	35	3'		Top 2' of sample Medium to Coarse Sand, tan to brown, ~~Moist~~ Damp. With some gravel present Bottom 1' of sample Medium to Coarse Sand, Moist, brown to Rust colored, No gravel present.
35	40	3'		Top 2' of sample Medium to Coarse Sand, Damp, tan to Brown with some with gravel present. gravel, sand, white, quartz. Bottom 1' of sample medium to coarse Sand, Damp, Brown to Rust colored.
40	45	2'	Reached Refusal	Medium to Coarse Sand, Rust colored, damp
				END OF HOLE

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6/26/2006

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SGP104(7-7.5) Project/No. NY001348.0006.0002 Page 1 of 1

Site Location Syracuse Air Bellhouse

Drilling Started 6/27/06 2:00 Drilling Completed 6/27/06 2:05

Total Depth Drilled 8' Feet Hole Diameter 2 1/4 inches Type of Sample/ Coring Device Geoprobe/Liners

Length and Diameter of Coring Device 5' 3" Ø Sampling Interval 5' feet

Land-Surface Elev. — feet ☐ Surveyed ☐ Estimated Datum —

Drilling Fluid Used DONE Drilling Method Direct Push

Drilling Contractor Zebra Driller Dan Helper Jim

Prepared By MW Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
0	5'	Debris from hand Clearing		Sand, Medium, tan, dry 70% gravel (0.2-1" Ø, Rnd, Qtz 30%
5	8'	5'		Sand and gravel as previous
				END OF BORING

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6/26/2006

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Sample/Core Log

Boring/Well SG1-105 Project/No. NY000348.0806.0002 Page 1 of 1

Site Location Offsite Bathgate Park / Sycamore Ave Drilling Started 6/27/06 9:30am Drilling Completed 6/27/06 0945

Total Depth Drilled 8' Feet Hole Diameter 2 1/4 inches Type of Sample/ Coring Device DPT w/ Liners

Length and Diameter of Coring Device 5' 3" ø Sampling Interval 5' feet

Land-Surface Elev. — feet ☐ Surveyed ☐ Estimated Datum —

Drilling Fluid Used NONE Drilling Method DPT

Drilling Contractor Zebra Driller Evan Helper Jim

Prepared By Mitch Wenkstern Hammer Weight N/A Hammer Drop N/A ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
0	5	Clearing for bris		Medium Sand and gravel, Yellow to Rust colored. Quartz gravel 0.2-1" ø
5	8'	3'		Medium grain Sand, Yellow to Rust colored. Dry. Quartz gravel 0.2-1" ø
				END OF BORING

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well SB107 Project/No. NY001348.0806.0002 Page 1 of 1

Site Location Stewart Ave. Bethpage Drilling Started 6/27/06 1200 Drilling Completed 6/27/06 12:15

Total Depth Drilled 8 Feet Hole Diameter 3 1/4 inches Type of Sample/ Coring Device Geoprobe liners

Length and Diameter of Coring Device 5' 3" Ø Sampling Interval 5' feet

Land-Surface Elev. — feet ☐ Surveyed ☐ Estimated Datum —

Drilling Fluid Used NONE Drilling Method Push - DPT

Drilling Contractor Zebra Driller Dan Helper Luke

Prepared By MW Hammer Weight NA Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
5	8'	3'		Sand, Medium, tan/Rust, Dry 80%
				Gravel 30% 0.2-1" Ø, Round, Quartz
				END OF BORING

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6/26/2006

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Sample Log

NY001464.0807.0015G

Well/Boring SGP-108 Project Name and No. N-Grumman OU3

Site Location Bethpage, NY Drilling Started 4-4-07 Drilling Completed 4-4-07

Total Depth Drilled 25 feet Hole Diameter 2¼ inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5 'Long x 2" Type of Sampling Device Geoprobe Dual tube system

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Luke Reiss Helper

Prepared By Prezorski Hammer Weight — Hammer Drop — Inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand dry	—	Asphalt. Then fine to med brown sand,	0
				and fine to coarse quartzite gravel.	
5	10	2.92	—	2" quartzite stones. Then 4" fine to med rust-brown	0
				sand. Then 1" fine to coarse rust-brown sand;	0
				some fine quartzite gravel. Then 1" sandy brown clay.	0
				Then 5" fine to med rust brown sand. Then	0
				3" silty brown clay. Then 5.5" fine to coarse	0
				bright rust sand; some quartzite gravel. Then	0
				1'3" fine to med rust sand; and fine quartzite	0
				gravel. Then bright rust sand; some fine quartzite	0
				gravel.	
10	15	3.25	—	9" fine to med brown sand; and fine quartzite gravel,	0
				Then 5" fine quartzite gravel; some fine to med	0
				brown sand. Then 3" fine brown sand. Then	0
				1'3" fine to med brown sand; and fine to coarse	0

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4/4/07

Sample Log (Cont.d)

NY001464, 0807.00156

Well/Boring SGP-108 Project Name and No. N-Grumman 003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
10	15	CONT.	—	quartzite gravel. Then 6" fine to coarse quartzite gravel.	0
15	20	1.3	—	fine to med brown sand, and fine quartzite gravel. Then med brown sand, trace fine quartzite gravel.	0
20	25	1.75	—	Fine to med brown sand, and fine quartzite gravel.	0
				End of Boring	

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Sample Log

NY001464.0807.0015G

Well/Boring SGP-108 Project Name and No. N. Grumman OU3

Site Location N. Sixth street Bethpage, NY Drilling Started 4/5/07 Drilling Completed 4/5/07

Total Depth Drilled 25 to 35 feet Hole Diameter 2¼ inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Geoprobe Dual tube system for 25-30'. Then macrocore sampler for 30-35'.

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Luke Reiss Helper Quincy Brandt

Prepared By Prezorski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
25	30	2.42	—	8" fine to med light brown sand; some fine	0
				quartzite gravel. Then 1" fine brown sand. Then	0
				5" light brown fine sand with bands of dark	0
				brown fine sand. Then 3" fine to med brown	0
				sand; and fine quartzite gravel. Then 2"	
				fine to med brown sand; trace fine quartzite gravel.	0
				Then 6.5" fine to med light brown sand;	0
				some fine quartzite gravel.	
30	35	1.1 (In pile)	—	Fractured quartzite stones; and fine to med	0
				brown sand; some clumps sandy brown clay.	
				End of boring	

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Sample Log

NY0014164.0807.00156

Well/Boring SGP-108 Project Name and No. N-Grumman 003

Site Location N. Sixth street Bethpage, NY Drilling Started 4-17-07 Drilling Completed 4-17-07

Total Depth Drilled 35-55 feet Hole Diameter 2 1/4 inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Geoprobe dual tube system

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Evan N. Helper Quincy B.

Prepared By Prezorski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
35	40	2.75	—	Approx 3" grey silt, Then approx 6" f/c gravel; trace grey silt. Then 1" fine quartzite gravel; some med brown sand. Then 1.5" same with some brown silt. Then 1.5" quartzite gravel and med brown sand. Then 1' f/m dark brown sand; some f/c quartzite gravel. Then slightly clayey rust brown sand	0
40	45	3.67 (44 inches)		3.5" slightly silty rust clay. Then 1" fine beige sand. Then 2" silty rust clay. Then 3" banded grey & rust clay/sand. Then 6" Grey clay banded with fine rust sand. (concentrated bands) Then 3.5" fine rust sand. Then 2" Grey clay banded with rust fine sand. Then 1' light beige sand with thin bands light brown fine sand. (Core bound at rust sandy clay)	0

Sample Log (Cont.d)

NY00NG4.0807.0015G

Well/Boring SGP-108 Project Name and No. N-Grumman OU7

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
40	45	cont	—	Then 7" fine rust sand with bands of light beige fine sand. Then ½" sandy light grayish dark grey clay.	0
45	50	3.67	—	Approx 3" fine rust + Beige sand (noble) Then 1" Sandy rust clay, Then 10" fine rust & beige sand (Irregular Bands) Then ½" sandy rust clay, Then 1'6" fine light rust + beige sand. Then 7" Very light beige sand; trace rust fine sand. Then 2" Concentrated banded grey clay in rust sandy clay, then 1" Very light beige sand. Then ½" rust sandy clay.	0

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Sample Log (Cont.d)

NY001464.0807.00156

Well/Boring SGB-16 Project Name and No. N-Grumman 003

Prepared By Prezioti

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
50	55	4.16	—	Approx 7" Grey clay with irregular bands of rust fine sand & grey fine sand. Then 2" rust fine sand with (irregular bands) grey fine sand. Then 1" rust fine sand. Then 5.5" rust fine sand with (irregular bands) grey fine sand. Then ~~fine~~ 1" sandy rust clay. Then 1" grey clay. Then 1.5" F/M light beige sand. Then 3.5" F/M light beige sand with bands of sandy rust clay & grey clay; moist. Then 3" Sandy rust clay with band of grey clay, moist. Then 4" F/M rust brown sand, wet. Then 3.5" bands of rust sandy clay, beige sand, dark grey/grey clay, rust sandy clay. Then 2" F/M rust brown sand. Then 1" banded clays (rust sandy clay, dark grey/grey clay). Then 1" F/M rust brown sand Then 3" banded clays (rust sandy clay, dark grey/grey clay) Then 1.5" F/C rust brown sand. Then 1" rust F/M sand. Then 8.5" rust brown sand. Then 1" grey clay. End of Boring	0

wet

Sample Log

Well/Boring SGP-109 Project Name and No. N-Grumman OU3 NY001464.0807.0015G

Site Location Bethpage, NY Drilling Started 3/30/07 Drilling Completed 3/30/07

Total Depth Drilled 45 feet Hole Diameter 2¼ inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Geoprobe Dual tube system

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Env Driller Charles Green Helper Bob Burava

Prepared By Prezorski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand dig	—	Grass, roots, topsoil; fine to coarse quartzite gravel.	0
				Then med light brown sand; and fine to coarse gravel.	
5	10	2.66	—	1'4" fine to med light brown sand; and fine to	0
				coarse quartzite gravel. Then ~~S~~ fine to med	0
				rust sand; and fine to coarse quartzite gravel	
10	15	—	—	No recovery. (Quartzite stone stuck in sampler)	—
15	20	2.42	—	3" fine to med dark brown sand; ~~and~~ trace fine	0
				quartzite gravel. Then 2" fine quartzite	0
				gravel; trace med light brown sand. Then 8"	0
				fine to coarse light brown sand and fine to	
				coarse quartzite gravel. Then 1" ~~fractured~~	0
				fractured Quartzite stone. Then 1'4"	0
				fine to med light brown sand; and fine to coarse	
				quartzite gravel	
20	25	3.17	—	4" fine brown sand. Then 2" fine dark	0

Sample Log (Cont.d)

Well/Boring SGP-109 Project Name and No. N-Grumman OU3 NY00 1464.0807.0015G

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
20	25	CONT.		brown sand. Then 6" dark brown	0
				silty clay. Then 2" fine to med brown sand;	0
				some silty brown clay. Then 3.5" fine	0
				tan sand. Then 2.5" light brown sand.	0
				Then 1" quartzite stone. Then 8" fine	0
				light brown sand; some fine quartzite gravel.	
				Then 8" light brown silt; and fine light brown	0
				sand; and fine quartzite gravel. Then 3" fine	0
				beige sand.	
25	30	2.92	—	5" fine beige sand; trace fine quartzite gravel.	0
				Then 5" fine beige sand; and fine quartzite gravel.	0
				Then 5" fine beige sand. Then 1'6" fine	0
				beige sand; and fine quartzite gravel.	
30	35	—		No recovery	—
35	40	2.42	—	5" grey silt; some fine to med grey sand. Then	0
				2'1" fine light brown sand; some med light brown	0
				sand; some fine quartzite gravel; some beige silt	
40	45	2.84	—	1'1" fine rust sand; some rust silt.	0
				Then fine to med rust sand; some rust silt; some	0
				fine quartzite gravel. Then 3" fine rust sand	0
				Then 5" fine rust sand; and fine quartzite	0

Sample Log (Cont.d)

Well/Boring SGP-109 Project Name and No. N-Grumman 003 NY001464.0807.0156

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
40	45	Cont.		gravel. Then 2.5" fine rust & beige	0
				sand	
				End of Boring	
				Refused at 45'	

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Sample Log

Well/Boring SGR-110 Project Name and No. N-Grumman 003 / NY001464.0807.001SG

Site Location Sycamore Ave, Bethpage NY Drilling Started 3/26/07 Drilling Completed 3/26/07

Total Depth Drilled 40 feet Hole Diameter 2 inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Diameter Type of Sampling Device Macrocore

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Charles Green Helper Robert Barana

Prepared By Prezorski Hammer Weight N/A Hammer Drop N/A inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand DSP	—	Asphalt, roots, topsoil, med brown sand and fine to coarse gravel.	0
5	10	4'5"		Brown med sand and brown silt and fine gravel, quartzite. Then 1'6" rust silt and med rust sand and fine gravel, quartzite. Then 1'10" fine to med rust sand, some fine gravel, quartzite. Then 11.5" fine brown sand, some brown silt, some fine quartzite gravel. Then 3" med rust sand, trace fine quartzite gravel.	0 0 0 0 0
10	15	3'10"		1" beige silt, some beige sand. Then 5" fine rust sand. Then 4" fine to coarse rust sand and fine gravel, quartzite. Then 6" fine to med rust sand, trace fine gravel, quartzite. Then 8" fine to med rust sand, some fine gravel, quartzite. Then 2" fine gravel.	0 0 0 0 0

Sample Log (Cont.d)

NY001464.0807.10015G

Well/Boring SGP-110 Project Name and No. N- Grumman OU3

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
10	15	Cont.		some coarse rust sand. Then 1'3"	0
				fine to med rust sand; some fine quartzite gravel.	
15	20	3'2"		1" beige silt; trace fine gravel, quartzite.	0
				Then 1'7" fine to med rust sand; trace	0
				fine gravel, quartzite. Then 3.5" fine	0
				to coarse gravel; and fine to coarse rust sand.	
				Then 1.5" black stained sand (no odor);	0
				some fine to coarse gravel, quartzite.	
				Then 3" fine to med rust sand; trace	0
				fin gravel, quartzite. Then 1" fine gravel,	0
				quartzite. Then 5" fine rust sand (trace	0
				med rust sand). Then 1" fine gravel quartzite.	0
				Then 3" fine light rust sand.	0
20	25	3'8"		1' fine light rust sand with thin bands of	0
				dark rust. Then 8.5" fine to med lighter	0
				rust sand; some fine gravel, quartzite.	
				Then 2" fine gravel, quartzite. Then	0
				6" fine to med beige sand; some fine	0
				gravel, quartzite. Then 2" fine to med	0
				brown sand; some fine gravel, quartzite. Then	
				1" fine gravel, quartzite (with 2 bands dark rust sand). Then 4" fine brown	0

Sample Log (Cont.d)

NY001464.0807.00156

Well/Boring SGP-110 Project Name and No. N-Grumman 003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
20	25	Cont.		sand with 2 bands of dark brown. Then	
				4" fine to med brown sand; and fine	0
				gravel, quartzite. Then 4" fine to med	0
				beige sand.	
25	30	3'3"		1" compressed brown silt; and fine gravel,	0
				quartzite. Then 3" fine gravel, quartzite,	0
				Then 2" med light rust sand; and fine	0
				gravel, quartzite. Then 2" fine brown sand	0
				with bands of dark brown. Then 2" fine	0
				gravel, quartzite; and med to coarse beige sand.	
				Then 2" fine light brown sand with	0
				bands of dark brown. Then 2" fine light	0
				brown sand; some gravel, quartzite. Then 4.5'	0
				fine light brown sand.	
30	35	1'8"		1" fine quartzite gravel; and fine to med	0
				beige sand. Then 10" fine light beige sand,	0
				some bands of dark brown. Then 3" fine to med beige	0
				sand; and fine gravel, quartzite. Then 2"	0
				fine to coarse gravel; some beige med sand.	
35	40	2'3"		4" brown silt, and trace fine gravel, quartzite.	0
				Then 8.5" fine to coarse beige sand; some	0

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Sample Log (Cont.d)

NY001464.0707.000156

Well/Boring SGP-110 Project Name and No. N-Grumman 003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
35	40	Cont.		fine gravel, quartzite; some med rust sand.	
				Then 1.5" fine to coarse rust sand; and	0
				fine gravel, quartzite. Then 2" brown clay	0
				Chard). Then 6" fine dark rust sand.	
				Then 3" fine brown sand; some fine	
				gravel, quartzite. Then fine to med	
				brown sand; and fine to coarse gravel, quartzite	
				End of Boring	

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Sample Log

NY001464.0607.00156

Well/Boring SGP-110 Project Name and No. N- Grumman 063

Site Location Sycamore Ave, Bethpage NY Drilling Started 3/29/07 Drilling Completed 3/29/07

Total Depth Drilled 40-57 feet Hole Diameter 2 inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Geoprobe Dual tube system

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Charles Green Helper Luke Reiss

Prepared By Prazorski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
40	45	3.83	—	Approx 5" brown silty, ~~and~~ trace fine quartzite	0
				gravel; and med brown sand. Then 2'3"	0
				silty brown clay (very compact). Then 5" fine	0
				rust sand. Then 1' banded sandy rust clay and	0
				grey silty clay.	
45	50	2.75	—	7" Irregular banded fine grey sand &	0
				fine tan sand. Then 1.5" banded sandy	
				grey clay & sandy light brown clay. Then	
				5" grey fine sand with bands of light	
				brown fine sand. Then 1" sandy light	
				brown clay. Then 10" fine grey sand with	
				some thin bands of rust sandy clay. Then	
				9" fine rust sand; some bands of sandy	↓
				rust clay.	
50	55	2.67	—	1'1" fine rust sand & fine grey sand with	

Sample Log (Cont.d)

NY001464.0807.00156

Well/Boring SGP-110 Project Name and No. N-Grumman OU3

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
50	55	CONT	—	one thin rust sandy clay band. Then	0
				7" grey fine sand & brown fine sand.	0
				Then 1' 3" fine to med brown sand, wet.	0
55	57	2.33	—	Fine Brown sand; wet.	0
				(with very thin single grey silty clay band)	
				End of Boring	

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Sample Log

NY001464.0807.0015G

Well/Boring SGP-111 Project Name and No. N-Grumman OU3

Site Location Sycamore Ave; Bethpage, NY Drilling Started 4/5/07 Drilling Completed 4/5/07

Total Depth Drilled 30 feet Hole Diameter 2 inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Macrocore Sampler

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Luke Reiss Helper Quincy Brandt

Prepared By Prezorski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand Dig	—	Asphalt, Then fine to med brown sand; and fine to coarse	0
				quartzite gravel. Then fine to med light brown sand;	0
				some fine quartzite gravel.	
5	10	4.17	—	10" fine to med beige sand; and beige silt;	0
				some fine quartzite gravel. Then 1" fine rust sand;	0
				some fine quartzite gravel. Then 10" fine to	0
				med rust sand; and fine quartzite gravel. Then	
				1" fine quartzite gravel. Then 2.5" fine to med	0
				rust sand; and fine quartzite gravel. Then 3"	
				fine to med rust sand. Then ½" fractured quartzite	0
				stone. Then 7" med rust sand. Then 1" fine	
				quartzite gravel; some fine to med rust sand, Then	0
				4" fine to med rust sand; some fine quartzite gravel.	0
				Then 1" fractured quartzite stone. Then 3.5"	
				fine to med rust sand; some fine quartzite gravel.	0

Sample Log (Cont.d)

NY001464.0807.0015G

Well/Boring SGP-111 Project Name and No. N-Grumman OU3

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
5	10	CONT.	—	Then large quartzite stone; Then fine to	0
				med. rust sand; and rust silt; some fine quartzite	
				gravel.	
10	15	4.6	—	Approx 4" fine to coarse brown sand; some fine to	0
				coarse gravel. Then 7" fine to med rust sand;	0
				trace rust silt; some fine to coarse quartzite gravel.	0
				Then 3" fine rust sand; and beige silt; trace	0
				~~fine~~ fine quartzite gravel. Then 2.5" fine rust	0
				sand; and beige silt; and fine quartzite gravel.	0
				Then 1'2" fine to med brown sand; and	0
				fine to coarse quartzite gravel. Then 3"	0
				fine to med brown sand; some brown silt;	0
				some fine gravel, Then 5" light brown silt;	0
				some fine quartzite gravel; trace fine to med brown	0
				sand. Then coarse gravel (quartzite stones), Then	0
				2.5" fine to med rust sand; trace fine quartzite	0
				gravel. Then 1.5" fine quartzite gravel. Then	0
				2" coarse gravel (2 fractured quartzite stones)	0
				Then 1.5" fine to coarse rust sand. Then	0
				1" fine quartzite gravel. Then 1.5" fine	0
				quartzite gravel and fine to med rust sand.	0

Sample Log (Cont.d)

N-Grumman 043

Well/Boring SGP-111 Project Name and No. NY001464.0807.00156

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
10	15	CONT.	—	Then 5" med rust sand; trace fine rust sand; some fine quartzite gravel.	0
15	20	2.92	—	2" fractured quartzite stone. Then 1.5" brown silt; and fine quartzite gravel. Then 2" beige silt; + fine quartzite gravel. Then 4" fine to coarse rust sand. Then 1.5" fractured Quartzite stone. Then 9" fine to med rust sand. Then 3" fine to coarse rust sand. Then 1" fine to coarse dark rust sand. Then 1" Sandy brown clay. Then 4.5" fine brown sand. Then 1" sandy brown clay. Then 2-3" fine brown sand. Then 3.5" slighty clayey brown sand.	0
20	25	1.84	—	2" fractured quartzite stones. Then 6" fine brown sand. Then 1.5" fractured quartzite stones. Then fine to med. light brown sand; and fine to coarse quartzite gravel.	0
25	30	In piles (Liner stuck in macrocore sampler)	—	Approx 8" fine beige sand; and beige silt; some fine quartzite gravel. Then approx 6" brown silt; and fine to coarse quartzite gravel.	0
				End of Boring	

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Sample Log

NY001464.0807.0086

Well/Boring SGP-111 Project Name and No. Grumman OU3

Site Location Sycamore St Bethpage, NY Drilling Started 4/16/07 Drilling Completed 4/16/07

Total Depth Drilled 30-55 feet Hole Diameter 2¼ inches Sampling Interval Continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Dual Tube system

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Charles Greer Helper Evan

Prepared By Prezorski Hammer Weight — Hammer Drop — Inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
30	35	4.16	—	Approx 1'3" F/C tan sand; some fine quartzite gravel. Then 11" F/M tan sand. Then ½" fine quartzite gravel. Then 2" fine quartzite gravel; and F/M tan sand. Then 8" fine quartzite gravel, trace F/M tan sand. Then 5" F/M rust sand; and F/C quartzite gravel. Then 5" F/M rust sand; trace fine quartzite gravel	0
35	40	4.58	—	Approx 6" F/M rust sand; trace fine quartzite gravel. Then 1" fractured coarse gravel (stone) Then 2" F/M brown sand; and fine quartzite gravel. Then dark brown fine sand; trace fine quartzite gravel. Then 3" fine rust sand.	0

Sample Log (Cont.d)

NY001464.0807.00156

Well/Boring SGP-111 Project Name and No. N-Grumman OU3

Prepared By [illegible] 4-16-07

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
35	40	cont	—	Then 2" slightly clayey rust fine sand. Then 1' fine rust sand with trace bands of grey. Then appx 8" fine rust sand, trace bands of grey fine sand; trace (2 clumps) sandy rust clay. Then 7" fine beige sand, trace bands of grey. Then 11" fine banded rust & beige sand.	0
40	45	3.83	—	±2" slightly clayey rust fine sand. Then 1' irregular rust bands in beige fine sand. Then 2" fine rust sand slightly clayey rust fine sand. Then 1' fine beige sand with bands of fine rust sand. Then 2" fine beige sand with thin rust sandy clay. Then 5.5" beige fine sand with bands of rust fine sand. Then 1" rust sandy clay. Then 6.5" fine beige sand with bands of rust fine sand. Then rust fine sand with band of sandy rust clay and beige sand.	0
45	50	4.25	—	(See bottom of next page)	

Sample Log (Cont.d)

NY001464.0607.00156

Well/Boring SGP-11 Project Name and No. Grumman 003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
50	55	4.25	—	3" fine orange sand, moist. Then 1'1" fine rust sand with banded grey fine sand, moist. Then 4" same but wet. Then 1'4" fine tan sand with 6 thin banded slightly sandy rust clay and banded dark grey fine sand, wet. Then 1'1" f/M tan sand with trace bands of fine grey sand, very wet. End of Boring	0
45	50	4.25	—	Approx 2" slightly clayey rust sand. Then 9" fine light rust sand. Then 3" banded grey/dark grey fine sand with sandy rust clay. Then 3.5" fine beige sand with bands of rust fine sand. Then 5" rust fine sand with trace bands beige sand. Then 1.5" beige sand, trace thin bands rust fine sand Then 1'1" rust fine sand banded with trace beige fine sand. Then ± 1" beige fine sand. Then 3" fine rust sand,	0

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Sample Log (Cont.d)

NY 40464, 0607, 10156

Well/Boring SGP-111 Project Name and No. Grumman 043

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
45	50	cont	—	Then 3" banded rust sandy clay, with dark grey fine sand & beige fine sand, Then 2" beige fine sand, Then 2" rust sandy clay banded with dark grey fine sand, beige fine sand, Then 2" fine beige sand, Then 1" fine rust sand.	0
				End of Boring	

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Sample Log

NY001464.0907.0015G

Well/Boring SGP-112 Project Name and No. N-Grumman OU3

Site Location Sycamore Ave, Bethpage NY Drilling Started 4/3/07 Drilling Completed 4/3/07

Total Depth Drilled 52.5 feet Hole Diameter 2¼ inches Sampling Interval Continous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Geoprobe Dual tube system

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Shawn Tisdale Helper Luke Ross

Prepared By Prezorski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand dig	—	Asphalt, Then brown sand; and fine to coarse quartzite gravel	0
5	10	2	—	5" fine to med bright rust sand; some fine quartzite gravel. Then 4" fine to medium rust sand; trace fine quartzite gravel. Then 7.5" fine to med dark rust sand; and fine quartzite gravel. Then 7" fine to med tan sand; some fine quartzite gravel.	0
10	15	3.25	—	7" fine to med brown sand; trace fine quartzite gravel. Then 2" fine quartzite gravel; and fine to med brown sand. Then 5" fine to med brown sand; Then 6" fine to med rust sand, and fine quartzite gravel. Then 5" coarse rust-brown sand; and fine quartzite gravel. Then 6" fine to coarse rust-brown	0

Sample Log (Cont.d)

NY004464.0807.001SG

Well/Boring SGP-112 Project Name and No. N-Grumman 003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
10	15	Cont	—	Sand, and fine quartzite gravel. Then	
				5" fine to coarse tan sand, trace fine	0
				quartzite gravel	
15	20	3.83	—	Approx 1'1" fine to med tan sand, and	0
				fine quartzite gravel. Then 1' fine light	0
				brown sand with bands of dark rust. Then	0
				1.5" sandy brown clay with bands of fine rust sand,	0
				Then 7" sandy brown clay. Then fine	0
				brown sand.	
20	25	2.79	—	6" sandy brown clay. Then 2" fine brown sand,	0
				Then 9" brown sandy clay with band of fine rust	0
				sand. Then 2" sandy brown clay with irregular	0
				thin bands of rust. Then 1' fine tan sand	0
				with bands of rust. Then 2.5" sandy brown clay	0
				with bands of fine rust sand.	
25	30	Approx 2'	—	7" fine bright rust sand, some fine quartzite gravel,	0
	(In line pile stuck in sampler)			Then 5" brown fine sand. Then light brown sand,	0
				some fine quartzite gravel. Then fine to med light	0
				brown sand, and fine quartzite gravel, and light	0
				brown silt,	
30	32.5	1.83	—	Approx 7" grey silty and fine quartzite gravel,	0

Sample Log (Cont.d)

NY001464.0807.00156

Well/Boring SGP-112 Project Name and No. N Grumman 003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
30	32.5	cont	—	Then 1" dark grey silt. Then 7" fine to	0
				med light rust brown sand; some fine quartzite	0
				gravel. Then 9" med light brown sand.	0
				Then 3" fine to med very dark rust sand.	0
32.5	35	2	—	Fine very dark rust sand; some fine	0
				quartzite gravel.	
35	37.5	2	—	Fine very dark rust sand; trace fine quartzite	0
				gravel	
37.5	40	2	—	Approx 3" very dark rust sand, trace fine	0
				quartzite gravel. Then fine rust sand with	0
				irregular bands of grey.	
40	42.5	2.5	—	Approx 6" fine very light beige sand. Then 3"	0
				slightly clayey rust sand. Then 6" fine very	0
				light beige sand with thin band of ~~sand~~ slightly	0
				sandy rust clay. Then 10.5" fine very light	0
				beige sand with thin and ½" bands of	0
				sandy rust clay.	
42.5	45	1.58	—	Approx 4" fine rust sand. Then 10" very	0
				light fine beige sand with thin bands of dark	0
				brown & rust. Then 1.5" sandy rust clay	0
				with bands of dark brown. Then 2.5" light	

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4/3/07

Sample Log (Cont.d)

NY001464.0807.001SG

Well/Boring SGP-112 Project Name and No. N-Grumman OU3

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
42.5	45	Cont.	—	fine beige sand with bands of rust & dark brown.	0
45	47.5	1.92	—	10.5" light beige fine sand with irregular bands of rust. Then 1" sandy rust clay with bands of dark brown. Then 1' very light beige fine sand with bands of dark grey & rust. Then fine rust sand.	0
47.5	50	2.5	—	Approx 6" light beige fine sand with bands of rust fine sand; wet. Then 5" rust fine sand with ½" band of sandy rust clay; wet. Then 1'8" fine very light beige sand with irregular bands of rust fine sand; moist.	0
50	52.5	2.5	—	2" standing water. Then fine to med rust sand. Then 10" fine to med light Beige sand with bands of dark grey. Then 6" fine rust sand (very slightly clayey). Then 4" light beige & rust fine sand (Banded); one small clump of grey clay. End of Boring.	0

wet

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Sample Log

NY001464.1067.00150

Well/Boring SGP-115 Project Name and No. Grumman OU3

Site Location Bethpage, NY Drilling Started 3/19/07 Drilling Completed 3/19/07

Total Depth Drilled 35 feet Hole Diameter 2 inches Sampling Interval continuous feet

Length and Diameter of Sampling Device 5' Long x 2" Type of Sampling Device Macrocore sampler

Drilling Method Geoprobe Direct Push Drilling Fluid Used None

Drilling Contractor Zebra Driller Charles Crean Helper Luke Reiss

Prepared By Prezioski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	2.67	—	Topsoil, roots, fine to coarse quartzite gravel,	0
				Then light Brown/dark brown med sand and	0
				fine quartzite gravel Then med rust sand.	0
5	10	3.42	—	4" topsoil; Brown med sand, Then 3" silty	0
				light Brown clay, Then 1'4" F/M rust sand;	
				Some fine gravel. Then 2" darker rust	
				F/M sand; some fine quartzite gravel, Then	
				3" F/M rust sand; some fine gravel. Then	
				fine 3" rust sand. Then 4" F/C rust sand;	
				some fine quartzite gravel, Then F/M rust sand.	
10	15	2.92	—	2" fine rust sand. Then 3" dark brown	0
				fine sand; trace fine quartzite gravel. Then	
				2" Brown silt, Then 5" F/M rust sand.	
				Then 4" F/C rust sand. Then Approx 1'	
				F/M rust sand; some fine quartzite gravel,	

Sample Log (Cont.d)

NY001464.0807.00150

Well/Boring SGP-115 Project Name and No. Grumman 003

Prepared By Prczorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
10	15	cont	—	Then 4" fine quartzite gravel, Then	0
				4" coarse gravel (quartzite); and rust silt.	0
15	20	3	—	4" coarse gravel; and rust silt, Then	
				F/M rust sand, Then 9" F/C rust sand,	
				and f/c quartzite gravel, Then 1.5"	
				fine quartzite gravel, Then 1'3" F/M	
				rust sand; trace fine quartzite gravel. Then	
				2.5" F/C rust sand, Then F/M rust	
				sand; some fine quartzite gravel.	↓
20	25	3.16	—	½" brown silt. Then 1" F rust sand, Then	0
				4" fine Light brown sand, Then 2" silty	
				brown clay, Then 7" light brown sand, Then	
				6.5" beige fine sand, Then 3" rust/beige	
				fine sand, Then 2" silty rust sand, Then	
				5" silty brown clay, Then 2" same but	
				less hard, Then 1" rust fine sand, Then	
				8" fine beige sand	↓
25	30	2.67	—	3.5" fine rust sand, Then 9" Beige	0
				fine sand, Then 1.5" fine rust sand,	
				then 3" silty Brown clay, Then 4.5"	
				Fine Beige sand, Then ½" silty brown clay	↓

Sample Log (Cont.d)

NY001464.0607.00150

Well/Boring SGP-115 Project Name and No. N-Grumman OU3

Prepared By Prizonski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
25	30	cont.	—	Then 2" fine beige sand, Then 3"	0
				silty brown clay (hard), Then 7.5"	0
				fine rust sand,	
30	35	1.67	—	FIM rust sand, some fine gravel	0
				gravel.	
				End of Boring	

Sample Log

Well/Boring F-6-SB Project Name and No. NGC-04-3/NY001464.0807.000150

Site Location Bethpage, NY Drilling Started 4/18/07 Drilling Completed 4/19/07

Total Depth Drilled 56 feet Hole Diameter 6 inches Sampling Interval 0-56 feet

Length and Diameter of Sampling Device 2ft length/2" diameter Type of Sampling Device Stainless Steel Split Spoon

Drilling Method Hollow Stem Auger Drilling Fluid Used None

Drilling Contractor Delta Driller Jason Pittel Helper Tom Romano

Prepared By John Corral Hammer Weight ~140lbs Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
24	26	9,11,11,11	10"	Med to course light brown sand with trace fine gravel, qtz, subrounded, moist	0.6
REP 041907					
26	28	6,13,19,23	15"	Med to course light brown sand with little fine + med gravel, qtz, subrounded, moist	2
28	30	21,31,38,44	14"	Med brown sand with some course sand and little fine gravel, qtz, subrounded, moist	1.5
* (30-32 Missed Discrepancy)*		7,13,19,31			
32	34	17,12,12,20	15"	Medium + course light brown sand with little, fine + med gravel, qtz, subrounded, very moist	1.0
34	36	9,9,18,25	16"	Med light brown sand with some course sand + trace fine gravel, qtz, subrounded, moist	3.0
36	38	20,20,33,33	14"	top 7" med light brown sand, qtz with little fine + med gravel (from 6-7" stained dark red/black), next 7" med to course brown sand with little fine toned gravel, qtz, subrounded moist	1.0
38	40	21,29,34,37	12"	top 7" med to course light brown sand with some fine gravel, qtz, sub rounded moist, red to course light brown sand + fine gravel with some qtz, subrounded, moist	1.0

Sample Log (Cont.d)

Well/Boring F-6-SB Project Name and No. NGC-OU-3/NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
40	42	17"	5,8,13,25	top 6" med to coarse brown sand with little fine gravel, wet bottom 11" reddish brown med sand with trace gravel qtz, subrounded, moist	1
42	44	11"	8,9,9,47	top 6" med to coarse brown sand with little fine gravel wet, bottom 5" tan brown clay with some fine sand, moist, qtz, subrounded	0,5
44	46	15"	10,18,27,44	top 3" ~~med to coarse~~ brown fine to med, coarse sand + clay, wet, clay and fine sand, ~~tan with some black~~ tan tannish tan with some black, qtz, subrounded, moist	6,5
46	46	14"	3,6,15,20	top 7" fine brown sand + tan clay, wet, next 5" fine brown sand with some black sand, last 2" tan clay with little fine sand, qtz, subrounded, moist	0,5
48	50	15"	10,5,20,15	top 13" tanish black clay with some fine sand qtz, subrounded, moist, bottom 2" fine sand with thin (.1") alternating brown black layers, qtz, subrounded moist	0,5
50	52	14"	6,10,14,20	fine sand and silt greyish black (bottom 3" brown grey + black), qtz, subrounded, moist	
52	54	17"	4,14,28,28	top 6" tan clay + fine greenish brown sand, wet, next 11" greenish brown fine sand with some silt, qtz subrounded moist	0,3
54	56	20"	16,20,20,24	top 6" fine greenish brown sand + silt; wet next 6" tan clay greenish brown silt; wet 8" fine sand with some medium sand + silt. greenish brown wet	0,2

End of Boring

ARCADIS

Sample Log

Well/Boring F-7-SB Project Name and No. NGC-OU-3 / NY001464.0807.00150

Site Location Bethpage Community Park Drilling Started 4/19/07 Drilling Completed 4/20/07

Total Depth Drilled 52 feet Hole Diameter 6 inches Sampling Interval Continuous 0-52 feet

Length and Diameter of Sampling Device 2 ft long / 2" wide Type of Sampling Device Stainless Steel Split Spoon

Drilling Method Hollow Stem Auger Drilling Fluid Used None

Drilling Contractor Delta Driller Bob Devine Jr Helper Tom Romano

Prepared By John Corral Hammer Weight ~140 lbs Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	2	14"		top 4" ~~organ~~ black organic soil, bottom 10" brown med to fine sand with some fine gravel, qtz, subrounded moist	0
2	4	16"		top 8" brown fine to medium sand with little fine to medium fine gravel, 1 piece of black stained hard material 1" diameter, bottom 6" light brown med sand with little fine gravel	0
4	6			Sean missed description	0
6	8	12"		med brown sand with little coarse sand and fine gravel (from 6"-7" black staining), qtz, subrounded, moist	6
8	10	14"		med to course brown sand with little fine gravel, qtz subrounded, moist	0
10	12	15"		med to course light brown sand with little fine + medium gravel, qtz, subrounded, moist	0
12	14			Sand as 10-12	

Sample Log (Cont.d)

Well/Boring F-7-SB Project Name and No. NGC-OU-3/NY001464.0807.0050

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
14	16	10"		med to course brown sand with little fine gravel, qtz, subrounded, moist	0.0
16	18	10"		same as 14-16	
18	20	10"		M/C sand, brown with a little fine gravel, quartzite subrounded, moist,	0.0
20	~~24~~ 22	8"		same as 18-20	0.0
~~24~~ 22	~~26~~ 24			~~NSR~~ same as 20-22 (Not Enough recovery for sample)	
REPO4	2007				
24	26	12"		med to course light brown sand with little fine gravel, qtz, subrounded, moist	
26	28	14"		med to course light brown sand with little fine gravel, qtz, subrounded, moist	0.0
28	30	14"		fine to medium light brown sand with some gravel top 10" moist bottom 4" wet	0.0
30	32	14		top 4" same as 28-30 wet, bottom 10" fine to med reddish brown sand, qtz, subrounded, wet	0
32	34			top 3" same as 30-32, bottom 12" tan clay (bottom 5" with some black), with little fine sand qtz, subrounded, moist	0

Sample Log (Cont.d)

Well/Boring F-7-SB Project Name and No. NGC-OU-3 / NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
34	36	12"		fine to medium reddish brown sand with little clay qtz, subrounded, wet	0
36	38	20"		top 8" fine brown sand, qtz, subrounded, dry, next @ 12" fine brown sand and clay, qtz subrounded, wet with some black staining	0.9
38	40	11"		~~clay with some fine sand~~ fine sand with some clay black with some gray, moist	0
40	42	16"		black clay with ~~some~~ little fine sand (top 5" soft and wet), bottom 10" (hard clay)	0
42	44	15"		@ black clay with some fine sand, qtz, subrounded moist	0.9
44	46	13"		top 6" is with black clay with fine sand ~~black clay with some fine sand~~ wet, qtz subrounded, bottom 7" black clay with some fine sand, qtz, subrounded, dry	0
46	48	16"		black clay with some fine sand, moist, qtz subrounded	0
48	50	14"		black clay with some fine sand, moist, qtz subrounded bottom 1" ~~soft~~ med greenish brown sand qtz, subrounded, wet	0
50	52	24"		brown greenish brown sand, qtz, subrounded, wet End of boring	0

Sample Log

Well/Boring G-35B Project Name and No. NGC M1001464.0807.00150

Site Location Bethpage, NY Drilling Started 4/4/07 Drilling Completed (look at John's log)

Total Depth Drilled 42 feet today Hole Diameter ~6 inches Sampling Interval ~2 feet

Length and Diameter of Sampling Device 12' Type of Sampling Device Splitspoon

Drilling Method HSA Drilling Fluid Used n/a

Drilling Contractor Delta Driller Jay Pittel Helper Tom R.

Prepared By Scherlin (SC) Hammer Weight ~140 lbs Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	cuttings		m/c sand with gravel, black, quartzite, subangular, dry, (GP)	5.4
5	10	11		same as above (0-5')	5.1
10	15	11		same as above (5-10')	5.3
15	20	11		same as above (10-15')	5.5
20	26	11		same as (15-20')	4.9
26	28	6"	6,12,15,18	m/c sand with gravel, brown, Quartzite, subangular, (GP), dry	2.0
28	30	1'6"	4,4,12,7	m/c sand with gravel, brown, Quartzite, subangular, dry (GP)	1.5
30	32	8"	7,8,22,15	same as (28'-30')	1.5
32	34	1'2"	10,15,23,3	(MS/MSD) same as (30'-32')	1.1
34	36	1'	10,17,17,13	m/c sand with gravel, brown/grey, Quartzite, subangular, dry, (GP)	0.4
36	38	1'	18,13,9,4	same as (34'-36')	1.2

Sample Log (Cont.d)

Well/Boring G-35B Project Name and No. NGC M001464.0807.00150

Prepared By JC

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
38	40	10"	7,9,10,6	f/m sand, tan, a little gravel, Quartzite, subangular, dry, (SW)	0.7
40	42	1'	6,14,39,21	(40'-41'10") M/C sand, brown/grey with a little gravel, quartzite, subangular, dry, (GP)	0.8
				(41'10"-42') Silty clay, ≈ 1/32" thread, grey, dry, (ML)	0.3
				(Continued on John C.'s logs)	

Sample Log (Cont.d)

Well/Boring G-3-SB Project Name and No. N6L-OU-3, NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
42	44	14"	10,27,12,5	7" med to coarse brown sand qtz, subrounded, wet	7.6
				7" grey fine sand + silt, moist, qtz, subround	0.8
44	46	10"	10,16,12,23	10" fine sand + silt, grey with little green color, qtz, subrounded wet	42 (max)
46	48	18"	8,19,23,32	top 6" same as 44-46	1.0
				next 6" fine sand silt + clay, grey, qtz, subround wet, next 6" grey clay moist	1.0
					0.5
48	50	16"	12,19,27,34	top 7" fine sand, silt, + clay, grey with little green qtz, subrounded, moist, bottom 7" & grey fine sand + silt, qtz, subrounded, moist	0
					0
50	52	14"	14,20,20,16	top 5" fine sand, silt, clay, greyish brown, qtz subrounded, moist, next 4" grey fine sand + silt,	0
					0
				qtz, subrounded, moist, top 6" brown med	0
				sand, qtz subrounded, moist	
52	54	15"	11,27,32,32	top 4" grey fine sand + silt, qtz, subrounded, moist, next 11" fine to med reddish brown sand, qtz, subrounded wet	0
					6.2
54	56	14"	9,19,24,33	top 4", fine brown sand, qtz, subrounded moist,	0.5
				bottom 10" grayish brown fine sand + silt with	
				some black staining qtz, subrounded, wet	
				end of boring	

Sample Log

Well/Boring 6-5-SB Project Name and No. NGC-OU-3 / NY001464.0807.00150

Site Location Bethpage, NY Drilling Started 4/17/07 Drilling Completed 4/18/07

Total Depth Drilled 56 feet Hole Diameter 6 inches Sampling Interval 0-56 feet

Length and Diameter of Sampling Device 2ft length/2" Ø diameter Type of Sampling Device Stainless Steel Split Spoon

Drilling Method Hollow Stem Auger Drilling Fluid Used None

Drilling Contractor Delta Driller Jason Pittard Helper John Corral

Prepared By John Corral Hammer Weight ~140 lbs Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
24	26	12"	3,7,13,17	med to course light brown sand with little fine gravel, qtz, subrounded moist	6
26	28	13"	8,10,10,20	top 7" med to course brown sand with little fine gravel, qtz, subrounded, moist; bottom 6" light brown med to course sand, qtz, subrounded, dry	0 1.3
28	30	14"	4,11,11,18	top 7" med to course sand with some fine gravel bottom 7" med sand with little course gravel, qtz subrounded, moist	1.9 max
REP 04/18/07 ↑ 30	32	14"	4,13,13,20	med sand with little fine gravel, qtz, subrounded moist (top 7" brown bottom 7" light brown)	1.0
32	34	15"	4,5,7,15	Same as bottom 7" of 30-32	1.0
34	36	14"	6,7,13,20	top 7" med brown sand with some fine gravel, bottom 7" med to course light brown sand with some fine gravel, qtz, subrounded moist	1.0

Sample Log (Cont.d)

Well/Boring 6-S-SB Project Name and No. NGC-04-3/NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
36	38	14"	3,11,17,22	top 7" red brown sand with little fine gravel, bottom 7" red to course brown sand with little fine gravel, qtz, subrounded, moist	1.0
38	40	13"	6,17,18,24	top 6" red brown sand with some fine gravel, bottom 7" 6" red to course reddish brown sand with some fine to med gravel qtz (except calcite grains) subrounded moist	2.0
40	42	15"	6,9,14,17	top 7" red to course brown sand with little gravel, qtz, subrounded, wet; next ½" clay + fine sand tan brown, moist, next 4" clay with some fine sand tan brown, dry, qtz subrounded	1.5
42	44	16"	6,2,3,13	clay with some fine sand, qtz, subrounded (top 8" tan brown moist bottom 8" grey black dry)	1.0
44	46	16"	4,5,10,15	top 8" tan clay with little fine sand wet, next 6" black clay with some fine sand, next 4" fine sand with little clay, black, qtz, subrounded, moist	1.0
46	48	17"	3,7,11,32	top 5" tan brown clay with some fine sand, next 4" tan clay with some black staining + some fine sand, next 5" tan brown clay + fine sand, bottom 3" fine brown sand with some clay, qtz, subrounded moist	1 15 1

Sample Log (Cont.d)

Well/Boring 6-S-SB Project Name and No. NGC-OU-3/NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
48	50	16"	3,12,13,20	top 8" tan clay with some fine sand qtz, subrounded moist; bottom 8" greenish brown med sand, wet, qtz subrounded	1 5
50	52	18"	3,10,10,15	top 6" tan clay with ~~some~~ little black staining and fine sand, moist next 5" fine greenish brown sand with little staining, wet next 7" tan brown clay with little black staining and fine sand, qtz, subrounded, moist	1 1 1 1
52	54	17"	6,6,10,18	top 6" clay tan clay and green ~~ash~~ reddish brown fine sand wet, bottom 11" green red brown fine sand, wet, qtz, subrounded	1 1
54	56	24"	10,18,26,30	top 7" tan clay, moist, ~~next~~ next 4" clay + fine sand brown tan with some black staining, next 5" fine green red to brown sand with some tan clay, green ~~re~~ next 8" fine to med green red + brown sand, qtz, subrounded, wet	1 5 1 1

End of Boring

ARCADIS G&M

Sample/Core Log

Boring/Well H-4-SB3 Project/No. NY061348.0806.00002 Page 1 of 3

Site Location Bethpage, NY Drilling Started 10/23/06 Drilling Completed 10/24/06

Total Depth Drilled 48 Feet Hole Diameter 6 inches Drilling Method Hollow Stem Auger (3¼ I.D. Auger)

Length and Diameter of Coring Device 2 Feet Long 3" diameter Type of Coring/Sampling Device Stainless Steel Split Spoon

Sampling Interval Continuous feet Drilling Fluid Used None

Drilling Contractor Delta Well + Pump

Prepared By John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	2.5	2.5	Hand Auger	brown course sand and gravel (.5 - 1.0") diameter, qtz, subrounded, wet	0.0
2.5	4.0	1.5	Hand Auger	Same as 0 to 2.5	0.0
4.0	4.5	0.5	Hand Auger	brown course sand with some black stained course sand and some gravel (.2 - .4" diameter), qtz, subrounded, wet	0.0
6	8	16"	7, 15, 13, 25/5	top 8" fine black stained sand and silt with some gravel (.2 - .4" diameter), qtz subrounded, wet	0.0
				bottom 8" fin black stained sand and silt with sm gravel (.2 - .4" diameter), qtz, subround, moist	0.0
8	10	24"	5, 16, 34/6	top 8" same as bottom 8" from 6-8	0.0
				bottom 16" black stained fine sand with gravel (.3 - .8" diameter), qtz, subrounded, very wet	0.0
10	12	16"	18, 24, 50/3	top 8" black stained fine sand with some gravel (.3.8" diameter), qtz, sub round, moist	0.0
				bottom 8" brown med sand, unconsolidated, non cohesive dry	0.0
12	14	12"	4, 9, 26, 52	top 6" brown red sand, unconsolidated with some fine gravel (.1 - .3" diameter) qtz, subrounded, moist	0.0
				bottom 6" black stained fine red sand with some gravel (.3 - .8" diameter) qtz, subrounded, moist	0.0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well H-3-SB

Prepared by John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
14	16	12"	20,42,78,53	Red top 6" light brown fine + med sand with some fine gravel (.1-.3" diameter), qtz, subrounded, dry, bottom 6" dark brown fine + med sand wit some fine gravel ((.1-.3" diameter), qtz, subroun dry	1.0
16	18	10"	5,11,36,88	top 5" big whitish tan course sand and gravel (.2-.4" diameter), qtz, subrounded, dry	0.0
				bottom 5" brown med+course sand with some gravel (.2-.4" diameter), qtz, subrounded, dry	0.0
18	20	Refusal	no split spoon recovery		
20	22	10"	46,7,10,48,53	course tan brown Sand, qtz, subrounded, dry with gravel (.3-1.0" diameter) wh. to, qtz, subrounded, dry	0.6
22	24	10"	23,39,59,41	same as 20 to 22	0.3
24	26	18"	56,43,68,10	med tan brown sand, qtz, subrounded, dry with gravel (.3-1.0" diameter), white, qtz, subround, dry	0.0
26	28	12"	34,48,77,85	med to course tan brown sand, qtz with some gravel (.2-1.0" diameter) qtz, subrounded, moist	0.1
28	30	10"	28,37,87,54	top 5" brown grey med to course sand with some gravel (.2-.8" diameter), qtz, subrounded, moist,	0.0
				bottom 5" whitish brown course sand and gravel (.2-.4" diameter) qtz, subrounded, dry	0.0
30	32	12"	62,53,60,51	Med to course tan brown sand with some gravel (.2-.5" diameter) qtz, subrounded, moist	0.0
32	34		62,53,42,46	Med to course brown sand, with little gravel (.2-.5" diameter), qtz, subrounded, dry	0.0
34	36	18"	46,47,63,72	top 6" tan brown med to course sand with little gravel (.2-.5"), bottom 12" tan white med to coarse sand, with little gravel (.2-.5") qtz, subrounded, dry	0.8
					0.0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well H-3-SB

Prepared by John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
36	38	14"	12,24,25,19	top 4" brown med sand, unconsolidated, homogenous, qtz, subrounded, moist	0.0
				bottom 10" tan/white med to course sand, qtz, subrounded, moist with some fine gravel, qtz, subrounded, moist	0.5
38	40	15"	6,43,50,48	top 4" brown med sand, unconsolidated, homogenous, qtz, subrounded, moist	0.0
				bottom 11" tan white med to coarse sand with some gravel, subrounded, qtz, dry	15
40	42	14"	6,24,108,113	top 7" brown med to coarse sand with some gravel (.3-.8" diameter), qtz, subrounded, moist	3
				bottom 7" dark brown stained med to coarse sand with some gravel (.2-.5") and some rock (1-2" diameter), qtz, subrounded, moist. rock angular	75
42	44	9"	8,20,17,37	top 3" coarse brown sand and gravel (.2-.4" diameter) moist, subrounded, qtz	20
				next 3" fine sand + silt tan brown with some red streaks, qtz, subrounded, moist	4
				bottom 3" compact tan/grey clay + silt with some red + black streaks, qtz, moist	4
44	46	16"	9,35,42,51	top 6" grey green fine sand and silt, qtz, subround moist, next 5" fine sand with some silt brown + dark brown, qtz, subrounded, dry	2.5
				Bottom 5" tan grey silt + clay, moist	0.5
					1.0
46	48	15"	6,12,14,15	top 6" grey green fine sand and silt, qtz, subrounded moist, next 6" fine sand and silt thin interbedded color layers of tan, brown, orange + black	0.5
				bottom 3" grey clay with some streaks of black	2.0
					1.0

— End —

ARCADIS G&M

Sample/Core Log

Boring/Well N-7-~~00~~ SB Project/No. NY001348.0606.00002

Site Location: Bethpage, NY

Drilling Started: 10/27/06 Drilling Completed: 10/30/06

Total Depth Drilled: 52 Feet Hole Diameter: 6 inches Drilling Method: Hollow Stem Auger, (3¼" I.D. Augers)

Length and Diameter of Coring Device: 2 ft Long, 3" diameter Type of Coring/Sampling Device: Stainless Steel Split Spoon

Sampling Interval: Continuous feet Drilling Fluid Used: 100 gallons of Potable Water

Drilling Contractor: Delta Well + Pump

Prepared By: John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	2.5	2.5	hand Augered	brown med to course sand with some gravel	0.0
				(1-2" diameter), qtz, subrounded, moist	
2.5	~~2.5~~ 4.5	2	hand Augered	light brown med to course sand with some	0.0
				gravel (~~.19~~ 1-2" diameter), qtz, subrounded, dry	
5	7	12"	52,46,88,79	top 9" brown med to course sand with some gravel	~~0.0~~ 0.2
				(.1-.3" diameter) qtz, subrounded, moist	
				bottom 3" brown med to course sand and gravel (.1-.4"	~~0.0~~ 0.2
				diameter) qtz, subrounded, moist	
7	9	6"	10,110, Refusal	loose recovery of med to course brown sand and gravel	
				(1-2.5" diameter at bottom) qtz, subrounded, moist	
9	11	12"	25,19,16,17	med to course brown sand with gravel (.2-1.0"	0.0
				diameter) qtz subrounded, moist	
11	13	12"	19,43,29,45	med to course brown sand with gravel (.2-1.0"	0.0
				diameter) qtz, subrounded, moist	
13	15	7"	18,55,61,86	course brown sand + gravel (.2-.3" diameter) loose	0.0
				with a rock at bottom (2" by 4"), qtz, subrounded, dry	
15	17	15"	6,34,41,43	med to course tan brown sand with some gravel	0.1
				(.2-1.0" diameter) qtz, subrounded, moist	
17	19	12"	5,15,43,43	med to course tan brown sand with some gravel	0.1
				(.2-.6" diameter) qtz, subrounded, moist	

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well H-7-~~[illegible]~~SB

Page 2/3

Prepared by John Coral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
19	21	14"	61,30,60,45	top 3" same as 17-21	0.2
				bottom 11" med tan brown sand with some gravel	0.0
				(.3 -1.5 "diameter), qtz, subrounded, dry	
21	23	18"	15,36,62,38	top 8" med to course brown sand with little gravel	0.0
				(.5-1.0" diameter), qtz, subrounded, moist	
				bottom 10" med to course whitish brown sand with	0.0
				gravel (.2-.7" diameter) qtz, subrounded, moist	
23	25	15"	9,40,55,46	med to course tan brown sand with some gravel	0.2
				(.2-.8" diameter) qtz, subrounded, moist	
25	27	12"	7,18,37,53	med to course tan brown sand with some gravel	0.2
				(.3-1.0 diameter) qtz, subrounded, moist	
27	29	14"	23,37,48,53	same as 25 to 27	0.1
29	31	14"	31,58,100,73	med, light tan brown sand with little course sand	0.1
				+gravel, qtz, subrounded, dry	
31	33	12"	8,21,16,51	top 5" tan brown med to course sand with	0.1
				some gravel (.5-2.0" diameter), qtz, moist, subrounded	
				bottom 7" light tan brown med to course sand with	0.1
				some gravel (.2-.6" diameter), qtz, moist, subrounded	
33	35	12"	7,20,20,24	top 4" brown med to course sand with some	0.0
				gravel (.4-1.0" diameter) qtz, subrounded, moist	
				bottom 8" med tan to white sand/~~[illegible]~~, qtz, subrounded	0.0
				dry	
35	37	15"	6,7,10,12	top 4" med brown sand with little gravel (.2-.5"	0.0
				diameter) qtz, subrounded, moist	
				bottom 12" med ~~[illegible]~~ light tan sand with little gravel	0.0
				(.2-.5" diameter) qtz, subrounded, dry	
37	39	16"	38,39,77,105	top 8" med brown sand with little gravel (.2-.5") qtz,	0.0
				subrounded, dry; bottom 8" little tan med to course and	

and gravel (.2-1.0" diameter), qtz, subrounded, dry | 0.0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well H-7-SB

Prepared by John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
39	41	12"	7,10,42,46	med brown, tan, red sand with some white gravel (.2-.8" diameter) qtz, subrounded, dry	0.1
41	43	13"	11,47,100,107	top 1" med redish brown sand with gravel (.2-.5" diameter) qtz, subrounded, dry	0.0
				bottom 12" light tan med brown sand, dry	0.0
43	45	13"	18,40,63,60	top 1" med redish brown sand with gravel (.2-.5" diameter), qtz, subrounded, wet	0.0
				bottom 12" light tan med sand, qtz, subrounded, wet	0.0
45	47	12"	13,24,44,46	top 11" med brown sand, qtz, subrounded, wet	0.0
				bottom 1" fine brown sand, qtz, subrounded, wet	
47	48	12"	12,32—	top 12" med brown sand, qtz, subrounded, wet	
48	50	12"	6,10,12,14	top 6" med light tan sand, qtz, subrounded wet	0.0
				bottom 6" tan clay with some black and orange, wet	0.0
50	52	4"	3,9,11,25	top 12" fine to med sand (slough) loose, wet	0.0
				bottom 8" grey clay with little black and orange black in thin stratified layers, trace silt, moist	0.0

EOH

Sample Log

Well/Boring I-1-SB Project Name and No. NY001464.0807.00150

Site Location Bethpage Community Park Drilling Started 4/2/17 Drilling Completed 4/3/17

Total Depth Drilled 56 feet Hole Diameter 4¼ 3¼" Augers inches Sampling Interval Continuous 2 feet

Length and Diameter of Sampling Device 2ft/2" Type of Sampling Device Stainless Steel Split Spoon

Drilling Method Hollow Stem Auger Drilling Fluid Used None

Drilling Contractor Delta Driller Jason Pittel Helper Tom Romano

Prepared By John Corral Hammer Weight ~140 lbs Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	2	9"	NA	Top 3" Organic Soil Material, Dark, Silty	0.0
				Bottom 6" med to course brown sand with some	0.0
				fine gravel, moist, qtz, subrounded	
2	4	6"	NA	med to course brown sand with some fine grad	0.0
				moist, qtz, subrounded	
4	6	5"	4,6,3,8	Medium to Course, brown stain Sand, with some fine	0
				gravel, wet, (from 3-4" stained black)	
6	8	13"	14,22,30,30	bottom one 1" med reddish brown sand qtz, dry	0
				subrounded, next 1" grey grey silt, dry	
				next 3" brown med to course sand subrounded	
				dry, qtz, next 3" black stained med to course	
				sand with some fine gravel, wet next 5" red to course	
				wet grey brown sand with some gravel, subround	
				qtz, wet	

Sample Log (Cont.d)

Well/Boring T-1-SB Project Name and No. NGC-OU-3 / NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
8	10	13"	6,23,38,13	top 4" brown/grey med to course sand, wet, qtz, subrounded	0
				4"-8" brown/grey with some staining med to course sand wet, qtz subrounded	
				wet 8"-13" - med to course sand with little fine gravel, qtz, subrounded, dry	
10	12	15"	3,6,20,20	top 5" grey brown fine med + course sand with some fine gravel, moist, qtz, subrounded, bottom 10"	0
				brown med to course sand dry, qtz, subrounded,	
12	14	8"	9,12,11,10	top 3" grey brown fine, med + course sand, moist,	0
				qtz, subrounded bottom 5" light brown med to course sand with little medium gravel (.5-1" diameter)	
14	16	8"	3,6,9,10	top 3" grey brown, fine, med + course, sand, qtz	0
				subrounded, moist, bottom 5" light brown med	
				to course sand with little fine gravel, qtz, subrounded, dry	
16	18	12"	7,17,12,24	med to course brown sand, moist, wet with	0
				little fine gravel, qtz, subrounded	
18	20	10"	6,10,15,7	same as 16-18	0
20	22	10"	5,10,15,20	same as 18-26	0
22	24	6"	14,18,29,24	med to course brown sand, dry subrounded	0
				qtz	

Sample Log (Cont.d)

Well/Boring I-1-SB Project Name and No. NGC-OU-3 / NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
24	26	20"	14,19,20,16	top 6" med to coarse brown sand with little fine gravel brown with little black staining moist, subrounded qtz	0,4
				next 14" light med to coarse brown sand, dry qtz subrounded	92
26	28	15"	6,10,20,20	top 5" med to coarse brown sand with little fine gravel	0,4
				bottom 10" med to coarse brown sand, qtz, subrounded, dry	0,4
28	30	14"	15,15,30,27	top 6" med to coarse brown sand with some fine gravel, qtz, subrounded, moist, bottom	0
				8" med to coarse light brown sand with some fine gravel, qtz, subrounded, dry	0
30	32	16"	6,13,20,30	top 4" med to coarse brown sand, moist, qtz, subrounded	0,5
				bottom 12" med light brown sand with little trace fine gravel	1,0
32	34	16"	4,6,16,15	top 4" med to coarse brown sand, moist, qtz, subrounded	1,0
				bottom 12" med light brown sand with little fine gravel, 4" of thin dark brown bands at bottom, qtz, dry, subrounded	1,0
34	36	14"	2,5,12,20	med to coarse brown sand with little fine gravel, qtz subrounded, moist	0,5
36	38	16"	4,9,15,10	same as 34-36	0,5

Sample Log (Cont.d)

Well/Boring I-1-SB Project Name and No. NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
38	40	18"	4,5,16,10	top 4" med to coarse brown sand, moist, qtz, subrounded	0.5
				next 8" brown silt, fine sand + fine gravel, qtz, subrounded, moist	0.5
				bottom 6" clay, tan brown moist	0.5
40	42	10"	4,9,16,12	clay with some fine sand, black tan brown + orange, moist, (qtz, subrounded (fine sand))	0.5
42	44	3"	7,7,7,7	Same as 40 - 42	0.0
44	46	4"	4,7,20,20	tan clay + fine sand brown, qtz, subrounded, moist with trace fine gravel	0.6
46	48	16"	2,2,11,13	first 6" tan clay + fine sand, brown qtz, subrounded, moist	0.0
				next 4" grey fine sand, qtz, subrounded, dry	0.5
				bottom 6" brown fine sand, qtz, subrounded dry	0.6
48	50	2.5"	3,6,12,20	tan clay + fine sand, qtz, subrounded, dry	0.0
50	52	15"	4,8,12,20	top 5" tan clay with some fine sand, qtz, subround dry, next 3" brown fine sand, next 2" green brown silt + fine sand, next 5" light brown fine sand, qtz subrounded, dry	0.8
REP040307 52	54	15"	5,12,15,20	top 4" tan clay, bottom 11" greenish brown med sand qtz, wet, subrounded	16.0
54	56	12"	4,9,15,12	greenish brown med sand, qtz, wet, subrounded	0.0
				end of boring	

meadow in Septa

ARCADIS

Sample Log

Well/Boring I-2-SB Project Name and No. NY001464.0807.00150

Site Location Bethpage, NY Drilling Started 4/10/07 Drilling Completed 4/11/07

Total Depth Drilled 56 feet Hole Diameter 6 inches Sampling Interval 0-56 feet

Length and Diameter of Sampling Device 2 ft length/2" diameter Type of Sampling Device Stainless Steel Split Spoon

Drilling Method Hollow Stem Auger Drilling Fluid Used None

Drilling Contractor Delta Driller Jason Pittd Helper Tom Romano

Prepared By John Corral Hammer Weight ~140 lbs Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	2	9"	3,4,7,6	top 4" dark brown fine sandy silt with some organic material, bottom 5" brown red to course sand + fine gravel, qtz, subrounded, moist	0 5.0 ml
			6/3/07		
2	4	4"	6,3,6,7	same as bottom 5" of 0-2	0
4	6	12"	17,40,4,38	top 6" red to course brown sand with little fine gravel, qtz, subrounded moist	0
				bottom 6" gray course sand with some red gravel (1" diameter), qtz, subrounded to subangular edge	6
6	8	14"	4,11,22,26	top 6" red to course brown sand with little fine gravel qtz subrounded, moist, bottom 3" fine silt greenish brown with some fine sand, qtz, subround moist, bottom 5" red to course light brown sand qtz, subrounded moist	0 0
8	10	12"	15,35,25,25	top 6" greenish brown red to course sand with little fine gravel, qtz, subrounded, moist	6
				bottom 6" brown reddish brown red to course sand, qtz, subrounded, dry	

Sample Log (Cont.d)

Well/Boring I-2-SB Project Name and No. N6C-04-3 / NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
10	12	12"	3,14,18,20	top 7" red to course brown sand with little fine gravel, qtz, subrounded, dry, bottom 5" red brown sand, qtz, subrounded, moist	0
12	14	3"	8,10,10,15	Med to course brown sand, moist, subrounded, red	0
14	16	4"	3,4,10,20	trace Med to course brown sand with little fine gravel, qtz, subrounded, wet	0
16	18	15"	6,9,11,35	med to course brown sand with some fine gravel and trace med gravel (1" diameter) qtz, subrounded dry	0
18	20	14"	6,9,9,30	same as 16-18	0
20	22	14"	9,12,14,18	top 4" red brown sand, qtz, subrounded, moist bottom 10" light red brown to course sand with little fine gravel, qtz, subrounded, dry	0
22	24	12"	9,9,15,27	same as bottom 10" of 20-22	0
24	26	13"	2,7,15,20	Same as 22 to 24	0
26	28	12"	8,9,12,23	Same as 24 to 26 but moist not dry	0
28	30	15"	9,7,12,24	Same as 26 to 28	0
30	32	14"	2,5,11,14	med light brown sand with trace fine gravel qtz, subrounded, moist	0
32	34		4,5,7,20	med light brown sand with little course sand & fine gravel, qtz, subrounded, moist	0

headspace analysis in VOA jar

Sample Log (Cont.d)

Well/Boring I-2,SB Project Name and No. NGC-OU-3/NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
34	36	15"	5,6,8,20	med brown sand with some course sand and little fine gravel, qtz, subrounded, moist	0
36	38	12"	5,10,13,17	med + course brown sand, qtz, subrounded, moist	0
38	40	15"	5,12,9,10	top 6" same as 36-38, next 5" dark brown med to course sand with some fine gravel, wet, bottom 4" a tan clay with some medium sand, moist	0
40	42	16"	9,3,7,13	top 7" med brown sand moist, qtz, subrounded bottom 9" tan clay with some fine sand, dry	0
42	44	15"	1,3,7,9	top 2" sa med brown sand with little clay, qtz subrounded, moist, next 3" tan clay with some fine sand, next 10" black clay with little fine sand	6
44	46	14"	4,3,4,11	top 10" tan brown clay with some fine sand bottom 4" grey + brown med sand, qtz, subrounded dry	0
46	48	12	4,15,9,13	top 10" tan brown silt + fine sand, qtz, subrounded, moist bottom 2" tan brown clay with some fine sand	6
48	50	18	5,12,20,18	top 4" tan brown clay + fine sand, qtz, subrounded, dry, bottom 14" greenish brown, fine sand + silt, qtz, subrounded, dry	0 0,5

Sample Log (Cont.d)

Well/Boring I-2-SB Project Name and No. NGC-OU-3/N400464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
50	52		5,15,22,10	top 3" med brown sand + tan brown clay, qtz	0
				subrounded, dry; botton 12" med grained	19 max
				brown sand, qtz, subrounded, dry	
52	54	13"	6,15,17,36	top 2" ften clay + fine sand, next 3" fine	6 max
				brown sand, moist, bottom 8" greyish	
				brown med sand, qtz, subrounded wet	
54	56		4,13,17,22	Missed Description	
				end of boring	

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Sample Log

Well/Boring I-3-SB Project Name and No. NY001464.0807.00150

Site Location Bethpage Community Park Drilling Started 4/6/17 Drilling Completed 4/9/17

Total Depth Drilled 56 feet Hole Diameter 4 1/4 inches Sampling Interval 2 feet

Length and Diameter of Sampling Device 2ft (length) x 2" (wide) Type of Sampling Device Stainless Steel Split Spoon

Drilling Method Hollow Stem Auger Drilling Fluid Used None

Drilling Contractor Delta Driller Pat McAdams Helper Tom Romano

Prepared By John Corral | Jen Chrislip Hammer Weight ~140 Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	2	10"	N/A	Med to course brown sand with some fine gravel qtz, subrounded, wet, at 10" a few pieces of grey smooth hard plastic material	6
2	4	18"	16,32,38,43	Med to course brown sand with some fine gravel qtz, subrounded moist, (bottom 9" stained black)	2.5 max
REPEAT 0607 4	6	16"	24,50,54,36	Same as 2 to 4 (bottom 12" stained black	11.0 max
6	8	14"	12,13,13,14	med to course sand (top 2" brown bottom, 12" stained black, little fine gravel, qtz, subrounded, moist	3.0
8	10	15"	6,7,8,8	med to course sand stained black with little little fine gravel, qtz, subrounded, moist (bottom 4" wet)	1.0
10	12		7,15,20,15	Missed Sample (Inadvertently drilled past depth)	
12	14	14"	7,18,20,18	top 4" med to course sand stained black, qtz subrounded, moist, bottom 10" med to course brown sand with little fine gravel, qtz, subrounded, moist	13 / 63

Sample Log (Cont.d)

Well/Boring I-3-SB Project Name and No. M00796 4.0807.0015O

Prepared By JHC/JAC

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
14	16	12"	7,9,9,14	med to course brown sand, qtz, subrounded, wet	63 MCSX
16	18	6"	10,10,16,20	Same as 14-16	
~~16~~	~~16~~		~~10,10,16,20~~		
(1/9/07) 18	20	4"	10,12,12,16	m/c sand, brown with gravel, Q, subrounded, dry, (GP)	71
20	22	10"	8,12,21,20	Same as (18-20')	1101
22	24	1'	6,6,10,20	m/c sand, brown/black with gravel, Quartzite, subrounded, dry, (GP)	500
24	26	1'	6,10,18,21	Same as (20-22')	460
26	28	1'3"	7,11,15,20	Same as (22-24')	1172
28	30	1'	10,7,12,17	Same as (26-28')	1057
30	32	1'	6,10,15,15	m/c sand, brown/black with gravel, Quartzite, subrounded, ~~damp~~ (GP), damp	1270
32	34	1'4"	6,6,8,15	Same as (30-32')	1433
34	36	8"	7,10,18,25	Same as (32-34')	1405
36	38	1'1"	3,4,7,11	M/C sand, brown with a little gravel, Quartzite, subrounded, damp, (SP) [MS/MSD]	735
38	40	1'	1,8,5,10	(38-39') No Recovery	
				(39-39'8") Same as (36-38')	691
				(39'8"-40') Clay, grey, ~¼" thread, damp, (CH)	20.3

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Sample Log (Cont.d)

Well/Boring I-35B Project Name and No. NY001964.0807.00150

Prepared By JAC/JHC

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
40	42	2'	3,8,17,18	(40'-40'4") same as (36-38')	157
				(40'4"-42') same as (39'8"-40')	31.5
42	44	1'	4,4,7,7	Clay, grey, ≈ 1/64" thread and a little gravel, Quartzite, subrounded, damp, (CH)/(GP)	10.1
44	46	1'8"	1,4,7,10	Same as (42-44')	27.1
46	48	1'7"	3,8,15,25	silty clay, grey/dark green, damp, (ML), ≈ 1/32" thread.	310
48	50	1'2"	3,9,12,30	f/M sand with some clay, grey/dark green/black, damp, (SC)	291
50	52	10"	6,12,18,28	Same as (48-50')	485
52	54	1'2"	3,18,29,38	f/M sand w/some clay, grey/black, damp, (SC)	304
54	56	1'	4,10,18,15	Same as (52'-54')	114
				-End of Boring-	

ARCADIS

Sample Log

Well/Boring: I-45B
Project Name and No.: NY001469.0807.00130

Site Location: BCP
Drilling Started: 4/20/07
Drilling Completed: 4/20/07

Total Depth Drilled: ~56 feet
Hole Diameter: 6 inches
Sampling Interval: 2 feet

Length and Diameter of Sampling Device: 2'/2'
Type of Sampling Device: Split spoons

Drilling Method: HSA
Drilling Fluid Used: n/a

Drilling Contractor: Clearwater
Driller: Bruce
Helper: [illegible]

Prepared By: Scherlin (JC)
Hammer Weight: ~140 lbs
Hammer Drop: ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
				Drilling started by DOB.	
40	42	2'	11,12,12,12	(40-41') m/c sand and gravel, grey/black,	342
				Quartzite, subrounded, damp, (SP)	
				(41-42') grey clay, grey/black,	12.2
				dry, (CH)	
42	44	7"	8,7,7,6	(42-43'5") no rec.	
				(43'5"-44') silty clay, grey/black,	115
				with m/c sand, grey/black, and	
				gravel, fine, quartzite, subrounded,	
				wet (SC)	
44	46	2'	6,6,4,5	(44'-45'3") same as 43'5"-44')	10.3
				(45'3"-45'10") clay, grey, dry (CH)	28.1
				(45'10"-46') clay & silt, grey, brown	755
				damp (SM)	
46	48	2'	6,6,5,9	Same as (45'10"-46')	2284

Sample Log (Cont.d)

Well/Boring I-48B Project Name and No. M00M69.0807.0050

Prepared By SC

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
48	50	1'	6,10,11,11	(48-49') No recov.	
				(49'-50') F/M sand, brown/grey	1944
				with some clay and silt, brown/	
				grey, wet (SM)	
50	52	1'3"	10,11,11,13	(50'-50'9") No recov	
				(50'9"-52') Silt and clay,	1971
				grey/brown, wet (SM)	
52	54	10"	8,19,10,16	(52'-53'2") No recov.	
				(53'2"-54') Same as (50'9"-52')	99.5
54	56	2'	9,11,13,14	same as (53'2"-54')	110
				- End of Boring -	

ARCADIS G&M

Sample/Core Log

Boring/Well I-4-SB (~~I-4~~) Project/No. NY001348.0806.00002 Page 1 of 4

Site Location Bethpage, NY Drilling Started 10/17/06 Drilling Completed 10/18/06

Total Depth Drilled 50 Feet Hole Diameter 3¼" Augers Inches Drilling Method Hollow Stem Auger

Length and Diameter of Coring Device 2 ft Type of Coring/Sampling Device 3" Split Spoon

Sampling Interval Continous feet Drilling Fluid Used None

Drilling Contractor Delta Well and Pump

Prepared By John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	1	1	hand Auger	Dark brown ~~sandy~~ course Sand, subrounded, qtz, ~~black~~ moist with gravel .5-2.0" diameter white, qtz, moist	0.0
1	3.5	1.5	hand Auger	brown course sand, subrounded, qtz, moist with gravel 0.5-2.0" diameter, white, qtz, moist	0.0
3.5	4.5	1	hand Auger	Kerosene stained black course sand with some gravel 0.5-2.0" diameter, white, qtz, moist and some ~~cone~~ pieces ~2.0" diameter white concrete	0.0
6	8	1	6,18,17,14	fine sand dark brown, qtz, subrounded wet with some fine gravel .1-.3" diameter, qtz, subrounded wet, some rocks 1-2" diameter, qtz, subangular to subround wet	0.1
8	10	14"	22,19,16,17	-top 5" dark brown fine sand, qtz, sub rounded wet with some fine gravel .1-.3" diameter, qtz, subrounded, ~~coarse~~	4.0
				next 5" dark brown with staining, fine sand with gravel, qtz, subrounded, wet,	35.0
				next 4" brown sand and gravel .1-.3" diameter qtz, subrounded, dry	1.0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well I-4-SB

Page 2/4

Prepared by John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
10	12	12"	6,23,27,A	top 5" dark brown med sand with gravel, 2-4" diameter qtz, subrounded, moist	1.0
				bottom 7" tan brown med sand with gravel, 2-4" diameter, qtz subrounded, dry	8.0
12	14	18"	34,24,37,21	top 10" dark brown med sand with gravel, 2-4" diameter qtz, subrounded, moist	2.0
				bottom 8" tan brown sand with some gravel, 1-3" diameter qtz, subrounded, moist loosely consolidated	
14	16	14"	9,20,21,24	top 4" tan course sand + gravel, qtz, subrounded moist, loosly Consolidate	0.5
				bottom 10", tan course sand + gravel qtz, subrounded loosly, consolidated, dry	0.0
16	18	12"	8,14,14,13	tan brown course sand, qtz, subrounded, moist loosely consolidate with gravel, 2-.5" diameter, qtz, subrounded, moist dry	0.8
18	20	14"	12,20,21,16	top 10" tan brown course sand, qtz, subrounded moist	0.0
				bottom 4" tan brown course sand and gravel, 2-.4" diameter moist, subrounded, qtz, wet	8.0
20	22	12"	34,31,26,18	12" tan brown course sand and gravel (.3-1.0" diameter), qtz, subrounded wet	3.5
22	24	14"	6,10,12,18	14" tan brown course sand and gravel (.2-.5" diameter, qtz, subrounded, dry	35 (max detection)
24	26	12"	9,28,43,A	med to course tan brown sand with some fine gravel (.1-.3" diameter) and little course gravel (1.0-1.5" diameter), qtz, subrounded, dry	17

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well I-4-SR

Prepared by John Corral

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
26	28		8,14,27,54	tanish white course sand + fine gravel (.2-.5" diameter), qtz, subrounded, dry	20
28	30	12"	9,15,43,37	same as 26-28	65
30	32	12"	10,20,28,53	top 8" tan brown med sand, qtz, subrounded, dry	7
				bottom 4" course tan brown sand and gravel subrounded, dim moist, qtz	8
32	34	12"	11,16,49,17	fine to med tan brown sand with some gravel (.3-.8" diameter), qtz, subrounded, dry	8
34	36	15"	10,10,50,47	top 11", white course sand + fine gravel, qtz, subround dry,	1.5
				- bottom 4" tan brown course sand + fine gravel	28
36	38	16"	13,31,59,87	- top 6" white course sand + fine gravel, qtz subrounded, dry	26
				- bottom 10" brown course sand and find gravel, subrounded, qtz, moist	26
38	40	15"	12,22,25,37	top 5" tan brown course sand and fine gravel (.2-.4" diameter) qtz, subrounded, moist	14
				next 5" tan stained brownish black course sand and fine gravel (.2-.4" diameter), qtz, subround moist	95
				bottom 5" pinkish tan silt+clay	5
40	42	18"	17,19,26,38	top 4" med brown sand with some silt+clay, moist	16
				next 6" tan silt+clay, dry	8
				next 8" tan clay, dry	1
42	44	16"	5,19,68,79	top 4" brown wet, fine sand + silt, qtz, subrounded qtz, wet	34
				next 8" silt + clay, qtz wet with 1" of black staining	24
				next 4" wet silt + fine sand, qtz, wet	5

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Sample/Core Log (Cont.d)

Boring/Well: I-4-SB

Prepared by: John Corral

Page: 4/4

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
44	46	16"		top 5" ~~tan brown~~ fine sand silt and clay moist,	1.5
				next 5" tan clay, moist	1
				both tops 6" grey fine sand, qtz, subrounded moist	2.0
46	48	24"		top 8" clay with some silt and fine sand, ~~tan brown~~ moist ~~grey~~ blue staining	5
				next 6" clay ~~white~~, moist, tan brown	
				next 10" fine sand, moist, qtz, pink grey, brown tan colors	250
				End of Boring	

ARCADIS

4-6
42.44

Sample Log

Well/Boring J-2-SB Project Name and No. NGC-OU-3 / NY001464.0807.00150

Site Location Bethpage, NY Drilling Started 4/11/07 Drilling Completed 4/12/07

Total Depth Drilled 56 feet Hole Diameter 6 inches Sampling Interval 0-56 feet

Length and Diameter of Sampling Device 2 feet length/2" diameter Type of Sampling Device Stainless Steel Split Spoon

Drilling Method ~~Delta~~ Hollow Stem Auger Drilling Fluid Used None

Drilling Contractor Delta Driller Jason Pittel Helper Tom Romano

Prepared By John Corral Hammer Weight ~140 Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)	
0	2	8"	3,6,8,10 ~~10,15,8,30~~	fine sand + silt with organic material, qtz subrounded moist	0	
0	4	7"	10,15,8,30	top 2" same as 0-2, bottom 5" med to course brown sand with some fine gravel, qtz, subrounded, moist	6	
4	6	16"	5,11,41,26	top 9" med to course sand with some fine gravel brown + black stained, next 5" med to course brown sand with little fine gravel, qtz, subrounded, moist, bottom 2" fine sand + silt greenish brown, dry	0.3 0 0	1.0 (bag)
6	8	14"	6,25,30,60	top 6" med sand with some fine gravel, qtz, subrounded moist, bottom 8" med to course light brown sand with little fine gravel, qtz, subrounded dry	 6	.8 (bag)
8	10	10"	4,15,27,70	top 6" med brown sand with little fine gravel, qtz, subround moist, bottom 4" med to course reddish brown sand with trace gravel qtz, subrounded moist		

Sample Log (Cont.d)

Well/Boring J-2-SB Project Name and No. NGC-OU-3/NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
10	12	10"	4,12,12,15	med to course brown sand with some fine gravel	0
				qtz, subrounded, moist	
12	14	10"	3,7,7,7	Same as 10-12	0
14	16	9"	3,6,7,10	same as 12-14	0
16	18	6"	2,4,7,16	Same as 14-16	
18	20	9"	2,11,15,26	med to course light brown sand, with some	0
				fine gravel, qtz, subrounded, moist	
20	22	10"	3,4,15,21	same as 18-20	0
22	24	12"	3,12,17,13	top 5" same as 20-22 bottom 7" med to light	0
				brown sand with some fine gravel, qtz, subrounded, dry	0
24	26	13"	13,13,15,20	same as bottom 7" of 22-24	0
26	28	10"	3,4,11,10	Same as 24-26	0
28	30	11"	3,8,13,10	med to course brown sand gravel with some fine	0
				gravel, qtz, subrounded, moist	
30	32	10"	2,5,10,10	med to course light brown sand with little fine	0
				gravel, qtz, subrounded, moist	
32	34	9"	3,7,9,15	Same as 30-32 except top 4" brown in color	0
34	36	12"	2,9,11,16	top 10" same as 32-34 bottom 2" light brown	0
				med sand, qtz, subrounded, moist	
36	38	12"	5,11,13,10	same as top 10" of 34-36	0

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Sample Log (Cont.d)

Well/Boring J-2-SR Project Name and No. NGC-OU-3/NY001464.0807.00450

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)	headspace
38	40	9"	2,4,7,7	top 3" med to course light brown sand with trace fine gravel, bottom 9" med to course reddish brown sand with trace fine gravel, wet, qtz, subrounded	0	
40	42	16"	3,4,7,12	top 6" same as 38 to 40, bottom 10" black clay with little fine sand, qtz, subrounded, moist	0	
42	44	14"	2,4,10,10	black clay with some fine sand qtz, subrounded moist (wet outside)	0	0.5
44	46	12"	2,5,7,13	same as 42-44		
46	48		3,6,15,22	black clay moist inside wet outside	0	
48	50	20"	11,4,6,28	top 6" same as 46-48 next 14" tan clay moist inside wet outside	0	
50	52	14"		top 10" black clay moist inside, wet outside bottom 4" fine greenish brown sand, moist	0	
52	54		6,8,18,0	top 6" tan clay, bottom 4" fine greenish brown sand, qtz, subrounded, moist	0	
54	56	15"		top 7" black clay, bottom 8" fine greenish grey sand, qtz, subrounded, wet	0.5	
				end of boring		

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Sample Log

Well/Boring J-3-SB Project Name and No. NGC-OU-3/NY0014641.0807.00150

Site Location Bethpage, NY Drilling Started 4/13/07 Drilling Completed 4/13/07

Total Depth Drilled 56 feet Hole Diameter 6 inches Sampling Interval 0-56 feet

Length and Diameter of Sampling Device 2ft length, 2" diameter Type of Sampling Device Stainless Steel Split Spoon

Drilling Method Hollow Stem Auger Drilling Fluid Used None

Drilling Contractor Delta Driller Jason Pittl Helper Tom Romano

Prepared By John Corral Hammer Weight ~140 lbs Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	2	4"	2,8,3,8	dark brown fine sand and silt with some organic matter, qtz, subrounded, moist	0
2	4	5"	3,4,7,10	brown fine to medium sand with little coarse sand, qtz, subrounded, moist	0
4	6	14"	13,6,7,13	top 5" fine to medium brown sand with little fine gravel, qtz, subrounded, moist, bottom 9" fine to medium greenish brown sand with little fine gravel, qtz, subrounded dry	0
6	8	15"	5,7,17,19	top 3" fine brown sand + silt, next 6" greenish grey silt with some fine sand, bottom 6" med to coarse brown sand with a little fine gravel, qtz, subrounded moist	0
8	10	14"	4,17,21,32	top 5" silt, fine sand + little coarse sand greenish brown, bottom 9" reddish brown med to coarse sand with little fine gravel, qtz, subrounded, moist	0

Sample Log (Cont.d)

Well/Boring J-3-SB Project Name and No. NGC-OU-3/NY001464.0807.00150

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
10	12	12"	8,18,17,20	med to course reddish to light brown sand qtz, subrounded, moist	0
12	14	12"	8,6,7,10	top 5" med brown sand, qtz, subrounded, moist bottom 7" light brown med to course sand qtz, subrounded, dry	0
14	16	12"	6,6,6,10	light brown med to coarse sand, qtz, subrounded moist	0
16	18	12"	8,10,10,16	med to course light brown sand with trace fine gravel, qtz, subrounded, moist	0
18	20	10"	5,10,13,25	same as 16-18	0
20	22	12"	5,15,17,20	same as 18-20	0
22	24	12"	15,10,15,20	same as 20-22	0
24	26	13"	10,12,14,22	same as 22-24	0
26	28	14"	5,7,7,10	same as 24-26	0
28	30	12"		med light brown sand with some course sand qtz, subrounded, moist	0
30	32	14"		same as 28-30	0
32	34	12"		top 5" med to course brown sand, qtz, subrounded moist, bottom 7" med light brown sand, qtz, subrounde moist	0
34	36	14		top 3" med brown sand bottom 11" med to coarse light brown sand qtz, subrounded no	

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Sample Log (Cont.d)

Well/Boring J-3-SB Project Name and No. N6L-OU-3/NV00 1464.0807.00150 42-44 MS/MSD

Prepared By John Corral

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
36	38	13"		med to course brown sand with some fine gravel qtz, slbrownish, moist (bottom 1" stained black	0
38	40	12"		same as 36 to 38 (black staining from 1" to 9"), wet	2.5 max 7.8
40	42	16"		~~top 4" same as 38~~ top 4" med to course stained black sand wet, next 4" greenish brown fine sand wet, bottom 8" tan/ish black clay with some fine sand, wet outside material	0 1.0
42	44	16"		top 7" black clay with little fine sand, next 4" fine sand + silt, black, next 5" black clay with little fine sand	1.3 max 2.3
44	46	18"		top 8" black clay with little fine sand, next 3" black fine sand, next 7" black clay with little fine sand	0
46	48	14"		top 3" course sand mixed with black clay wet, next 11" black clay with little fine sand	7
48	50	15"		top 8" black fine sand + clay wet, bottom 8" tan clay with some fine sand, dry	0 0.7
50	52	16"		top 9" black clay moist, bottom 7" reddish brown fine sand dry	0.7 (clay) 160 (sand)
52	54	16"		top 8" black clay moist, next 8" fine greenish brown sand wet	1.2 clay 20 sand
End of Boring 54	56			~~black~~ greenish brown med sand, wet, qtz	160

Head space

REP 041307

Sample Log

NY001464.0807.00150

Well/Boring K-8-SB Project Name and No. N- Grumman OU3

Site Location Bethpage, NY Drilling Started 2/24/06 Drilling Completed 2/24/06

Total Depth Drilled 56 feet Hole Diameter 8 inches Sampling Interval (20-56) feet

Length and Diameter of Sampling Device 2' Long Type of Sampling Device split spoon

Drilling Method HSA Drilling Fluid Used None

Drilling Contractor Delta Well & Pump Driller Jay Flinger Helper Rick Guzman

Prepared By Prezorski Hammer Weight ~140lbs Hammer Drop ~30 Inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	20	cuttings	—	F/C rust sand; and F/C quartzite gravel.	0
20	22	0	—	No recovery	—
22	24	.167	8,10,10, 11	Quartzite stone. Then F/M brown sand; trace	0
				F/C quartzite gravel.	0
24	26	.42	6,9,7, 12	F/C brown sand; and fine quartzite gravel.	0
26	28	.84	10,10, 13,19	F/C brown sand; and fine quartzite gravel,	0
				Then fine brown sand.	0
28	30	—	—	(See Next page)	—
30	32	.67	10,10, 10,8	F/M brown sand; and fine quartzite gravel.	0

ARCADIS

Sample Log (Cont.d)

Well/Boring K-8-SB Project Name and No. NY001464.0807.00150

Prepared By Scherlin

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
28	30	9"	10,14, 7,12	(0-6") M/C sand, tan, dry, (SP)	0.0
				(6-9") M/C sand, tan and gravel,	0.0
				Quartzite, subangular, dry, (SP).	
32	34	9"	9,9, 11,11	M/C sand, tan with gravel,	0.0
				Quartzite, subangular, dry, (SP).	
34	36	10"	12,19, 17,16	M/C sand, brown w/gravel,	0.0
				Quartzite, subangular, dry (SP).	
36	38	7"	9,8,8, 16	(0-2") M/C sand, brown with	0.0
				silty clay, dry, (SC)	
				(2-7") M/C sand, dark grey,	0.0
				dry, (SP)	
38	40	12"	13,14, 17,12	F/M sand, brown / light grey with	0.0
				silty clay, (SC), dry	
40	42	8"	8,7,8, 11	F/sand brown/grey with silty	0.0
	(Rep0224075)			clay, brown/grey, dry (SC)	
42	44	10"	17,22, 24,24	F/sand, grey/brown with silt,	0.0
				grey/brown, dry, (SM)	
44	46	11"	9,14,14, 24	F/sand, grey with silt, grey,	0.0
	(MS/MSD)			dry, (SM)	
46	48	8.5"	15,17, 16,12	F/sand, brown/grey with silt,	0.0
				brown/grey, dry, (SM)	

ARCADIS

Sample Log (Cont.d)

Well/Boring K-8-SB Project Name and No. NY001464.0807.00150

Prepared By JCherlin

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
48	50	10"	23,19, 22,17	(0-3") F/sand, brown with silt, brown, dry (SM)	0.0
				(3"-4") Silty clay, grey, dry, (SC)	0.0
				(4"-10") F/sand, grey with silt, grey, dry, (SM)	0.0
50	52	10"	12,11, 11,11	(0-4.5") F/sand, brown with silt, brown, dry, (SM)	0.0
				(4.5-10") F/sand, grey with silt, grey, dry, (SM)	0.0
52	54	10"	12,13, 13,15	F/sand, grey/tan, and silt, grey/tan, wet, (SM)	0.0
54	56	15"	9,13,15, 9	F/sand, tan and a little silty clay, tan, wet, (SC)	0.0
				End of Boring	

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well L-7-SB Project/No. NY001464.0807.00150 Page 1 of 2

Site Location Bethpage Park, NY Drilling Started 2/24/09 7:45 Drilling Completed 11:50

Total Depth Drilled 56 Feet Hole Diameter 6→8 inches Type of Sample/ Coring Device SPlit Spoon

Length and Diameter of Coring Device 1-3/8" x 2' Sampling Interval 2 feet

Land-Surface Elev. ____ feet ☐ Surveyed ☒ Estimated Datum ____

Drilling Fluid Used None Drilling Method HSA

Drilling Contractor Delta Driller Jason Helper Thomas

Prepared By D Zuh Hammer Weight 140 Hammer Drop WR ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
(0.0) 0	20	—		med→fine sand, Lt Brown, sub rounded→sub angular, moist, w/pebbles (.5→3cm), some coarse sand rounded, [SW]
(0.0) 20	22	.5	6,8,10,13	SAA
(3.0) 22	24	.7	14,20,13,30	med→fine Lt Brown sand, w/coarse sand sub angular, trace pebbles (.5cm→2cm), moist, Loose packed, [SW] moist
(0.0) 24	26	.9	10,13,31,37	SAA
(0.0) 26	28	1.1	10,11,19,21	SAA - wet
(0.0) 28	30	2.0	20,28,30,50 (0→.3)	SAA Except: Lt Brown tint of reddish orange. (.3→2) Lt Brown fine→med sand, sub rounded→sub angular, w/pebbles (.5cm→3cm), moist, trace silt, Loose packed, [SW→SM]
(0.3) 30	32	.4	15,16,25,31	SAA
(0.1) 32	34	.5	11,15,21,18	SAA: Except: tint of med Brown, angular pebbles
(0.0) 34	36	.4	13,10,17,29	(0→.4) med Lt Brown sand, fine→very fine, some silt + coarse sand, moist, Loose packed, [SM]
(0.1) 36	38	.6	6,13,18,28	SAA: med→Lt Brown
(0.0) 38	40	1.15	10,19,15,36	Rep022407B (0→.5) SAA But Saturated (.5→1.15) med→very fine sand, Lt→olive gray, sub Angular→sub rounded, Saturated, some silt, [SP→SM]

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well: LT-SB

Page: 2/2

Prepared by: D. Zuck

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
40	42	.75	20,38,97,59	(0→.3) Saturated, med→fine sand, sub rounded→ Subangular, w/ pebbles (.5cm→2cm), trace Coarse sand, Loose packed, Lt. Brown [SW]	0.0
				(.3→7.5) med Brown fine→very fine sand, trace coarse sand, Saturated, some silt, [SM]	
42	44	2.0	6,10,12,18	(0→1.2) silty varved clay, wet, Low plasticity, trace sand fine, [SC]	0.0→0.1
				(1.2→1.5) very fine gray silty sand, Saturated, Med dence packed, [SP]	
				(1.5→2) Olive gray, Low→medium plasticity, med. stiff, wet [CL]	
44	46	1.25	13,18,39,69	(0→.9) Clayey SAND, Saturated→wet, sand is very fine→fine, soft→med stiff, Lt. Gray, [SC]	0.0
				[.9→1.25] Varved Lt Gray clay, silty clay, wet, trace Orange sand layering, med plasticity, med stiff [CL]	
46	48	1.1	4,10,18,31	(0→1.1) Sandy Varved Lt. Gray Clay, wet, Sand: ~~most~~ Very fine→fine grains, Subangular→ subrounded, Low plasticity, med stiff [SC→CL]	0.0
48	50	.7	6,8,12,14	(0→.4) Silty Sand, Saturated, fine→very fine Lt. Brown, [SM]	0.0
				(.4→.7) Same as [46→48]	
50	52	2.0	6,6,10,12	(0→2) med→fine Sand, Saturated, trace Lt. Brown Clay, Sand: subangular→Subrounded, Loose packed, [SP]	0.0
52	54	2.0	4,4,6,10	SAA	0.0
54	56	2.0	4,8,10,10	SAA	0.1

End of boring

Recalibrated PID 0.2 Base line ☆

☆ all PID Readings are change from Baseline.

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well N-3-SB Project/No. NY0014464.0807.0015.B Page 1 of 3

Site Location Bethpage Park, NY Drilling Started 2/23/07 ~7:30 Drilling Completed 12:45

Total Depth Drilled 56 Feet Hole Diameter 6" inches Type of Sample/ Coring Device Split Spoon

Length and Diameter of Coring Device 1-"X 2' Sampling Interval 2 feet

Land-Surface Elev. / feet ☐ Surveyed ☒ Estimated Datum /

Drilling Fluid Used None Drilling Method HSA

Drilling Contractor Delta Driller Dyson Helper Thomas

Prepared By D. Zuck Hammer Weight 140 Hammer Drop 6 ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
0	20	—	~~3,15,18,21~~ ~~3,NS~~	Back Fill
20	22	.6	3,15,14,21	(0→.6) med→fine sand, w/ pebbles (.5cm→3cm), sub rounded→ Lt Brown sub angular pebbles: quartz rounded, Loose packed [GW]
22	24	.7	30,83,63,70	(0→.7) SAA except: pebbles (.5cm→1cm)
24	26	.2	3,30,40,50	(.2) med→fine sand, Loose packed, sub rounded→ sub angular, Lt. Brown→ med Brown, trace pebbles (.5cm→2cm), [GP]
26	28	.2	12,13,55,45	SAA
28	30	1.5	13,24,28,32	(0→.8) SAA
				(.8→1.5) med→fine Lt Brown sand, w/ coarse sub angular→ Angular sand, Sand matrix of med→ fine sand: sub rounded→ sub angular, Loose packed, moist [SW]
30	32	1.35	8,34,20,25	(0→1.1) med→fine sand, w/ rounded pebbles (.5→2cm), Lt Brown, Loose packed, moist [SW]
				(1.1→1.35) med→fine sand Lt Brown w/ Rust red tint, some angular coarse sand, moist [SW]
32	34	1.1	36,23,13,33	(0→.5) SAA
				(.5→1.1) Silty SAND, trace pebbles (5cm), moist, med Dense packed [SM] Lt Brown tint of Reddish orange.

re Log (Cont.d)

ell N-3-SB

Prepared by D. Zuck

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
34	36	1.0	3,5,12,27	0→.3 (SAA)	0.0
				(.3→1) fine→very fine sand, some silt, med Dense packed, moist, Lt Brown→yellowish orange, sub rounded→sub angular [SP]	
36	38	1.45	15,20,25,35	(0→.4) SAA Except: med→Radish Brown, trace pebbles (.5cm)	0.0
				(.4→1.45) fine→very fine sand, sub rounded→sub angular, whitish yellow→Lt Brown, trace→some silt, moist, med dense, [SP→SM]	
38	40	1.2	8,20,23,23	SAA	0.0
40	42	1.1	16,16,30,23	(0→.4) fine→very fine, Lt Brown sand, sub-rounded→sub angular, trace pebbles .5cm, some silt, med Dense Packed, moist [SM]	0.0
				(.4→1.1) fine→very fine white sand, sub rounded→sub angular, moist→wet, Loose packed, [SP]	
42	44	1.3	11,43,25,20	(0→.3) SAA Except: med Brown	0.0
				(.3→1.3) SAA Exept: Back to white sand	
44	46	1.3	5,8,20,25	(0→.4) SAA Exept: Lt Gray tint of orange	0.0
				(.4→1.3) Lt Brown fine→very fine sand, trace silt, sub angular→Subrounded, moist, Loose [SP]	
46	48	1.1	4,15,25,25	(0→.3) Clayey SAND, Radish Brown→Lt Brown, trace silt, Low→No plasticity [SC]	0.0
				(.3→1.1) Silty sand, Lt Brown w/tint of orange, sub rounded→sub angular, med Dense packed, moist, [SM]	

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well N-3-SB

Page 3/3

Prepared by D. Zuck

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
48	50	1.1	6,27,26,26	SAA	0.0
50	52	.9	4,20,26,25	(Rep 022307B)	0.0
				0→.2 Lt ~~Brown~~ Gray, soft clay, moist, Low→med plasticity [CL]	
				(.2→.9) med→fine sand, Lt Brown tint of Lt. Gray, Moist, sub rounded→sub Angular Loose packed, [SP]	
52	54	1.9	6,6,10,22	MS/MSD	0.0
				(0→1.5) Very fine sand w/silts, trace mold; Sand: sub rounded, wet, Lt Brown→ Lt Gray, ~~Dam~~ med. Dense packed, [SM]	
				(1.5→1.9) SAA except: all Lt Gray.	
54	56	2.0	6,8,15,22	(0→2.0) SAA wet→ saturated; Lt Brown first (0→1'), then Lt. Gray (1→2').	0.0
				end of boring	

ARCADIS GERAGHTY & MILLER

Sample/Core Log

Boring/Well N-5-SB Project/No. NY001464.0807.00150 Page 1 of 3

Site Location Bethpage, NY Drilling Started 2/22/07 10:30 Drilling Completed 6:00

Total Depth Drilled 50 Feet Hole Diameter 6 inches Type of Sample/ Coring Device Split spoon

Length and Diameter of Coring Device S.S. 1.5' x 2' Sampling Interval 2 feet

Land-Surface Elev. / feet ☐ Surveyed ☒ Estimated Datum /

Drilling Fluid Used None Drilling Method HSA

Drilling Contractor Delta Driller Jason Helper Thomas

Prepared By D. Zuck Hammer Weight 140 Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
0	10	—	—	Over Burden
10	12	1.2	17,27,25,38	(0→.2) Stained sand med→coarse grained, sub rounded→sub angular, moist, Lt Brown→Grey→Lt Brown, Very Loose, trace fines, [G-W]
				(.2→1.2) med→fine grained sand, Lt Brown, w/ pebbles (5cm→2cm), w/ coarse sand, Quartzite, moist; Sand: sub rounded→sub angular, Loose packed, [G-
12	14	1.6	12,21,19,16	(0→1.6) [illegible] Lt Brown, med→coarse Sand, sub rounded→ sub angular, Moist, some pebbles, loose packed [G-W]
14	16	1.1	11,12,12,26	(0→.4) (SAA)
				(.4→1.1) med→fine sand, trace coarse sand, Lt Brown, moist, Loose packed, sub rounded→Sub Angular, [SP]
16	14	1.3	69,62,44,44	(0→.7) SAA
				(.7→1.1) fine sand w/ white Quartzite + Quartz pebbles, rounded, Dry→moist; Sand: sub angular [G-W]
				(1.1→1.3) S.A.: (0→.7)
18	20	1.6	44,30,46,[illegible]	(0→.8) med→fine sand, w/ some pebbles (.5cm→2cm), sub rounded→ Sub angular sand, Lt [illegible] Brown, moist [SW]
			[illegible]	(.8→1.6) SAA except: med Brown, few pebbles

Samplelg.xls.xls

ARCADIS GERAGHTY & MILLER

Sample/Core Log (Cont.d)

Boring/Well N-5-SB

Prepared by D. Zuck

PPM	Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
9.0)	20	22	1.1	24,24,34,40	(0→.5) med→fine sand, some pebbles, moist, med Brown, trace silt, sub rounded→sub angular; Rounded pebbles, Loose packed, [SW]
					(.5→1.1) SAA Except: Lt Brown + coarse sand.
.PPM 9.0)	22	24	1.25	29,21,30,40	(0→1.25) med→fine sand, Lt-Brown→Whitish Gray, Some coarse sand, trace pebbles (.5cm→2cm), moist, sub rounded→sub angular Sand, Loose packed, [SW]
PPM 3.0)	24	26	1.2	8,22,23,37	(0→1.2) SAA Except: trace coarse Sand, some Pebbles
r.0	26	28	1.2	40,30,40,60	0→.7 S.AA. Except: Wet
					(.7→1.2) " " : moist
1.0	28	30	1.3	15,20,35,20	(0→.5) SAA
					(.5→1.3) med→fine sand, Lt Brown tint of white, trace coarse sand, moist, sub rounded→sub angular, Loose packed [SP]
0.6	30	32	1.2	30,25,20,20	(SAA)
0.0	32	34	1.0	15,23,30,30	(0→.5) med→fine sand, Lt→med Brown, moist→wet, sub rounded, trace pebbles (.5cm), [SP]
	~~34~~	~~36~~		~~6,15,13,10~~	(.5→1) SAA Lt. Brown + bit of white, moist
0.0	34	36	1.5	6,15,13,10	(0→1.05) fine sand, with→Some pebbles, Lt→Med Brown, moist→wet, Sub rounded→Sub angular, SP
					(1.05→1.5) Lt varved clay, Lt Brown, trace sand, Low plasticity, med stiff [CL]
0.0	36→	38	1.3	17,4,5,10	0→.55 SAA
					.55→1.3 Gray clay, med→Low plasticity, [CL] (med stiff)

ARCADIS GERAGHTY & MILLER

Sample/Core Log (Cont.d)

Boring/Well N-5-SB

Page 3 of 3

Prepared by D. Zuke

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
(0.0) 38	40	1.25	13,5,10,13	0→.3 sand from cave in: Lt Brown, med→fine grained, trace pebbles, moist→wet; [SP] (.3→1.25) same
(0.0) 40	42	1.35	6,5,9,15	Clay, olive gray, [CL] med→High plasticity, med. stiff (clay as above)
(0.0) 42	44	1.9	3,6,9,14	S.A.A.
(0.0) 44	46	1.5	6,8,19,15	(0→.9) SAA: transitioning from olive gray→Lt Gray (.9→1.1) very fine→fine sand, sub rounded→sub angular, Lt. Brown, med. Dense, moist [SP] 1.1→1.5 Lt. gray, clay, med stiff, med plasticity, [CL]
(0.0) 46	48	1.25	4,5,12,13	(0→.7) SAA (.7→1.25) fine sand, white→Lt. Red, sub rounded→sub angular, Loose packed, moist, [SP]
(0.0) 48	50	1.0	3,4,11,11	(0→.4) Lt gray clay, med. ~~Density~~ Stiff, med plasticity, varved fine silt/sand layers, [CL] (.4→.6) Lt Brown Sand, Loose packed, sub rounded→sub Ang., fine grained [SP] (.6→1) Clayey Sand, Reddish white, fine→Very fine, sand [SC]
(0.0) 50	52	3.7	3,4,4,8	(0→.2) SAA (.2→.7) Clayey SAND, med Dense packed, fine→Very fine sand w/silts, Lt Red + Lt Brown, moist, [SC]
(0.0) 52	54	.6	4,10,10,15	(0→.2) Clay, Olive gray, Dense med plasticity, med stiff [CL] (.2→.8) med→fine sand, few silt, Lt Brown, Saturated, sub rounded→sub Angular, Loose packed [SP]
(0.0) 54	56	2.0	2,6,15,18	(0→2.0) SAA
				END OF BORING

Sample Log

NY001464.0807.00150

Well/Boring N-6-SB Project Name and No. N-Grumman 003

Site Location Bethpage, NY Drilling Started 2/22/07 Drilling Completed 2/23/07

Total Depth Drilled 56 feet Hole Diameter 8 inches Sampling Interval 10-56 feet

Length and Diameter of Sampling Device 2' Long Type of Sampling Device Split spoon

Drilling Method HSA Drilling Fluid Used None

Drilling Contractor Delta Well & Pump Driller Jay Finger Helper Rick Guzman

Prepared By Prezoski Hammer Weight ~140 lbs Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	10	cuttings	—	Fine to coarse rust sand; and f/c gravel.	0
10	12	1.25	13,18, 17,12	4" fine (chopped) quartzite gravel; and	0
				med beige sand. Then 4" fine brown sand,	0
				and fine quartzite gravel. Then quartzite	0
				rock fragments. Then 3.5" rust-brown	0
				fine sand; trace fine quartzite gravel.	
12	14	.5	18,21 16,11	chopped angular quartzite; and fine brown sand.	0
				Then fine to coarse quartzite gravel.	0
14	16	.416	18,21, 16,11	Fine gravel, quartzite fragments; and fine to	0
				med brown sand.	
16	18	.208	28,21, 10,11	Fine brown sand; and f/c quartzite gravel	0
18	20	.92	28,18, 11,11	f/m brown sand; and f/c quartzite gravel.	0
				Then f/c quartzite gravel. Then 8" fine	0
				light tan sand.	
20	22	.92	16,13, 7,10	Fine brown sand; some fine quartzite gravel.	0

Sample Log (Cont.d)

NY 001464.0807.00150

Well/Boring N-6-SB Project Name and No. N- Grumman 003

Prepared By Prczorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
20	22	Cont. —		Then 8" fine beige sand; some fine quartzite gravel.	0
22	24	.667	12,12, 9,8	F/C beige sand. Then 4" F/C beige sand; and F/C quartzite gravel.	0
24	26	.67	6,9, 10,12	F/M rust sand; some fine quartzite gravel. Then	0
				Quartzite fragments. Then light rust F/M sand;	0
				some fine quartzite gravel.	
26	28	.375	9,15, 23,29	F/M tan sand; some fine quartzite gravel.	0
28	30	.125	21,29, 32,34	F/C tan sand; and fine quartzite gravel.	0
30	32	1.17	12,19, 7,17	F/M light beige sand; and quartzite gravel.	0
				Then 7" silty rust clay.	0
32	34	1.084	12,19, 7,17	F/C beige sand; and F/C quartzite gravel.	0
				Then 10.5" silty rust clay.	0
34	36	.834	10,12, 19,11	silty rust clay.	0
36	38	1.75	8,6,9, 11	Trace rust silt. Then brown silty clay. Then	0
	(Rp 022308A)			rust silt. Then Grey clay. Then grey clay;	0
				and red silt; and fine red sand.	0
38	40	1	11,6,9, 11	Grey clay. Then rust silt. Then grey clay	0
				(firm). Then ~~red~~ red silt. Then tan silt.	0
40	42	1.5	6,6,12, 8	5.5" silty light brown clay. Then red silt.	0
				Then layered pink & tan silt. Then 7"	0

Sample Log (Cont.d)

Well/Boring N-6-SB Project Name and No. N-Grumman 003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
40	42	Cont. —		pink & gray silty clay.	0
42	44	1.58'	6,10,8,8	Silty brown clay, Then tan & pink silty clay,	0
	(MS/MSD)			Then tan clay (firm). Then silty pink & tan clay	0
44	46	1.08'	5,5,9,7	Silty brown clay. Then grey clay with layers	0
				of pink silty clay & grey silty clay.	0
46	48	.75	6,7,7,6	Fine brown sand. Then Grey clay. Then	0
				fine brown sand layered with grey clay.	0
48	50	.92	5,5,5,9	Dark brown clay, Then Brown clay, Then	0
				grey clay. Then fine rust sand with bands	0
				of dark rust fine sand.	0
50	52	.5	9,8,11,12	Grey clay. Then fine rust sand. Then	0
				dark rust fine sand!	0
52	54	1	8,8,9,8	Grey clay, Then fine tan sand; wet. Then fine rust sand;	0
				wet. Then fine dark rust sand; wet.	0
54	56	1.08'	9,8,8,8	fine brown sand; wet.	0
				End of Boring	

Sample Log

NY001464, 080-100150

Well/Boring N-8-SB Project Name and No. N-Grumman OU3

Site Location Bethpage, NY Drilling Started 2-23-07 Drilling Completed 2-23-07

Total Depth Drilled 56 feet Hole Diameter 8 inches Sampling Interval 20-56 feet

Length and Diameter of Sampling Device 2' Long Type of Sampling Device Split spoon

Drilling Method HSA Drilling Fluid Used None

Drilling Contractor Delta Well & Pump Driller Jay Finger Helper Rick Guzman

Prepared By Prezorski Hammer Weight ~140 lbs Hammer Drop ~30 inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	15	cuttings	—	F/C rust sand; and F/C quartzite gravel.	0
15	20	cuttings	—	F/C light tan sand; and F/C quartzite gravel.	0
20	22	.42	5,4,6,8	F/M rust sand; and F/C quartzite gravel.	0
22	24	.59	10,12,14,10	Fine light brown sand; and fine quartzite gravel.	0
				Then dark brown fine sand, Then F/C	0
				beige sand; and fine quartzite gravel, Then	0
				fine light tan sand.	0
24	26	.75	10,10,14,12	4 quartzite stones. Then F/C brown sand;	0
				and fine quartzite gravel. Then F/C light	0
				beige sand (and fine gravel). Then F/M light beige sand, some	0
				fine quartzite gravel.	
26	28	.84	9,8,11,11	F/C brown sand. Then F/M light beige sand.	0
				Then very light F/C beige sand; and fine	0
				quartzite gravel.	0
28	30	.84	12,13,9,12	F/M rust sand. Then F/C rust sand. Then	0

ARCADIS

2-2307

Sample Log (Cont.d)

NY001464.088-100150

Well/Boring N-8-SB Project Name and No. N-Grumman OU3

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
28	30	Cont.	—	Flc rust sand, and fine quartzite gravel.	0
				Then FIM rust & tan sand.	0
30	32	.67	10,10,9,10	Fine brown sand; trace med brown sand. Then	0
	(Rep 022307P)			FIM brown sand; and fine quartzite gravel.	0
				Then Fine light beige sand.	0
32	34	.59	7,6,9,12	Flc light beige sand; and fine quartzite gravel.	0
				Then dark rust silt, trace fine quartzite gravel.	0
34	36	.75	16,18,13,16	Med brown sand. Then fine dark rust sand,	0
				Then silty light brown clay. Then FIM light	0
				tan sand with trace beds of dark grey fine	0
				sand.	
36	38	.71	16,18,13,16	FIM light beige sand; trace fine quartzite	0
				gravel. Then Med rust sand. Then FIM	0
				rust sand.	
38	40	.5	8,6,6,12	FIM light rust sand. Then fine grey	0
				sand with layer of compact grey silt.	0
40	42	1	12,19,17,24	Wet; Flc rust brown sand. Then very light	0
	(MS/MSD)			fine beige sand. Then sandy brown clay.	0
42	44	1	12,14,16,18	Wet; Fine brown sand. Then FIM brown sand;	0
				moist. Then fine light beige sand.	0
44	46	1	12,14,16,18	Wet; FIM brown sand. Then sandy brown clay.	0

ARCADIS

Sample Log (Cont.d)

NY001464.0807.00150

Well/Boring N-8-SB Project Name and No. N-Grumman 003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
44	46	Cont. —		Then beige fine sand with band of sandy	0
				brown clay. Then fine beige sand. Then	0
				Sandy brown clay. Then light beige fine sand.	0
46	48	—	14,15, 13,18	See page 4	—
48	50	.92	17,16 15,19	F/M tan sand; trace sandy brown clay.	0
50	52	—	9,12, 14,13	See page 4	—
52	54	—	17,16, 19,17	See page 4	—
54	56	—	14,16, 12,12	See page 4	—
				End of Boring	

ARCADIS

Sample Log (Cont.d)

Well/Boring N-8-SB Project Name and No. M001464.0807.00180

Prepared By Scherlin

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
46	48	10"		M/C sand, tan/dark grey mix, dry, (SP).	0.0
50	52	7"		(0-2") M/C sand, tan, with some gravel, Quartzite, subrounded and some silty clay, brown, dry, (GC)	e.0
				(2-3") M/C sand, dark grey, dry, (SP)	e.0
				(3-7") M/C sand, tan, dry (SP)	0.0
52	54	13"		(0-11") M/C sand, tan, with a little silty clay, damp, (SC)	0.0
				(11"-13") M/C sand, light grey with striations of dark grey, damp, (SP).	0.0
54	56	10.5"		M/C sand, tan, damp, (SP). End	0.0

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Sample/Core Log

Boring/Well P-5-SB Project/No. NY001464.0607.00150 Page 1 of 3

Site Location Bethpage Park Drilling Started 2/23/07 1:25 Drilling Completed 5:20

Total Depth Drilled 56 Feet Hole Diameter 6→8" inches Type of Sample/ Coring Device Split Spoon

Length and Diameter of Coring Device 1½" x 2' Sampling Interval 2 feet

Land-Surface Elev. — feet ☐ Surveyed ☒ Estimated Datum —

Drilling Fluid Used — Drilling Method HSA

Drilling Contractor Delta Driller Jason Helper Thomas

Prepared By D. Zuck Hammer Weight 140 Hammer Drop NA ins.

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
0	15	—	—	Back Fill
5	20	—	PID: (41.7)	Sludge: Black, Liquidy, thick Like tar (Not tar track)
20	22	.4	~~4~~ 8,10,14	(0→.4) med→fine sand, w/ coarse sand & pebbles ≈.5cm→3cm, Lt Brown w/ tint of white, Loose packed, moist [SW]
22	24	1.0	20,50/6",36,21	(0→.1) & Black wood / paper material, mixed w/ med→fine sand, moist, (14.2 ppm)
				(.1→1) Lt Brown med→fine sand, trace silt, sub rounded→sub angular, moist, Loose packed, [SP] (0.1)
24	26	~~.5~~	50,25,20,30	(0→.2) & Black wood Paper material (4.0) ppm
				(.2→.5) Lt Brown Sand, med→fine grain, sub rounded→sub angular, moist, Loose [SP]
~~26~~	~~28~~			
26	28	1.1	25,30,25,30	(0→.2) & Black wood material (3.7 ppm)
				(.2→1.1) Some Lt. Brown @ 24→26 [SP] (0.1)
28	30	—	6,10,15,46	No Recovery
30	32	.8	41,21,8,17	(0→.4) Lt Brown sand, tint of white, med→fine grains, trace coarse grained sand & pebbles (.5cm→1cm), sub rounded→sub angular, moist, Loose packed, [SW]
				(.4→1.1) Lt Brown to Orangish yellow, fine→very fine sand, w/ silt, moist→wet, medium dense packed, [SM]

Samplelg.xls.xls

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well P-5-SB

Prepared by D. Zuch

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
32	34	1.3	12,25,27,3	(0→.6) med→fine sand, w/pebbles & coarse sand, Subrounded→Subangular grains, moist Lt. Brown tint of Red, Loose, [GM]	0.0
				(.6→1.3) fine→very fine sand, Lt Brown tint of ~~Red~~ Yellowish orange, moist, sub Angular→sub rounded, Loose→med dence packed [SP→SM] some Silt	
34	36	1.25	5,29,10,18	(0→1) SAA: Except trace Coarse Angular Sand	0.0
				(1.1→1.25) Very fine sand w/ silt, wet, trace Mica fragments, Lt Brown, [SM]	
36	38	1.3	6,10,10,12	(0→.3) Dark Brown→orangish yellow, med sand, Sub rounded→subangular, some silt, trace pebbles, moist, [SW]	0.0
				(.3→1.3) fine→very fine sand, Lt Brown→ Whitish gray, moist, sub rounded→ Subangular, some silt, med dence packed [SM]	
38	40	1.6	10,14,17,17	(0→.2) SAA: Lt Brown→med Brown	0.0
				(.2→1.6) med→fine sand, whitish gray, moist→wet, Subangular→ Subrounded, trace silt, Loose pack [SP]	
40	42	1.35	20,15,10,20	(0→.5) SAA	0.0
				(.5→.75) very fine Clayey-silty Sand, med Dence, sand: very fine, Lt Green→Lt Brown [SM→SC]	
				(.75→1.35) fine→very fine white sand, sub rounded→Sub angular, moist, Loose packed [SP]	

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well P-5-SB

Page 3/3

Prepared by D. Zuk

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
42	44	1.0	12,22/17,19	SAA	0.0
44	46	.7	6,12,13,21	(0→.3) Lt Brown Silty Sand, med dence, moist, Sand: fine→very fine grain, Sub angular, [SM]	0.0
				(.3→.7) SAA Except: grayish white [SP→SM]	
46	48	.95	10,18,18,21	(0→.4) SAA	0.0
				(.4→9.5) med→fine sub angular→sub rounded sand, whtish gray, moist→wet, [SP]	
48	50	.7	6,10,18,13	(0→.5) SAA	0.0
				(.5→.65) Dark Olive gray clay, med plasticity, moist, [CL]	
				(.65→.7) Same as (0→.5) [SP]	
50	52	1.5	11,11,19,33	(0→.3) Lt Brown tint of white, med→fine sand, Sub angular→sub rounded, moist→wet, Loose packed [SP]	0.0
				(.3→1.5) SAA: Saturated	
52	54	1.4	6,10,13,21	(0→.8) SAA	0.0
				(.8→1.0) Clayey sand, med→fine sub angular gravel, moist→wet, med Dense, [SC]	
				(1.0→1.4) Lt Gray clay, moist Low→med plasticity Low stiffness, [CL]	
54	56	1.35	6,6,10,10	(0→.3) Silty Sand med Brown ~~moist~~ wet, med Dense, fine sub angular Sand, [SM]	0.0
				(.3→.9) Clayey sand, fine sand w/clay, saturated, [SC]	
				(.9→1.1) Lt ~~Brown~~ Gray Clay, Low Plasticity, wet, [CL]	
				(1.1→1.35) Lt. Gray ~~Sand~~, med→fine grain, subangular→subrounded, wet→saturated, Low ~~Density~~ Packing, [SP]	

END OF BORING

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Sample Log

ARCADIS

NY001464.0807.00003

Well/Boring BCP MW4-3 Project Name and No. N-Grumman 003

Site Location Bethpage, NY Drilling Started 2-8-07 Drilling Completed 2-9-07

Total Depth Drilled 130 feet Hole Diameter 10 inches Sampling Interval N/A feet

Length and Diameter of Sampling Device N/A Type of Sampling Device N/A

Drilling Method HSA Auger 5' Long x 6¼" Drilling Fluid Used None

Drilling Contractor Delta Well + Pump Driller Jay Finger Helper Rick Guzman

Prepared By Prezorski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Hand dig	—	2' Frozen top soil; and fine to coarse quartzite	0
				gravel. Then brown silt; some brown silty clay,	0
				Then fine to medium brown sand; and fine quartzite	0
				gravel.	
5	10	cuttings	—	fine to med brown sand; some fine quartzite gravel.	0
10	15	cuttings	—	same as above	0
15	20	cuttings	—	Fine to med brown sand; some fine to coarse	0
~~20~~	~~25~~	"		quartzite gravel	
20	25	cuttings	—	Medium brown sand; some fine gravel, quartzite,	0
				angular + subrounded.	
25	30	cuttings	—	fine to med brown sand; some fine quartzite	0
				gravel	
30	35	cuttings	—	fine to coarse brown sand; and fine to	0
				coarse quartzite gravel.	
35	40	cuttings	—	fine brown sand; some fine quartzite gravel	0

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Sample Log (Cont.d)

ARCADIS

Well/Boring BCPMW4-3 Project Name and No. N-Grumman 003 NY001464.0807.00003

Prepared By Prezorski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
40	45	cuttings	—	Fine to medium brown sand; trace fine gravel, quartzite; some coarse gravel, quartzite	0
45	50	cuttings	—	Fine to med brown sand; some fine to coarse quartzite gravel	0
50	55	cuttings	—	Same as above	0
55	60	cuttings	—	Same as above	0
60	65	cuttings	—	Fine brown sand	0
65	70	cuttings	—	Fine brown sand	0
70	75	cuttings	—	Fine brown sand	0
75	80	cuttings	—	Fine Brown sand	0
80	85	cuttings	—	Fine Brown sand	0
85	90	cuttings	—	Fine Brown sand	0
90	95	cuttings	—	Fine brown sand; wet.	0
95	100	cuttings	—	Fine to med brown sand; wet.	0
100	105	cuttings	—	Fine to med brown sand; wet.	0
105	110	cuttings	—	Fine brown sand; wet.	0
110	115	cuttings	—	Fine to med brown sand; wet.	0
115	120	cuttings	—	Same as above	0
120	125	cuttings	—	Fine brown sand; wet.	0
125	130	cuttings	—	Fine brown sand; wet	0
				End of boring	

ARCADIS G&M

Sample/Core Log

Boring/Well BCP MW-5-1 Project/No. N-Grumman 003 / NY001348.0806.00002 Page 1 of 1

Site Location Bethpage, New York Drilling Started 11/20/06 Drilling Completed 11/20/06

Total Depth Drilled 18 Feet Hole Diameter 16 inches Drilling Method (Excavator with auger attached)

Length and Diameter of Coring Device 5' Long x 10" diameter Type of Coring/Sampling Device —

Sampling Interval — feet Drilling Fluid Used None

Drilling Contractor Delta Well + Pump

Prepared By Prework:

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5	—	hand dig	Topsoil. Med to coarse light brown sand; and fine to coarse gravel, quartzite. Then black	0
				stained silt / fine sand; and black stained fine	8.9
				to coarse gravel (quartzite). Then slightly black stained	
				concrete. Then black stained silt / fine sand; and	
				black stained fine to coarse quartzite gravel.	
5	10	—	cuttings	Black stained silt; and black stained fine to coarse	
				gravel (quartzite). Then at 9'3" rags, rags	
				covered with green material, fine to coarse	50
				green solid material with streaks of yellow; some	
				fine to coarse quartzite gravel with dark brown silt	
10	15	—	cuttings	Rags, rags covered with green material, fine to	
				coarse green solid material with streaks of yellow;	
				some fine to coarse quartzite gravel with dark	
				brown silt. Then rags, black stained rags,	
				dark brown silt and fine to coarse quartzite gravel	
				At 13' med to fine brown sand; and fine	
				quartzite gravel. Then coarse to med light brown	
				sand.	
15	18	—	cuttings	Light brown fine to med sand; and fine gravel quartzite.	1.6 (to 3ppm)

End of Boring

ARCADIS G&M

Sample/Core Log

NY001348.0806.0002

Boring/Well BCP MW 5-1 Project/No. N-Grumman 003 Page 1 of 1

Site Location Bethpage, NY Drilling Started 11/27/06 Drilling Completed 11/27/06

Total Depth Drilled 53 Feet Hole Diameter 14 inches Drilling Method Mud Rotary

Length and Diameter of Coring Device Large drill bit attached to drill rod 20' Long & 15' Long Type of Coring/Sampling Device cuttings

Sampling Interval — feet Drilling Fluid Used Quick Gel Bentonite / Water

Drilling Contractor Delta Well & Pump

Prepared By Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	20	—	—	No trough cuttings. Delta Redrill. See previous log	—
20	40	—	From trough	Coarse sand, Then Fine to coarse beige sand	0
40	53	—	From trough	Fine to med beige sand; and black particles	19.5
				Then fine beige sand; and fine black particles	4.2
—	—	—	From Bailer	Note: After drilling large bailer used	—
				yields coarse sand; and fine quartzite gravel.	16.3
				Then coarse sand; and fine quartzite gravel; and	9.8
				trace metal fragments. Then same as	
				above with large dumps grey clay.	.8-7.8
				End of boring	

G:\TECHNICL\FIELD LOGS\Sample Core Log.XLS- Sheet1

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Sample/Core Log

Boring/Well BCP MW5-1 Project/No. NY001348.0806.00002 N-Grumman OU3 Page 1 of 1

Site Location Bethpage, NY Drilling Started 12/4/06 Drilling Completed 12/5/06

Total Depth Drilled 70 Feet Hole Diameter 10 inches Drilling Method HSA

Length and Diameter of Coring Device 5' Long x 6 1/4" Type of Coring/Sampling Device —

Sampling Interval — feet Drilling Fluid Used None (cuttings)

Drilling Contractor Delta Well & Pump

Prepared By Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Notes:	Sample/Core Description	PID (ppm)
0	5	—	—	No soil cuttings generated during drilling	—
5	10	—	—		—
10	15	—	—		—
15	20	—	—		—
20	25	—	—		—
25	30	—	—		—
30	35	—	—		—
35	40	—	—		—
40	45	—	—		—
45	50	—	—		—
50	55	—	—		—
55	60	—	—		—
60	65	—	—		—
65	70	—	—		—
				End of Boring	

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Sample Log

Well/Boring MW6-1 Project Name and No. NOC-043 N.700,464.0807.00003

Site Location Bethpage, NY Drilling Started 3/6/07 1:30 Drilling Completed 3/7/07 3:00

Total Depth Drilled 105 feet Hole Diameter 8 inches Sampling Interval 10 feet

Length and Diameter of Sampling Device / Cuttings Type of Sampling Device /

Drilling Method HSA Drilling Fluid Used H_2O

Drilling Contractor Delta Driller Jay Finger Helper Enrique

Prepared By D. Zuck Hammer Weight / Hammer Drop / inches

	Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
3/6/07	0	5	/	/	Hand Dig, Coarse Gravel & med→fine Lt Brown Sand	0.0
	5	20	/	/	Lt Brown med→fine sand sub angular→	
	~~100~~				Sub rounded, w/ Pebbles & Coarse Sand sub rounded→Rounded	
					5cm→5cm diameter, trace→some Silt	
					[GW→SW]	
	20	30	/	/	SAA Except: Pebbles are Rounded.	0.0
	30	40	/	/	SAA	0.0
	40	50	/	/	SAA	
	50	60	/	/	med→Lt Brown Sub rounded→sub angular	0.0
					med→fine Sand, trace Coarse Sand, few Silt,	
					[SP→SM]	
	60	70	/	/	SAA, trace Silt [SP]	0.0
	70	80	/	/	SAA	0.0
3/7/07	80	90	—	—	med Brown, Subrounded→sub angular, mod→	0.0
					fine Sand, trace Silt, moist→wet [SP]	

Sample Log (Cont.d)

Well/Boring MW6-1 Project Name and No. NGC-043 NY001464.0807.00002

Prepared By D. Zuk

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
90	100	✓	✓	SAA	0.0
100	105	"	✓	" "	0.0
				End of Boring	

Sample Log

Well/Boring MW6-2 Project Name and No. NGC-043 NY001464.0507.00003

Site Location Bethpage, NY Drilling Started 2/28/07 1:00 Drilling Completed 3/2/07 ~12:00

Total Depth Drilled 148 feet Hole Diameter 6 inches Sampling Interval — feet

Length and Diameter of Sampling Device — Cuttings Type of Sampling Device —

Drilling Method HSA Drilling Fluid Used H_2O

Drilling Contractor Delta Driller Jay Finger Helper Enrique

Prepared By D. Zuck Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	—	—	topsoil + Back fill: Lt Brown → med Brown,	0.0
				Sandy Silty mix; Sand: med → Coarse grains Sub	
				Angular → subrounded, w/silt and pebbles .5cm →	
				6cm, Sat unsat → moist [G-W]	
5	20	—	—	med → fine sub angular → Sub rounded Lt.	0.0
				Brown Sand, Some pebbles .5cm → 4cm, trace	
				Silt, moist [SW]	
20	30	—	—	med → fine sub angular → Subrounded sand, Lt	0.0
				Brown (20→25) tint of yellowish orangish (25→30), few silt, moist	
				[SP → SM]	
30	40	—	—	SAA	
40	50	—	—	med → fine subangular → subrounded Lt Brown	0.0
				Sand, Some .5 → 4cm pebbles rounded, few stone	
				Silt, moist [SW]	
50	60	—	—	med → fine Lt Brown (50→55) → med Brown (55→60) (See Page 2)	0.0

Drill tip 5.5"

Sample Log (Cont.d)

Well/Boring MW-6-2 Project Name and No. NGC-043 M0001464.0607.00003

Prepared By D. Zuck

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
(cont. 50	60	—	—	Sub angular to Sub rounded sand, trace silt, moist → wet, [SP]	—
60	70	—	—	SAA; wet	0.0
70	80	—	—	SAA; med Brown, wet	0.0
80	90	—	—	SAA	0.0
90	~~100~~	—	—	Med fine Lt Brown Sub rounded → Sub Angular sand,	0.0 →
				trace Coarse sand, Saturated, trace silt [SP → SM]	0.3
100	110	—	—	SAA	0.0 → 0.2
110	120	—	—	SAA	0.0 → 0.2
120	130	—	—	" "	0.3
120	140	—	—	" "	0.5
140	148	—	—	SAA	0.3
				End of Boring	

Sample Log

NY001464.0807.00003

Well/Boring BCP MW-7-1 Project Name and No. N-Grumman 003

Site Location Bethpage, NY Drilling Started 2-16-07 Drilling Completed 2-19-07

Total Depth Drilled 105 feet Hole Diameter 10 inches Sampling Interval — feet

Length and Diameter of Sampling Device 5' Long x 6 1/4" Type of Sampling Device —

Drilling Method HSA Drilling Fluid Used None

Drilling Contractor Delta Well & Pump Driller Jay Pittard 2/16 / Jay Finger 2/19 Helper Rick Guzman

Prepared By Prezorski / Chorlin 0-5' Hammer Weight — Hammer Drop — Inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	Handdig	—	M/C sand dark brown/black with a little light brown, and some gravel, quartzite, subrounded, damp/frozen (SP)	0
5	10	cuttings	—	Med brown sand, and F/C quartzite gravel	0
10	15	cuttings	—	M/C rust sand, and F/C quartzite gravel.	0
15	20	cuttings	—	F/M rust sand, and F/C quartzite gravel	0
20	25	cuttings	—	same as above	0
25	30	cuttings	—	Fine brown sand, trace fine quartzite gravel. Then	0
				F/M brown sand, trace fine quartzite gravel	0
30	35	cuttings	—	Fine brown sand, very trace quartzite gravel	0
35	40	cuttings	—	Same as above	0
40	45	cuttings	—	Fine rust-brown sand, and F/C quartzite gravel	0
45	50	cuttings	—	Fine brown sand, some fine quartzite gravel	0
50	55	cuttings	—	Fine brown sand	0
55	60	cuttings	—	Fine brown sand	0
60	65	cuttings	—	Fine brown sand	0
65	70	cuttings	—	Fine brown sand	0

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2/19/07

Sample Log (Cont.d)

NY001464.0807.000003

Well/Boring BCP MW-7-1 Project Name and No. N. Grumman OU3

Prepared By Brezoski

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
70	75	cuttings	—	Fine brown sand	0
75	80	cuttings	—	fine brown sand; moist	0
80	85	cuttings	—	Fine brown sand; trace med brown sand; wet.	0
85	90	cuttings	—	F/M brown sand; wet	0
90	95	cuttings	—	Fine brown sand; wet	0
95	100	cuttings	—	F/M brown sand; trace fine grantite gravel; wet.	0
100	105	cuttings	—	F/M brown sand; trace fine grantite gravel; wet.	0
				End of boring	

ARCADIS G&M

Sample/Core Log

NY001348.0806.00002

Boring/Well F-8-PZ Project/No. Grumman 003 Page 1 of 3

Site Location Bethpage, NY Drilling Started 5/24/06 Drilling Completed 5/25/06

Total Depth Drilled 40 Feet Hole Diameter 6 inches Drilling Method Hollow Stem Auger

Length and Diameter of Coring Device 5' Long x 6" Type of Coring/Sampling Device Auger / Split Spoon

Sampling Interval variable feet Drilling Fluid Used NONE

Drilling Contractor Delta

Prepared By Prezorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Blow counts Notes:	Sample/Core Description	PID (ppm)
0	5	cuttings		Fine to med orange sand; some fine to coarse gravel, subrounded, quartzite	0
				Then dark orange fine sand; trace fine to coarse gravel, subrounded, quartzite.	
				Then dark orange fine sand, trace fine gravel, quartzite; moist. Then	
				darker orange fine sand; trace fine to coarse gravel, quartzite; moist	
5	7	.83	2,3,4,4	Fine to med dark orange sand; trace fine gravel, subrounded, angular, quartzite.	0
				Moist	
10	12	1.25	3,4,6,6	Moist. Dark orange fine sand; trace fine gravel, quartzite. Then 6"	0
				coarse to fine orange sand; some coarse to fine gravel, subrounded, quartzite.	
				Then moist coarse to fine sand (orange to tan); trace fine gravel, subrounded, quartzite	
15	17	1.08	3,10,30,23	Fine to med tan sand with bands of dark orange; very trace fine	0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well ~~P2-1~~ F-8-P2

Page 2/3

Prepared by Prczorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Blow Counts / ~~Notes:~~	Sample/Core Description	PID (ppm)
				gravel, angular, quartzite. Then 4" coarse to fine tan sand; and fine to coarse gravel, angular, subrounded quartzite. Then 4" med to fine light tan sand.	
20	22	.92	10, 17, 20, 30	6" fine to coarse gravel, angular, subrounded; and coarse to medium orange sand. Then 4" fine to coarse gravel, angular, subrounded; and orange tan coarse sand. Then fine grey sand; and fine gravel, subrounded, angular, quartzite. Then fine grey sand.	0
22	24	1.42	16, 18, 24, 46	3" coarse to fine gravel; and fine to med rust colored sand. Then 2" coarse to fine rust colored sand; some fine to coarse gravel, angular, subrounded, quartzite. Then 12.5" fine to med orange tan sand. Band of moist fine sand.	0
24	26	.875	15, 17, 25, 58	Coarse gravel, quartzite; and fine rust colored sand. Then fine to med rust colored sand; and fine gravel, angular, subrounded quartzite Band of dark orange fine sand. Then 6" rust colored sand with band of darker orange. Then 2" fine rust colored sand with clumps	0

ARCADIS G&M

Sample/Core Log (Cont.d)

Boring/Well ~~P2-1~~ F-8-P2

Page 3/3

Prepared by Przorski

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Blow counts Notes:	Sample/Core Description	PID (ppm)
				of black material. No odor. PID 0ppm	0
26	28	1.58	19,35, 39,53	Wet, uniform, Fine to med rust colored sand with bands of dark orange	0
28	30	1.58	21,33, 46,52	Wet, uniform, fine rust colored sand, Very compact, firm. Very, very trace coarse sand at top mixed with fine sand.	0
30	32	2	28,36, 42,98	Wet, ~~Uniform~~. Med to fine tan sand. Then Compact fine tan sand with bands of rust colored fine sand. Then last 2" rust colored fine sand	0
32	34	2	7,13,19 34	Wet, uniform. Compact. Fine to med light brown sand. Very wet on bottom.	0
34	36	1.33	17,21, 29,32	Very wet, Fine to med Brown sand. Note! From 10"-13" clay clumps within sand	0
36	38	2	18,22, 27,31	11" Wet fine brown sand. Then hard, from brown clay.	0
38	40	1.83	17,21, 28,32	7" wet fine brown sand. Then 3" hard, from brown clay. Then Same brown clay but with dark streaks of black. No odor. PID 0ppm. Then soft silty black clay. No odor. PID 0ppm.	0
				End of Boring	

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Sample Log

Well/Boring I97-PZ Project Name and No. NGC-043 NY001464.0807.00003

Site Location Bethpage, NY Drilling Started 10:45 Drilling Completed 3:10

Total Depth Drilled 42.85 feet Hole Diameter 8 inches Sampling Interval — feet

Length and Diameter of Sampling Device — Type of Sampling Device —

Drilling Method HSA Drilling Fluid Used None

Drilling Contractor Delta Driller Jay Finger Helper Enrique

Prepared By D. Zuck Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample Description	PID (ppm)
0	5			Hand cleared; topsoil + gravely Sand, Lt→med Brown	0.0
5	20			med→fine sand, some silt + pebbles .5cm→4cm diam, rounded; Sand: subrounded→subangular, moist→wet, Loose, [GM] Lt. Brown	(0.0)
20	30			SAA	0.0
30	40			med→Very Fine Sand, Lt Brown, some silt, few pebbles (.5cm→3cm), Moist, subangular→subrounded, [GM→SM]	0.0
40	≈43			SAA	0.0

ARCADIS

Sample Log

NY001464.0807.00003

Well/Boring 0-97 P2 Project Name and No. N-Grumman OU3

Site Location Bethpage, NY Drilling Started 2/22/07 Drilling Completed 2/22/07

Total Depth Drilled 45 feet Hole Diameter 6 inches Sampling Interval — feet

Length and Diameter of Sampling Device 4 1/4" x 5' Long Type of Sampling Device —

Drilling Method HSA Drilling Fluid Used None

Drilling Contractor Delta Well & Pump Driller Jay Finger Helper Rick Guzman

Prepared By Prezorski Hammer Weight — Hammer Drop — inches

Sample Depth (feet below land surface) From	To	Sample Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample Description	PID (ppm)
0	5	cuttings	—	Topsoil; and f/c quartzite gravel. f/c rust sand;	0
				and f/c quartzite gravel.	
5	10	cuttings	—	f/m rust sand; and f/c quartzite gravel	0
10	15	cuttings	—	Same as above	0
15	20	cuttings	—	f/c rust sand; and f/c quartzite gravel.	0
20	25	cuttings	—	Same as above.	0
25	30	cuttings	—	f/c rust sand; and f/c quartzite gravel; wet.	0
30	35	cuttings	—	Same as above	0
35	40	cuttings	—	f/c rust sand; and f/c quartzite gravel; wet.	0
40	45	cuttings	—	f/c rust sand; and f/c quartzite gravel; moist.	0
				End of boring.	