APPENDIX D

MONITORING WELL STRATIGRAPHIC AND INSTRUMENTATION LOGS

APPENDIX D.1	1967 LEGGETTE, BRASHEARS & GRAHAM WELLS
APPENDIX D.2	1983 GROUND/WATER TECHNOLOGY, INC. WELLS
APPENDIX D.3	JUNE 1991, CRA
APPENDIX D.4	JUNE 1995, CRA
APPENDIX D.5	2001 NEW INSTALLATIONS, CRA
APPENDIX D.6	2001 WELL CONVERSIONS, CRA

APPENDIX D.1

1967 LEGGETTE, BRASHEARS & GRAHAM WELLS

LEGGETTE, BRASHEARS & FRAHAM WELLS (DRILLED IN 7867)

NEW DESIGNATION

T-1

T-2

T-2

OLD DESIGNATION

OLD #3

OLD #2

OLD #1

LAYNE-NEW YORK CO., INC.

1250 WEST ELIZABETH AVE., LINDEN, N. J.

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L	\mathbf{C}	G	\mathbf{C}	•	M	/		L.	L

1-225-61

Log of Wel	1 201 A E	PFRH		Well Test	No
	Address	15:1:12	Date Test Hol	County, Size Completed	5/2///
Water stan	Total depth to ds when not p		teet 7	/	hes from the surface of the ground
THICKNESS THATUM	DEPTH TO HOTTOM OF STRATA	FORMATION FOUND EACH STRATUM	THICKNESS OF STHATUM	DEPTH TO BOTTOM OF STMATA	PORMATION FOUND EACH STRATUM
. 2	2'	to PSoil			
<u>.</u>		Yill Soil			
6"	7-6"	SanTof Soit			
3	9-6"	67741 + E/27			
	9-6	SHIPA MACH			
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		3			
के जीवनी करींबार कर अस्तर के राजकार हरके	t on its of the state of the st	ergandis a del seconomica estados estados con constituições e de casa de constituições de casa de constituições			¥.
Remarks a	nd opinion of T	ear .	_	. 9	

Rotary Cubic Tool

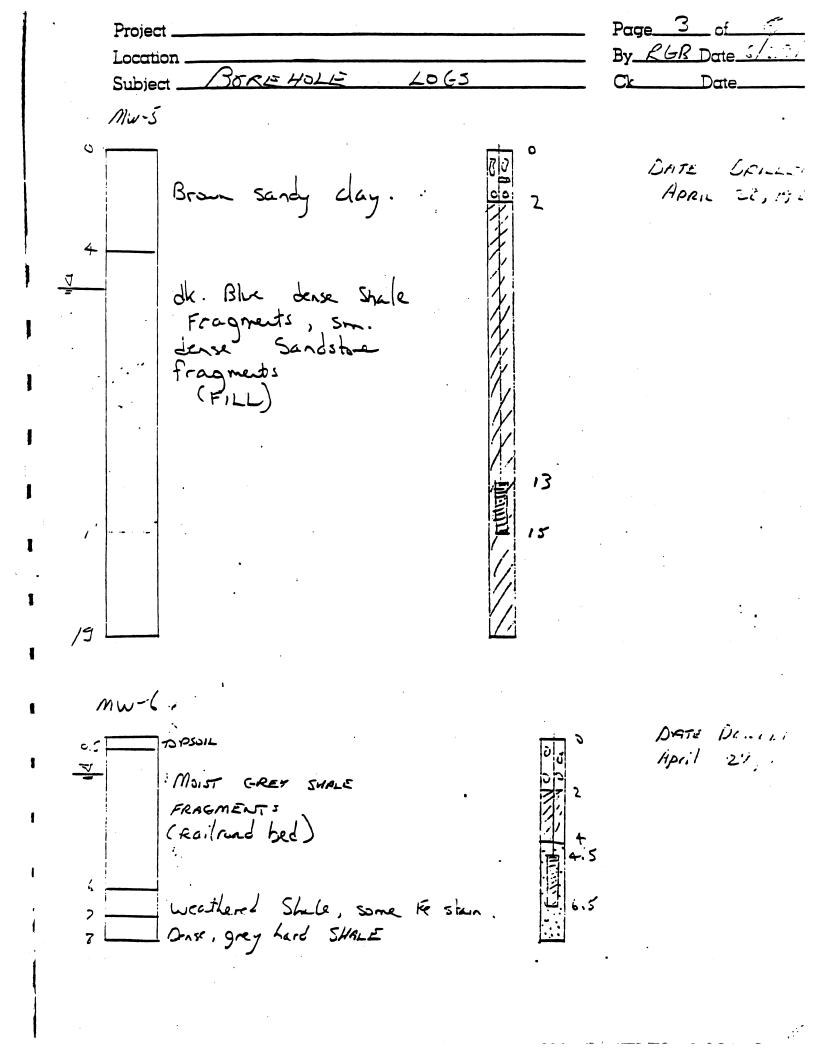
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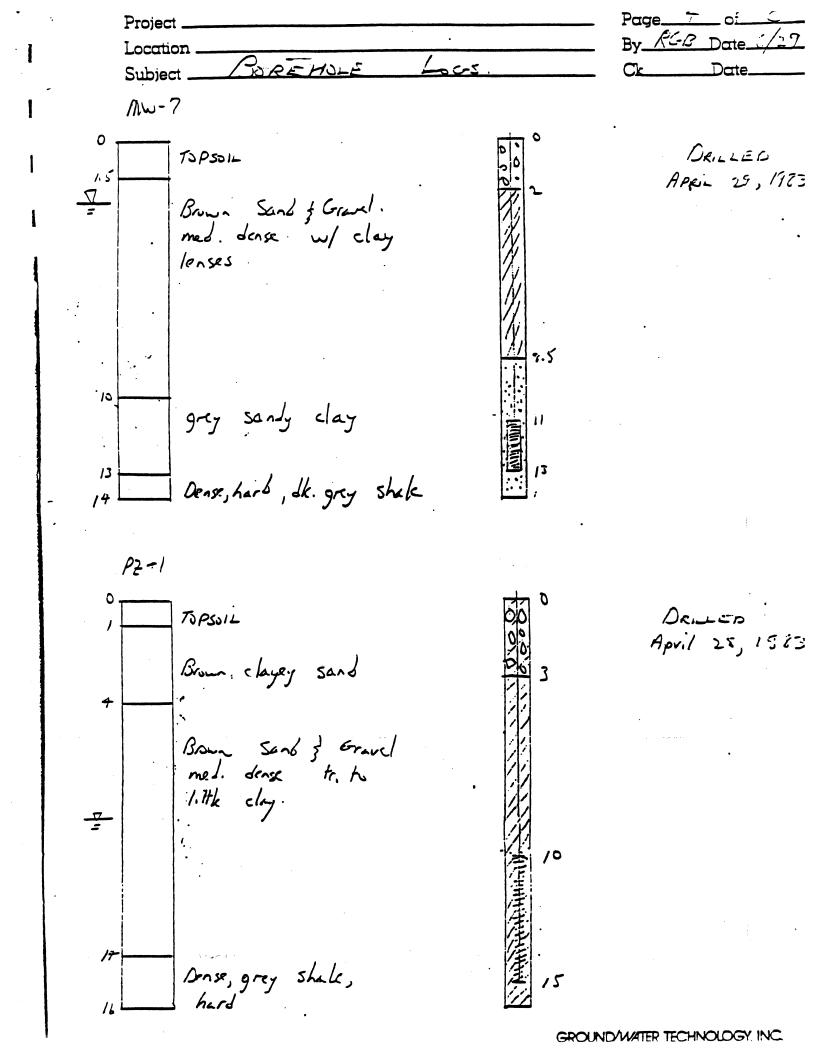
TEST W	ELL		DRD			(s	Layin	<i>\(\lambda</i>	.! z w	YORK	Co., 11
GROUND SURFACE	\; o'		c* .	N :Y:	رکم کز ج	12 1 2: 14 F P	PAH PERA	<u> </u>	TEST WE		<u>3-2</u> -
	JAILA NEWYE			-/-/-		-R/ R			TY-F TH TA	Selv.	ETE E
			WEL.		NO N: TYPE _ TA (MEAS	T	T	GTH	ELEVATIO		
GRAY SHALE FRACTURED. ITH STKS. OF SHUD TONE	R	156"	7:00 7:70 7:37 4:30	10	PUMP. WELL	OBS. WELL	OBS. WELL	TIME	GPM	PUMP. WZLL	OBS. WELL
	rek Hole		630								
EOTTOM OF TEST HOLE	address, of the state of	i storical inches de 1949	STAT STATE JUAL	IC LEVEL		HARD.		IRON		, MANGAN	I

APPENDIX D.2

1983 GROUND/WATER TECHNOLOGY, INC. WELLS

GROUND/WATER TECHNOLOGY, INC. WELLS (DRILLED IN 1983)





Proje			5 of 6
Loca Subj P2-2	ect BOREHOLE LOGS.	By_ <i>K</i> //	DateDate
0,5	- -	0	BRILLED GPRIL 25,
3	CRUSHED SHALE FRAGENTS.	2	
	C-REY ZHALE , DEN 32		
<u>ā</u>	DRY	3	
1 /2	WEATHDRED SHALK, SOFT. PESTAINS.	11.21.11.11.11.11.11.11.11.11.11.11.11.1	
1 15	SOFT, LT. GREY SHALE ORY.	建了	

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1

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. T.C.

Project. By RGB Date 5/20/-Location. Subject ____ Date_ DRILLED Apr. 1 28 , 1583. TOPSIL sandy clay, bonn. 3 DK GRY SHALE FRAGMENTS, (FILL) sm. clay. strong oder, water grey color. 19 13 Hole cond 18 DK. GRY, drass SHALE <u>D</u> 20 20

.

APPENDIX D.3

JUNE 1991, CRA

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(L-06)

PROJECT NAME: NEPERA - LAGOON SITE

HOLE DESIGNATION: MW-1D-91, BH-2-91 (Page 1 of 2)
DATE COMPLETED: JUNE 30, 1991

PROJECT NO .:

3698

CLIENT:

NEPERA, INC.

DRILLING METHOD: 4 1/4" ID HSA

LOCATION:

HAMPTONBURGH, NY

CRA SUPERVISOR: R. FIELD

	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION			AMPL	
ft BGS		ft AMSL	INSTALLATION	N U M	S 'I	, I
	REFERENCE POINT (Top of Riser) GROUND SURFACE	380.54 378.0		M B E R	E	(ppm
	SM—SAND, little silt, little fine to coarse gravel, medium dense, brown, dry		CONCRETE SEAL	1SS	1	7 4.5
- 2.5	Same, with weathered shale framents	·	8°¢ BOREHOLE	2SS	$\langle N \rangle$	00 0.5 00 29.5
- 5.0			BENTONITE GROUT			00 1.7
- 7.5	\BEDROCK-SHALE END OF OVERBURDEN HOLE @ 8.0 FT BGS	370.0	BOREHOLE	588	>1	oo –
- 10.0	END OF OVERBONDEN FIGURE & 6.0 FT BG3		5.9"ø BOREHOLE			
- 12.5		365.0	3.9*•			
- 15.0		·	BOREHOLE		-	
- 17.5						
- 20.0		·				
- 22.5						
- 25.0						
- 27.5						
- 30.0			·			
- 32.5						

NOTES:

MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



WATER FOUND STATIC WATER LEVEL



(L-07)

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: NEPERA - LAGOON SITE

HOLE DESIGNATION:

MW-1D-91, BH-2-91 (Page 2 of 2) JUNE 25, 1991 DATE COMPLETED:

PROJECT NO .:

3698

WR / CORE

CLIENT:

NEPERA, INC.

DRILLING METHOD: CRA SUPERVISOR:

R. FIELD / E. HOLT

HAMPTONBURGH, NY LOCATION:

		E L E V		BI	RN	CR OE	R Q D	WR AE TT EU
DEPTH	DESCRIPTION OF STRATA	E V A T - O N	MONITOR INSTALLATION	BEDROCK BEDROCK	KOZ Beek	RECOVERY CORE	ט	-DRN -ER
ft BGS	•	ft. AMSL	·			%	%	%
- 7.5	Overburden		CEMENT/ BENTONITE GROUT 4" STEEL					·
- 10.0	SHALE(Normanskill Formation): dark gray, fine grained, near vertical fractures throughout, bedding trends east @ 30°	370.0	E CASING BENTONITE PELLET SEAL	·				-
- 12.5			→5.9*ø BOREHOLE					
- 15.0	 weathered fracture (13.5 to 14.3 ft BGS) iron staining between broken shale pieces (16.0 to 16.5 ft BGS) 	363.8	■ 3.9"ø BOREHOLE		1	95	83	
- 17.5	- near vertical iron stained fracture with presence of chalcopyrite (18.3 to 19.0 ft BGS)				2	100	95	
- 20.0	- trends westerly (20.5 to 22.0 ft BGS)							
- 22.5	 45° fractures on quartz filled veins, trending west with bedding to 24.0 ft BGS 							
- 25.0	 bedding disturbed with quartz filling between fractures that myriad column length, trace pyrite between fractures 						·	
- 27.5	 bedding continues westerly dipping 45° (27.2 to 32 ft BGS) 				3	100	82	
- 30.0								
32.5	END OF HOLE • 32 FT. BGS	346.0						

PNOTES: MEASURING POINT-ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE,

▼ WATER FOUND

35.0

T STATIC WATER LEVEL

NM - NOT MEASURED

11 (12 # CN) (13 ja.)

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

HOLE DESIGNATION: MW-2D-91

(Page 1 of 3). JUNE 30, 1991

PROJECT NO .:

PROJECT NAME: NEPERA - LAGOON SITE

DATE COMPLETED:

(L-08)

CLIENT:

NEPERA, INC.

3698

DRILLING METHOD: 4 1/4" ID HSA

LOCATION:

HAMPTONBURGH, NY

CRA SUPERVISOR: E. HOLT

	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION	MONITOR		SAMI		- ц
BGS	REFERENCE POINT (Top of Riser)	ft AMSL 379.53	INSTALLATION	Z J M B E	ST A T E	C - ▶ < ₹	CZI
	REFERENCE POINT (Top of Riser) GROUND SURFACE SM-SAND, fine to medium grained, some silt,	377.2		R	M	<u>Ē</u> 45	(ppr
2.5	SM—SAND, fine to medium grained, some silt, little to some gravel, medium dense to extremely dense, brown to dark gray, moist to wet		CONCRETE SEAL	1SS 2SS		50	_
5.0				355	X	27	0.
'.5			8" BOREHOLE	4SS		21	0
0.0		367.2	CEMENT/	588	M	21	0
0.0	GM—GRAVEL, fine to coarse grained, little to some silt, shale fragments, very dense to extremely dense, light gray to dark gray,	- 367.2 366.0	BENTONITE GROUT 4*6 STEEL CASING	6SS	X	98	
2.5	saturated		STEEL CASING	7SS	X	73	C
5.0				8SS 9SS	H	>100 >100	١
7.5			BENTONITE				
0.0	END OF OVERBURDEN HOLE @ 19.0 FT. BGS	358.2	PELLET SEAL				
2.5			5.9°¢ BOREHOLE				
5.0			3.9°¢ COREHOLE				-
7.5							
0.0							
2.5							
			•				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

WATER FOUND V STATIC WATER LEVEL V



(L-09)

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: NEPERA - LAGOON SITE

HOLE DESIGNATION:

MW-2D-91 (Page 2 of 3)

PROJECT NO .:

3698

DATE COMPLETED:

JUNE 30, 1991

CLIENT:

NEPERA, INC.

DRILLING METHOD:

WR / CORE

LOCATION:

HAMPTONBURGH, NY

CRA SUPERVISOR:

R. FIELD

DEPTH	DESCRIPTION OF STRATA	ELEVATION	MONITOR INSTALLATION	BEDROCK L	アンスの日本	Ϋ́	ROD	WATER
ft BGS		ft. AMSL	<u>.</u>			%	%	%
17.5	Overburden		8°6 BOREHOLE CEMENT/ BENTONITE GROUT BENTONITE					
20.0	SHALE(Normanskill Formation): gray, massive, bedding dips eastward — quartz filled fracture (**\textit{0}\) 19.1 ft BGS) — vertical fracture (**\textit{0}\) 20.3 ft BGS) — vertical fracture (**\textit{0}\) 21.5 ft BGS) — vertical fracture (**\textit{0}\) 21.5 ft BGS) — highly fractured (22.0 to 22.8 ft BGS)	- <i>358.2</i>	5.9"ø BOREHOLE Tiest Casing		1	100	71	100
25.0	 highly fractured (23.3 to 23.8 ft BGS) vertical fracture (© 24.4 ft BGS) vertical fracture (© 25.0 ft BGS) vertical fracture (© 26.0 ft BGS) quartz filled fractures (© 26.1 and 		3.9°¢ COREHOLE					(
27.5	26.5 ft BGS) — highly vertically fractured (26.5 to 27.0 ft BGS) — (45') vertical fracture (27.0 to				2	100	81	100
30.0	28.0 ft BGS) - fracture (@ 28.8 ft BGS) - fracture (@ 29.9 ft BGS) - fracture (@ 30.4 ft BGS) - fracture (@ 31.3 ft BGS)							
32.5	- highly fractured and broken (31.8 to 32.0 ft BGS) -highly fractured throughout - quartz filled joints (@ 33.0 ft BGS)				3	96	40	100
35.0	 weathered iron stained fracture (@ 35.0 ft BGS) weathered iron stained fracture (@ 35.8 ft BGS) 							
37.5	- fault (@ 36.5 ft BGS) - vertical fracture (@ 37.3 ft BGS) - vertical fracture (@ 37.8 ft BGS) - vertical fracture (@ 38.2 ft BGS)				4	100	64	100
40.0	 vertical fracture (@ 38.9 ft BGS) vertical fracture (@ 39.1 ft BGS) vertical fracture (@ 39.4 ft BGS) vertical fracture (@ 39.9 ft BGS) 							
42.5	 vertical fractures and fault zone (40.0 to 40.9 ft BGS) highly fractured (42.5 to 43.0 ft BGS) 							
45.0	•				5	100	62	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND

T STATIC WATER LEVEL

NM - NOT MEASURED

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: NEPERA - LAGOON SITE

HOLE DESIGNATION:

MW-2D-91 (Page 3 of 3)

PROJECT NO .:

3698

DATE COMPLETED:

JUNE 30, 1991

(L-09)

CLIENT:

NEPERA, INC.

DRILLING METHOD:

WR / CORE

LOCATION:

HAMPTONBURGH, NY

CRA SUPERVISOR:

R. FIELD

LOCATI	ON: HAMPTONBURGH, NY		CRA SUPER		JK:	R. F		
DEPTH	DESCRIPTION OF STRATA	E LEVAT-OZ	MONITOR INSTALLATION	BINTER OCKL	RUMBER	RECO>ERY	R Q D	WATER
t BGS		ft. AMSL				%	%	
47.5	- fault zone (© 45.2 ft BGS)				5	100	62	
50.0	 highly fractured, weathered, iron staining (@ 47.6 ft BGS) highly fractured and weathered (50.0 to 51.0 ft BGS) 		3.9°¢ COREHOLE		6	88	52	
52.5	END OF HOLE @ 52 FT. BGS	325.2			-			-
55.0								
57.5	·							
60.0							•	
62.5								
65.0								
67.5								
70.0								
72.5								
75.0								

▼ WATER FOUND

T STATIC WATER LEVEL

NM - NOT MEASURED

2 350 955

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(L-10)

PROJECT NAME: NEPERA - LAGOON SITE

HOLE DESIGNATION: MW-3D-91

(Page 1 of 3).

PROJECT NO .:

3698

DATE COMPLETED:

JUNE 30, 1991

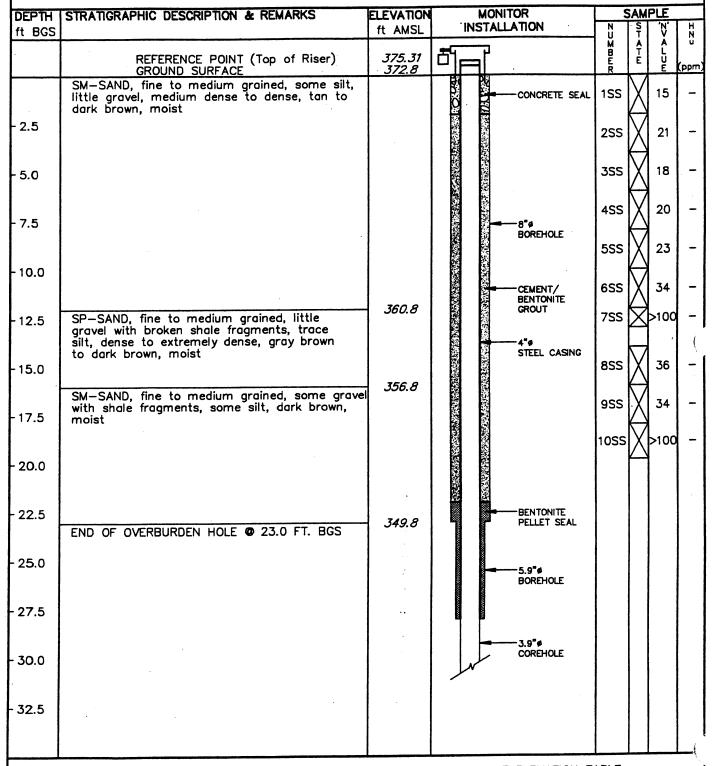
CLIENT:

NEPERA, INC.

DRILLING METHOD: 4 1/4" ID HSA

LOCATION:

CRA SUPERVISOR: R. FIELD HAMPTONBURGH, NY



NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

WATER FOUND STATIC WATER LEVEL

(L-11)

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: NEPERA - LAGOON SITE

HOLE DESIGNATION:

MW-3D-91 (Page 2 of 3.)

PROJECT NO .:

3698

DATE COMPLETED:

JUNE 30, 1991

CLIENT:

NEPERA, INC.

DRILLING METHOD:

NX CORE

LOCATION:

HAMPTONBURGH, NY

CRA SUPERVISOR:

R. FIELD

DEPTH DESCRIPTION OF STRATA The content of the c									
Overburden 349.8 SHALE(Normanskill Formation): fine groined, gray, massive vertical fracture (@ 23.2 ft BGS) - vertical fracture (@ 23.2 ft BGS) - vertical fracture (@ 24.5 ft BGS) - vertical fracture (@ 24.5 ft BGS) - vertical fracture (@ 24.9 ft BGS) - vertical fracture (@ 23.9 ft BGS) - vertical fracture (@ 23.9 ft BGS) - vertical fracture (@ 23.9 ft BGS) - highly fracture form foulting (@ 28.8 29.0 and 29.3 ft BGS) - highly fracture form foulting (@ 33.1 ft BGS) - vertical fracture (@ 32.9 ft BGS) - vertical fracture (@ 34.8 ft BGS) - vertical fracture (@ 35.7 ft BGS) - vertical fracture (@ 35.7 ft BGS) - vertical fracture (@ 36.8 ft BGS) - vertical fracture (@ 36.8 ft BGS) - vertical fracture (@ 36.4 ft BGS) - vertical fracture (@ 44.6 ft BGS) - vertical fracture (@ 44.6 ft BGS) - vertical fracture (@ 46.9 ft BGS) - vertical fracture (@ 46	DEPTH	DESCRIPTION OF STRATA	Ť		BINTE OCY L	RUNBER	RECOVERY CORE	RQD	WR AETU ERN
SHALE(Normanskill Formation): fine grained, gray, massive — vertical fracture (@ 23.9 ft BGS) — vertical fracture (@ 24.5 ft BGS) — vertical fracture (@ 24.5 ft BGS) — vertical fracture (@ 24.5 ft BGS) — vertical fracture (@ 24.9 ft BGS) — vertical fracture (@ 24.9 ft BGS) — vertical fracture (@ 24.9 ft BGS) — vertical fracture dipping at 40' (@ 25.3 ft BGS) — vertical fracture dipping at 40' (@ 25.3 ft BGS) — vertical fracture dipping at 40' (@ 25.9 ft BGS) — vertical fracture swith iron staining (@ 28.8 29 ond 29.3 ft BGS) — vertical fracture from faulting (@ 30.1 ft BGS) — vertical fracture from faulting (@ 33.8 ft BGS) — vertical fracture (@ 34.8 ft BGS) — vertical fracture (@ 34.8 ft BGS) — vertical fracture (@ 35.7 ft BGS) — vertical fracture (@ 35.8 ft BGS) — vertical fracture (@ 36.8 ft BGS) — vertical fracture (@ 44.0 ft BGS) — vertical fracture (@ 46.9 ft BGS) — vertical	ft BGS		ft. AMSL				%	%	%
STALL_CONTRINGENT FORMATION Time grained, gray, massive vertical fracture (© 23.2 ft BGS) vertical fracture (© 23.9 ft BGS) vertical fracture (© 24.5 ft BGS) vertical fracture dipping at 40' (© 25.3 ft BGS) vertical fracture dipping at 40' (© 25.9 ft BGS) vertical fracture dipping at 40' (© 25.9 ft BGS) vertical fracture with iron staining (© 28.8, 29.0 and 29.3 ft BGS) vertical fracture from faulting (© 30.1 ft BGS) highly fractured zone (32.2 to 32.3 ft BGS) vertical fracture (© 34.8 ft BGS) vertical fracture (© 34.8 ft BGS) vertical fracture (© 34.8 ft BGS) vertical fracture (© 36.8 ft BGS) vertical fracture (© 36.8 ft BGS) vertical fracture (© 38.4, 40.7, 40.9, 41.2 and 41.7 ft BGS) vertical fracture (© 46.9 ft BGS) vertical fractur	- 22.5		740 R	BOREHOLE CEMENT/ BENTONITE					
(@ 25.3 ft BGS) - vertical fracture dipping at 40' (@ 25.9 ft BGS) - vertical fracture dipping at 40' (@ 28.8, 29.0 and 29.3 ft BGS) - vertical fracture from faulting (@ 30.1 ft BGS) - injghly fractured zone (32.2 to 32.3 ft BGS) - weathered fracture (@ 32.9 ft BGS) - quartz filled vertical fracture (@ 33.8 ft BGS) - vertical fracture (@ 34.8 ft BGS) - quartz filled healed fracture (@ 35.7 ft BGS) - vertical fracture (@ 36.8 ft BGS) - quartz filled healed fracture (@ 35.7 ft BGS) - weathered fracture (@ 38.4, 40.7, 40.9, 41.2 and 41.7 ft BGS) - highly fractured (@ 42.0 ft BGS) - vertical fracture (@ 46.0 ft BGS) - vertical fracture (@ 46.9 ft BGS) - vertical fracture (@ 46.9 ft BGS) - vertical fracture (@ 48.9 ft BGS) - vertical fracture (@ 48.5 to 49.0 ingt BGS) - weathered fracture zone containing redeposition of clay minerals with iron staining (48.5 to 49.0 ingt BGS) 50.0 - quartz filled veins (@ 50.4 ft BGS)		grained, gray, massive - vertical fracture (@ 23.2 ft BGS) - vertical fracture (@ 23.9 ft BGS) - quartz filled fracture (@ 24.3 ft BGS) - vertical fracture (@ 24.5 ft BGS) - vertical fracture (@ 24.9 ft BGS) - vertical fracture dipping at 40'		BENTONITE PELLET SEAL		1	[.] 80	100	100
(@ 30.1 ft BGS) - highly fractured zone (32.2 to 32.3 ft BGS) - weathered fracture (@ 32.9 ft BGS) - quartz filled vertical fracture (@ 33.8 ft BGS) - vertical fracture (@ 34.8 ft BGS) - quartz filled healed fracture (@ 35.7 ft BGS) - vertical fracture (@ 36.8 ft BGS) - quartz lined fracture (@ 36.8 ft BGS) - quartz lined fracture (@ 38.4, 40.7, 40.9, 41.2 and 41.7 ft BGS) - highly fractured (@ 42.0 ft BGS) - vertical fracture (@ 46.0 ft BGS) - vertical fracture (@ 46.9 ft BGS) - vertical fracture (@ 46.9 ft BGS) - vertical fracture (@ 46.9 ft BGS) - quartz filled veins (@ 50.4 ft BGS) - quartz filled veins (@ 50.4 ft BGS)		vertical fracture dipping at 40° (@ 25.9 ft BGS) vertical fracture dipping at 40° (@ 26.9 ft BGS) weathered fractures with iron staining (@ 28.8, 29.0 and 29.3 ft BGS)		3.9*#		2	100	89	100
(@ 33.8 ft BGS) - vertical fracture (@ 34.8 ft BGS) - quartz filled healed fracture (@ 35.7 ft BGS) - vertical fracture (@ 36.8 ft BGS) - quartz lined fracture (37.4 ft BGS) - quartz lined fracture (38.4, 40.7, 40.9, 41.2 and 41.7 ft BGS) - highly fractured (@ 42.0 ft BGS) - vertical fracture (@ 44.6 ft BGS) - vertical fracture (@ 46.0 ft BGS) - vertical fracture (@ 46.9 ft BGS) - quartz filled veins (@ 50.4 ft BGS)		(© 30.1 ft BGS) - highly fractured zone (32.2 to 32.3 ft BGS) - weathered fracture (© 32.9 ft BGS)							
40.0 - weathered fractures (② 38.4, 40.7, 40.9, 41.2 and 41.7 ft BGS) - highly fractured (② 42.0 ft BGS) - vertical fracture (③ 46.0 ft BGS) - vertical fracture (④ 46.9 ft BGS) - vertical fracture (④ 46.9 ft BGS) - weathered fracture zone containing redeposition of clay minerals with iron staining (48.5 to 49.0 ingt BGS) - quartz filled veins (⑤ 50.4 ft BGS)	37.5	(@ 33.8 ft BGS) - vertical fracture (@ 34.8 ft BGS) - quartz filled healed fracture (@ 35.7 ft BGS) - vertical fracture (@ 36.8 ft BGS)							
- vertical fracture (**) 44.6 ft BGS) - vertical fracture (**) 46.0 ft BGS) - vertical fracture (**) 46.9 ft BGS) - weathered fracture zone containing redeposition of clay minerals with iron staining (48.5 to 49.0 ingt BGS) - quartz filled veins (**) 50.4 ft BGS)		— weathered fractures (© 38.4, 40.7, 40.9, 41.2 and 41.7 ft BGS)				3	100	91	
- vertical fracture (**) 46.9 ft BGS) - weathered fracture zone containing redeposition of clay minerals with iron staining (48.5 to 49.0 ingt BGS) - quartz filled veins (**) 50.4 ft BGS)		— vertical fracture (@ 44.6 ft BGS)			-				
redeposition of clay minerals with iron staining (48.5 to 49.0 ingt BGS) - quartz filled veins (© 50.4 ft BGS)	47.5	- vertical fracture (@ 46.9 ft BGS)					105		
	50.0	redeposition of clay minerals with iron staining (48.5 to 49.0 ingt BGS) — quartz filled veins (© 50.4 ft BGS)				4	100	82	

NOTES: MEASURING POINT-ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

▼ WATER FOUND

STATIC WATER LEVEL

NM - NOT MEASURED

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: NEPERA - LAGOON SITE

HOLE DESIGNATION:

MW-3D-91 (Page 3 of 3)

PROJECT NO .:

3698

DATE COMPLETED:

JUNE 30, 1991

(L-11)

CLIENT:

NEPERA, INC.

DRILLING METHOD:

NX CORE

LOCATION:

HAMPTONBURGH, NY

CRA SUPERVISOR: R.

R. FIELD

LOCATI	ON. HAMP TOUBONGH, IN		0.0.7. 00. 2.		·			
DEPTH	DESCRIPTION OF STRATA	ELEVATION	MONITOR INSTALLATION	BINTEROUX L	RUZBER RUZBER	Ÿ	ROD	WRETURN ERN
ft BGS		ft. AMSL				%	%	%
52.5	— highly fractured zone with some weathering (51.5 to 52.8 ft BGS)	319.8	3.9°€ COREHOLE					
	END OF HOLE 6 53 FT. BGS	3/9.6						
55.0		·		İ				
57.5								
60.0								(
62.5								
65.0								
67.5								
70.0								
72.5								
75.0								
77.5								
80.0								ri,
		<u></u>	DOENT ELEVATION TABLE	<u></u>			<u> </u>	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND

T STATIC WATER LEVEL

NM - NOT MEASURED

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: NEPERA - LAGOON SITE

PROJECT NO .: 3698

CLIENT:

NEPERA, INC.

CHEMICAL ANALYSIS

LOCATION:

HAMPTONBURGH, NY

HOLE DESIGNATION: MW-4D-91

(Page 1 of 2) JUNE 30, 1991

(L-12)

DATE COMPLETED:

DRILLING METHOD: 4 1/4" ID HSA

CRA SUPERVISOR: R. FIELD

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION			AMPLE	
11 862		ft AMSL	INSTALLATION	Z 7 X B E	S N	CZH
	REFERENCE POINT (Top of Riser) GROUND SURFACE	375.21 372.9		B E R	A LUE	(ppm)
	SM—SAND, fine to medium grained, little to some silt, trace to little fine gravel, trace clay, medium dense, dry to moist		CONCRETE SEAL	1SS	21	-
2.5		·		255	29	-
5.0			8°9 BOREHOLE	3SS	23	-
7.5	ML—SILT, trace fine to coarse grained gravel and shale fragments, interbedded, trace very fine grained sand, trace clay, medium dense,	365.9	CONCRETE SEAL 8° BOREHOLE CEMENT/ BENTONITE GROUT 4° STEEL CASING	4SS	51	-
10.0	brown, wet		BENTONITE GROUT	5 SS	20	-
	SM—SAND, fine grained, some silt interbedded with fractured shale and fine grained gravel brown, wet to saturated	362.4	STEEL CASING	6SS	12	-
12.5	- fractured shale			7SS [> 100	-
15.0	END OF OVERDURDEN HOLE O 45 0 ET DOO	357.9		888	 >100	-
	END OF OVERBURDEN HOLE • 15.0 FT BGS		PELLET SEAL			
17.5			 5.9°∮ BOREHOLE			
20.0			3.9**			
22.5			COREHOLE			
25.0						
27.5						
30.0						
32.5						
NOTES	MEASURING POINT ELEVATIONS MAY CHANG	E; REFER	TO CURRENT ELEVATION TA	BLE	art vil varanta	. ye r . Syor Y

STATIC WATER LEVEL

(L-13)STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: NEPERA - LAGOON SITE

HOLE DESIGNATION: MW-4D-91 (Page 2 of 2)
DATE COMPLETED: JUNE 30, 1991

PROJECT NO .:

3698

CLIENT:

NEPERA, INC.

DRILLING METHOD:

NX CORE

LOCATION:

HAMPTONBURGH, NY

CRA SUPERVISOR:

R. FIELD

					·				
DEPTH	DESCRIPTION OF STRATA	E LEVAT-OR		MONITOR INSTALLATION	BETERVAL	ないる田山氏	RECO>ER> Core	RGD	WR AE TU RR
ft BGS		ft. AMSL					%	%	%
15.0	Overburden	357.7	TO MANY COMMAND	8° BOREHOLE CEMENT/ BENTONITE GROUT					
17.5	SHALE(Normanskill Formation): dark gray, fine grained, U shaped bedding - vertical fracture (© 16.5 ft BGS) - vertical fractures (17.2 to 18.2 ft BGS) - highly fractured vertically (18.2 to	357.4		BENTONITE PELLET SEAL		1	100	62	
20.0	19.0 ft BGS) — iron stained vertical fractures (© 19.6, 19.8 and 19.9 ft BGS) — 1mm guartz layer with displacement			BOREHOLE 4*# STEEL CASING		2	100	67	
22.5	of bedding (20.5 ft BGS) — weathered fractures along bedding planes 50° angle dip, iron staining and quartz filling in fractures, joints 45° to fractures, various fracture planes vertical and against bedding orientation, weathered fractures from 21.0 to 23.0 ft BGS, shale			3.9°¢ COREHOLE		3	80	50	(
25.0	fractures from 21.0 to 23.0 ft BGS, shale contains more chlorite exibiting a pale green appearance END OF HOLE 26 FT. BGS	<i>346.9</i>	L					·	
30.0									
32.5							·		
35.0									
37.5									
40.0							·		
1									

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND

▼ STATIC WATER LEVEL

NM - NOT MEASURED

APPENDIX D.4

JUNE 1995, CRA

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(WL-16) Page 1 of 1

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: MW-6D-95

DATE COMPLETED: MAY 23, 1995

DRILLING METHOD: HSA/HQ CORING/ROTARY

CRA SUPERVISOR: K. WEHN

DEPTH	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR		S	AMPLE	
ft. BGS	REFERENCE POINT (Top of Riser) GROUND SURFACE	ft. AMSL 351.73 348.5	INSTALLATION	NUMBER	STATE	'N' VALUE	PID (ppm)
-	OL-ORGANIC SILT	348.0					
	SM-SAND, some silt		10" Ø BOREHOLE				
-2.5							
	ML-SILT, some clay, some shale fragments,	345.5	6" CASING				
-5.0	wet		D III				
-3.0			CEMENT/ BENTONITE			İ	
L		341.5	CEMENT/ BENTONITE GROUT				
-7.5	END OF OVERBURDEN HOLE @ 7.0ft BGS	347.3	5 7/8" Ø BOREHOLE				
			4" Ø STAINLESS				
-10.0			STAINLESS STEEL CASING				
			CASINO				
10.5							
-12.5							
-15.0							
		1					
-17.5							
					•		
20.0							
22.5							
25.0			•				
23.0							·
							•
27.5							
30.0							
			·				
32.5							
	ITES: MEASURING POINT ELEVATIONS MAY CHANGE; R						

WATER FOUND T STATIC WATER LEVEL T (JULY 24, 1995)

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

(WL-16) Page 1 of 2

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: MW-6D-95

DATE COMPLETED: MAY 23, 1995

DRILLING METHOD: HSA/HQ CORING/ROTARY

CRA SUPERVISOR: K. WEHN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	JROCK ERVAL	RUN NUMBER	CORE RECOVERY %	RQD %	MATER RETURN %
	Overburden			IN IN	A D	RECO	<u> </u>	M/ RET
			₩ 10° Ø BOREHOLE					
- 7.5	SHALE (Normanskill Formation): blue gray, fine to very fine grained, U-shaped bedding, extenesive iron stained fractures dipping @ 50	341.5	CASING TO 12ft BGS		t	98	0)	
-10.0	·					J	1	
-12.5	– fine light/dark gray bedding planes dipping @ 50° (@ 13ft BGS)		CEMENT/ BENTONITE GROUT		2	100	. 44	
-15.0	- 3 to 5" void (@ 15.9ft BGS)							
—17.5	 white gypsum filled fractures (16.3 to 17ft BGS) 3 to 5" void (@ 18ft BGS) gypsum filled fractures (18.5 to 19.3ft 				3	75	94	
-20.0	BGS)		5 7/8" Ø BOREHOLE		4		87	
-22.5	 more competent, less weathered and fractured 		S S S S S S S S S S S S S S S S S S S					
-25.0	 fracture with white mineral filling rubble from fracture (24.7 to 25ft BGS) 							
-27.5	 competent, unfractured, homogeneous (25 to 29ft BGS) 				5		72 .	,
-30.0	- rubble from fracture (30 to 30.6ft BGS)		4" Ø STAINLESS STEEL					·
-32.5			CASING		6	100	87	
-35.0								
-37.5	Y				7	100	97	
	INTES: MEASURING POINT FLEVATIONS MAY CHA							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STATIC WATER LEVEL (JULY 24/1995)

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

(WL-16) Page 2 of 2

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: MW-6D-95

DATE COMPLETED: MAY 23, 1995

DRILLING METHOD: HSA/HQ CORING/ROTARY

CRA SUPERVISOR: K. WEHN

				•	BEDROCK INTERVAL	RUN	CORE RECOVERY	RQD %	WATER
	– dark gray, bedding dipping 50°, alternately dark to light gray, thinly bedded (@ 40.3ft BGS)					7	100	97	
-42.5				5 7/8" Ø					
-45.0	- infilled fractures, oriented opposite to bedding planes (45 to 49.3ft BGS)		**************************************	BOREHOLE		В	100	85	
-47.5			X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-X-	CEMENT/					
-50.0			XXXXXX	BENTONITI GROUT		9	100	100	
-52.5	 white fracture infilling, extremely resistant to breakage 		******						
55.0			200000	4 0 STAINLESS STEEL CASING TO 63ft BGS		10	100	100	
57.5				K)					
60.0			******			11	100	100	
62.5			× × × ×						
65.0						12	66	50	
67.5	(07 + 004 700)			⋖ 3 7/8" Ø COREHOLE					
70.0	- rubble zone (67 to 68ft BGS)					13	100	100	
72.5	END OF HOLE @ 72.0ft BGS	276.5							

WATER FOUND T STATIC WATER LEVEL T (JULY 24, 1995)

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(WL-18)

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-1-95

DATE COMPLETED: MAY 23, 1995

DRILLING METHOD:

CRA SUPERVISOR: K. WEHN

DEPTH	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR		S.	AMPLE	
t. BGS	REFERENCE POINT (Top of Riser) GROUND SURFACE	ft. AMSL 370.04 367.4	INSTALLATION	NUMBER	STATE	'N' VALUE	PID (ppn
	SM/ML-SAND, SILT and GRAVEL (TILL), trace			╁¯		-	
	clay						
2.5			10" Ø STEEL				
5.0			CASING				
7.5							
7.5			CEMENT/ BENTONITE				
10.0	ML-SILTY CLAY, some sand and gravel	357.9	BENTONITE GROUT				
12.5							
							vçan
15.0							
17.5	END OF OVERBURDEN HOLE @ 18ft BGS	349.4	2" Ø STAINLESS STEEL				
20.0	END OF OVERBORDEN HOLE & 1911 BG2		PIPE				
20.0							
22.5							
25.0							
			·				
27.5							
30.0							
		-					
32.5							
	TES: MEASURING POINT ELEVATIONS MAY CHANGE;						

WATER FOUND T STATIC WATER LEVEL T (JULY 24, 1995)

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(WL-20) Page 1 of 1

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

HOLE DESIGNATION: MW-7U-95

DATE COMPLETED: MAY 4, 1995
DRILLING METHOD: 4 14" ID HSA

DRILLING METHOD. 4 # 10 H3/

LOCATION: MAYBROOK, NEW YORK CRA SUPERVISOR: E. FINCK

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR INSTALLATION		S	AMPLE	:
	REFERENCE POINT (Top of Riser) GROUND SURFACE	368.76 364.2	-TRP	NUMBER	STATE	'N' VALUE	PID (ppm)
	ML-SILT, some clay, some shale fragments, moist		CONCRETE SEAL	155	X	6	0
-2.5			2" Ø STAINLESS STEEL PIPE			·	
-5.0	SM-SAND, some silt, trace gravel, fine to medium grained, moist	359.2	CEMENT/ BENTONITE GROUT	255	X	12	0
-7.5			BENTONITE PELLETS SAND PACK		·		
-10.0	- wet		WELL SCREEN	3 S S	X	16	0
-12.5	- auger refusal on shale bedrock	350.3	8" Ø BOREHOLE	455		>50	_
-15.0	END OF HOLE @ 13.9ft BGS		PELLETS SCREEN DETAILS Screened interval: 8.6 to 13.6ft BGS				
-17.5			Length: 5ft Diameter: 5 Slot Size: #10 Material: Stainless Steel Sand Pack:				
-20.0			7.6 to 13.6ft BGS Material: No.4 Sand				
-22.5							
-25.0							
27.5	·						
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

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STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(WL-15) Page 1 of 1

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698 CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: MW-8U-95

DATE COMPLETED: MAY 24, 1995
DRILLING METHOD: 4 14" ID HSA

CRA SUPERVISOR: K. WEHN

DEPTH	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR INSTALLATION	SAMPLE			
ft. BGS	REFERENCE POINT (Top of Riser)	ft. AMSL 361.04		NUMBER	STATE	N' VALUE	PID (ppm)
	GROUND SURFACE	357.3		ž	S	ż	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
– 2.5	SM-SAND (TOPSOIL), some gravel and silt, mottled brown with yellow, red/brown, moist, plant matter, brick fragments		CONCRETE SEAL 2" Ø STAINLESS STEEL PIPE	155	X	12	0
-5.0	ML-SILT (TILL), little sand, trace fine gravel, yellow brown, wet - well graded	353.3	BENTONITE PELLETS SAND PACK	255	X	10	
– 7.5			WELL SCREEN				
-10.0	SP/GP-SAND and fine GRAVEL, gray, wet, chemcial odor - refusal at presumed bedrock	347.3 347.1	8" Ø BOREHOLE SCREEN DETAILS Screened interval:	355	><	>50	
—12.5	END OF HOLE @ 10.2ft BGS	·	5.2 to 10.2ft BGS Length: 5ft Diameter: 2" Slot Size: #10 Material: Stainless Steel				(
—15.0		·	Sand Pack: 4 to 10.2ft BGS Material: No.4 Sand				
-17.5							
-20.0		,					
– 22.5		•					
-25.0							
-27.5		7.8					
-30.0							
-32.5							

OTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

(WL-18) Page 1 of 5

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-1-95

DATE COMPLETED: MAY 23, 1995

DRILLING METHOD:

CRA SUPERVISOR: K. WEHN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	CORE RECOVERY %	RGD %	WATER RETIIBN %
	Overburden			BED INTE	N. N.	CO RECOV	RO	WA
-18.5	SHALE (BEDROCK), hard, gray	349.4	10" Ø STEEL CASING					
-21.0								
-23.5								
-26.0								
-28.5					-			
-31.0			CEMENT/ BENTONITI GROUT			•		
-33.5								
-36.0								
-38.5								
-41.0								
43.5			2" Ø					
46.0			STAINLESS STEEL PIPE					
48.5								
ł								

WATER FOUND TO STATIC WATER LEVEL TO (JULY 24, 1995)

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-1-95

DATE COMPLETED: MAY 23, 1995

DRILLING METHOD:

CRA SUPERVISOR: K. WEHN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	CORE RECOVERY %	80D %	MATER RETURN %
-53.5			IO" Ø STEEL CASING		•			
-56.0			NEW NEW NEW NEW NEW NEW NEW NEW NEW NEW					
– 58.5								
61.0			CEMENT/ BENTONITE GROUT STATE OF BOREHOLE					
-63.5			CEMENT/ BENTONITE GROUT		-			į
-66.0			XXXXXXX					and the second
-68.5			N.X.X.X.X.X		4.			
71.0			8 8					
 73.5			6" Ø BOREHOLE					
 76.0	·		ZXXXXXX					
- 78.5			2" Ø STAINLESS			·		
 81.0			STEEL PIPE					
 83.5			<u> </u>					

WATER FOUND TO STATIC WATER LEVEL To (JULY 24, 1995)

(WL-18) aae 3 of 5

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-1-95

DATE COMPLETED: MAY 23, 1995

DRILLING METHOD:

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	CORE RECOVERY %	RQD %	WATER
88.5			CEMENT/ BENTONIT GROUT	-		RE		
91.0			N N N N N N N N N N N N N N N N N N N				·	
93.5			2" Ø STAINLES STEEL PIPE	5				
96.0			ZZZZZZZ ZZZZZZZ					
98.5			NANASAN NANASAN					
03.5			CEMENT/ BENTONIT GROUT 2" Ø STAINLES STEEL PIPE 6" Ø BOREHOLE BENTONITE SEAL					
06.0								
08.5			BENTONITE			·		
13.5			1000000					
16.0			SAND PACK					
8.5			WELL SCREEN					
NOTE	ES: MEASURING POINT ELEVATIONS MAY CHANG	CC DEEED	TO CURRENT ELEVATION	ADIE				

(WL-18) Page 4 of 5

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-1-95

DATE COMPLETED: MAY 23, 1995

DRILLING METHOD:

CRA SUPERVISOR: K. WEHN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	CORE RECOVERY %	RGD %	WATER RETURN %
			SAND PACK			<u> </u>		
-123.5								
—126.0								
– 128.5								
—131.0								
– 133.5			CEMENT/ BENTONITE GROUT					
—136 . 0			GROUT					v v
—138.5						,		
—141.O								
-143.5								
—146.O			6" Ø BOREHOLE					
-148.5								
—151.0								
— 153.5								
	END OF HOLE @ 155.0ft BGS	212.4	E333					***************************************

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND T STATIC WATER LEVEL To (JULY 24, 1995)

(WL-18) Page 5 of 5

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-1-95

DATE COMPLETED: MAY 23, 1995

DRILLING METHOD:

CRA SUPERVISOR: K. WEHN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	CORE RECOVERY %	RGD %	WATER RETURN %
				HE	ž	REC	æ	3.₩
-158.5 -161.0	NOTES: 1. This well was originally installed by C. A. Rich (1985) with a long open corehole interval below the base of the 10 inch casing. The well was converted to the instrumentation indicated on this log by CRA (1995). 2. The geologic descriptions were taken from the original log.		SCREEN DETAILS Screened interval: 115 to 120ft BGS Length: 5ft Diameter: 2" Slot Size: #10 Material: Stainless Steel Sand Pack: 112 to 123ft BGS Material: No.4 Sand					
	nom the engine rog.		7,5,5,15,17,5,77					
-163.5			·					
-166.0		·			-			
-168.5								
-171.0								
-173.5								
-176.0								
-178.5								
-181.0						·		
-183.5								
-186.0						• .		
-188.5								

WATER FOUND ¥ STATIC WATER LEVEL ¥ (JULY 24, 1995)

(WL-19) Page 1 of 1

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-2-95

DATE COMPLETED: MAY 18, 1995

DRILLING METHOD:

DEPTH	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR		S	AMPLE	
t. BGS	REFERENCE POINT (Top of Riser) GROUND SURFACE	ft. AMSL 368.65 366.1	INSTALLATION	NUMBER	STATE	N' VALUE	PI (pr
	SM-SAND and SILT, some gravel			1		-	
-2.5			10" Ø STEEL CASING				
5.0			CEMENT/ BENTONITI				
-7.5			I XX XX GAOUT				
-10.0	END OF OVERBURDEN HOLE @ 9ft BGS	357.1	2" Ø STAINLESS STEEL PIPE	5			
-12.5							
-15.0							(
-17.5		·					
-20.0							
-22.5							
-25.0		·					
-27.5							
-30.0		·					
32.5							
	TES: MEASURING POINT ELEVATIONS MAY CHANGE						

(WL-19) Page 1 of 6

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-2-95

DATE COMPLETED: MAY 18, 1995

DRILLING METHOD:

CRA SUPERVISOR: K. WEHN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	IRE /ERY %	RGD %	WATER RETURN %
	Overburden		·	BED	RINUM	CORE RECOVERY 5	RQ	WAT
-9.5	SHALE (BEDROCK), hard, gray	357.1	10" Ø STEEL CASING	-				
-12.0								
-14.5								
-17.0								
-19.5			CEMENT/ BENTONITE GROUT					
-22.0								
-24.5								
-27.0								
-29.5								
-32.0			2" Ø STAINLESS STEEL PIPE			,		
-34.5								
-37.0								
-39.5					-			

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE WATER FOUND \$\fomalle{\pi}\$ STATIC WATER LEVEL \$\fomalle{\pi}\$ (JULY 24, 1995)

(WL-19) Page 2 of 6

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-2-95

DATE COMPLETED: MAY 18, 1995

DRILLING METHOD:

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	CORE RECOVERY %	RGD %	WATER
-44.5			10" Ø STEEL CASING		-			
47.0								
49.5				·				
52.0								
54.5			2" Ø STAINLES: STEEL PIPE					-
57.0								
59.5						•		
62.0			CEMENT/ BENTONIT GROUT					
64.5								
67.0			%					
69.5			BOREHOLE			•		
72.0			SANCE SANCE				÷	
74.5	·					·		

(WL-19)

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-2-95

DATE COMPLETED: MAY 18, 1995

DRILLING METHOD:

CRA SUPERVISOR: K. WEHN

-79.5 -82.0 -84.5 -87.0 -89.5 -92.0 -94.5 -97.0 -99.5 -102.0 -104.5	DEPTH ft. BG	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	CORE RECOVERY %	RQD %	WATER RETURN %
—99.5 —102.0 —102.0	-		ļ	121121	® <u>₹</u>		RE(2
—99.5 —102.0				6" Ø BOREHOLE					
—99.5 —102.0 —102.0 —102.0	-82.0								
—99.5 —102.0 PACK PACK WELL SCREEN	– 84.5			XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX					
—99.5 —102.0 —102.0	-87.0			BENTONITE GROUT					
—99.5 —102.0 —102.0	-89.5		·	<u> </u>					
—99.5 —102.0 —102.0	-92.0			2" Ø STAINLESS STEEL PIPE					
—99.5 —102.0 —102.0	-94.5			BENTONITE SEAL					
—99.5 —102.0 WELL SCREEN	-97.0			SAND					
WELL SCREEN	-99.5			PACK					
	-102.0			WELL SCREEN					
;	-104.5			SUREEN SUREEN					
— 107.0	-107.0								
-109.5 CEMENT/ BENTONITE GROUT	-109.5			BENTONITE					

WATER FOUND TO STATIC WATER LEVEL TO (JULY 24, 1995)

(WL-19) Page 4 of 6

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-2-95

DATE COMPLETED: MAY 18, 1995

DRILLING METHOD:

CRA SUPERVISOR: K. WEHN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	CORE RECOVERY %	RGD %	WATER RETURN %
-114.5								
–117. 0								
–119. 5			6" Ø BOREHOLE					
-122.0								
-124.5								
-127.0								· Landon
-129.5								
-132.0								
-134.5								
-137.0			CEMENT/ BENTONIT GROUT	E	-		-	
-139.5								
-142.0								
-144.5			N.X.X					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

(WL-19) Page 5 of 6

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-2-95

DATE COMPLETED: MAY 18, 1995

DRILLING METHOD:

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	CORE RECOVERY %	% OD!	WATER
			Latel		ž	RECC	Rad x	3
-149.5								
152.0	e,		6" Ø BOREHOLE					
154.5								
157.0						·		
159.5								
162.0								
164.5								
67.0			CEMENT/ BENTONITE GROUT					
169.5	· ·		GROU I					
72.0								
74.5								÷
77.0								
79.5	END OF HOLE @ 178.0ft BGS	188.1	נציצו					

(WL-19) Page 6 of 6

PROJECT NAME: NEPERA - MAYBROOK

PROJECT NUMBER: 3698

CLIENT: NEPERA INC.

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: DW-2-95

DATE COMPLETED: MAY 18, 1995

DRILLING METHOD:

CRA SUPERVISOR: K. WEHN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	BEDROCK INTERVAL	RUN NUMBER	CORE RECOVERY %	RGD %	WATER RETURN %
-184.5 -187.0	NOTES: 1. This well was originally installed by C. A. Rich (1985) with a long open corehole interval below the base of the 10 inch casing. The well was converted to the instrumentation indicated on this log by CRA (1995). 2. The geologic descriptions were taken from the original log.		SCREEN DETAILS Screened interval: 100 to 105ft BGS Length: 5ft Diameter: 2" Slot Size: #10 Material: Stainless Steel Sand Pack: 96 to 106ft BGS Material: No.4 Sand		•			
-189.5								
-192.0						·		·
-194.5								
-197.0								. (
-199.5			•			•		
-202.0								
-204.5								
-207.0								
-209.5								
-212.0								
-214.5								
	NOTES: MEASURING POINT ELEVATIONS MAY CHAN	105 0555	D TO CURRENT ELEVATION	TABLE				L

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE: REFER TO CURRENT ELEVATION TABLE

TO THE PROPERTY OF THE STATIC WATER LEVEL - To COULTY 24, 1995) TO BE THE STATIC WATER LEVEL - TO COULTY 24, 1995)

APPENDIX D.5

2001 NEW INSTALLATIONS, CRA

			-

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-9U-01 DATE COMPLETED: JUNE 14, 2001

DRILLING METHOD: 41" HSA

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR INSTALLATION		s	AMPLE	
	REFERENCE POINT (Top of Riser) GROUND SURFACE	359.700 357.10	#TSP	NUMBER	STATE	VALUE	PIO ngq)
	SM-SAND, with silt, trace gravel, loose, fine grained, poorly graded, brown with orange, damp		CONCRETE	Z	- 0,	ż	
2.5	SP-SAND, trace silt, trace large gravel, loose, fine grained, poorly graded, dark brown, damp, trace rock fragments	355.10	BENTONITE CHIPS 8" Ø BOREHOLE				
5.0	- gravel SM/GW-SILTY SAND and GRAVEL loose fine	353.10	BENTONITE CHIPS				
7.5	to coarse grained, well graded, brown with orange, damp SM/GW-SAND and GRAVEL, with silt, loose, fien	351.10 350.10					
/.5	SM-SAND, with silt, loose fine to medium	349.10	8" Ø BOREHOLE				
0.0	grained, well graded, orange, wet SM/GW-SAND and GRAVEL, with silt, loose, fine to coarse grained, well graded, dark brown	346.60	2" Ø SS PIPE				
2.5	wet - saturated - with rock fragments, orange brown	345.10	SAND PACK				
	ML-SILT (TILL), with sand, trace clay, trace gravel, compact, well graded, gray, damp	344.43	SEC				
5.0	GW-GRAVEL, trace medium sand, dense, medium to coarse grained, well graded, brown, wet	342.77 342.10	SCREEN				
7.5	ML-SILT (TILL), trace to little fine sand, trace clay, trace gravel, dense, brown, very moist to wet, oxidized		SCREEN DETAILS Screened interval: 10.0 to 15.0ft BGS Length: 5.0ft				
0.0	BEDROCK (SHALE), weathered, fine grained, gray/black - auger refusal END OF HOLE @ 15.0ft BGS		Diameter: 2" Slot Size: #10 Material: Stainless Steel Sand Pack: 8.0 to 15.0ft RGS				
2.5	·		Material: Silica Sand				
5.0	•						
.5							
٠٠.							
.0							
.5							
NOTE	S: MEASURING POINT ELEVATIONS MAY CHANGE; REF			- 1			

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-10U-01 DATE COMPLETED: JUNE 13, 2001 DRILLING METHOD: 41" HSA

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR INSTALLATION		s	AMPLE	
	REFERENCE POINT (Top of Riser) GROUND SURFACE	359.600 357.50	and acception	NUMBER	STATE	. VALUE	PID (ppm
1.0	SM-SAND, with silt, trace gravel, loose, fine grained, poorly graded, light brown, damp, trace grassy vegetation		CONCRETE	2		Ž	
2.0	- and silt, trace clay, very moist						
3.0	 with to trace silt, trace gravel, loose, fine grained, well graded, brown, damp 						
4.0	ML-SILT (TILL), little fine sand, trace gravel, loose, fine grained, well graded, light orangey	353.50					
5.0 6.0	brown, damp		BENTONITE				
7.0	- occasional oxidized soil		BENTONITE BENTONITE B'' Ø BOREHOLE 2" Ø SS PIPE				
3.0	SM-SILTY SAND, loose, fine grained, well graded, brown, saturated	349.50					
0.0	ML-SILT (TILL), with sand, trace gravel, firm, fine grained, well graded, mottled gray and	348.00	B" Ø BOREHOLE				
1.0	SM-SILTY SAND, trace clay, loose, fine grained, poorly graded, brown, saturated	346,17					
2.0	- with silt, trace small gravel, fine to coarse grained, well graded, dark brown ML/SM-SILT and SAND, compact, fine grained,	345.42 345.17					
3.0	SM-SAND, with silt, trace gravel, loose, fine to coarse grained, well graded, orange brown		2" Ø SS PIPE				
4.0 h	ML/SM-SILT and SAND, trace clay, fine grained, poorly graded, mottled gray with brown, wet	343.75 343.50					
.0	SM-SAND, with silt, trace gravel, loose, fine to medium grained, well graded, dark brown, saturated		BENTONITE CHIPS				
.0	SW/GW-SAND and GRAVEL, with weathered shale fragments, loose, medium to coarse grained, well graded, dark brown, saturated	340.33	BENTONITE				
(م ا	- increase in weathered shale, trace gravel, dark brown to black	339.83	CHIPS				
.0 \	ML/SM-SILT and SAND, with clay, loose to compact, fine grained, orange brown, saturated		SAND PACK				
NO	IES: MEASURING POINT ELEVATIONS MAY CHANGE: RI						

(WL-24) Page 2 of 2

PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-10U-01 DATE COMPLETED: JUNE 13, 2001

DRILLING METHOD: 41 HSA

DEPTH		ELEV.	MONITOR		0	AMPLE	
ft. BGS	STITATIONAL FILE DESCRIPTION & REMARKS	ft. AMSL	INSTALLATION	NUMBER	STATE	VALUE	PID
-21.0 -22.0 -23.0	SM-SAND, with silt, with gravel, loose, fine to coarse grained, well graded, dark brown, saturated GW-GRAVEL, trace silt, trace medium to coarse sand, loose, well graded, dark brown, saturated, oxidized SW-SAND, with gravel, with silt, loose, fine to coarse grained, well graded, dark brown, saturated - trace silt, loose, fine grained, poorly graded,	338.60 337.60 334.50	SAND PACK SAND PACK WELL SCREEN	₽UN	ST	^ .N.	(ррт
25.0	Ilight brown, saturated ML/SM-SILT and SAND, trace gravel, loose, fine grained, poorly graded, light brown, saturated ML-SILT (TILL) with class with seed with	333.58 332.50	8 Ø BOREHOLE				
26.0 27.0	ML-SILT (TILL), with clay, with sand, with gravel compact, well graded, gray, moist - fractured shale bedrock, highly weatered, dark gray - auger refusal		SCREEN DETAILS Screened Interval: 20.0 to 25.0ft BGS Length: 5.0ft Diameter: 2"				
28.0 29.0	END OF HOLE @ 25.0ft BGS		Slot Size: #10 Material: Stainless Steel Sand Pack: 18.0 to 25.0ft BGS Material: Silica Sand		-		
30.0 31.0							
32.0			4.9				
33.0							
5.0							
6.0 7.0							
8.0							
9.0	OTES: MEASURING POINT ELEVATIONS MAY CHANGE; REI						

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-11U-01 DATE COMPLETED: JUNE 25, 2001

DRILLING METHOD: 41" HSA CRA SUPERVISOR: M. JIMENEZ

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR INSTALLATION		S	AMPLE	:
	REFERENCE POINT (Top of Riser) GROUND SURFACE	348.590 346.20		NUMBER	STATE	VALUE	PIO (ppr
	TOPSOIL			ž	S	ż	ועק)
	SM-SAND, some silt, little gravel, medium dense, fine grained, poorly graded, beige, moist	345.70	CONCRETE				
-2.5	CL-CLAY, some silt, trace gravel, trace fine sand, stiff, low plasticity, gray, moist	344.20	CONCRETE BENTONITE CHIPS 2" Ø SS				
5.0	SW/GW-SAND and GRAVEL, little silt, very dense, fine to medium grained, well graded,	340.70	[: =f: PIPE				
7.5	gray, wet BEDROCK (SHALE), weathered, fine grained,	338.70	SAND PACK WELL SCREEN 8" Ø			1	
	gray, wet refusal		8" Ø				
10.0	END OF HOLE @ 9.5ft BGS	336.70	BOREHOLE				
2.5			SCREEN DETAILS Screened Interval: 4.5 to 9.5ft BGS Length: 5.0ft Diameter: 2"				
5.0			Slot Size: #10 Material: Stainless Steel Sand Pack: 3.5 to 9.5ft BGS Material: Silica Sand				
7.5					-		
0.0							
2.5	·						
5.0							
7.5							
0.0							
.5			+ 10 + 20 + 20				
NOTE	S: MEASURING POINT ELEVATIONS MAY CHANGE; RE		1			1	

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-9D-01

DATE COMPLETED: JUNE 14, 2001
DRILLING METHOD: 81" HSA/HQ AIR CORING

CRA SUPERVISOR: K. VANDER MEULEN

DEPTH							
ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ft. AMSL	MONITOR INSTALLATION	~	Γ	AMPLE	
	REFERENCE POINT (Top of Riser) GROUND SURFACE	359.480 357.30	477	NUMBER	STATE	N' VALUE	PID (ppm)
	SM-SAND, with silt, trace gravel, loose, fine grained, poorly graded, brown with orange, damp		CONCRETE	ıss	X	8	0
2.5	SP-SAND, trace silt, trace large gravel, loose, fine grained, poorly graded, dark brown, damp, trace rock fragments	355.30	CEMENT/ BENTONITE	255		29	0
5.0	- gravel SM/GW-SILTY SAND and GRAVEL, loose, fine	353.30	GROUT		(\cdot)		
ł	to coarse grained, well graded, brown with orange, damp	351.30	BENTONITE	355	\triangle	26	0
7.5	SM/GW-SAND and GRAVEL, with silt, loose, fine to coarse, well graded, light brown, damp	350.30 349.30		455	XI	34	0
0.0	SM-SAND, with silt, loose, fine to medium grained, well graded, orange, wet SM/GW-SAND and GRAVEL, with silt, loose, fine	349.30	12" Ø BOREHOLE	555	X	26	0
-	to coarse grained, well graded, dark brown, wet	346.80	6" Ø STEEL	6SS	\forall	24	0
2.5	- saturated - with rock fragments, orange brown	345.30 344.63	CASING	7SS	\forall	20	
5.0	ML-SILT (TILL), with sand, trace clay, trace gravel, compact, well graded, gray, damp GW-GRAVEL, trace medium sand, dense, medium	342.97	2" Ø SS	855	\Diamond	39 <50	0
	to coarse grained, well graded, brown, wet ML-SILT (TILL), trace to little fine sand trace	342.30					,
7.5	clay, trace gravel, dense, brown, very moist to wet, oxidized		7 7/8" Ø BOREHOLE				
0.0	BEDROCK (SHALE), weathered, fine grained, gray/black - auger refusal						
0.0	END OF OVERBURDEN HOLE @ 15.0ft BGS						
2.5							
5.0	·						
7.5							
0.0							
2.5							
		- 1			- 1		I

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE WATER FOUND ♀ STATIC WATER LEVEL ▼

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW9D-01 DATE COMPLETED: JUNE 14, 2001

DRILLING METHOD: 814" HSA/HQ AIR CORING

CRA SUPERVISOR: K. VANDER MEULEN

DEPTH							
ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	N N N	ERY %	24	% X
	REFERENCE POINT (Top of Riser) GROUND SURFACE	359.480 357.30		RUN NUMBER	CORE RECOVERY	ROD	WATER
17.5 20.0	BEDROCK (Shale): black, fine grained, smooth, thinly bedded highly fracture and weathered vertical fracture, oxidized staining horizontal fracture, oxidized staining, possible water baring zone, rock fragments highly fractured (horizontal/vertical	342.30	CEMENT/ BENTONITE GROUT 7 7/8" Ø BOREHOLE	1	100	60	
-22.5	oxidized rock fragments - vertical fracture - rock fragments		6" Ø STEEL CASING BENTONITE	2	100	52	
-25.0 -27.5			2" Ø STAINLESS STEEL PIPE	3	100	94	
-30.0 -32.5	 horizontal fracture, silt parting, wet (1/2" seam) vertical fracture (3'-2"), wet 		SAND PACK	4	100	75	
-35.0 -37.5	- horizontal and vertical fracturing, wet zone		WELL SCREEN	5	100	83	
-40.0	 vertical fractures, wet vertical fractures, wet 		4" Ø COREHOLE	6	100	50	
-42.5	END OF HOLE @ 41.5ft BGS	315.80	(1크) SCREEN DETAILS				
-45.0			Screened interval: 31.5 to 41.5ft BGS Length: 10.0ft Diameter: 2" Slot Size: #10 Material: Stainless Steel				
-47.5 NO	IES: MEASURING POINT ELEVATIONS MAY CHAN	GE: REEE	Sand Pack: 29.5 to 41.5ft BGS Material: Silica Sand				

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-10D-01 DATE COMPLETED: JUNE 13, 2001

DRILLING METHOD: 81" HSA/HQ AIR CORING

CRA SUPERVISOR: K. VANDER MEULEN

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR INSTALLATION	<u> </u>	SA	MPLE	
	REFERENCE POINT (Top of Riser) GROUND SURFACE	359.710 357.80	ad The state of th	NUMBER	STATE	N' VALUE	PID (ppr
-1.0	SM-SAND, with silt, trace gravel, loose, fine grained, poorly graded, light brown, damp, trace grassy vegetation		CONCRETE	ISS	\bigvee	5	0
2.0	- and silt, trace clay, very moist				\triangle		
3.0	 with to trace silt, trace gravel, loose, fine grained, well graded, brown, damp 			255	X	7	0
4.0	ML-SILT (TILL), little fine sand, trace gravel,	353.60	CEMENT/ BENTONITE	k	$\langle \rangle$	İ	
5.0	loose, fine grained, well graded, light orangey brown, damp		GROUT	355	\bigvee	17	0
6.0				K			
7.0	- occasional oxidized soil		2" Ø SS PIPE	455	X	27	0
1.0	SM-SILTY SAND, loose, fine grained, well graded, brown, saturated	349.80		K			
0.0		348.10		588	X	12	0
0.0	ML-SILT (TILL), with sand, trace gravel, firm, fine grained, well graded, mottled gray and brown, occasional oxidation, damp	347.60	BENTONITE	K			
.0	SM-SILTY SAND, trace clay, loose, fine grained, poorly graded, brown, saturated	346.27		655	X	16	0
2.0	- with silt, trace small gravel, fine to coarse grained, well graded, dark brown ML/SM-SILT and SAND, compact, fine grained,	345.52 345.27		1			
3.0	SM-SAND, with silt, trace gravel loose fine to	343.21		755	\bigvee	22	0
1.0	coarse grained, well graded, orange brown, saturated ML/SM-SILT and SAND, trace clay, fine	343.85 343.60	12" Ø	1			
.0 \	grained, poorly graded, mottled gray with brown, wet		BOREHOLE	sss \	$\sqrt{ }$	5	
.0	SM-SAND, with silt, trace gravel, loose, fine to medium grained, well graded, dark brown, saturated			\angle			
.0	SW/GW-SAND and GRAVEL, with weathered shale fragments, loose, medium to coarse grained, well graded, dark brown, saturated	340.43		ss \	$\sqrt{ }$,,	0
.0 /\	- increase in weathered shale, trace gravel, dark brown to black	339.93	6" Ø STEEL				=
.0 \	ML/SM-SILT and SAND, with clay, loose to compact, fine grained, orange brown, saturated		CASING	88	$\int \int \int_{\Gamma_1}$	0	0

STATIC WATER LEVEL T

(WL-23) Page 2 of 4

PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-10D-01 DATE COMPLETED: JUNE 13, 2001

DRILLING METHOD: 84" HSA/HQ AIR CORING

coarse grained saturated GW-GRAVEL, tr sand, loose, we saturated, oxid SW-SAND, with coarse grained saturated - trace silt, loo light brown, sat ML/SM-SILT an loose, fine grain saturated - with clay, with well graded, grained graded, grained saturated - with clay, with well graded, grained saturated - with clay, with well graded, grained saturated - with clay, with well graded, grained saturated - with clay, with well graded, grained saturated - with clay, with well graded, grained saturated - with clay, with graded, grained saturated - with clay, with graded, grained saturated - with clay, with graded, grained saturated - with graded, grained saturated - with graded, grained saturated - with graded, grained saturated - with graded, grained saturated - with graded, grained saturated - with graded	n gravel, with silt, loose, fine to d, well graded, dark brown, ose, fine grained, poorly graded, turated ond SAND (TILL), trace gravel, ined, poorly graded, light brown, the sand, with gravel, compact, ay, moist ale bedrock, highly weatered,	338.60 337.60 334.60	12" Ø BOREHOLE 2" Ø SS PIPE 6" Ø STEEL CASING BENTONITE CEMENT/ BENTONITE GROUT	1355	36 - 36 - N, VALUE	PID (ppn O
21.0 21.0 21.0 22.0 22.0 23.0 23.0 24.0 24.0 25.0 26.0 27.0 28.0 29.0 20.0	d, well graded, dark brown, race silt, trace medium to coarse ell graded, dark brown, dized d, gravel, with silt, loose, fine to d, well graded, dark brown, ose, fine grained, poorly graded, turated nd SAND (TILL), trace gravel, ened, poorly graded, light brown, h sand, with gravel, compact, ay, moist ale bedrock, highly weatered,	337.80 334.60	BOREHOLE 2" Ø SS PIPE 6" Ø STEEL CASING BENTONITE CEMENT/ BENTONITE GROUT 7 7/8" Ø	1255	6	o
6.0 7.0			BOREHOLE			
3.0 3.0						

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-10D-01 DATE COMPLETED: JUNE 13, 2001

DRILLING METHOD: 814" HSA/HQ AIR CORING

ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	Z W	ERY X	>4	<u>e</u> :
	REFERENCE POINT (Top of Riser) GROUND SURFACE	359.710 357.80		RUN	CORE RECOVERY	RaD %	WATER
	Overburden		12" Ø BOREHOLE			 	+-
-25.0	BEDROCK (Shale): black, fine grained, smooth, thinly bedded, gray	333.10		-			-
-27.5			CEMENT/	,	100	97	
	- 0.12" horizontal fracture; slightly weathered; no infilling		BENTONITE GROUT		100	87	
-30.0	 Ö.08" horizontal fracture; slightly weathered; no infilling quartz vein, O.04" thick 		7 7/8" Ø			 	ļ
32.5	433112 Year, 0.04 Mick		BOREHOLE				
52.5	– some quartz infilling		6" Ø STEEL CASING	2	100	100	
35.0							
	– 2" horizontal and vertical fracture, water						
37.5	 horizontal fracture, vertical fractures, water 		BENTONITE	3	100	67	
40.0	- vertical fracture						
12.5	~ vertical fracture		BENTONITE 2" Ø STAINLESS STEEL PIPE				
15.0			2" Ø				
	- horizontal fracture		STAINLESS STEEL PIPE	4	100		
7.5	- vertical fracture				100	100	
0.0							
2.5			4" Ø COREHOLE	+	_		
- 0							
5.0	- horizontal fracture - horizontal fracture		BENTONITE CHIPS	5	100	100	

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-10D-01 DATE COMPLETED: JUNE 13, 2001

DRILLING METHOD: 814" HSA/HQ AIR CORING

CRA SUPERVISOR: K. VANDER MEULEN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ft. AMSL	MONITOR INSTALLATION	RUN	CORE RECOVERY %	RQD %	WATER
	- vertical fracture (1")		2" Ø		REC	-	x (
-60.0			STAINLESS STEEL PIP	5	100	100	
-62.5	 horizontal fracture, seems water producing 		WELL SCREEN				
-65.0	 horizontal and vertical fractures, highly fractured calcite seam 		SAND PACK	6	100	74	
67.5	 vertical fracture (4") vertical and horizontal fractures, highly weathered 		4" Ø		100	14	
70.0	END OF HOLE @ 70.0ft BGS	287.60	COREHOLE	-			
72.5			SCREEN DETAILS Screened interval: 60.0 to 70.0ft BGS Length: 10.0ft Diameter: 2"				
75.0			Slot Size: #10 Material: Stainless Steel Sand Pack: 57.5 to 70.0ft BGS Material: Silica Sand				
77.5			San San San				
0.0			Í				
2.5							
5.0							
7.5							
0.0						!	
		E; REFER T					

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3898

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-11D-01 DATE COMPLETED: JUNE 25, 2001

DRILLING METHOD: 84" HSA/HQ AIR CORING

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR INSTALLATION		S	AMPLE	=
	REFERENCE POINT (Top of Riser) GROUND SURFACE	348.660 346.50	THE PACE AT TOR	NUMBER	STATE	'N' VALUE	PIC (pp
-	TOPSOIL	346.00		2	, J	<u>.z</u>	
-2.5	SM-SAND, some silt, little gravel, medium dense, fine grained, poorly graded, beige, molst	344.50	CONCRETE	155	X	14	0
	CL-CLAY, some silt, trace gravel, trace fine sand, stiff, low plasticity, gray, moist			255	X	27	0
-5.0	SH/CH SAND - 4 CO	341.00	CEMENT/ BENTONITE GROUT	355	\forall	22	0
-7.5 -	SW/GW-SAND and GRAVEL, little silt, very dense, fine to medium grained, well graded, gray, wet		12" Ø	455	(\cdot)		J
	BEDROCK (SHALE), weathered, fine grained, gray, wet - refusal	339.00 338.50	BOREHOLE BENTONITE	455	\triangle	>50	0
10.0	END OF OVERBURDEN HOLE @ 8.0ft BGS		CHIPS 6" Ø STEEL				
12.5			CASING 2" Ø SS				
			11/2				i :
15.0			7 7/8" Ø BOREHOLE		İ		
17.5							
20.0							
22.5							
5.0							
7.5							
0.0							<i>3</i>
2.5							
NOT	ES: MEASURING POINT ELEVATIONS MAY CHANGE; REF	ER TO CI					

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-11D-01 DATE COMPLETED: JUNE 25, 2001

DRILLING METHOD: 8¼" HSA/HQ AIR CORING CRA SUPERVISOR: K.VANDER MEULEN/M.JIMENEZ

DEPTH ft. BGS		ELEV.	MONITOR INSTALLATION	~	% ≻		Τ.
	REFERENCE POINT (Top of Riser) GROUND SURFACE	348.660 346.50	INSTALLATION	RUN	CORE RECOVERY	RQD %	WATER
***************************************	Overburden		1201 0		82		
	BEDROCK (Shale): weathered, gray, fine grained, wet	338.50	12" Ø BOREHOLE			 	-
-10.0	- highly fractured, calcite seam, iron staining		CEMENT/ BENTONITE	1	82	78	
10.5	 highly fractured (horizontal), silt partings 		GROUT			-	
-12.5	 highly fractured (vertical and horizontal), silt partings 						
45.0	- vertical fractures		7 7/8" Ø				1
15.0	 vertical fracture, silt partings thin calcite bedding (horizontal) 		BOREHOLE	2	100	90	
17.5	– thin calcite bedding (horizontal)		6" Ø STEEL CASING				
20.0	- thin calcite bedding (horizontal)		6" Ø STEEL CASING BENTONITE CHIPS 2" Ø STAINIESS				
20.0			BENTONITE CHIPS	3	100	74	
	- highly fractured, vertical, silt partings						
22.5	- fine grained, gray, dry			-			
	- thin calcite bedding, vertical		2" Ø STAINLESS STEEL PIPE	4	89	85	
25.0	- horizontal fracture, silt partings		JIELE FIFE				
27.5	– horizontal fracture, small calcite pieces		SAND PACK				
	 highly fractured, horizontal, vertical, calcite, wet 						
30.0	- horizontal fracture, silt partings		WELL SCREEN	5	88	94	
	- horizontal fracture, silt partings						
2.5	- 6 thin calcite beddings, horizontal - horizontal fracture						
5.0	- horizontal fracture - highly fractured, both horizontal and vertical	311.50	4" Ø COREHOLE				
	END OF HOLE @ 35.0ft BGS		SCREEN DETAILS				
7.5			Screened Interval: 25.0 to 35.0ft BGS Length: 10.0ft Diameter: 2"				
0.0			Slot Size: #10 Material: Stainless Steel Sand Pack:				
			22.0 to 35.0ft BGS Material: Silica Sand				
	DIES: MEASURING POINT ELEVATIONS MAY CHANG			.			

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-12D-01 DATE COMPLETED: JUNE 26, 2001

DRILLING METHOD: 814" HSA/HQ AIR CORING

CRA SUPERVISOR: K.VANDER MEULEN/M.JIMENEZ

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE				
	REFERENCE POINT (Top of Riser) GROUND SURFACE	385.040 382.80	*T=P	NUMBER	STATE	'N' VALUE	PI((pp	
}	TOPSOIL	382.30			, o,	Z		
-2.5	SM-SAND, some silt, loose, fine grained, poorly graded, brown, moist	302.50	CONCRETE	ISS	X	4	0	
	SP-SAND, little silt, loose, fine grained, poorly graded, dark brown, moist	379.80	SAND PACK	255	X	7	0	
-5.0	SW/GW-SAND and GRAVEL, rock fragments, very dense, fine to medium grained, well	377.80 377.30	CEMENT/ BENTONITE	355	X	>50	0	
-7.5	graded, gray, moist/dry, pieces of shale BEDROCK (SHALE), fragments, weathered, fine grained, dark gray, dry		GROUT	455	\forall	>50	0	
,,, <u> </u>	- auger refusal	373.80	BOREHOLE	ŀ	\hookrightarrow			
10.0	END OF OVERBURDEN HOLE @ 9.0ft BGS		BENTONITE CHIPS 6" Ø STEEL					
12.5			CASING 2" Ø SS					
15.0			2" Ø SS PIPE 7 7/8" Ø BOREHOLE					
17.5								
20.0								
22.5								
5.0								
7.5								
0.0								
···			·					
2.5								
	ES: MEASURING POINT ELEVATIONS MAY CHANGE; REF.							

(WL-27) Page 2 of 2

PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-12D-01

DATE COMPLETED: JUNE 26, 2001

DRILLING METHOD: 81" HSA/HQ AIR CORING

CRA SUPERVISOR: K.VANDER MEULEN/M.JIMENEZ

ft. BGS	DESCRIPTION OF STRATA	ft. AMS		MONIT INSTALLA		2 2		>4	0
	REFERENCE POINT (Top of Riser) GROUND SURFACE	385.046 382.80				RUN	CORE	Rad	WATER
	Overburden			-	— 12" Ø	+	~		+-
-10.0	BEDROCK (Shale): weathered, fine	373.80			BOREHOLE				
	grained, fragments, dark gray, dry - highly fractured (vertical), iron staining, fine grained, gray, dry				- CEMENT/ BENTONITE				
-12.5	ine granied, gray, dry				GROUT				
	- highly fractured, (vertical)					'	9	28	
15.0	,				- 7 7/8" Ø BOREHOLE				
	- vertical fracture								
17.5	~ vertical fracture				- 6" Ø STEEL CASING	2	10	100	
	 horizontal fracture, iron staining shale, fine grain, gray, dry 				2701110		.0	150	
20.0	 horizontal fracture horizontal fracture, iron staining 				BENTONITE				-
	- horizontal fracture, silt partings				CHIPS				
22.5	 vertical fracture, silt partings horizontal fracture 					3	97	97	
,, ,	- vertical fractures, (highly fractured) wet				2" Ø STAINLESS STEEL PIPE				
25.0	- no fractures, fine grain, skeet				OTELE FIFE	4	100	100	
7.5	 highly fractured, vertical and horizontal 				ŀ				
27.5	 horizontal fracture, silt partings, wet horizontal fracture, silt partings 				SAND PACK				
0.0	- horizontal fracture								
0.0	- vertical fracture				WELL SCREEN	5	94	77	
2.5					CONECIA				
	- fine grain shale, gray, wet								
5.0	- horizontal fracture			←	4" Ø COREHOLE	_			
	- horizontal fracture END OF HOLE @ 36.0ft BGS	346.80				6	100	100	
7.5			SCREE	N DETAILS ed interval:		T			
0.0		1	26. Length: Diamete Slot Siz	.0 to 36.0ft BG 10.0ft er: 2" e: #10					
			Material Sand Pa 24.	l: Stainless St	1				
NOTE	S: MEASURING POINT ELEVATIONS MAY CHANG WATER FOUND V STATIC WATER LEVEL								

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-13D-01

DATE COMPLETED: JUNE 07, 2001

DRILLING METHOD: 814" HSA/HQ AIR CORING

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION		SA	MPLE	_
	REFERENCE POINT (Top of Riser) GROUND SURFACE	387.220 385.10		NUMBER	STATE		OI'
	SM-SAND, with silt, with gravel, trace rootlets, loose, fine grained, poorly graded, brown, damp	384.10	CONCRETE	ıss	X		0
-2.5	SW/GW-SAND and GRAVEL, trace silt with shale rock fragments, loose, fine to coarse grained, well graded, grayish brown, damp	382.43	12" Ø BOREHOLE	255	$\langle \rangle$,	·50 o	0
-5.0	- and weathered shale rock fragments, dense, light grayish brown, dry BEDROCK, shale fragments, with little fine sand,	380.10		355		50 g	0
-7.5	- highly weathered, dry - auger refusal		CEMENT/ BENTONITE GROUT BENTONITE				
-10.0	END OF OVERBURDEN HOLE @ 5.0ft BGS		CHIPS 6" Ø STEEL CASING				
-12.5							
15.0							
17.5						1	
20.0							
22.5							
25.0							
27.5							
0.0							
2.5							
1							1

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-13D-01 DATE COMPLETED: JUNE 07, 2001

DRILLING METHOD: 8½" HSA/HQ AIR CORING

CRA SUPERVISOR: K. VANDER MEULEN

ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	2 4	E %	96	مح
	REFERENCE POINT (Top of Riser) GROUND SURFACE	387.220 385.10		RUN	CORE RECOVERY	ROD	MATER
-7.5	BEDROCK (Shale): dark gray to black, highly fractured, thinly bedded, smooth, fine grain	380.10	7 7/8" Ø BOREHOLE	1	95	0	
-10.0			CEMENT/ BENTONITI GROUT BENTONITI CHIPS	_			
-12.5				2	88	31	
-15.0	 highly fractured (vertical and horizontal), oxidized 		2" Ø STAINLESS STEEL PIPE				
17.5	vertical fracture, oxidizedvertical aand horizontal fractures		6" Ø STEEL CASING 2" Ø STAINLESS STEEL PIPE BENTONITE CHIPS 4" Ø COREHOLE	3	93	67	
20.0	- vertical fracture - highly fractured		CHIPS		-		
22.5			4" Ø				
25.0	- highly fractured		COREHOLE	4	100	42	
27.5	– highly fractured (vertical and horizontal), silt partings		SAND PACK	5	100	58	
0.0	- horizontal fractures - horizontal fractures - horizontal fractures			6	100	82	
2.5			WELL				
5.0	- highly fractured (vertical and horizontal), little water at end of run		SCREEN	7	100	58	
7.5	- 3 horizontal fractures, water in hole after ½ hour		BENTONITE	8	100	92	

(WL-28) Page 3 of 3

PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-13D-01 DATE COMPLETED: JUNE 07, 2001

DRILLING METHOD: 81" HSA/HQ AIR CORING

CRA SUPERVISOR: K. VANDER MEULEN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	R	% 	ه. (\[~ \cdot \]
			Vorm	RUN NUMBER	CORE RECOVERY	RGD %	WATER
	END OF HOLE @ 41.0ft BGS	344.10		8	100	92	
-42.5 -45.0			SCREEN DETAILS Screened Interval: 27.0 to 37.0ft BGS Length: 10.0ft Diameter: 2"				
			Slot Size: #10 Material: Stainless Steel Sand Pack: 24.0 to 37.5ft BGS				
47.5			Material: Silica Sand				
50.0							
52.5							
55.0							
7.5							
0.0							
2.5							
5.0							
7.5							
.0	-						
.5							

WATER FOUND \$ STATIC WATER LEVEL \$

APPENDIX D.6

2001 WELL CONVERSIONS, CRA

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-1D-91
DATE COMPLETED: JUNE 25, 1991
DRILLING METHOD: 4M" ID HSA
CRA SUPERVISOR: R. FIELD

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR INSTALLATION	SAMPLE	
	REFERENCE POINT (Top of Riser) GROUND SURFACE	380.760 378.00	THE PARENTION	NUMBER STATE 'N' VALUE	PID (ppm)
-2.5	SM-SAND, little silt, little fine to coarse gravel, medium dense, brown, dry		BENTONITE CHIPS	15S 17	4.5
	- with weathered shale fragments		8" Ø BOREHOLE	255 >100	0.5
-5.0			CEMENT/ BENTONITE GROUT	355 >100 455 >100	29.5 1.7
-7.5	BEDROCK (SHALE)	370.00 370.00	4" Ø STEEL CASING	555 >100	_
-10.0	END OF OVERBURDEN HOLE @ 8.0ft BGS	370.00	5.9" Ø BOREHOLE		
12.5					
15.0		\$	2" Ø STAINLESS STEEL PIPE 3.9" Ø		
17.5	·		PIPE 3.9" Ø COREHOLE		•
20.0					
22.5					i
5.0					
7.5					
0.0	·				
2.5					-
NOTES	MEASURING POINT ELEVATIONS MAY CHANGE; REF WATER FOUND ♀ STATIC WATER LEVEL ▼ CHEMICAL ANALYSIS ○	ER TO CU	RRENT ELEVATION TABLE		

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-1D-91 DATE COMPLETED: JUNE 25, 1991 DRILLING METHOD: WR / CORE

CRA SUPERVISOR: R. FIELD / E. HOLT

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	Z W	ERY %	><	gg.
	REFERENCE POINT (Top of Riser) GROUND SURFACE	380.760 378.00		RUN NUMBER	CORE RECOVERY	RaD	WATER
-7.5	Overburden		BENTONITE CHIPS				
-10.0	SHALE (Normanskill Formation): dark gray, fine grained, near vertical fractures throughout, bedding trends east @ 30°	370.00	BOREHOLE CEMENT/ BENTONITE GROUT 5.9" Ø BOREHOLE				
-12.5	- weathered frature (13.5 to 14.3ft BGS)		4" @ STEEL				
-15.0	- iron staining between broken shale		CASING 2" Ø STAINLESS STEEL PIPE SAND PACK	1	95	83	
-17.5	pieces (16.0 to 16.5ft BGS) - near vertical iron stained fracture with presence of chalcopyrite (18.3 to 19.0ft		STEEL PIPE				
-20.0	BGS) - trends westerly (20.5 to 22.0ft BGS)		SAND PACK	2	100	95	
22.5	 45° fractures on quartz filled veins, trending west with bedding to 24.0ft BGS 						
25.0	 bedding disturbed with quartz filling between fractures that myriad column length, trace pyrite between fractures 		WELL SCREEN				
27.5	 bedding continues westerly dipping 45' (27.2 to 32ft BGS) 			3	100	82	
30.0			3.9" Ø COREHOLE				
32.5	END OF HOLE @ 32.0ft BGS	346.00	SCREEN DETAILS	+			
35.0	NOTE Open corehole converted on June 21, 2001.		Screened Interval: 21.5 to 31.5ft BGS Length: 10.0ft Diameter: 2" Slot Size: #10 Material: Stainless Steel Sand Pack:		·		
37.5			19.3 to 32.0ft BGS Material: No.1 Silica Sand				

MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE WATER FOUND ♀ STATIC WATER LEVEL ▼

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-2D-91 DATE COMPLETED: JUNE 30, 1991 DRILLING METHOD: 44" ID HSA

CRA SUPERVISOR: E. HOLT

DEPTH	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR		S	AMPLE	
ft. BGS	REFERENCE POINT (Top of Riser)	ft. AMSL	INSTALLATION	NUMBER	TE	ALUE	PID
	GROUND SURFACE	379.900 377.00	<u>gar</u>	NO.	STATE	'N' VALUE	(ppm)
-2.5	SM-SAND, some silt, little to some gravel, medium dense to extremely dense, fine to medium grained, brown to dark gray, moist to wet		BENTONITE CHIPS	1SS 2SS	\bigvee	45 50	_
-5.0			CEMENT/ BENTONITE GROUT	355	\bigcirc	27	0.8
-7.5			20 C C C C C C C C C C C C C C C C C C C	455	X	21	0.8
-10.0	GM-GRAVEL, little to some silt, shale fragments, very dense to extremely dense, fine	367.00	8" Ø BOREHOLE	555	$\stackrel{\times}{\rightarrow}$	21	0.3
-12.5	to coarse grained, light gray to dark gray, saturated		4" Ø STEEL	755	\Diamond	73	0.8
-15.0			CASING	855		>100	0.8
-17.5			2" Ø	955	\times	>100	-
-20.0	END OF OVERBURDEN HOLE @ 19.0ft BGS	358.00	STAINLESS STEEL PIPE				
22.5			5.9" Ø BOREHOLE				
25.0			1				
27.5			3.9" Ø COREHOLE		·		
30.0							:
32.5							
NOT	ES: MEASURING POINT ELEVATIONS MAY CHANGE; R WATER FOUND ♀ STATIC WATER LEVEL ▼	REFER TO C	CURRENT ELEVATION TABLE				

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-2D-91 DATE COMPLETED: JUNE 30, 1991 DRILLING METHOD: WR / CORE CRA SUPERVISOR: R. FIELD

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL		MONITO INSTALLA		ER C	E RY %	*	æ
	REFERENCE POINT (Top of Riser) GROUND SURFACE	379.900 377.00				RUN NUMBER	CORE RECOVERY	RGD %	WATER
17.5	Overburden			WASSESSESSESSESSESSESSESSESSESSESSESSESSE	- BENTONITE CHIPS - 8" Ø BOREHOLE				
20.0	SHALE (Normanskill Formation): gray, massive, bedding dips eastward – quartz filled fracture (@ 19.1ft BGS)	358.00			- CEMENT/ BENTONITE GROUT				-
22.5	- vertical fracture (@ 19.5ft BGS) - vertical fracture (@ 20.3ft BGS) - vertical fracture (@ 21.5ft BGS) - horizontal fracture (@ 22.0 to 22.8ft BGS) - horizontal fracture (@ 23.3 to 23.8ft BGS) - vertical fracture (@ 24.4ft BGS) - vertical fracture (@ 25.0ft BGS)				- 5.9" Ø BOREHOLE - 4" Ø STEEL CASING	1	100	71	10
27.5	 vertical fracture (@ 26.0ft BGS) quartz filled fractures (@ 26.1 and 26.5ft BGS) highly vertically fractured (26.5 to 27.0ft BGS) 				- 2" Ø	2	100	81	10
2.5	- (45°) vertical fracture (27.0 to 28.0ft BGS) - fracture (@ 28.8ft BGS) - fracture (@ 29.9ft BGS) - fracture (@ 30.4ft BGS) - fracture (@ 31.3ft BGS)				STAINLESS STEEL PIPE				
5.0	 highly fractured and broken (31.8 to 32.0ft BGS) highly fractured throughout quartz filled joints (@ 33.0ft BGS) weathered iron stained fracture (@ 33.0ft BGS) 			-	- 3.9" Ø COREHOLE	3	96	40	10
7.5	35.0ft BGS) - weathered iron stained fracture (@ 35.8ft BGS)					1			
0.0	- fault (@ 36.5ft BGS) - vertical fracture (@ 37.3ft BGS) - vertical fracture (@ 37.8ft BGS) - vertical fracture (@ 38.2ft BGS) - vertical fracture (@ 38.9ft BGS) - vertical fracture (@ 39.1ft BGS) - vertical fracture (@ 39.4ft BGS) - vertical fracture (@ 39.4ft BGS) - vertical fracture (@ 39.9ft BGS)]		· SAND PACK	4	100	64	100
	- vertical fractures and fault zone (40.0 to 40.9ft BGS)				}	_			
5.0	- highly fractured (42.5 to 43.0ft BGS) - fault zone (@ 45.2ft BGS)		1111 130014 1111		WELL SGREEN	5	100	98	
7.5	– highly fractured, weathered, iron staining (@ 47.6ft BGS)				-	+			
	ES: MEASURING POINT ELEVATIONS MAY CHANG					6	88	52	

MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE WATER FOUND

▼ STATIC WATER LEVEL

▼

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-2D-91
DATE COMPLETED: JUNE 30, 1991
DRILLING METHOD: WR / CORE
CRA SUPERVISOR: R. FIELD

DEPT	ы	7		_			
ft. Bo	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	IN BER	RE ERY %	%	₩ ¥ %
				RUN NUMBER	CORE RECOVERY	RaD	WATER RETURN %
	 highly fractured and weathered (50.0 to 51.0ft BGS) 		WELL SCREEN 3.9" Ø	6	88	52	
-52.5	NOTE	325.00	3.9" Ø COREHOLE				
-55.0	Open corehole converted on June 21,		SCREEN DETAILS Screened interval: 42.0 to 52.0ft BGS Length: 10.0ft Diameter: 2"				
-57.5			Slot Size: #10 Material: Stainless Steel Sand Pack: 39.0 to 52.0ft BGS Material: No.1 Silica Sand				
-60.0							
-62.5							Ē
-65.0							
-67.5							
-70.0		·					
-72.5							
-75.0							
-77.5							
-80.0							
-82.5							
	IOTES: MEASURING POINT ELEVATIONS MAY CHANG	GE: REFFR	TO CURRENT ELEVATION TABLE				

ES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE WATER FOUND ♀ STATIC WATER LEVEL ▼

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-3D-91
DATE COMPLETED: JUNE 30, 1991
DRILLING METHOD: 41 ID HSA
CRA SUPERVISOR: R. FIELD

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR		s	AMPLE	
11. 865	TON & NEMANCO	ft. AMSL	INSTALLATION	ا يم		T	
	REFERENCE POINT (Top of Riser) GROUND SURFACE	375.340 372.70	- TEP	NUMBER	STATE	N, VALUE	PID (ppm)
-2.5	SM-SAND, some silt, little gravel, medium dense to dense, fine to medium grained, tan to dark brown, moist		CHIPS	iss	X	15	
-5.0			8" Ø	255 355	\Diamond	21	-
- 7.5			BOREHOLE	ss	\Rightarrow	20	-
-10.0			CEMENT/ BENTONITE GROUT	sss (X	23	-
-12.5	SP-SAND, little gravel with broken shale	360.70	6	ss	X	34	-
	fragments, trace silt, dense to extremely dense, fine to medium grained, gray brown to dark brown, moist		4" Ø STEEL CASING	ss	\times	>100	-
-15.0	SM-SAND, some gravel with shale fragments,	358.70	8	ss	X	36	-
-17.5	some silt, fine to medium grained, dark brown, moist		STAINLESS STEEL	ss	X	34	-
-20.0				SS	\preceq	>100	-
-22.5	END OF OVERBURDEN HOLE @ 23.0ft BGS	349.70	5.9" Ø BOREHOLE				
-25.0		Į					
-27.5			3.9" Ø COREHOLE				
30.0			3.9" Ø COREHOLE				
32.5			`.				
NOT	ES: MEASURING POINT ELEVATIONS MAY CHANGE; R WATER FOUND ♀ STATIC WATER LEVEL ▼	EFER TO C	URRENT ELEVATION TABLE				

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-3D-91
DATE COMPLETED: JUNE 30, 1991
DRILLING METHOD: NX CORE
CRA SUPERVISOR: R. FIELD

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL		MONITO INSTALLA		Z Z Z	RE ERY &	>6	٩
	REFERENCE POINT (Top of Riser) GROUND SURFACE	375.340 372.70				RUN NUMBER	CORE RECOVERY	Rab	WATED
	Overburden			1	- BENTONITE CHIPS				+-
22.5					- 8" Ø				
	SHALE (Normanskill Formation): fine grained, gray, massive	349.70	Z I		BOREHOLE				\vdash
25.0	- vertical fracture (@ 23.2ft BGS) - vertical fracture (@ 23.9ft BGS) - quartz filled fracture (@ 24.3ft BGS) - vertical fracture (@ 24.5ft BGS)		*		- 5.9" Ø BOREHOLE - CEMENT/ BENTONITE GROUT	1	80	100	1
27.5	 vertical fracture (@ 24.9ft BGS) vertical fracture dipping at 40° (@ 25.3ft BGS) 				- 4" Ø STEEL CASING				
0.0	 vertical fracture dipping at 40° (@ 25.9ft BGS) 								
	- vertical fracture dipping at 40° (@ 26.9ft BGS)		mysms						
2.5	- weathered fractures with iron staining (@ 28.8, 29.0 and 29.3ft BGS)		ARAILINE.		- 2" Ø STAINLESS	2	100	89	10
	- vertical fracture from faulting (@ 30.1ft BGS)				STEEL PIPE				
5.0	 horizontal fracture zone (32.2 to 32.3ft BGS) 								
7.5	 weathered fracture (@ 32.9ft BGS) quartz filled vertical fracture (@ 33.8ft BGS) 				·				
	- vertical fracture (@ 34.8ft BGS)			-	- 3.9" Ø				
0.0	 quartz filled healed fracture (@ 35.7ft BGS) 				COREHOLE	3	100	04	
0.0	 vertical fracture (@ 36.8ft BGS) quartz lined fracture (@ 37.4ft BGS) 					1	100	91	
2.5	 weathered fractures (@ 38.4, 40.7, 40.9, 41.2 and 41.7ft BGS) 								
	- highly fractured (@ 42.0ft BGS)								
5.0	- vertical fracture (@ 44.6ft BGS)				SAND PACK	$\neg \dagger$			
	- vertical fracture (@ 46.0ft BGS)								
7.5	- vertical fracture (@ 46.9ft BGS)								
0.0	 weathered fracture zone containing redeposition of clay minerals with iron staining (48.5 to 49.0ft BGS) 					4	100	82	
	- quartz filled veins (@ 50.4ft BGS)				WELL SCREEN				
.5	 quartz filled veins (@ 51.0ft BGS) highly fractured zone with some 								
٠	weathering (51.5 to 52.8ft BGS) END OF HOLE 8 53.0ft BGS	319.70							******
	Control of the second s								
NO	IES: MEASURING POINT ELEVATIONS MAY CHAN								

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: HAMPTONBURGH, NY

HOLE DESIGNATION: MW-3D-91 DATE COMPLETED: JUNE 30, 1991 DRILLING METHOD: NX CORE

CRA SUPERVISOR: R. FIELD

		7					
DEPTI ft. BG	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	RUN NUMBER	IRE /ERY %	RQD %	ER RN %
				NUM.	CORE RECOVERY	Rai	WATER RETURN %
– 57.5			SCREEN DETAILS Screened interval: 43.0 to 53.0ft BGS Length: 10.0ft Diameter: 2" Slot Size: #10 Material: Stainless Steel				
-60.0			Sand Pack: 41.0 to 53.0ft BGS Material: No.1 Silica Sand				
-62.5							
-65.0							
-67.5							·
-7 0.0							
-72.5							
-75.0							
-77.5							
-80.0							
-82.5							
-85.0							
-87.5							
	NOTES: MEASURING POINT ELEVATIONS MAY CHANG)C. DESE	TO OURDENT TO				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND \$\PI\$ STATIC WATER LEVEL \$\P\$

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: MW-5D-95

DATE COMPLETED: JUNE 6, 1995

DRILLING METHOD: HSA/HQ CORING/ROTARY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV.	MONITOR INSTALLATION		S	AMPLE	
	REFERENCE POINT (Top of Riser) GROUND SURFACE	384.350 360.20		NUMBER	STATE	N' VALUE	PID (ppm)
	SM/ML-SAND and SILT (TILL), well graded			_		2	
-2.5			SAND PACK				O
-5.0			₹ 10" Ø BOREHOLE				
-7.5							
-10.0			CEMENT/ BENTONITE GROUT				,
-12.5							
-15.0			4" Ø STEEL CASING				
-17.5			2" Ø STAINLESS				
-20.0	END OF OVERBURDEN HOLE @ 19.0ft BGS	341.20	STEEL PIPE				
-22.5			5.9" Ø BOREHOLE				
-25.0			BENTONITE CHIPS				
-27.5							
30,0							
32.5							

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: MW-5D-95

DATE COMPLETED: JUNE 6, 1995

DRILLING METHOD: HSA/HQ CORING/ROTARY

REFERENCE POINT (Top of Riser)	1			(~ III	>6	1 64
GROUND SURFACE	364.350 360.20		RUN	CORE RECOVERY	RaD	WATER RETURN %
Overburden		0" Ø BOREHOLE				-
SHALE (Normanskill Formation): light to dark blue gray, fine to very fine grained, slightly metamorphosed shale, bedding planes dipping at 45–50° angle	341.20	SAND PACK				
		BENTONITE CHIPS				
			-	100	100	
		5.9" Ø BOREHOLE				
·		CEMENT/ BENTONITE GROUT	2	92	98	
		4" Ø STEEL CASING				
		2" Ø	1B	100	100	
		STEEL PIPE				
- weathered fractures (@ 42.7ft BGS)			28	100	91.6	
			30	400		
- calcite viens (@ 48.1ft BGS)		3.9" Ø	פנ	100	80	
		CONEMOLE	48	100	90	
	planes dipping at 45-50° angle - weathered fractures (@ 42.7ft BGS)	dark blue gray, fine to very fine grained, slightly metamorphosed shale, bedding planes dipping at 45-50° angle - weathered fractures (@ 42.7ft BGS)	SHALE (Normanskill Formation): light to dark blue gray, fine to very fine grained, slightly metamorphosed shale, bedding planes dipping at 45–50° angle BENTONITE CHIPS SAND PACK BENTONITE CHIPS SETAINLESS STEEL PIPE - Calcite views (© 42.7ft BGS)	SHALE (Normanskill Formation): light to dark blue gray, fine to very fine grained, slightly metamorphosed shale, bedding planes dipping at 45-50° angle BENTONITE CHIPS I SHOREHOLE SAND PACK BENTONITE CEMENT/ BENTONITE GROUT 2 4" Ø STEEL CASING	SHALE (Normanskill Formation): light to dark blue gray, fine to very fine grained, slightly metamorphosed shale, bedding planes dipping at 45-50" angle BENTONITE CHIPS I 100 5.8" Ø BOREHOLE CEMENT/ BENTONITE GROUT 2 92	SHALE (Normanskill Formation): light to dark blue gray, fine to very fine grained, slightly metamorphosed shale, bedding planes dipping at 45–50° angle 341.20 SAND PACK BENTONITE CHIPS I 100 100 5.8" Ø BOREHOLE CEMENT/ BENTONITE GROUT 2 92 98

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: MW-5D-95

DATE COMPLETED: JUNE 6, 1995

DRILLING METHOD: HSA/HQ CORING/ROTARY

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	RUN	CORE RECOVERY X	ж	E .
				N N	RECOV	ROD %	WATER
	- metamorphic flow features (@ 52ft BGS)			4B	100	90	
-55.0	- calcite viens cut across bedding (@ 53.3ft BGS)		BENTONIT	E 58	100	100	
57.5					100	100	
60.0	- slightly fractured						
62.5				68	84.7	78	
65.0			3.9" Ø COREHOLE				-
37.5							
70.0			BENTONIT CHIPS 3.9" Ø COREHOLE 2" Ø STAINLES: STEEL PIP	7B	100	76	-
2.5							
75.0			2" Ø STAINLESS STEEL PIP	8B	100	87	
7.5			STEEL PIP				
0.0	- moderately fractured (81 to 83.3ft			98	100	50	
2.5	BGS)		SAND PACK				
5.0			SAND PACK	108	100	100	
NOT	ES: MEASURING POINT ELEVATIONS MAY CHAN						

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PROJECT NAME: MAYBROOK LAGOON SITE

PROJECT NUMBER: 3698

CLIENT: MAYBROOK/HARRIMAN ENVIRONMENTAL TRUST

LOCATION: MAYBROOK, NEW YORK

HOLE DESIGNATION: MW-5D-95

DATE COMPLETED: JUNE 6, 1995

DRILLING METHOD: HSA/HQ CORING/ROTARY

CRA SUPERVISOR: K. WEHN

DEPTH ft. BGS	DESCRIPTION OF STRATA	ELEV. ft. AMSL	MONITOR INSTALLATION	RUN	RE ERY %	*	£
·			0-0	NUM.	CORE RECOVERY	RaD	WATER
	- highly fractured (88.5 to 97ft BGS)		WELL SCREEN	10B	100	100	
92.5			SAND PACK	ИΒ	100	29	
95.0			3.9" Ø	128	100	20	
97.5	END OF HOLE @ 97.0ft BGS	263.20	COREHOLE				
00.0	NOTE Open corehole converted on June 26, 2001.		SCREEN DETAILS Screened interval: 87.0 to 97.0ft BGS Length: 10.0ft Diemeter: 2" Slot Size: #10 Material: Stainless Steel				
02.5			Sand Pack: 84.0 to 97.0ft BGS Material: No.1 Silica Sand				
05.0							
07.5	•						
0.0							
2.5							
5.0							
7.5							
0.0			1				

WATER FOUND \$\Pi\$ STATIC WATER LEVEL \$\P\$