

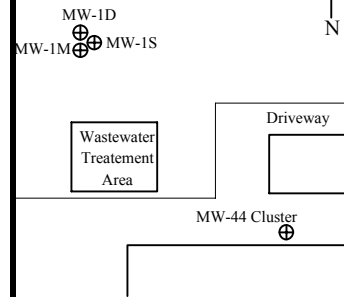
# DRILLING LOG for Well #: MW-1S



ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project:	Raytheon-Wayland	Project Number:	143.69		
Client:	Raytheon	Logged by:	Michael Horesh		
Drilling Co:	Geosearch, Inc.	Driller:	Joe Keenan		
Date Started:	26-Jun-02	Date Finished:	26-Jun-02		
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA		
Screen Diam:	2"	Length:	10'	Slot Size:	0.010"
Casing Diam:	2"	Length:	5'	Type:	PVC
Boring Depth:	16'	Well Depth:	15'	Boring Diam.:	4"
Surface Elev.:	NA	MP:	TOC	Depth to GW:	12.87'
		MP Elev.:	NA		

## SITE MAP



Notes: DTW measured on 7/10/2002

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14		SILT & CLAY	6-5-5-5	14"	Medium to dark brown SILT and CLAY, well sorted, moist, Clay interbeds, dark gray coarse Sand lense 4" from bottom.	S-1 13'-15'	0.0	
15								
16								
17					Bottom of Boring at 16' bgs			
18					<b>Well Construction Details</b>			
19					Protective Steel Standpipe			
20					0'-1' Concrete Surface Seal			
21					1'-2' Portland Cement and Bentonite Slurry Grout			
22					2'-3' Bentonite Chip Seal			
23					3'-16' #1 Silica Sand Filter Pack			
24					5'-15' 0.010" Slotted PVC Well Screen			
25					16' Bottom of boring			

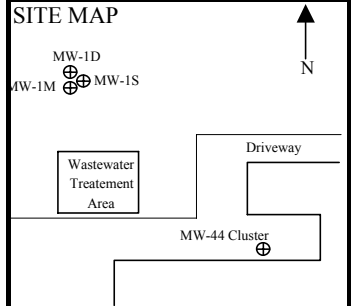
### Key to Well Construction

	Sandpack		Well Screen		Grout
	Bentonite Seal		Cement		

# DRILLING LOG for Well #: MW-1M

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project:	Raytheon-Wayland	Project Number:	143.69		
Client:	Raytheon	Logged by:	Michael Horesh		
Drilling Co.:	Geosearch, Inc.	Driller:	Joe Keenan		
Date Started:	26-Jun-02	Date Finished:	26-Jun-02		
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA		
Screen Diam:	2"	Length:	5'	Slot Size:	0.010"
Casing Diam:	2"	Length:	35'	Type:	PVC
Boring Depth:	41'	Well Depth:	40'	Boring Diam.:	8"
Surface Elev.:		MP:		Depth to GW:	16.26
		MP Elev.:			



Notes: DTW measured on 7/10/2002

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
3					<b>Well Construction Details</b> Protective Steel Standpipe 0'-1' Concrete Surface Seal 1'-30' Portland Cement and Bentonite Slurry Grout 30'-33' Bentonite Chip Seal 33'-41' #1 Silica Sand Filter Pack 35'-40' 0.010" Slotted PVC Well Screen 41' Bottom of Borehole			
6								
9								
12								
15								
18								
21								
24								
27								
30								
33								
36					Bottom of Boring at 41' bgs			
39								
42								
45								
48								
51								
54								
57								
60								
63								
66								
69								
72								
75								

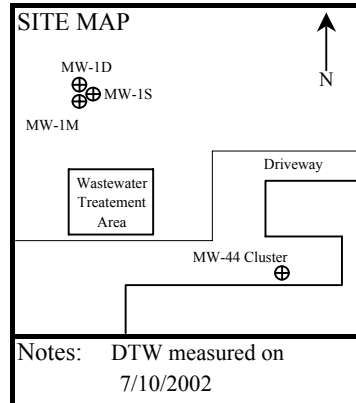
Key to Well Construction

-  Sandpack
-  Well Screen
-  Grout
-  Bentonite Seal
-  Cement
-  Native Fill

# DRILLING LOG for Well #: MW-1D

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project:	Raytheon-Wayland	Project Number:	143.69		
Client:	Raytheon	Logged by:	Michael Horesh		
Drilling Co:	Geosearch, Inc.	Driller:	Joe Keenan		
Date Started:	24-Jun-02	Date Finished:	24-Jun-02		
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA		
Screen Diam:	2"	Length:	5'	Slot Size:	0.010"
Casing Diam:	2"	Length:	50'	Type:	PVC
Boring Depth:	58'	Well Depth:	55'	Boring Diam.:	4"
Surface Elev.:		MP:	TOC	Depth to GW:	16.26'
		MP Elev.:			



Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
1	[Pattern]	SAND	6-11-8-6	12"	Medium to dark brown, coarse SAND, trace Gravel, trace Pebbles dry, well sorted, some dark brown Silt w/ root fibers.	S-1 0'-2'	0.0	
2	[Pattern]							
3	[Pattern]							
4	[Pattern]							
5	[Pattern]							
6	[Pattern]	SAND	4-5-5-12	18"	Medium to dark brown, fine SAND, some Silt, well sorted, moist; top two inches dark brown, coarse SAND, dry.	S-2 5'-7'	0.0	
7	[Pattern]							
8	[Pattern]							
9	[Pattern]							
10	[Pattern]							
11	[Pattern]	SILT & CLAY	3-3-5-6-	15"	Medium brown SILT and CLAY well sorted, moist, dense, some black/brown staining.	S-3 10'-12'	0.0	
12	[Pattern]							
13	[Pattern]							
14	[Pattern]							
15	[Pattern]							
16	[Pattern]	SILT & CLAY	2-3-3-5	16"	Medium brown SILT and CLAY, well sorted, moist, dense; coarse Sand lenses, dark gray Clay lenses.	S-4 15'-17'	0.0	
17	[Pattern]							
18	[Pattern]							
19	[Pattern]							
20	[Pattern]							
21	[Pattern]	SAND	WOR-2-2-4	14"	Brown, fine SAND, trace Silt, well sorted, saturated, orange horizontal staining, little brown Silt and Clay.	S-5 20'-22'	0.0	
22	[Pattern]							
23	[Pattern]							
24	[Pattern]							
25	[Pattern]							

**Key to Well Construction**

WOR= Weight of Rod  
H= 140 lb. Hammer

- [Pattern] Sandpack
- [Pattern] Well Screen
- [Pattern] Grout
- [Pattern] Bentonite Seal
- [Pattern] Cement
- [Pattern] Native Backfill

# DRILLING LOG for Well #: MW-1D



ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
26		SAND	WOR-WOR- WOR+H-1	10"	Brown fine SAND, trace Silt, well sorted, saturated, some orange, layered staining.	S-6 25'-27'	N/A	
27								
28								
29								
30								
31		SAND	2-3-3-3	17"	Brown fine SAND, trace Silt, well sorted, saturated, minor layering of sediments.	S-7 30'-32'	0.0	
32								
33								
34								
35								
36		SAND	3-4-5-5	24"	Gray fine SAND well sorted, very moist to saturated, dark gray, thin Clay interbeds, orange-stained interbeds.	S-8 35'-37'	0.0	
37								
38								
39								
40								
41		SILT	WOR-WOR- 3-2	18"	Medium gray SILT, trace fine Sand, moist to saturated, minor bedding, dark gray Clay interbeds.	S-9 40'-42'	0.0	
42								
43								
44								
45								
46		SILT	3-7-9-14	18"	Brown/gray SILT, little Clay, moist to saturated, dark gray Clay interbed (1/2") at top of interval	S-10 45'-47'	0.0	
47								
48								
49								
50								
51		SAND & GRAVEL	10-18-17-17	24"	<b>Top 12"</b> : lt. brown fine SAND, some Silt, moist. <b>Bottom 12"</b> : Blue-gray GRAVEL, some Sand, moist.	S-11 50'-52'	0.0	
52								
53								
54								
55								



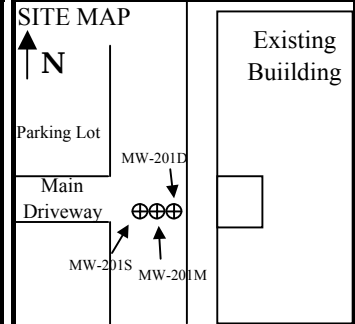
# DRILLING LOG for Well #: MW-201S

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project: Raytheon-Wayland  
Client: Raytheon  
Drilling Co: Geosearch, Inc.  
Date Started: 20-Jul-02  
Location: Wayland, MA

Project Number: 143.69  
Logged by: Mark Ciriello  
Driller: Joe  
Date Finished: 20-Jul-02  
Drilling Method: 4.25" ID HSA

Screen Diam: 2" Length: 10' Slot Size: 0.010"  
Casing Diam: 2" Length: 12' Type: PVC  
Boring Depth: 22' Well Depth: 22' Boring Diam.: 8"  
Surface Elev.: 132.5' MP: TOC Depth to GW: 19.47'  
MP Elev.: 132.38'



Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
1								
2								
3								
4								
5								
6								
7								
8								
9		SAND	7-7-8-7	20"	Brown, medium SAND, trace coarse Sand, some fine Sand, dry.	S-1 8'-10'	0.0	
10								
11		SAND	8-11-15-22	12"	Light brown fine-medium SAND, trace Silt, dry.	S-2 10'-12'	0.0	
12								
13		SAND	18-22-22-19	8"	Light brown fine-medium SAND, little Gravel, little coarse Sand, dry.	S-3 12'-14'	0.0	
14								
15		SAND	14-13-14-14	18"	Light brown fine-medium SAND, well sorted, moist.	S-4 14'-16'	0.0	
16								
17		SAND & GRAVEL	15-17-17-18	16"	Brown fine-medium SAND & GRAVEL, trace Silt, moist to wet.	S-5 16'-18'	0.0	
18								
19		SAND & GRAVEL	6-10-8-6	12"	Brown medium-coarse SAND & GRAVEL, wet.	S-6 18'-20'	0.0	
20								
21		SAND & GRAVEL	15-16-16-11	10"	Brown medium-coarse SAND & GRAVEL, wet.	S-7 20'-22'	0.0	
22								
23					Bottom of Boring at 22' bgs.			
24								
25					Well Construction Details on Following Page			

Key to Well Construction

- Sandpack
- Well Screen
- Bentonite Seal
- Cement
- Native Fill

# DRILLING LOG for Well #:

MW-201S



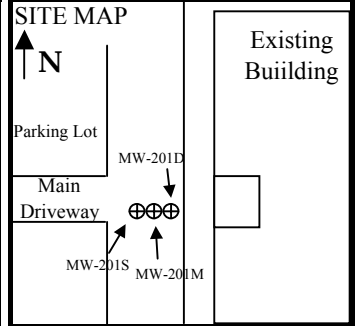
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399 Bylston Street, 6th Floor  
Boston, MA 02116

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
					<p><b>Well Construction Details:</b></p> <p>Protective Flushmount Roadbox</p> <p>0'-1' Concrete Surface Seal</p> <p>1'-9' Native Backfill</p> <p>9'-11' Bentonite Chip Seal</p> <p>11'-22' #1 Silica Sand Filter Pack</p> <p>12'-22' 0.010" Slotted PVC Well Screen</p> <p>22' Bottom of Boring</p>			

# DRILLING LOG for Well #: MW-201M

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116







Project: Raytheon-Wayland	Project Number: 143.69
Client: Raytheon	Logged by: Mark Ciriello
Drilling Co: Geosearch, Inc.	Driller: Joe Keenan
Date Started: 20-Jul-02	Date Finished: 20-Jul-02
Location: Wayland, MA	Drilling Method: 4.25" ID HSA
Screen Diam: 2" Length: 5'	Slot Size: 0.010"
Casing Diam: 2" Length: 22'	Type: PVC
Boring Depth: 27' Well Depth: 27'	Boring Diam.: 8"
Surface Elev.: 132.5' MP: TOC	Depth to GW: 18.27'
MP Elev.: 132.19'	



Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
1					Soil samples collected at MW-201S.			
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

Key to Well Construction

-  Sandpack
-  Well Screen
-  Grout
-  Bentonite Seal
-  Cement
-  Native Fill





# DRILLING LOG for Well #: MW-201D

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project:	Raytheon-Wayland	Project Number:	143.69		
Client:	Raytheon	Logged by:	Matt Daly		
Drilling Co:	Geosearch, Inc.	Driller:	Joe Keenan		
Date Started:	20-Jul-02	Date Finished:	20-Jul-02		
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA		
Screen Diam:	2"	Length:	5'	Slot Size:	0.010"
Casing Diam:	2"	Length:	60'	Type:	PVC
Boring Depth:	65'	Well Depth:	65'	Boring Diam.:	8"
Surface Elev.:	132.5'	MP:	TOC	Depth to GW:	19.04'
		MP Elev.:	132.10'		

**SITE MAP**

Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
3					<b>Well Construction Details:</b> Protective Flushmount Roadbox 0'-2' Concrete Surface Seal 2'-15' Native Backfill 15'-56' Portland Cement & Bentonite Slurry Grout 56'-58' Bentonite Chip Seal 58'-65' #1 Silica Sand Filter Pack 60'-65' 0.010" Slotted PVC Well Screen 65' Bottom of Boring			
6								
9								
12								
15								
18								
21								
24								
27								
30								
33								
36								
39								
42								
45								
48								
51								
54								
57								
60								
63								
66								
69								
72								
75								

**Key to Well Construction**

	Sandpack		Well Screen		Grout
	Bentonite Seal		Cement		Native Fill

# DRILLING LOG for Well #:

MW-202S

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project: Raytheon-Wayland  
 Client: Raytheon  
 Drilling Co: Geosearch, Inc.  
 Date Started: 20-Jul-02  
 Location: Wayland, MA  
 Screen Diam: 2" Length: 10'  
 Casing Diam: 2" Length: 12'  
 Boring Depth: 22' Well Depth: 22'  
 Surface Elev.: \_\_\_\_\_ MP: TOC Depth to GW: 17'  
 MP Elev.: \_\_\_\_\_

Project Number: 143.69  
 Logged by: Mark Ciriello  
 Driller: Jeremiah Fluck  
 Date Finished: 20-Jul-02  
 Drilling Method: 4.25" ID HSA  
 Slot Size: 0.010"  
 Type: PVC  
 Boring Diam.: 8"  
 Depth to GW: 17'

**SITE MAP**

Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
1								
2								
3								
4								
5								
6								
7								
8								
9		SAND	9-10-13-12	12"	Light brown, fine to medium SAND, trace Silt, dry.	S-1 8'-10'	6.0	
10								
11		SAND	7-10-11-10	14"	Light brown, medium SAND, some fine Sand, trace Silt, dry.	S-2 10'-12'	0.7	
12								
13		SAND	10-10-12-13	15"	Light brown, fine to medium SAND, trace Silt, dry.	S-3 12'-14'	0.1	
14								
15		SAND	7-7-10-10	19"	Light brown, fine to medium SAND, trace Silt, dry.	S-4 14'-16'	0.0	
16								
17		SAND	9-10-9-7	2"	Light brown, fine to medium SAND, trace Silt, some gray/brown fine Sand and Silt, dry.	S-5 16'-18'	0.0	
18								
19		SAND	7-8-10-12	10"	Light brown, fine to medium SAND, trace SILT, some gray/brown fine Sand and Silt, dry.	S-6 18'-20'	0.0	
20								
21		SAND	5-9-9-9	10"	Light brown, fine to medium SAND, trace SILT, some gray/brown fine Sand and Silt, dry.	S-7 20'-22'	0.0	
22								
23								
24								
25					Well Construction Data on Following Page			

Key to Well Construction

- Sandpack
- Well Screen
- Bentonite Seal
- Cement
- Native Fill

**DRILLING LOG for Well #:** MW-202S

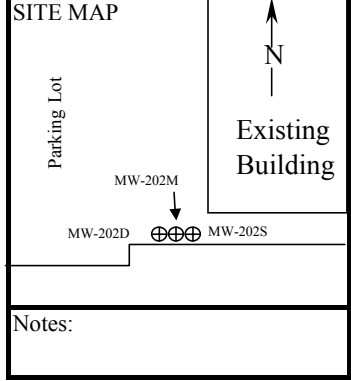
ERM  
 399 Boylston Street, 6th Floor  
 Boston, MA 02116

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
					<p><b>Well Construction Details:</b></p> <p>Protective Flushmount Roadbox</p> <p>0-1' Cement Surface Seal</p> <p>1'-9' Native Material</p> <p>9'-11' Bentonite Chip Seal</p> <p>11'-22' #1 Silica Sand Filter Pack</p> <p>12'-22' 0.010" Slotted PVC Well Screen</p> <p>22' Bottom of Borehole</p>			

# DRILLING LOG for Well #: MW-202M

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project:	Raytheon-Wayland	Project Number:	143.69		
Client:	Raytheon	Logged by:	Mark Ciriello		
Drilling Co:	Geosearch, Inc.	Driller:	Jeremiah Fluck		
Date Started:	20-Jul-02	Date Finished:	20-Jul-02		
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA		
Screen Diam:	2"	Length:	5'	Slot Size:	0.010"
Casing Diam:	2"	Length:	28'	Type:	PVC
Boring Depth:	33'	Well Depth:	33'	Boring Diam.:	8"
Surface Elev.:		MP:	TOC	Depth to GW:	17'
		MP Elev.:			



Notes:

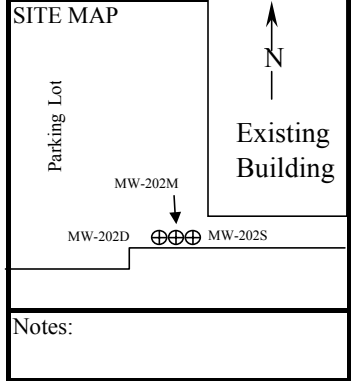
Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
3					<b>Well Construction Details:</b>  Protective Flushmount Roadbox 0-1' Concrete Surface Seal 1'-17' Native Fill 17'-26' Portland Cement and Bentonite Slurry Grout 26'-27' Bentonite Chip Seal 27'-33' #1 Silica Sand Filter Pack 28'-33' 0.010" Slotted PVC Well Screen 33' Bottom of Borehole			
6								
9								
12								
15								
18								
21								
24								
27								
30								
33					Bottom of Boring at 33' bgs			
36								
39								
42								
45								
48								
51								
54								
57								
60								
63								
66								
69								
72								
75								



# DRILLING LOG for Well #: MW-202D

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project:	Raytheon-Wayland	Project Number:	143.69		
Client:	Raytheon	Logged by:	Mark Ciriello		
Drilling Co.:	Geosearch, Inc.	Driller:	Jeremiah Fluck		
Date Started:	20-Jul-02	Date Finished:	20-Jul-02		
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA		
Screen Diam:	2"	Length:	5'	Slot Size:	0.010"
Casing Diam:	2"	Length:	51'	Type:	PVC
Boring Depth:	56'	Well Depth:	56'	Boring Diam.:	8"
Surface Elev.:		MP:	TOC	Depth to GW:	17'
		MP Elev.:			



Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
3					<b>Well Construction Details:</b>  Protective Flushmount Roadbox 0-1' Concrete Surface Seal 1'-17' Native Fill 17'-49' Portland Cement and Bentonite Slurry Grout 49'-50' Bentonite Chip Seal 50'-56' #1 Silica Sand Filter Pack 51'-56' 0.010" Slotted PVC Well Screen 56' Bottom of Borehole			
6								
9								
12								
15								
18								
21								
24								
27								
30								
33								
36								
39								
42								
45								
48								
51					Bottom of Boring at 56' bgs.			
54								
57								
60								
63								
66								
69								
72								
75								

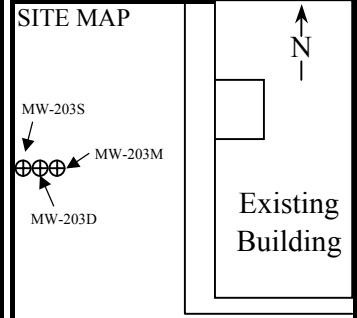
**Key to Well Construction**

-  Sandpack
-  Well Screen
-  Grout
-  Bentonite Seal
-  Cement
-  Native Fill

# DRILLING LOG for Well #: MW-203S

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project: Raytheon-Wayland	Project Number: 143.69
Client: Raytheon	Logged by: Jessica Eckhardt
Drilling Co: Geosearch, Inc.	Driller: Dave Crawford
Date Started: 20-Jul-02	Date Finished: 20-Jul-02
Location: Wayland, MA	Drilling Method: 4.25" ID HSA
Screen Diam: 2" Length: 5' Slot Size: 0.010"	
Casing Diam: 2" Length: 17' Type: PVC	
Boring Depth: 22' Well Depth: 22' Boring Diam.: 8"	
Surface Elev.: 132.8' MP: TOC Depth to GW: 19.98'	
MP Elev.: 132.50'	









Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11		SAND & GRAVEL	11-20-20-17	7"	<b>Top 3"</b> : Brown coarse GRAVEL, <b>Bottom 4"</b> : Light brown fine SAND; dry.	S-1 10'-12'	0.0	
12								
13		-	20-21-21-21	0	NR	S-2 12'-14'	0.0	
14								
15		SAND	9-11-10-21	16"	Silty at top of interval, fine to coarse SAND, trace of Gravel, tan; dry.	S-3 14'-16'	0.0	
16								
17		SAND	20-18-12-12	18"	Light brown med.-coarse SAND, trace Gravel, dark brown Sandy Silt to fine Sandy Silt; bottom 4" moist.	S-4 16'-18'	0.0	
18								
19		SAND	6-9-9-10	9"	Brown, coarse to medium Gravel with SAND, some Cobbles, saturated.	S-5 18'-20'	0.0	
20								
21		SAND	9-10-21-11	19"	Brown, coarse to med. SAND w/ interbeds of med. Gravel, yellow coloration, trace Gravel.	S-6 20'-22'	0.0	
22								
23					Bottom of Boring at 22' bgs.			
24								
25					Well Construction Details on Following Page			

NR=No Recovery

Key to Well Construction

-  Sandpack
-  Well Screen
-  Grout
-  Bentonite Seal
-  Cement
-  Native Fill

**DRILLING LOG for Well #:** MW-203S

ERM  
 399 Boylston Street, 6th Floor  
 Boston, MA 02116

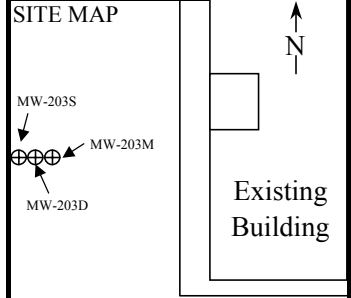
Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
					<p><b>Well Construction Details:</b></p> <p>Protective Flushmount Roadbox</p> <p>0'-1' Concrete Surface Seal</p> <p>1'-9' Native Backfill</p> <p>9'-11' Bentonite Chip Seal</p> <p>11'-22' #1 Silica Sand Filter Pack</p> <p>12'-22' 0.010" Slotted PVC Well Screen</p> <p>22' Bottom of Boring</p>			



# DRILLING LOG for Well #: MW-203M

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project:	Raytheon-Wayland	Project Number:	143.69		
Client:	Raytheon	Logged by:	Jessica Eckhardt		
Drilling Co:	Geosearch, Inc.	Driller:	Dave Crawford		
Date Started:	20-Jul-02	Date Finished:	20-Jul-02		
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA		
Screen Diam:	2"	Length:	5'	Slot Size:	0.010"
Casing Diam:	2"	Length:	67'	Type:	PVC
Boring Depth:	43'	Well Depth:	72'	Boring Diam.:	8"
Surface Elev.:		MP:	TOC	Depth to GW:	19.52'
		MP Elev.:	132.39'		



Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
3					<b>Well Construction Details:</b> Protective Flushmount Roadbox 0-1' Concrete Surface Seal 1'-18' Native Material 18'-34' Portland Cement & Bentonite Slurry Grout 34'-36' Bentonite Chip Seal 36'-43' #1 Silica Sand Filter Pack 38'-43' 0.010" Slotted PVC Well Screen 43' Bottom of Borehole			
6								
9								
12								
15								
18								
21								
24								
27								
30								
33								
36								
39								
42								
45					Bottom of Boring at 43' bgs.			
48								
51								
54								
57								
60								
63								
66								
69								
72								
75								

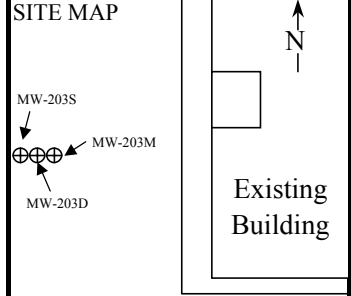
Key to Well Construction

	Sandpack		Well Screen		Grout
	Bentonite Seal		Cement		Native Fill

# DRILLING LOG for Well #: MW-203D

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project:	Raytheon-Wayland	Project Number:	143.69		
Client:	Raytheon	Logged by:	Jessica Eckhardt		
Drilling Co:	Geosearch, Inc.	Driller:	Dave Crawford		
Date Started:	20-Jul-02	Date Finished:	20-Jul-02		
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA		
Screen Diam:	2"	Length:	5'	Slot Size:	0.010"
Casing Diam:	2"	Length:	58'	Type:	PVC
Boring Depth:	63'	Well Depth:	63'	Boring Diam.:	8"
Surface Elev.:	132.8'	MP:	TOC	Depth to GW:	18.52'
		MP Elev.:	132.14'		



Notes:

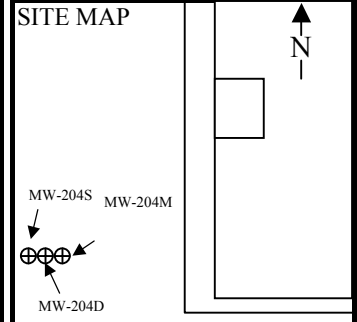
Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
3					<b>Well Construction Details:</b> Protective Flushmount Roadbox 0'-1' Concrete Surface Seal 1'-18' Native Material 18'-54' Portland Cement & Bentonite Slurry Grout 54'-56' Bentonite Chip Seal 56'-63' #1 Silica Sand Filter Pack 58'-63' 0.010" Slotted PVC Well Screen 63' Bottom of Borehole			
6								
9								
12								
15								
18								
21								
24								
27								
30								
33								
36								
39								
42								
45								
48								
51								
54								
57								
60								
63								
66					Bottom of Boring at 63' bgs.			
69								
72								
75								



# DRILLING LOG for Well #: MW-204S

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116






Project: Raytheon-Wayland	Project Number: 143.69
Client: Raytheon	Logged by: Jessica Eckhardt
Drilling Co: Geosearch, Inc.	Driller: Artie Cox
Date Started: 20-Jul-02	Date Finished: 20-Jul-02
Location: Wayland, MA	Drilling Method: 4.25" ID HSA
Screen Diam: 2" Length: 10' Slot Size: 0.010"	
Casing Diam: 2" Length: 12' Type: PVC	
Boring Depth: 22' Well Depth: 22' Boring Diam.: 8"	
Surface Elev.: 132.6' MP: TOC Depth to GW: 19.63'	
MP Elev.: 132.23'	



Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
1								
2								
3								
4								
5								
6								
7								
8								
9		SAND	6-6-7-9	18"	Light brown-orange med. SAND, well sorted, light orange stained interbeds; dry to moist.	S-1 8'-10'	1.4	
10								
11		SAND	5-7-10-11	18"	Light brown-orange med. SAND, orange-stained horizontal beds, fine Sand lens (2"); dry to moist.	S-2 10'-12'	1.9	
12								
13		SAND	13-15-17-18	18"	Tan-brown fine SAND, well sorted, subtle banding, trace coarse Sand; moist.	S-3 12'-14'	1.6	
14								
15		SAND	5-6-9-11	17"	Tan fine SAND, well sorted, some brown coarse Sand, trace fine Sand; moist.	S-4 14'-16'	1.2	
16								
17		SAND	9-10-10-11	15"	Medium-fine brown SAND, well sorted, horizontal bedding moist.	S-5 16'-18'	2.0	
18								
19		SAND	9-9-11-13	15"	Light brown med.-coarse SAND, trace Gravel, moderate to well sorted; saturated.	S-6 18'-20'	0.7	
20								
21		SAND & GRAVEL	10-16-14-16	24"	Brown, med.-coarse SAND & GRAVEL, moderate to well sorted, trace Cobbles, orange-staining; saturated.	S-7 20'-22'	0.7	
22								
23					Bottom of Boring at 22' bgs.			
24								
25								

Key to Well Construction

-  Sandpack
-  Well Screen
-  Bentonite Seal
-  Cement
-  Native Fill

# DRILLING LOG for Well #:

MW-204S



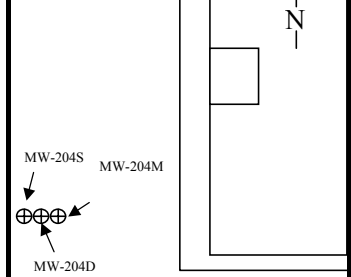
ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
					<p><b>Well Construction Details:</b></p> <p>Protective Flushmount Roadbox</p> <p>0-1' Concrete Surface Seal</p> <p>1'-9' Native Material</p> <p>9'-11' Bentonite Chip Seal</p> <p>11'-22' #1 Silica Sand Filter Pack</p> <p>12'-22' 0.010" Slotted PVC Well Screen</p> <p>22' Bottom of Borehole</p>			

# DRILLING LOG for Well #: MW-204M

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

## SITE MAP



Project:	Raytheon-Wayland	Project Number:	143.69		
Client:	Raytheon	Logged by:	Jessica Eckhardt		
Drilling Co:	Geosearch, Inc.	Driller:	Artie Cox		
Date Started:	20-Jul-02	Date Finished:	20-Jul-02		
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA		
Screen Diam:	2"	Length:	5'	Slot Size:	0.010"
Casing Diam:	2"	Length:	41'	Type:	PVC
Boring Depth:	46'	Well Depth:	46'	Boring Diam.:	8"
Surface Elev.:	132.6'	MP:	TOC	Depth to GW:	19.31'
		MP Elev.:	132.02'		

Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
3					<b>Well Construction Details:</b>  Protective Flushmount Roadbox 0-1' Concrete Surface Seal 1'-18' Native Material 18'-37' Portland Cement and Bentonite Slurry Grout 37'-39' Bentonite Chip Seal 39'-46' #1 Silica Sand Filter Pack 41'-46' 0.010" Slotted PVC Well Screen 46' Bottom of Borehole			
6								
9								
12								
15								
18								
21								
24								
27								
30								
33								
36								
39								
42								
45								
48					Bottom of Boring at 46' bgs.			
51								
54								
57								
60								
63								
66								
69								
72								
75								

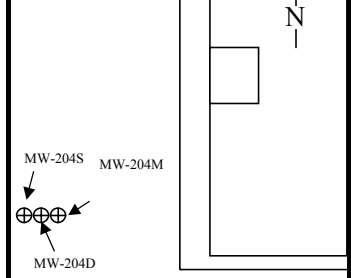
Key to Well Construction

	Sandpack		Well Screen		Grout
	Bentonite Seal		Cement		Native Fill

# DRILLING LOG for Well #: MW-204D

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

## SITE MAP



Project:	Raytheon-Wayland	Project Number:	143.69
Client:	Raytheon	Logged by:	Jessica Eckhardt
Drilling Co.:	Geosearch, Inc.	Driller:	Artie Cox
Date Started:	20-Jul-02	Date Finished:	20-Jul-02
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA
Screen Diam.:	2"	Length:	5'
Casing Diam.:	2"	Length:	67'
Boring Depth:	72'	Well Depth:	72'
Surface Elev.:	132.6'	MP:	TOC
		MP Elev.:	132.30'
		Slot Size:	0.010"
		Type:	PVC
		Boring Diam.:	8"
		Depth to GW:	18.67'

Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
3					<b>Well Construction Details:</b>  Protective Flushmount Roadbox 0-1' Concrete Surface Seal 1'-18' Native Material 18'-63' Portland Cement and Bentonite Slurry Grout 63'-65' Bentonite Chip Seal 65'-72' #1 Silica Sand Filter Pack 67'-72' 0.010" Slotted PVC Well Screen 72' Bottom of Borehole			
6								
9								
12								
15								
18								
21								
24								
27								
30								
33								
36								
39								
42								
45								
48								
51								
54								
57								
60								
63								
66								
69								
72								
75					Bottom of Boring at 72' bgs.			

Key to Well Construction

	Sandpack		Well Screen		Grout
	Bentonite Seal		Cement		Native Fill

# DRILLING LOG for Well #:

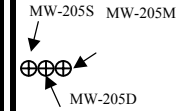
MW-205S



ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project: Raytheon-Wayland	Project Number: 143.69	
Client: Raytheon	Logged by: Mark Ciriello	
Drilling Co: Geosearch, Inc.	Driller: Pat Hines	
Date Started: 20-Jul-02	Date Finished: 20-Jul-02	
Location: Wayland, MA	Drilling Method: 4.25" ID HSA	
Screen Diam: 2"	Length: 10'	Slot Size: 0.010"
Casing Diam: 2"	Length: 12'	Type: PVC
Boring Depth: 22'	Well Depth: 22'	Boring Diam.: 8"
Surface Elev.: 132.4'	MP: TOC	Depth to GW: 19.31'
	MP Elev.: 131.98'	

## SITE MAP



Existing Building

Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
1								
2								
3								
4								
5								
6								
7								
8								
9		SAND & GRAVEL	6-7-7-8	1.5'	Light brown fine-med. SAND & GRAVEL, trace Silt; dry.	S-1 8'-10'	0.0	
10		SAND & GRAVEL	7-8-9-9	1.0'	Light brown fine-med. SAND & GRAVEL, trace Silt; dry.	S-2 10'-12'	0.0	
11		SAND	10-10-11-12	1.3'	Light brown well sorted fine SAND, some Silt; dry.	S-3 12'-14'	0.0	
12		SAND	12-11-12-11	1.8'	Brown-yellow fine SAND, well sorted, moist.	S-4 14'-16'	0.0	
13		SAND	10-10-12-11	2'	Brown fine SAND, some Silt; wet.	S-5 16'-18'	0.0	
14		SAND	10-10-11-12	1.8'	Brown fine SAND, some Silt; wet.	S-6 18'-20'	0.0	
15		SAND	11-11-13-12	2.0'	Brown fine SAND, some Silt; wet.	S-7 20'-22'	0.0	
16								
17								
18								
19								
20								
21								
22					Bottom of Boring at 22' bgs.			
23								
24								
25					Well Construction Details on Following Page			

### Key to Well Construction

	Sandpack		Well Screen		Grout
	Bentonite Seal		Cement		Native Fill

# DRILLING LOG for Well #:

MW-205S



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Boston, MA 02116

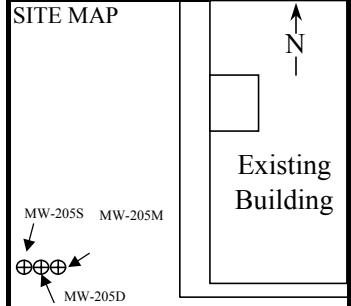
Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
					<p><b>Well Construction Details:</b></p> <p>Protective Flushmount Roadbox</p> <p>0-1' Concrete Surface Seal</p> <p>1'-9' Native Material</p> <p>9'-11' Bentonite Chip Seal</p> <p>11'-22' #1 Silica Sand Filter Pack</p> <p>12'-22' 0.010" Slotted PVC Well Screen</p> <p>22' Bottom of Borehole</p>			



# DRILLING LOG for Well #: MW-205M

ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project:	Raytheon-Wayland	Project Number:	143.69		
Client:	Raytheon	Logged by:	Mark Ciriello		
Drilling Co.:	Geosearch, Inc.	Driller:	Pat Hines		
Date Started:	20-Jul-02	Date Finished:	20-Jul-02		
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA		
Screen Diam:	2"	Length:	5'	Slot Size:	0.010"
Casing Diam:	2"	Length:	42'	Type:	PVC
Boring Depth:	47'	Well Depth:	47'	Boring Diam.:	8"
Surface Elev.:	132.4'	MP:	TOC	Depth to GW:	19.45'
		MP Elev.:	132.12'		



Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
3					<b>Well Construction Details:</b>  Protective Flushmount Roadbox 0-1' Concrete Surface Seal 1'-18' Native Material 18'-38' Portland Cement and Bentonite Slurry Grout 38'-40' Bentonite Chip Seal 40'-47' #1 Silica Sand Filter Pack 42'-47' 0.010" Slotted PVC Well Screen 47' Bottom of Borehole			
6								
9								
12								
15								
18								
21								
24								
27								
30								
33								
36								
39								
42								
45								
48					Bottom of Boring at 47' bgs.			
51								
54								
57								
60								
63								
66								
69								
72								
75								

Key to Well Construction

-  Sandpack
-  Well Screen
-  Grout
-  Bentonite Seal
-  Cement
-  Native Fill

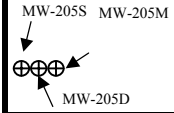
# DRILLING LOG for Well #: MW-205D



ERM  
399 Boylston Street, 6th Floor  
Boston, MA 02116

Project:	Raytheon-Wayland	Project Number:	143.69
Client:	Raytheon	Logged by:	Mark Ciriello
Drilling Co:	Geosearch, Inc.	Driller:	Pat Hines
Date Started:	20-Jul-02	Date Finished:	20-Jul-02
Location:	Wayland, MA	Drilling Method:	4.25" ID HSA
Screen Diam:	2"	Length:	5'
Casing Diam:	2"	Length:	65'
Boring Depth:	70'	Well Depth:	70'
Surface Elev.:	132.4'	MP:	TOC
		MP Elev.:	131.98'
		Slot Size:	0.010"
		Type:	PVC
		Boring Diam.:	8"
		Depth to GW:	18.38'

## SITE MAP



Existing Building

Notes:

Depth	Well Log	Stratigraphy	Blowcounts per 6 inches	Recovery	Split Spoon Description/Soil Classification	Sample # & Depth	PID Conc. (ppm) spoon/HS	Lab Sample # & Analyses
3								
6								
9								
12								
15								
18								
21								
24								
27								
30								
33								
36								
39								
42								
45								
48								
51								
54								
57								
60								
63								
66								
69								
72					Bottom of Boring at 70' bgs.			
75								

### Well Construction Details:

Protective Flushmount Roadbox

0'-1' Concrete Surface Seal

1'-18' Native Material

18'-60' Portland Cement and Bentonite Slurry Grout

60'-62.5' Bentonite Chip Seal

62.5'-70' #1 Silica Sand Filter Pack

65'-70' 0.010" Slotted PVC Well Screen

70' Bottom of Borehole

### Key to Well Construction



Sandpack



Well Screen



Grout



Bentonite Seal



Cement



Native Fill