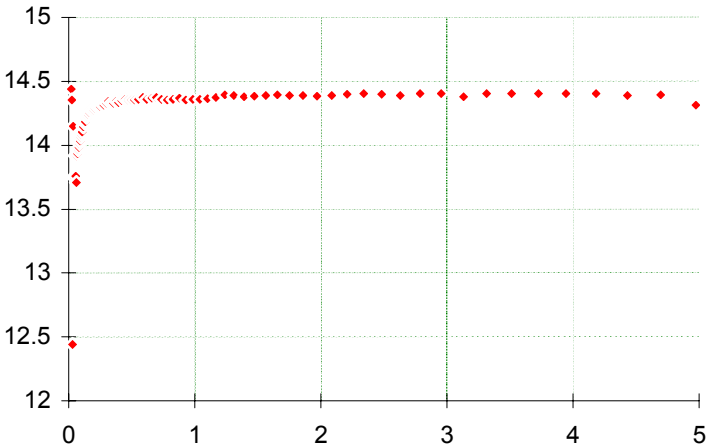


### SLUG TEST DATA ENTRY FORM

Client Name: Raytheon Systems      Well Number: MW-37      Test Type: Rising Head  
 Project No.: 143.45      Topo. Elev.:      Weather: Sunny, clear, 70's  
 Project Name: Wayland, MA      Tested By: JD/RB      Date Started: 6/9/1998

BASIC TEST DATA	
Measurement Units (1-6):	2
Unconfined(1)/Confined(2):	2
Well Depth - TOC (feet):	22.00
Static W/L-Depth (ft.):	14.42
Riser Pipe Diameter (feet):	0.166
Initial Test Depth Value (ft.):	14.42
TOC Elevation (feet):	134.41
Intake/Soil Col. Diam. (feet):	0.75
Depth to Top of Pack (feet):	3
Intake/Soil Col. Length (ft.):	11
Saturat. Col. Thickness (ft.):	7.58
Casing Soil Length (if appl.):	
Casing Stickup (feet):	3
Slug Volume (ft <sup>3</sup> ):	
Thickness of Aquifer (feet):	7.58



AQUIFER RECOVERY DATA							
Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)
0.02	14.438	0.1672	14.256	0.6963	14.374	2.953	14.402
0.025	14.353	0.177	14.275	0.738	14.36	3.1297	14.378
0.03	12.439	0.1875	14.265	0.7813	14.353	3.3163	14.402
0.035	14.148	0.1985	14.275	0.828	14.36	3.5147	14.406
0.04	13.751	0.2102	14.289	0.8763	14.369	3.7247	14.402
0.045	13.742	0.2227	14.298	0.928	14.355	3.9463	14.402
0.05	13.917	0.2358	14.302	0.983	14.36	4.1813	14.402
0.055	13.756	0.2498	14.302	1.0413	14.36	4.4297	14.388
0.06	13.71	0.2647	14.321	1.103	14.365	4.693	14.392
0.065	13.913	0.2803	14.316	1.168	14.374	4.973	14.316
0.07	13.931	0.297	14.33	1.238	14.392		
0.075	13.963	0.3147	14.344	1.3113	14.388		
0.08	13.982	0.3333	14.33	1.3897	14.378		
0.085	14.012	0.3532	14.33	1.473	14.383		
0.09	14.035	0.3742	14.344	1.5613	14.388		
0.095	14.062	0.3963	14.335	1.6547	14.392		
0.1	14.081	0.4198	14.348	1.753	14.388		
0.1058	14.104	0.4447	14.36	1.858	14.388		
0.112	14.148	0.4697	14.355	1.968	14.383		
0.1185	14.143	0.4963	14.355	2.0847	14.388		
0.1255	14.175	0.5247	14.355	2.2097	14.397		
0.1328	14.185	0.5547	14.36	2.3413	14.402		
0.1407	14.217	0.5863	14.374	2.4813	14.397		
0.149	14.231	0.6213	14.36	2.6297	14.388		
0.1578	14.238	0.658	14.369	2.7863	14.406		

## Bouwer & Rice Method for Calculating Hydraulic Conductivity

Project Name: Wayland, MA

Project No.: 143.45

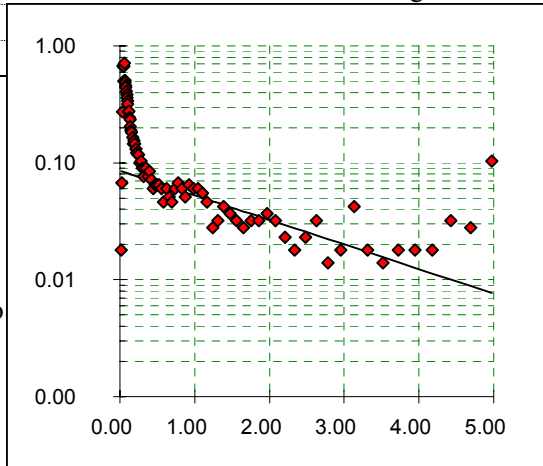
Client Name: Raytheon Systems

Identification: MW-37 Rising Head

User Name: JD/RB

Run Date: 6/9/1998

Riser Pipe Diameter:	0.166 feet
Intake Diameter:	0.75 feet
Intake Length:	11 feet
Saturated Column Length:	7.58 feet
Water Table Depth:	14.42 feet
Aquifer Thickness:	7.58 feet
Line Fit Starting No.:	33 Min 1 to
Line Fit Ending No.:	81 Max 85
Specify Output Units:	7 1 to 9
K(h):	1.77E-04 cm./sec.
Correlation Coefficient:	0.8988



Meas. #	Time minutes	Field Meas. feet	Drawdown/up feet	Line Fit To LN(Yt)	Regression On LN(Yt)
1)	0.02	14.44	0.02	-4.017	-2.469
2)	0.03	14.35	0.07	-2.703	-2.472
3)	0.03	12.44	1.98	0.684	-2.474
4)	0.04	14.15	0.27	-1.302	-2.477
5)	0.04	13.75	0.67	-0.402	-2.479
6)	0.05	13.74	0.68	-0.389	-2.481
7)	0.05	13.92	0.50	-0.687	-2.484
8)	0.06	13.76	0.66	-0.409	-2.486
9)	0.06	13.71	0.71	-0.342	-2.489
10)	0.07	13.91	0.51	-0.679	-2.491
11)	0.07	13.93	0.49	-0.715	-2.494
12)	0.08	13.96	0.46	-0.783	-2.496
13)	0.08	13.98	0.44	-0.826	-2.498
14)	0.09	14.01	0.41	-0.896	-2.501
15)	0.09	14.04	0.39	-0.955	-2.503
16)	0.10	14.06	0.36	-1.027	-2.506
17)	0.10	14.08	0.34	-1.082	-2.508
18)	0.11	14.10	0.32	-1.152	-2.511
19)	0.11	14.15	0.27	-1.302	-2.514
20)	0.12	14.14	0.28	-1.284	-2.517
21)	0.13	14.18	0.24	-1.406	-2.520
22)	0.13	14.19	0.23	-1.448	-2.524
23)	0.14	14.22	0.20	-1.595	-2.528
24)	0.15	14.23	0.19	-1.666	-2.532
25)	0.16	14.24	0.18	-1.704	-2.536
26)	0.17	14.26	0.16	-1.808	-2.541
27)	0.18	14.28	0.15	-1.931	-2.545
28)	0.19	14.27	0.15	-1.864	-2.550
29)	0.20	14.28	0.15	-1.931	-2.556
30)	0.21	14.29	0.13	-2.033	-2.561
31)	0.22	14.30	0.12	-2.104	-2.567
32)	0.24	14.30	0.12	-2.137	-2.574
33)	0.25	14.30	0.12	-2.137	-2.581

## Bouwer & Rice Method for Calculating Hydraulic Conductivity

Project Name: Wayland, MA

Project No.: 143.45

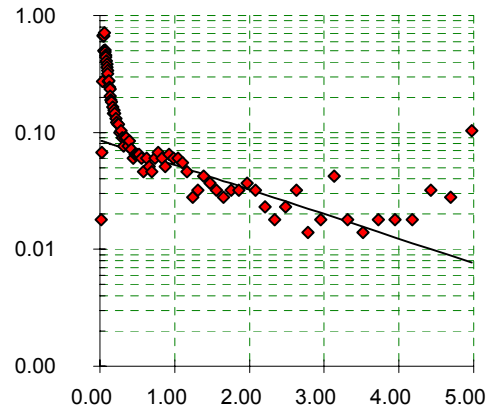
Client Name: Raytheon Systems

Identification: MW-37 Rising Head

User Name: JD/RB

Run Date: 6/9/1998

Riser Pipe Diameter:	0.166 feet
Intake Diameter:	0.75 feet
Intake Length:	11 feet
Saturated Column Length:	7.58 feet
Water Table Depth:	14.42 feet
Aquifer Thickness:	7.58 feet
Line Fit Starting No.:	33 Min 1 to
Line Fit Ending No.:	81 Max 85
Specify Output Units:	7 1 to 9
K(h):	1.77E-04 cm./sec.
Correlation Coefficient:	0.8988



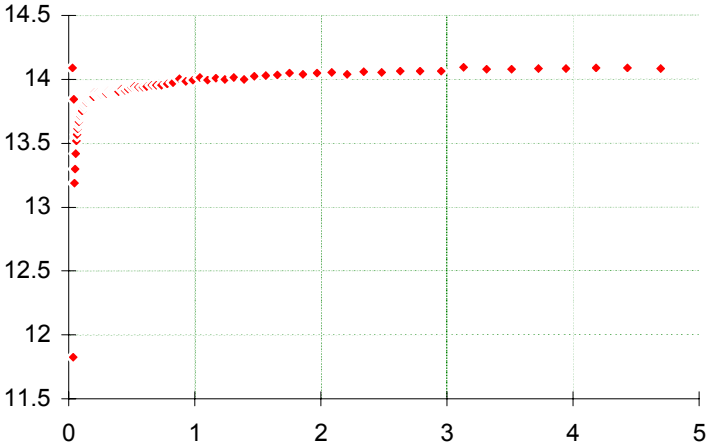
Meas. #	Time minutes	Field Meas. feet	Drawdown/up feet	Line Fit To LN(Yt)	Regression On LN(Yt)
34)	0.26	14.32	0.10	-2.313	-2.588
35)	0.28	14.32	0.10	-2.263	-2.595
36)	0.30	14.33	0.09	-2.408	-2.603
37)	0.31	14.34	0.08	-2.577	-2.612
38)	0.33	14.33	0.09	-2.408	-2.621
39)	0.35	14.33	0.09	-2.408	-2.631
40)	0.37	14.34	0.08	-2.577	-2.641
41)	0.40	14.34	0.08	-2.465	-2.651
42)	0.42	14.35	0.07	-2.631	-2.663
43)	0.44	14.36	0.06	-2.813	-2.675
44)	0.47	14.36	0.06	-2.733	-2.687
45)	0.50	14.36	0.06	-2.733	-2.700
46)	0.52	14.36	0.06	-2.733	-2.714
47)	0.55	14.36	0.06	-2.813	-2.728
48)	0.59	14.37	0.05	-3.079	-2.743
49)	0.62	14.36	0.06	-2.813	-2.760
50)	0.66	14.37	0.05	-2.976	-2.778
51)	0.70	14.37	0.05	-3.079	-2.797
52)	0.74	14.36	0.06	-2.813	-2.817
53)	0.78	14.35	0.07	-2.703	-2.838
54)	0.83	14.36	0.06	-2.813	-2.860
55)	0.88	14.37	0.05	-2.976	-2.884
56)	0.93	14.36	0.06	-2.733	-2.909
57)	0.98	14.36	0.06	-2.813	-2.935
58)	1.04	14.36	0.06	-2.813	-2.964
59)	1.10	14.37	0.05	-2.900	-2.993
60)	1.17	14.37	0.05	-3.079	-3.025
61)	1.24	14.39	0.03	-3.576	-3.059
62)	1.31	14.39	0.03	-3.442	-3.094
63)	1.39	14.38	0.04	-3.170	-3.132
64)	1.47	14.38	0.04	-3.297	-3.172
65)	1.56	14.39	0.03	-3.442	-3.215
66)	1.65	14.39	0.03	-3.576	-3.260
67)	1.75	14.39	0.03	-3.442	-3.308
68)	1.86	14.39	0.03	-3.442	-3.359
69)	1.97	14.38	0.04	-3.297	-3.412
70)	2.08	14.39	0.03	-3.442	-3.468
71)	2.21	14.40	0.02	-3.772	-3.529



### SLUG TEST DATA ENTRY FORM

Client Name: Raytheon Systems      Well Number: MW-39      Test Type: Rising Head  
 Project No.: 143.45      Topo. Elev.:      Weather: Sunny, clear, 70's  
 Project Name: Wayland, MA      Tested By: JD/RB      Date Started: 6/9/1998

BASIC TEST DATA	
Measurement Units (1-6):	2
Unconfined(1)/Confined(2):	1
Well Depth - TOC (feet):	22.00
Static W/L-Depth (ft.):	14.1
Riser Pipe Diameter (feet):	0.166
Initial Test Depth Value (ft.):	14.1
TOC Elevation (feet):	134.89
Intake/Soil Col. Diam. (feet):	0.75
Depth to Top of Pack (feet):	3
Intake/Soil Col. Length (ft.):	11
Saturat. Col. Thickness (ft.):	7.9
Casing Soil Length (if appl.):	
Casing Stickup (feet):	3
Slug Volume (ft <sup>3</sup> ):	
Thickness of Aquifer (feet):	7.9



AQUIFER RECOVERY DATA							
Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)
0.03	14.091	0.1875	13.865	0.7813	13.964	3.3163	14.079
0.035	11.828	0.1985	13.865	0.828	13.973	3.5147	14.079
0.04	13.842	0.2102	13.897	0.8763	14.005	3.7247	14.084
0.045	13.187	0.2227	13.883	0.928	13.982	3.9463	14.084
0.05	13.3	0.2358	13.892	0.983	13.992	4.1813	14.088
0.055	13.417	0.2498	13.883	1.0413	14.015	4.4297	14.088
0.06	13.516	0.2647	13.879	1.103	13.992	4.693	14.084
0.065	13.569	0.2803	13.888	1.168	14.01		
0.07	13.616	0.297	13.888	1.238	14.001		
0.075	13.648	0.3147	13.911	1.3113	14.015		
0.08	13.671	0.3333	13.906	1.3897	14.001		
0.085	13.706	0.3532	13.906	1.473	14.024		
0.09	13.715	0.3742	13.906	1.5613	14.028		
0.095	13.738	0.3963	13.902	1.6547	14.033		
0.1	13.766	0.4198	13.922	1.753	14.047		
0.1058	13.756	0.4447	13.915	1.858	14.038		
0.112	13.807	0.4697	13.922	1.968	14.047		
0.1185	13.789	0.4963	13.941	2.0847	14.052		
0.1255	13.805	0.5247	13.945	2.2097	14.038		
0.1328	13.823	0.5547	13.941	2.3413	14.061		
0.1407	13.819	0.5863	13.941	2.4813	14.056		
0.149	13.842	0.6213	13.945	2.6297	14.065		
0.1578	13.86	0.658	13.955	2.7863	14.065		
0.1672	13.851	0.6963	13.955	2.953	14.065		
0.177	13.855	0.738	13.955	3.1297	14.093		

## Bouwer & Rice Method for Calculating Hydraulic Conductivity

Project Name: Wayland, MA

Project No.: 143.45

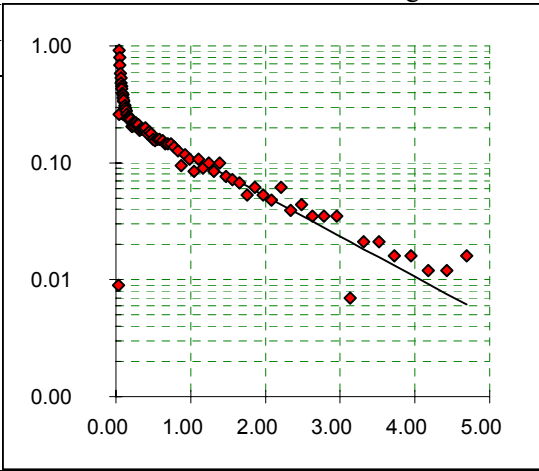
Client Name: Raytheon Systems

Identification: MW-39 Rising Head

User Name: JD/RB

Run Date: 6/9/1998

Riser Pipe Diameter:	0.166 feet
Intake Diameter:	0.75 feet
Intake Length:	11 feet
Saturated Column Length:	7.9 feet
Water Table Depth:	14.1 feet
Aquifer Thickness:	7.9 feet
Line Fit Starting No.:	25 Min 1 to
Line Fit Ending No.:	70 Max 82
Specify Output Units:	7 1 to 9
K(h):	2.94E-04 cm./sec.
Correlation Coefficient:	0.9810



Meas. #	Time minutes	Field Meas. feet	Drawdown/up feet	Line Fit To LN(Yt)	Regression On LN(Yt)
1)	0.03	14.09	0.01	-4.711	-1.401
2)	0.04	11.83	2.27	0.821	-1.405
3)	0.04	13.84	0.26	-1.355	-1.409
4)	0.05	13.19	0.91	-0.091	-1.413
5)	0.05	13.30	0.80	-0.223	-1.416
6)	0.06	13.42	0.68	-0.381	-1.420
7)	0.06	13.52	0.58	-0.538	-1.424
8)	0.07	13.57	0.53	-0.633	-1.428
9)	0.07	13.62	0.48	-0.726	-1.432
10)	0.08	13.65	0.45	-0.794	-1.436
11)	0.08	13.67	0.43	-0.846	-1.440
12)	0.09	13.71	0.39	-0.931	-1.444
13)	0.09	13.72	0.39	-0.955	-1.448
14)	0.10	13.74	0.36	-1.016	-1.452
15)	0.10	13.77	0.33	-1.097	-1.456
16)	0.11	13.76	0.34	-1.067	-1.461
17)	0.11	13.81	0.29	-1.228	-1.466
18)	0.12	13.79	0.31	-1.168	-1.471
19)	0.13	13.81	0.30	-1.221	-1.476
20)	0.13	13.82	0.28	-1.284	-1.482
21)	0.14	13.82	0.28	-1.269	-1.488
22)	0.15	13.84	0.26	-1.355	-1.495
23)	0.16	13.86	0.24	-1.427	-1.502
24)	0.17	13.85	0.25	-1.390	-1.509
25)	0.18	13.86	0.24	-1.406	-1.517
26)	0.19	13.87	0.23	-1.448	-1.525
27)	0.20	13.87	0.23	-1.448	-1.534
28)	0.21	13.90	0.20	-1.595	-1.543
29)	0.22	13.88	0.22	-1.528	-1.553
30)	0.24	13.89	0.21	-1.570	-1.564
31)	0.25	13.88	0.22	-1.528	-1.575
32)	0.26	13.88	0.22	-1.510	-1.587
33)	0.28	13.89	0.21	-1.551	-1.599

## Bouwer & Rice Method for Calculating Hydraulic Conductivity

Project Name: Wayland, MA

Project No.: 143.45

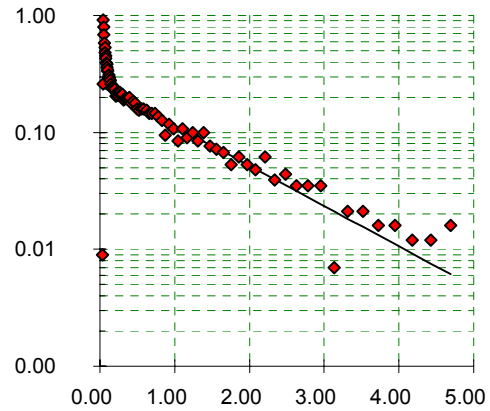
Client Name: Raytheon Systems

Identification: MW-39 Rising Head

User Name: JD/RB

Run Date: 6/9/1998

Riser Pipe Diameter:	0.166 feet
Intake Diameter:	0.75 feet
Intake Length:	11 feet
Saturated Column Length:	7.9 feet
Water Table Depth:	14.1 feet
Aquifer Thickness:	7.9 feet
Line Fit Starting No.:	25 Min 1 to
Line Fit Ending No.:	70 Max 82
Specify Output Units:	7 1 to 9
K(h):	2.94E-04 cm./sec.
Correlation Coefficient:	0.9810



Meas. #	Time minutes	Field Meas. feet	Drawdown/up feet	Line Fit To LN(Yt)	Regression On LN(Yt)
34)	0.30	13.89	0.21	-1.551	-1.612
35)	0.31	13.91	0.19	-1.666	-1.626
36)	0.33	13.91	0.19	-1.640	-1.641
37)	0.35	13.91	0.19	-1.640	-1.657
38)	0.37	13.91	0.19	-1.640	-1.673
39)	0.40	13.90	0.20	-1.619	-1.691
40)	0.42	13.92	0.18	-1.726	-1.709
41)	0.44	13.92	0.19	-1.687	-1.729
42)	0.47	13.92	0.18	-1.726	-1.749
43)	0.50	13.94	0.16	-1.839	-1.770
44)	0.52	13.95	0.15	-1.864	-1.792
45)	0.55	13.94	0.16	-1.839	-1.816
46)	0.59	13.94	0.16	-1.839	-1.841
47)	0.62	13.95	0.15	-1.864	-1.869
48)	0.66	13.96	0.15	-1.931	-1.898
49)	0.70	13.96	0.15	-1.931	-1.928
50)	0.74	13.96	0.15	-1.931	-1.961
51)	0.78	13.96	0.14	-1.995	-1.996
52)	0.83	13.97	0.13	-2.064	-2.033
53)	0.88	14.01	0.09	-2.354	-2.071
54)	0.93	13.98	0.12	-2.137	-2.112
55)	0.98	13.99	0.11	-2.226	-2.155
56)	1.04	14.02	0.08	-2.465	-2.202
57)	1.10	13.99	0.11	-2.226	-2.250
58)	1.17	14.01	0.09	-2.408	-2.302
59)	1.24	14.00	0.10	-2.313	-2.357
60)	1.31	14.02	0.08	-2.465	-2.415
61)	1.39	14.00	0.10	-2.313	-2.478
62)	1.47	14.02	0.08	-2.577	-2.543
63)	1.56	14.03	0.07	-2.631	-2.613
64)	1.65	14.03	0.07	-2.703	-2.687
65)	1.75	14.05	0.05	-2.937	-2.765
66)	1.86	14.04	0.06	-2.781	-2.848
67)	1.97	14.05	0.05	-2.937	-2.936
68)	2.08	14.05	0.05	-3.037	-3.028
69)	2.21	14.04	0.06	-2.781	-3.127
70)	2.34	14.06	0.04	-3.244	-3.231
71)	2.48	14.06	0.04	-3.124	-3.342

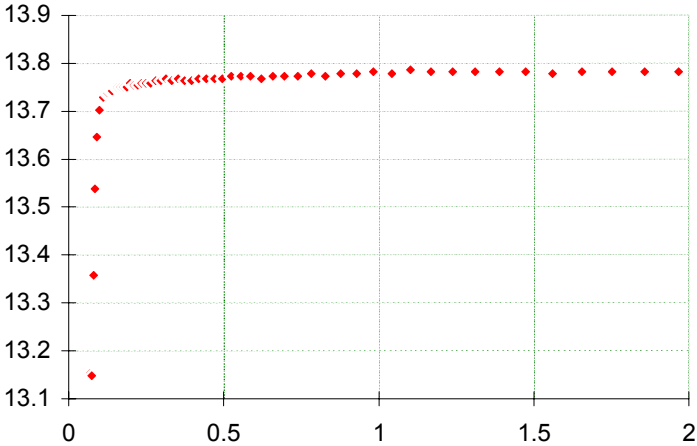




### SLUG TEST DATA ENTRY FORM

Client Name: Raytheon Systems      Well Number: MW-40      Test Type: Rising Head  
 Project No.: 143.45      Topo. Elev.: \_\_\_\_\_      Weather: Sunny, clear, 70's  
 Project Name: Wayland, MA      Tested By: JD/RB      Date Started: 6/9/1998

BASIC TEST DATA	
Measurement Units (1-6):	2
Unconfined(1)/Confined(2):	1
Well Depth - TOC (feet):	22.00
Static W/L-Depth (ft.):	13.78
Riser Pipe Diameter (feet):	0.166
Initial Test Depth Value (ft.):	13.78
TOC Elevation (feet):	134.88
Intake/Soil Col. Diam. (feet):	0.75
Depth to Top of Pack (feet):	3
Intake/Soil Col. Length (ft.):	11
Saturat. Col. Thickness (ft.):	8.22
Casing Soil Length (if appl.):	
Casing Stickup (feet):	3
Slug Volume (ft <sup>3</sup> ):	
Thickness of Aquifer (feet):	8.22



AQUIFER RECOVERY DATA							
Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)
0.07	13.153	0.297	13.764	1.238	13.782		
0.075	13.148	0.3147	13.768	1.3113	13.782		
0.08	13.358	0.3333	13.764	1.3897	13.782		
0.085	13.538	0.3532	13.768	1.473	13.782		
0.09	13.646	0.3742	13.764	1.5613	13.778		
0.095	13.702	0.3963	13.764	1.6547	13.782		
0.1	13.702	0.4198	13.768	1.753	13.782		
0.1058	13.729	0.4447	13.768	1.858	13.782		
0.112	13.729	0.4697	13.768	1.968	13.782		
0.1185	13.738	0.4963	13.768				
0.1255	13.738	0.5247	13.773				
0.1328	13.743	0.5547	13.773				
0.1407	13.743	0.5863	13.773				
0.149	13.75	0.6213	13.768				
0.1578	13.75	0.658	13.773				
0.1672	13.75	0.6963	13.773				
0.177	13.75	0.738	13.773				
0.1875	13.75	0.7813	13.778				
0.1985	13.759	0.828	13.773				
0.2102	13.755	0.8763	13.778				
0.2227	13.755	0.928	13.778				
0.2358	13.759	0.983	13.782				
0.2498	13.759	1.0413	13.778				
0.2647	13.759	1.103	13.787				
0.2803	13.764	1.168	13.782				

## Bower & Rice Method for Calculating Hydraulic Conductivity

Project Name: Wayland, MA

Project No.: 143.45

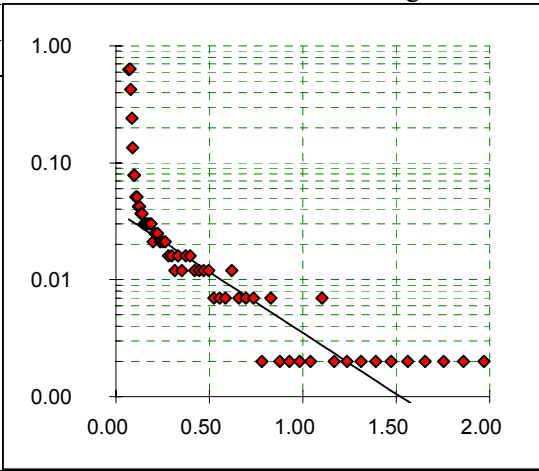
Client Name: Raytheon Systems

Identification: MW-40 Rising Head

User Name: JD/RB

Run Date: 6/9/1998

Riser Pipe Diameter:	0.166 feet
Intake Diameter:	0.75 feet
Intake Length:	11 feet
Saturated Column Length:	8.22 feet
Water Table Depth:	13.78 feet
Aquifer Thickness:	8.22 feet
Line Fit Starting No.:	8 Min 1 to
Line Fit Ending No.:	55 Max 59
Specify Output Units:	7 1 to 9
K(h):	9.00E-04 cm./sec.
Correlation Coefficient:	0.9296



Meas. #	Time minutes	Field Meas. feet	Drawdown/up feet	Line Fit To LN(Yt)	Regression On LN(Yt)
1)	0.07	13.15	0.63	-0.467	-3.419
2)	0.08	13.15	0.63	-0.459	-3.431
3)	0.08	13.36	0.42	-0.863	-3.443
4)	0.09	13.54	0.24	-1.419	-3.455
5)	0.09	13.65	0.13	-2.010	-3.467
6)	0.10	13.70	0.08	-2.551	-3.479
7)	0.10	13.70	0.08	-2.551	-3.491
8)	0.11	13.73	0.05	-2.976	-3.505
9)	0.11	13.73	0.05	-2.976	-3.520
10)	0.12	13.74	0.04	-3.170	-3.535
11)	0.13	13.74	0.04	-3.170	-3.552
12)	0.13	13.74	0.04	-3.297	-3.569
13)	0.14	13.74	0.04	-3.297	-3.588
14)	0.15	13.75	0.03	-3.507	-3.608
15)	0.16	13.75	0.03	-3.507	-3.630
16)	0.17	13.75	0.03	-3.507	-3.652
17)	0.18	13.75	0.03	-3.507	-3.676
18)	0.19	13.75	0.03	-3.507	-3.701
19)	0.20	13.76	0.02	-3.863	-3.727
20)	0.21	13.76	0.02	-3.689	-3.755
21)	0.22	13.76	0.02	-3.689	-3.785
22)	0.24	13.76	0.02	-3.863	-3.817
23)	0.25	13.76	0.02	-3.863	-3.850
24)	0.26	13.76	0.02	-3.863	-3.886
25)	0.28	13.76	0.02	-4.135	-3.924
26)	0.30	13.76	0.02	-4.135	-3.964
27)	0.31	13.77	0.01	-4.423	-4.006
28)	0.33	13.76	0.02	-4.135	-4.051
29)	0.35	13.77	0.01	-4.423	-4.099
30)	0.37	13.76	0.02	-4.135	-4.149
31)	0.40	13.76	0.02	-4.135	-4.202
32)	0.42	13.77	0.01	-4.423	-4.259
33)	0.44	13.77	0.01	-4.423	-4.319

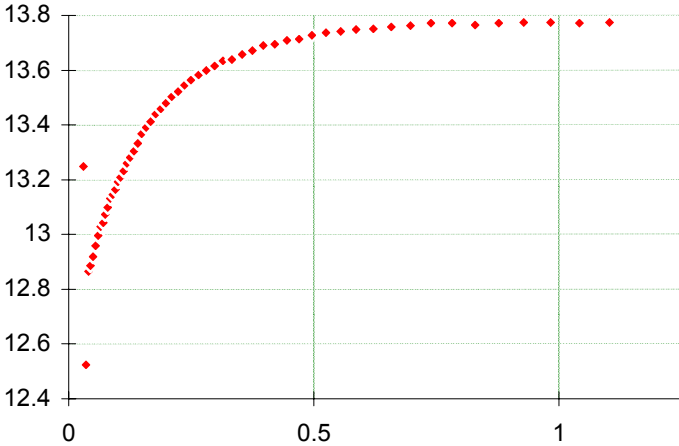




### SLUG TEST DATA ENTRY FORM

Client Name: Raytheon Systems      Well Number: MW-40S      Test Type: Rising Head  
 Project No.: 143.45      Topo. Elev.: \_\_\_\_\_      Weather: Sunny, clear, 70's  
 Project Name: Wayland, MA      Tested By: JD/RB      Date Started: 6/9/1998

BASIC TEST DATA	
Measurement Units (1-6):	2
Unconfined(1)/Confined(2):	1
Well Depth - TOC (feet):	30.00
Static W/L-Depth (ft.):	13.78
Riser Pipe Diameter (feet):	0.166
Initial Test Depth Value (ft.):	13.78
TOC Elevation (feet):	134.87
Intake/Soil Col. Diam. (feet):	0.75
Depth to Top of Pack (feet):	3
Intake/Soil Col. Length (ft.):	11
Saturat. Col. Thickness (ft.):	16.22
Casing Soil Length (if appl.):	
Casing Stickup (feet):	3
Slug Volume (ft3):	
Thickness of Aquifer (feet):	16.22

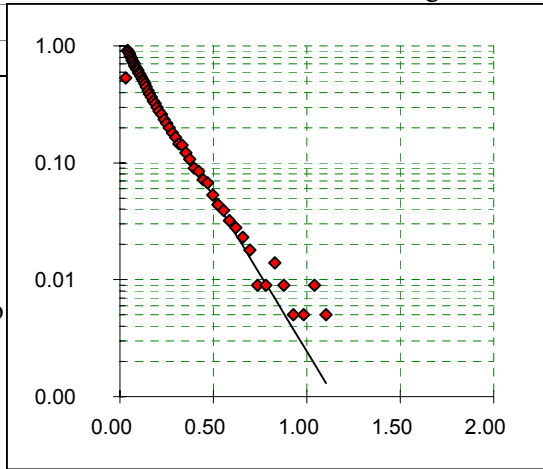


AQUIFER RECOVERY DATA							
Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)
0.025	11.817	0.177	13.441	0.738	13.771		
0.03	13.249	0.1875	13.459	0.7813	13.771		
0.035	12.525	0.1985	13.48	0.828	13.766		
0.04	12.864	0.2102	13.503	0.8763	13.771		
0.045	12.887	0.2227	13.522	0.928	13.775		
0.05	12.92	0.2358	13.545	0.983	13.775		
0.055	12.959	0.2498	13.563	1.0413	13.771		
0.06	12.996	0.2647	13.582	1.103	13.775		
0.065	13.028	0.2803	13.6				
0.07	13.042	0.297	13.616				
0.075	13.072	0.3147	13.635				
0.08	13.1	0.3333	13.639				
0.085	13.132	0.3532	13.658				
0.09	13.146	0.3742	13.672				
0.095	13.164	0.3963	13.69				
0.1	13.192	0.4198	13.695				
0.1058	13.208	0.4447	13.708				
0.112	13.231	0.4697	13.713				
0.1185	13.259	0.4963	13.727				
0.1255	13.282	0.5247	13.736				
0.1328	13.305	0.5547	13.741				
0.1407	13.333	0.5863	13.748				
0.149	13.367	0.6213	13.752				
0.1578	13.39	0.658	13.757				
0.1672	13.413	0.6963	13.762				

## Bouwer & Rice Method for Calculating Hydraulic Conductivity

Project Name: Wayland, MA Project No.: 143.45  
 Client Name: Raytheon Systems Identification: MW-40S Rising Head  
 User Name: JD/RB  
 Run Date: 6/9/1998

Riser Pipe Diameter: 0.166 feet  
 Intake Diameter: 0.75 feet  
 Intake Length: 11 feet  
 Saturated Column Length: 16.22 feet  
 Water Table Depth: 13.78 feet  
 Aquifer Thickness: 16.22 feet  
 Line Fit Starting No.: 5 Min 1 to  
 Line Fit Ending No.: 52 Max 58  
 Specify Output Units: 7 1 to 9  
 K(h): 2.69E-03 cm./sec.  
 Correlation Coefficient: 0.9982



Meas. #	Time minutes	Field Meas. feet	Drawdown/up feet	Line Fit To LN(Yt)	Regression On LN(Yt)
1)	0.03	11.82	1.96	0.674	-0.087
2)	0.03	13.25	0.53	-0.633	-0.117
3)	0.04	12.53	1.26	0.227	-0.148
4)	0.04	12.86	0.92	-0.088	-0.178
5)	0.05	12.89	0.89	-0.113	-0.208
6)	0.05	12.92	0.86	-0.151	-0.239
7)	0.06	12.96	0.82	-0.197	-0.269
8)	0.06	13.00	0.78	-0.243	-0.300
9)	0.07	13.03	0.75	-0.285	-0.330
10)	0.07	13.04	0.74	-0.304	-0.360
11)	0.08	13.07	0.71	-0.345	-0.391
12)	0.08	13.10	0.68	-0.386	-0.421
13)	0.09	13.13	0.65	-0.434	-0.452
14)	0.09	13.15	0.63	-0.456	-0.482
15)	0.10	13.16	0.62	-0.485	-0.513
16)	0.10	13.19	0.59	-0.531	-0.543
17)	0.11	13.21	0.57	-0.559	-0.578
18)	0.11	13.23	0.55	-0.600	-0.616
19)	0.12	13.26	0.52	-0.652	-0.655
20)	0.13	13.28	0.50	-0.697	-0.698
21)	0.13	13.31	0.48	-0.744	-0.742
22)	0.14	13.33	0.45	-0.805	-0.791
23)	0.15	13.37	0.41	-0.884	-0.841
24)	0.16	13.39	0.39	-0.942	-0.895
25)	0.17	13.41	0.37	-1.002	-0.952
26)	0.18	13.44	0.34	-1.082	-1.011
27)	0.19	13.46	0.32	-1.136	-1.075
28)	0.20	13.48	0.30	-1.204	-1.142
29)	0.21	13.50	0.28	-1.284	-1.213
30)	0.22	13.52	0.26	-1.355	-1.289
31)	0.24	13.55	0.23	-1.448	-1.369
32)	0.25	13.56	0.22	-1.528	-1.454
33)	0.26	13.58	0.20	-1.619	-1.545







## Bouwer & Rice Method for Calculating Hydraulic Conductivity

Project Name: Wayland, MA

Project No.: 143.45

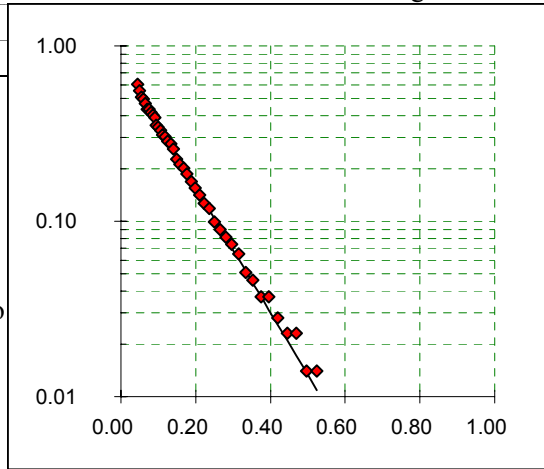
Client Name: Raytheon Systems

Identification: MW-41 Rising Head

User Name: JD/RB

Run Date: 6/9/1998

Riser Pipe Diameter:	0.166 feet
Intake Diameter:	0.75 feet
Intake Length:	11 feet
Saturated Column Length:	4.23 feet
Water Table Depth:	12.77 feet
Aquifer Thickness:	4.23 feet
Line Fit Starting No.:	1 Min 1 to
Line Fit Ending No.:	35 Max 41
Specify Output Units:	7 1 to 9
K(h):	2.49E-03 cm./sec.
Correlation Coefficient:	0.9992



Meas. #	Time minutes	Field Meas. feet	Drawdown/up feet	Line Fit To LN(Yt)	Regression On LN(Yt)
1)	0.05	12.17	0.60	-0.507	-0.592
2)	0.05	12.21	0.56	-0.587	-0.633
3)	0.06	12.26	0.51	-0.669	-0.673
4)	0.06	12.27	0.50	-0.697	-0.714
5)	0.07	12.30	0.47	-0.753	-0.755
6)	0.07	12.34	0.43	-0.835	-0.796
7)	0.08	12.34	0.43	-0.835	-0.837
8)	0.08	12.35	0.42	-0.872	-0.878
9)	0.09	12.37	0.40	-0.906	-0.919
10)	0.09	12.38	0.39	-0.942	-0.960
11)	0.10	12.42	0.35	-1.041	-1.001
12)	0.10	12.43	0.34	-1.067	-1.042
13)	0.11	12.44	0.33	-1.109	-1.089
14)	0.11	12.46	0.31	-1.168	-1.140
15)	0.12	12.47	0.30	-1.191	-1.193
16)	0.13	12.48	0.29	-1.252	-1.251
17)	0.13	12.49	0.28	-1.284	-1.310
18)	0.14	12.51	0.26	-1.355	-1.375
19)	0.15	12.54	0.23	-1.487	-1.443
20)	0.16	12.56	0.21	-1.551	-1.515
21)	0.17	12.57	0.20	-1.604	-1.592
22)	0.18	12.58	0.19	-1.677	-1.672
23)	0.19	12.60	0.17	-1.784	-1.758
24)	0.20	12.62	0.15	-1.864	-1.848
25)	0.21	12.63	0.14	-1.959	-1.944
26)	0.22	12.64	0.13	-2.064	-2.047
27)	0.24	12.65	0.12	-2.137	-2.154
28)	0.25	12.67	0.10	-2.313	-2.268
29)	0.26	12.68	0.09	-2.408	-2.390
30)	0.28	12.69	0.08	-2.513	-2.518
31)	0.30	12.70	0.07	-2.604	-2.655
32)	0.31	12.71	0.06	-2.733	-2.800
33)	0.33	12.72	0.05	-2.976	-2.952

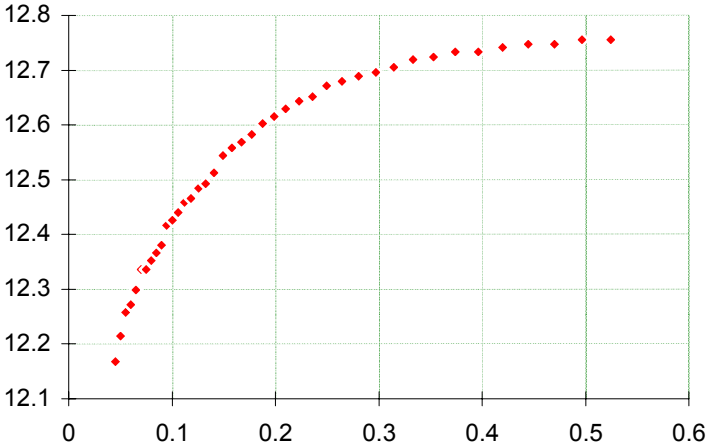




### SLUG TEST DATA ENTRY FORM

Client Name: Raytheon Systems      Well Number: MW-41      Test Type: Rising Head  
 Project No.: 143.45      Topo. Elev.: \_\_\_\_\_      Weather: Sunny, clear, 70's  
 Project Name: Wayland, MA      Tested By: JD/RB      Date Started: 6/9/1998

BASIC TEST DATA	
Measurement Units (1-6):	2
Unconfined(1)/Confined(2):	2
Well Depth - TOC (feet):	17.00
Static W/L-Depth (ft.):	12.77
Riser Pipe Diameter (feet):	0.166
Initial Test Depth Value (ft.):	12.77
TOC Elevation (feet):	127.43
Intake/Soil Col. Diam. (feet):	0.75
Depth to Top of Pack (feet):	3
Intake/Soil Col. Length (ft.):	11
Saturat. Col. Thickness (ft.):	4.23
Casing Soil Length (if appl.):	
Casing Stickup (feet):	3
Slug Volume (ft3):	
Thickness of Aquifer (feet):	4.23



AQUIFER RECOVERY DATA							
Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)
0.045	12.168	0.2227	12.643				
0.05	12.214	0.2358	12.652				
0.055	12.258	0.2498	12.671				
0.06	12.272	0.2647	12.68				
0.065	12.299	0.2803	12.689				
0.07	12.336	0.297	12.696				
0.075	12.336	0.3147	12.705				
0.08	12.352	0.3333	12.719				
0.085	12.366	0.3532	12.724				
0.09	12.38	0.3742	12.733				
0.095	12.417	0.3963	12.733				
0.1	12.426	0.4198	12.742				
0.1058	12.44	0.4447	12.747				
0.112	12.459	0.4697	12.747				
0.1185	12.466	0.4963	12.756				
0.1255	12.484	0.5247	12.756				
0.1328	12.493						
0.1407	12.512						
0.149	12.544						
0.1578	12.558						
0.1672	12.569						
0.177	12.583						
0.1875	12.602						
0.1985	12.615						
0.2102	12.629						

**HALEY & ALDRICH, INC**

**RISING HEAD TEST SUMMARY**

SITE NAME Former Raytheon Plant  
 SITE LOCATION Wayland, MA  
 FILE NUMBER 12069-041

Monitoring Well ID: ha-101  
 Test Date: 01/09/98  
 H&A Rep.: J. Bode

**Rising Head Permeability Calculation: Bouwer-Rice Method**

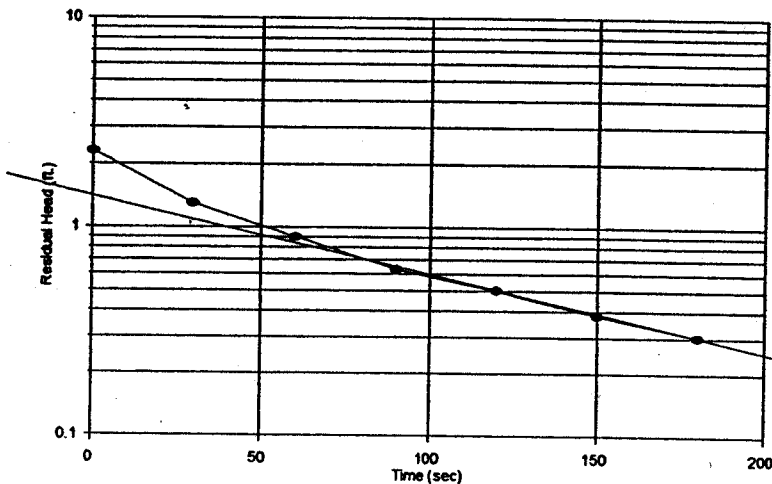
Well Depth, in ft.: 19  
 Depth to Static (GS) in ft.: 8.2  
 Well Depth-Static (Lw), in ft.: 10.8  
 Test Section Radius (rw), in ft.: 0.33  
 Casing Radius (rc), in ft.: 0.067  
 Test Length Section (Le), in ft.: 10.8  
     A: 2.593  
     B: 0.424  
     C: 2.259  
     Le/rw: 32.727  
 Saturated Thickness (H), in ft.: 30 (assumed)

Elapsed Time (sec)	Depth to Water (ft.)	Residual Head (ft.)
0	10.5	2.3
30	9.5	1.3
60	9.1	0.9
90	8.83	0.63
120	8.7	0.5
150	8.58	0.38
180	8.5	0.3
210	8.2	
240	8.2	
270	8.2	

For  $Lw < H - \ln(Rc/rw)$ : 2.236  
 For  $Lw = H - \ln(Rc/rw)$ : 2.60170473  
 Yo, in ft.: 1.3  
 Yt, in ft.: 0.6  
 t, in min.: 1.67

(Lw < H)                      (Lw = H)

Kh (cm/sec) = 1.09E-04  
 Kh (ft/min) = 2.15E-04  
 Kh (ft/day) = 3.10E-01



**HALEY & ALDRICH, INC**

**RISING HEAD TEST SUMMARY**

SITE NAME Former Raytheon Plant  
 SITE LOCATION Wayland, MA  
 FILE NUMBER 12069-041

Monitoring Well ID: ha-102  
 Test Date: 01/09/98  
 H&A Rep.: J. Bode

**Rising Head Permeability Calculation: Bouwer-Rice Method**

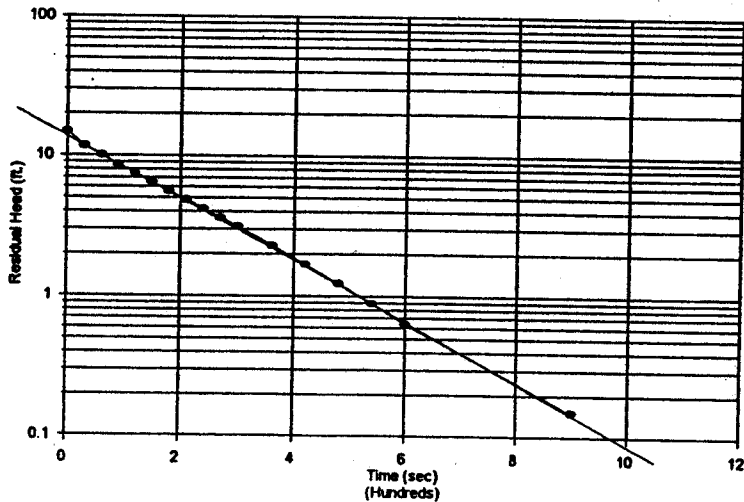
Well Depth, in ft.: 15  
 Depth to Static (GS) in ft.: 14.79  
 Well Depth-Static (Lw), in ft.: 0.21  
 Test Section Radius (rw), in ft.: 0.167  
 Casing Radius (rc), in ft.: 0.167  
 Test Length Section (Le), in ft.: 2  
 A: 1.978  
 B: 0.294  
 C: 1.325  
 Le/rw: 11.976  
 Saturated Thickness (H), in ft.: 30 (assumed)

For Lw < H - ln(Re/rw): 0.196  
 For Lw = H - ln(Re/rw): 0.20359386  
 Yo, in ft.: 13  
 Yt, in ft.: 5  
 t, in min.: 3.33

(Lw < H)                      (Lw = H)

Kh (cm/sec) = 2.00E-04  
 Kh (ft/min) = 3.93E-04  
 Kh (ft/day) = 5.66E-01

Elapsed Time (sec)	Depth to Water (ft.)	Residual Head (ft.)
0	0	14.79
30	3.1	11.69
60	4.73	10.06
90	6.14	8.65
120	7.3	7.49
150	8.31	6.48
180	9.2	5.59
210	9.96	4.83
240	10.61	4.18
270	11.2	3.59
300	11.67	3.12
360	12.5	2.29
420	13.1	1.69
480	13.56	1.23
540	13.9	0.89
600	14.15	0.64
900	14.64	0.15
1200	14.79	



SITE NAME  
 SITE LOCATION  
 FILE NUMBER

Monitoring Well ID: HA-103  
 Test Date: 9jan98  
 H&A Rep.: J. Bode

Rising Head Permeability Calculation: Bouwer-Rice Method

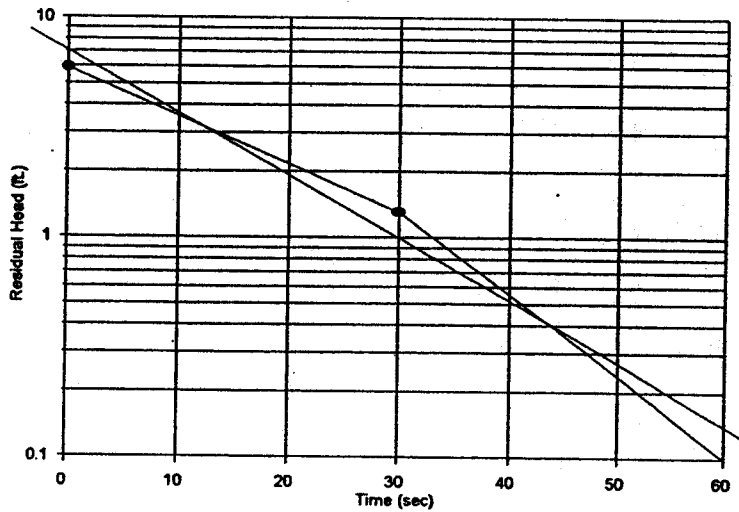
Well Depth, in ft.: 25  
 Depth to Static (GS) in ft.: 15.6  
 Well Depth-Static (Lw), in ft.: 9.4  
 Test Section Radius (rw), in ft.: 0.083  
 Casing Radius (rc), in ft.: 0.083  
 Test Length Section (Le), in ft.: 9.4  
     A: 4.606  
     B: 0.811  
     C: 5.408  
     Le/rw: 113.253  
 Saturated Thickness (H), in ft.: 30

Elapsed Time (sec)	Depth to Water (ft.)	Residual Head (ft.)
0	21.5	5.9
30	16.9	1.3
60	15.7	0.1
90	15.6	

For  $L_w < H - \ln(R_e/r_w)$ : 3.198  
 For  $L_w = H - \ln(R_e/r_w)$ : 3.56729843  
 Yo, in ft.: 7  
 Yt, in ft.: 0.38  
 t, in min.: 0.67

(Lw < H)                      (Lw = H)

Kh (cm/sec) = 2.59E-03  
 Kh (ft/min) = 5.10E-03  
 Kh (ft/day) = 7.34E+00



**HALEY & ALDRICH, INC**

**RISING HEAD TEST SUMMARY**

SITE NAME	Former Raytheon Plant	Monitoring Well ID:	HA-104
SITE LOCATION	Wayland, MA	Test Date:	9jan98
FILE NUMBER	12069-041	H&A Rep.:	J. Bode

**Rising Head Permeability Calculation: Bouwer-Rice Method**

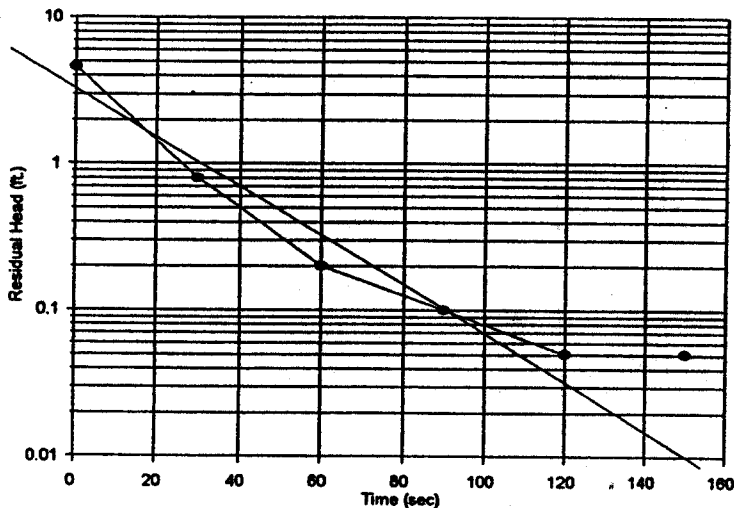
Well Depth, in ft.:	28
Depth to Static (GS) in ft.:	18.4
Well Depth-Static (Lw), in ft.:	9.6
Test Section Radius (rw), in ft.:	0.083
Casing Radius (rc), in ft.:	0.083
Test Length Section (Le), in ft.:	9.7
A:	4.682
B:	0.826
C:	5.531
Le/rw:	116.867
Saturated Thickness (H), in ft.:	30

Elapsed Time (sec)	Depth to Water (ft.)	Residual Head (ft.)
0	23	4.6
30	19.2	0.8
60	18.6	0.2
90	18.5	0.1
120	18.45	0.05
150	18.45	0.05
180	18.4	

For  $L_w < H - \ln(Rc/rw)$ : 3.221  
 For  $L_w = H - \ln(Rc/rw)$ : 3.58583986  
 $Y_o$ , in ft.: 3  
 $Y_t$ , in ft.: 0.06  
 $t$ , in min.: 1.67

(Lw < H)                      (Lw = H)

Kh (cm/sec) = 1.36E-03  
 Kh (ft/min) = 2.68E-03  
 Kh (ft/day) = 3.86E+00





SITE NAME Former Raytheon Plant  
 SITE LOCATION Wayland, MA  
 FILE NUMBER 12069-041

Monitoring Well ID: mw-10  
 Test Date: 01/08/98  
 H&A Rep.: J. Bode

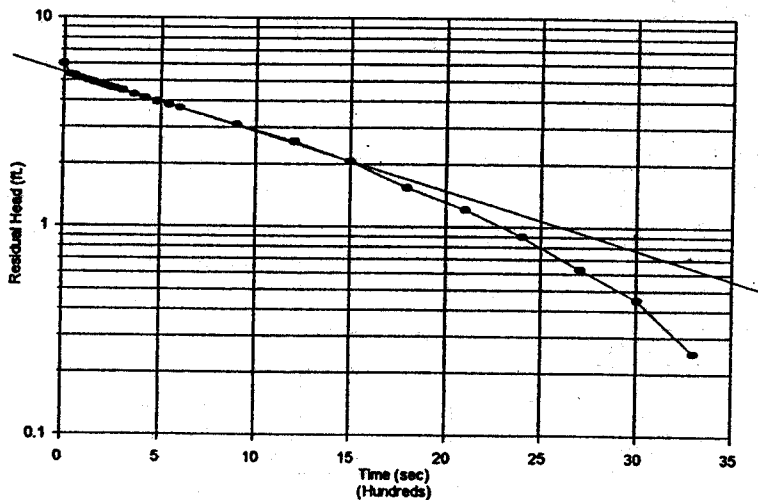
Rising Head Permeability Calculation: Bouwer-Rice Method

Well Depth, in ft.: 18  
 Depth to Static (GS) in ft.: 11.5  
 Well Depth-Static (Lw), in ft.: 6.5  
 Test Section Radius (rw), in ft.: 0.33 (assumed)  
 Casing Radius (rc), in ft.: 0.083  
 Test Length Section (Le), in ft.: 6.5  
 A: 2.212  
 B: 0.344  
 C: 1.678  
 Le/rw: 19.697  
 Saturated Thickness (H), in ft.: 30 (assumed)  
 For Lw < H - ln(Re/rw): 1.799  
 For Lw = H - ln(Re/rw): 2.20133079  
 Yo, in ft.: 5.5  
 Yt, in ft.: 4  
 t, in min.: 8.3

(Lw < H) (Lw = H)

Kh (cm/sec) = 1.86E-05  
 Kh (ft/min) = 3.66E-05  
 Kh (ft/day) = 5.27E-02

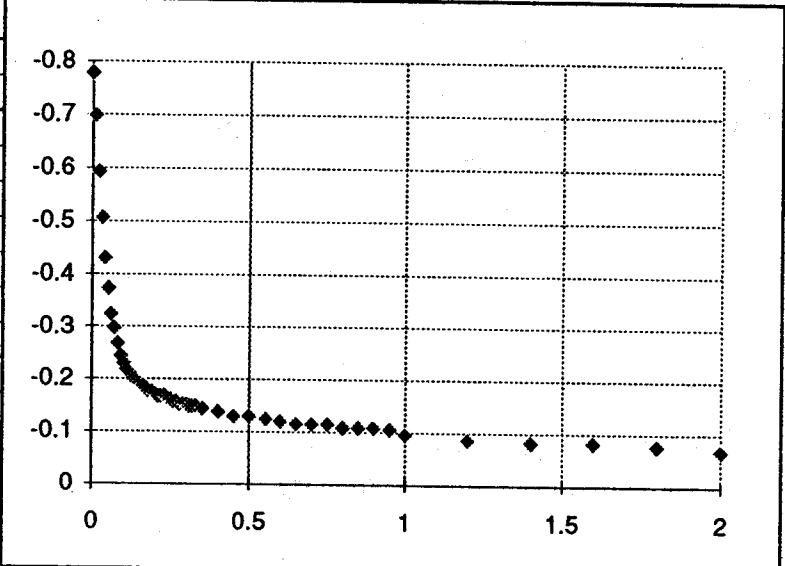
Elapsed Time (sec)	Depth to Water (ft.)	Residual Head (ft.)
0	17.5	6
30	16.82	5.32
60	16.72	5.22
90	16.6	5.1
120	16.5	5
150	16.4	4.9
180	16.32	4.82
210	16.24	4.74
240	16.14	4.64
270	16.05	4.55
300	15.97	4.47
360	15.78	4.28
420	15.61	4.11
480	15.47	3.97
540	15.32	3.82
600	15.2	3.7
900	14.58	3.08
1200	14.05	2.55
1500	13.55	2.05
1800	13.04	1.54
2100	12.71	1.21
2400	12.4	0.9
2700	12.13	0.63
3000	11.95	0.45
3300	11.75	0.25



## SLUG TEST DATA ENTRY FORM

Client Name: Raytheon      Well Number: MW-13      Test Type: Rising Head  
 Project No.: 143.4      Topo. Elev.: \_\_\_\_\_      Weather: Snowing  
 Project Name: Raytheon, Wayland      Tested By: JRD/CAF      Date Started: 3/6/96

BASIC TEST DATA	
Measurement Units (1-6):	2
Unconfined(1)/Confined(2):	1
Well Depth - TOC (feet):	22.66
Static W/L-Depth (ft.):	15.92
Riser Pipe Diameter (feet):	0.33
Initial Test Depth Value (ft.):	0.778
TOC Elevation (feet):	
Intake/Soil Col. Diam. (feet):	0.5
Depth to Top of Pack (feet):	2
Intake/Soil Col. Length (ft.):	11
Saturat. Col. Thickness (ft.):	6.74
Casing Soil Length (if appl.):	
Casing Stickup (feet):	
Slug Volume (ft3):	
Thickness of Aquifer (feet):	20



AQUIFER RECOVERY DATA							
Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)	Time (min)	Depth (ft.)
0	-0.778	0.25	-0.162	1.6	-0.081		
0.01	-0.697	0.26	-0.157	1.8	-0.076		
0.02	-0.592	0.27	-0.157	2	-0.066		
0.03	-0.506	0.28	-0.152				
0.04	-0.429	0.29	-0.152				
0.05	-0.372	0.3	-0.152				
0.06	-0.324	0.31	-0.148				
0.07	-0.296	0.32	-0.148				
0.08	-0.267	0.33	-0.148				
0.09	-0.243	0.35	-0.143				
0.1	-0.229	0.4	-0.138				
0.11	-0.219	0.45	-0.128				
0.12	-0.21	0.5	-0.128				
0.13	-0.2	0.55	-0.124				
0.14	-0.195	0.6	-0.119				
0.15	-0.191	0.65	-0.114				
0.16	-0.186	0.7	-0.114				
0.17	-0.181	0.75	-0.114				
0.18	-0.176	0.8	-0.109				
0.19	-0.176	0.85	-0.109				
0.2	-0.171	0.9	-0.109				
0.21	-0.167	0.95	-0.105				
0.22	-0.167	1	-0.095				
0.23	-0.167	1.2	-0.085				
0.24	-0.162	1.4	-0.081				

## Bower & Rice Method for Calculating Hydraulic Conductivity

Project Name: Raytheon, Wayland

Project No.: 143.4

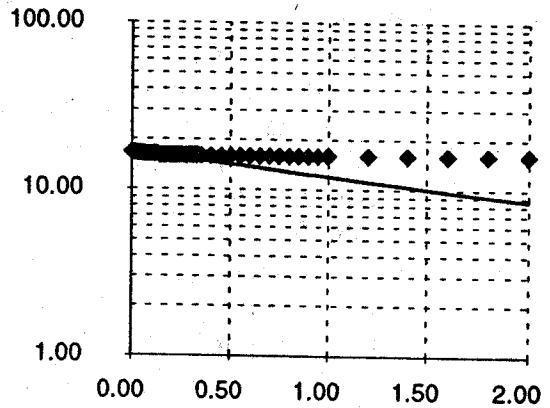
Client Name: Raytheon

Identification: MW-13

User Name: JRD/CAF

Run Date:

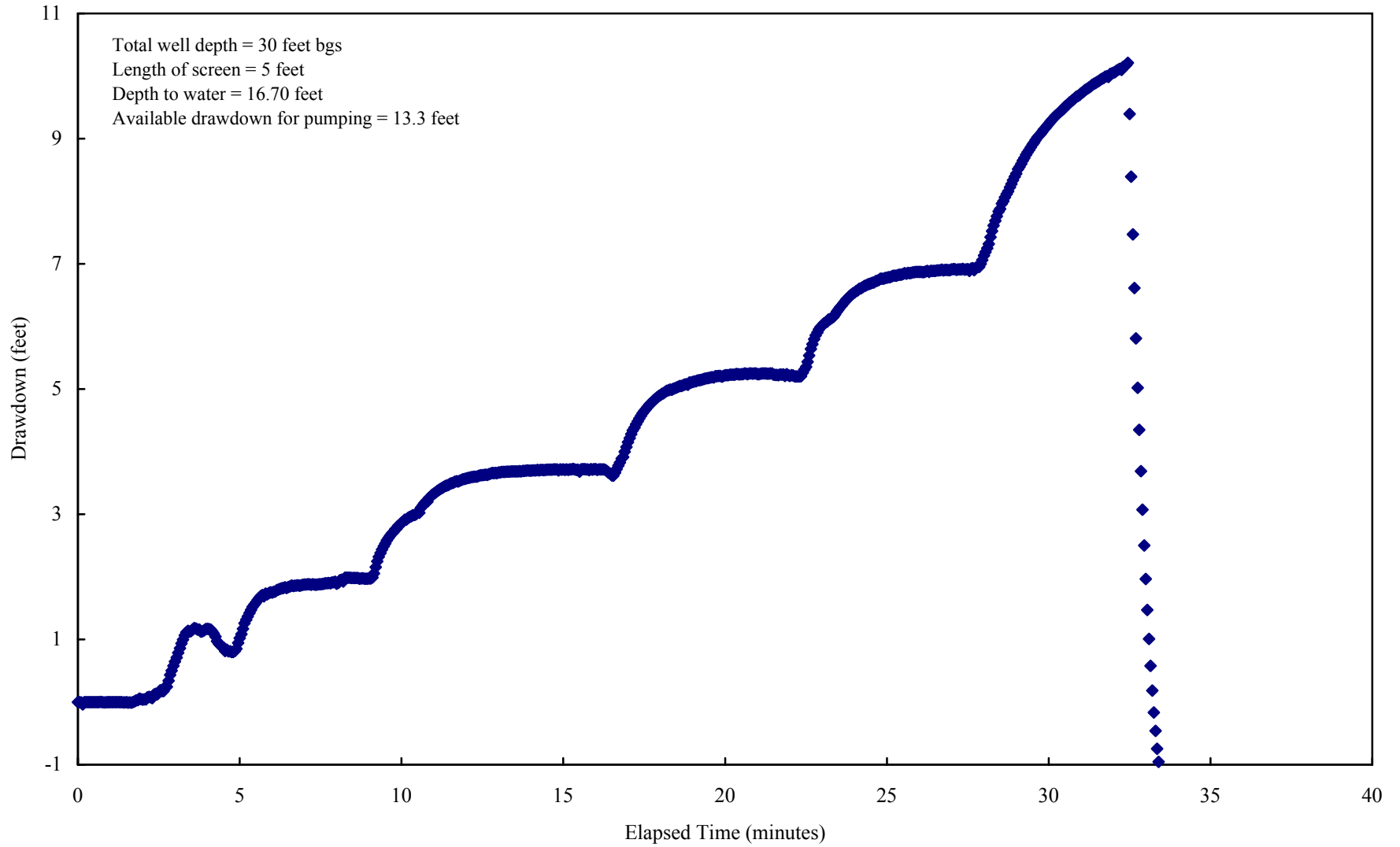
Riser Pipe Diameter:	0.33 feet
Intake Diameter:	0.5 feet
Intake Length:	11 feet
Saturated Column Length:	6.74 feet
Water Table Depth:	15.92 feet
Aquifer Thickness:	20 feet
Line Fit Starting No.:	1 Min 1 to
Line Fit Ending No.:	11 Max 53
Specify Output Units:	7 1 to 9
K(h):	4.82E-04 cm./sec.
Correlation Coefficient:	0.9656



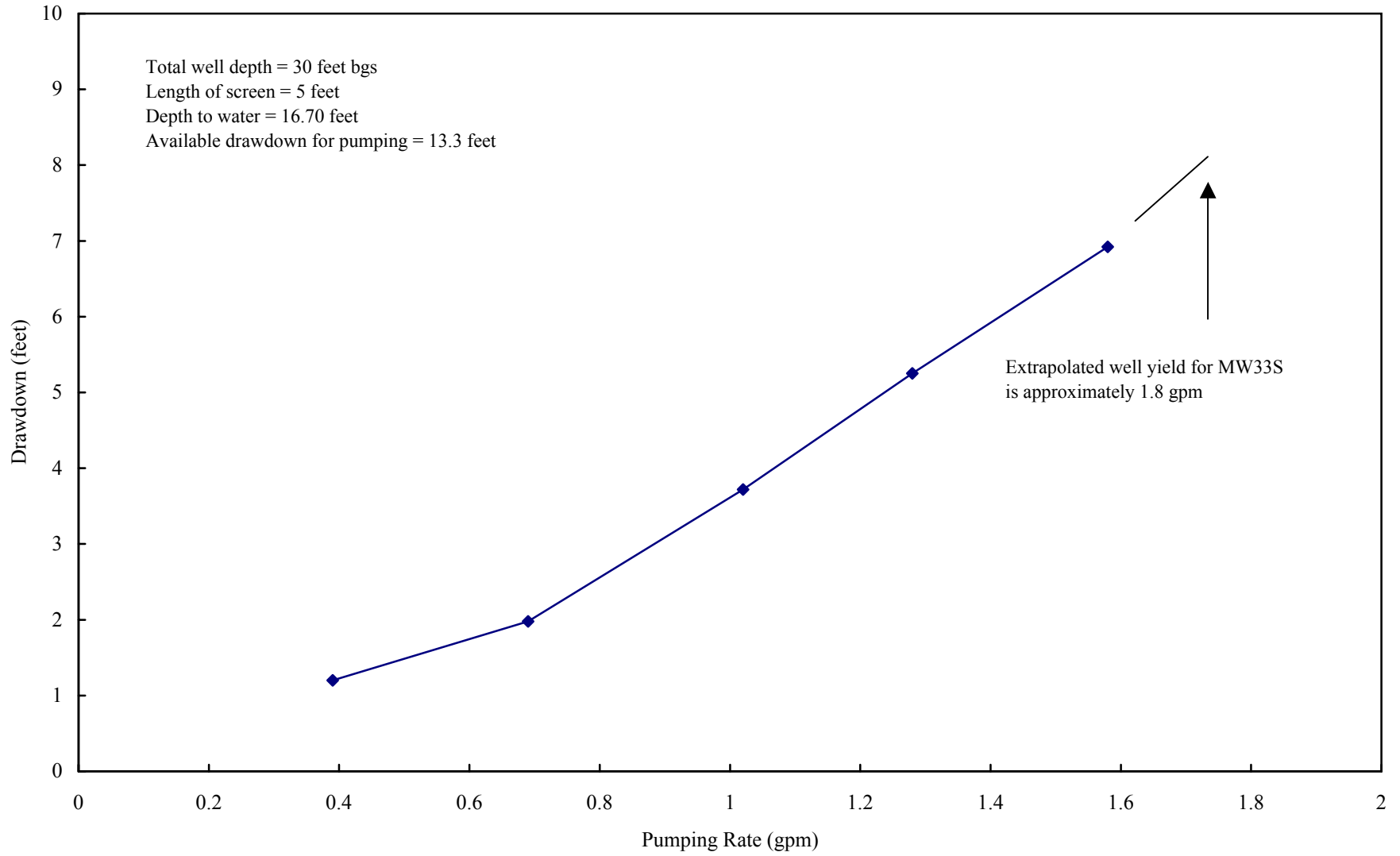
Meas. #	Time minutes	Field Meas. feet	Drawdown/up feet	Line Fit To LN(Yt)	Regression On LN(Yt)
1)	0.00	-0.78	16.70	2.815	2.811
2)	0.01	-0.70	16.62	2.810	2.808
3)	0.02	-0.59	16.51	2.804	2.804
4)	0.03	-0.51	16.43	2.799	2.801
5)	0.04	-0.43	16.35	2.794	2.798
6)	0.05	-0.37	16.29	2.791	2.794
7)	0.06	-0.32	16.24	2.788	2.791
8)	0.07	-0.30	16.22	2.786	2.787
9)	0.08	-0.27	16.19	2.784	2.784
10)	0.09	-0.24	16.16	2.783	2.781
11)	0.10	-0.23	16.15	2.782	2.777
12)	0.11	-0.22	16.14	2.781	2.774
13)	0.12	-0.21	16.13	2.781	2.771
14)	0.13	-0.20	16.12	2.780	2.767
15)	0.14	-0.20	16.12	2.780	2.764
16)	0.15	-0.19	16.11	2.780	2.761
17)	0.16	-0.19	16.11	2.779	2.757
18)	0.17	-0.18	16.10	2.779	2.754
19)	0.18	-0.18	16.10	2.779	2.750
20)	0.19	-0.18	16.10	2.779	2.747
21)	0.20	-0.17	16.09	2.778	2.744
22)	0.21	-0.17	16.09	2.778	2.740
23)	0.22	-0.17	16.09	2.778	2.737
24)	0.23	-0.17	16.09	2.778	2.734
25)	0.24	-0.16	16.08	2.778	2.730
26)	0.25	-0.16	16.08	2.778	2.727
27)	0.26	-0.16	16.08	2.777	2.724
28)	0.27	-0.16	16.08	2.777	2.720
29)	0.28	-0.15	16.07	2.777	2.717
30)	0.29	-0.15	16.07	2.777	2.714
31)	0.30	-0.15	16.07	2.777	2.710
32)	0.31	-0.15	16.07	2.777	2.707



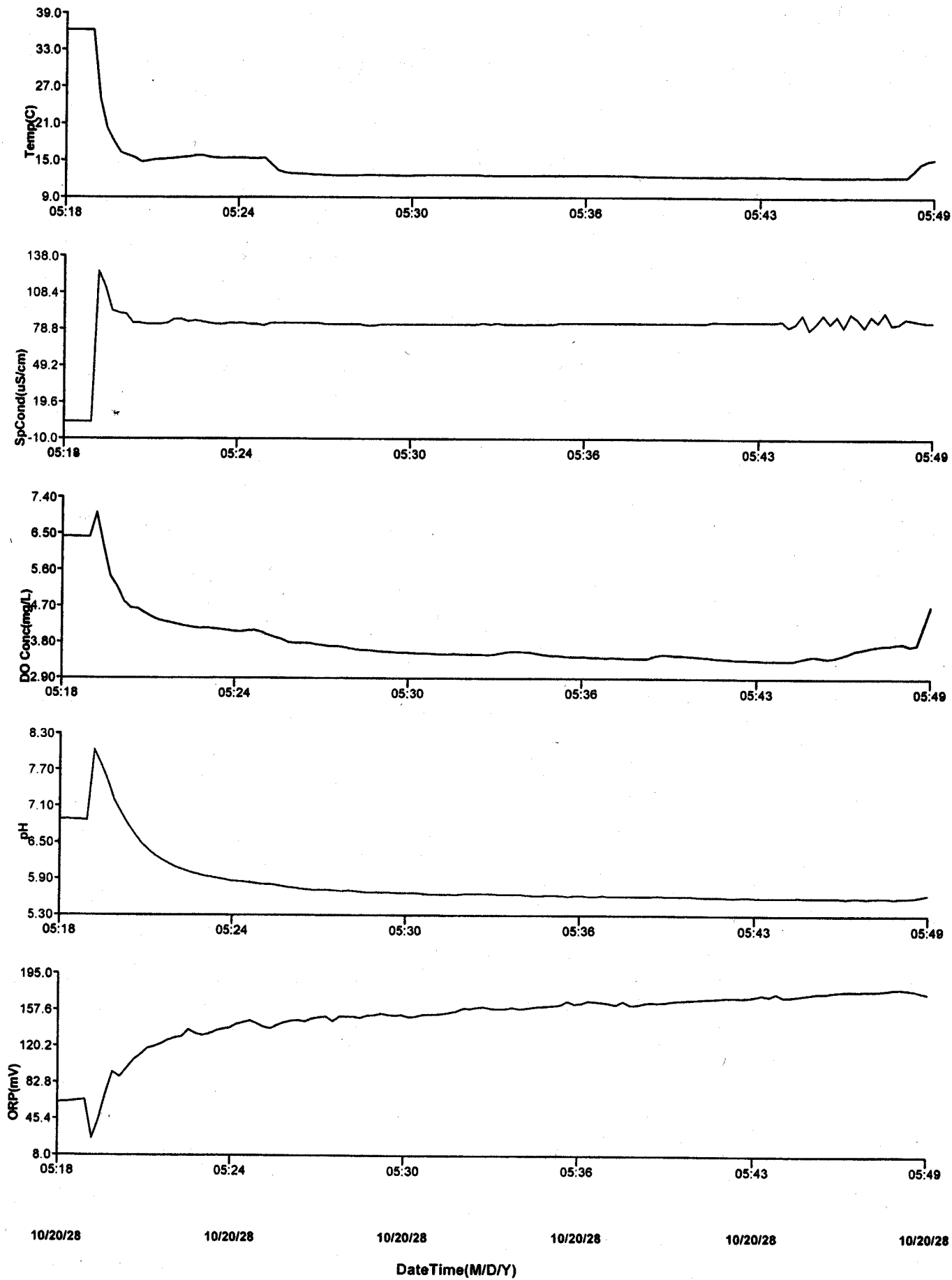
### MW-33S Step Drawdown Test



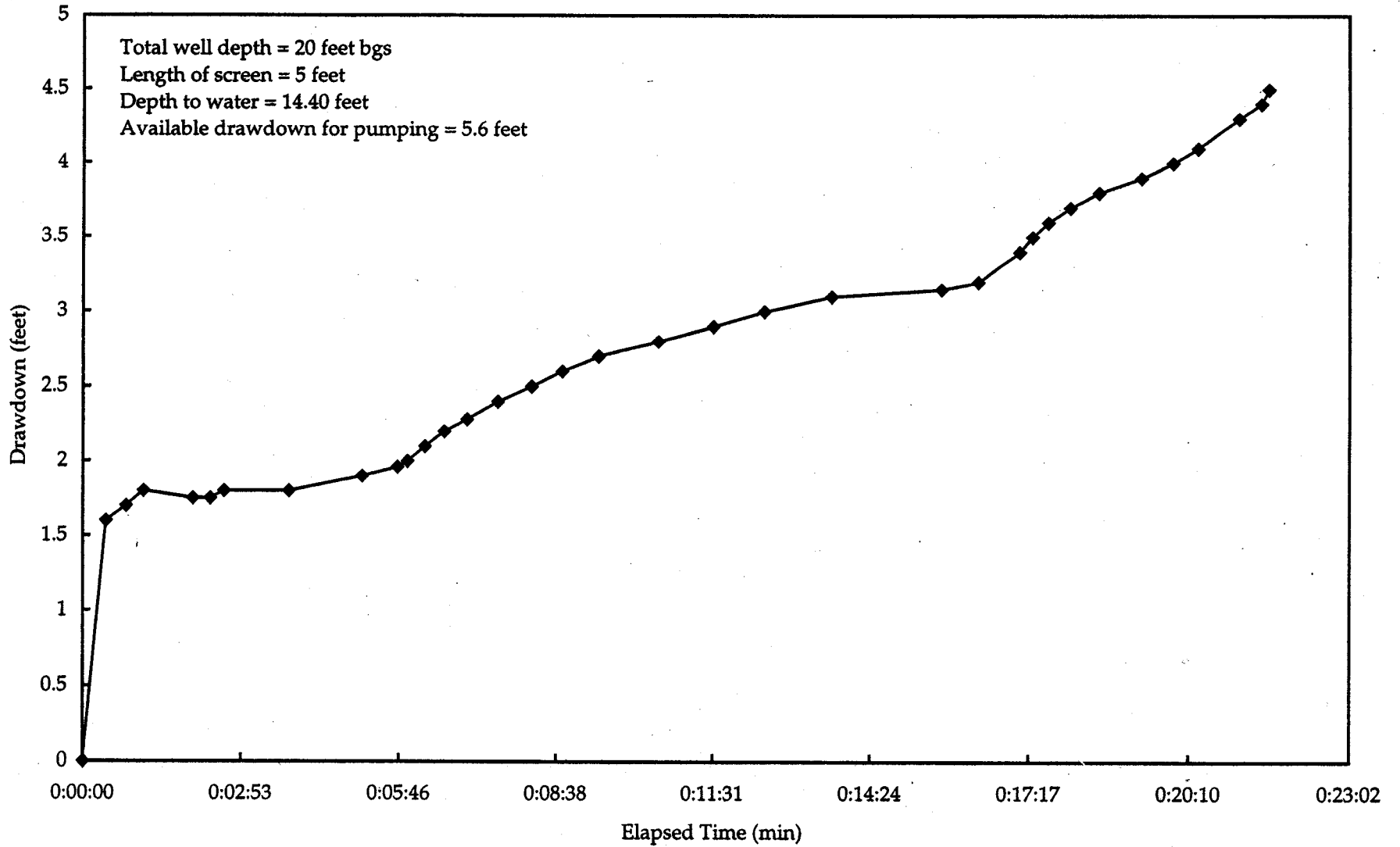
### Wayland - MW33S Well Yield Data



# Raytheon Wayland MW-33S Field Parameters from Step Drawdown Test

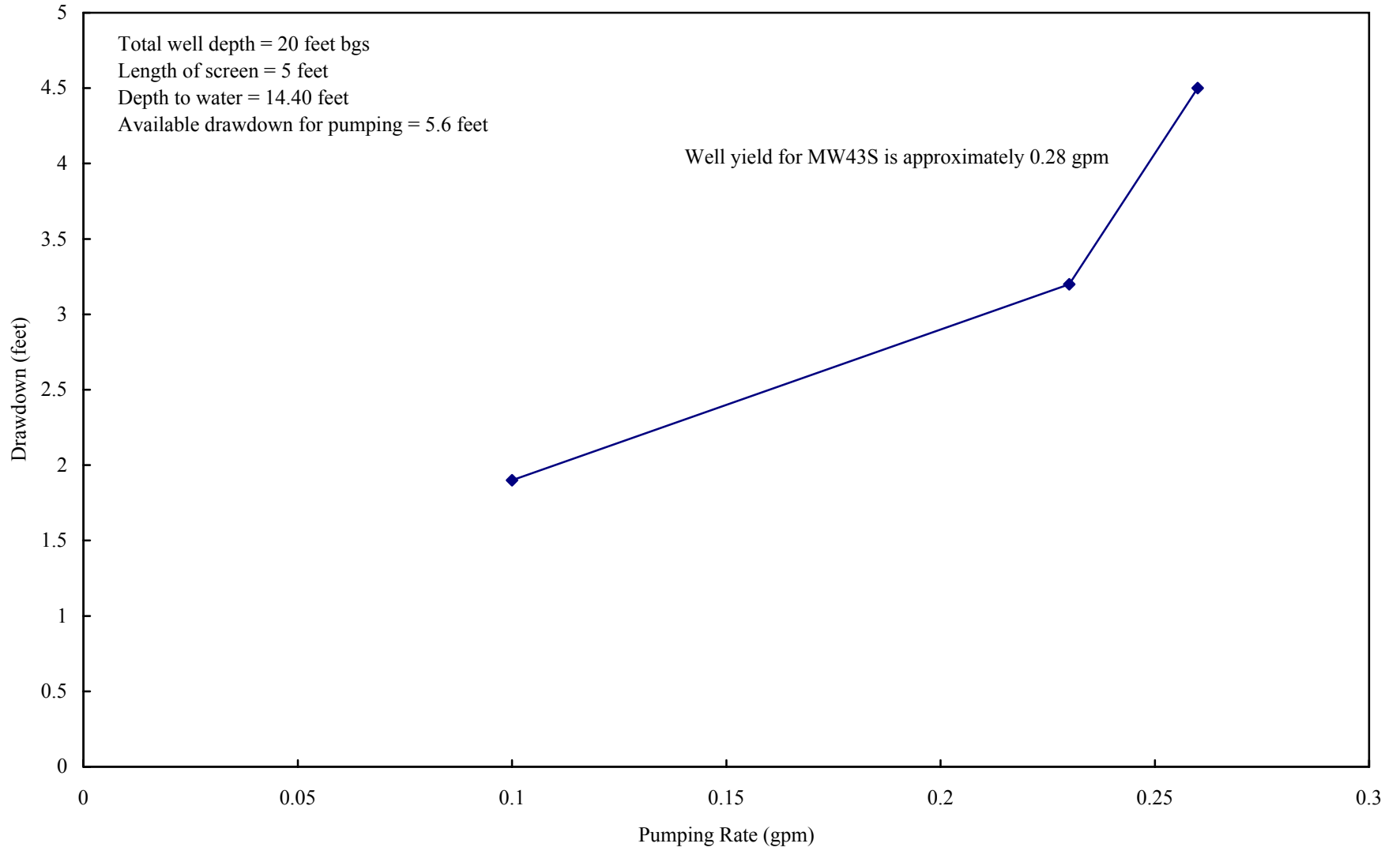


### MW43S Step Drawdown Data

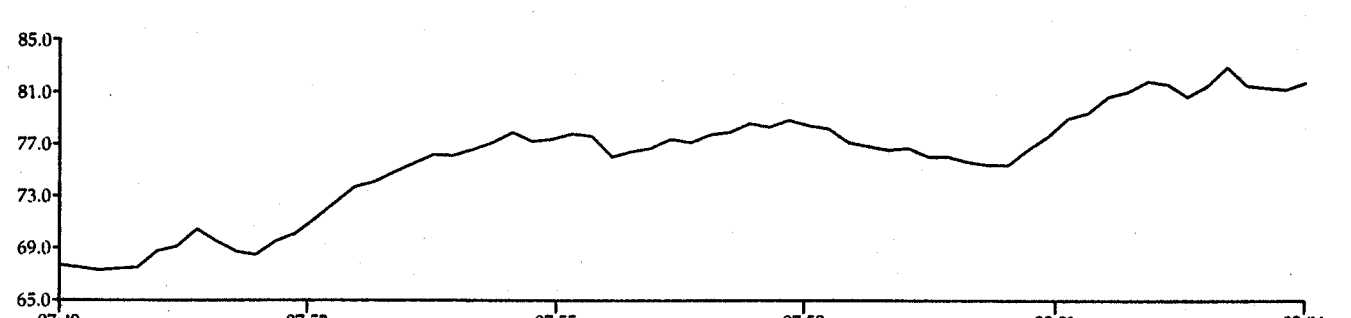
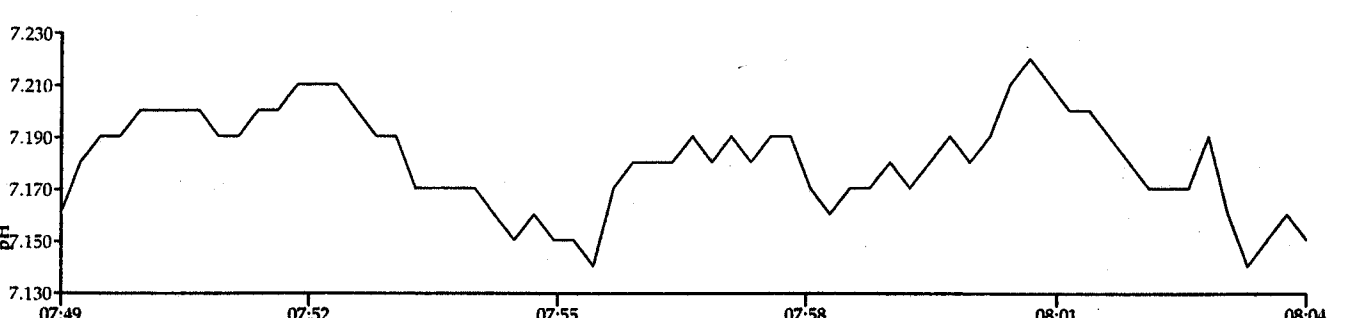
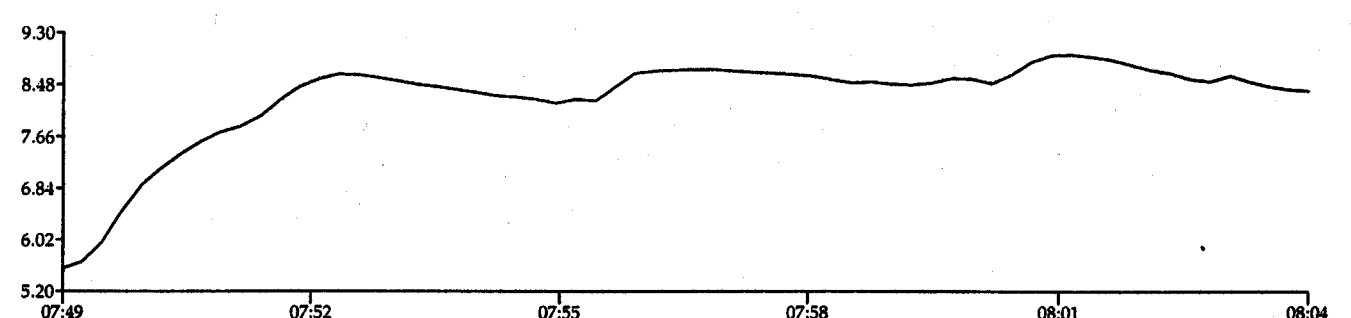
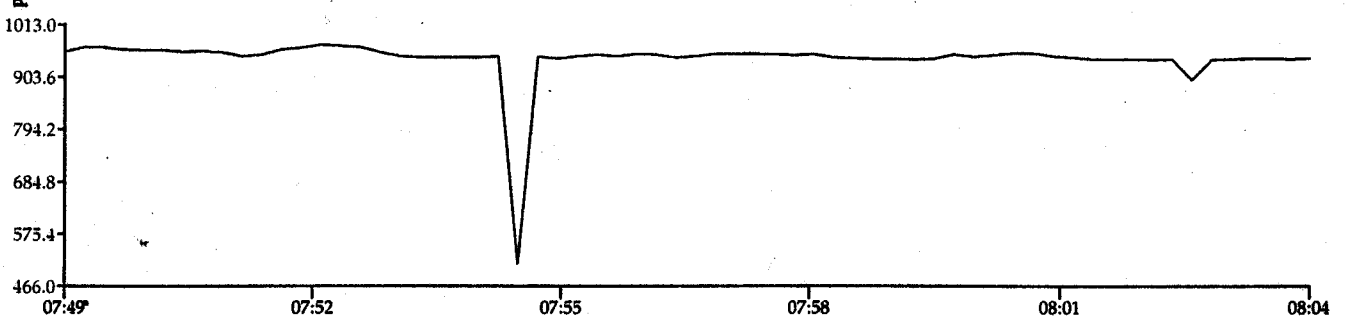
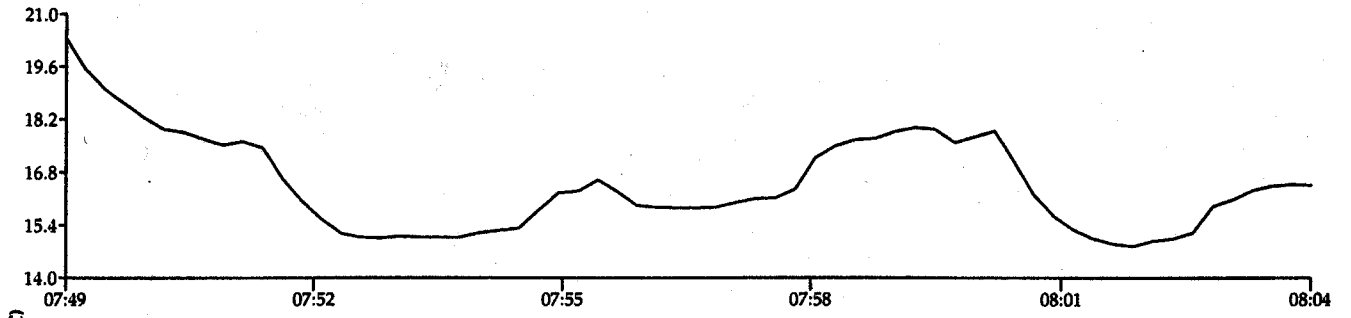




### Wayland - MW43S Well Yield Data



# Raytheon Wayland MW-43S Field Parameters during Step Drawdown

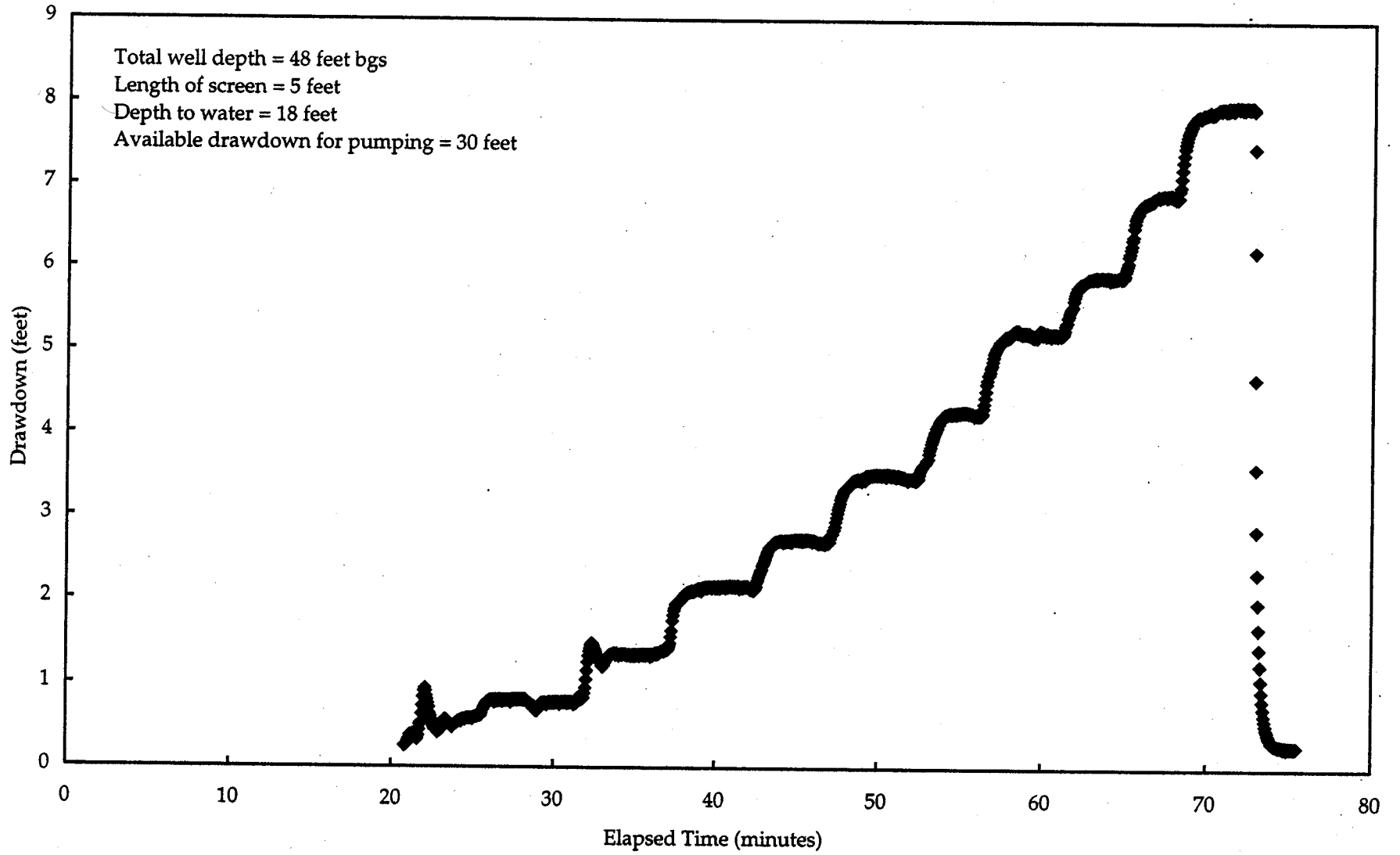


(V)

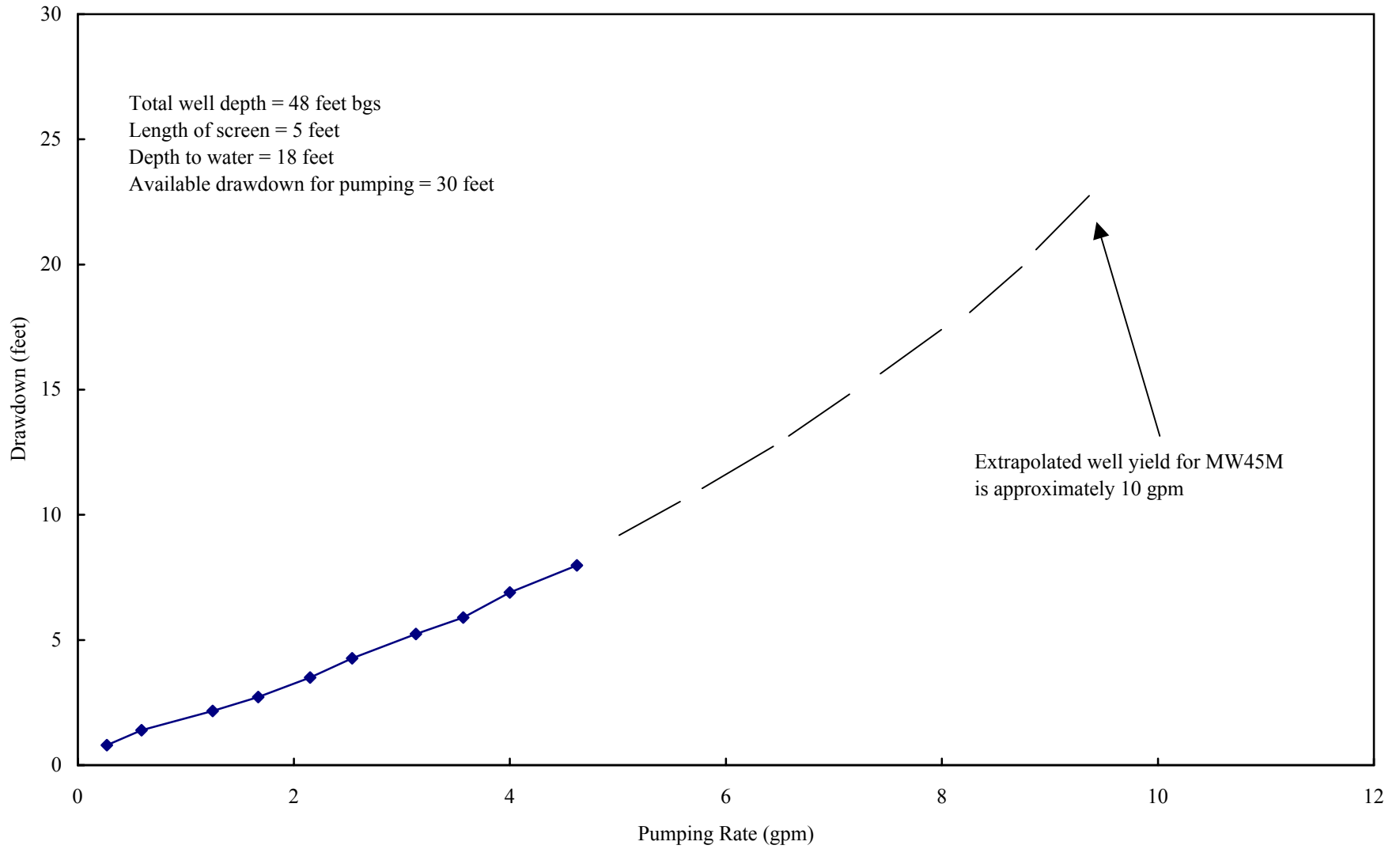
20/10/28      20/10/28      20/10/28      20/10/28      20/10/28

(D/M/Y)

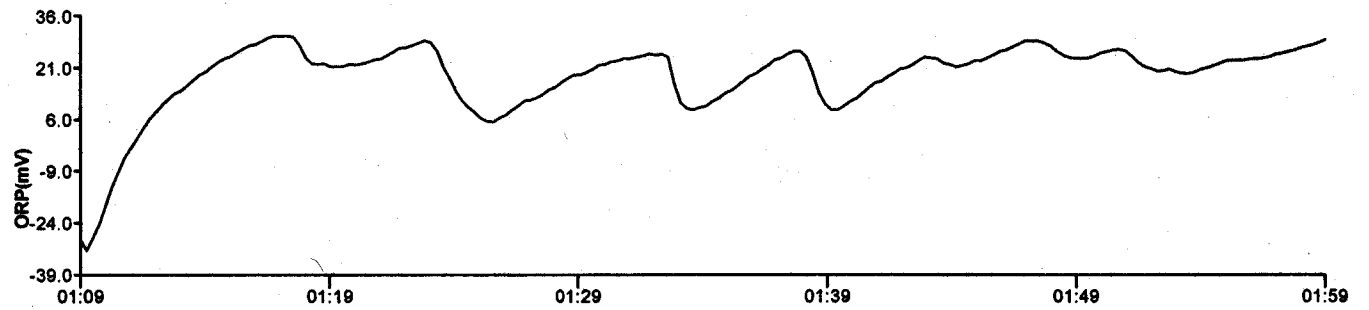
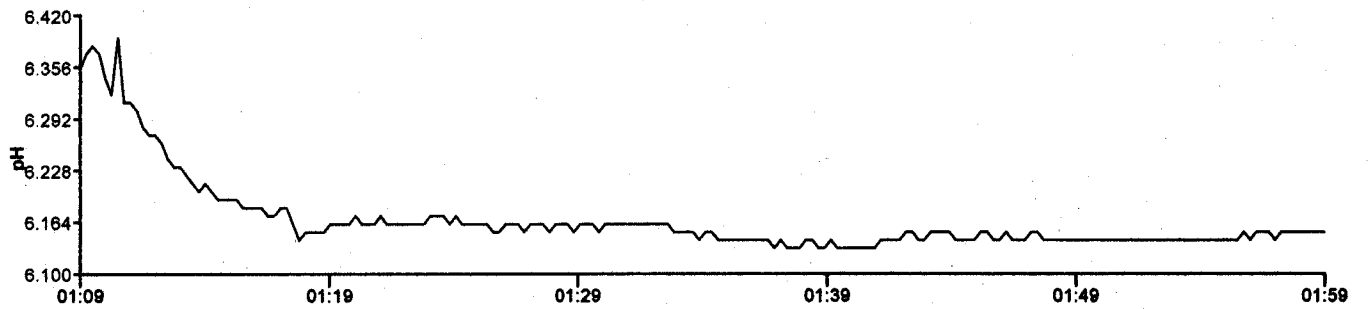
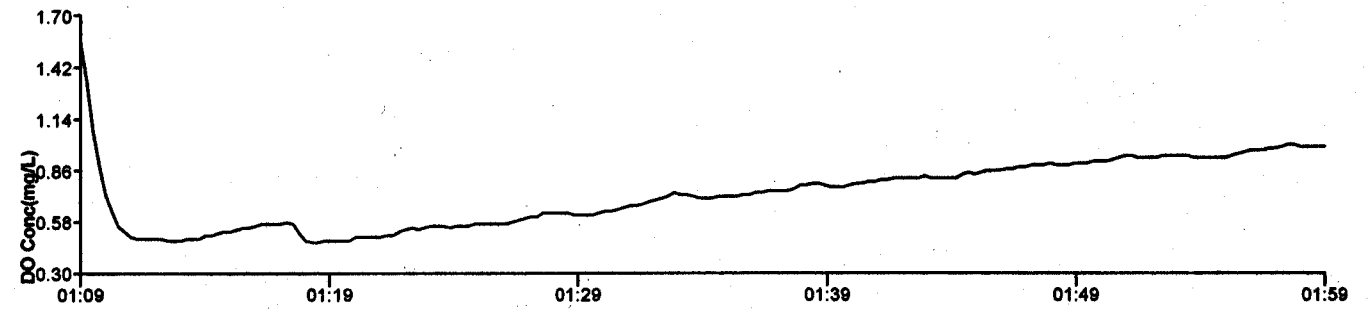
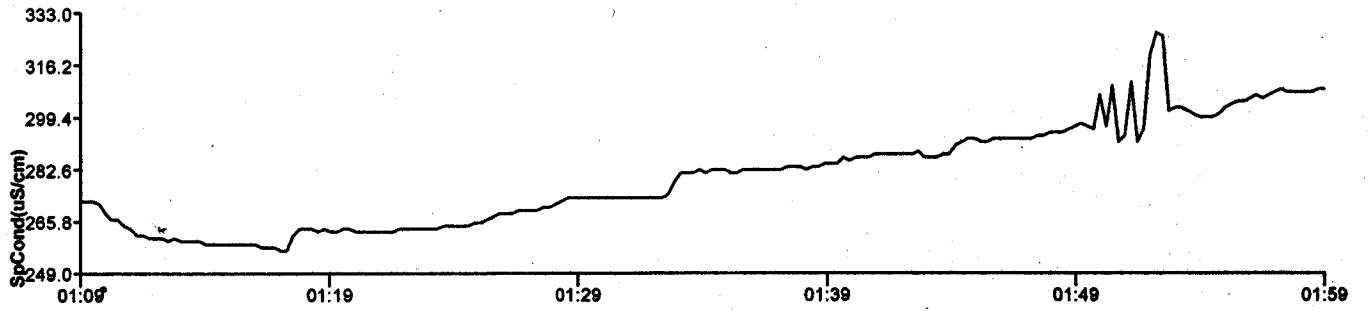
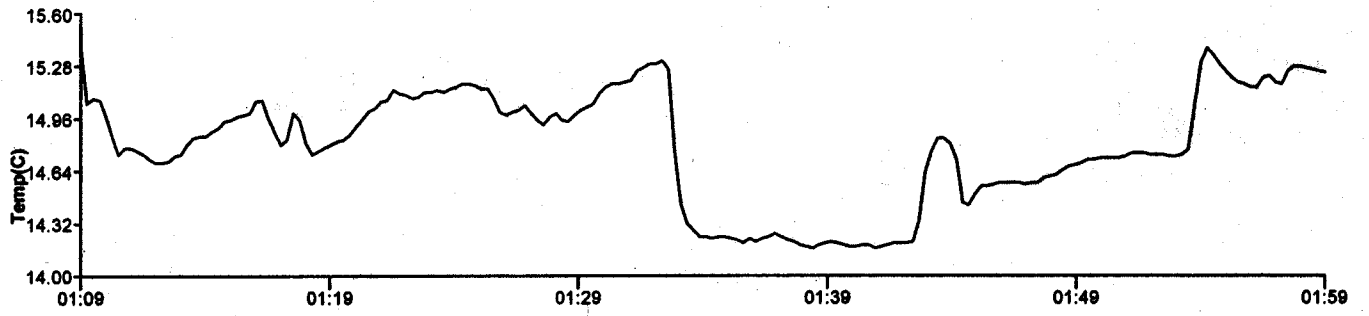
### MW-45M Step Drawdown Test



### Wayland - MW45M Well Yield Data



# Raytheon Wayland MW-45M Field Parameters from Step Drawdown Test



10/20/28

10/20/28

10/20/28

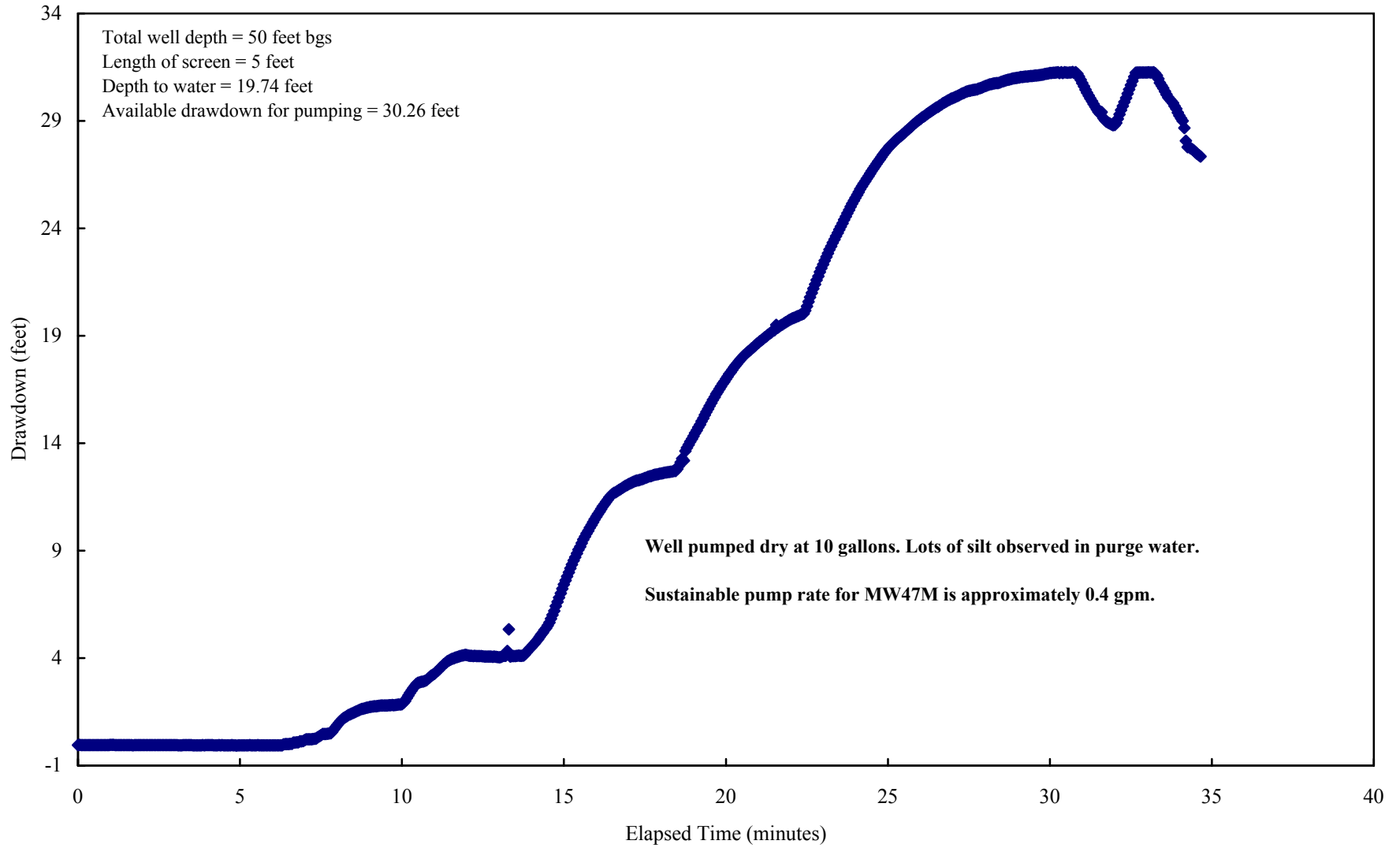
10/20/28

10/20/28

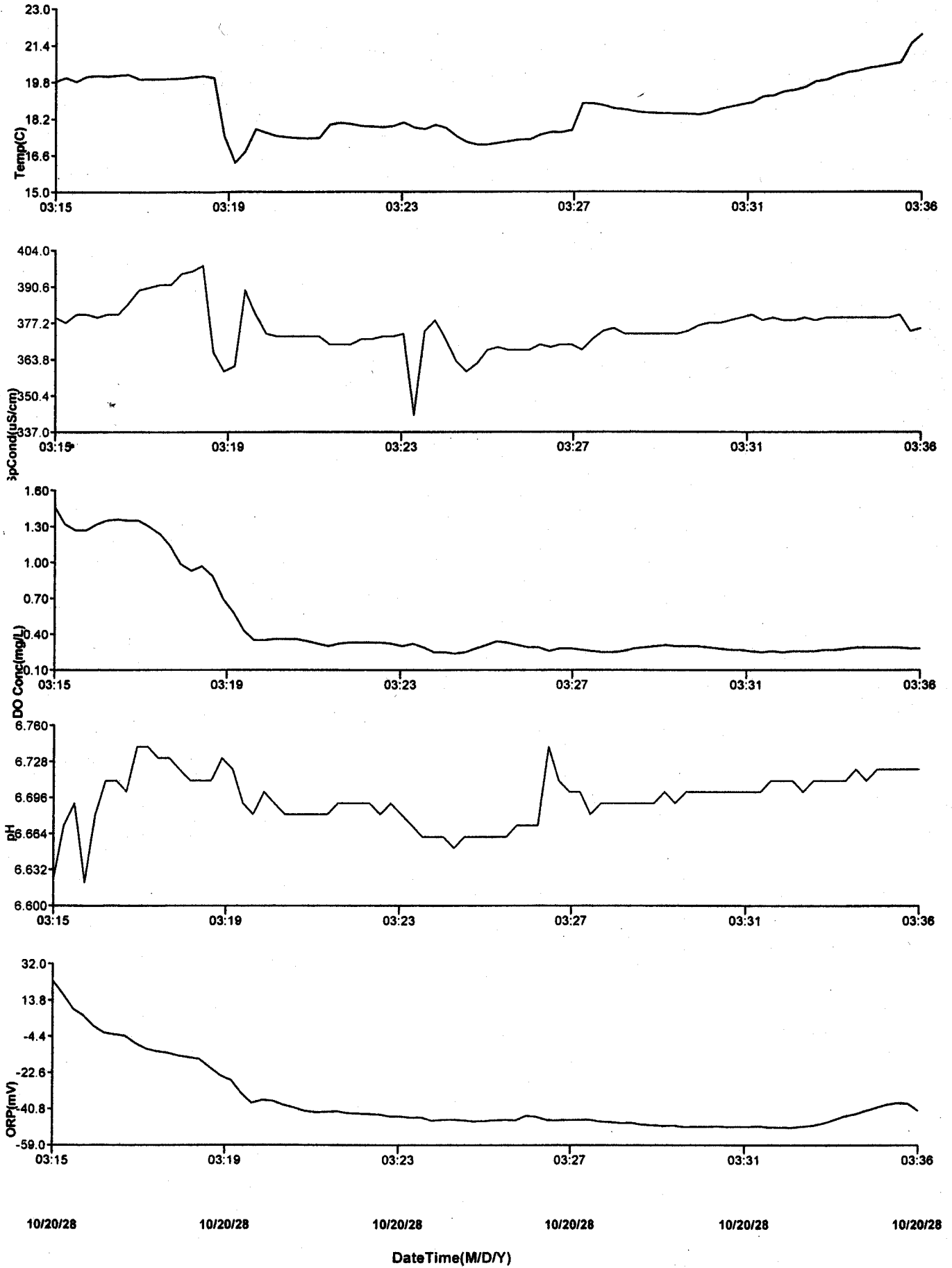
10/20/28

DateTime(M/D/Y)

### Wayland - MW47M Step Drawdown Data



# Raytheon Wayland MW-47M Field Parameters from Step Drawdown Test



*Appendix E*  
*Environmental Risk*  
*Characterization*  
*(Entrix, December 2000)*