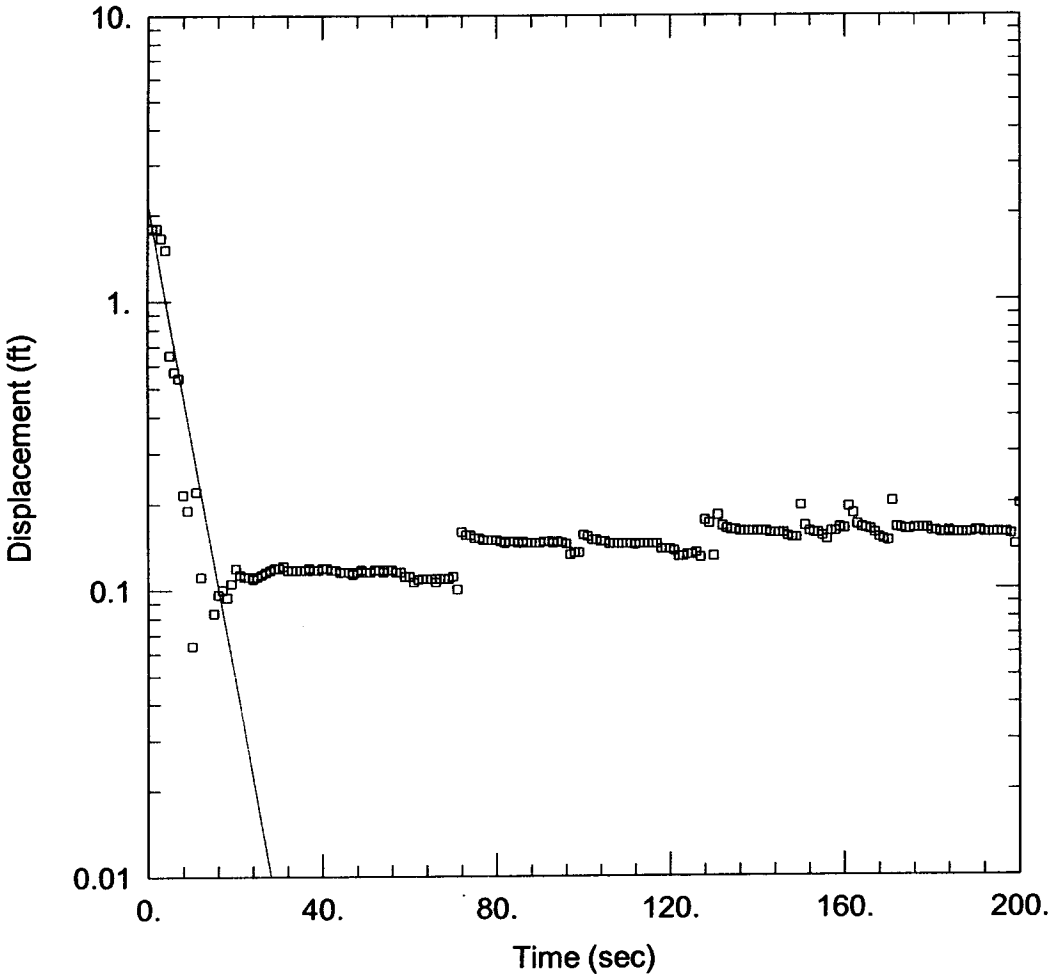
Appendix E

Slug Test Analysis (Hvorslev Method) for MW-0001A Using Complete Data Set



TEST # 2 BOEING

Data Set: G:\COMMON\SGANDHI\BOEING\BOEING~1\MW0001A.AQT
Date: 10/21/02 Time: 08:59:23

AQUIFER DATA

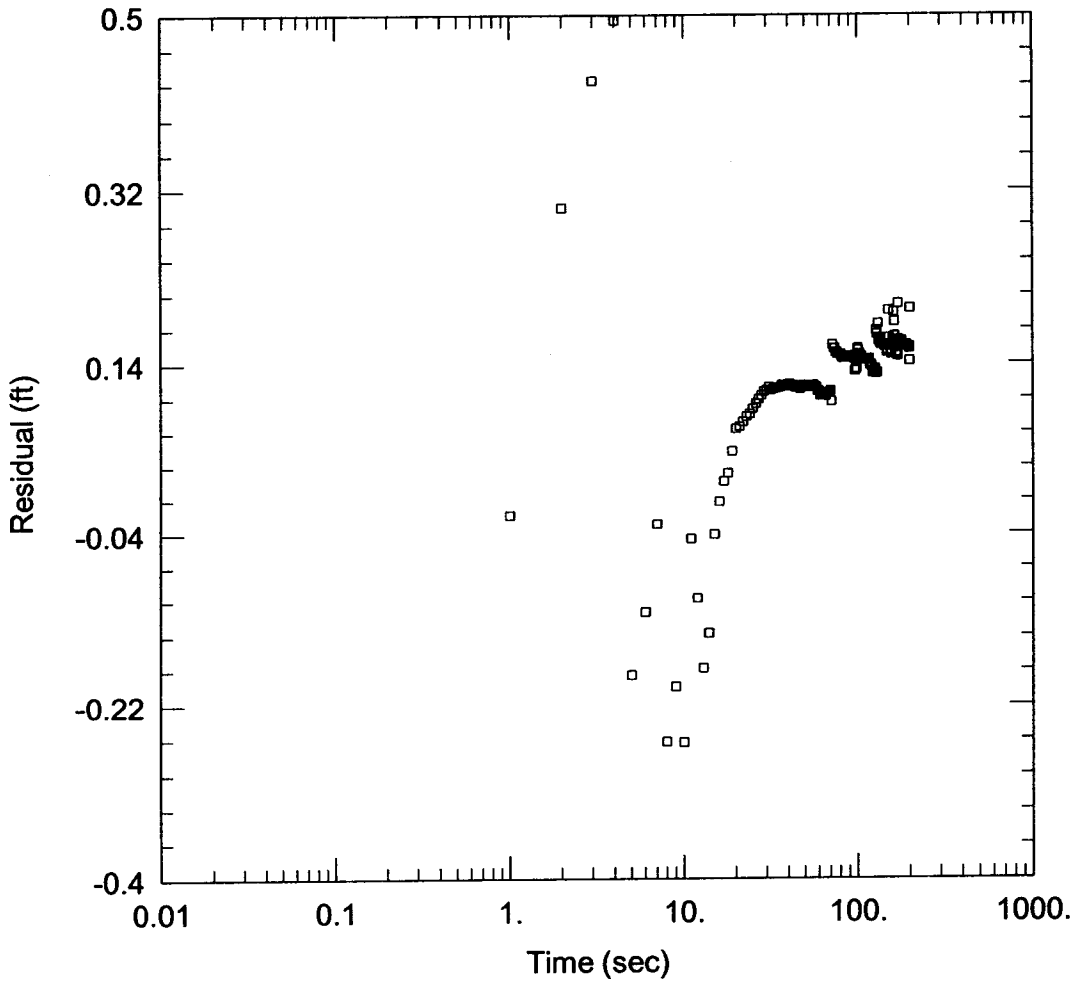
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 1.803 ft
Casing Radius: 0.167 ft
Screen Length: 15. ft
Water Column Height: 7. ft
Wellbore Radius: 0.33 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 0.001269 ft/sec
y0 = 2.184 ft



TEST # 2 BOEING

Data Set: G:\COMMON\SGANDHI\BOEING\BOEING~1\MW0001A.AQT
Date: 10/21/02 Time: 08:59:28

AQUIFER DATA

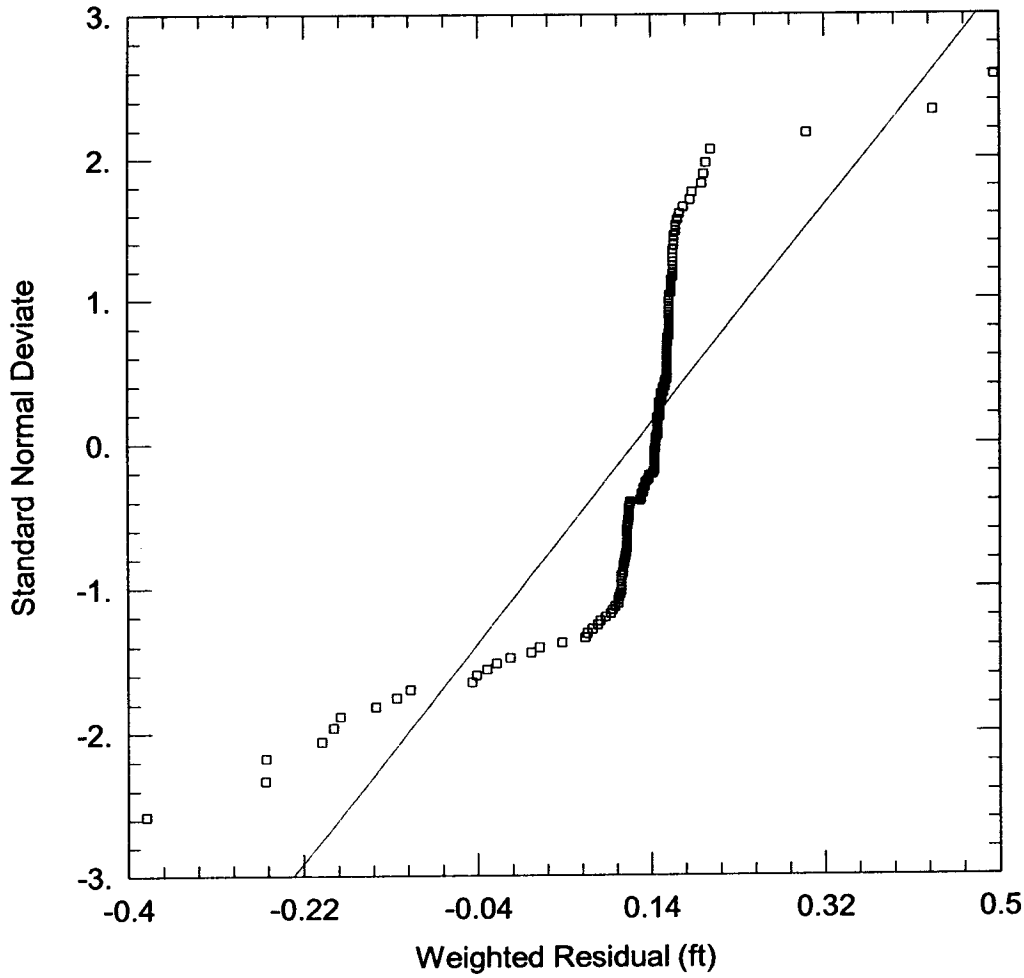
Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 1.803 ft
Casing Radius: 0.167 ft
Screen Length: 15. ft
Water Column Height: 7. ft
Wellbore Radius: 0.33 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 0.001269 ft/sec
y0 = 2.184 ft



TEST # 2 BOEING

Data Set: G:\COMMON\SGANDHI\BOEING\BOEING~1\MW0001A.AQT
Date: 10/21/02 Time: 08:59:33

AQUIFER DATA

Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 1.803 ft
Casing Radius: 0.167 ft
Screen Length: 15. ft
Water Column Height: 7. ft
Wellbore Radius: 0.33 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 0.001269 ft/sec
y0 = 2.184 ft

Diagnostic Statistics

Aquifer Model: Unconfined
Solution Method: Hvorslev

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.001269	0.0001017	ft/sec
y0	2.184	0.112	ft

Parameter Correlations

	K	y0
K	1.00	0.64
y0	0.64	1.00

Residual Statistics

for weighted residuals

Sum of Squares ... 4.654 ft^2
Variance..... 0.02339 ft^2
Std. Deviation..... 0.1529 ft
Mean ..... 0.1233 ft
No. of Residuals ... 201
No. of Estimates ... 2

BOE-C6-0129803

Data Set: G:\COMMON\SGANDHI\BOEING\BOEING~1\MW0001A.AQT
Title: Test # 2 Boeing
Date: 10/21/02
Time: 08:59:47

AQUIFER DATA

Saturated Thickness: 7 ft
Anisotropy Ratio (Kz/Kr): 1

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW0001A

X Location: 0 ft
Y Location: 0 ft

Observation Data

Time (sec)	Displacement (ft)
0.	1.803
1.	1.784
2.	1.792
3.	1.663
4.	1.512
5.	0.651
6.	0.57
7.	0.543
8.	0.215
9.	0.19
10.	0.064
11.	0.221
12.	0.111
13.	0.
14.	0.005
15.	0.083
16.	0.096
17.	0.1
18.	0.094
19.	0.105
20.	0.119
21.	0.113
22.	0.111
23.	0.111
24.	0.109
25.	0.111
26.	0.113
27.	0.115
28.	0.117
29.	0.119
30.	0.119

31.	0.121
32.	0.117
33.	0.117
34.	0.117
35.	0.117
36.	0.117
37.	0.119
38.	0.117
39.	0.117
40.	0.119
41.	0.119
42.	0.117
43.	0.117
44.	0.115
45.	0.115
46.	0.115
47.	0.113
48.	0.115
49.	0.117
50.	0.115
51.	0.115
52.	0.117
53.	0.117
54.	0.115
55.	0.117
56.	0.117
57.	0.115
58.	0.115
59.	0.111
60.	0.111
61.	0.106
62.	0.108
63.	0.109
64.	0.109
65.	0.109
66.	0.106
67.	0.109
68.	0.109
69.	0.109
70.	0.111
71.	0.1
72.	0.159
73.	0.155
74.	0.155
75.	0.151
76.	0.151
77.	0.149
78.	0.149
79.	0.149
80.	0.149
81.	0.147
82.	0.145

83.	0.147
84.	0.147
85.	0.145
86.	0.147
87.	0.145
88.	0.145
89.	0.145
90.	0.145
91.	0.147
92.	0.147
93.	0.145
94.	0.147
95.	0.146
96.	0.144
97.	0.132
98.	0.134
99.	0.134
100.	0.155
101.	0.153
102.	0.149
103.	0.149
104.	0.147
105.	0.147
106.	0.144
107.	0.144
108.	0.144
109.	0.144
110.	0.144
111.	0.144
112.	0.143
113.	0.144
114.	0.144
115.	0.144
116.	0.144
117.	0.144
118.	0.138
119.	0.138
120.	0.138
121.	0.136
122.	0.13
123.	0.13
124.	0.132
125.	0.132
126.	0.134
127.	0.129
128.	0.174
129.	0.17
130.	0.13
131.	0.181
132.	0.166
133.	0.163
134.	0.161

135.	0.161
136.	0.159
137.	0.159
138.	0.159
139.	0.159
140.	0.159
141.	0.159
142.	0.159
143.	0.157
144.	0.157
145.	0.157
146.	0.157
147.	0.153
148.	0.151
149.	0.151
150.	0.195
151.	0.166
152.	0.159
153.	0.157
154.	0.157
155.	0.153
156.	0.149
157.	0.159
158.	0.159
159.	0.164
160.	0.163
161.	0.193
162.	0.183
163.	0.168
164.	0.164
165.	0.163
166.	0.161
167.	0.157
168.	0.151
169.	0.149
170.	0.147
171.	0.202
172.	0.164
173.	0.163
174.	0.161
175.	0.161
176.	0.163
177.	0.163
178.	0.163
179.	0.163
180.	0.159
181.	0.159
182.	0.157
183.	0.157
184.	0.159
185.	0.157
186.	0.157

187.	0.157
188.	0.157
189.	0.157
190.	0.159
191.	0.159
192.	0.157
193.	0.157
194.	0.157
195.	0.157
196.	0.157
197.	0.157
198.	0.155
199.	0.142
200.	0.197

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.001269	ft/sec
y0	1.638	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.001269	0.0001017	ft/sec
y0	2.184	0.112	ft

Parameter Correlations

	K	y0
K	1.00	0.64
y0	0.64	1.00

Residual Statistics

for weighted residuals

Sum of Squares ... 4.654 ft^2
Variance..... 0.02339 ft^2
Std. Deviation..... 0.1529 ft
Mean ..... 0.1233 ft
No. of Residuals ... 201
No. of Estimates ... 2

Errors Detected in Data Set

No errors detected!

Options Available

Choose a solution to perform forward solution or curve matching analyses.