APPENDIX K

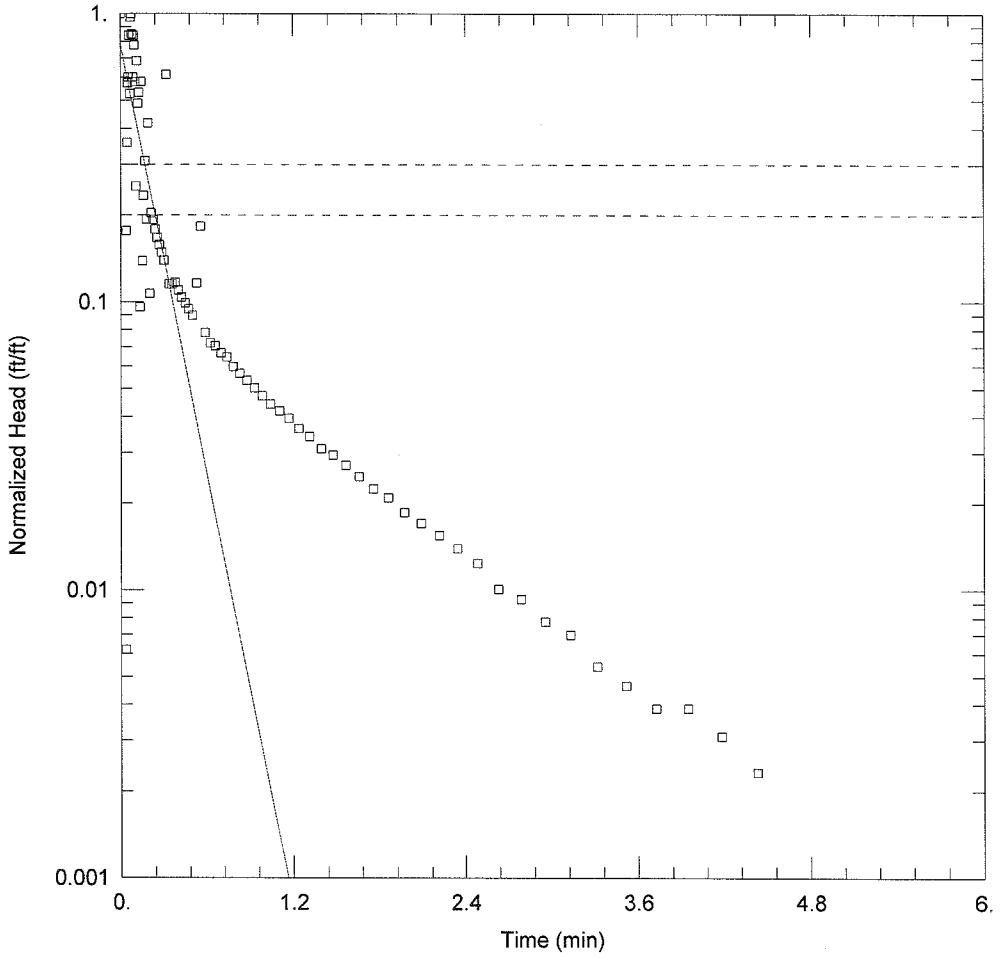
HYDRAULIC CONDUCTIVITY DATA

AVM GOWANDA
PRE-DESIGN STUDY
HYDRAULIC CONDUCTIVITY TESTING RESULTS

(results presented in cm/s)

Well	Slug	Bail	Geometric Mean
MW-3	2.02E-03	2.70E-03	2.25E-03
	1.92E-03	2.45E-03	
MW-4	2.67E-03	2.18E-03	2.26E-03
	2.18E-03	2.08E-03	
MW-7	5.47E-03	1.09E-02	7.09E-03
	3.72E-03	1.15E-02	
MW-8	9.51E-03	1.42E-02	1.39E-02
	3.86E-03	7.12E-02	
MW-10	4.09E-03	1.95E-02	1.04E-02
	7.40E-03	1.97E-02	
MW-11	3.88E-03	3.48E-03	3.05E-03
	2.35E-03	2.72E-03	
TW-2	2.86E-04	3.66E-04	3.57E-04
	4.28E-04	3.64E-04	
TW-3	2.64E-03	3.63E-03	2.97E-03
	2.62E-03	3.11E-03	

Geometric mean - overburden wells 3.37E-03



MW3 SLUG IN 1

Data Set: C:\...\MW3 Slug In 1.aqt
Date: 08/24/04 Time: 15:24:30

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW3
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 17.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW3)

Initial Displacement: 1.29 ft
Total Well Penetration Depth: 17.75 ft
Casing Radius: 0.083 ft
Static Water Column Height: 17.75 ft
Screen Length: 15. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.00202 cm/sec v0 = 1.014 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW3 Slug In 1.aqt
Title: MW3 SLUG IN 1
Date: 08/24/04
Time: 15:24:37

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW3

AQUIFER DATA

Saturated Thickness: 17.75 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW3

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.29 ft
Static Water Column Height: 17.75 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 15. ft
Total Well Penetration Depth: 17.75 ft

No. of Observations: 85

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.035	0.008	0.5547	0.236
0.04	0.228	0.5863	0.101
0.045	0.461	0.6213	0.093
0.05	0.741	0.6578	0.091
0.055	0.777	0.6963	0.086
0.06	1.082	0.738	0.083
0.065	0.68	0.7813	0.077
0.07	1.254	0.828	0.073
0.075	1.29	0.8763	0.069
0.08	1.095	0.928	0.065
0.0848	0.777	0.983	0.061
0.09	1.082	1.041	0.057
0.095	1.003	1.103	0.054
0.1	0.746	1.168	0.051
0.1058	0.325	1.238	0.047
0.112	0.885	1.311	0.044
0.1185	0.629	1.39	0.04
0.1255	0.686	1.473	0.038

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1328	0.124	1.561	0.035
0.1407	0.749	1.655	0.032
0.149	0.179	1.753	0.029
0.1578	0.302	1.858	0.027
0.167	0.398	1.968	0.024
0.177	0.25	2.085	0.022
0.1875	0.538	2.21	0.02
0.1985	0.138	2.341	0.018
0.2102	0.263	2.481	0.016
0.2227	0.249	2.63	0.013
0.2358	0.231	2.786	0.012
0.2498	0.216	2.953	0.01
0.2647	0.204	3.13	0.009
0.2803	0.192	3.316	0.007
0.297	0.18	3.515	0.006
0.3147	0.792	3.725	0.005
0.3333	0.149	3.946	0.005
0.3532	0.149	4.181	0.004
0.3742	0.151	4.43	0.003
0.3963	0.142	4.693	0.
0.4198	0.134	4.973	0.
0.4447	0.128	5.27	0.
0.4697	0.122	5.583	-0.001
0.4963	0.116	5.915	0.
0.5247	0.15		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 3.017

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.00202	cm/sec
y0	1.014	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.001438	0.0002663	cm/sec
y0	0.935	0.09576	ft

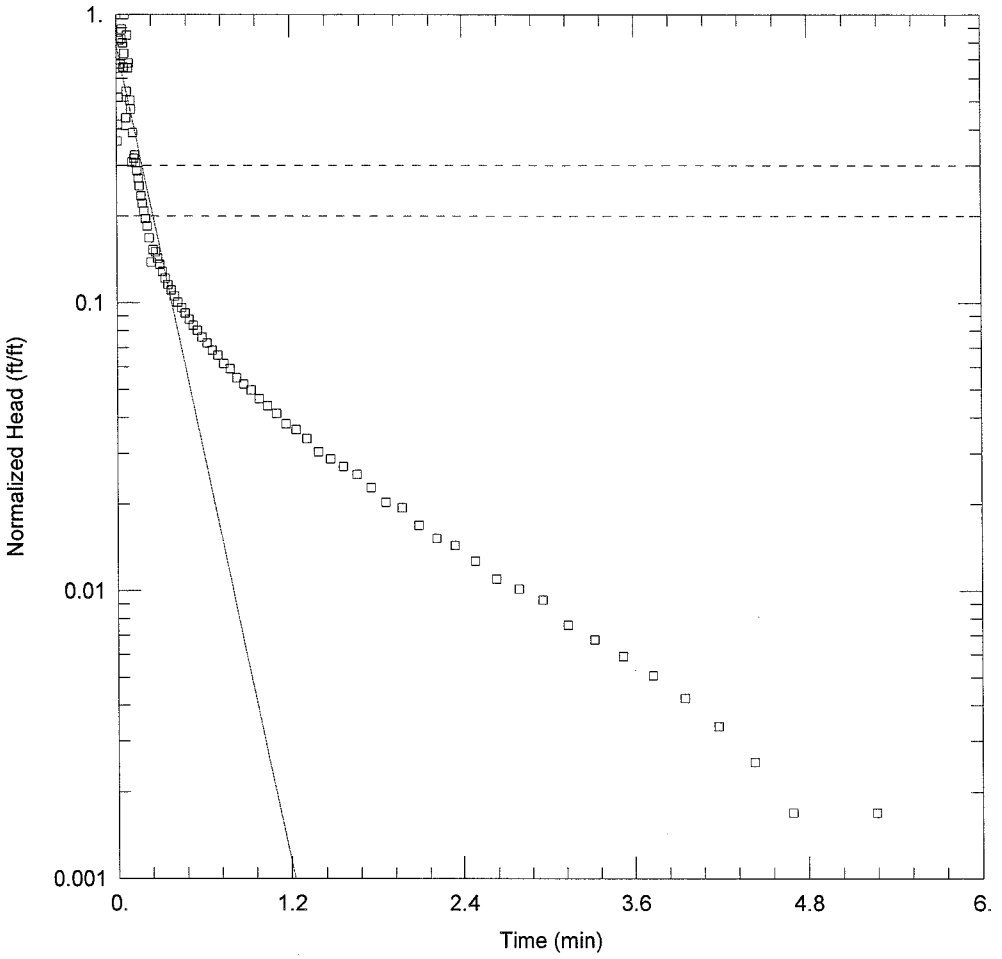
Parameter Correlations

	K	y0
K	1.00	0.81
y0	0.81	1.00

Residual Statistics

for weighted residuals

Sum of Squares	3.53 ft^2
Variance	0.04253 ft^2
Std. Deviation	0.2062 ft
Mean	0.008746 ft
No. of Residuals	85
No. of Estimates	2



MW3 SLUG IN 2

Data Set: C:\...\MW3 Slug In 2.aqt
Date: 08/24/04 Time: 15:27:45

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW3
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 17.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW3)

Initial Displacement: 1.183 ft
Total Well Penetration Depth: 17.75 ft
Casing Radius: 0.083 ft
Static Water Column Height: 17.75 ft
Screen Length: 15. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.001915 cm/sec v0 = 0.9304 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW3 Slug In 2.aqt
Title: MW3 SLUG IN 2
Date: 08/24/04
Time: 15:27:50

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW3

AQUIFER DATA

Saturated Thickness: 17.75 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW3

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.183 ft
Static Water Column Height: 17.75 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 15. ft
Total Well Penetration Depth: 17.75 ft

No. of Observations: 89

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.431	0.4697	0.109
0.01	0.492	0.4963	0.104
0.015	0.611	0.5247	0.099
0.02	0.961	0.5547	0.095
0.025	0.77	0.5863	0.09
0.03	0.797	0.6213	0.086
0.035	0.972	0.6578	0.081
0.04	1.053	0.6963	0.078
0.045	0.944	0.738	0.073
0.05	0.777	0.7813	0.07
0.055	0.867	0.828	0.065
0.06	1.183	0.8763	0.062
0.065	0.518	0.928	0.059
0.07	0.641	0.983	0.055
0.075	1.003	1.041	0.052
0.08	0.773	1.103	0.049
0.0848	0.803	1.168	0.045
0.095	0.596	1.238	0.043

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1	0.555	1.311	0.04
0.1058	0.364	1.39	0.036
0.112	0.461	1.473	0.034
0.1185	0.375	1.561	0.032
0.1255	0.385	1.655	0.03
0.1328	0.362	1.753	0.027
0.1407	0.34	1.858	0.024
0.149	0.32	1.968	0.023
0.1578	0.301	2.085	0.02
0.167	0.278	2.21	0.018
0.177	0.262	2.341	0.017
0.1875	0.247	2.481	0.015
0.1985	0.232	2.63	0.013
0.2102	0.219	2.786	0.012
0.2227	0.199	2.953	0.011
0.2358	0.164	3.13	0.009
0.2498	0.181	3.316	0.008
0.2647	0.178	3.515	0.007
0.2803	0.169	3.725	0.006
0.297	0.161	3.946	0.005
0.3147	0.152	4.181	0.004
0.3333	0.144	4.43	0.003
0.3532	0.137	4.693	0.002
0.3742	0.131	4.973	0.
0.3963	0.125	5.27	0.002
0.4198	0.119	5.583	0.
0.4447	0.114		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 3.017

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.00202	cm/sec
y0	1.014	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.001915	0.0001934	cm/sec
y0	0.9304	0.04808	ft

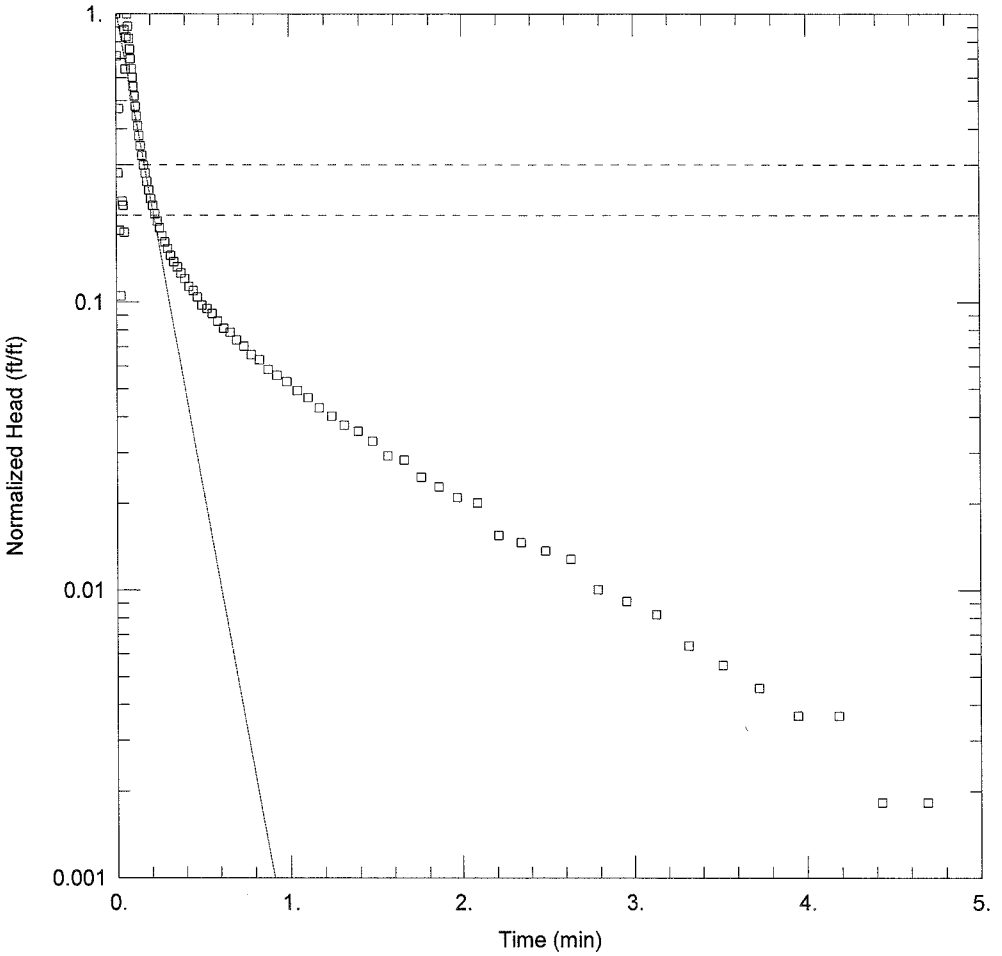
Parameter Correlations

	K	y0
K	1.00	0.73
y0	0.73	1.00

Residual Statistics

for weighted residuals

Sum of Squares	1.377 ft^2
Variance	0.01583 ft^2
Std. Deviation	0.1258 ft
Mean	0.01092 ft
No. of Residuals	89
No. of Estimates	2



MW3 SLUG OUT 1

Data Set: C:\...\MW3 Slug Out 1.aqt
Date: 08/24/04 Time: 15:31:15

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW3
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 17.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW3)

Initial Displacement: 1.094 ft
Total Well Penetration Depth: 17.75 ft
Casing Radius: 0.083 ft
Static Water Column Height: 17.75 ft
Screen Length: 15. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002695 cm/sec v0 = 1.149 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW3 Slug Out 1.aqt
Title: MW3 SLUG OUT 1
Date: 08/24/04
Time: 15:31:22

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW3

AQUIFER DATA

Saturated Thickness: 17.75 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW3

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.094 ft
Static Water Column Height: 17.75 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 15. ft
Total Well Penetration Depth: 17.75 ft

No. of Observations: 87

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.781	0.4447	0.12
0.01	0.307	0.4697	0.114
0.015	0.513	0.4963	0.107
0.02	0.194	0.5247	0.104
0.025	0.115	0.5547	0.1
0.035	0.245	0.5863	0.094
0.04	0.237	0.6213	0.089
0.045	0.191	0.6578	0.086
0.05	0.963	0.6963	0.081
0.055	0.704	0.738	0.077
0.06	0.911	0.7813	0.072
0.065	1.094	0.828	0.069
0.07	0.988	0.8763	0.064
0.075	0.898	0.928	0.061
0.08	0.825	0.983	0.058
0.0848	0.764	1.041	0.054
0.09	0.706	1.103	0.051
0.095	0.658	1.168	0.047

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1	0.611	1.238	0.044
0.1058	0.567	1.311	0.041
0.112	0.523	1.39	0.039
0.1185	0.484	1.473	0.036
0.1255	0.447	1.561	0.032
0.1328	0.413	1.655	0.031
0.1407	0.382	1.753	0.027
0.149	0.353	1.858	0.025
0.1578	0.327	1.968	0.023
0.167	0.307	2.085	0.022
0.177	0.287	2.21	0.017
0.1875	0.268	2.341	0.016
0.1985	0.25	2.481	0.015
0.2102	0.237	2.63	0.014
0.2227	0.222	2.786	0.011
0.2358	0.209	2.953	0.01
0.2498	0.198	3.13	0.009
0.2647	0.186	3.316	0.007
0.2803	0.177	3.515	0.006
0.297	0.168	3.725	0.005
0.3147	0.159	3.946	0.004
0.3333	0.151	4.181	0.004
0.3532	0.145	4.43	0.002
0.3742	0.138	4.693	0.002
0.3963	0.132	4.973	0.
0.4198	0.124		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 3.017

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.002695	cm/sec
y0	1.149	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.001191	0.0002078	cm/sec
y0	0.6717	0.05323	ft

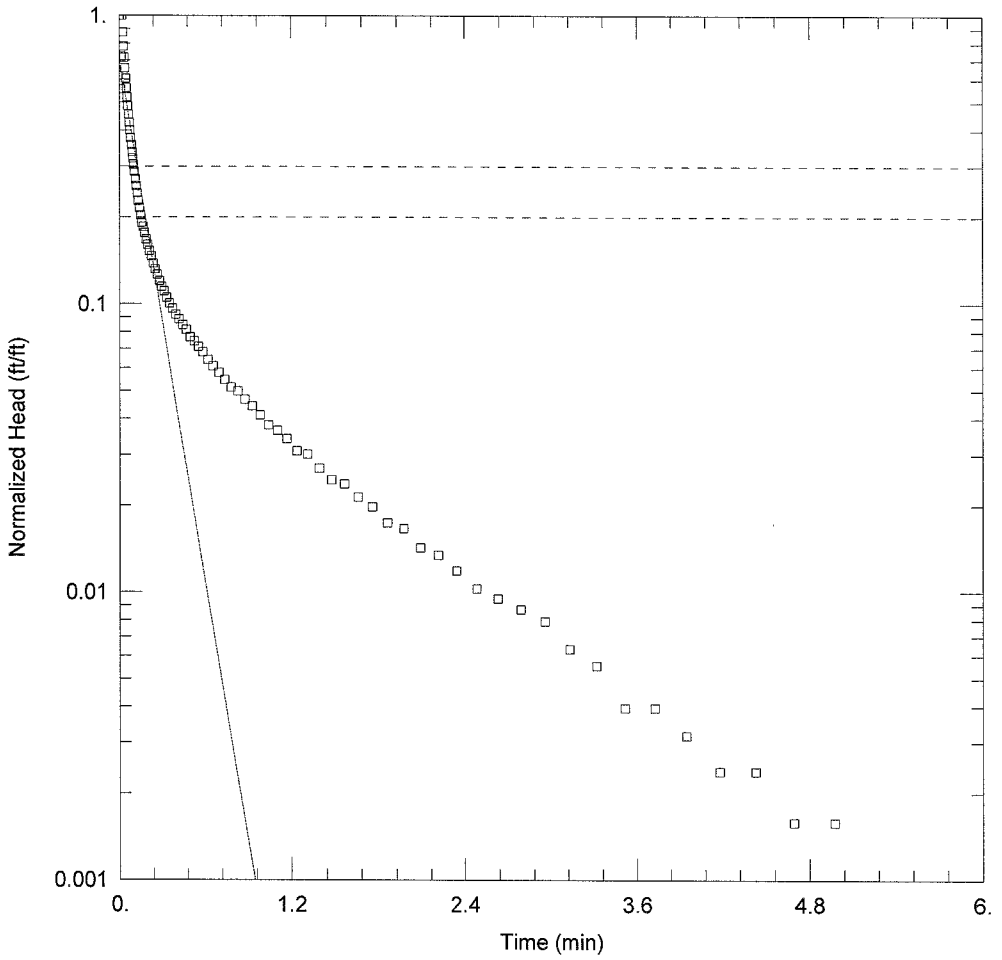
Parameter Correlations

	K	y0
K	1.00	0.72
y0	0.72	1.00

Residual Statistics

for weighted residuals

Sum of Squares	2.355 ft^2
Variance	0.02771 ft^2
Std. Deviation	0.1665 ft
Mean	0.004445 ft
No. of Residuals	87
No. of Estimates	2



MW3 SLUG OUT 2

Data Set: C:\...\MW3 Slug Out 2.aqt
Date: 08/24/04 Time: 15:35:20

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW3
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 17.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW3)

Initial Displacement: 1.263 ft
Total Well Penetration Depth: 17.75 ft
Casing Radius: 0.083 ft
Static Water Column Height: 17.75 ft
Screen Length: 15. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002448 cm/sec v0 = 0.9076 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW3 Slug Out 2.aqt
Title: MW3 SLUG OUT 2
Date: 08/24/04
Time: 15:35:27

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW3

AQUIFER DATA

Saturated Thickness: 17.75 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW3

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.263 ft
Static Water Column Height: 17.75 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 15. ft
Total Well Penetration Depth: 17.75 ft

No. of Observations: 89

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	-0.005	0.4447	0.107
0.01	0.702	0.4697	0.103
0.015	0.911	0.4963	0.097
0.02	1.263	0.5247	0.094
0.025	1.105	0.5547	0.09
0.03	0.987	0.5863	0.086
0.035	0.901	0.6213	0.081
0.04	0.829	0.6578	0.077
0.045	0.764	0.6963	0.073
0.05	0.709	0.738	0.069
0.055	0.659	0.7813	0.065
0.06	0.614	0.828	0.063
0.065	0.573	0.8763	0.059
0.07	0.538	0.928	0.056
0.075	0.506	0.983	0.052
0.08	0.476	1.041	0.048
0.0848	0.45	1.103	0.046
0.09	0.425	1.168	0.043

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.404	1.238	0.039
0.1	0.385	1.311	0.038
0.1058	0.364	1.39	0.034
0.112	0.343	1.473	0.031
0.1185	0.324	1.561	0.03
0.1255	0.306	1.655	0.027
0.1328	0.288	1.753	0.025
0.1407	0.272	1.858	0.022
0.149	0.257	1.968	0.021
0.1578	0.242	2.085	0.018
0.167	0.234	2.21	0.017
0.177	0.223	2.341	0.015
0.1875	0.212	2.481	0.013
0.1985	0.203	2.63	0.012
0.2102	0.193	2.786	0.011
0.2227	0.185	2.953	0.01
0.2358	0.175	3.13	0.008
0.2498	0.167	3.316	0.007
0.2647	0.16	3.515	0.005
0.2803	0.152	3.725	0.005
0.297	0.145	3.946	0.004
0.3147	0.14	4.181	0.003
0.3333	0.133	4.43	0.003
0.3532	0.127	4.693	0.002
0.3742	0.122	4.973	0.002
0.3963	0.116	5.27	0.
0.4198	0.112		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 3.017

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.002695	cm/sec
y0	1.149	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.002448	0.0002696	cm/sec
y0	0.9076	0.05492	ft

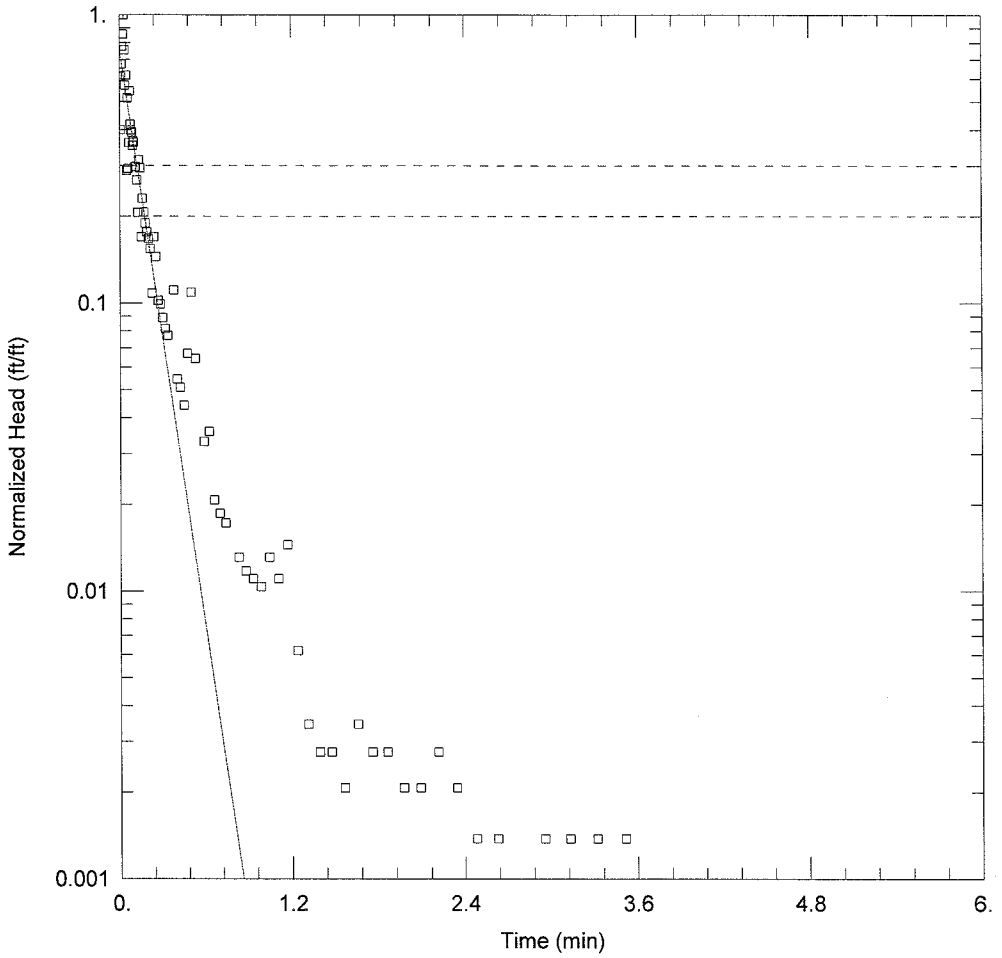
Parameter Correlations

	K	y0
K	1.00	0.75
y0	0.75	1.00

Residual Statistics

for weighted residuals

Sum of Squares	1.444 ft^2
Variance	0.0166 ft^2
Std. Deviation	0.1288 ft
Mean	0.01676 ft
No. of Residuals	89
No. of Estimates	2



MW4 SLUG IN 1

Data Set: C:\...\MW4 Slug In 1.aqt
Date: 08/24/04 Time: 16:00:10

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW4
Test Date: 7/30/04

AQUIFER DATA

Saturated Thickness: 16.05 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW4)

Initial Displacement: 1.449 ft
Total Well Penetration Depth: 16.05 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.05 ft
Screen Length: 15. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002668 cm/sec v0 = 1.113 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW4 Slug In 1.aqt
Title: MW4 SLUG IN 1
Date: 08/24/04
Time: 16:00:17

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/30/04
Test Well: MW4

AQUIFER DATA

Saturated Thickness: 16.05 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW4

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.449 ft
Static Water Column Height: 16.05 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 15. ft
Total Well Penetration Depth: 16.05 ft

No. of Observations: 90

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.579	0.4447	0.064
0.01	0.888	0.4697	0.097
0.015	0.979	0.4963	0.158
0.02	1.127	0.5247	0.093
0.025	1.24	0.5547	-0.249
0.03	1.449	0.5863	0.048
0.035	1.094	0.6213	0.052
0.04	0.826	0.6578	0.03
0.045	0.894	0.6963	0.027
0.05	0.418	0.738	0.025
0.055	0.746	0.7813	-0.027
0.06	0.425	0.828	0.019
0.065	0.522	0.8763	0.017
0.07	0.789	0.928	0.016
0.075	0.604	0.983	0.015
0.08	0.578	1.041	0.019
0.0848	0.568	1.103	0.016
0.09	0.511	1.168	0.021

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.529	1.238	0.009
0.1	0.524	1.311	0.005
0.1058	0.43	1.39	0.004
0.112	0.431	1.473	0.004
0.1185	0.387	1.561	0.003
0.1255	0.299	1.655	0.005
0.1328	0.455	1.753	0.004
0.1407	0.427	1.858	0.004
0.149	0.246	1.968	0.003
0.1578	0.335	2.085	0.003
0.167	0.3	2.21	0.004
0.177	0.275	2.341	0.003
0.1875	0.256	2.481	0.002
0.1985	0.243	2.63	0.002
0.2102	0.224	2.786	0.001
0.2227	0.157	2.953	0.002
0.2358	0.246	3.13	0.002
0.2498	0.21	3.316	0.002
0.2647	0.148	3.515	0.002
0.2803	0.144	3.725	0.001
0.297	0.129	3.946	0.001
0.3147	0.118	4.181	0.
0.3333	0.112	4.43	0.001
0.3532	-0.025	4.693	0.001
0.3742	0.161	4.973	0.001
0.3963	0.079	5.27	0.001
0.4198	0.074	5.583	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.953

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.003107	cm/sec
y0	0.9601	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.002668	0.0002216	cm/sec
y0	1.113	0.0524	ft

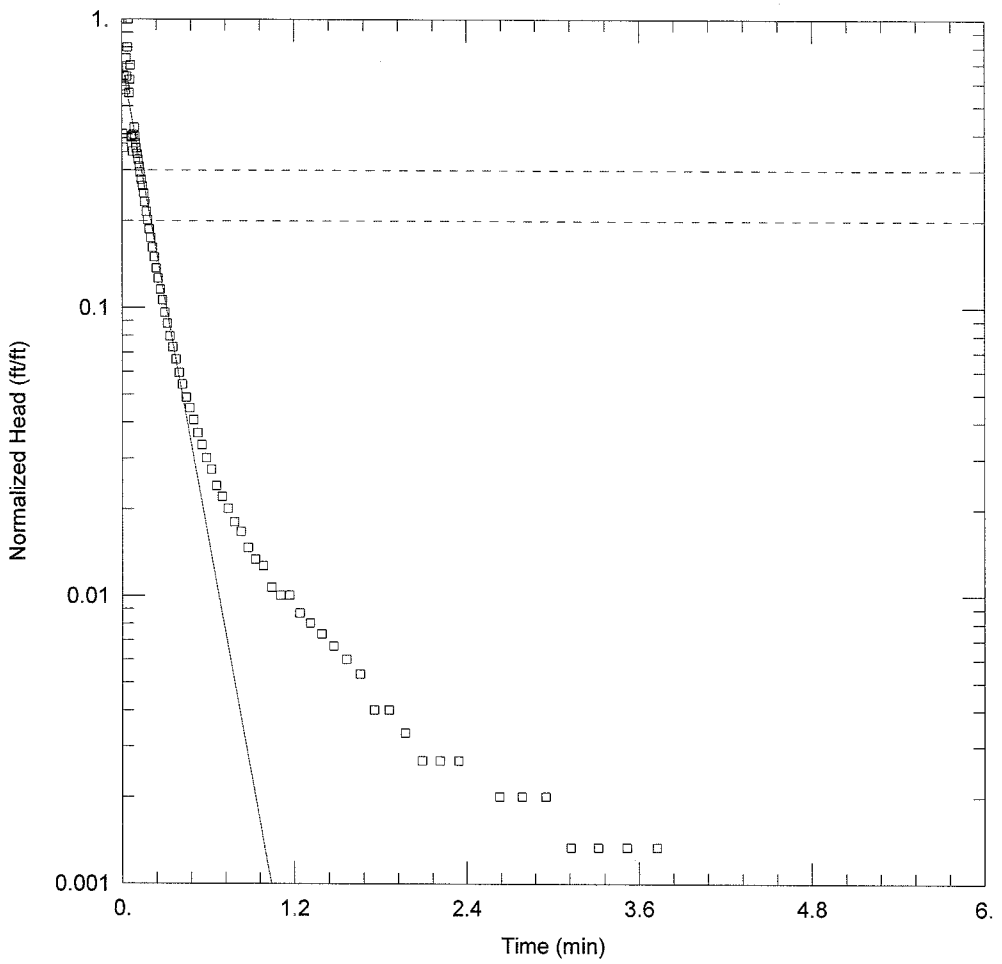
Parameter Correlations

	K	y0
K	1.00	0.75
y0	0.75	1.00

Residual Statistics

for weighted residuals

Sum of Squares	1.204 ft^2
Variance	0.01368 ft^2
Std. Deviation	0.1169 ft
Mean	0.004411 ft
No. of Residuals	90
No. of Estimates	2



MW4 SLUG IN 2

Data Set: C:\...\MW4 Slug In 2.aqt
Date: 08/24/04 Time: 16:02:51

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW4
Test Date: 7/30/04

AQUIFER DATA

Saturated Thickness: 16.05 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW4)

Initial Displacement: 1.494 ft
Total Well Penetration Depth: 16.05 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.05 ft
Screen Length: 15. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.002175 cm/sec v0 = 1.058 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW4 Slug In 2.aqt
Title: MW4 SLUG IN 2
Date: 08/24/04
Time: 16:02:57

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/30/04
Test Well: MW4

AQUIFER DATA

Saturated Thickness: 16.05 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW4

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.494 ft
Static Water Column Height: 16.05 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 15. ft
Total Well Penetration Depth: 16.05 ft

No. of Observations: 90

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.598	0.4447	0.073
0.01	0.536	0.4697	0.067
0.015	0.953	0.4963	0.061
0.02	0.877	0.5247	0.055
0.025	0.85	0.5547	0.05
0.03	1.096	0.5863	0.045
0.035	0.946	0.6213	0.041
0.04	1.194	0.6578	0.036
0.045	1.494	0.6963	0.033
0.05	0.83	0.738	0.03
0.055	0.923	0.7813	0.027
0.06	1.035	0.828	0.025
0.065	0.584	0.8763	0.022
0.07	0.589	0.928	0.02
0.075	0.52	0.983	0.019
0.08	0.595	1.041	0.016
0.0848	0.63	1.103	0.015
0.09	0.586	1.168	0.015

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.556	1.238	0.013
0.1	0.534	1.311	0.012
0.1058	0.511	1.39	0.011
0.112	0.488	1.473	0.01
0.1185	0.462	1.561	0.009
0.1255	0.44	1.655	0.008
0.1328	0.416	1.753	0.006
0.1407	0.395	1.858	0.006
0.149	0.373	1.968	0.005
0.1578	0.348	2.085	0.004
0.167	0.322	2.21	0.004
0.177	0.301	2.341	0.004
0.1875	0.28	2.481	-0.003
0.1985	0.261	2.63	0.003
0.2102	0.242	2.786	0.003
0.2227	0.224	2.953	0.003
0.2358	0.205	3.13	0.002
0.2498	0.189	3.316	0.002
0.2647	0.173	3.515	0.002
0.2803	0.159	3.725	0.002
0.297	0.144	3.946	0.001
0.3147	0.132	4.181	0.001
0.3333	0.119	4.43	0.001
0.3532	0.109	4.693	0.001
0.3742	0.099	4.973	0.
0.3963	0.089	5.27	0.
0.4198	0.081	5.583	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.953

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.002668	cm/sec
y0	1.113	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.002175	0.00019	cm/sec
y0	1.058	0.04936	ft

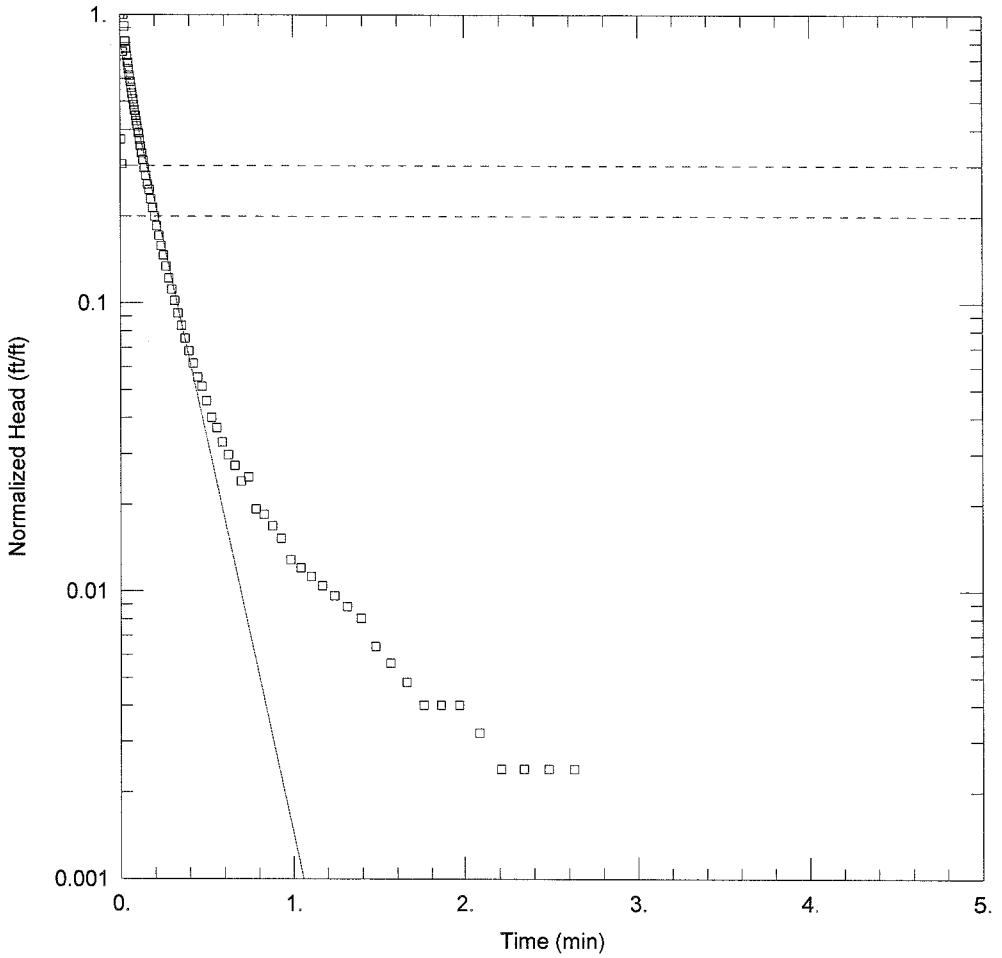
Parameter Correlations

	K	y0
K	1.00	0.74
y0	0.74	1.00

Residual Statistics

for weighted residuals

Sum of Squares	1.289 ft^2
Variance	0.01465 ft^2
Std. Deviation	0.121 ft
Mean	0.002164 ft
No. of Residuals	90
No. of Estimates	2



MW4 SLUG OUT 1

Data Set: C:\...\MW4 Slug Out 1.aqt
Date: 08/24/04 Time: 16:05:53

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW4
Test Date: 7/30/04

AQUIFER DATA

Saturated Thickness: 16.05 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW4)

Initial Displacement: 1.245 ft
Total Well Penetration Depth: 16.05 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.05 ft
Screen Length: 15. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.002177 cm/sec v0 = 0.9937 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW4 Slug Out 1.aqt
Title: MW4 SLUG OUT 1
Date: 08/24/04
Time: 16:05:59

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/30/04
Test Well: MW4

AQUIFER DATA

Saturated Thickness: 16.05 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW4

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.245 ft
Static Water Column Height: 16.05 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 15. ft
Total Well Penetration Depth: 16.05 ft

No. of Observations: 88

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.461	0.4198	0.077
0.01	0.378	0.4447	0.069
0.015	0.926	0.4697	0.064
0.02	1.245	0.4963	0.057
0.025	1.135	0.5247	0.05
0.03	1.005	0.5547	0.046
0.035	0.947	0.5863	0.041
0.04	0.896	0.6213	0.037
0.045	0.849	0.6578	0.034
0.05	0.806	0.6963	0.03
0.055	0.766	0.738	0.031
0.06	0.731	0.7813	0.024
0.065	0.696	0.828	0.023
0.07	0.665	0.8763	0.021
0.075	0.635	0.928	0.019
0.08	0.606	0.983	0.016
0.0848	0.58	1.041	0.015
0.09	0.556	1.103	0.014

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.533	1.168	0.013
0.1	0.511	1.238	0.012
0.1058	0.485	1.311	0.011
0.112	0.461	1.39	0.01
0.1185	0.437	1.473	0.008
0.1255	0.413	1.561	0.007
0.1328	0.391	1.655	0.006
0.1407	0.367	1.753	0.005
0.149	0.345	1.858	0.005
0.1578	0.322	1.968	0.005
0.167	0.308	2.085	0.004
0.177	0.286	2.21	0.003
0.1875	0.267	2.341	0.003
0.1985	0.249	2.481	0.003
0.2102	0.231	2.63	0.003
0.2227	0.214	2.786	0.001
0.2358	0.197	2.953	0.001
0.2498	0.183	3.13	0.001
0.2647	0.167	3.316	0.
0.2803	0.152	3.515	0.
0.297	0.139	3.725	0.
0.3147	0.127	3.946	0.
0.3333	0.115	4.181	-0.001
0.3532	0.104	4.43	0.
0.3742	0.094	4.693	0.
0.3963	0.085	4.973	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.953

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.002175	cm/sec
y0	1.058	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.002177	0.0001714	cm/sec
y0	0.9937	0.04179	ft

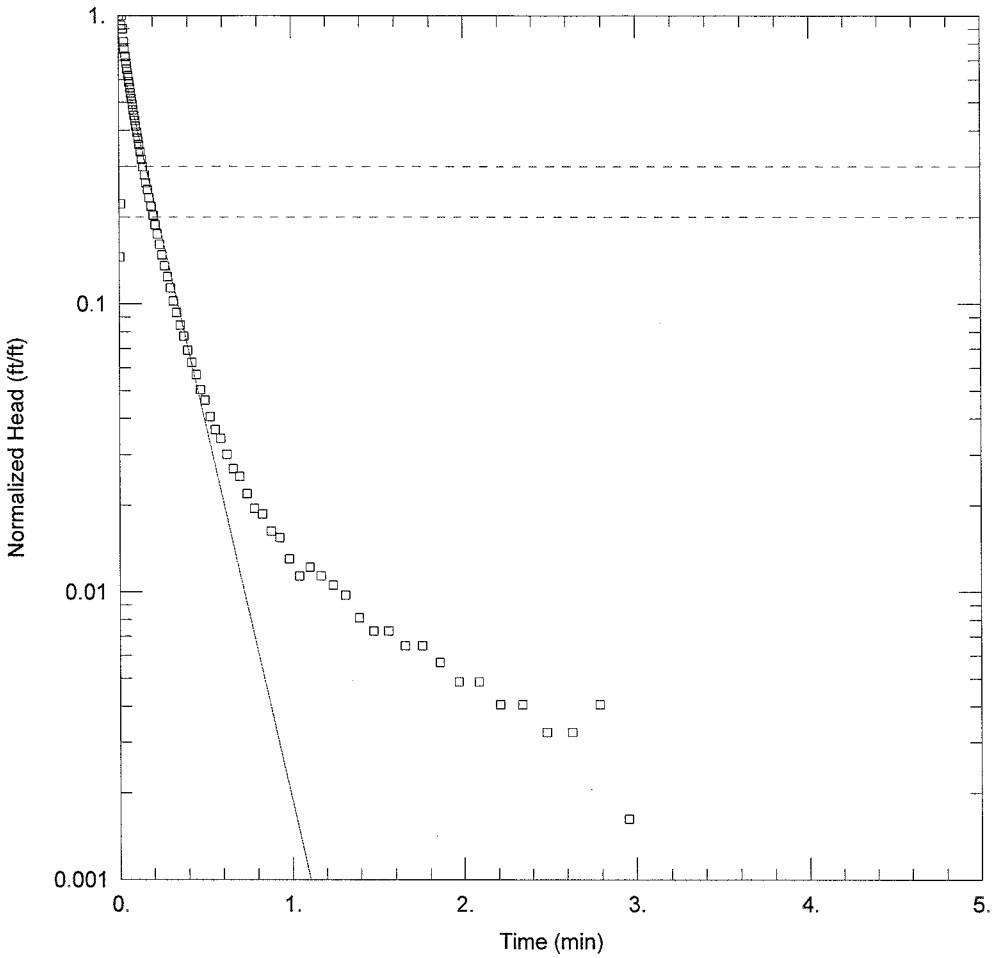
Parameter Correlations

	K	y0
K	1.00	0.74
y0	0.74	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.9021 ft^2
Variance	0.01049 ft^2
Std. Deviation	0.1024 ft
Mean	0.002154 ft
No. of Residuals	88
No. of Estimates	2



MW4 SLUG OUT 2

Data Set: C:\...\MW4 Slug Out 2.aqt
Date: 08/24/04 Time: 16:08:31

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW4
Test Date: 7/30/04

AQUIFER DATA

Saturated Thickness: 16.05 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW4)

Initial Displacement: 1.231 ft
Total Well Penetration Depth: 16.05 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.05 ft
Screen Length: 15. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002075 cm/sec
y0 = 0.957 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW4 Slug Out 2.aqt
Title: MW4 SLUG OUT 2
Date: 08/24/04
Time: 16:08:38

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/30/04
Test Well: MW4

AQUIFER DATA

Saturated Thickness: 16.05 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW4

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.231 ft
Static Water Column Height: 16.05 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 15. ft
Total Well Penetration Depth: 16.05 ft

No. of Observations: 87

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.179	0.4198	0.077
0.01	0.274	0.4447	0.07
0.015	1.139	0.4697	0.062
0.02	1.231	0.4963	0.057
0.025	1.106	0.5247	0.05
0.03	0.997	0.5547	0.045
0.035	0.942	0.5863	0.042
0.04	0.888	0.6213	0.037
0.045	0.842	0.6578	0.033
0.05	0.801	0.6963	0.031
0.055	0.762	0.738	0.027
0.06	0.726	0.7813	0.024
0.065	0.692	0.828	0.023
0.07	0.663	0.8763	0.02
0.075	0.634	0.928	0.019
0.08	0.606	0.983	0.016
0.0848	0.579	1.041	0.014
0.09	0.554	1.103	0.015

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.532	1.168	0.014
0.1	0.51	1.238	0.013
0.1058	0.486	1.311	0.012
0.112	0.462	1.39	0.01
0.1185	0.439	1.473	0.009
0.1255	0.415	1.561	0.009
0.1328	0.391	1.655	0.008
0.1407	0.368	1.753	0.008
0.149	0.345	1.858	0.007
0.1578	0.324	1.968	0.006
0.167	0.307	2.085	0.006
0.177	0.288	2.21	0.005
0.1875	0.269	2.341	0.005
0.1985	0.25	2.481	0.004
0.2102	0.232	2.63	0.004
0.2227	0.215	2.786	0.005
0.2358	0.198	2.953	0.002
0.2498	0.182	3.13	0.001
0.2647	0.167	3.316	0.001
0.2803	0.153	3.515	0.001
0.297	0.14	3.725	0.001
0.3147	0.126	3.946	0.
0.3333	0.115	4.181	0.
0.3532	0.104	4.43	-0.001
0.3742	0.095	4.693	0.
0.3963	0.085		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.953

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.002177	cm/sec
y0	0.9937	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.002075	0.0002109	cm/sec
y0	0.957	0.05123	ft

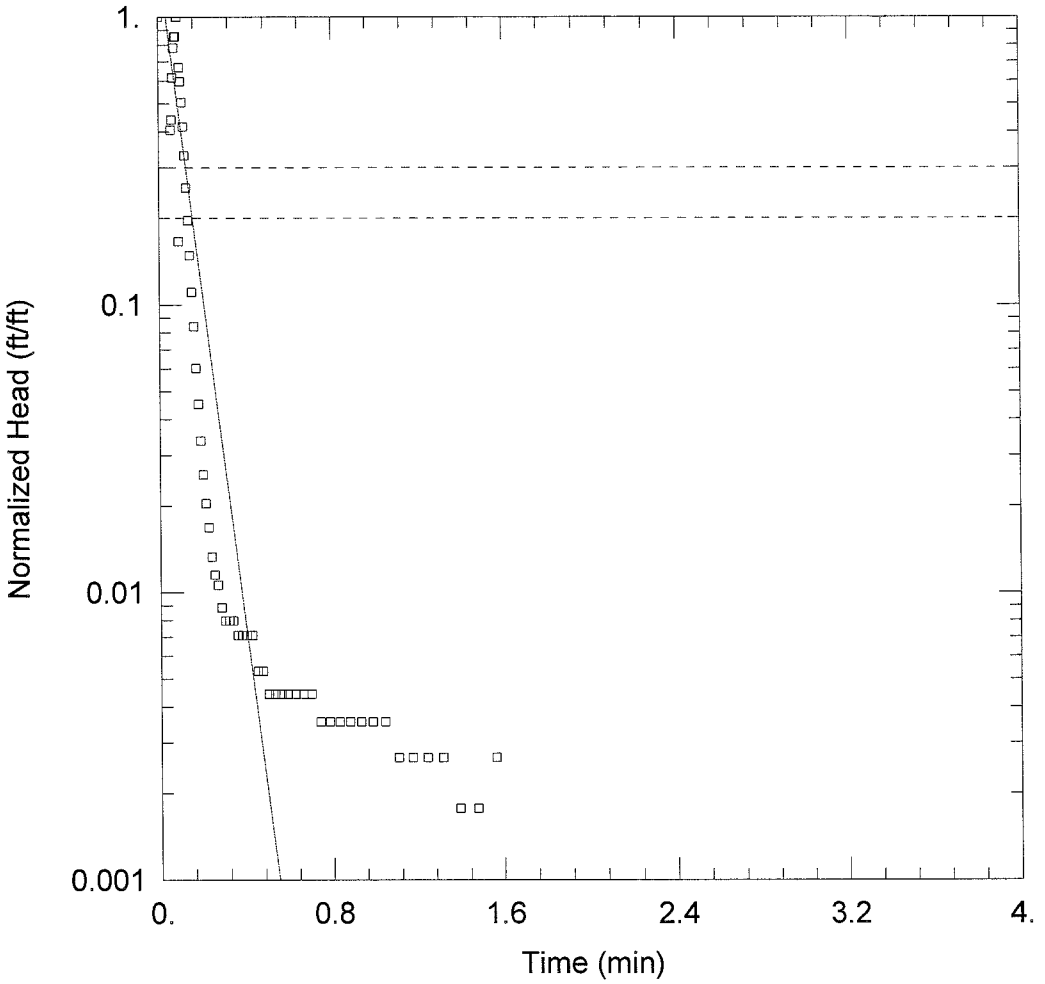
Parameter Correlations

	K	y0
K	1.00	0.74
y0	0.74	1.00

Residual Statistics

for weighted residuals

Sum of Squares	1.4 ft^2
Variance	0.01647 ft^2
Std. Deviation	0.1284 ft
Mean	0.001555 ft
No. of Residuals	87
No. of Estimates	2



MW7 SLUG IN 1

Data Set: C:\...\MW7 Slug In 1.aqt
Date: 08/24/04 Time: 12:38:17

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW7
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 6.45 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW7)

Initial Displacement: 1.128 ft
Total Well Penetration Depth: 6.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 6.45 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.005471 cm/sec v0 = 1.878 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW7 Slug In 1.aqt
Title: MW7 SLUG IN 1
Date: 08/24/04
Time: 12:38:50

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW7

AQUIFER DATA

Saturated Thickness: 6.45 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW7

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.128 ft
Static Water Column Height: 6.45 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 6.45 ft

No. of Observations: 72

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.055	0.458	0.4697	0.006
0.06	0.497	0.4963	0.005
0.065	0.695	0.5247	0.005
0.07	0.882	0.5547	0.005
0.075	0.964	0.5863	0.005
0.08	0.964	0.6213	0.005
0.0848	1.128	0.6578	0.005
0.09	0.188	0.6963	0.005
0.095	0.754	0.738	0.004
0.1	0.673	0.7813	0.004
0.1058	0.57	0.828	0.004
0.112	0.47	0.8763	0.004
0.1185	0.373	0.928	0.004
0.1255	0.288	0.983	0.004
0.1328	0.222	1.041	0.004
0.1407	0.168	1.103	0.003
0.149	0.125	1.168	0.003
0.1578	0.095	1.238	0.003

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.167	0.068	1.311	0.003
0.177	0.051	1.39	0.002
0.1875	0.038	1.473	0.002
0.1985	0.029	1.561	0.003
0.2102	0.023	1.655	0.001
0.2227	0.019	1.753	0.001
0.2358	0.015	1.858	0.001
0.2498	0.013	1.968	0.001
0.2647	0.012	2.085	0.001
0.2803	0.01	2.21	0.001
0.297	0.009	2.341	0.001
0.3147	0.009	2.481	0.
0.3333	0.009	2.63	0.
0.3532	0.008	2.786	0.
0.3742	0.008	2.953	0.
0.3963	0.008	3.13	0.
0.4198	0.008	3.316	0.
0.4447	0.006	3.515	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.29

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.003883	cm/sec
y0	0.8797	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.005471	0.0007561	cm/sec
y0	1.878	0.3102	ft

Parameter Correlations

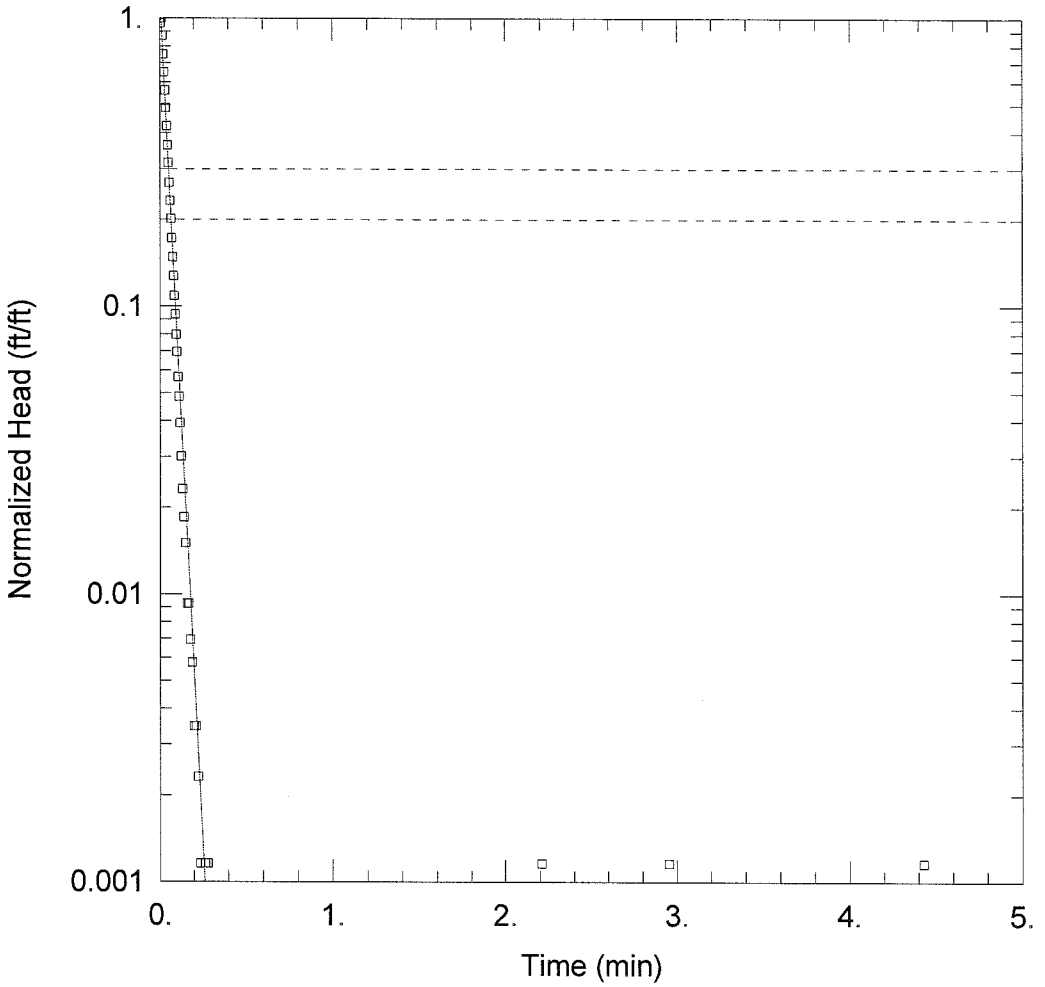
	K	y0
K	1.00	0.94
y0	0.94	1.00

Residual Statistics

for weighted residuals

Sum of Squares . . . . . 1.178 ft^2
Variance . . . . . 0.01682 ft^2
Std. Deviation . . . . . 0.1297 ft
Mean . . . . . -0.006702 ft

No. of Residuals 72
No. of Estimates 2



MW7 SLUG OUT 1

Data Set: C:\...\MW7 Slug Out 1.aqt
Date: 08/24/04 Time: 12:44:12

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW7
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 6.45 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW7)

Initial Displacement: 0.863 ft
Total Well Penetration Depth: 6.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 6.45 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.01085 cm/sec v0 = 1.063 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW7 Slug Out 1.aqt
Title: MW7 SLUG OUT 1
Date: 08/24/04
Time: 12:44:18

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW7

AQUIFER DATA

Saturated Thickness: 6.45 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW7

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.863 ft
Static Water Column Height: 6.45 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 6.45 ft

No. of Observations: 88

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.827	0.4198	0.
0.01	0.863	0.4447	0.
0.015	0.75	0.4697	0.
0.02	0.647	0.4963	-0.001
0.025	0.561	0.5247	0.
0.03	0.485	0.5547	0.
0.035	0.422	0.5863	0.
0.04	0.365	0.6213	0.
0.045	0.313	0.6578	0.
0.05	0.272	0.6963	-0.001
0.055	0.232	0.738	0.
0.06	0.201	0.7813	0.
0.065	0.174	0.828	0.
0.07	0.149	0.8763	0.
0.075	0.128	0.928	0.
0.08	0.11	0.983	0.
0.0848	0.094	1.041	0.
0.09	0.081	1.103	0.

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.069	1.168	0.
0.1	0.06	1.238	0.
0.1058	0.049	1.311	0.
0.112	0.042	1.39	0.
0.1185	0.034	1.473	0.
0.1255	0.026	1.561	0.
0.1328	0.02	1.655	0.
0.1407	0.016	1.753	0.
0.149	0.013	1.858	0.
0.1578	0.008	1.968	0.
0.167	0.008	2.085	0.
0.177	0.006	2.21	0.001
0.1875	0.005	2.341	0.
0.1985	0.003	2.481	0.
0.2102	0.003	2.63	0.
0.2227	0.002	2.786	0.
0.2358	0.001	2.953	0.001
0.2498	0.	3.13	0.
0.2647	0.001	3.316	0.
0.2803	0.001	3.515	0.
0.297	0.	3.725	0.
0.3147	0.	3.946	0.
0.3333	0.	4.181	0.
0.3532	0.	4.43	0.001
0.3742	0.	4.693	0.
0.3963	0.	4.973	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.29

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.005471	cm/sec
y0	1.878	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.01085	0.0001711	cm/sec
y0	1.063	0.01246	ft

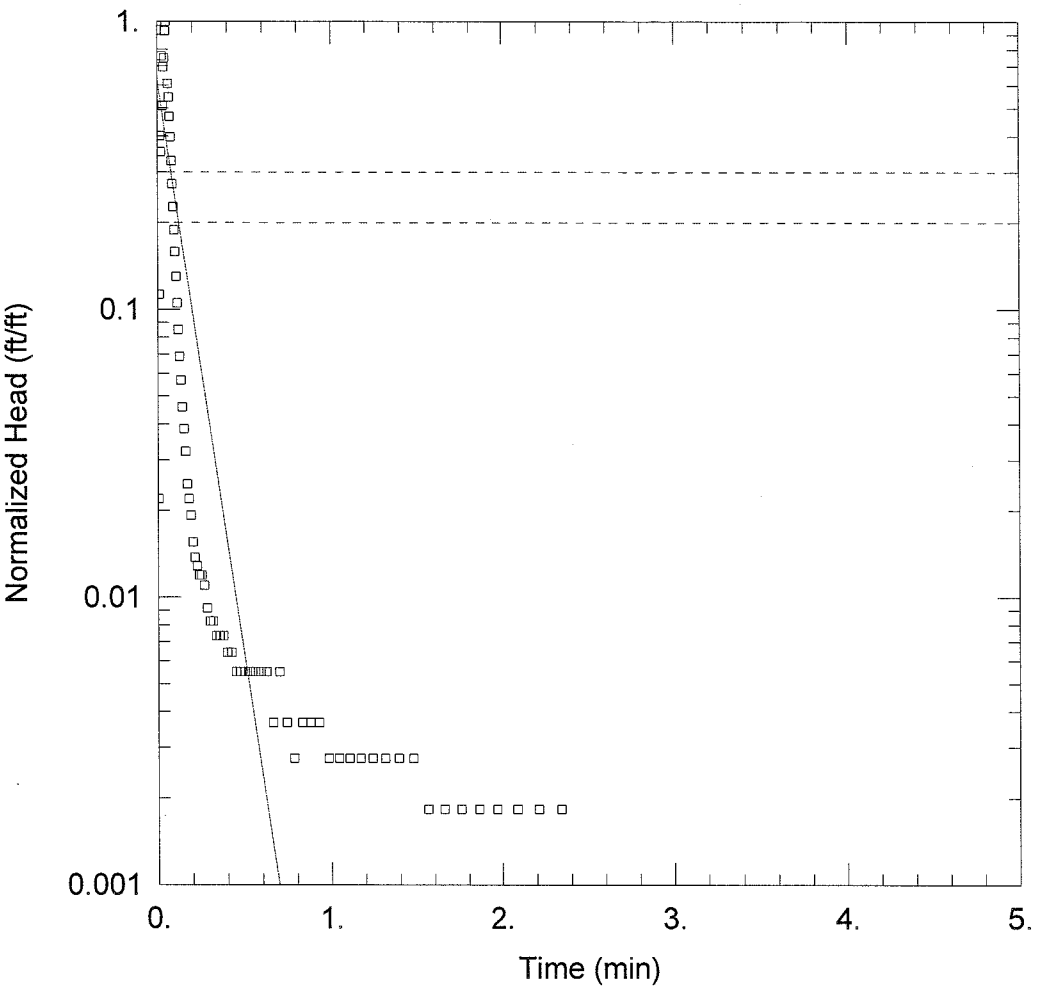
Parameter Correlations

	K	y0
K	1.00	0.76
y0	0.76	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.01813 ft^2
Variance	0.0002108 ft^2
Std. Deviation	0.01452 ft
Mean	-0.001394 ft
No. of Residuals	88
No. of Estimates	2



MW7 SLUG IN 2

Data Set: C:\...\MW7 Slug In 2.aqt
Date: 08/24/04 Time: 12:48:57

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW7
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 6.45 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW7)

Initial Displacement: 1.091 ft
Total Well Penetration Depth: 6.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 6.45 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.003717 cm/sec v0 = 0.6838 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW7 Slug In 2.aqt
Title: MW7 SLUG IN 2
Date: 08/24/04
Time: 12:49:16

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW7

AQUIFER DATA

Saturated Thickness: 6.45 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW7

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.091 ft
Static Water Column Height: 6.45 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 6.45 ft

No. of Observations: 86

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.024	0.4198	0.007
0.01	0.123	0.4447	0.006
0.015	0.437	0.4697	0.006
0.02	0.384	0.4963	0.006
0.025	0.827	0.5247	0.006
0.03	0.556	0.5547	0.006
0.035	0.757	0.5863	0.006
0.04	0.813	0.6213	0.006
0.045	1.011	0.6578	0.004
0.05	1.091	0.6963	0.006
0.06	0.663	0.738	0.004
0.065	0.596	0.7813	0.003
0.07	0.509	0.828	0.004
0.075	0.434	0.8763	0.004
0.08	0.358	0.928	0.004
0.0848	0.298	0.983	0.003
0.09	0.248	1.041	0.003
0.095	0.206	1.103	0.003

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1	0.173	1.168	0.003
0.1058	0.142	1.238	0.003
0.112	0.115	1.311	0.003
0.1185	0.093	1.39	0.003
0.1255	0.075	1.473	0.003
0.1328	0.062	1.561	0.002
0.1407	0.05	1.655	0.002
0.149	0.042	1.753	0.002
0.1578	0.035	1.858	0.002
0.167	0.027	1.968	0.002
0.177	0.024	2.085	0.002
0.1875	0.021	2.21	0.002
0.1985	0.017	2.341	0.002
0.2102	0.015	2.481	0.001
0.2227	0.014	2.63	0.001
0.2358	0.013	2.786	0.001
0.2498	0.013	2.953	0.001
0.2647	0.012	3.13	0.001
0.2803	0.01	3.316	0.001
0.297	0.009	3.515	0.001
0.3147	0.009	3.725	0.001
0.3333	0.008	3.946	0.001
0.3532	0.008	4.181	0.
0.3742	0.008	4.43	0.001
0.3963	0.007	4.693	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.29

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.005471	cm/sec
y0	1.878	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.003717	0.0007027	cm/sec
y0	0.6838	0.07762	ft

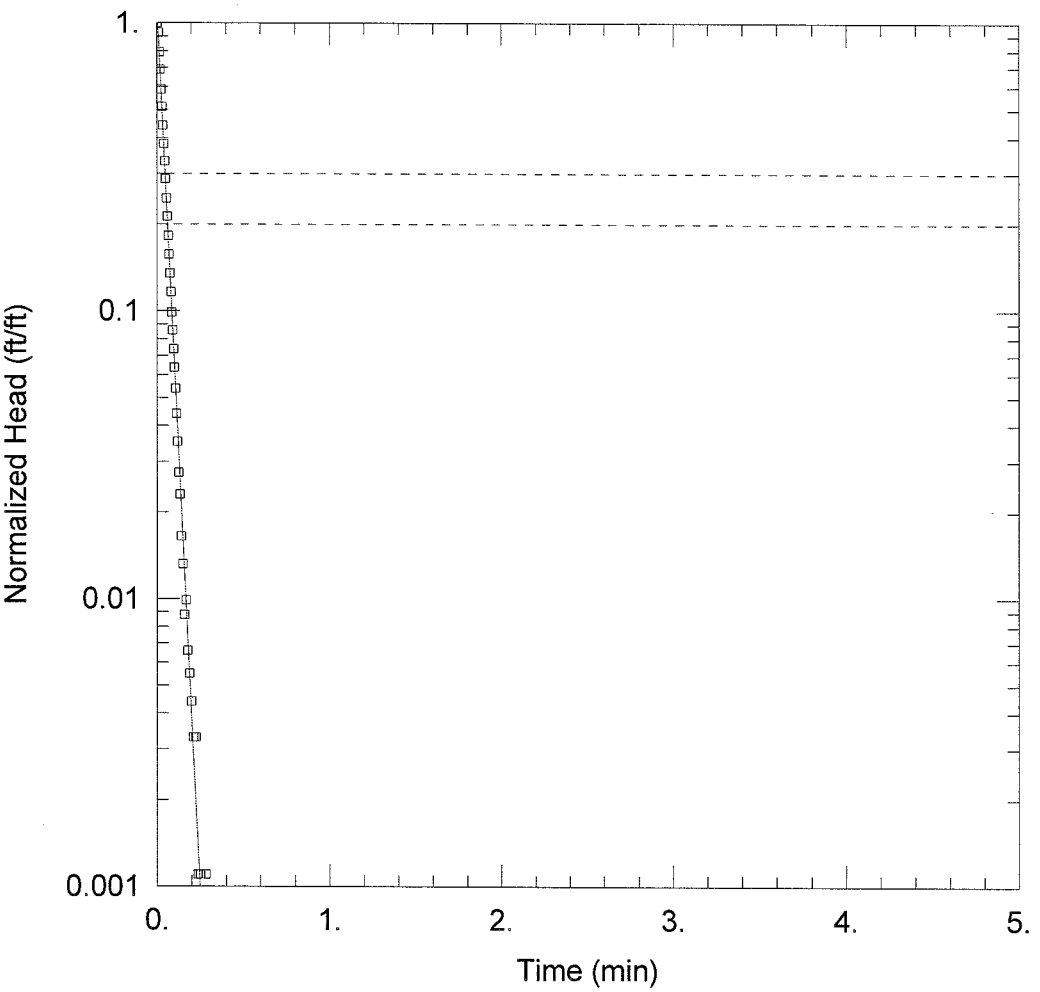
Parameter Correlations

	K	y0
K	1.00	0.74
y0	0.74	1.00

Residual Statistics

for weighted residuals

Sum of Squares	2.103 ft^2
Variance	0.02504 ft^2
Std. Deviation	0.1582 ft
Mean	-0.007737 ft
No. of Residuals	86
No. of Estimates	2



MW7 SLUG OUT 2

Data Set: C:\...\MW7 Slug Out 2.aqt
Date: 08/24/04 Time: 12:52:34

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW7
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 6.45 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW7)

Initial Displacement: 0.909 ft
Total Well Penetration Depth: 6.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 6.45 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.01148 cm/sec v0 = 1.089 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW7 Slug Out 2.aqt
Title: MW7 SLUG OUT 2
Date: 08/24/04
Time: 12:52:47

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW7

AQUIFER DATA

Saturated Thickness: 6.45 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW7

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.909 ft
Static Water Column Height: 6.45 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 6.45 ft

No. of Observations: 88

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.909	0.4198	0.
0.01	0.841	0.4447	-0.001
0.015	0.719	0.4697	-0.001
0.02	0.626	0.4963	-0.001
0.025	0.534	0.5247	0.
0.03	0.465	0.5547	0.
0.035	0.401	0.5863	-0.001
0.04	0.346	0.6213	0.
0.045	0.301	0.6578	-0.001
0.05	0.262	0.6963	-0.001
0.055	0.224	0.738	-0.001
0.06	0.194	0.7813	-0.001
0.065	0.166	0.828	-0.001
0.07	0.143	0.8763	-0.001
0.075	0.123	0.928	-0.001
0.08	0.106	0.983	-0.001
0.0848	0.09	1.041	-0.001
0.09	0.078	1.103	-0.001

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.067	1.168	-0.001
0.1	0.058	1.238	-0.001
0.1058	0.049	1.311	-0.001
0.112	0.04	1.39	-0.001
0.1185	0.032	1.473	-0.001
0.1255	0.025	1.561	-0.001
0.1328	0.021	1.655	-0.001
0.1407	0.015	1.753	-0.001
0.149	0.012	1.858	0.
0.1578	0.008	1.968	-0.001
0.167	0.009	2.085	-0.001
0.177	0.006	2.21	-0.001
0.1875	0.005	2.341	0.
0.1985	0.004	2.481	0.
0.2102	0.003	2.63	-0.001
0.2227	0.003	2.786	-0.001
0.2358	0.001	2.953	0.
0.2498	0.001	3.13	0.
0.2647	0.	3.316	0.
0.2803	0.001	3.515	0.
0.297	0.	3.725	0.
0.3147	0.	3.946	0.
0.3333	0.	4.181	0.
0.3532	0.	4.43	0.
0.3742	0.	4.693	0.
0.3963	0.	4.973	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.29

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.01085	cm/sec
y0	1.063	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.01148	6.522E-5	cm/sec
y0	1.089	0.004629	ft

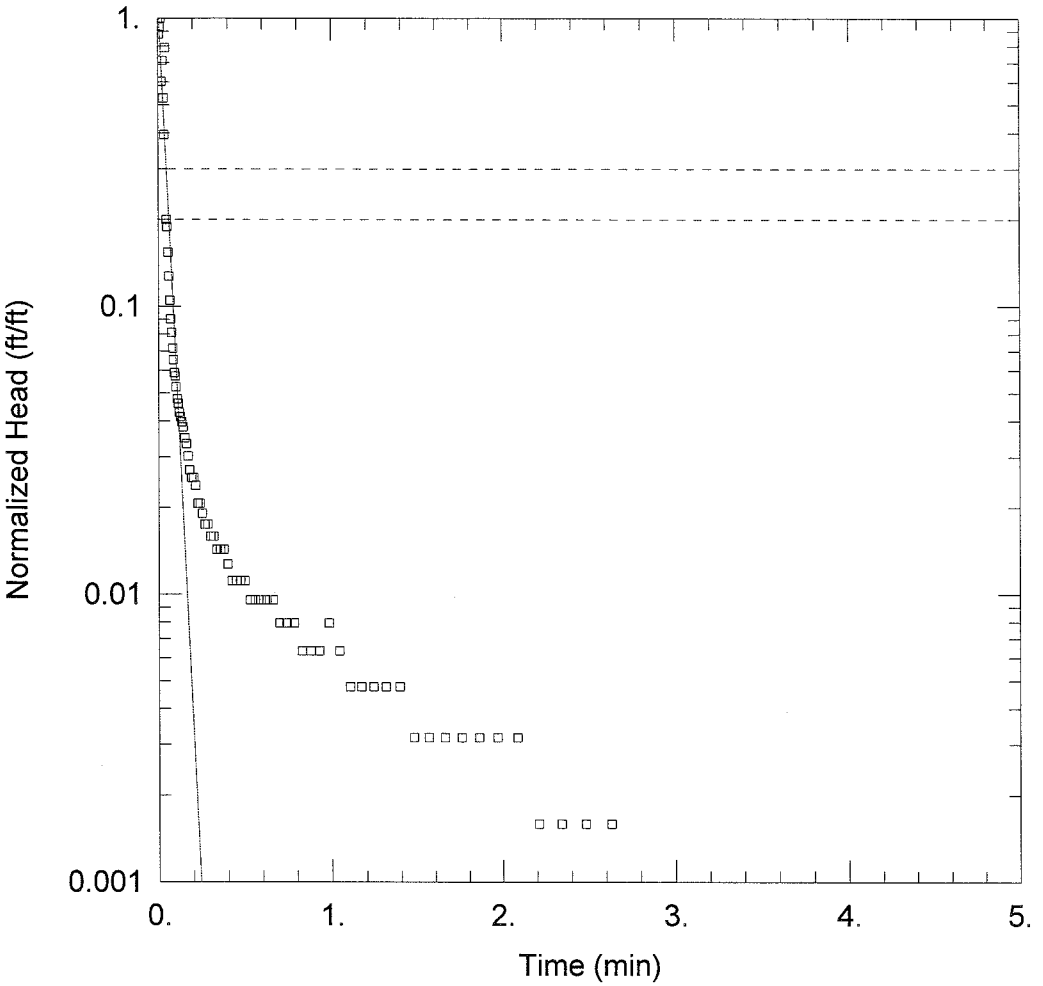
Parameter Correlations

	K	y0
K	1.00	0.76
y0	0.76	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.002333 ft^2
Variance	2.712E-5 ft^2
Std. Deviation	0.005208 ft
Mean	-0.0008314 ft
No. of Residuals	88
No. of Estimates	2



MW8 SLUG IN 1

Data Set: C:\...\MW8 Slug In 1.aqt
Date: 08/24/04 Time: 13:58:57

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW8
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 10.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW8)

Initial Displacement: 0.629 ft
Total Well Penetration Depth: 4.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.5 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.009506 cm/sec v0 = 0.7752 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW8 Slug In 1.aqt
Title: MW8 SLUG IN 1
Date: 08/24/04
Time: 13:59:18

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW8

AQUIFER DATA

Saturated Thickness: 10.5 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW8

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.629 ft
Static Water Column Height: 10.5 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 4.45 ft

No. of Observations: 88

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.553	0.4198	0.007
0.01	0.585	0.4447	0.007
0.015	0.629	0.4697	0.007
0.02	0.379	0.4963	0.007
0.025	0.448	0.5247	0.006
0.03	0.332	0.5547	0.006
0.035	0.248	0.5863	0.006
0.04	0.497	0.6213	0.006
0.045	0.126	0.6578	0.006
0.05	0.119	0.6963	0.005
0.055	0.097	0.738	0.005
0.06	0.08	0.7813	0.005
0.065	0.066	0.828	0.004
0.07	0.057	0.8763	0.004
0.075	0.051	0.928	0.004
0.08	0.045	0.983	0.005
0.0848	0.041	1.041	0.004
0.09	0.037	1.103	0.003

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.036	1.168	0.003
0.1	0.033	1.238	0.003
0.1058	0.03	1.311	0.003
0.112	0.029	1.39	0.003
0.1185	0.027	1.473	0.002
0.1255	0.026	1.561	0.002
0.1328	0.025	1.655	0.002
0.1407	0.024	1.753	0.002
0.149	0.022	1.858	0.002
0.1578	0.021	1.968	0.002
0.167	0.019	2.085	0.002
0.177	0.017	2.21	0.001
0.1875	0.016	2.341	0.001
0.1985	0.016	2.481	0.001
0.2102	0.015	2.63	0.001
0.2227	0.013	2.786	0.
0.2358	0.013	2.953	0.
0.2498	0.012	3.13	0.
0.2647	0.011	3.316	0.
0.2803	0.011	3.515	0.
0.297	0.01	3.725	0.
0.3147	0.01	3.946	0.
0.3333	0.009	4.181	0.
0.3532	0.009	4.43	0.
0.3742	0.009	4.693	0.
0.3963	0.008	4.973	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 1.838

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.005471	cm/sec
y0	1.878	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.009506	0.000582	cm/sec
y0	0.7752	0.03564	ft

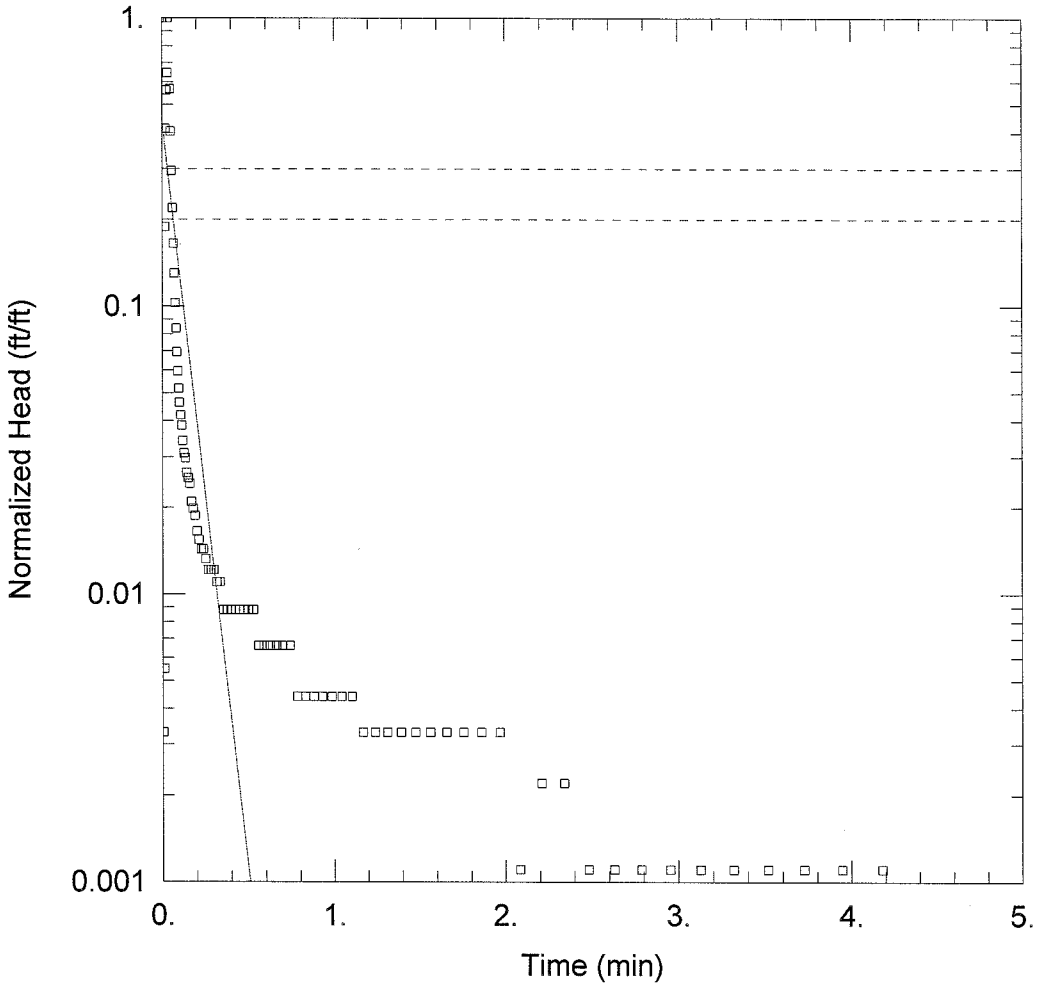
Parameter Correlations

	K	y0
K	1.00	0.76
y0	0.76	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.1329 ft^2
Variance	0.001545 ft^2
Std. Deviation	0.03931 ft
Mean	0.002339 ft
No. of Residuals	88
No. of Estimates	2



MW8 SLUG IN 2

Data Set: C:\...\MW8 Slug In 2.aqt
Date: 08/24/04 Time: 14:03:41

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW8
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 10.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW8)

Initial Displacement: 0.907 ft
Total Well Penetration Depth: 4.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.5 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.003861 cm/sec v0 = 0.4002 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW8 Slug In 2.aqt
Title: MW8 SLUG IN 2
Date: 08/24/04
Time: 14:03:53

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW8

AQUIFER DATA

Saturated Thickness: 10.5 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW8

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.907 ft
Static Water Column Height: 10.5 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 4.45 ft

No. of Observations: 87

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.003	0.4447	0.008
0.01	0.005	0.4697	0.008
0.015	0.171	0.4963	0.008
0.02	0.376	0.5247	0.008
0.025	0.509	0.5547	0.006
0.03	0.585	0.5863	0.006
0.035	0.907	0.6213	0.006
0.045	0.514	0.6578	0.006
0.05	0.367	0.6963	0.006
0.055	0.268	0.738	0.006
0.06	0.199	0.7813	0.004
0.065	0.15	0.828	0.004
0.07	0.118	0.8763	0.004
0.075	0.093	0.928	0.004
0.08	0.076	0.983	0.004
0.0848	0.063	1.041	0.004
0.09	0.054	1.103	0.004
0.095	0.047	1.168	0.003

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1	0.042	1.238	0.003
0.1058	0.038	1.311	0.003
0.112	0.035	1.39	0.003
0.1185	0.031	1.473	0.003
0.1255	0.028	1.561	0.003
0.1328	0.027	1.655	0.003
0.1407	0.024	1.753	0.003
0.149	0.023	1.858	0.003
0.1578	0.022	1.968	0.003
0.167	0.019	2.085	0.001
0.177	0.018	2.21	0.002
0.1875	0.017	2.341	0.002
0.1985	0.015	2.481	0.001
0.2102	0.014	2.63	0.001
0.2227	0.013	2.786	0.001
0.2358	0.013	2.953	0.001
0.2498	0.012	3.13	0.001
0.2647	0.011	3.316	0.001
0.2803	0.011	3.515	0.001
0.297	0.011	3.725	0.001
0.3147	0.01	3.946	0.001
0.3333	0.01	4.181	0.001
0.3532	0.008	4.43	0.
0.3742	0.008	4.693	0.
0.3963	0.008	4.973	0.
0.4198	0.008		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 1.838

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.009506	cm/sec
y0	0.7752	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.003861	0.0009138	cm/sec
y0	0.4002	0.06129	ft

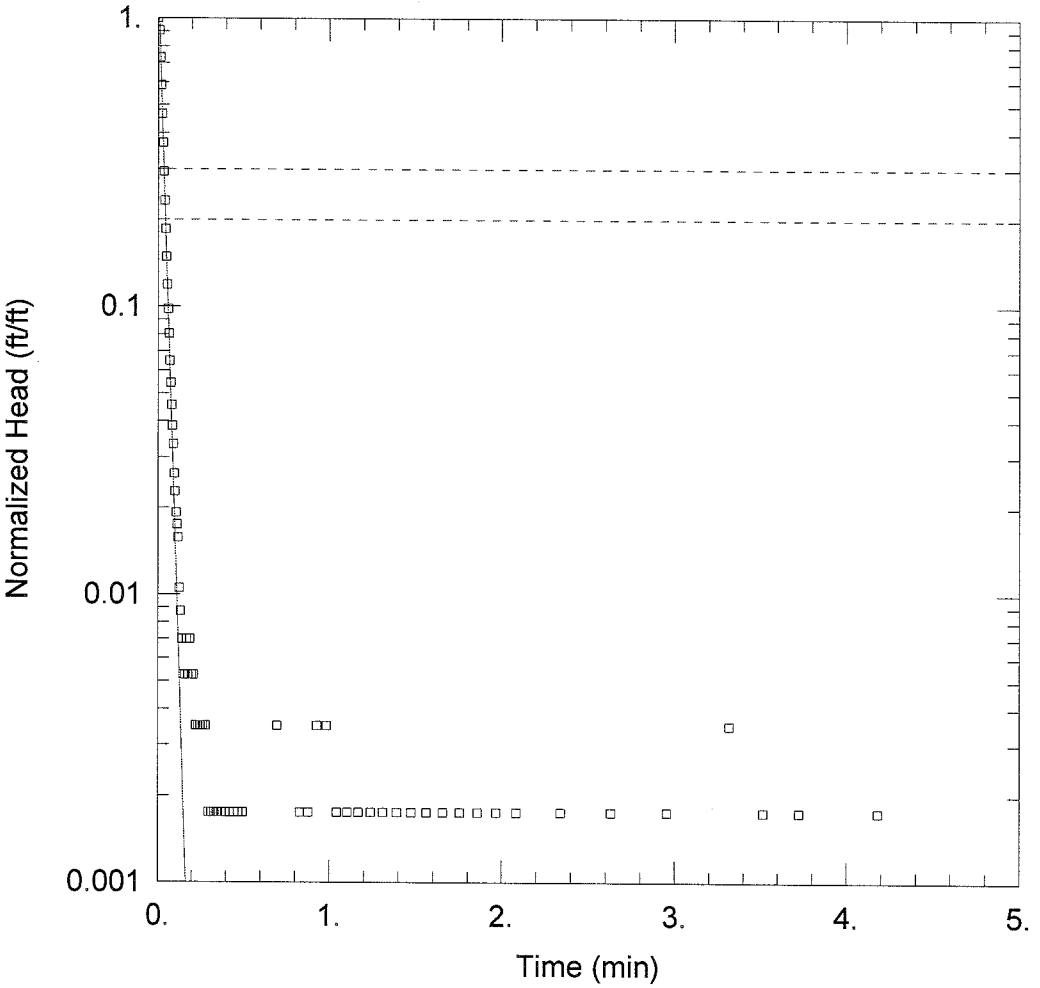
Parameter Correlations

	K	y0
K	1.00	0.75
y0	0.75	1.00

Residual Statistics

for weighted residuals

Sum of Squares	1.023 ft^2
Variance	0.01204 ft^2
Std. Deviation	0.1097 ft
Mean	-0.002319 ft
No. of Residuals	87
No. of Estimates	2



MW8 SLUG OUT 1

Data Set: C:\...\MW8 Slug Out 1.aqt
Date: 08/24/04 Time: 14:06:51

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW8
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 10.5 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW8)

Initial Displacement: 0.571 ft
Total Well Penetration Depth: 4.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.5 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01422 cm/sec
y0 = 0.802 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW8 Slug Out 1.aqt
Title: MW8 SLUG OUT 1
Date: 08/24/04
Time: 14:06:59

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW8

AQUIFER DATA

Saturated Thickness: 10.5 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW8

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.571 ft
Static Water Column Height: 10.5 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 4.45 ft

No. of Observations: 86

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.64	0.3963	0.001
0.01	0.517	0.4198	0.001
0.015	0.417	0.4447	0.
0.02	0.334	0.4697	0.001
0.025	0.266	0.4963	0.001
0.03	0.211	0.5247	0.
0.035	0.168	0.5547	0.
0.04	0.133	0.5863	0.
0.045	0.106	0.6213	0.
0.05	0.085	0.6578	0.
0.055	0.068	0.6963	0.002
0.06	0.056	0.738	0.
0.065	0.046	0.7813	0.
0.07	0.037	0.828	0.001
0.075	0.031	0.8763	0.001
0.08	0.026	0.928	0.002
0.0848	0.022	0.983	0.002
0.09	0.019	1.041	0.001

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.015	1.103	0.001
0.1	0.013	1.168	0.001
0.1058	0.011	1.238	0.001
0.112	0.01	1.311	0.001
0.1185	0.009	1.39	0.001
0.1255	0.006	1.473	0.001
0.1328	0.005	1.561	0.001
0.1407	0.004	1.655	0.001
0.149	0.003	1.753	0.001
0.1578	0.003	1.858	0.001
0.167	0.004	1.968	0.001
0.177	0.003	2.085	0.001
0.1875	0.004	2.21	0.
0.1985	0.003	2.341	0.001
0.2102	0.003	2.481	0.
0.2227	0.002	2.63	0.001
0.2358	0.002	2.786	0.
0.2498	0.002	2.953	0.001
0.2647	0.002	3.13	0.
0.2803	0.002	3.316	0.002
0.297	0.001	3.515	0.001
0.3147	0.001	3.725	0.001
0.3333	0.001	3.946	0.
0.3532	0.001	4.181	0.001
0.3742	0.001	4.43	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 1.838

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.003861	cm/sec
y0	0.4002	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.01422	5.473E-5	cm/sec
y0	0.802	0.002427	ft

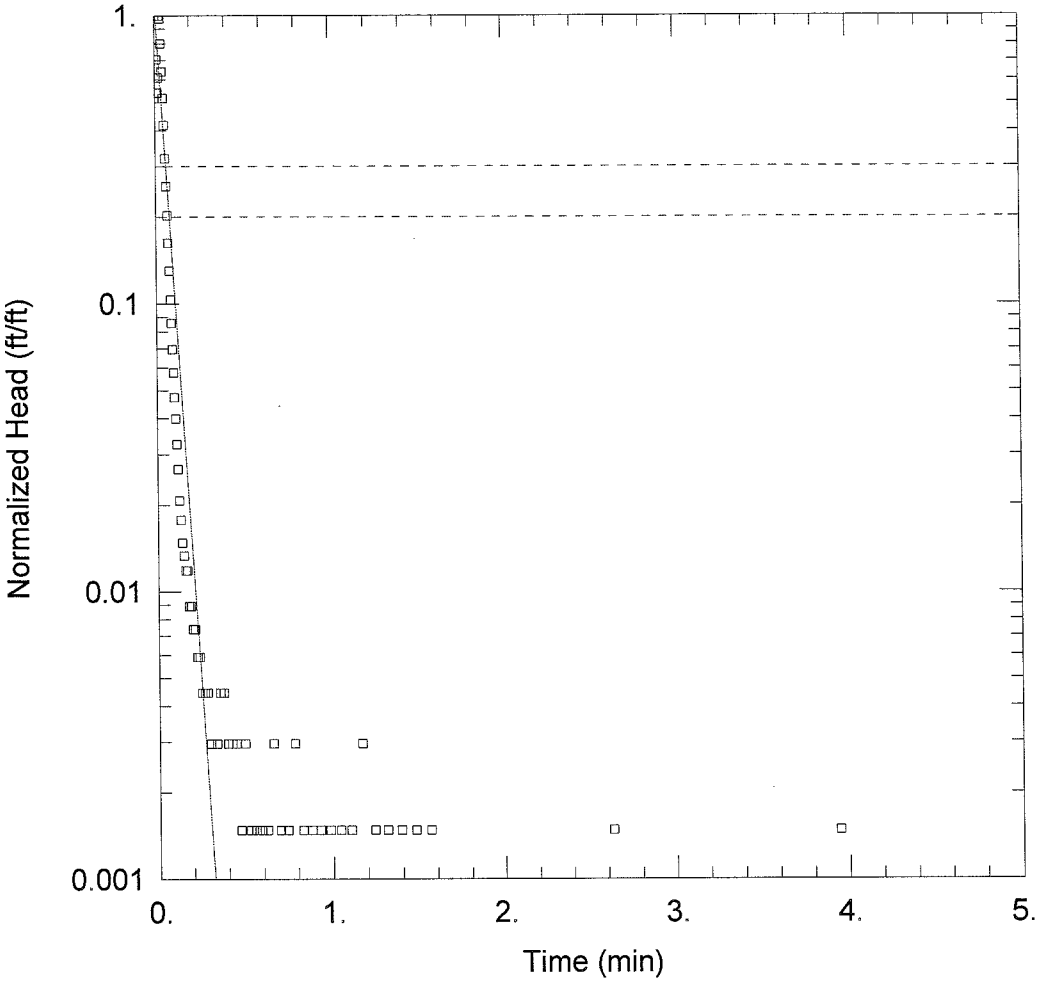
Parameter Correlations

	K	y0
K	1.00	0.78
y0	0.78	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.0003449 ft^2
Variance	4.106E-6 ft^2
Std. Deviation	0.002026 ft
Mean	0.001127 ft
No. of Residuals	86
No. of Estimates	2



MW8 SLUG OUT 2

Data Set: C:\...\MW8 Slug Out 2.aqt
Date: 08/24/04 Time: 14:09:58

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW8
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 10.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW8)

Initial Displacement: 0.676 ft
Total Well Penetration Depth: 4.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.5 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.007118 cm/sec v0 = 0.7805 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW8 Slug Out 2.aqt
Title: MW8 SLUG OUT 2
Date: 08/24/04
Time: 14:10:04

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW8

AQUIFER DATA

Saturated Thickness: 10.5 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW8

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.676 ft
Static Water Column Height: 10.5 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 4.45 ft

No. of Observations: 84

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.01	0.477	0.3963	0.002
0.015	0.365	0.4198	0.002
0.02	0.412	0.4447	0.002
0.025	0.676	0.4697	0.001
0.03	0.659	0.4963	0.002
0.035	0.541	0.5247	0.001
0.04	0.433	0.5547	0.001
0.045	0.35	0.5863	0.001
0.05	0.282	0.6213	0.001
0.055	0.216	0.6578	0.002
0.06	0.173	0.6963	0.001
0.065	0.137	0.738	0.001
0.07	0.11	0.7813	0.002
0.075	0.088	0.828	0.001
0.08	0.07	0.8763	0.001
0.0848	0.058	0.928	0.001
0.09	0.047	0.983	0.001
0.095	0.039	1.041	0.001

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1	0.032	1.103	0.001
0.1058	0.027	1.168	0.002
0.112	0.022	1.238	0.001
0.1185	0.018	1.311	0.001
0.1255	0.014	1.39	0.001
0.1328	0.012	1.473	0.001
0.1407	0.01	1.561	0.001
0.149	0.009	1.655	-0.001
0.1578	0.008	1.753	0.
0.167	0.008	1.858	0.
0.177	0.006	1.968	0.
0.1875	0.006	2.085	0.
0.1985	0.005	2.21	0.
0.2102	0.005	2.341	0.
0.2227	0.004	2.481	0.
0.2358	0.004	2.63	0.001
0.2498	0.003	2.786	0.
0.2647	0.003	2.953	0.
0.2803	0.003	3.13	0.
0.297	0.002	3.316	0.
0.3147	-0.002	3.515	0.
0.3333	0.002	3.725	0.
0.3532	0.003	3.946	0.001
0.3742	0.003	4.181	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 1.838

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.01422	cm/sec
y0	0.802	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.007118	0.0006229	cm/sec
y0	0.7805	0.05507	ft

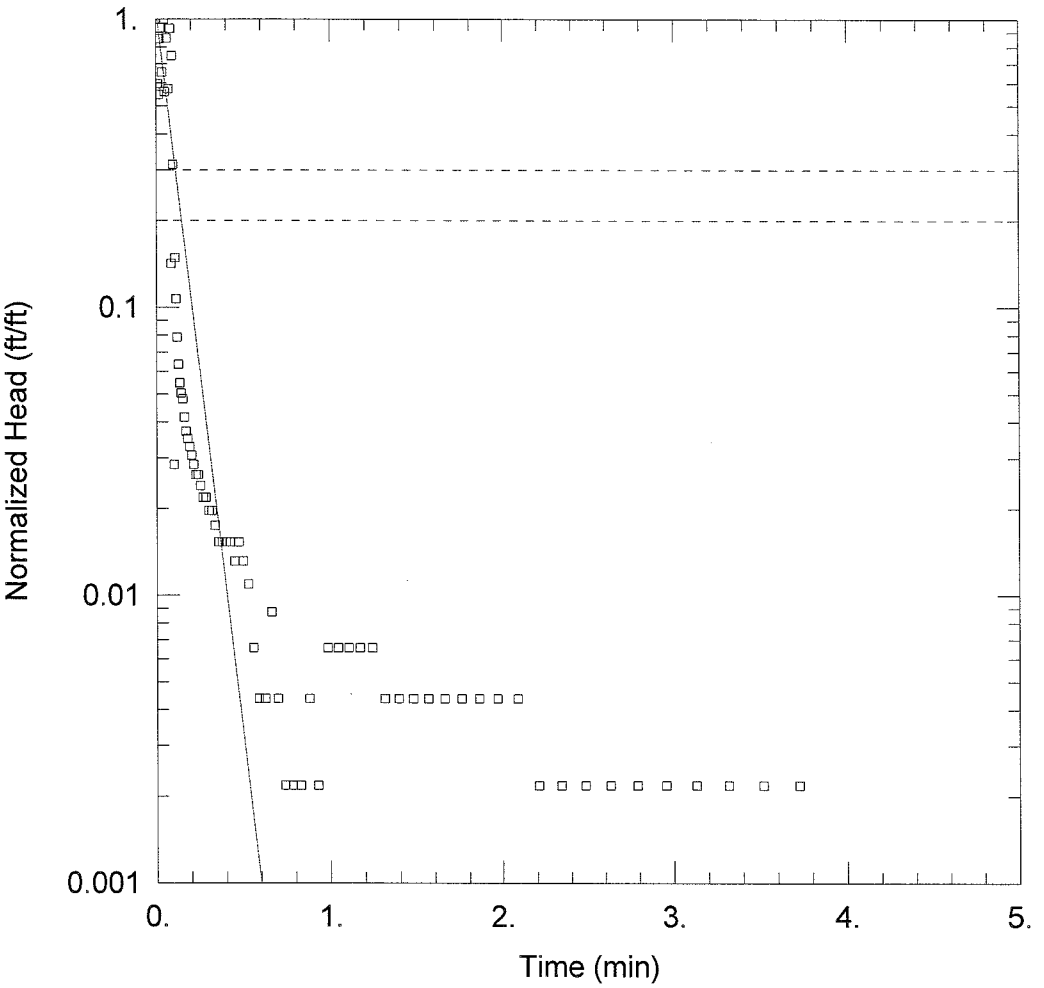
Parameter Correlations

	K	y0
K	1.00	0.81
y0	0.81	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.2725 ft^2
Variance	0.003323 ft^2
Std. Deviation	0.05765 ft
Mean	-0.003897 ft
No. of Residuals	84
No. of Estimates	2



MW10 SLUG IN 1

Data Set: C:\...\MW10 Slug In 1.aqt
Date: 08/24/04 Time: 14:16:40

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW10
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 7.65 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW10)

Initial Displacement: 0.457 ft
Total Well Penetration Depth: 5.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 7.65 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.004094 cm/sec v0 = 0.5049 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW10 Slug In 1.aqt
Title: MW10 SLUG IN 1
Date: 08/24/04
Time: 14:16:49

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW10

AQUIFER DATA

Saturated Thickness: 7.65 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW10

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.457 ft
Static Water Column Height: 7.65 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 5.45 ft

No. of Observations: 83

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.01	0.273	0.4697	0.007
0.015	0.25	0.4963	0.006
0.02	0.39	0.5247	0.005
0.025	0.426	0.5547	0.003
0.035	0.299	0.5863	0.002
0.045	0.457	0.6213	0.002
0.05	0.256	0.6578	0.004
0.055	0.53	0.6963	0.002
0.06	0.392	0.738	0.001
0.065	0.48	0.7813	0.001
0.07	0.262	0.828	0.001
0.08	0.424	0.8763	0.002
0.0848	0.065	0.928	0.001
0.09	0.341	0.983	0.003
0.095	0.143	1.041	0.003
0.1	0.013	1.103	0.003
0.1058	0.068	1.168	0.003
0.112	0.049	1.238	0.003

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1185	0.036	1.311	0.002
0.1255	0.029	1.39	0.002
0.1328	0.025	1.473	0.002
0.1407	0.023	1.561	0.002
0.149	0.022	1.655	0.002
0.1578	0.019	1.753	0.002
0.167	0.017	1.858	0.002
0.177	0.016	1.968	0.002
0.1875	0.015	2.085	0.002
0.1985	0.014	2.21	0.001
0.2102	0.013	2.341	0.001
0.2227	0.012	2.481	0.001
0.2358	0.012	2.63	0.001
0.2498	0.011	2.786	0.001
0.2647	0.01	2.953	0.001
0.2803	0.01	3.13	0.001
0.297	0.009	3.316	0.001
0.3147	0.009	3.515	0.001
0.3333	0.008	3.725	0.001
0.3532	0.007	3.946	0.
0.3742	0.007	4.181	0.
0.3963	0.007	4.43	0.
0.4198	0.007	4.693	0.
0.4447	0.006		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.008512	cm/sec
y0	0.5061	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.004094	0.0005444	cm/sec
y0	0.5049	0.04704	ft

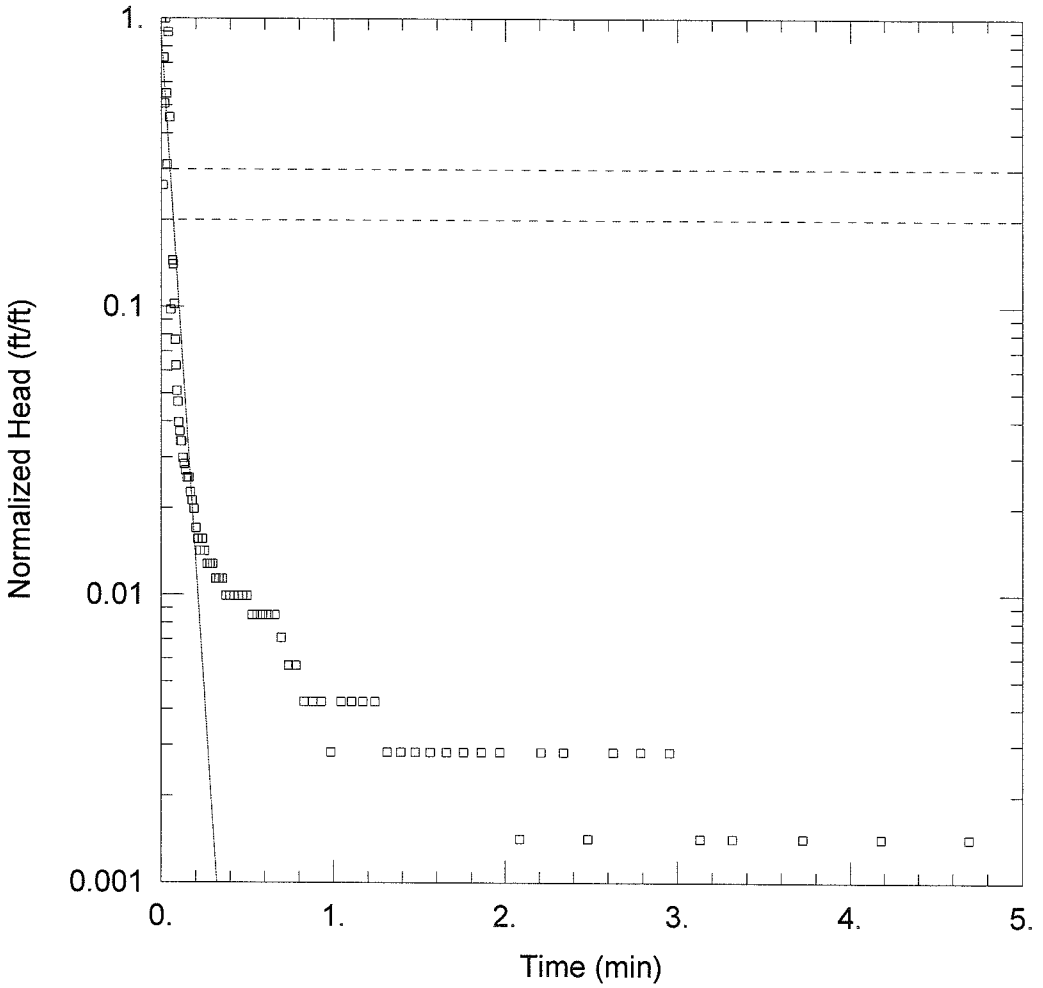
Parameter Correlations

	K	y0
K	1.00	0.77
y0	0.77	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.4172 ft^2
Variance	0.005151 ft^2
Std. Deviation	0.07177 ft
Mean	-0.003288 ft
No. of Residuals	83
No. of Estimates	2



MW10 SLUG IN 2

Data Set: C:\...\MW10 Slug In 2.aqt
Date: 08/24/04 Time: 14:20:08

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW10
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 7.65 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW10)

Initial Displacement: 0.705 ft
Total Well Penetration Depth: 5.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 7.65 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.007404 cm/sec
y0 = 0.6255 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW10 Slug In 2.aqt
Title: MW10 SLUG IN 2
Date: 08/24/04
Time: 14:20:16

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW10

AQUIFER DATA

Saturated Thickness: 7.65 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW10

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.705 ft
Static Water Column Height: 7.65 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 5.45 ft

No. of Observations: 85

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.01	0.186	0.4697	0.007
0.015	0.515	0.4963	0.007
0.02	0.357	0.5247	0.006
0.025	0.705	0.5547	0.006
0.03	0.387	0.5863	0.006
0.035	0.22	0.6213	0.006
0.04	0.63	0.6578	0.006
0.05	0.32	0.6963	0.005
0.055	0.069	0.738	0.004
0.065	0.102	0.7813	0.004
0.07	0.099	0.828	0.003
0.075	0.072	0.8763	0.003
0.08	0.054	0.928	0.003
0.0848	0.044	0.983	0.002
0.09	0.036	1.041	0.003
0.095	0.033	1.103	0.003
0.1	0.028	1.168	0.003
0.1058	0.026	1.238	0.003

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.112	0.024	1.311	0.002
0.1185	0.024	1.39	0.002
0.1255	0.021	1.473	0.002
0.1328	0.02	1.561	0.002
0.1407	0.019	1.655	0.002
0.149	0.018	1.753	0.002
0.1578	0.018	1.858	0.002
0.167	0.016	1.968	0.002
0.177	0.015	2.085	0.001
0.1875	0.014	2.21	0.002
0.1985	0.012	2.341	0.002
0.2102	0.011	2.481	0.001
0.2227	0.01	2.63	0.002
0.2358	0.011	2.786	0.002
0.2498	0.01	2.953	0.002
0.2647	0.009	3.13	0.001
0.2803	0.009	3.316	0.001
0.297	0.009	3.515	0.
0.3147	0.008	3.725	0.001
0.3333	0.008	3.946	0.
0.3532	0.008	4.181	0.001
0.3742	0.007	4.43	0.
0.3963	0.007	4.693	0.001
0.4198	0.007	4.973	0.
0.4447	0.007		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.004094	cm/sec
y0	0.5049	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.007404	0.001004	cm/sec
y0	0.6255	0.06566	ft

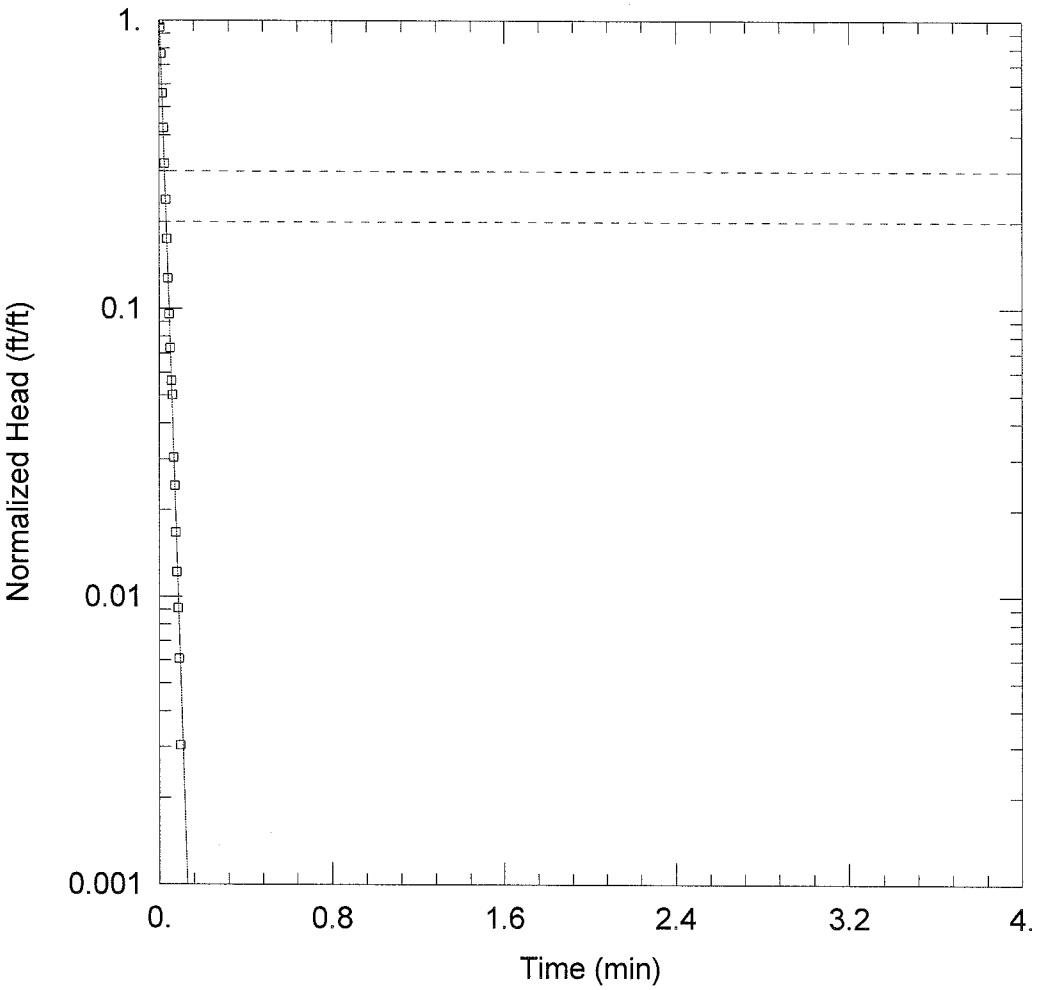
Parameter Correlations

	K	y0
K	1.00	0.80
y0	0.80	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.418 ft^2
Variance	0.005036 ft^2
Std. Deviation	0.07096 ft
Mean	-0.0006365 ft
No. of Residuals	85
No. of Estimates	2



MW10 SLUG OUT 1

Data Set: C:\...\MW10 Slug Out 1.aqt
Date: 08/24/04 Time: 14:23:16

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW10
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 7.65 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW10)

Initial Displacement: 0.658 ft
Total Well Penetration Depth: 5.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 7.65 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.01951 cm/sec v0 = 0.8422 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW10 Slug Out 1.aqt
Title: MW10 SLUG OUT 1
Date: 08/24/04
Time: 14:23:24

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW10

AQUIFER DATA

Saturated Thickness: 7.65 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW10

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.658 ft
Static Water Column Height: 7.65 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 5.45 ft

No. of Observations: 84

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.621	0.3742	-0.004
0.01	0.504	0.3963	-0.005
0.015	0.368	0.4198	-0.004
0.02	0.279	0.4447	-0.004
0.025	0.21	0.4697	-0.004
0.03	0.157	0.4963	-0.004
0.035	0.115	0.5247	-0.003
0.04	0.084	0.5547	-0.003
0.045	0.063	0.5863	-0.003
0.05	0.048	0.6213	-0.004
0.055	0.037	0.6578	-0.004
0.06	0.033	0.6963	-0.003
0.065	0.02	0.738	-0.004
0.07	0.016	0.7813	-0.002
0.075	0.011	0.828	-0.002
0.08	0.008	0.8763	-0.003
0.0848	0.006	0.928	-0.003
0.09	0.004	0.983	-0.003

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.002	1.041	-0.003
0.1	0.	1.103	-0.002
0.1058	-0.001	1.168	-0.002
0.112	-0.001	1.238	-0.003
0.1185	-0.003	1.311	-0.002
0.1255	-0.003	1.39	-0.002
0.1328	-0.004	1.473	-0.002
0.1407	-0.004	1.561	-0.001
0.149	-0.005	1.655	-0.001
0.1578	-0.005	1.753	-0.001
0.167	-0.004	1.858	-0.002
0.177	-0.004	1.968	-0.001
0.1875	-0.004	2.085	-0.001
0.1985	-0.004	2.21	-0.001
0.2102	-0.004	2.341	0.
0.2227	-0.004	2.481	0.
0.2358	-0.005	2.63	0.
0.2498	-0.005	2.786	-0.001
0.2647	-0.004	2.953	0.
0.2803	-0.005	3.13	0.
0.297	-0.005	3.316	0.
0.3147	-0.004	3.515	0.
0.3333	-0.004	3.725	-0.001
0.3532	-0.004	3.946	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.007404	cm/sec
y0	0.6255	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.01951	0.0001809	cm/sec
y0	0.8422	0.006339	ft

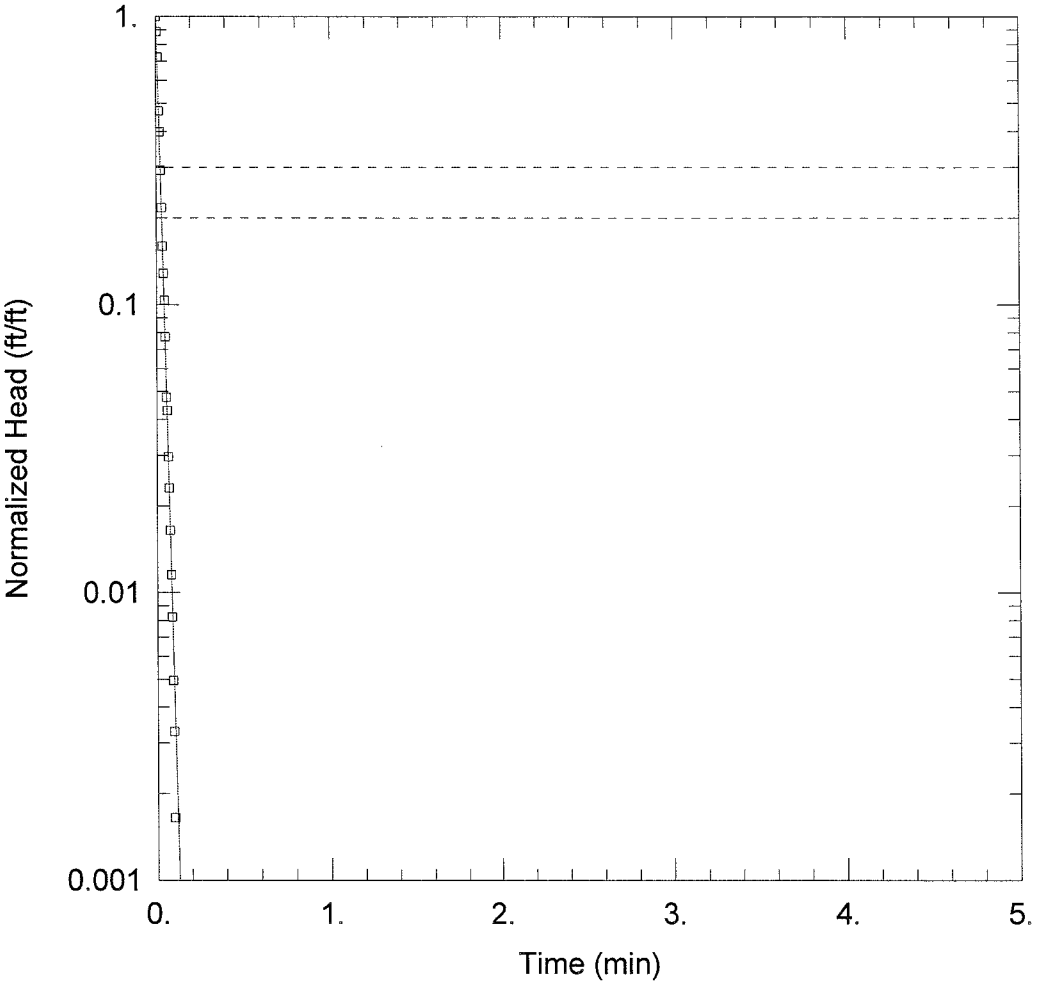
Parameter Correlations

	K	y0
K	1.00	0.80
y0	0.80	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.001595 ft^2
Variance	1.945E-5 ft^2
Std. Deviation	0.00441 ft
Mean	-0.002447 ft
No. of Residuals	84
No. of Estimates	2



MW10 SLUG OUT 2

Data Set: C:\...\MW10 Slug Out 2.aqt
Date: 08/24/04 Time: 14:25:47

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW10
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 7.65 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW10)

Initial Displacement: 0.607 ft
Total Well Penetration Depth: 5.45 ft
Casing Radius: 0.083 ft
Static Water Column Height: 7.65 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.01968 cm/sec v0 = 0.7231 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW10 Slug Out 2.aqt
Title: MW10 SLUG OUT 2
Date: 08/24/04
Time: 14:25:53

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW10

AQUIFER DATA

Saturated Thickness: 7.65 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW10

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.607 ft
Static Water Column Height: 7.65 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 5.45 ft

No. of Observations: 88

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.537	0.4198	-0.004
0.01	0.439	0.4447	-0.003
0.015	0.286	0.4697	-0.003
0.02	0.242	0.4963	-0.003
0.025	0.178	0.5247	-0.003
0.03	0.132	0.5547	-0.004
0.035	0.097	0.5863	-0.003
0.04	0.078	0.6213	-0.003
0.045	0.063	0.6578	-0.003
0.05	0.047	0.6963	-0.003
0.055	0.029	0.738	-0.003
0.06	0.026	0.7813	-0.003
0.065	0.018	0.828	-0.003
0.07	0.014	0.8763	-0.003
0.075	0.01	0.928	-0.003
0.08	0.007	0.983	-0.002
0.0848	0.005	1.041	-0.003
0.09	0.003	1.103	-0.003

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.002	1.168	-0.002
0.1	0.001	1.238	-0.002
0.1058	0.	1.311	-0.002
0.112	-0.001	1.39	-0.002
0.1185	-0.002	1.473	-0.001
0.1255	-0.003	1.561	-0.002
0.1328	-0.004	1.655	-0.002
0.1407	-0.003	1.753	-0.002
0.149	-0.004	1.858	-0.001
0.1578	-0.006	1.968	-0.002
0.167	-0.003	2.085	-0.001
0.177	-0.003	2.21	-0.001
0.1875	-0.003	2.341	-0.001
0.1985	-0.003	2.481	-0.001
0.2102	-0.004	2.63	-0.001
0.2227	-0.004	2.786	-0.001
0.2358	-0.004	2.953	0.
0.2498	-0.003	3.13	0.
0.2647	-0.004	3.316	-0.002
0.2803	-0.004	3.515	-0.002
0.297	-0.004	3.725	0.
0.3147	-0.004	3.946	-0.001
0.3333	-0.004	4.181	-0.001
0.3532	-0.004	4.43	-0.001
0.3742	-0.004	4.693	0.
0.3963	-0.004	4.973	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.01951	cm/sec
y0	0.8422	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.01968	0.0002415	cm/sec
y0	0.7231	0.007214	ft

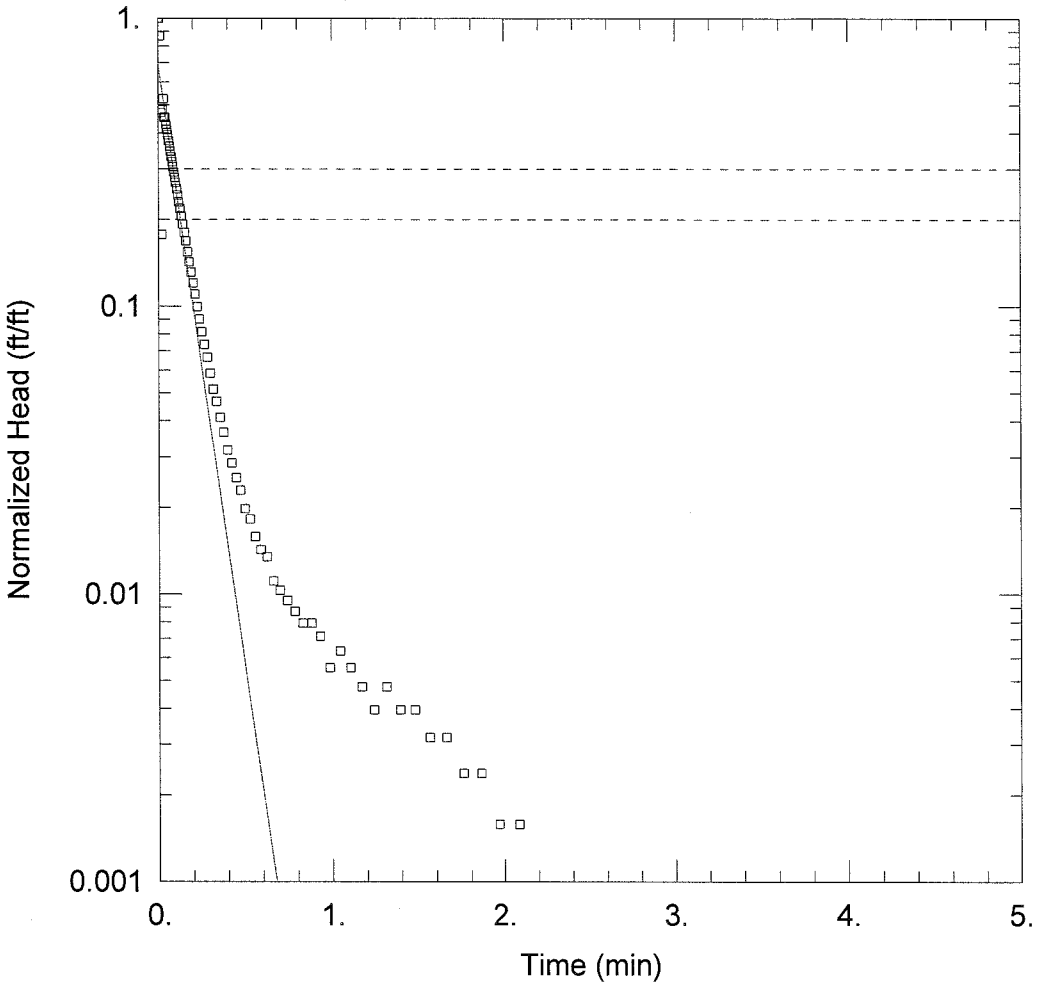
Parameter Correlations

	K	y0
K	1.00	0.80
y0	0.80	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.002135 ft^2
Variance	2.482E-5 ft^2
Std. Deviation	0.004982 ft
Mean	-0.002037 ft
No. of Residuals	88
No. of Estimates	2



MW11 SLUG IN 1

Data Set:
Date: 08/24/04 Time: 11:07:13

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW11
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 10.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW11)

Initial Displacement: 1.262 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.003883 cm/sec v0 = 0.8797 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW
Title: MW11 SLUG IN 1
Date: 08/24/04
Time: 11:07:32

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW11

AQUIFER DATA

Saturated Thickness: 10.75 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW11

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.262 ft
Static Water Column Height: 9. ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 9. ft

No. of Observations: 88

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	1.262	0.4198	0.036
0.01	1.096	0.4447	0.032
0.015	0.594	0.4697	0.029
0.02	0.224	0.4963	0.025
0.025	0.606	0.5247	0.023
0.03	0.663	0.5547	0.02
0.035	0.572	0.5863	0.018
0.04	0.572	0.6213	0.017
0.045	0.54	0.6578	0.014
0.05	0.518	0.6963	0.013
0.055	0.496	0.738	0.012
0.06	0.474	0.7813	0.011
0.065	0.454	0.828	0.01
0.07	0.436	0.8763	0.01
0.075	0.417	0.928	0.009
0.08	0.4	0.983	0.007
0.0848	0.385	1.041	0.008
0.09	0.369	1.103	0.007

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.353	1.168	0.006
0.1	0.34	1.238	0.005
0.1058	0.323	1.311	0.006
0.112	0.307	1.39	0.005
0.1185	0.291	1.473	0.005
0.1255	0.276	1.561	0.004
0.1328	0.26	1.655	0.004
0.1407	0.244	1.753	0.003
0.149	0.228	1.858	0.003
0.1578	0.213	1.968	0.002
0.167	0.195	2.085	0.002
0.177	0.18	2.21	0.001
0.1875	0.166	2.341	0.001
0.1985	0.152	2.481	0.001
0.2102	0.139	2.63	0.001
0.2227	0.126	2.786	0.001
0.2358	0.114	2.953	0.001
0.2498	0.103	3.13	0.001
0.2647	0.093	3.316	0.001
0.2803	0.084	3.515	0.001
0.297	0.074	3.725	0.001
0.3147	0.065	3.946	0.001
0.3333	0.059	4.181	0.001
0.3532	0.052	4.43	0.001
0.3742	0.046	4.693	0.
0.3963	0.04	4.973	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.288

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.003883	cm/sec
y0	0.8797	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.003883	0.0002973	cm/sec
y0	0.8797	0.04073	ft

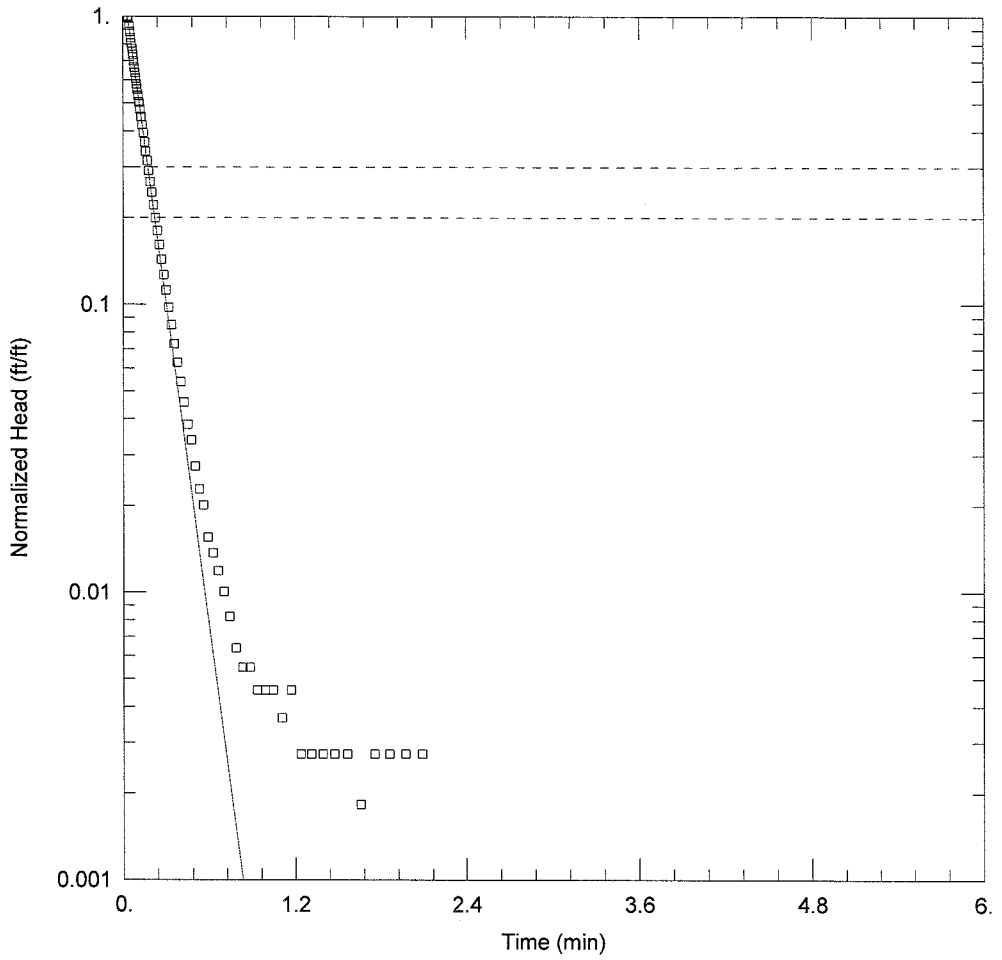
Parameter Correlations

	K	y0
K	1.00	0.75
y0	0.75	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.5749 ft^2
Variance	0.006684 ft^2
Std. Deviation	0.08176 ft
Mean	0.006587 ft
No. of Residuals	88
No. of Estimates	2



MW11 SLUG OUT 1

Data Set:
Date: 08/24/04 Time: 11:28:46

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW-11
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 10.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW11)

Initial Displacement: 1.095 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.003483 cm/sec
v0 = 1.483 ft

Data Set:
Title: MW11 SLUG OUT 1
Date: 08/24/04
Time: 11:28:55

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW-11

AQUIFER DATA

Saturated Thickness: 10.75 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW11

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.095 ft
Static Water Column Height: 9. ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 9. ft

No. of Observations: 83

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.035	1.095	0.5247	0.025
0.04	1.077	0.5547	0.022
0.045	1.015	0.5863	0.017
0.05	0.966	0.6213	0.015
0.055	0.922	0.6578	0.013
0.06	0.882	0.6963	0.011
0.065	0.844	0.738	0.009
0.07	0.807	0.7813	0.007
0.075	0.766	0.828	0.006
0.08	0.728	0.8763	0.006
0.0848	0.697	0.928	0.005
0.09	0.667	0.983	0.005
0.095	0.638	1.041	0.005
0.1	0.611	1.103	0.004
0.1058	0.581	1.168	0.005
0.112	0.552	1.238	0.003
0.1185	0.521	1.311	0.003
0.1255	0.491	1.39	0.003

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1328	0.461	1.473	0.003
0.1407	0.432	1.561	0.003
0.149	0.401	1.655	0.002
0.1578	0.372	1.753	0.003
0.167	0.346	1.858	0.003
0.177	0.319	1.968	0.003
0.1875	0.292	2.085	0.003
0.1985	0.268	2.21	0.001
0.2102	0.243	2.341	0.001
0.2227	0.219	2.481	0.001
0.2358	0.198	2.63	0.001
0.2498	0.177	2.786	0.001
0.2647	0.157	2.953	0.001
0.2803	0.139	3.13	0.
0.297	0.123	3.316	0.
0.3147	0.107	3.515	0.001
0.3333	0.093	3.725	0.
0.3532	0.08	3.946	0.
0.3742	0.069	4.181	0.
0.3963	0.059	4.43	0.
0.4198	0.05	4.693	0.
0.4447	0.042	4.973	0.
0.4697	0.037	5.583	0.
0.4963	0.03		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.288

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.001017	cm/sec
y0	0.3015	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.003483	1.962E-5	cm/sec
y0	1.483	0.006429	ft

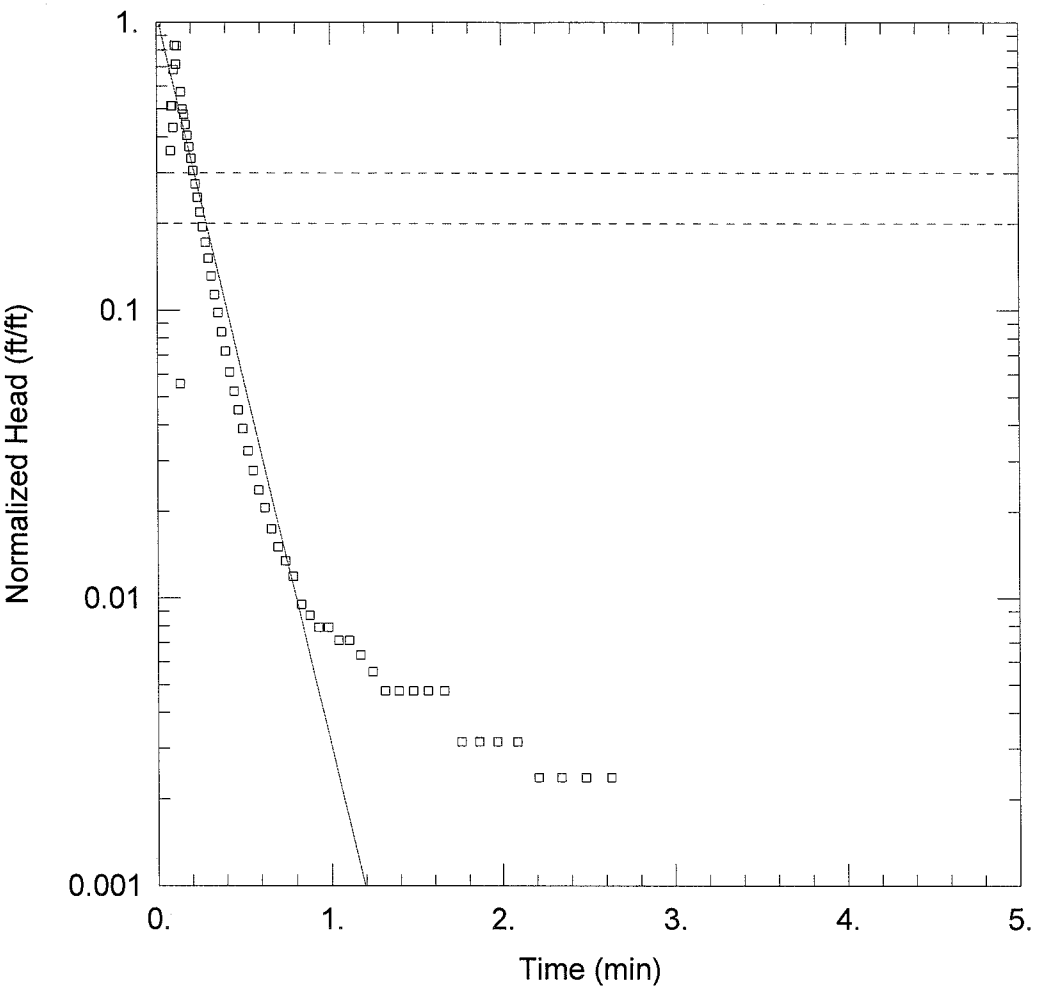
Parameter Correlations

	K	y0
K	1.00	0.87
y0	0.87	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.004531 ft^2
Variance	5.593E-5 ft^2
Std. Deviation	0.007479 ft
Mean	0.002796 ft
No. of Residuals	83
No. of Estimates	2



MW11 SLUG IN 2

Data Set: C:\...\MW11 Slug In 2.aqt
Date: 08/24/04 Time: 11:57:24

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW11
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 10.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW11)

Initial Displacement: 1.262 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 9. ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002345 cm/sec v0 = 1.363 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW
Title: MW11 SLUG IN 2
Date: 08/24/04
Time: 11:57:30

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW11

AQUIFER DATA

Saturated Thickness: 10.75 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW11

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.262 ft
Static Water Column Height: 9. ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 9. ft

No. of Observations: 72

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.08	0.452	0.6213	0.026
0.0848	0.646	0.6578	0.022
0.09	0.646	0.6963	0.019
0.095	0.545	0.738	0.017
0.1	0.864	0.7813	0.015
0.1058	1.047	0.828	0.012
0.112	0.901	0.8763	0.011
0.1185	1.042	0.928	0.01
0.1255	1.277	0.983	0.01
0.1328	0.07	1.041	0.009
0.1407	0.724	1.103	0.009
0.149	0.631	1.168	0.008
0.1578	0.604	1.238	0.007
0.167	0.557	1.311	0.006
0.177	0.511	1.39	0.006
0.1875	0.467	1.473	0.006
0.1985	0.425	1.561	0.006
0.2102	0.385	1.655	0.006

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.2227	0.347	1.753	0.004
0.2358	0.312	1.858	0.004
0.2498	0.277	1.968	0.004
0.2647	0.246	2.085	0.004
0.2803	0.217	2.21	0.003
0.297	0.191	2.341	0.003
0.3147	0.166	2.481	0.003
0.3333	0.143	2.63	0.003
0.3532	0.124	2.786	0.001
0.3742	0.106	2.953	0.001
0.3963	0.091	3.13	0.001
0.4198	0.077	3.316	0.001
0.4447	0.066	3.515	0.001
0.4697	0.057	3.725	0.001
0.4963	0.049	3.946	0.001
0.5247	0.041	4.181	0.
0.5547	0.035	4.43	0.001
0.5863	0.03	4.693	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.288

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.003883	cm/sec
y0	0.8797	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.002345	0.0003094	cm/sec
y0	1.363	0.1546	ft

Parameter Correlations

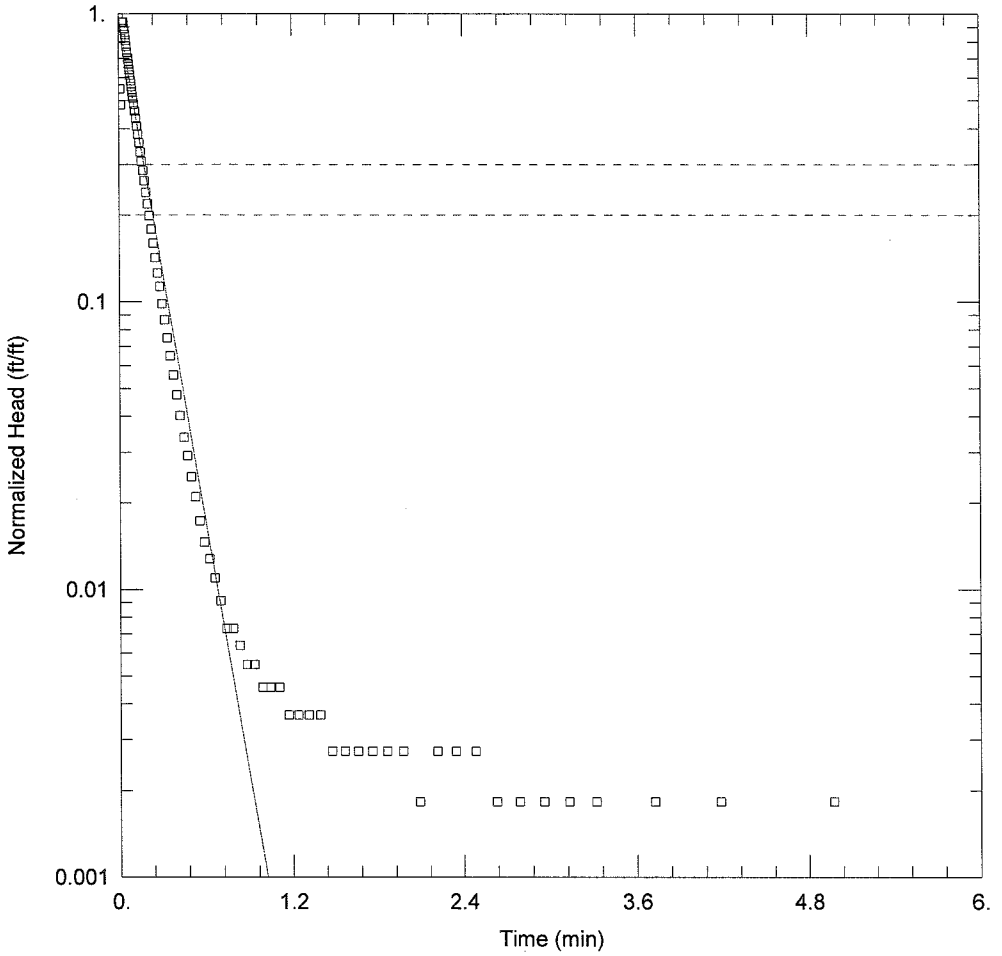
	K	y0
K	1.00	0.91
y0	0.91	1.00

Residual Statistics

for weighted residuals

Sum of Squares . . . . . 1.304 ft^2
Variance . . . . . 0.01863 ft^2
Std. Deviation . . . . . 0.1365 ft
Mean. . . . . -0.002603 ft

No. of Residuals. 72
No. of Estimates. 2



MW11 SLUG OUT 2

Data Set: C:\...\MW11 Slug Out 2.aqt
Date: 08/24/04 Time: 12:01:10

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: MW-11
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 10.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW11)

Initial Displacement: 1.095 ft Static Water Column Height: 9. ft
Total Well Penetration Depth: 9. ft Screen Length: 10. ft
Casing Radius: 0.083 ft Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.002716 cm/sec v0 = 1.084 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\MW
Title: MW11 SLUG OUT 2
Date: 08/24/04
Time: 12:01:20

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: MW-11

AQUIFER DATA

Saturated Thickness: 10.75 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : MW11

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.095 ft
Static Water Column Height: 9. ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 9. ft

No. of Observations: 88

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.01	0.601	0.4447	0.037
0.015	0.529	0.4697	0.032
0.02	0.898	0.4963	0.027
0.025	1.022	0.5247	0.023
0.03	1.13	0.5547	0.019
0.035	1.022	0.5863	0.016
0.04	0.973	0.6213	0.014
0.045	0.925	0.6578	0.012
0.05	0.884	0.6963	0.01
0.055	0.844	0.738	0.008
0.06	0.804	0.7813	0.008
0.065	0.768	0.828	0.007
0.07	0.734	0.8763	0.006
0.075	0.701	0.928	0.006
0.08	0.671	0.983	0.005
0.0848	0.64	1.041	0.005
0.09	0.612	1.103	0.005
0.095	0.585	1.168	0.004

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1	0.56	1.238	0.004
0.1058	0.532	1.311	0.004
0.112	0.503	1.39	0.004
0.1185	0.475	1.473	0.003
0.1255	0.446	1.561	0.003
0.1328	0.419	1.655	0.003
0.1407	0.391	1.753	0.003
0.149	0.363	1.858	0.003
0.1578	0.337	1.968	0.003
0.167	0.313	2.085	0.002
0.177	0.288	2.21	0.003
0.1875	0.263	2.341	0.003
0.1985	0.24	2.481	0.003
0.2102	0.218	2.63	0.002
0.2227	0.196	2.786	0.002
0.2358	0.175	2.953	0.002
0.2498	0.156	3.13	0.002
0.2647	0.138	3.316	0.002
0.2803	0.124	3.515	0.001
0.297	0.108	3.725	0.002
0.3147	0.095	3.946	0.001
0.3333	0.082	4.181	0.002
0.3532	0.071	4.43	0.001
0.3742	0.061	4.693	0.001
0.3963	0.052	4.973	0.002
0.4198	0.044	5.27	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.288

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.003483	cm/sec
y0	1.483	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.002716	0.0001663	cm/sec
y0	1.084	0.03763	ft

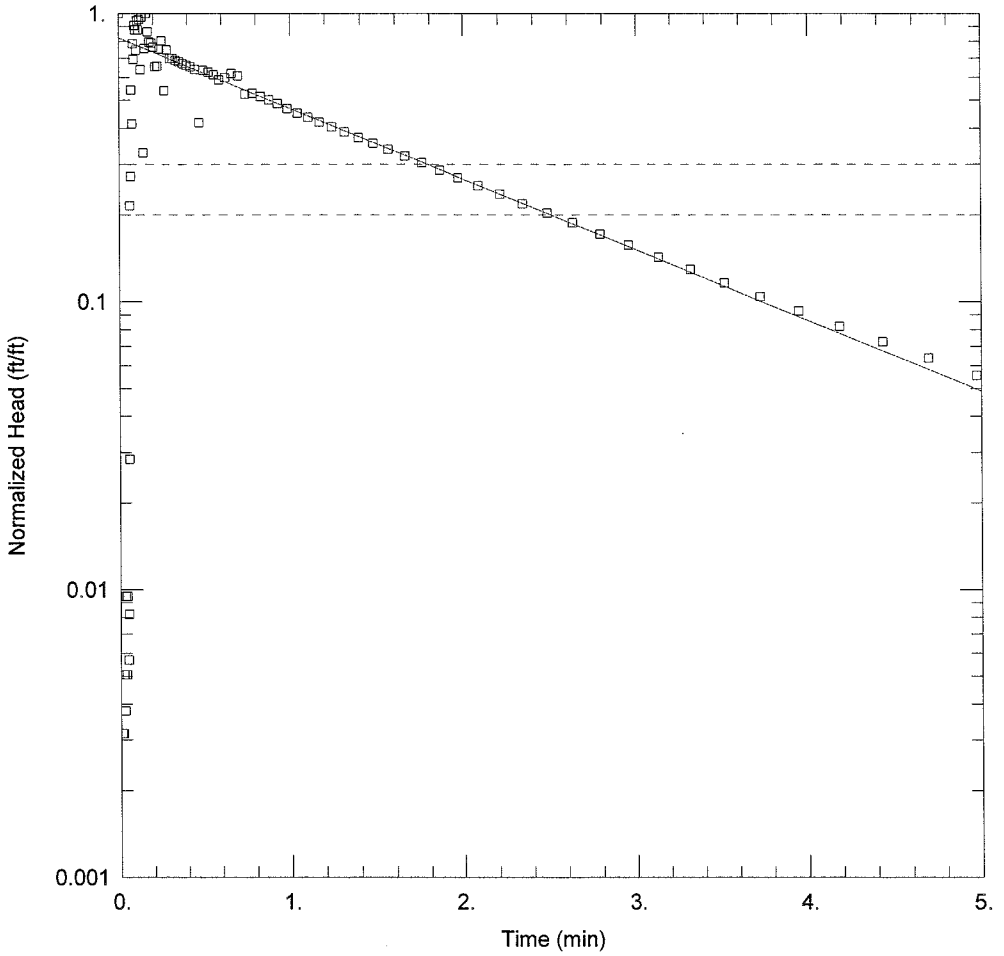
Parameter Correlations

	K	y0
K	1.00	0.77
y0	0.77	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.5822 ft^2
Variance	0.006769 ft^2
Std. Deviation	0.08228 ft
Mean	-0.002832 ft
No. of Residuals	88
No. of Estimates	2



TW2 SLUG IN 1

Data Set: C:\...\TW2 Slug In 1.aqt
Date: 08/24/04 Time: 14:55:28

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: TW2
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 16.99 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW2)

Initial Displacement: 1.583 ft
Total Well Penetration Depth: 16.99 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.99 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0002859 cm/sec y0 = 1.302 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\TW2 Slug In 1.aqt
Title: TW2 SLUG IN 1
Date: 08/24/04
Time: 14:55:36

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: TW2

AQUIFER DATA

Saturated Thickness: 16.99 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : TW2

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.583 ft
Static Water Column Height: 16.99 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 16.99 ft

No. of Observations: 88

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.	0.4198	1.033
0.01	0.005	0.4447	1.012
0.015	0.005	0.4697	0.662
0.02	0.008	0.4963	1.006
0.025	0.006	0.5247	0.989
0.03	0.015	0.5547	0.97
0.035	0.008	0.5863	0.93
0.04	0.015	0.6213	0.947
0.045	0.009	0.6578	0.979
0.05	0.013	0.6963	0.962
0.055	0.045	0.738	0.831
0.06	0.341	0.7813	0.837
0.065	0.431	0.828	0.816
0.07	0.859	0.8763	0.795
0.075	0.655	0.928	0.772
0.08	1.242	0.983	0.741
0.0848	1.097	1.041	0.715
0.09	1.437	1.103	0.691

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	1.389	1.168	0.666
0.1	1.181	1.238	0.641
0.1058	1.496	1.311	0.615
0.112	1.386	1.39	0.587
0.1185	1.51	1.473	0.562
0.1255	1.011	1.561	0.535
0.1328	1.538	1.655	0.508
0.1407	0.521	1.753	0.481
0.149	1.196	1.858	0.454
0.1578	1.583	1.968	0.426
0.167	1.368	2.085	0.4
0.177	1.26	2.21	0.374
0.1875	1.25	2.341	0.347
0.1985	1.209	2.481	0.322
0.2102	1.035	2.63	0.298
0.2227	1.039	2.786	0.272
0.2358	1.191	2.953	0.249
0.2498	1.271	3.13	0.226
0.2647	0.855	3.316	0.205
0.2803	1.183	3.515	0.184
0.297	1.105	3.725	0.165
0.3147	1.104	3.946	0.147
0.3333	1.088	4.181	0.13
0.3532	1.076	4.43	0.115
0.3742	1.061	4.693	0.101
0.3963	1.048	4.973	0.088

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.896

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0002859	cm/sec
y0	1.302	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.0001481	4.443E-5	cm/sec
y0	0.8983	0.06488	ft

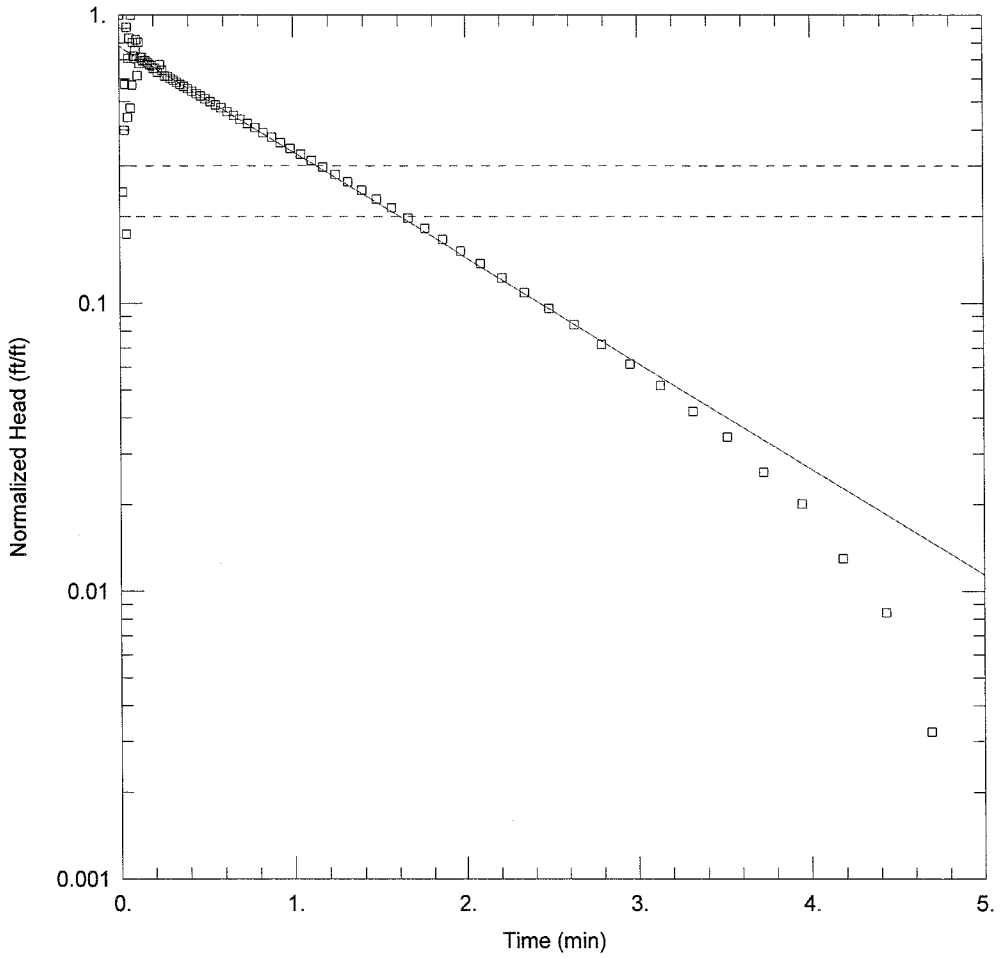
Parameter Correlations

	K	y0
K	1.00	0.56
y0	0.56	1.00

Residual Statistics

for weighted residuals

Sum of Squares	14.64 ft^2
Variance	0.1703 ft^2
Std. Deviation	0.4126 ft
Mean	-0.005575 ft
No. of Residuals	88
No. of Estimates	2



TW2 SLUG IN 2

Data Set: C:\...\TW2 Slug In 2.aqt
Date: 08/24/04 Time: 15:01:10

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: TW2
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 16.99 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW2)

Initial Displacement: 1.543 ft
Total Well Penetration Depth: 16.99 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.99 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0004279 cm/sec v0 = 1.201 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\TW2 Slug In 2.aqt
Title: TW2 SLUG IN 2
Date: 08/24/04
Time: 15:01:17

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: TW2

AQUIFER DATA

Saturated Thickness: 16.99 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : TW2

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.543 ft
Static Water Column Height: 16.99 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 16.99 ft

No. of Observations: 84

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.02	0.375	0.4697	0.808
0.03	0.615	0.4963	0.79
0.035	0.886	0.5247	0.772
0.04	0.268	0.5547	0.753
0.045	1.399	0.5863	0.735
0.05	0.682	0.6213	0.713
0.055	1.091	0.6578	0.692
0.06	1.282	0.6963	0.671
0.065	0.734	0.738	0.649
0.07	1.543	0.7813	0.627
0.075	0.883	0.828	0.602
0.08	1.237	0.8763	0.581
0.0848	1.111	0.928	0.556
0.09	1.089	0.983	0.532
0.095	1.163	1.041	0.507
0.1	1.265	1.103	0.482
0.1058	0.95	1.168	0.458
0.112	1.239	1.238	0.432

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1185	1.048	1.311	0.407
0.1255	1.099	1.39	0.381
0.1328	1.103	1.473	0.355
0.1407	1.07	1.561	0.331
0.149	1.073	1.655	0.305
0.1578	1.068	1.753	0.281
0.167	1.052	1.858	0.257
0.177	1.038	1.968	0.234
0.1875	1.028	2.085	0.212
0.1985	1.008	2.21	0.189
0.2102	1.011	2.341	0.168
0.2227	0.976	2.481	0.148
0.2358	1.037	2.63	0.13
0.2498	0.991	2.786	0.111
0.2647	0.947	2.953	0.095
0.2803	0.944	3.13	0.08
0.297	0.931	3.316	0.065
0.3147	0.916	3.515	0.053
0.3333	0.903	3.725	0.04
0.3532	0.887	3.946	0.031
0.3742	0.873	4.181	0.02
0.3963	0.857	4.43	0.013
0.4198	0.84	4.693	0.005
0.4447	0.823	4.973	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.896

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0004279	cm/sec
y0	1.201	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.0003659	3.49E-5	cm/sec
y0	1.101	0.03416	ft

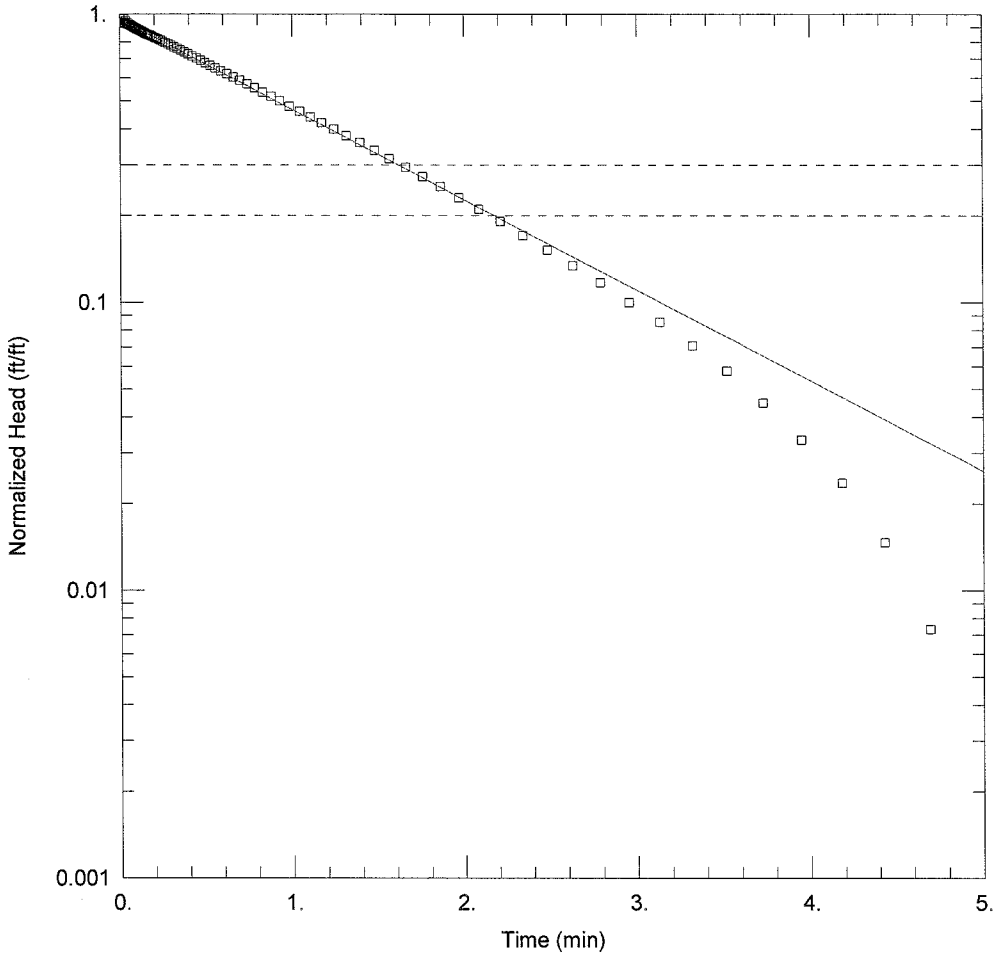
Parameter Correlations

	K	y0
K	1.00	0.62
y0	0.62	1.00

Residual Statistics

for weighted residuals

Sum of Squares	2.377 ft^2
Variance	0.02898 ft^2
Std. Deviation	0.1702 ft
Mean	-0.005062 ft
No. of Residuals	84
No. of Estimates	2



TW2 SLUG OUT 1

Data Set: C:\...\TW2 Slug Out 1.aqt
Date: 08/24/04 Time: 15:04:44

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: TW2
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 16.99 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW2)

Initial Displacement: 1.228 ft
Total Well Penetration Depth: 16.99 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.99 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0003659 cm/sec v0 = 1.181 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\TW2 Slug Out 1.aqt
Title: TW2 SLUG OUT 1
Date: 08/24/04
Time: 15:04:50

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: TW2

AQUIFER DATA

Saturated Thickness: 16.99 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : TW2

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.228 ft
Static Water Column Height: 16.99 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 16.99 ft

No. of Observations: 88

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	1.228	0.4198	0.878
0.01	1.149	0.4447	0.864
0.015	1.204	0.4697	0.848
0.02	1.141	0.4963	0.832
0.025	1.181	0.5247	0.815
0.03	1.14	0.5547	0.798
0.035	1.161	0.5863	0.78
0.04	1.137	0.6213	0.762
0.045	1.147	0.6578	0.743
0.05	1.13	0.6963	0.723
0.055	1.134	0.738	0.703
0.06	1.124	0.7813	0.682
0.065	1.123	0.828	0.659
0.07	1.116	0.8763	0.637
0.075	1.112	0.928	0.614
0.08	1.108	0.983	0.589
0.0848	1.104	1.041	0.566
0.09	1.099	1.103	0.541

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	1.095	1.168	0.517
0.1	1.09	1.238	0.491
0.1058	1.086	1.311	0.465
0.112	1.082	1.39	0.441
0.1185	1.076	1.473	0.414
0.1255	1.07	1.561	0.388
0.1328	1.065	1.655	0.362
0.1407	1.058	1.753	0.336
0.149	1.051	1.858	0.31
0.1578	1.045	1.968	0.284
0.167	1.042	2.085	0.259
0.177	1.035	2.21	0.235
0.1875	1.029	2.341	0.21
0.1985	1.021	2.481	0.187
0.2102	1.013	2.63	0.165
0.2227	1.005	2.786	0.144
0.2358	0.996	2.953	0.123
0.2498	0.987	3.13	0.105
0.2647	0.977	3.316	0.087
0.2803	0.967	3.515	0.071
0.297	0.957	3.725	0.055
0.3147	0.944	3.946	0.041
0.3333	0.933	4.181	0.029
0.3532	0.921	4.43	0.018
0.3742	0.906	4.693	0.009
0.3963	0.893	4.973	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.896

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0004279	cm/sec
y0	1.201	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.0003659	2.542E-6	cm/sec
y0	1.181	0.002547	ft

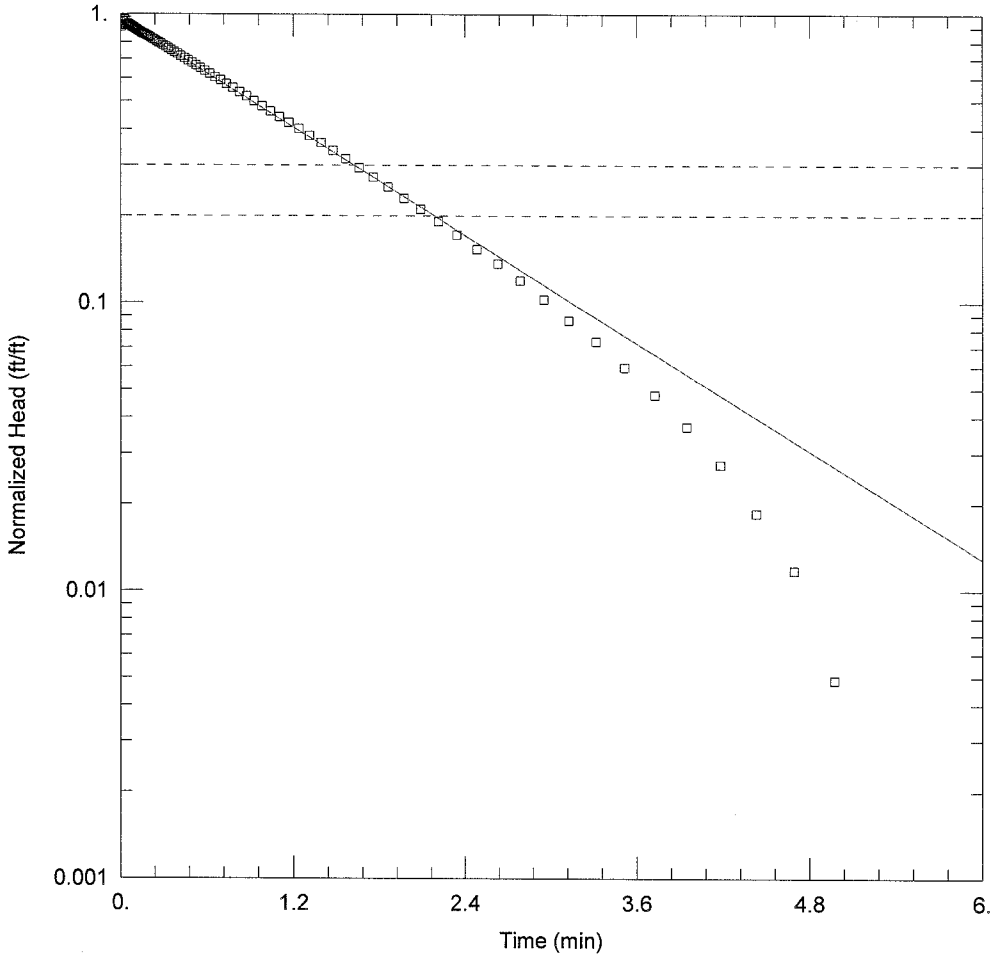
Parameter Correlations

	K	y0
K	1.00	0.59
y0	0.59	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.01597 ft^2
Variance	0.0001857 ft^2
Std. Deviation	0.01363 ft
Mean	-0.002225 ft
No. of Residuals	88
No. of Estimates	2



TW2 SLUG OUT 2

Data Set: C:\...\TW2 Slug Out 2.aqt
Date: 08/24/04 Time: 15:08:50

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: TW2
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 16.99 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW2)

Initial Displacement: 1.023 ft
Total Well Penetration Depth: 16.99 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.99 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.0003642 cm/sec v0 = 0.984 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\TW2 Slug Out 2.aqt
Title: TW2 SLUG OUT 2
Date: 08/24/04
Time: 15:08:57

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: TW2

AQUIFER DATA

Saturated Thickness: 16.99 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : TW2

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.023 ft
Static Water Column Height: 16.99 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 16.99 ft

No. of Observations: 89

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.922	0.4447	0.719
0.01	1.027	0.4697	0.707
0.015	0.961	0.4963	0.695
0.02	0.964	0.5247	0.68
0.025	0.981	0.5547	0.667
0.03	0.938	0.5863	0.652
0.035	0.979	0.6213	0.636
0.04	0.933	0.6578	0.619
0.045	0.966	0.6963	0.604
0.05	0.939	0.738	0.586
0.055	0.947	0.7813	0.569
0.06	0.943	0.828	0.55
0.065	0.937	0.8763	0.532
0.07	0.934	0.928	0.512
0.075	0.931	0.983	0.492
0.08	0.925	1.041	0.472
0.0848	0.925	1.103	0.452
0.09	0.918	1.168	0.431

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.917	1.238	0.411
0.1	0.912	1.311	0.388
0.1058	0.909	1.39	0.367
0.112	0.904	1.473	0.345
0.1185	0.899	1.561	0.323
0.1255	0.895	1.655	0.301
0.1328	0.89	1.753	0.279
0.1407	0.885	1.858	0.258
0.149	0.879	1.968	0.236
0.1578	0.873	2.085	0.216
0.167	0.871	2.21	0.196
0.177	0.865	2.341	0.176
0.1875	0.86	2.481	0.157
0.1985	0.854	2.63	0.14
0.2102	0.847	2.786	0.122
0.2227	0.839	2.953	0.105
0.2358	0.833	3.13	0.089
0.2498	0.824	3.316	0.075
0.2647	0.816	3.515	0.061
0.2803	0.807	3.725	0.049
0.297	0.798	3.946	0.038
0.3147	0.788	4.181	0.028
0.3333	0.778	4.43	0.019
0.3532	0.768	4.693	0.012
0.3742	0.756	4.973	0.005
0.3963	0.745	5.27	0.
0.4198	0.733		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.896

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0003659	cm/sec
y0	1.181	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.0003642	2.804E-6	cm/sec
y0	0.984	0.002352	ft

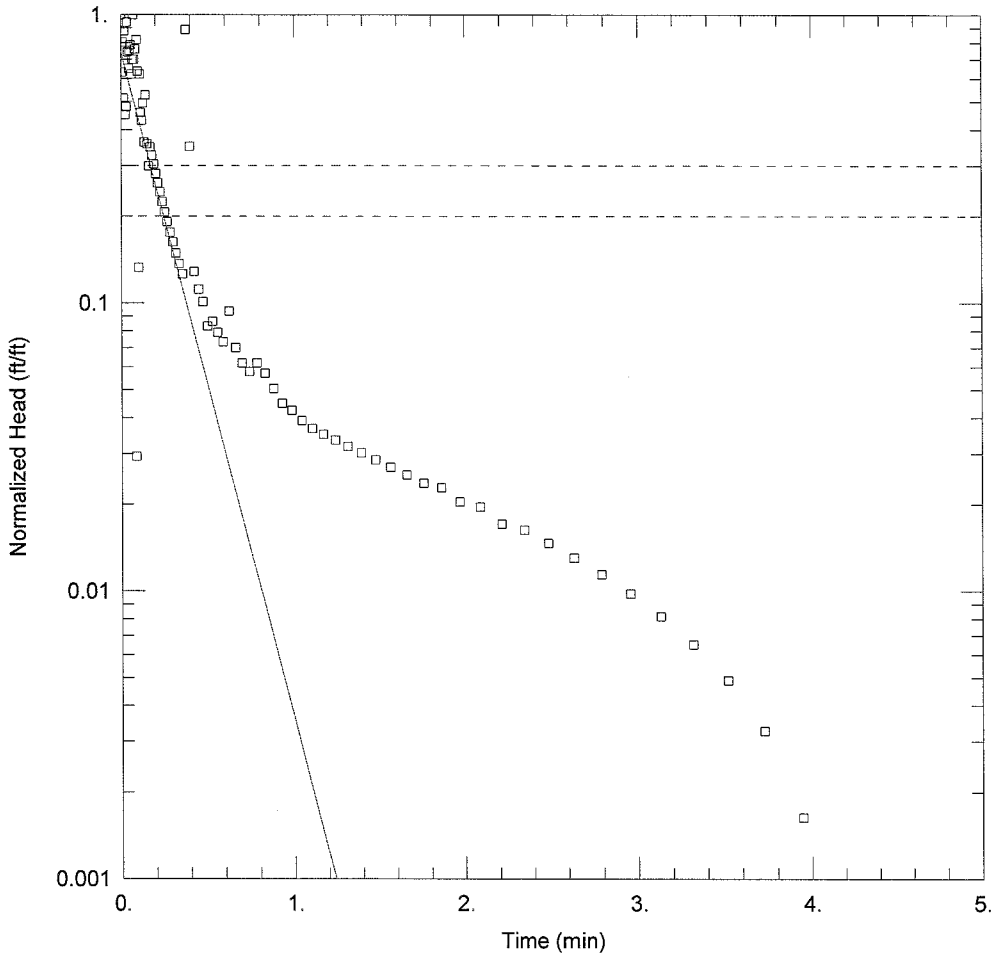
Parameter Correlations

	K	y0
K	1.00	0.59
y0	0.59	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.01381 ft^2
Variance	0.0001588 ft^2
Std. Deviation	0.0126 ft
Mean	-0.001898 ft
No. of Residuals	89
No. of Estimates	2



TW3 SLUG IN 1

Data Set: C:\...\TW3 Slug In 1.aqt
Date: 08/24/04 Time: 15:44:38

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: TW3
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 15.06 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW3)

Initial Displacement: 1.226 ft
Total Well Penetration Depth: 15.06 ft
Casing Radius: 0.083 ft
Static Water Column Height: 15.06 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.00264 cm/sec
y0 = 0.9125 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\TW3 Slug In 1.aqt
Title: TW3 SLUG IN 1
Date: 08/24/04
Time: 15:44:46

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: TW3

AQUIFER DATA

Saturated Thickness: 15.06 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : TW3

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.226 ft
Static Water Column Height: 15.06 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 15.06 ft

No. of Observations: 85

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.775	0.3963	0.429
0.01	0.984	0.4198	0.158
0.015	0.629	0.4447	0.137
0.02	1.077	0.4697	0.124
0.025	0.553	0.4963	0.102
0.03	0.587	0.5247	0.106
0.035	1.153	0.5547	0.097
0.04	0.91	0.5863	0.09
0.045	0.799	0.6213	0.115
0.05	0.92	0.6578	0.086
0.055	0.962	0.6963	0.076
0.06	0.762	0.738	0.071
0.065	0.858	0.7813	0.076
0.07	1.226	0.828	0.07
0.075	0.857	0.8763	0.062
0.08	0.93	0.928	0.055
0.0848	0.036	0.983	0.052
0.09	1.004	1.041	0.048

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.78	1.103	0.045
0.1	0.163	1.168	0.043
0.1058	0.763	1.238	0.041
0.112	0.561	1.311	0.039
0.1185	0.528	1.39	0.037
0.1255	0.606	1.473	0.035
0.1328	0.443	1.561	0.033
0.1407	0.646	1.655	0.031
0.149	0.438	1.753	0.029
0.1578	0.367	1.858	0.028
0.167	0.427	1.968	0.025
0.177	0.399	2.085	0.024
0.1875	0.372	2.21	0.021
0.1985	0.345	2.341	0.02
0.2102	0.32	2.481	0.018
0.2227	0.298	2.63	0.016
0.2358	0.276	2.786	0.014
0.2498	0.254	2.953	0.012
0.2647	0.235	3.13	0.01
0.2803	0.216	3.316	0.008
0.297	0.2	3.515	0.006
0.3147	0.183	3.725	0.004
0.3333	0.168	3.946	0.002
0.3532	0.155	4.181	0.
0.3742	1.089		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.823

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.00264	cm/sec
y0	0.9125	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.001972	0.0002629	cm/sec
y0	0.9516	0.05924	ft

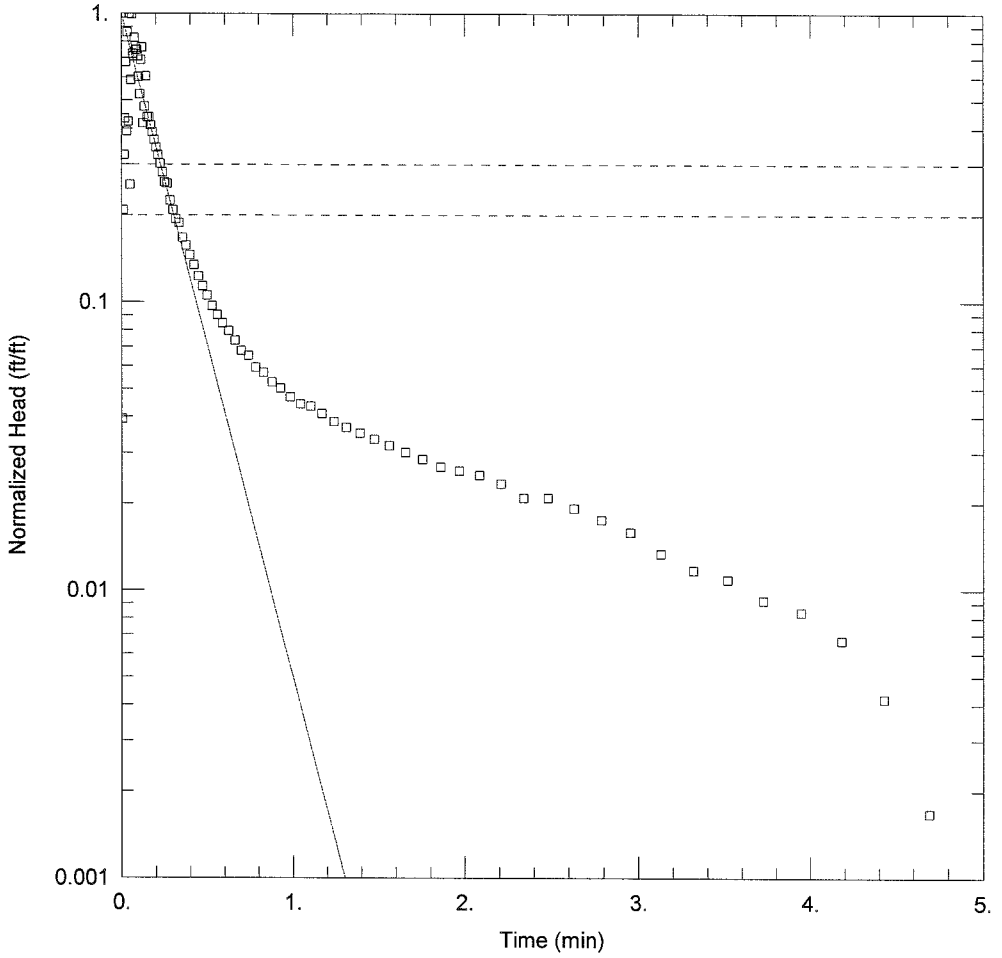
Parameter Correlations

	K	y0
K	1.00	0.72
y0	0.72	1.00

Residual Statistics

for weighted residuals

Sum of Squares	2.627 ft^2
Variance	0.03165 ft^2
Std. Deviation	0.1779 ft
Mean	0.009683 ft
No. of Residuals	85
No. of Estimates	2



TW3 SLUG IN 2

Data Set: C:\...\TW3 Slug In 2.aqt
Date: 08/24/04 Time: 15:47:48

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: TW3
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 15.06 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW3)

Initial Displacement: 1.195 ft
Total Well Penetration Depth: 15.06 ft
Casing Radius: 0.083 ft
Static Water Column Height: 15.06 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.002617 cm/sec v0 = 1.189 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\TW3 Slug In 2.aqt
Title: TW3 SLUG IN 2
Date: 08/24/04
Time: 15:48:51

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: TW3

AQUIFER DATA

Saturated Thickness: 15.06 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : TW3

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.195 ft
Static Water Column Height: 15.06 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 15.06 ft

No. of Observations: 88

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.047	0.4198	0.161
0.01	0.249	0.4447	0.147
0.015	0.387	0.4697	0.136
0.02	0.518	0.4963	0.126
0.025	0.811	0.5247	0.116
0.03	0.468	0.5547	0.108
0.035	1.03	0.5863	0.101
0.04	0.505	0.6213	0.095
0.045	1.195	0.6578	0.088
0.05	0.305	0.6963	0.081
0.055	0.702	0.738	0.078
0.06	1.188	0.7813	0.071
0.065	0.866	0.828	0.068
0.07	0.849	0.8763	0.063
0.075	0.986	0.928	0.06
0.08	0.921	0.983	0.056
0.0848	0.893	1.041	0.053
0.09	0.896	1.103	0.052

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.85	1.168	0.049
0.1	0.721	1.238	0.046
0.1058	0.627	1.311	0.044
0.112	0.826	1.39	0.042
0.1185	0.912	1.473	0.04
0.1255	0.498	1.561	0.038
0.1328	0.57	1.655	0.036
0.1407	0.724	1.753	0.034
0.149	0.524	1.858	0.032
0.1578	0.523	1.968	0.031
0.167	0.491	2.085	0.03
0.177	0.464	2.21	0.028
0.1875	0.437	2.341	0.025
0.1985	0.411	2.481	0.025
0.2102	0.387	2.63	0.023
0.2227	0.361	2.786	0.021
0.2358	0.337	2.953	0.019
0.2498	0.311	3.13	0.016
0.2647	0.308	3.316	0.014
0.2803	0.269	3.515	0.013
0.297	0.249	3.725	0.011
0.3147	0.232	3.946	0.01
0.3333	0.225	4.181	0.008
0.3532	0.2	4.43	0.005
0.3742	0.188	4.693	0.002
0.3963	0.174	4.973	0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.823

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.002617	cm/sec
y0	1.189	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.001419	0.0002147	cm/sec
y0	0.8057	0.05194	ft

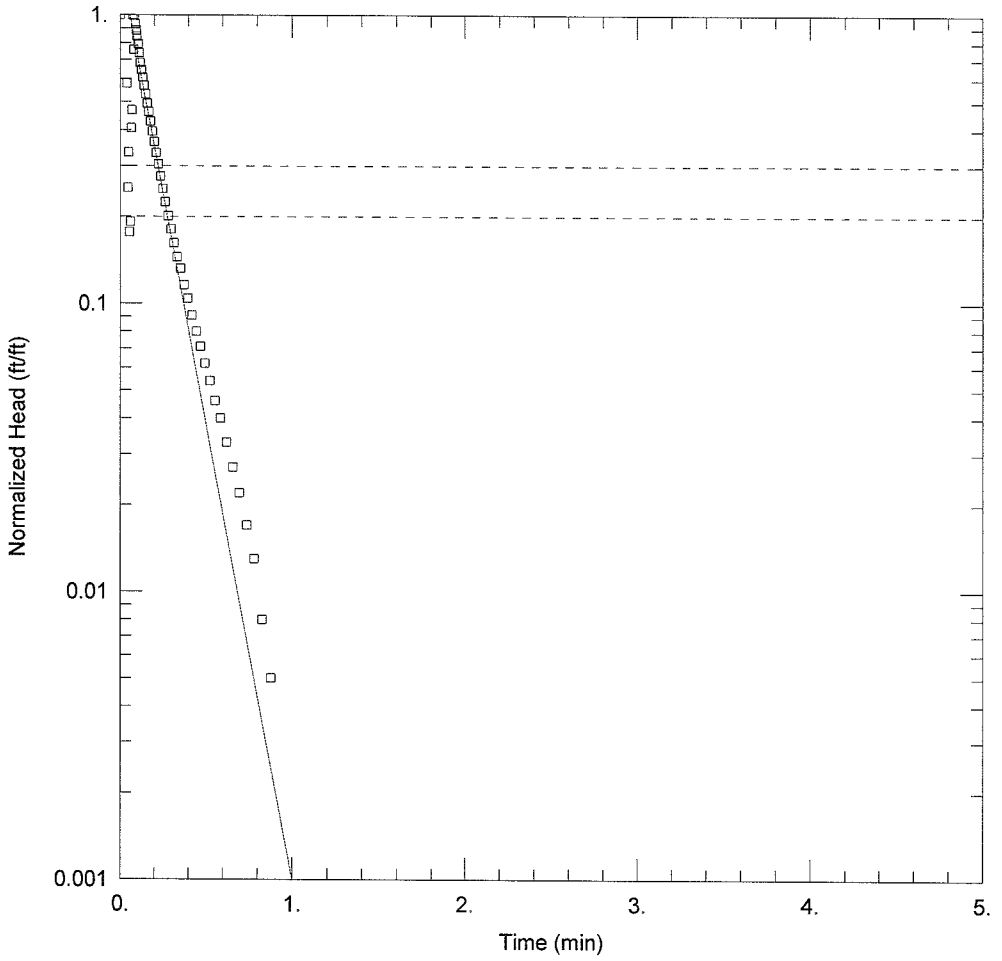
Parameter Correlations

	K	y0
K	1.00	0.70
y0	0.70	1.00

Residual Statistics

for weighted residuals

Sum of Squares	2.741 ft^2
Variance	0.03188 ft^2
Std. Deviation	0.1785 ft
Mean	0.001337 ft
No. of Residuals	88
No. of Estimates	2



TW3 SLUG OUT 1

Data Set: C:\...\TW3 Slug Out 1.aqt
Date: 08/24/04 Time: 15:52:13

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: TW3
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 15.06 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW3)

Initial Displacement: 0.999 ft
Total Well Penetration Depth: 15.06 ft
Casing Radius: 0.083 ft
Static Water Column Height: 15.06 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.003629 cm/sec
v0 = 1.532 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\TW3 Slug Out 1.aqt
Title: TW3 SLUG OUT 1
Date: 08/24/04
Time: 15:52:20

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: TW3

AQUIFER DATA

Saturated Thickness: 15.06 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : TW3

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 0.999 ft
Static Water Column Height: 15.06 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 15.06 ft

No. of Observations: 81

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.04	0.579	0.5247	0.054
0.045	0.252	0.5547	0.046
0.05	0.334	0.5863	0.04
0.055	0.177	0.6213	0.033
0.06	0.192	0.6578	0.027
0.065	0.405	0.6963	0.022
0.07	0.468	0.738	0.017
0.075	0.999	0.7813	0.013
0.08	0.756	0.828	0.008
0.0848	0.995	0.8763	0.005
0.09	0.929	0.928	0.
0.095	0.882	0.983	-0.003
0.1	0.841	1.041	-0.005
0.1058	0.793	1.103	-0.008
0.112	0.738	1.168	-0.01
0.1185	0.682	1.238	-0.012
0.1255	0.644	1.311	-0.013
0.1328	0.607	1.39	-0.015

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.1407	0.569	1.473	-0.015
0.149	0.531	1.561	-0.016
0.1578	0.494	1.655	-0.017
0.167	0.462	1.753	-0.017
0.177	0.428	1.858	-0.017
0.1875	0.395	1.968	-0.016
0.1985	0.363	2.085	-0.016
0.2102	0.333	2.21	-0.016
0.2227	0.304	2.341	-0.015
0.2358	0.276	2.481	-0.015
0.2498	0.25	2.63	-0.014
0.2647	0.225	2.786	-0.013
0.2803	0.201	2.953	-0.013
0.297	0.181	3.13	-0.011
0.3147	0.162	3.316	-0.011
0.3333	0.145	3.515	-0.008
0.3532	0.132	3.725	-0.007
0.3742	0.116	3.946	-0.006
0.3963	0.104	4.181	-0.004
0.4198	0.091	4.43	-0.003
0.4447	0.08	4.693	-0.001
0.4697	0.071	4.973	0.
0.4963	0.062		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.823

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.003629	cm/sec
y0	1.532	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.001914	0.0002982	cm/sec
y0	0.813	0.07047	ft

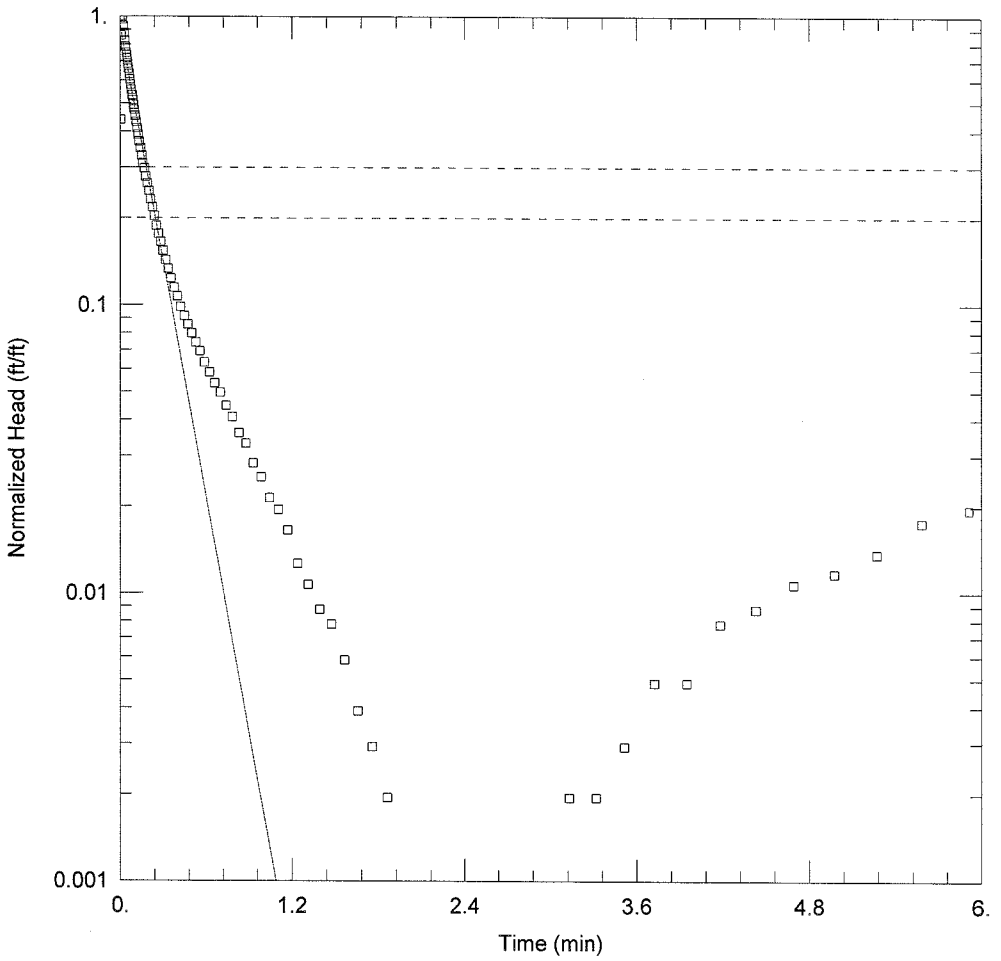
Parameter Correlations

	K	y0
K	1.00	0.81
y0	0.81	1.00

Residual Statistics

for weighted residuals

Sum of Squares	1.761 ft^2
Variance	0.02229 ft^2
Std. Deviation	0.1493 ft
Mean	-0.01111 ft
No. of Residuals	81
No. of Estimates	2



TW3 SLUG OUT 2

Data Set: C:\...\TW3 Slug Out 2.aqt
Date: 08/24/04 Time: 15:55:07

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Well: TW3
Test Date: 7/29/04

AQUIFER DATA

Saturated Thickness: 15.06 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW3)

Initial Displacement: 1.026 ft
Total Well Penetration Depth: 15.06 ft
Casing Radius: 0.083 ft
Static Water Column Height: 15.06 ft
Screen Length: 10. ft
Wellbore Radius: 0.333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.003107 cm/sec v0 = 0.9601 ft

Data Set: C:_files\2184 AVM Gowanda\Pre-design Field Work\Data Logger Data\Aqtesolv files\Slug Tests\TW3 Slug Out 2.aqt
Title: TW3 SLUG OUT 2
Date: 08/24/04
Time: 15:55:16

PROJECT INFORMATION

Company: DVIRKA & BARTILUCCI
Client: NYSDEC
Project: 2184
Location: AVM GOWANDA
Test Date: 7/29/04
Test Well: TW3

AQUIFER DATA

Saturated Thickness: 15.06 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: : TW3

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.026 ft
Static Water Column Height: 15.06 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 15.06 ft

No. of Observations: 91

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.005	0.451	0.4697	0.088
0.01	0.882	0.4963	0.082
0.015	1.026	0.5247	0.076
0.02	1.002	0.5547	0.071
0.025	0.95	0.5863	0.065
0.03	0.9	0.6213	0.06
0.035	0.845	0.6578	0.055
0.04	0.805	0.6963	0.051
0.045	0.767	0.738	0.046
0.05	0.735	0.7813	0.042
0.055	0.704	0.828	0.037
0.06	0.675	0.8763	0.034
0.065	0.648	0.928	0.029
0.07	0.621	0.983	0.026
0.075	0.596	1.041	0.022
0.08	0.572	1.103	0.02
0.0848	0.548	1.168	0.017
0.09	0.527	1.238	0.013

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.095	0.507	1.311	0.011
0.1	0.488	1.39	0.009
0.1058	0.465	1.473	0.008
0.112	0.443	1.561	0.006
0.1185	0.421	1.655	0.004
0.1255	0.4	1.753	0.003
0.1328	0.379	1.858	0.002
0.1407	0.359	1.968	0.001
0.149	0.338	2.085	0.001
0.1578	0.318	2.21	0.
0.167	0.305	2.341	0.001
0.177	0.286	2.481	0.
0.1875	0.271	2.63	0.
0.1985	0.255	2.786	0.001
0.2102	0.238	2.953	0.001
0.2227	0.224	3.13	0.002
0.2358	0.209	3.316	0.002
0.2498	0.193	3.515	0.003
0.2647	0.181	3.725	0.005
0.2803	0.17	3.946	0.005
0.297	0.158	4.181	0.008
0.3147	0.147	4.43	0.009
0.3333	0.137	4.693	0.011
0.3532	0.127	4.973	0.012
0.3742	0.118	5.27	0.014
0.3963	0.11	5.583	0.018
0.4198	0.101	5.915	0.02
0.4447	0.094		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
Shape Factor: 2.823

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.003629	cm/sec
y0	1.532	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.003107	0.0001571	cm/sec
y0	0.9601	0.02589	ft

Parameter Correlations

	K	y0
K	1.00	0.74

y0	0.74	1.00

Residual Statistics

for weighted residuals

Sum of Squares	0.3602 ft^2
Variance	0.004047 ft^2
Std. Deviation	0.06361 ft
Mean	0.007791 ft
No. of Residuals	91
No. of Estimates	2