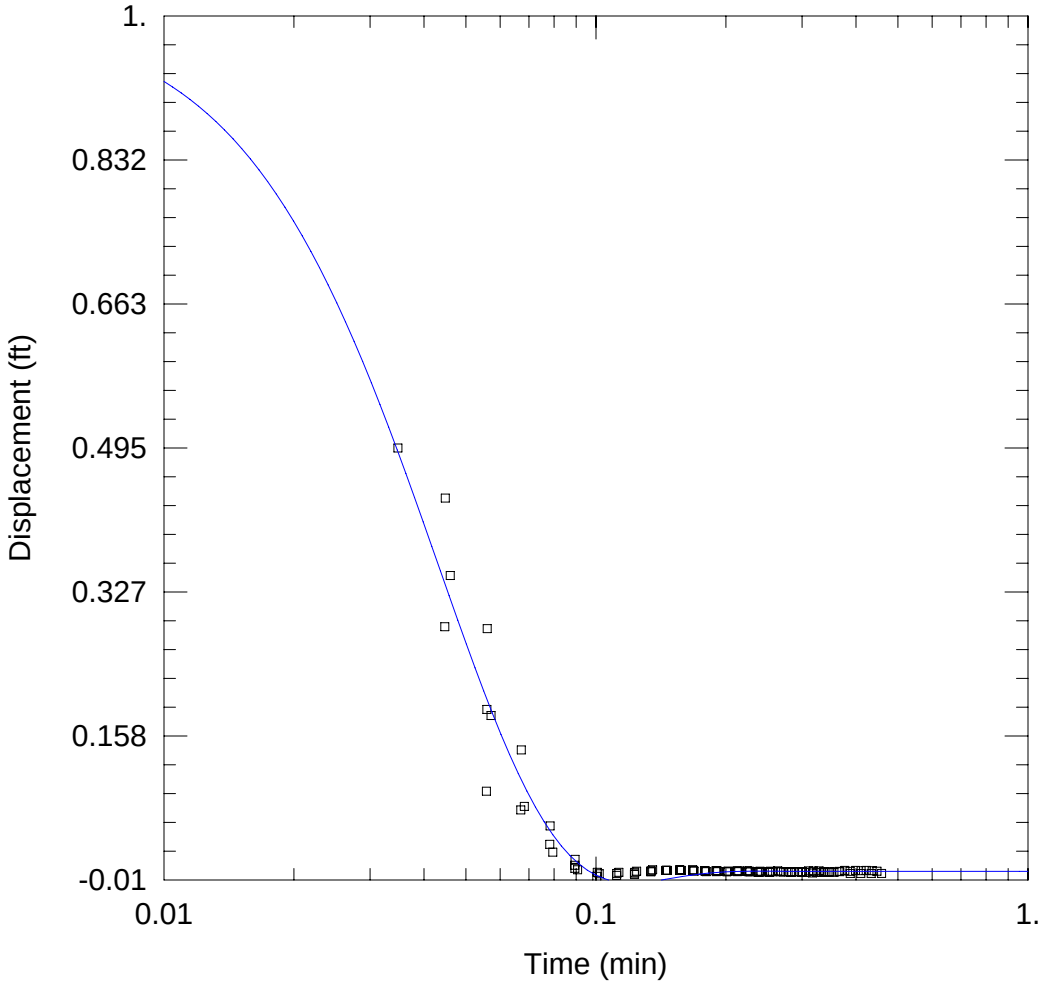


WELL TEST ANALYSIS

Data Set: R:\...\Best_MW1A_Butler.aqt
Date: 07/31/07 Time: 16:09:30

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW1A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 22. ft
Anisotropy Ratio (Kz/Kr): 0.1

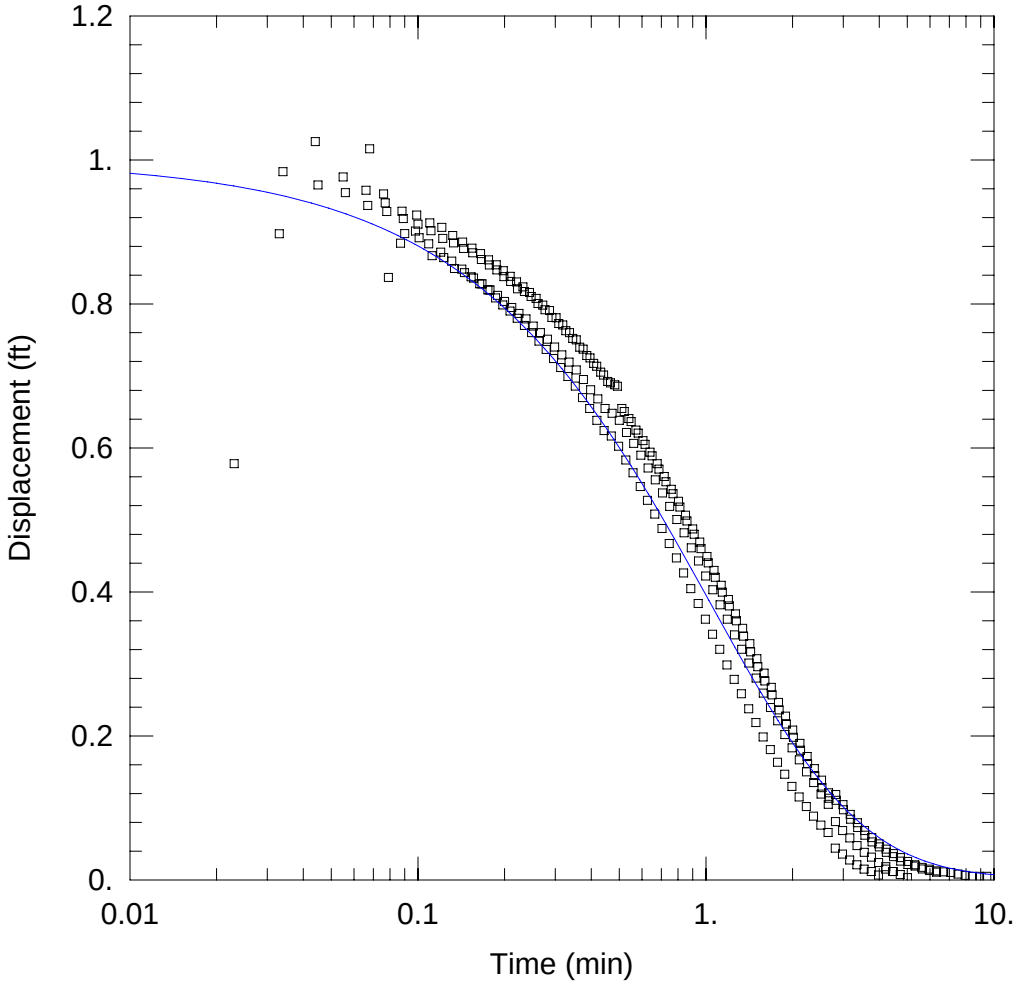
WELL DATA (MW1A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 22. ft
Casing Radius: 0.167 ft
Static Water Column Height: 27.49 ft
Screen Length: 15. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.1554 ft/min
C(D) = 0.8074



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW1B_KGSnoskin.aqt
Date: 07/31/07 Time: 16:13:03

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW1B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 50. ft

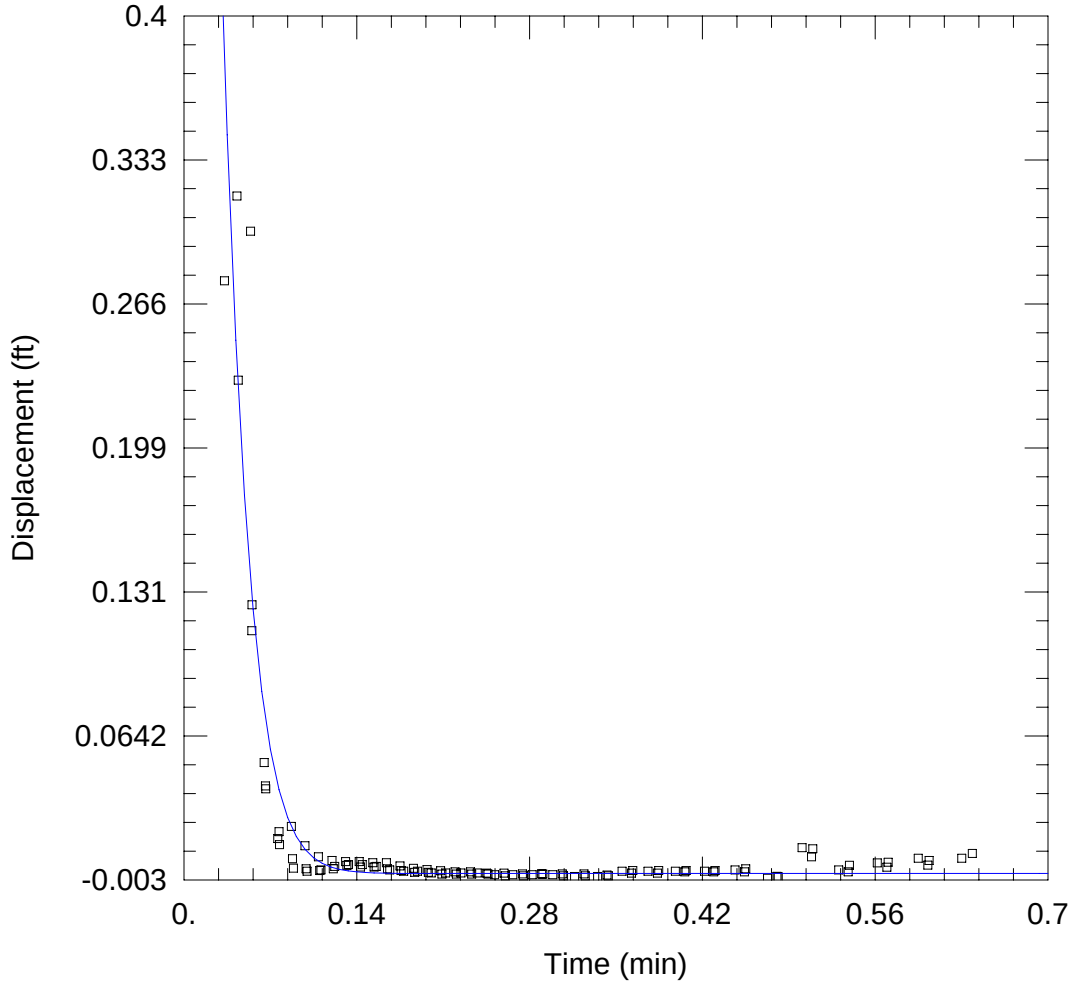
WELL DATA (MW1B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 50. ft
Casing Radius: 0.167 ft
Static Water Column Height: 82.39 ft
Screen Length: 15. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.003962 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW2_in_Butler.aqt
Date: 08/01/07 Time: 08:49:36

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW2
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 30.98 ft Anisotropy Ratio (Kz/Kr): 0.1

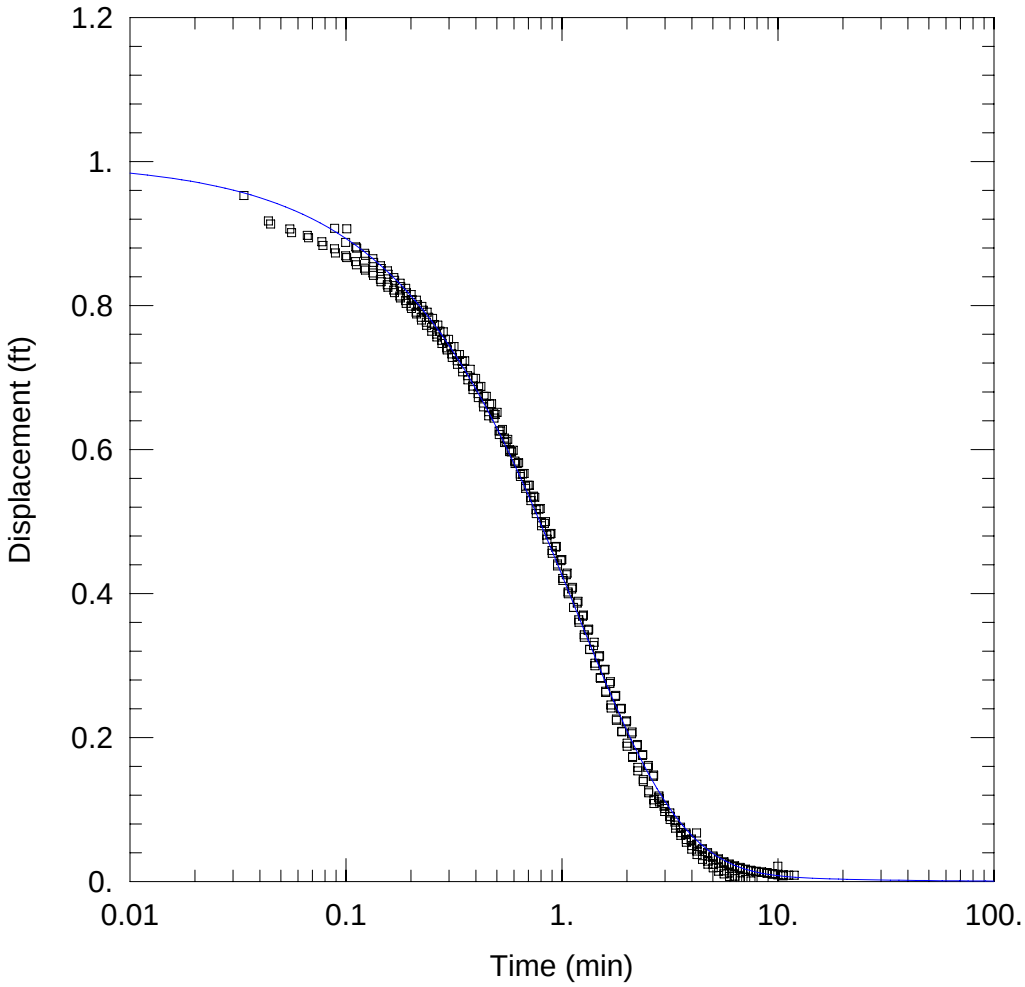
WELL DATA (MW2)

Initial Displacement: 1. ft
Total Well Penetration Depth: 30.98 ft
Casing Radius: 0.167 ft
Static Water Column Height: 30.98 ft
Screen Length: 15. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.1832 ft/min C(D) = 0.9773



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW3_KGSnoskin.aqt
Date: 08/01/07 Time: 08:51:54

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW3
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 22.43 ft

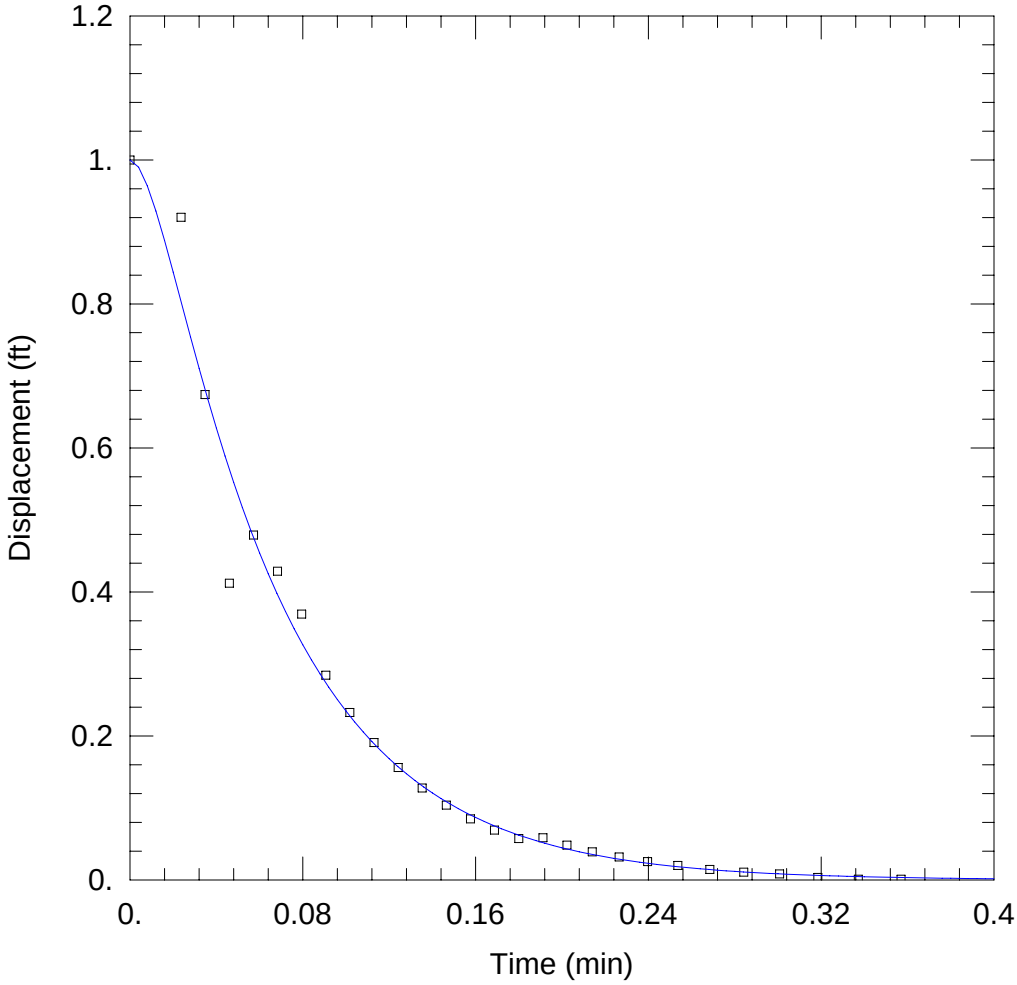
WELL DATA (MW3)

Initial Displacement: 1. ft
Total Well Penetration Depth: 22.43 ft
Casing Radius: 0.167 ft
Static Water Column Height: 22.43 ft
Screen Length: 10.2 ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.005344 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW4A_in_Butler.aqt
Date: 08/01/07 Time: 08:53:56

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW4A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 21. ft Anisotropy Ratio (Kz/Kr): 0.1

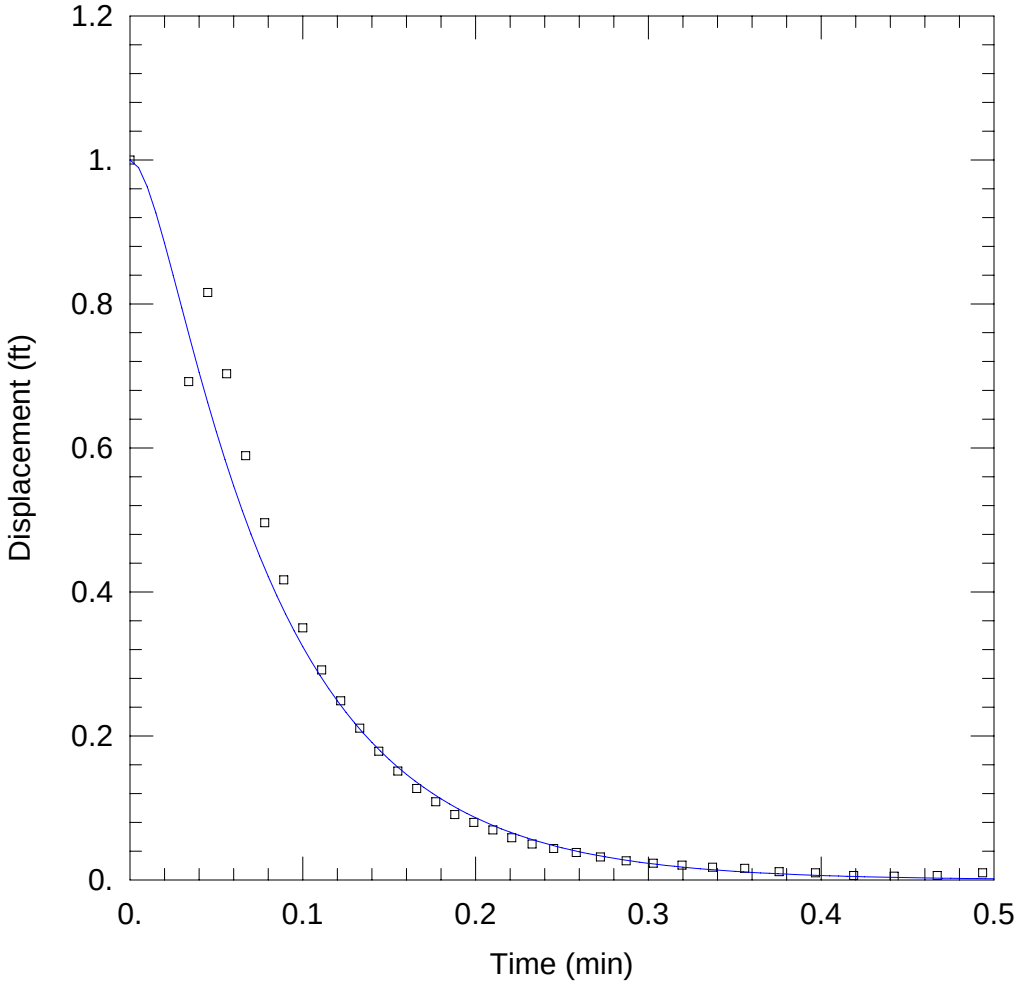
WELL DATA (MW4A)

Initial Displacement: 1. ft Static Water Column Height: 21. ft
Total Well Penetration Depth: 21. ft Screen Length: 10.3 ft
Casing Radius: 0.167 ft Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.1085 ft/min C(D) = 1.37



WELL TEST ANALYSIS

Data Set: R:\...\MW4A_out_Butler.aqt
Date: 07/24/07 Time: 14:40:52

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW4A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 21. ft Anisotropy Ratio (Kz/Kr): 0.1

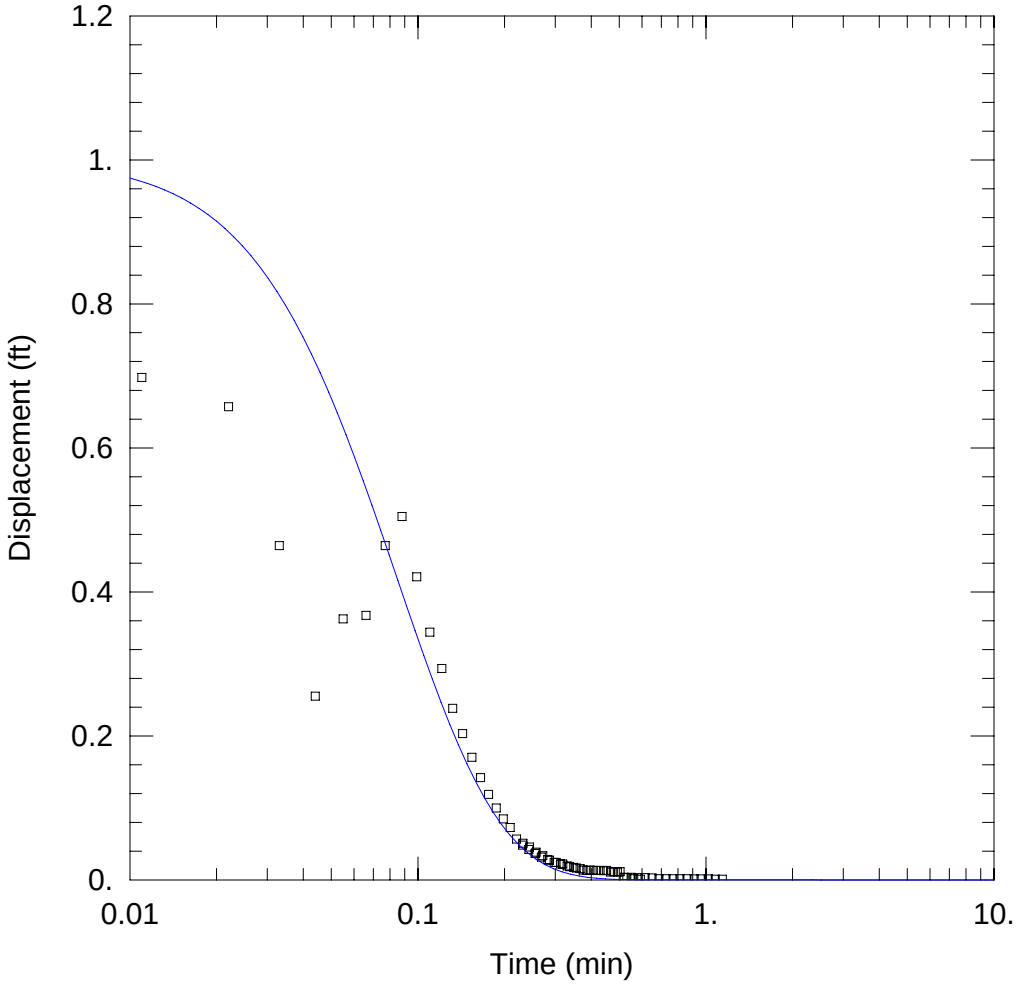
WELL DATA (MW4A)

Initial Displacement: 1. ft Static Water Column Height: 21. ft
Total Well Penetration Depth: 21. ft Screen Length: 10.3 ft
Casing Radius: 0.167 ft Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.08731 ft/min C(D) = 1.4



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW4B_out_Butler.aqt
Date: 08/01/07 Time: 08:56:55

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW4B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 15.5 ft Anisotropy Ratio (Kz/Kr): 0.1

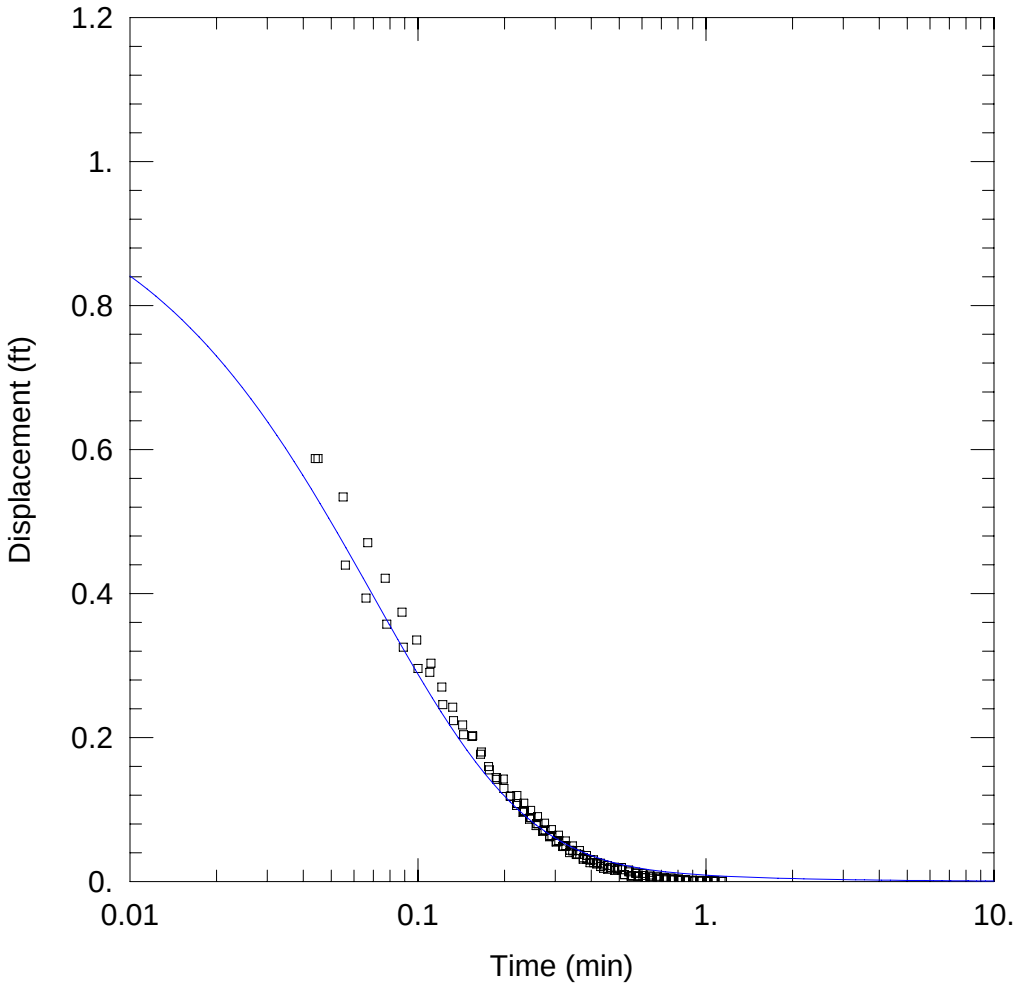
WELL DATA (MW4B)

Initial Displacement: 1. ft Static Water Column Height: 15.5 ft
Total Well Penetration Depth: 15.5 ft Screen Length: 10. ft
Casing Radius: 0.085 ft Wellbore Radius: 0.104 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.02595 ft/min C(D) = 1.096



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW4C_KGSnoskin.aqt
Date: 08/01/07 Time: 08:58:21

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW4C
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 9. ft

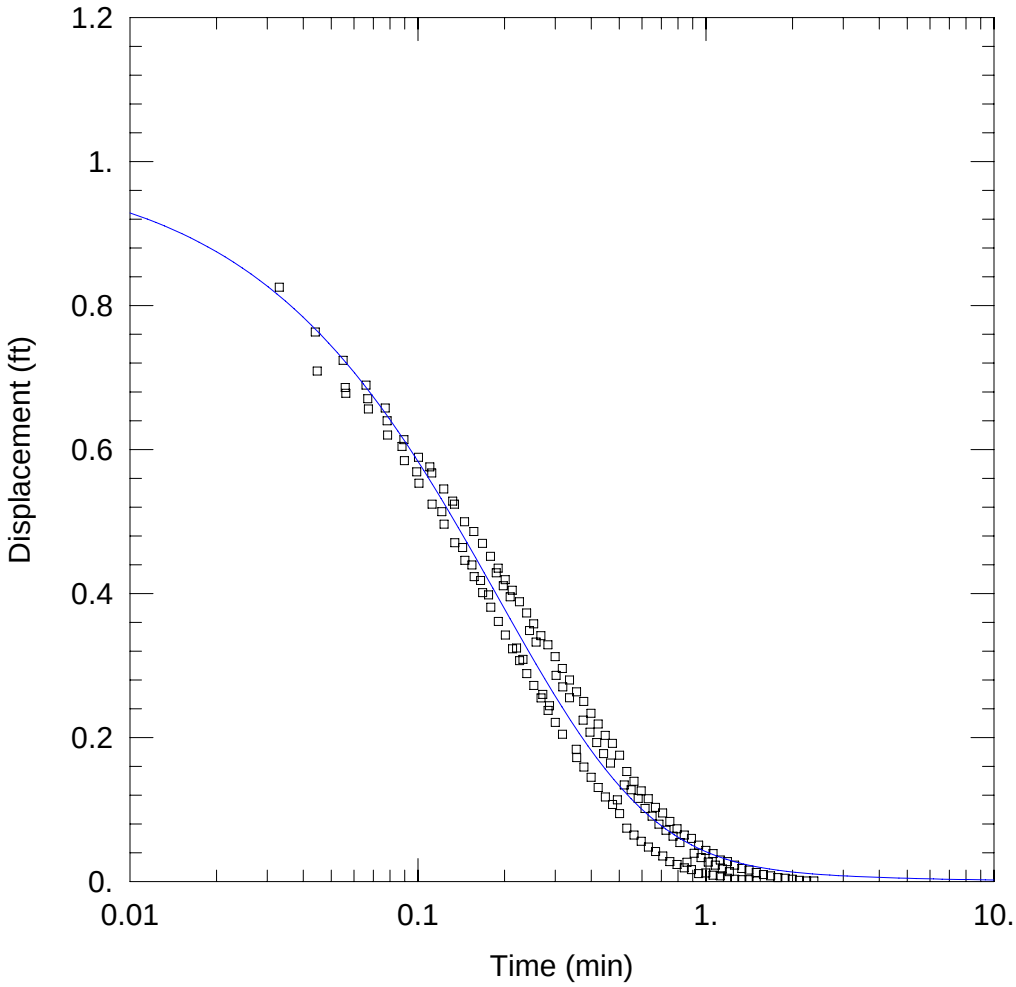
WELL DATA (MW4C)

Initial Displacement: 1. ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.085 ft
Static Water Column Height: 9. ft
Screen Length: 9. ft
Wellbore Radius: 0.104 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.02724 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW5_KGSnoskin.aqt
Date: 08/01/07 Time: 09:00:08

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW5
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 9. ft

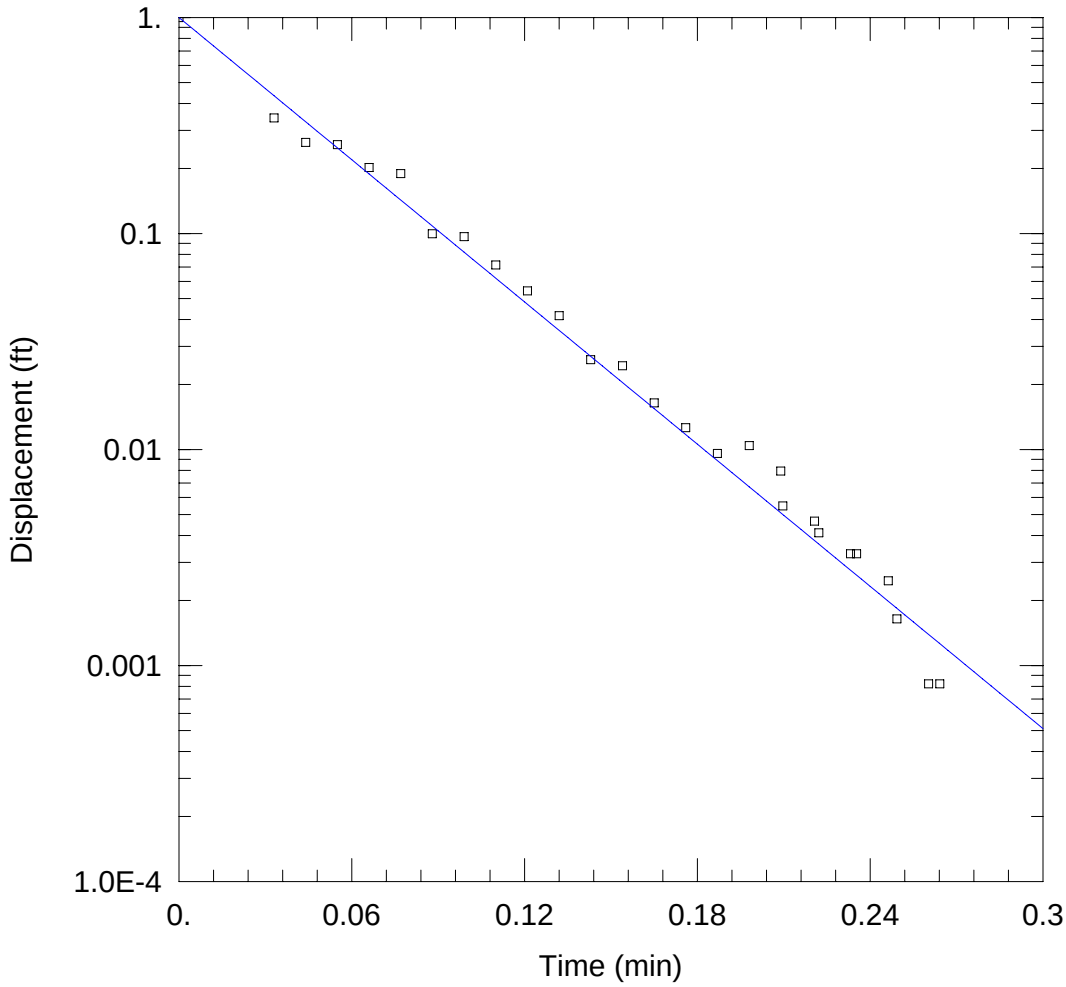
WELL DATA (MW5)

Initial Displacement: 1. ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.167 ft
Static Water Column Height: 9. ft
Screen Length: 9. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.03883 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW6_in_B&R.aqt
Date: 08/01/07 Time: 09:01:50

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW6
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 21.34 ft
Anisotropy Ratio (Kz/Kr): 0.1

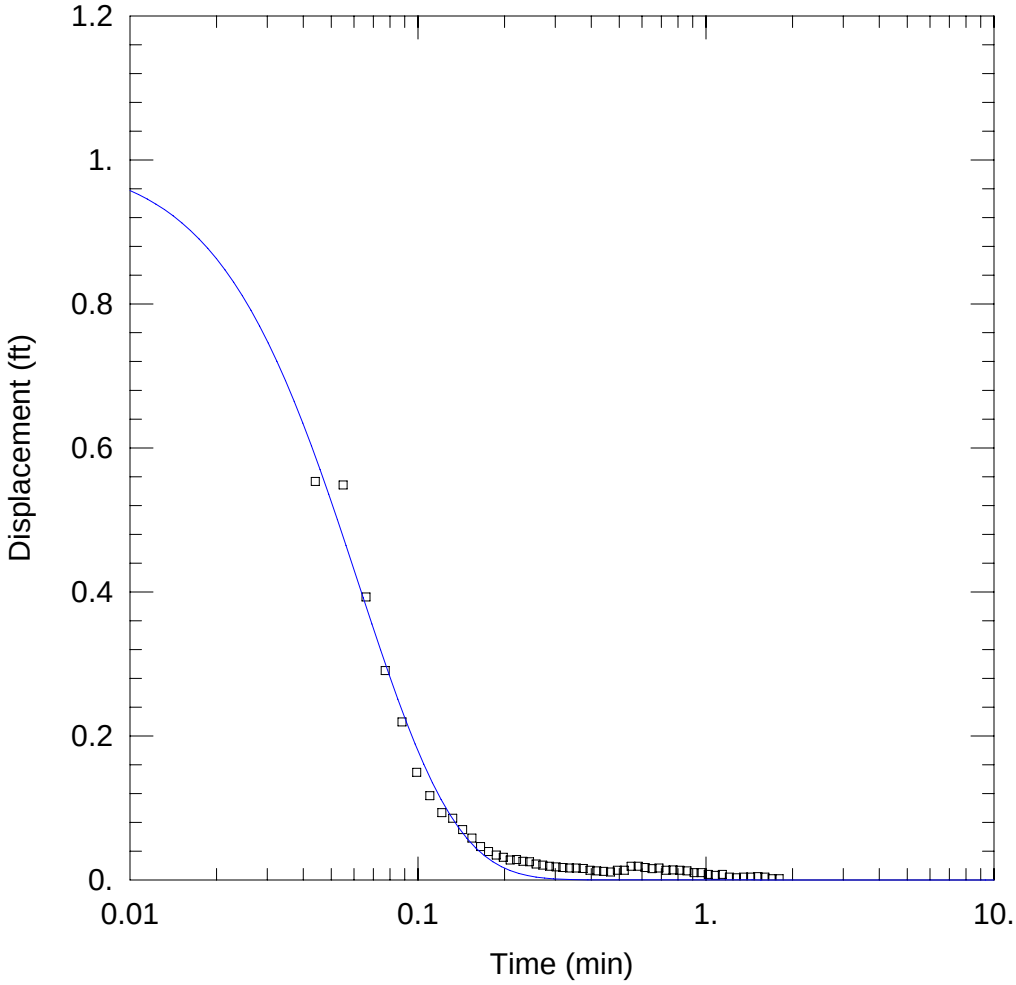
WELL DATA (MW6)

Initial Displacement: 1. ft
Total Well Penetration Depth: 21.34 ft
Casing Radius: 0.167 ft
Static Water Column Height: 21.34 ft
Screen Length: 10.4 ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.1485 ft/min
y0 = 1. ft



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW6_out_Butler.aqt
Date: 08/01/07 Time: 09:03:02

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW6
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 21.34 ft Anisotropy Ratio (Kz/Kr): 0.1

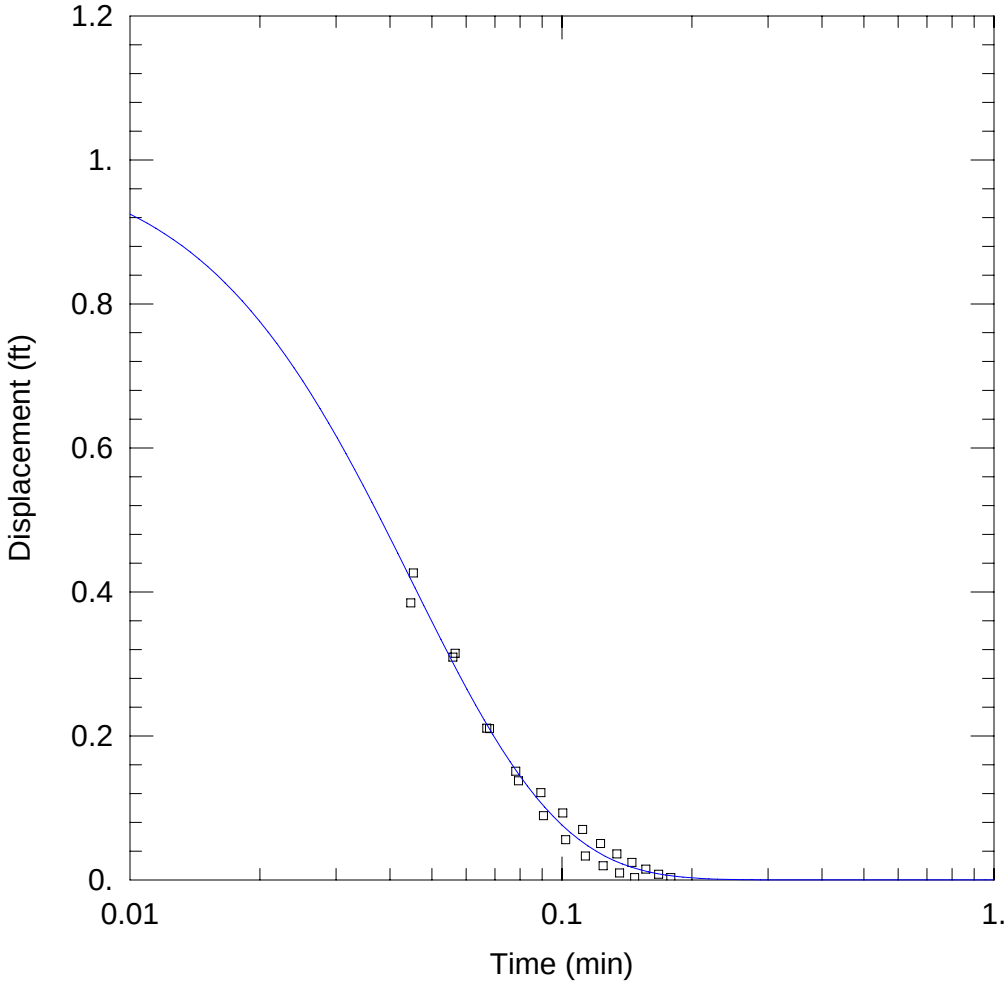
WELL DATA (MW6)

Initial Displacement: 1. ft Static Water Column Height: 21.34 ft
Total Well Penetration Depth: 21.34 ft Screen Length: 10.4 ft
Casing Radius: 0.167 ft Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.1213 ft/min C(D) = 1.036



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW7_in_Butler.aqt
Date: 08/01/07 Time: 09:04:20

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW7
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 15.5 ft Anisotropy Ratio (Kz/Kr): 0.1

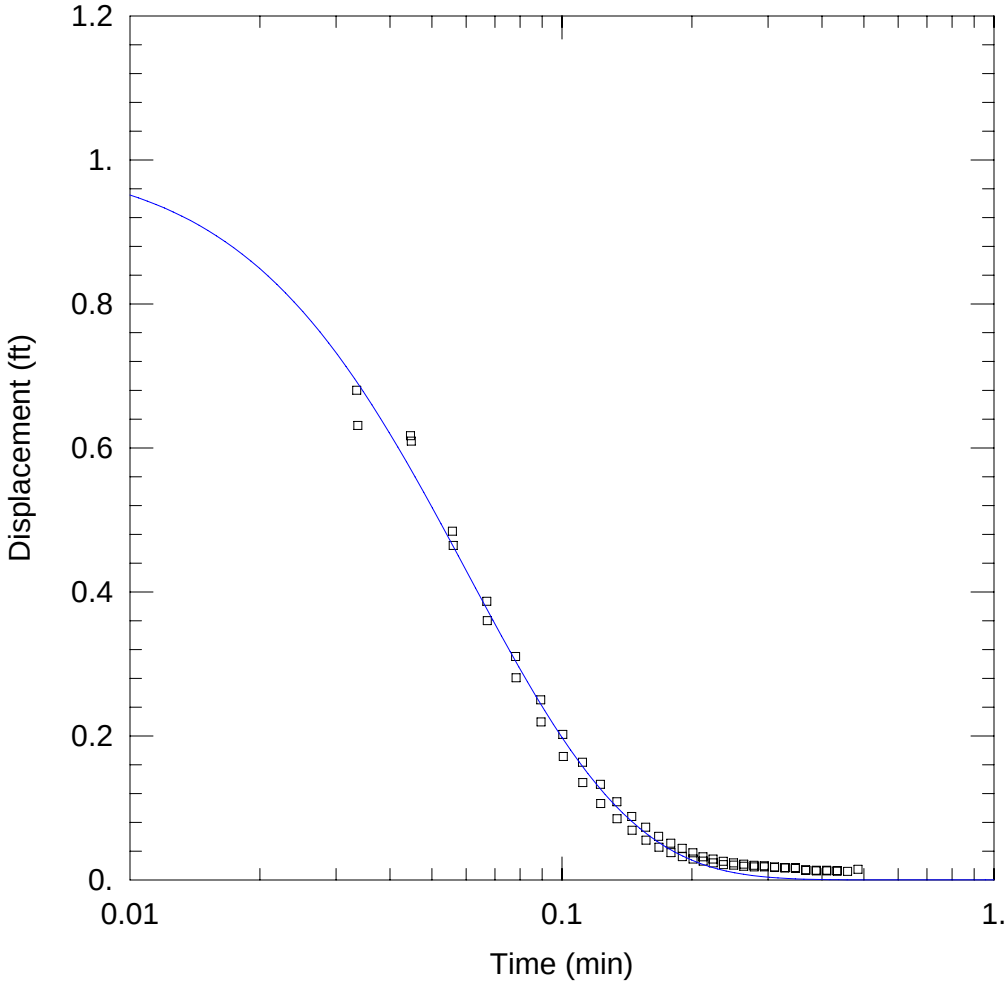
WELL DATA (MW7)

Initial Displacement: 1. ft
Total Well Penetration Depth: 15.5 ft
Casing Radius: 0.167 ft
Static Water Column Height: 15.5 ft
Screen Length: 10.2 ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.169 ft/min C(D) = 1.05



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW7_out_Butler.aqt
Date: 08/01/07 Time: 09:05:34

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW7
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 15.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

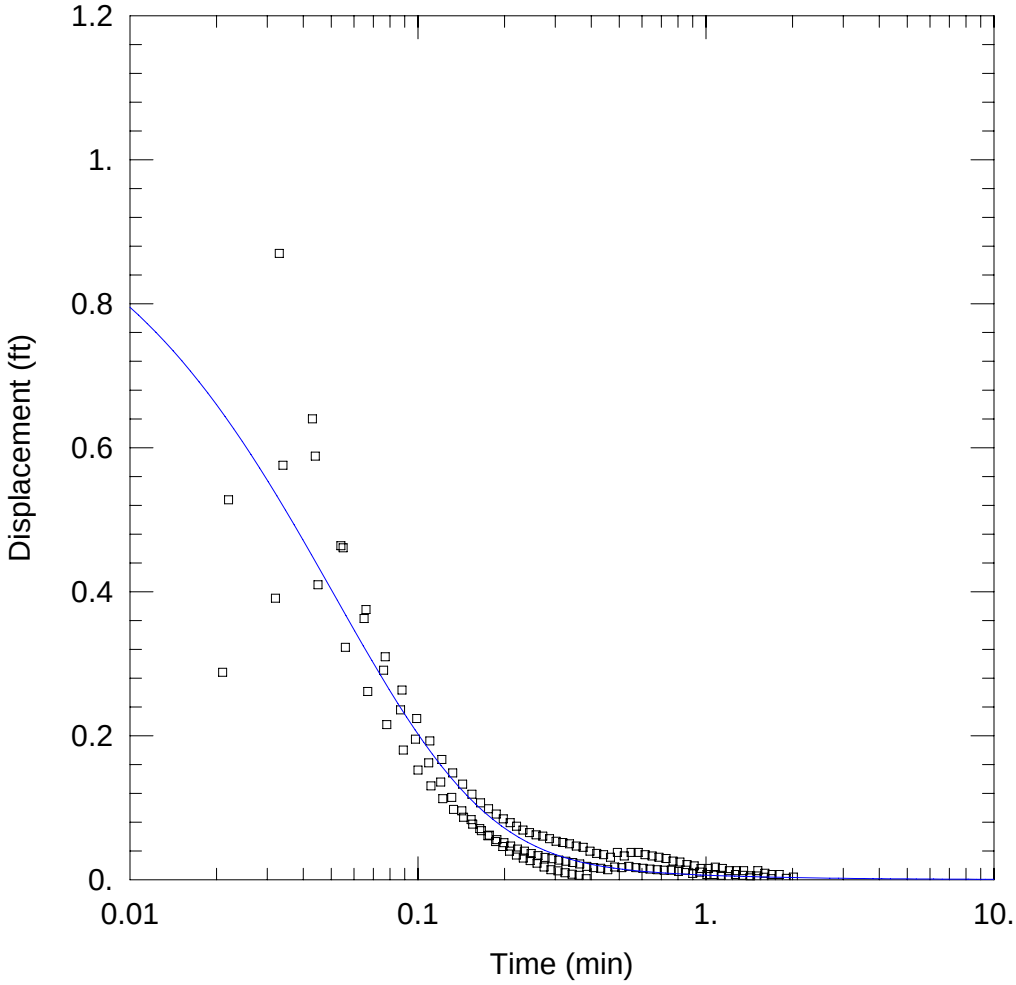
WELL DATA (MW7)

Initial Displacement: 1. ft
Total Well Penetration Depth: 15.5 ft
Casing Radius: 0.167 ft
Static Water Column Height: 15.5 ft
Screen Length: 10.2 ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.1189 ft/min
C(D) = 1.179



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW8A\MW8A_out_KGS.aqt
Date: 08/01/07 Time: 09:08:52

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW8A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 16. ft

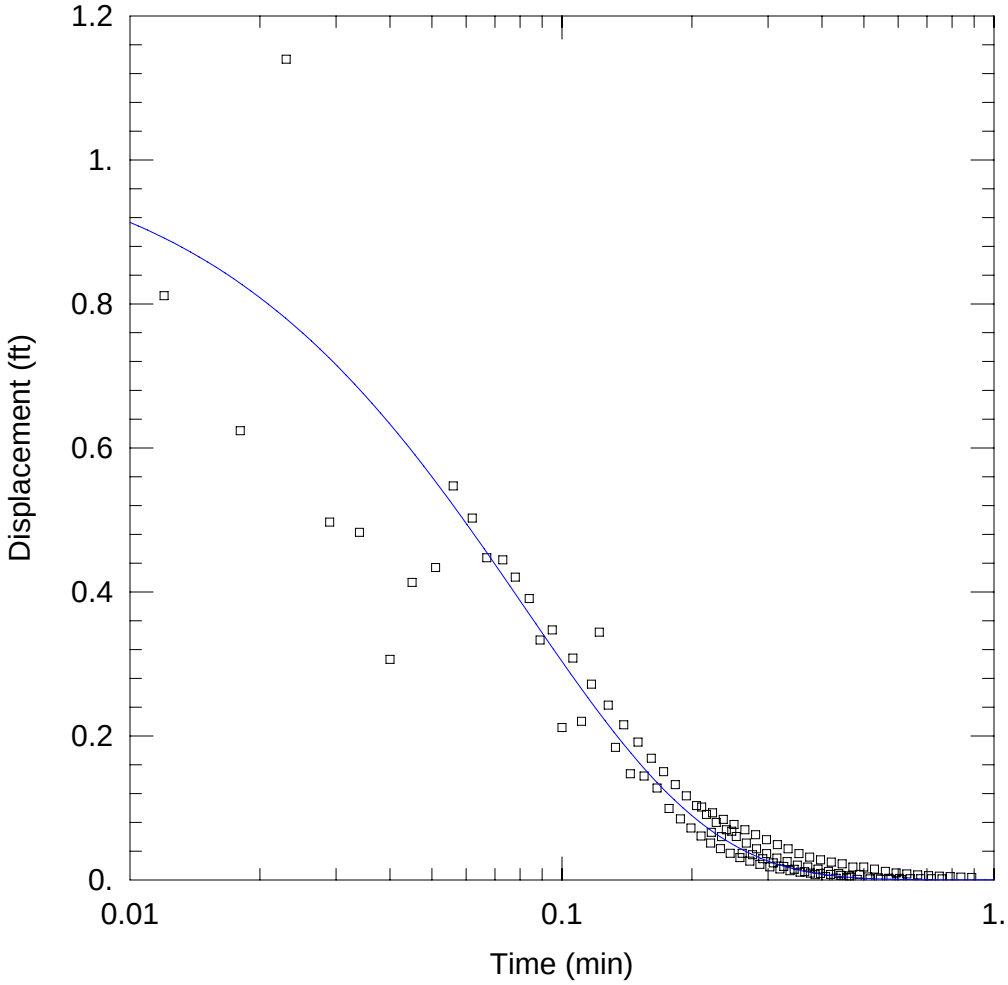
WELL DATA (MW8A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 16. ft
Casing Radius: 0.167 ft
Static Water Column Height: 16. ft
Screen Length: 15. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.07903 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW8B_Butler.aqt
Date: 08/01/07 Time: 09:12:59

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW8
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 0.1

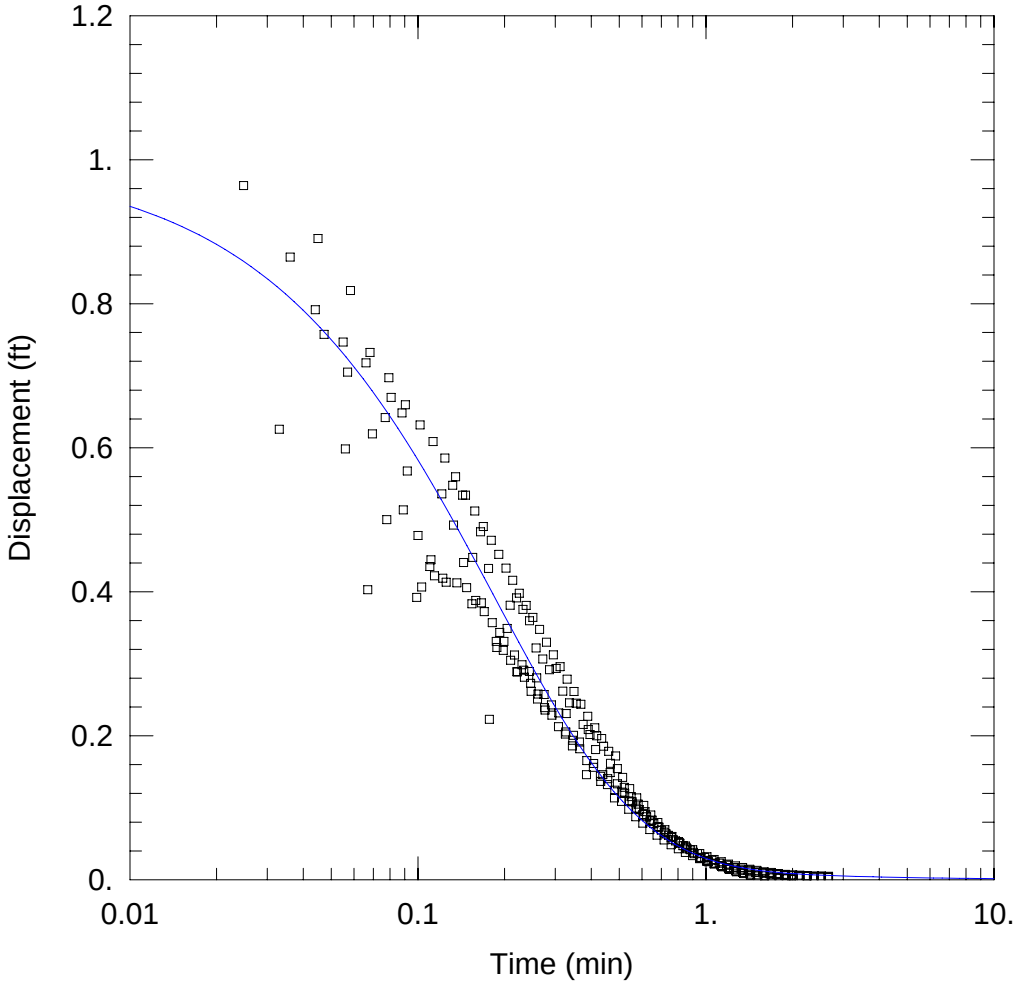
WELL DATA (MW8B)

Initial Displacement: 1. ft Static Water Column Height: 10. ft
Total Well Penetration Depth: 10. ft Screen Length: 10. ft
Casing Radius: 0.085 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.02272 ft/min C(D) = 2.884



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW8C_KGS_2.aqt
Date: 08/01/07 Time: 09:15:59

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW8C
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 4. ft

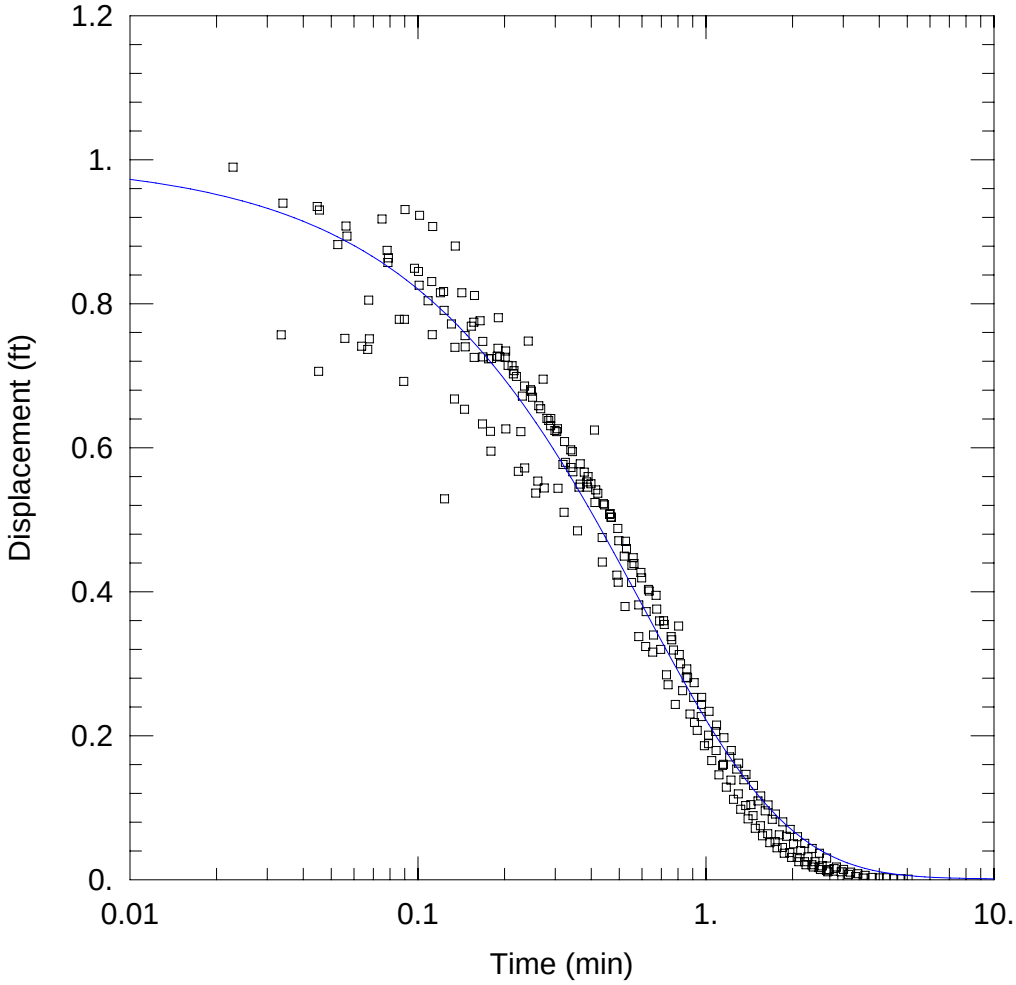
WELL DATA (MW8C)

Initial Displacement: 1. ft
Total Well Penetration Depth: 4. ft
Casing Radius: 0.085 ft
Static Water Column Height: 4. ft
Screen Length: 2.7 ft
Wellbore Radius: 0.104 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.0335 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW8D\MW8D_KGS.aqt
Date: 08/01/07 Time: 09:39:52

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW8D
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 87. ft

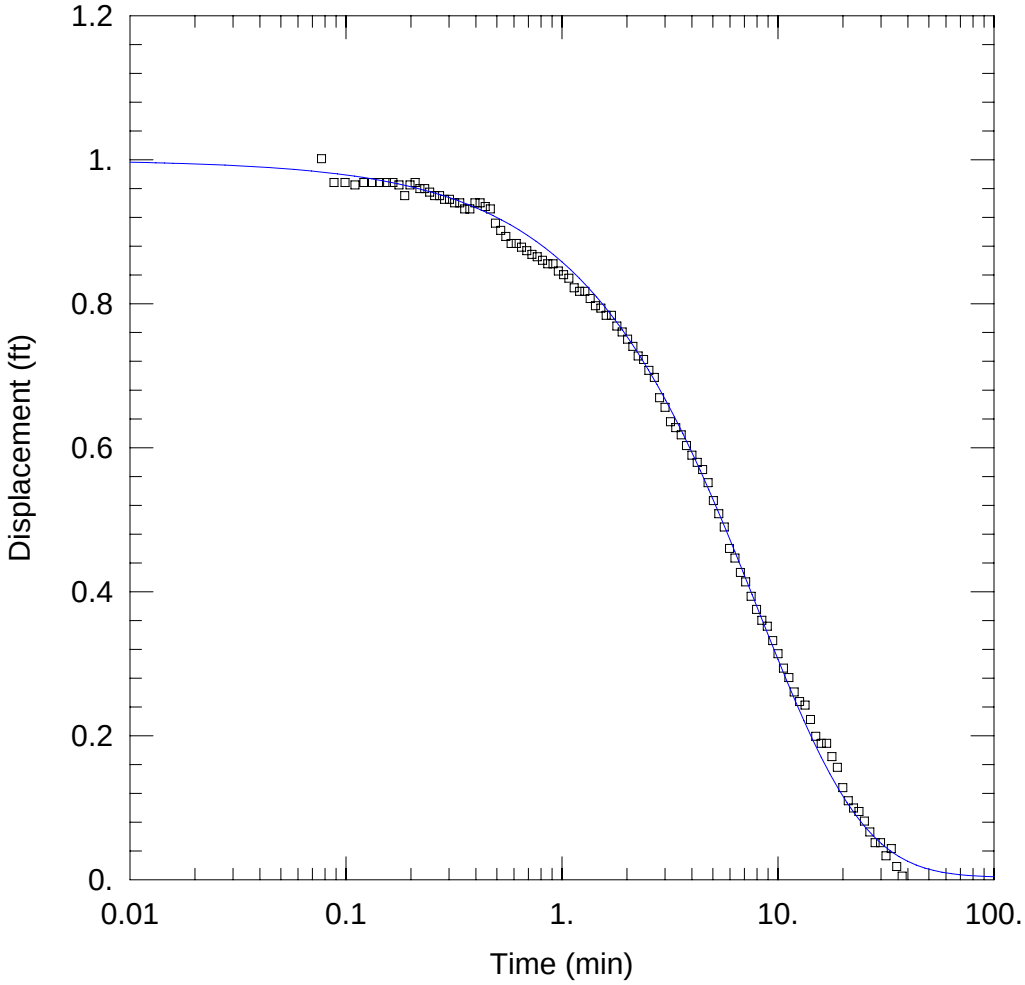
WELL DATA (MW8D)

Initial Displacement: 1. ft
Total Well Penetration Depth: 87. ft
Casing Radius: 0.167 ft
Static Water Column Height: 87. ft
Screen Length: 10. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.01039 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW9A_in2_KGS.aqt
Date: 08/01/07 Time: 09:48:42

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW9A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 21.75 ft

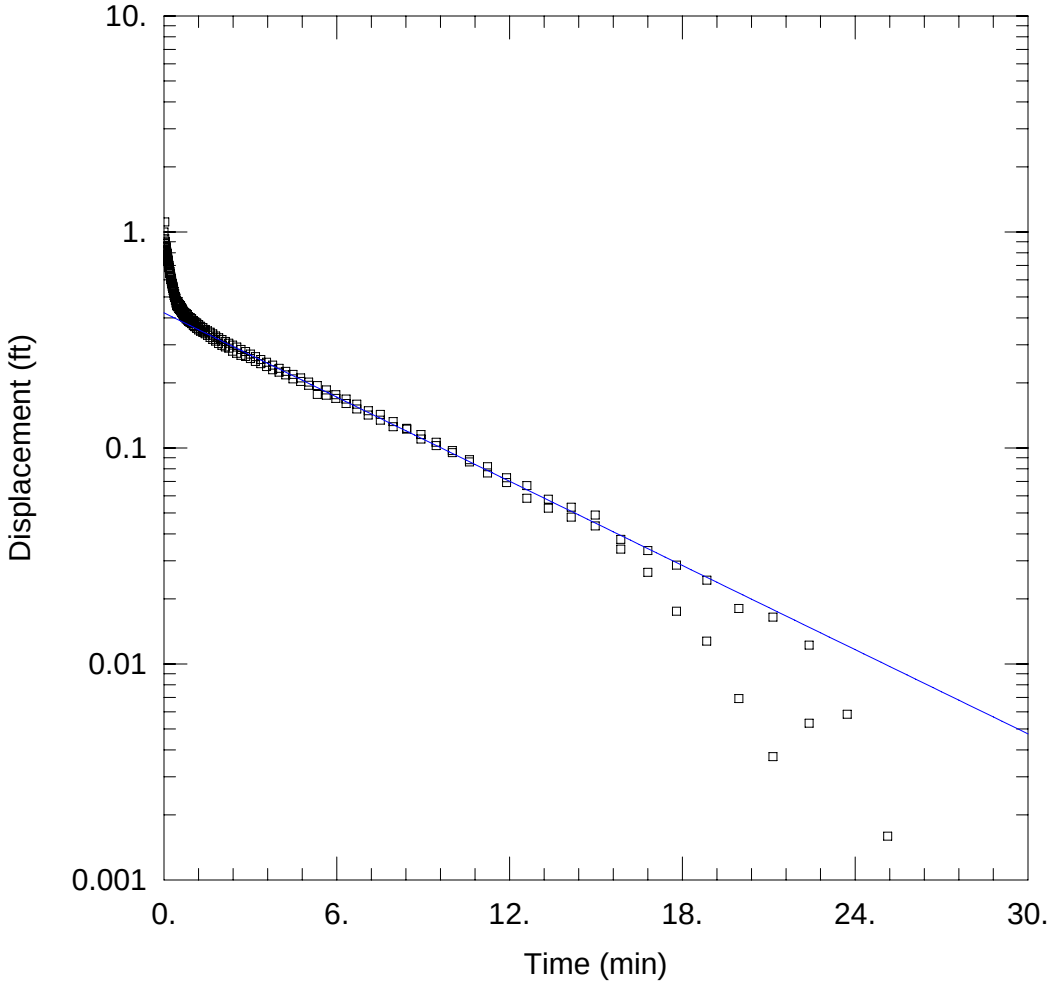
WELL DATA (MW9A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 21.75 ft
Casing Radius: 0.167 ft
Static Water Column Height: 21.75 ft
Screen Length: 8.75 ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.0008958 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW9A\MW9A_out_B&R.aqt
Date: 08/01/07 Time: 09:53:07

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW9A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 21.75 ft
Anisotropy Ratio (Kz/Kr): 1.

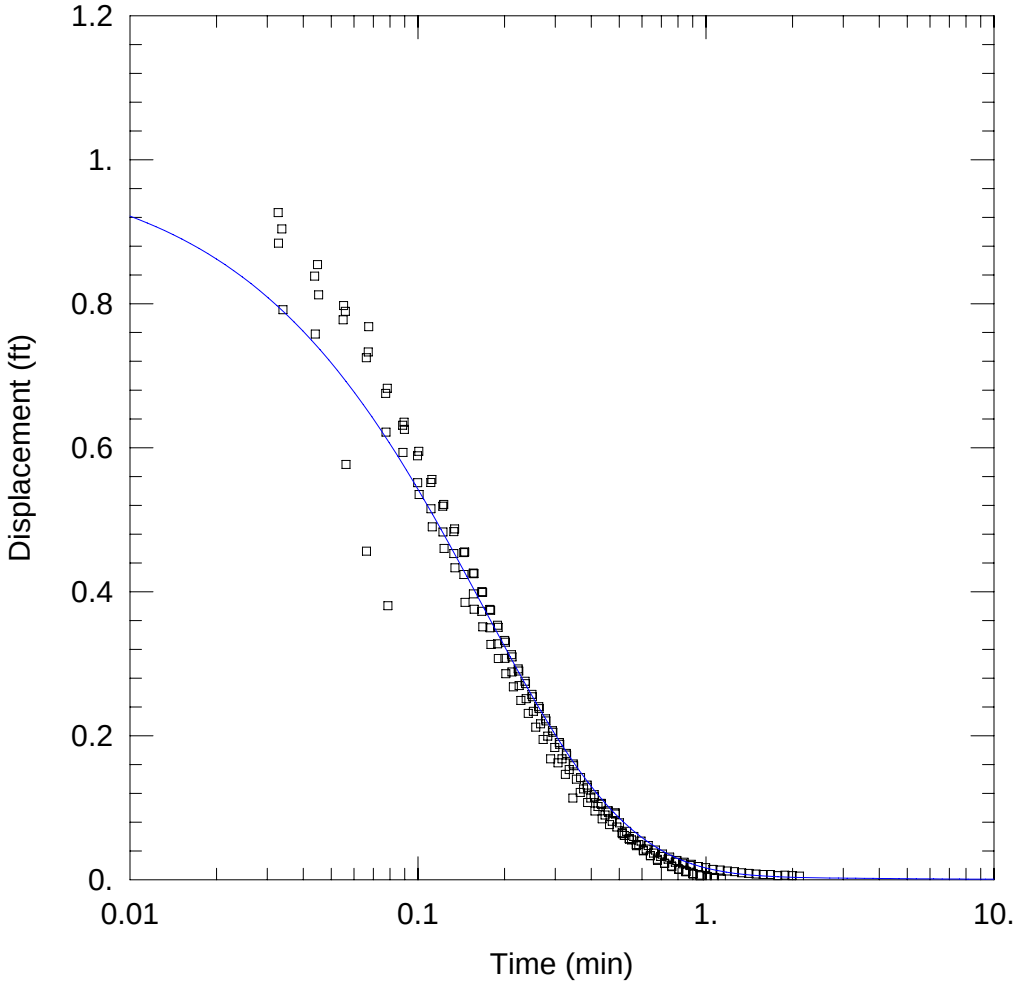
WELL DATA (MW9A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 21.75 ft
Casing Radius: 0.167 ft
Static Water Column Height: 21.75 ft
Screen Length: 8.75 ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.0008132 ft/min
y0 = 0.4219 ft



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW9B\MW9B_KGS.aqt
Date: 08/01/07 Time: 10:04:21

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW9B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 31.13 ft

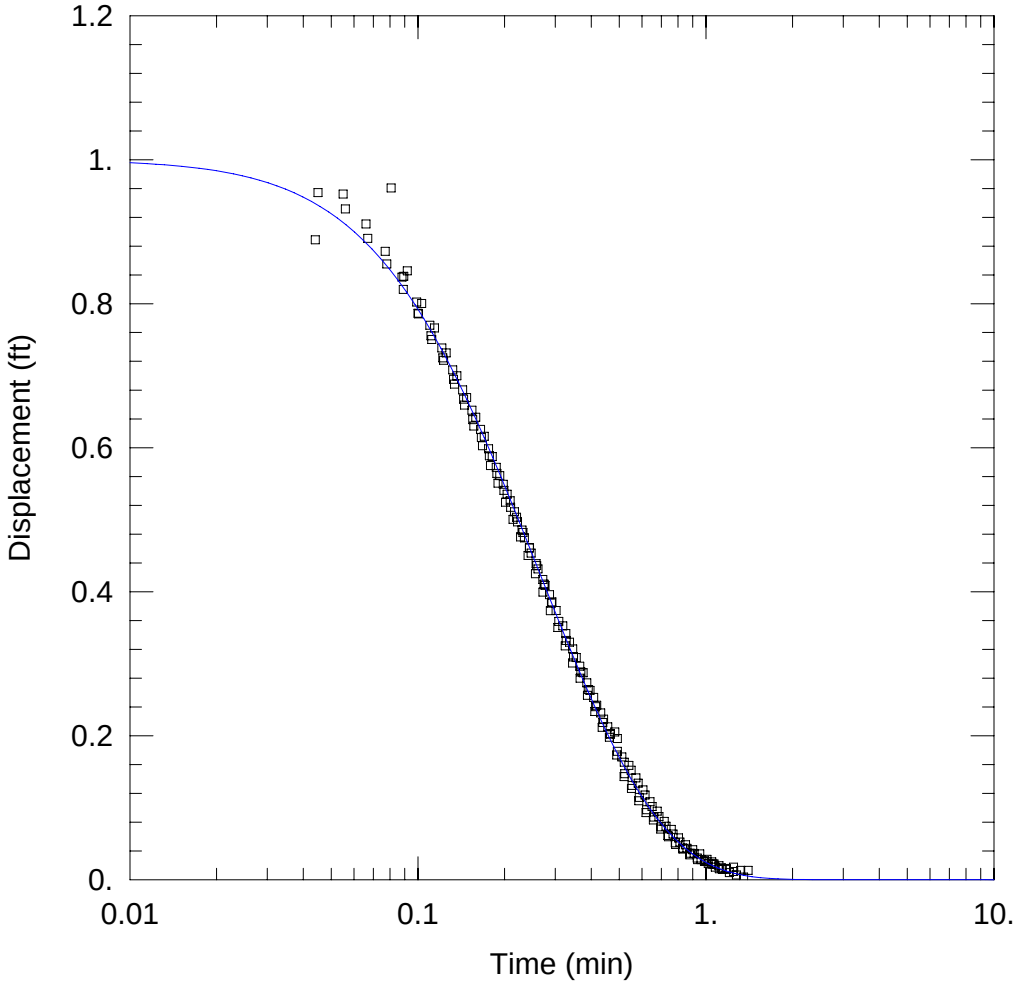
WELL DATA (MW9B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 31.13 ft
Casing Radius: 0.167 ft
Static Water Column Height: 31.13 ft
Screen Length: 10.2 ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.03663 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW10_Butler.aqt
Date: 08/01/07 Time: 10:10:31

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW10
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 28.27 ft Anisotropy Ratio (Kz/Kr): 0.1

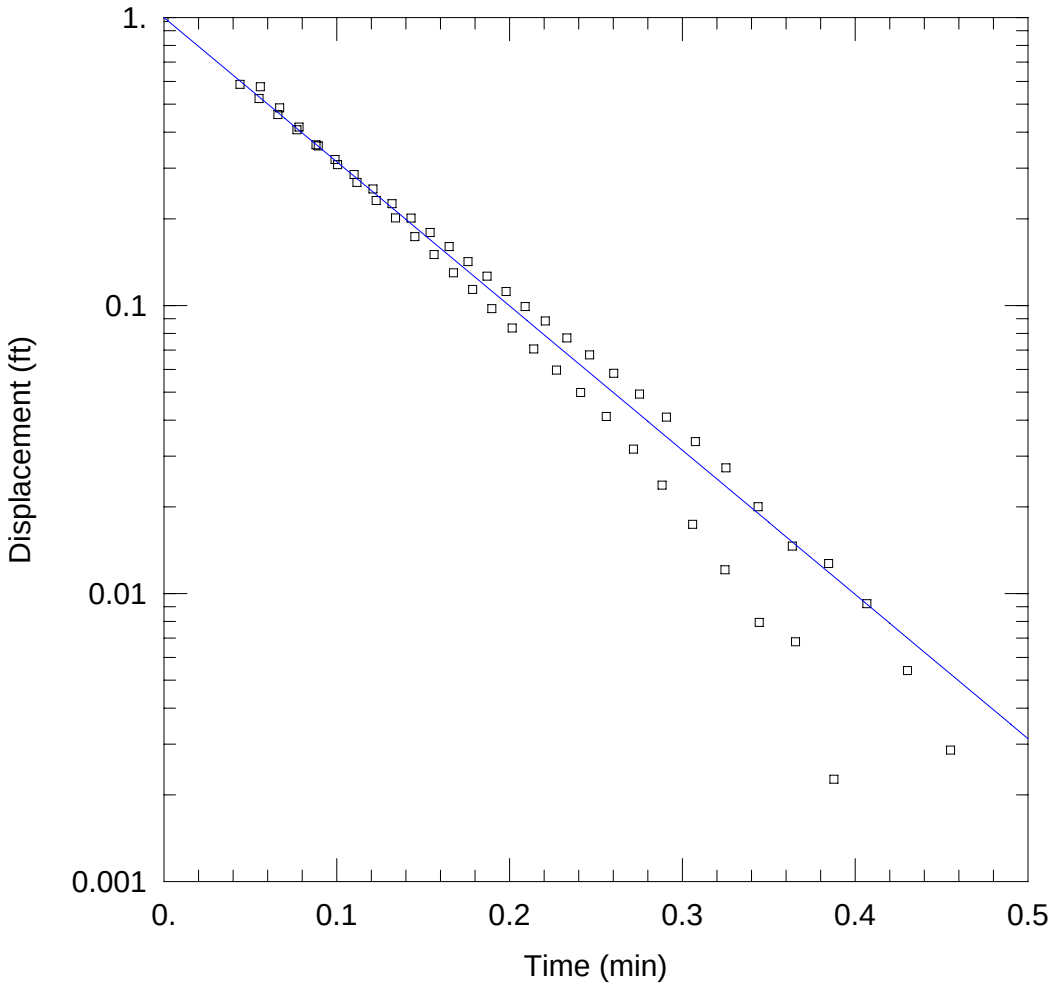
WELL DATA (MW10)

Initial Displacement: 1. ft
Total Well Penetration Depth: 28.27 ft
Casing Radius: 0.167 ft
Static Water Column Height: 28.27 ft
Screen Length: 10. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.02671 ft/min C(D) = 1.429



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW11_in_B&R.aqt
Date: 08/01/07 Time: 10:14:33

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW11
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 18.42 ft
Anisotropy Ratio (Kz/Kr): 0.1

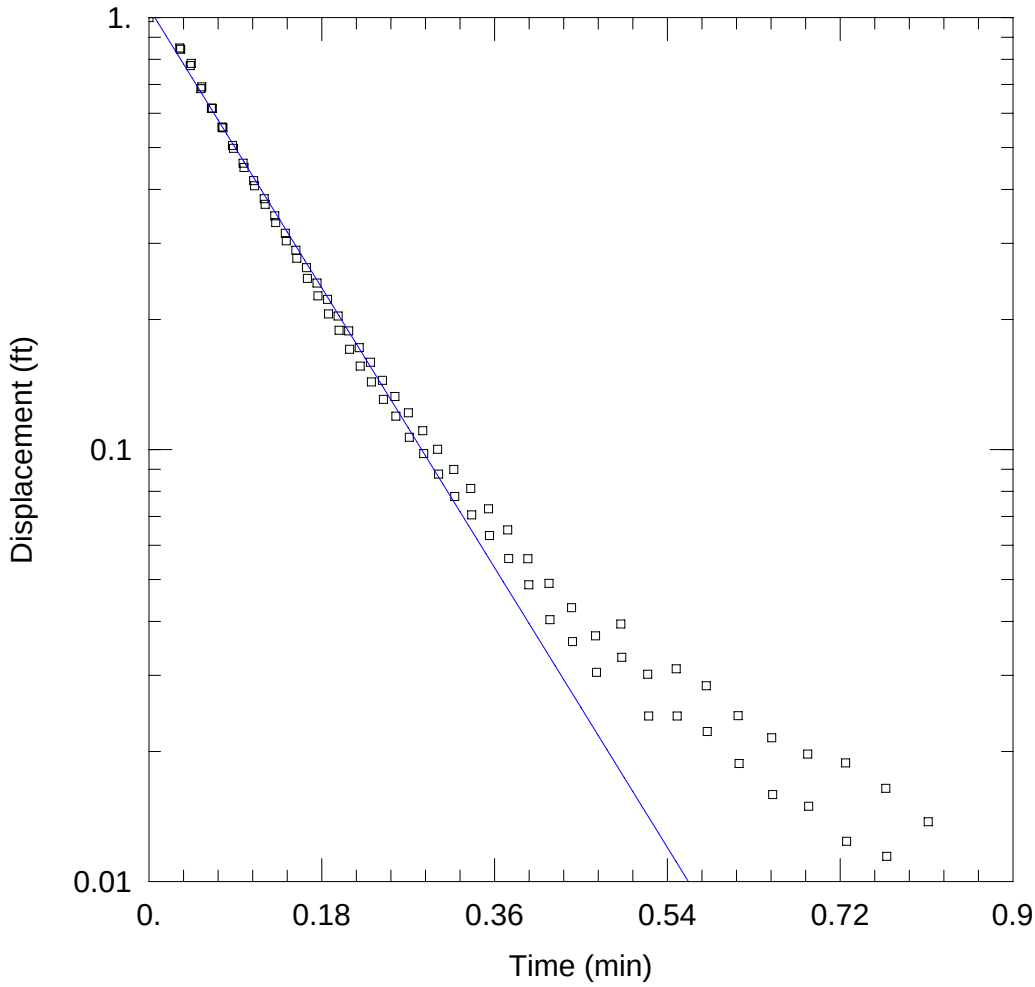
WELL DATA (MW11)

Initial Displacement: 1. ft
Total Well Penetration Depth: 18.42 ft
Casing Radius: 0.167 ft
Static Water Column Height: 18.42 ft
Screen Length: 10. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.06883 ft/min
y0 = 1. ft



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW11_out_B&R.aqt
Date: 08/01/07 Time: 10:17:14

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW11
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 18.42 ft Anisotropy Ratio (Kz/Kr): 0.1

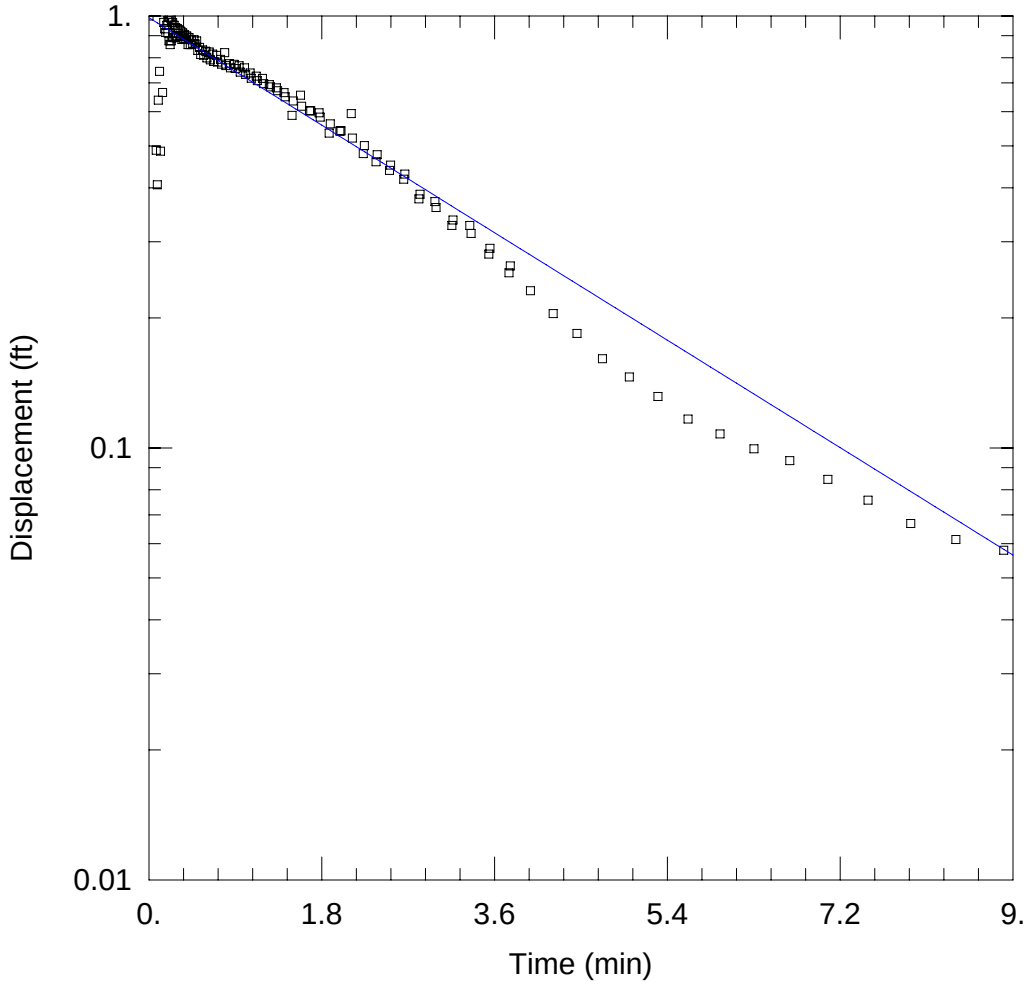
WELL DATA (MW11)

Initial Displacement: 1. ft
Total Well Penetration Depth: 18.42 ft
Casing Radius: 0.167 ft
Static Water Column Height: 18.42 ft
Screen Length: 10. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined Solution Method: Bouwer-Rice

K = 0.04945 ft/min y0 = 1.051 ft



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW12\MW12_out_B&R.aqt
Date: 08/01/07 Time: 10:36:30

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW12
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 5.89 ft
Anisotropy Ratio (Kz/Kr): 0.1

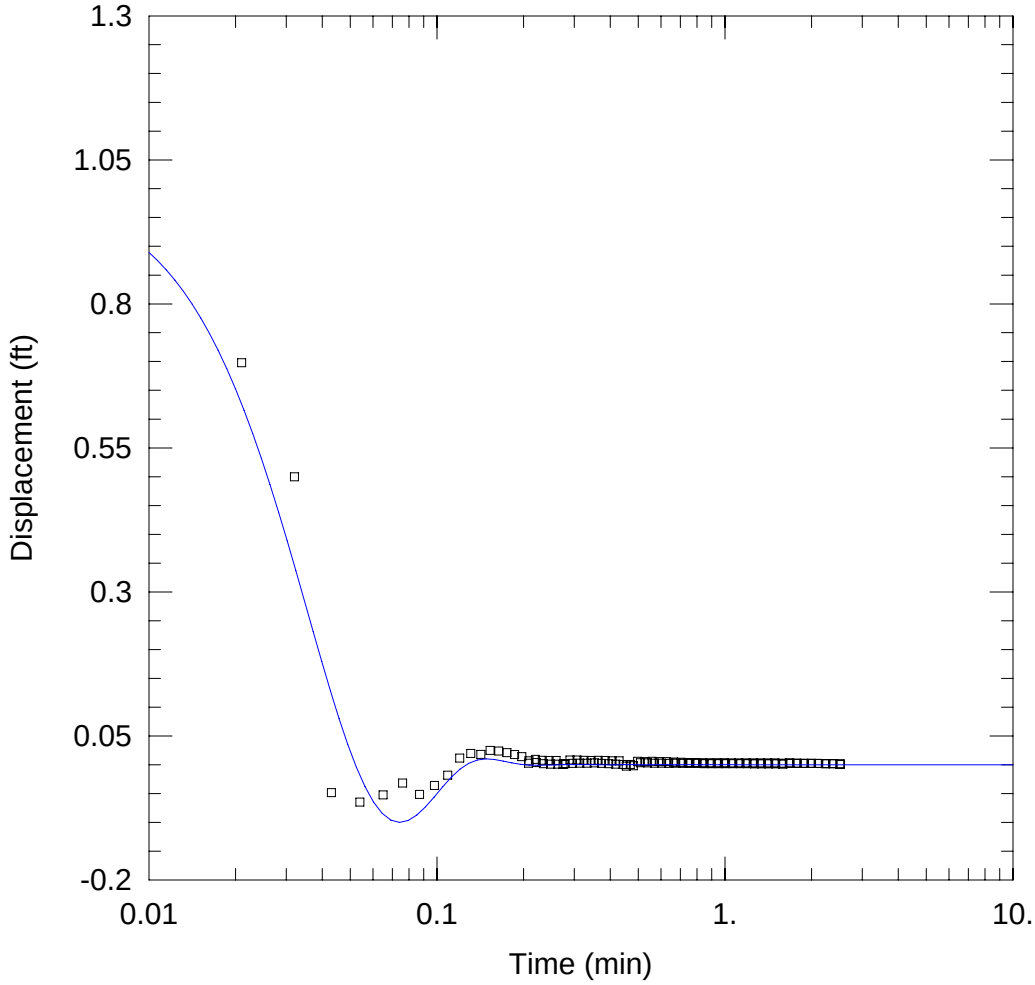
WELL DATA (MW12)

Initial Displacement: 1. ft
Total Well Penetration Depth: 5.89 ft
Casing Radius: 0.08 ft
Static Water Column Height: 5.89 ft
Screen Length: 5.89 ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.0005403 ft/min
y0 = 0.9905 ft



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW13B_in_Butler.aqt
Date: 08/01/07 Time: 10:39:40

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW13B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 11. ft Anisotropy Ratio (Kz/Kr): 0.1

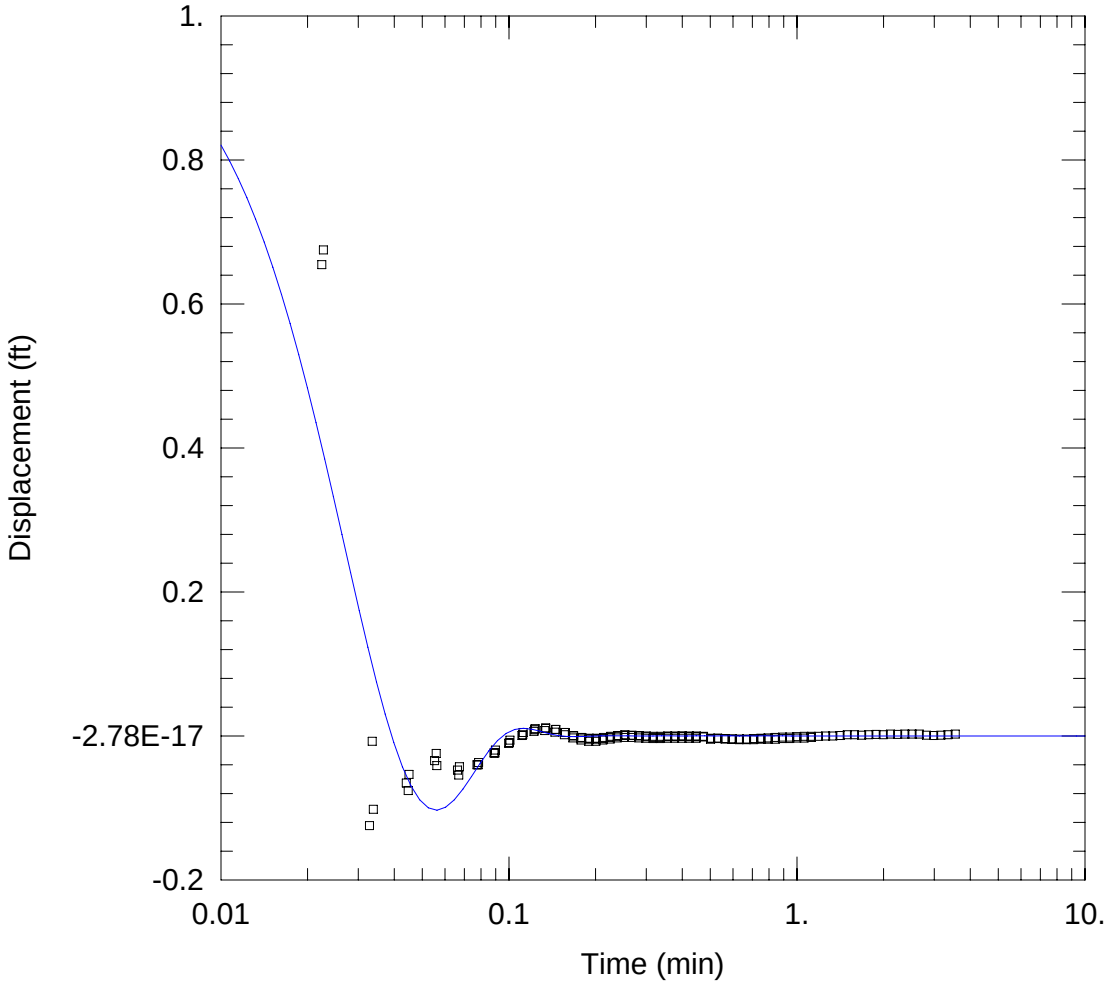
WELL DATA (MW13B)

Initial Displacement: 1. ft Static Water Column Height: 11. ft
Total Well Penetration Depth: 11. ft Screen Length: 10. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.09159 ft/min C(D) = 0.5909



WELL TEST ANALYSIS

Data Set: C:\...\MW14_in_Butler.aqt
Date: 10/11/07 Time: 10:54:34

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW14
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 21. ft Anisotropy Ratio (Kz/Kr): 0.1

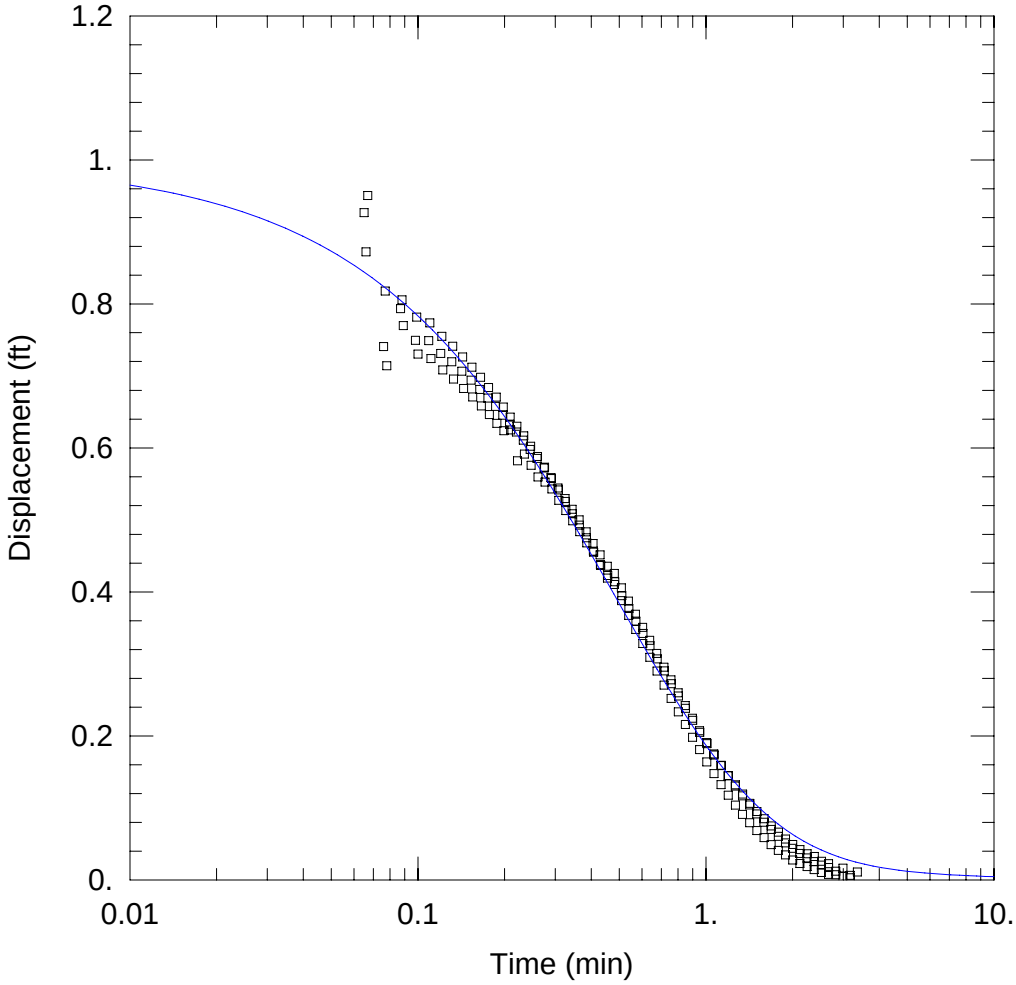
WELL DATA (MW14)

Initial Displacement: 1. ft Static Water Column Height: 20. ft
Total Well Penetration Depth: 20. ft Screen Length: 15. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.0777 ft/min C(D) = 0.586



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW15_in_KGS_2.aqt
Date: 08/01/07 Time: 10:48:46

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW15
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 38. ft

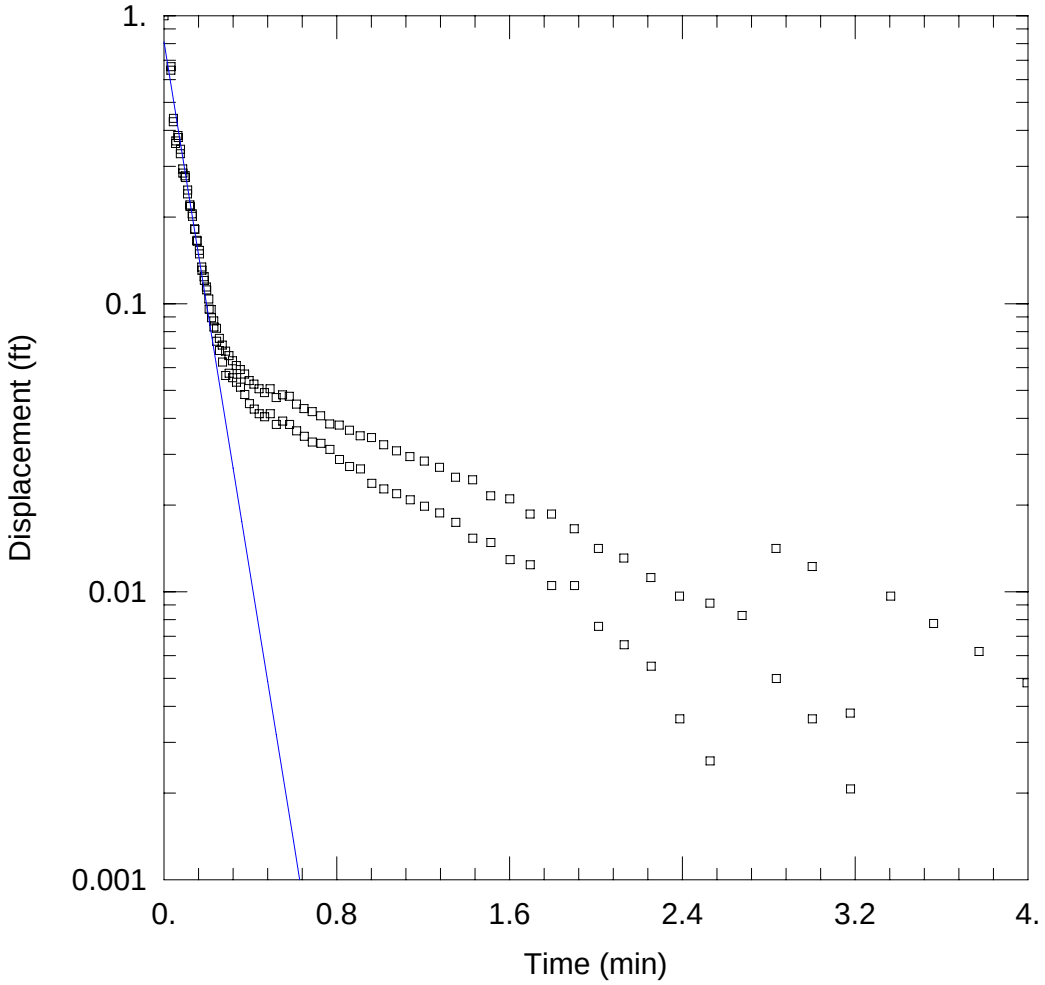
WELL DATA (MW15)

Initial Displacement: 1. ft
Total Well Penetration Depth: 38. ft
Casing Radius: 0.08 ft
Static Water Column Height: 38. ft
Screen Length: 20. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.001418 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW16A_out_B&R.aqt
Date: 08/01/07 Time: 10:52:46

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW16A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 12.63 ft
Anisotropy Ratio (Kz/Kr): 0.1

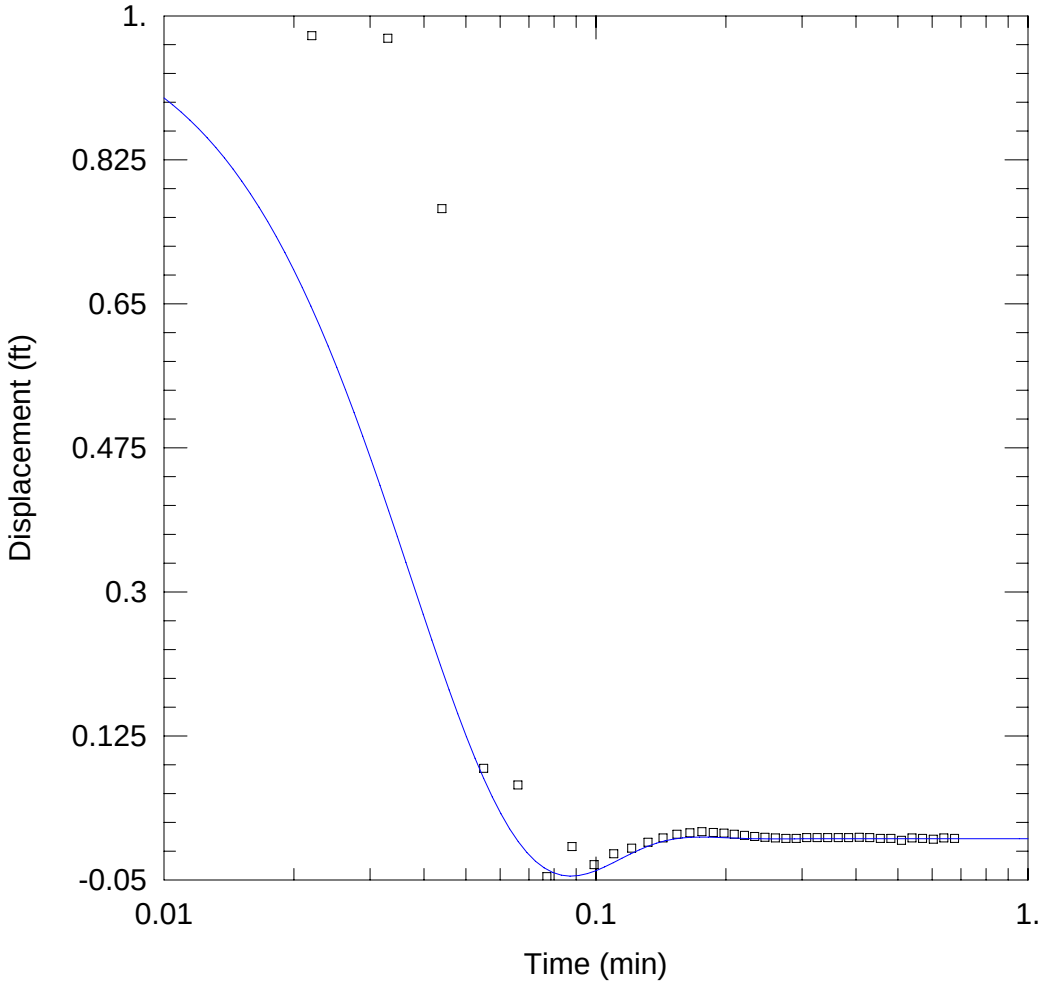
WELL DATA (MW16A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 12.63 ft
Casing Radius: 0.08 ft
Static Water Column Height: 12.63 ft
Screen Length: 12.63 ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.01008 ft/min
y0 = 0.8126 ft



WELL TEST ANALYSIS

Data Set: R:\...\MW16B_in_Butler.aqt
Date: 08/01/07 Time: 10:55:56

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW16B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 11. ft Anisotropy Ratio (Kz/Kr): 0.1

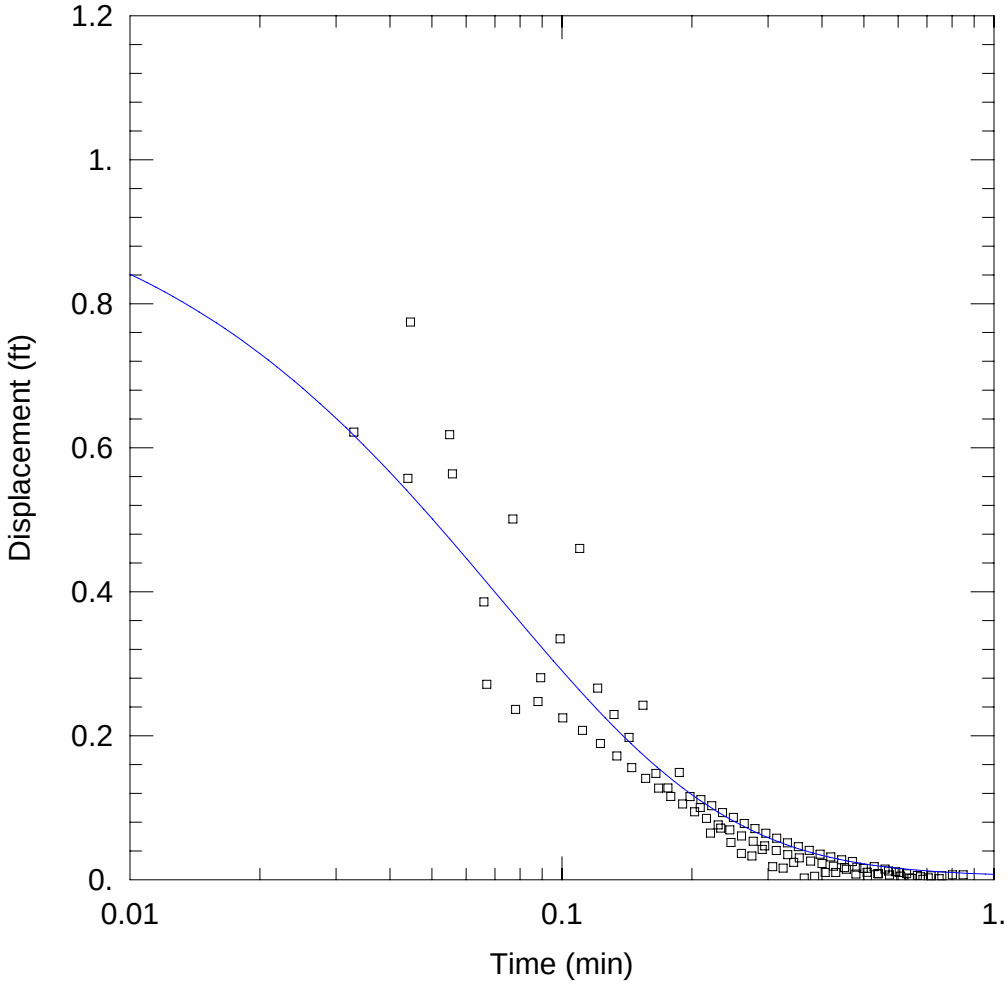
WELL DATA (MW16B)

Initial Displacement: 1. ft Static Water Column Height: 11. ft
Total Well Penetration Depth: 11. ft Screen Length: 10. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.07416 ft/min C(D) = 0.7013



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW16C\MW16C_KGS.aqt
Date: 08/01/07 Time: 10:56:57

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW16C
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 20. ft

WELL DATA (MW16C)

Initial Displacement: 1. ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.08 ft

Static Water Column Height: 20. ft
Screen Length: 15. ft
Wellbore Radius: 0.1 ft

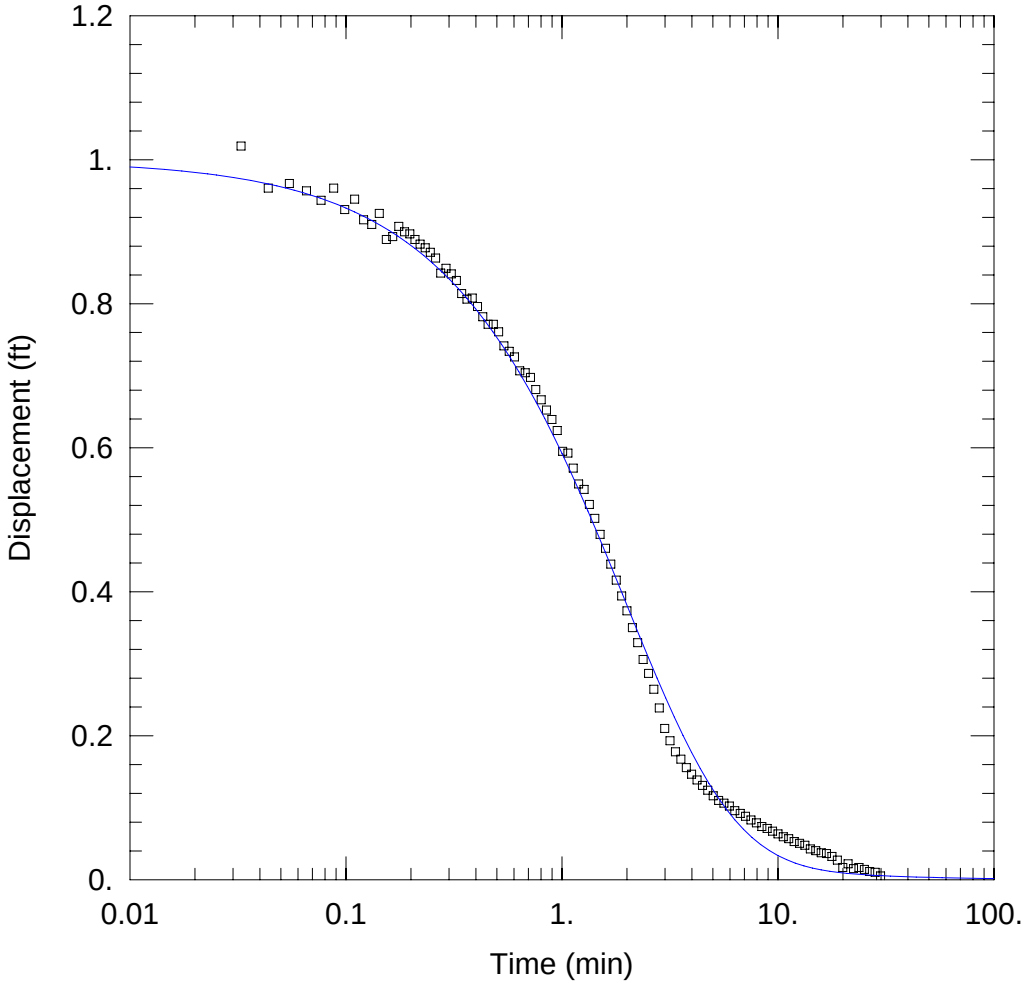
SOLUTION

Aquifer Model: Confined

Kr = 0.01317 ft/min
Kz/Kr = 0.1

Solution Method: KGS Model

Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW17A_out_KGS_2.aqt
Date: 08/01/07 Time: 11:01:49

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW17A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 9.83 ft

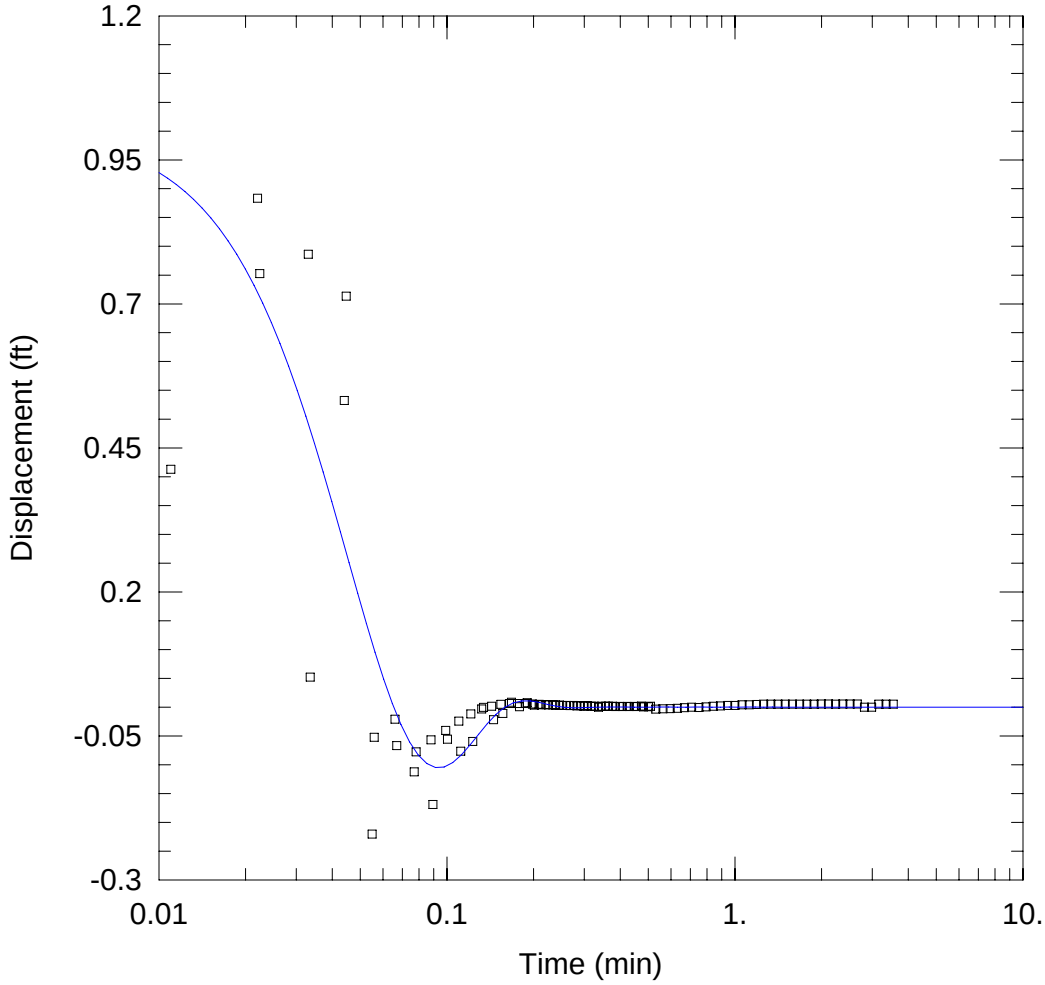
WELL DATA (MW17A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 9.83 ft
Casing Radius: 0.08 ft
Static Water Column Height: 9.83 ft
Screen Length: 6.83 ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.001116 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW17B_in_Butler.aqt
Date: 08/01/07 Time: 11:05:28

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW17B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 10.5 ft Anisotropy Ratio (Kz/Kr): 0.1

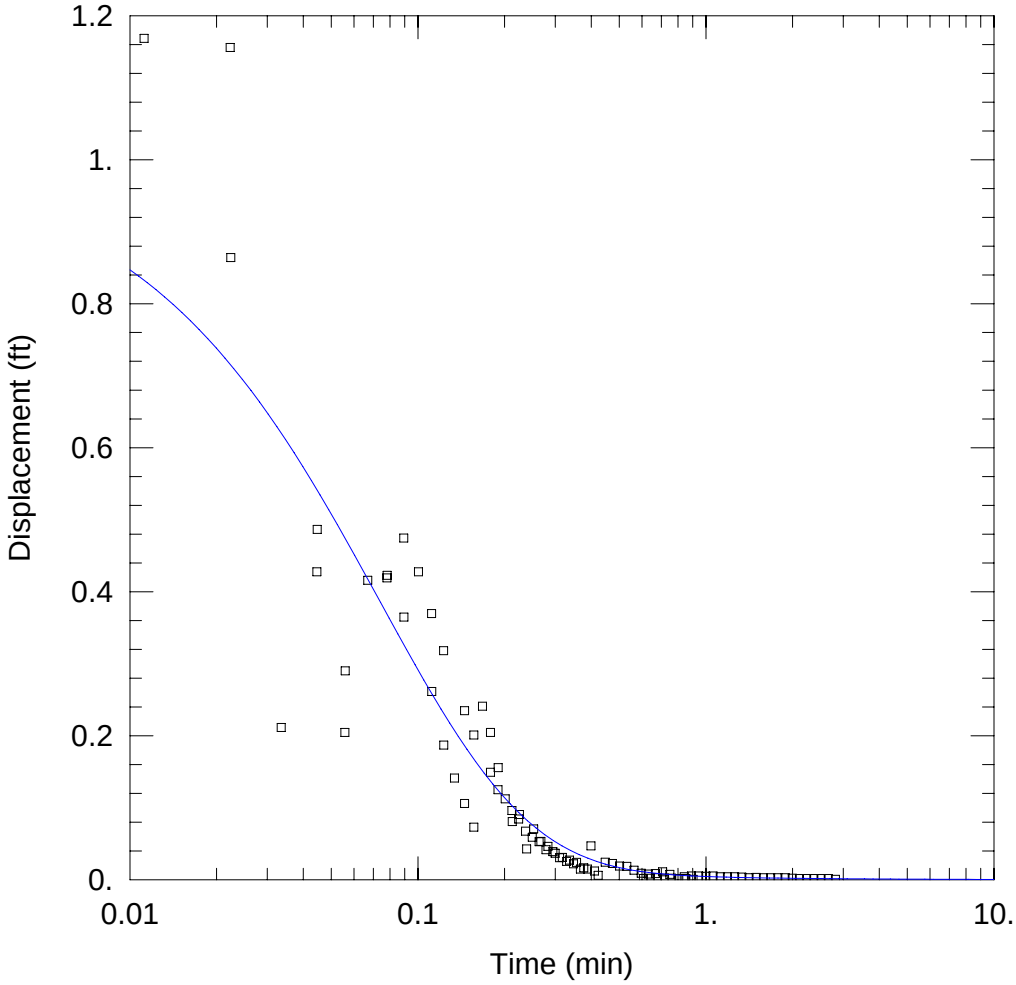
WELL DATA (MW17B)

Initial Displacement: 1. ft Static Water Column Height: 10.5 ft
Total Well Penetration Depth: 10.5 ft Screen Length: 10. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.07317 ft/min C(D) = 0.5823



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW17C_out_KGS_2.aqt
Date: 08/01/07 Time: 11:06:51

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW17C
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 22.5 ft

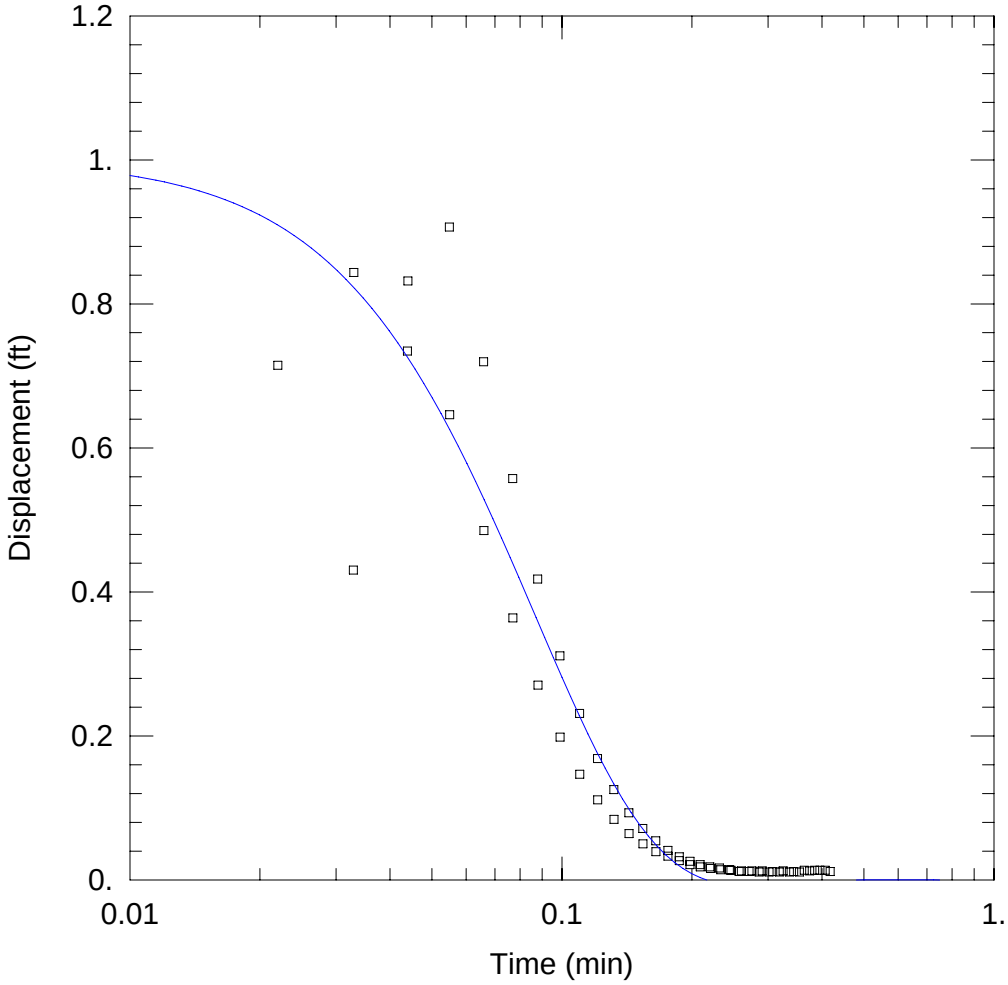
WELL DATA (MW17C)

Initial Displacement: 1. ft
Total Well Penetration Depth: 10.5 ft
Casing Radius: 0.08 ft
Static Water Column Height: 22.5 ft
Screen Length: 10. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.01958 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW18A\Best_MW18A.aqt
Date: 08/01/07 Time: 11:19:45

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW18A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 27.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

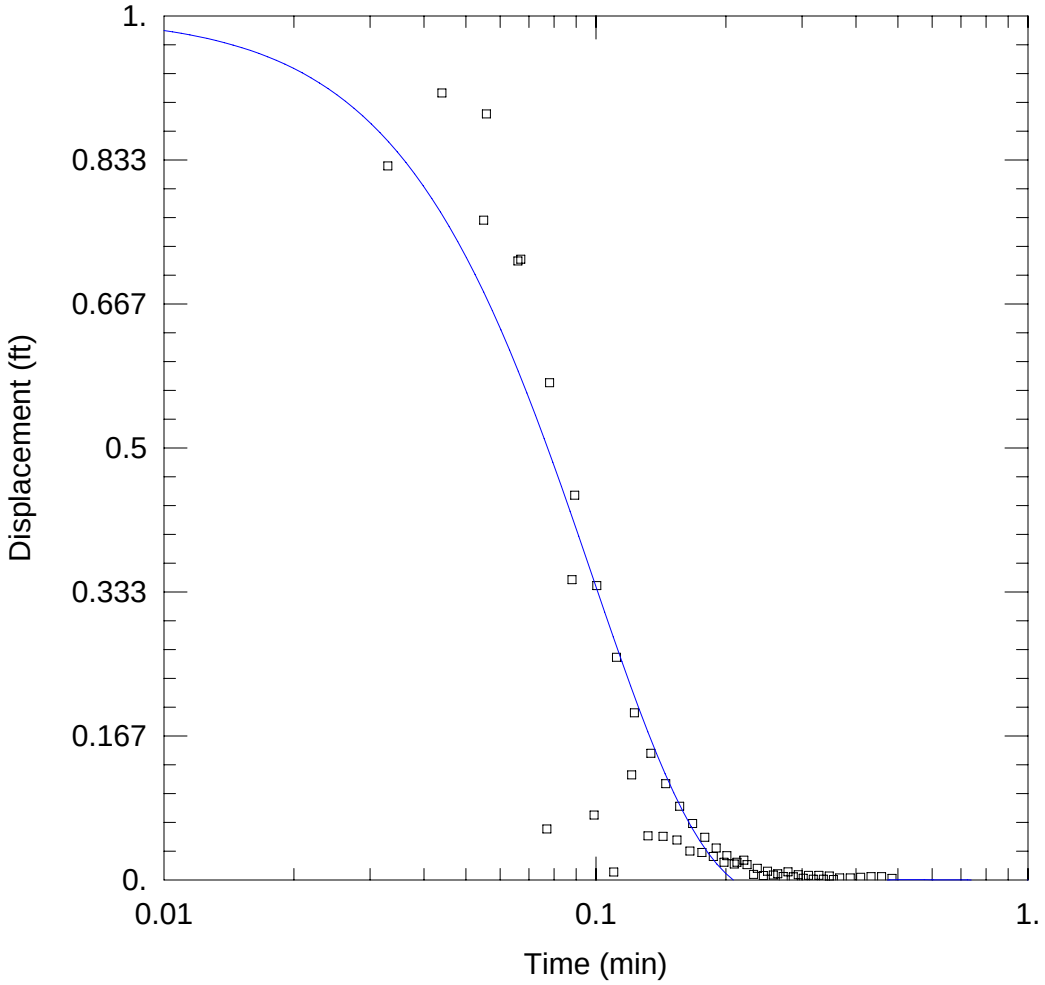
WELL DATA (MW18A)

Initial Displacement: 1. ft
Static Water Column Height: 27.5 ft
Total Well Penetration Depth: 27.5 ft
Screen Length: 15. ft
Casing Radius: 0.08 ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.01923 ft/min
C(D) = 0.8438



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW18B\Best_MW18B.aqt
Date: 08/01/07 Time: 11:40:27

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW18B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 12.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

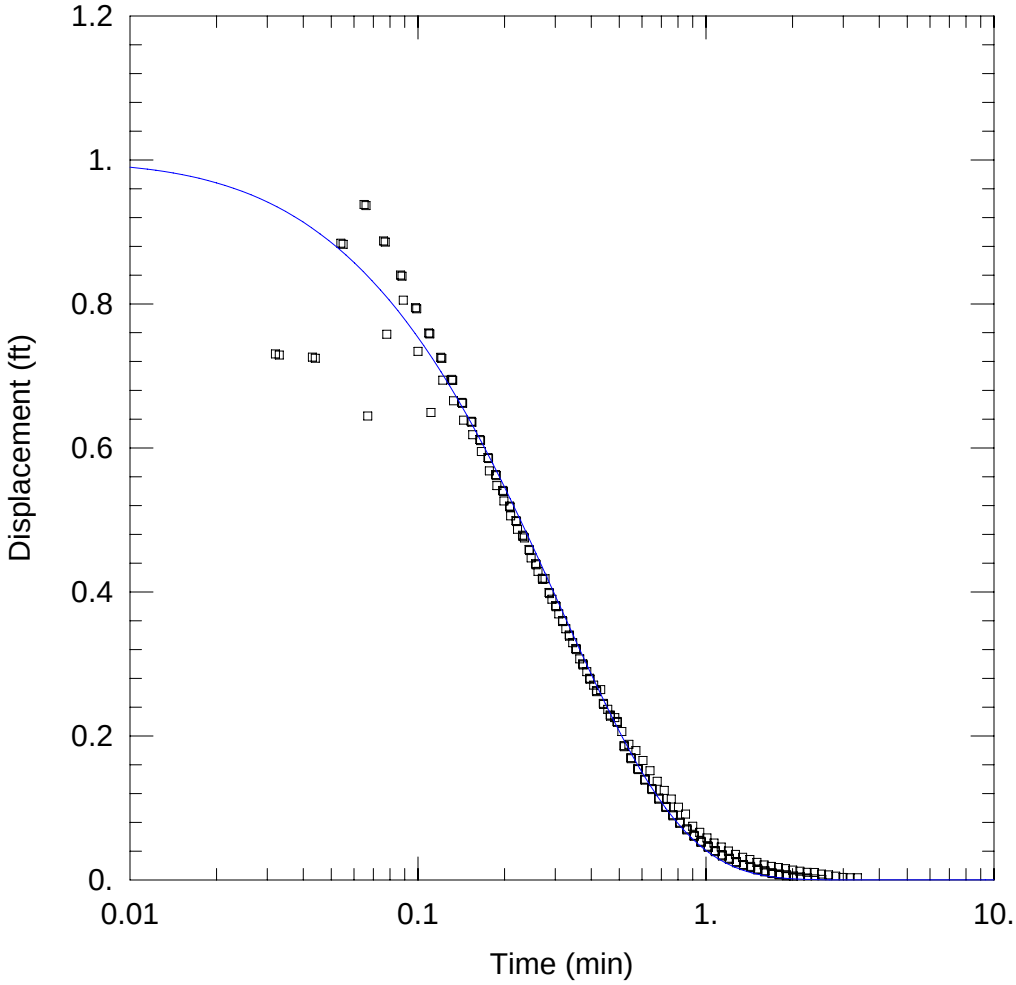
WELL DATA (MW18B)

Initial Displacement: 1. ft
Static Water Column Height: 12.5 ft
Total Well Penetration Depth: 12.5 ft
Screen Length: 10. ft
Casing Radius: 0.08 ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.02535 ft/min
C(D) = 0.7875



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW18C_Butler.aqt
Date: 08/01/07 Time: 11:43:50

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW18C
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 39. ft
Anisotropy Ratio (Kz/Kr): 0.1

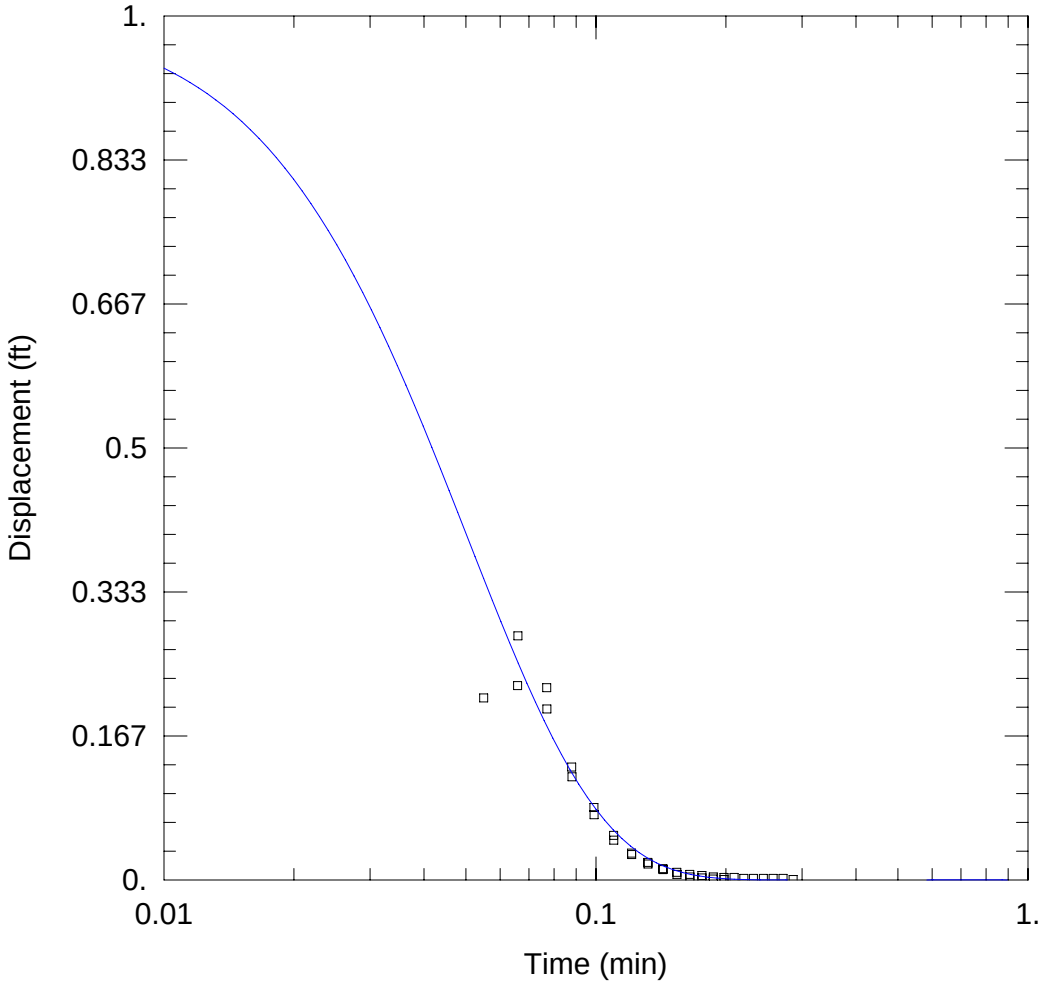
WELL DATA (MW18C)

Initial Displacement: 1. ft
Total Well Penetration Depth: 39. ft
Casing Radius: 0.08 ft
Static Water Column Height: 39. ft
Screen Length: 15. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.004553 ft/min
C(D) = 2.6



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW20A_out_Butler.aqt
Date: 08/01/07 Time: 11:53:25

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW20A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 25. ft Anisotropy Ratio (Kz/Kr): 0.1

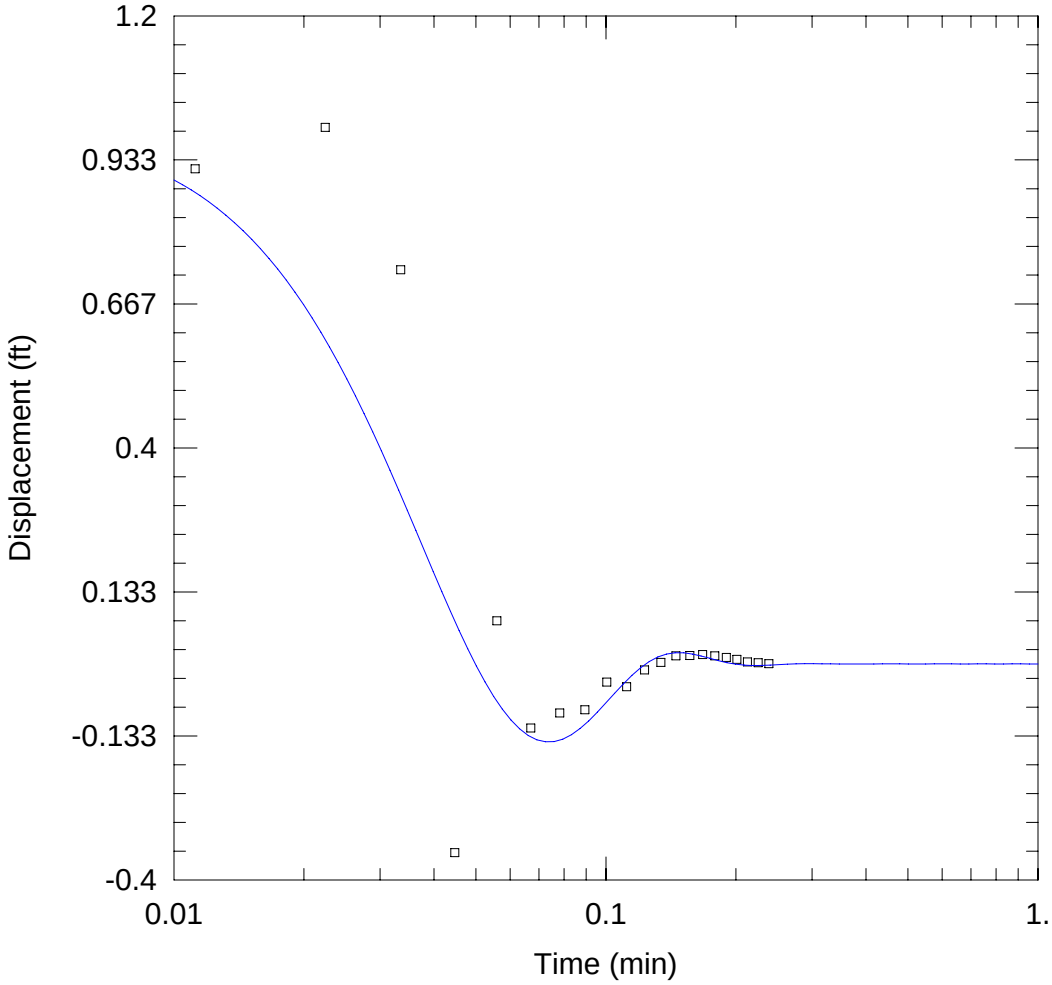
WELL DATA (MW20A)

Initial Displacement: 1. ft Static Water Column Height: 25. ft
Total Well Penetration Depth: 25. ft Screen Length: 15. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.02988 ft/min C(D) = 0.9646



WELL TEST ANALYSIS

Data Set: C:\...\MW20B_in_Butler.aqt
Date: 10/11/07 Time: 10:58:27

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW20B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 20. ft Anisotropy Ratio (Kz/Kr): 0.1

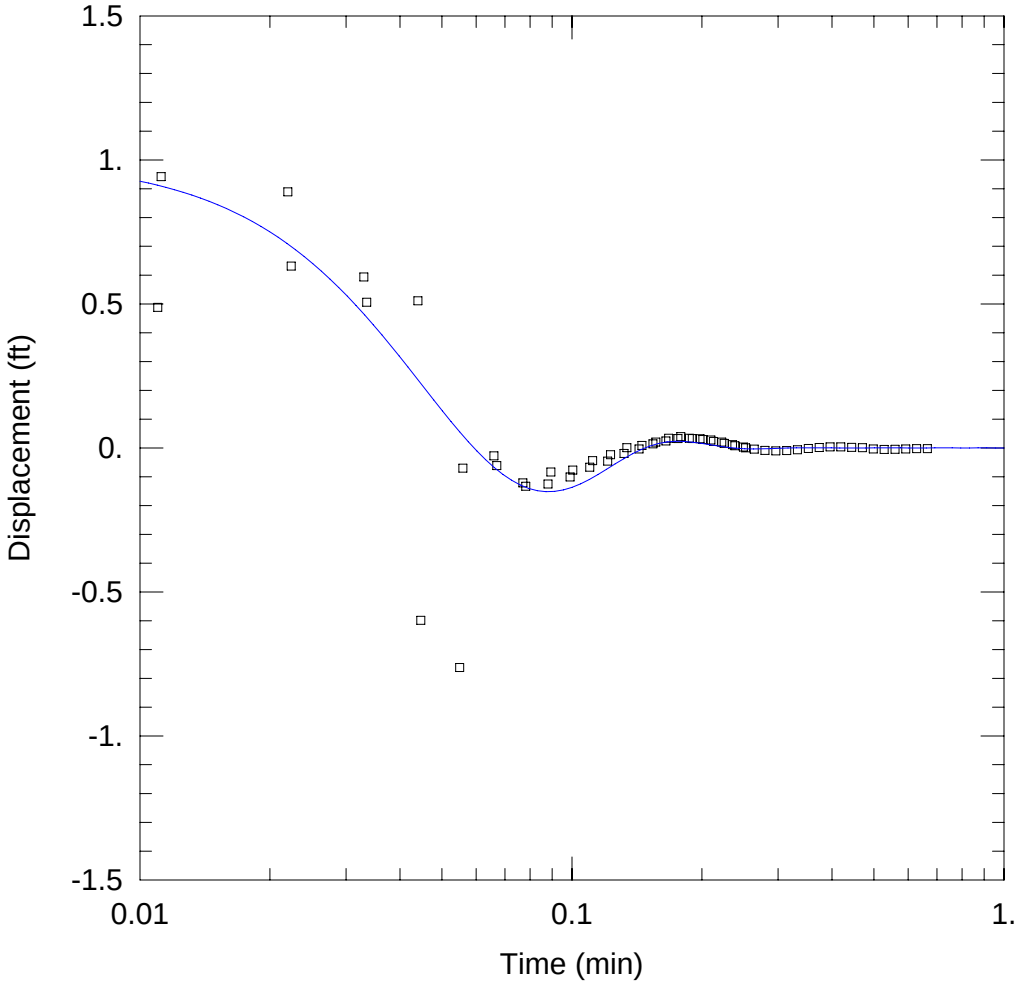
WELL DATA (MW20B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.08 ft
Static Water Column Height: 15. ft
Screen Length: 10. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.08789 ft/min
C(D) = 0.5242



WELL TEST ANALYSIS

Data Set: R:\...\MW20C_in_Butler.aqt
Date: 08/01/07 Time: 12:05:22

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW20C
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 15. ft Anisotropy Ratio (Kz/Kr): 0.1

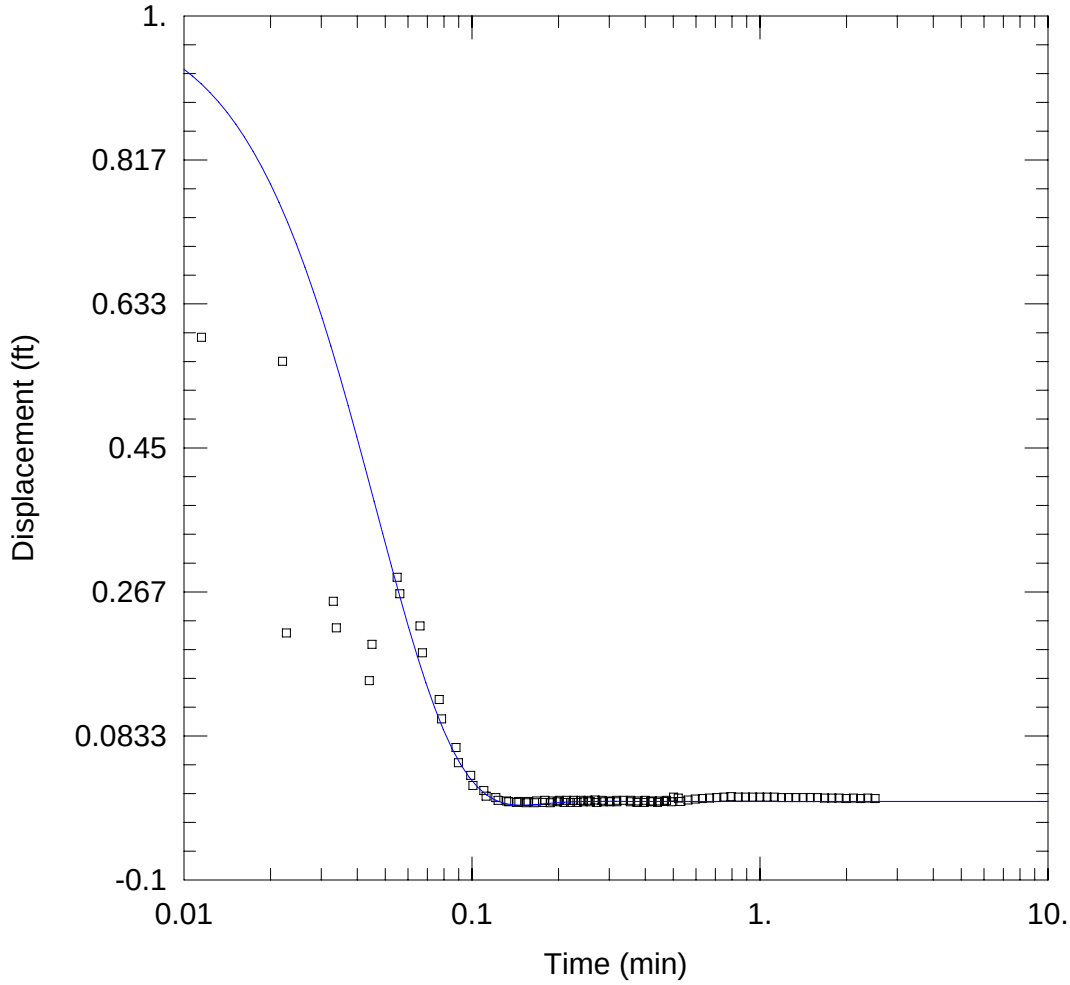
WELL DATA (MW20C)

Initial Displacement: 1. ft Static Water Column Height: 15. ft
Total Well Penetration Depth: 15. ft Screen Length: 10. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.08328 ft/min C(D) = 0.5142



WELL TEST ANALYSIS

Data Set: R:\...\MW21_out_Butler.aqt
Date: 08/01/07 Time: 12:10:09

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW21
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 24.5 ft Anisotropy Ratio (Kz/Kr): 0.1

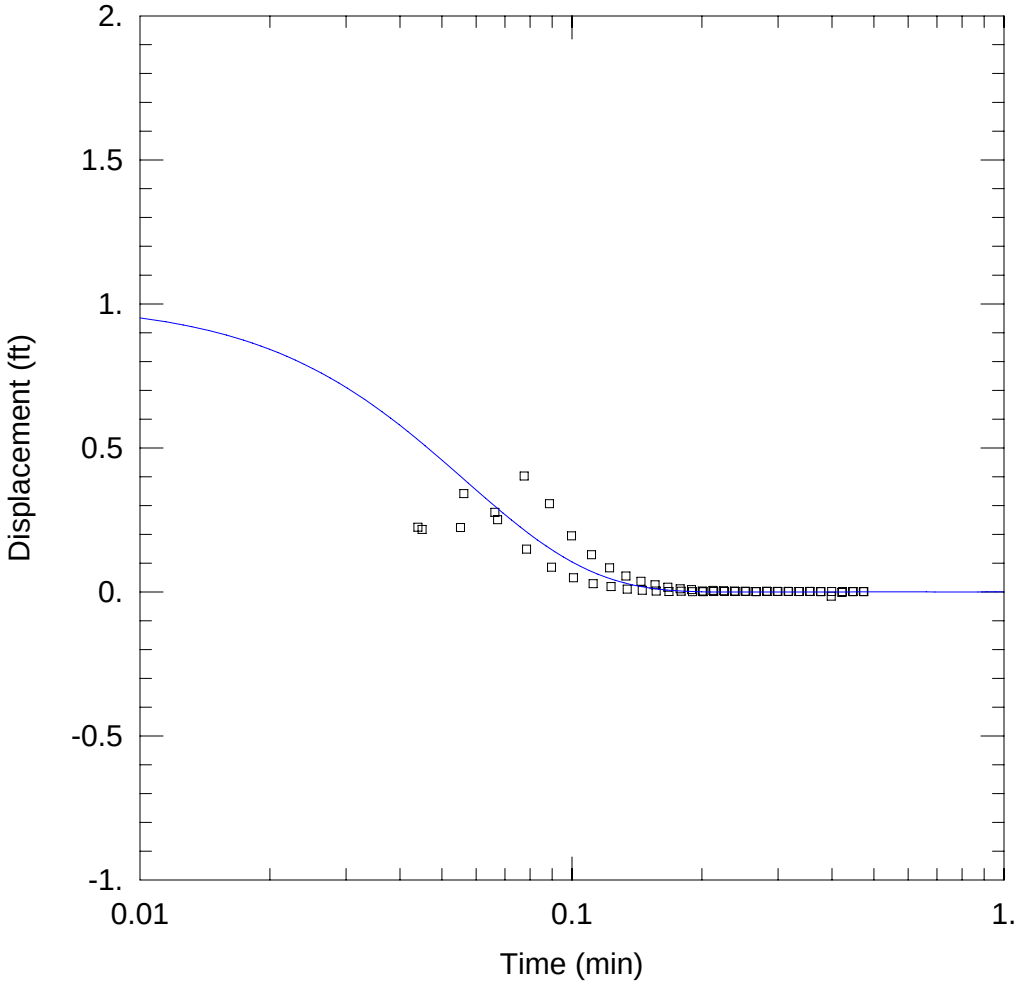
WELL DATA (MW21)

Initial Displacement: 1. ft
Total Well Penetration Depth: 24.5 ft
Casing Radius: 0.08 ft
Static Water Column Height: 24.5 ft
Screen Length: 15. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.03529 ft/min C(D) = 0.861



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW22_out1_Butler.aqt
Date: 08/01/07 Time: 12:55:00

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW22
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 28. ft Anisotropy Ratio (Kz/Kr): 0.1

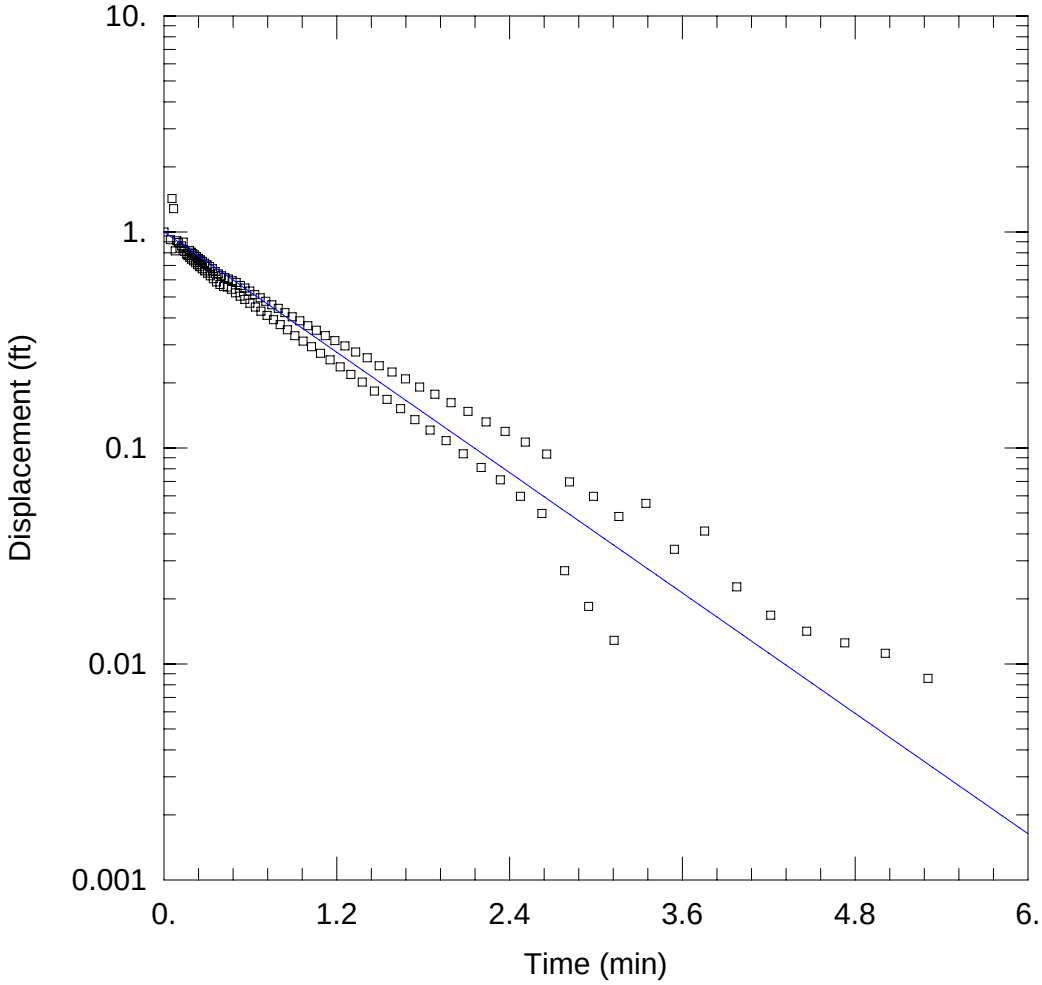
WELL DATA (MW22)

Initial Displacement: 1. ft Static Water Column Height: 28. ft
Total Well Penetration Depth: 28. ft Screen Length: 15. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.0275 ft/min C(D) = 0.9226



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW23Ain_B&R.aqt
Date: 08/02/07 Time: 08:47:23

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW23A
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 38.2 ft
Anisotropy Ratio (Kz/Kr): 0.1

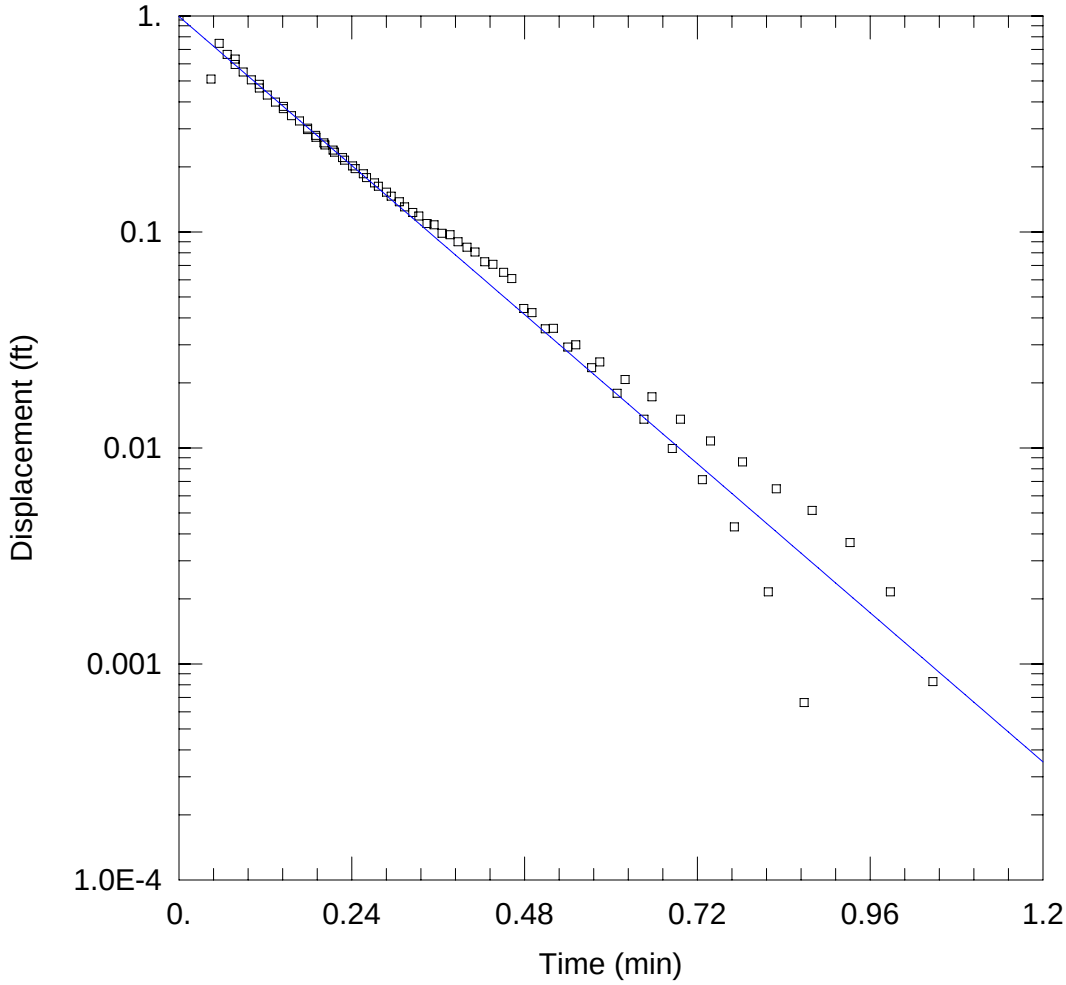
WELL DATA (MW23A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 27.2 ft
Casing Radius: 0.158 ft
Static Water Column Height: 27.2 ft
Screen Length: 20. ft
Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.0029 ft/min
y0 = 1. ft



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW23Aout_B&R.aqt
Date: 08/02/07 Time: 08:49:45

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW23A
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 38.2 ft
Anisotropy Ratio (Kz/Kr): 0.1

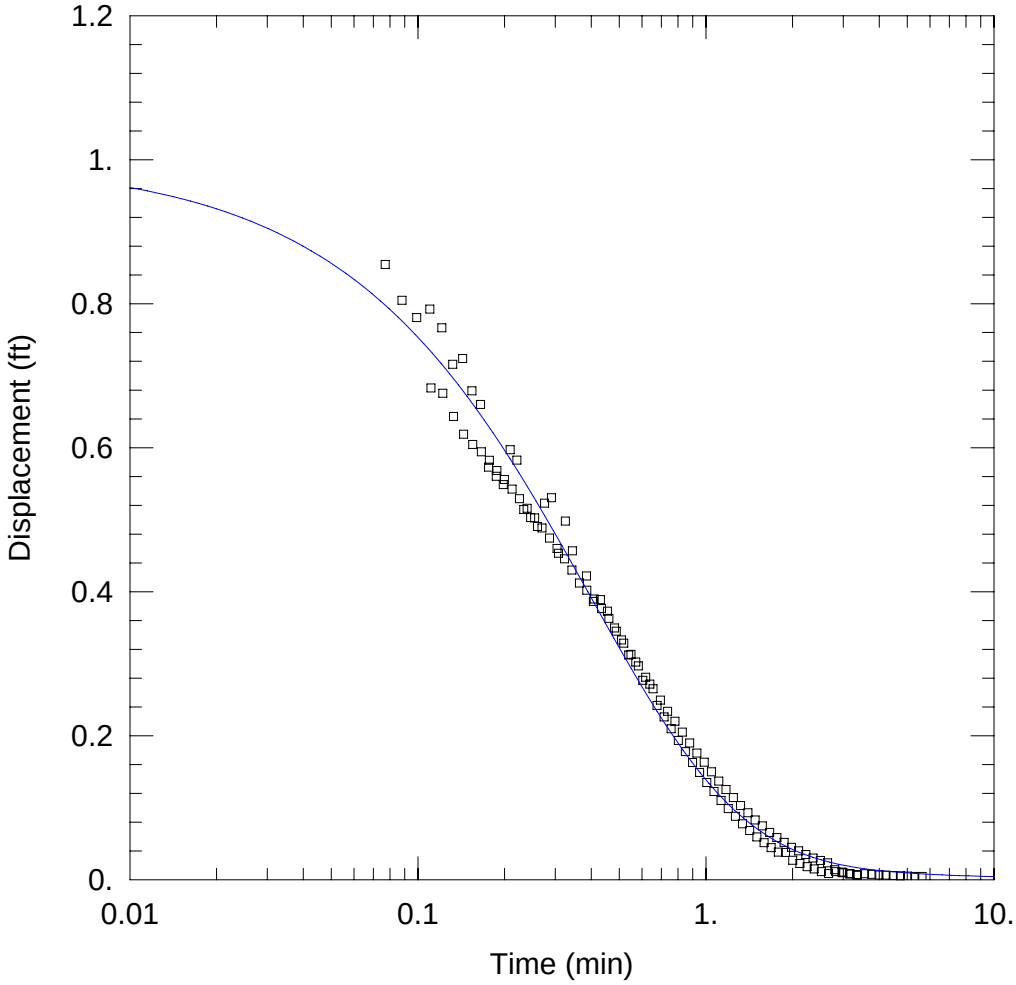
WELL DATA (MW23A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 27.2 ft
Casing Radius: 0.158 ft
Static Water Column Height: 27.2 ft
Screen Length: 20. ft
Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.01796 ft/min
y0 = 0.9941 ft



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW23B_KGS no skin.aqt
Date: 08/02/07 Time: 08:54:58

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW23B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 10. ft

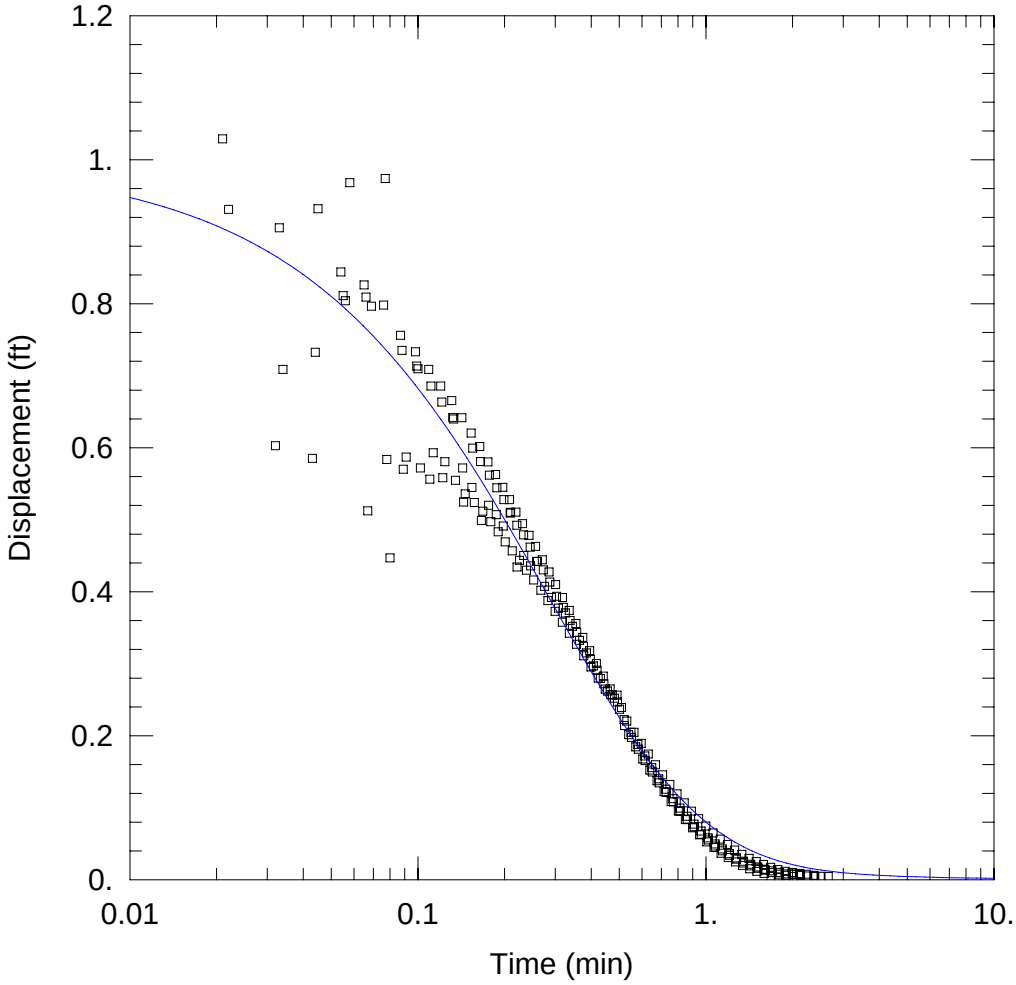
WELL DATA (MW23B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 10. ft
Casing Radius: 0.08 ft
Static Water Column Height: 10. ft
Screen Length: 15. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.004195 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW23C\MW23C_KGS.aqt
Date: 08/02/07 Time: 08:57:24

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW23C
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 28.5 ft

WELL DATA (MW23C)

Initial Displacement: 1. ft
Total Well Penetration Depth: 28.5 ft
Casing Radius: 0.08 ft

Static Water Column Height: 28.5 ft
Screen Length: 15. ft
Wellbore Radius: 0.1 ft

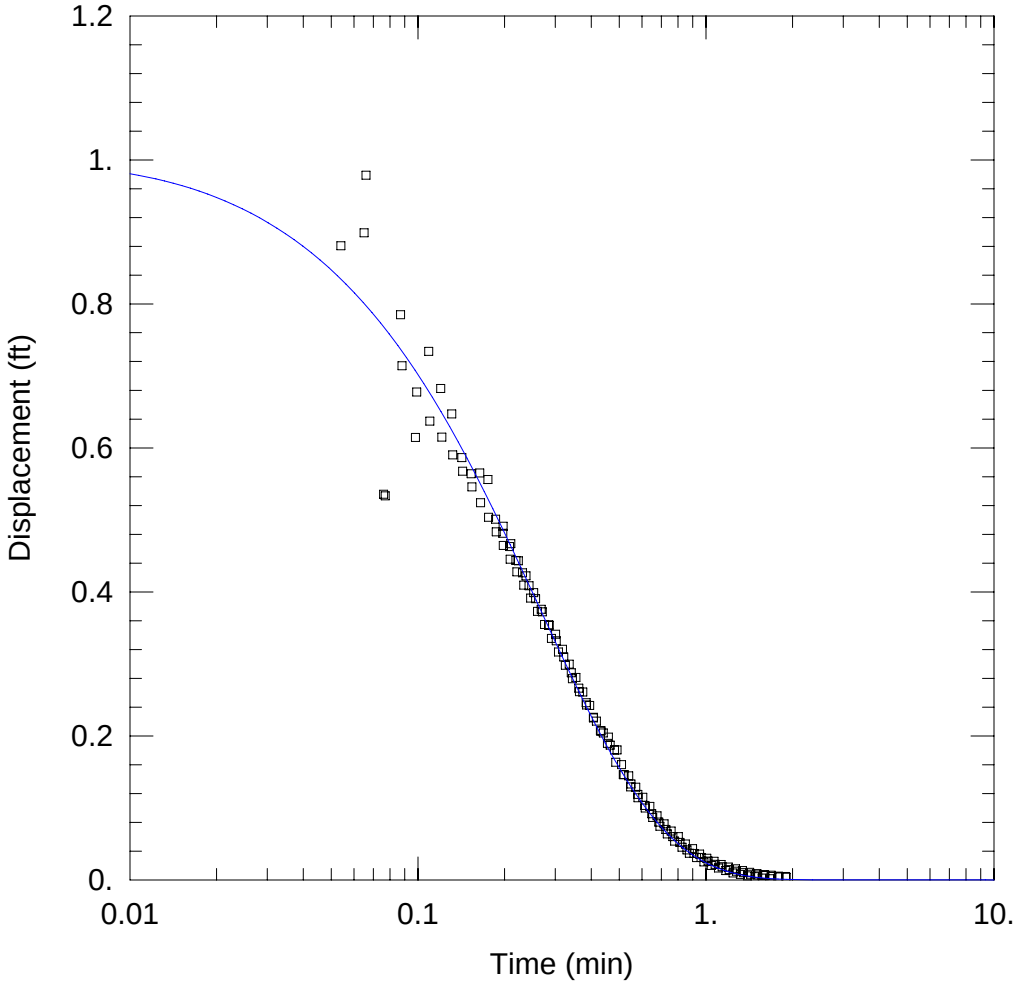
SOLUTION

Aquifer Model: Confined

Solution Method: KGS Model

Kr = 0.003311 ft/min
Kz/Kr = 0.1

Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW23D_Butler.aqt
Date: 08/02/07 Time: 09:20:05

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW23D
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 0.1

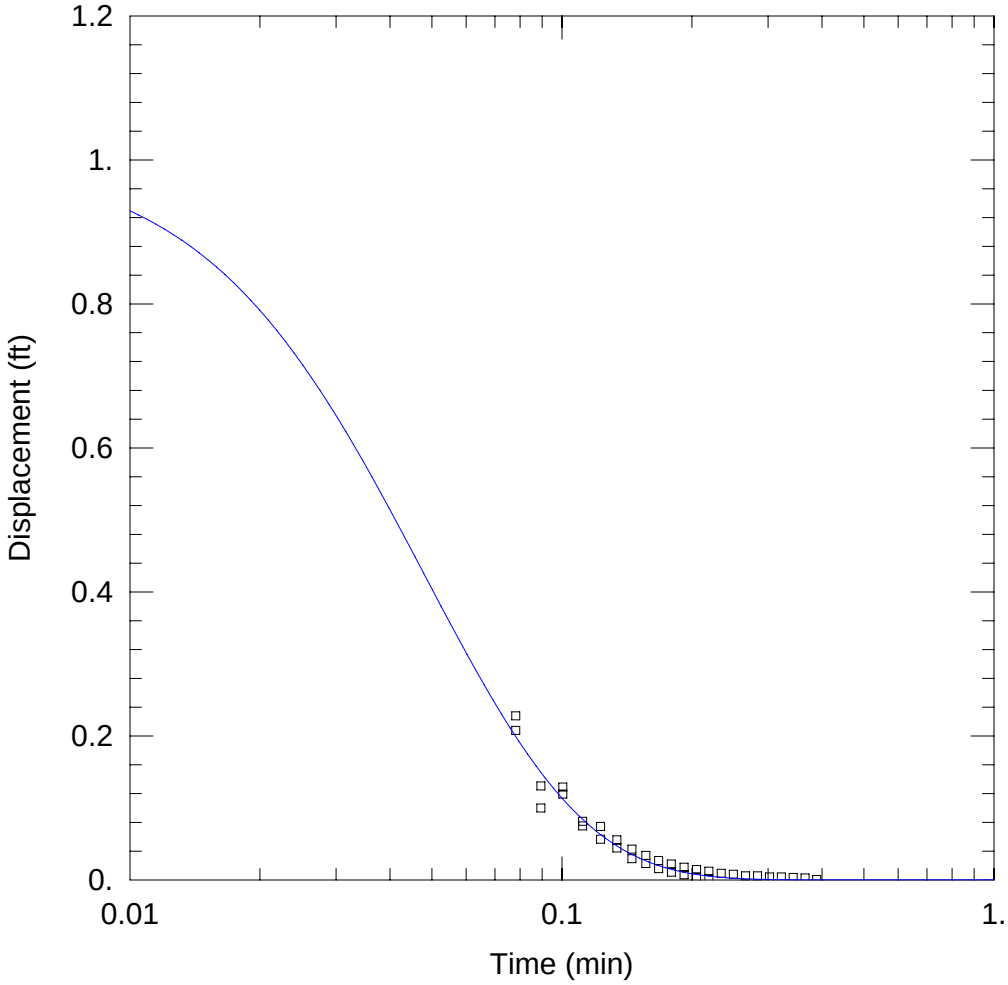
WELL DATA (MW23D)

Initial Displacement: 1. ft
Total Well Penetration Depth: 20. ft
Casing Radius: 0.08 ft
Static Water Column Height: 20. ft
Screen Length: 10. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.007604 ft/min
C(D) = 3.428



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW24Ain_Butler.aqt
Date: 08/02/07 Time: 09:33:40

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW24A
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 37.2 ft Anisotropy Ratio (Kz/Kr): 0.1

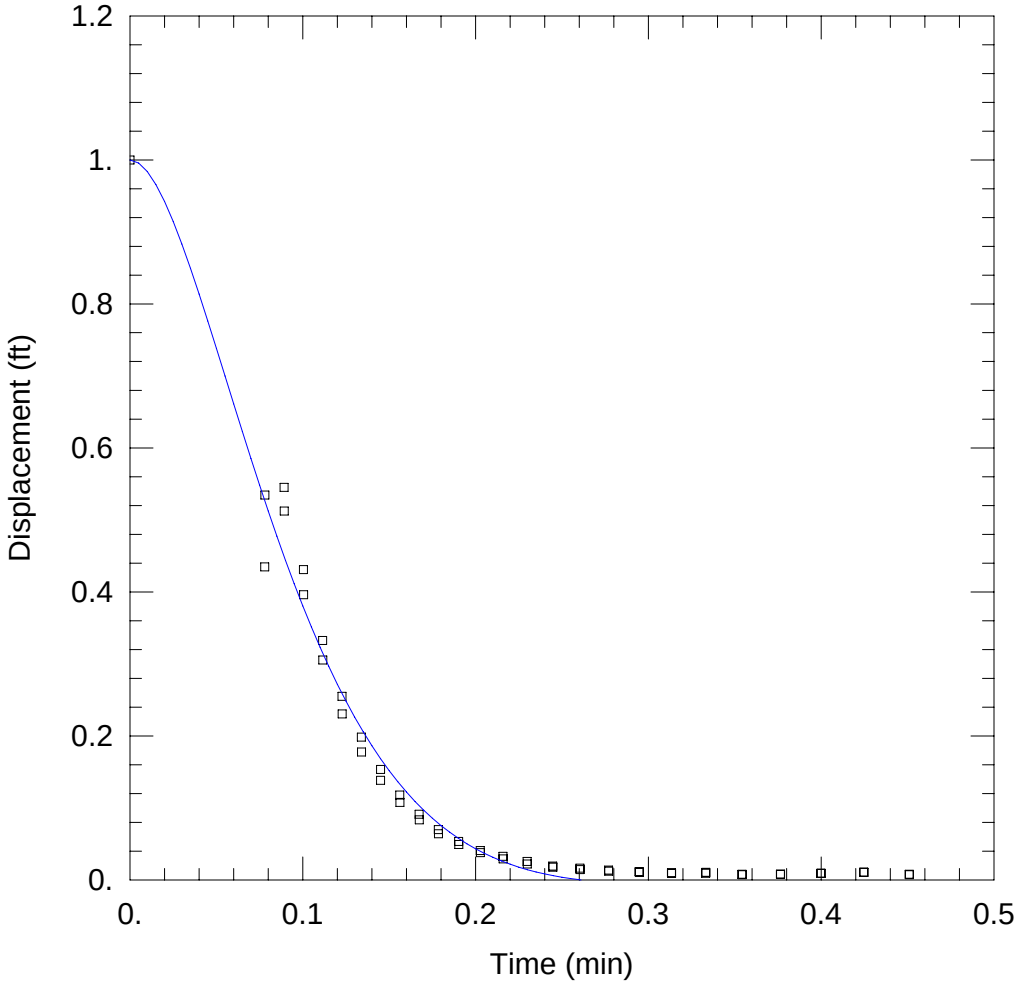
WELL DATA (MW24A)

Initial Displacement: 1. ft Static Water Column Height: 33.2 ft
Total Well Penetration Depth: 33.2 ft Screen Length: 20. ft
Casing Radius: 0.158 ft Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.06939 ft/min C(D) = 1.147



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW24Aout_Butler.aqt
Date: 08/02/07 Time: 09:32:52

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW24A
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 37.2 ft
Anisotropy Ratio (Kz/Kr): 0.1

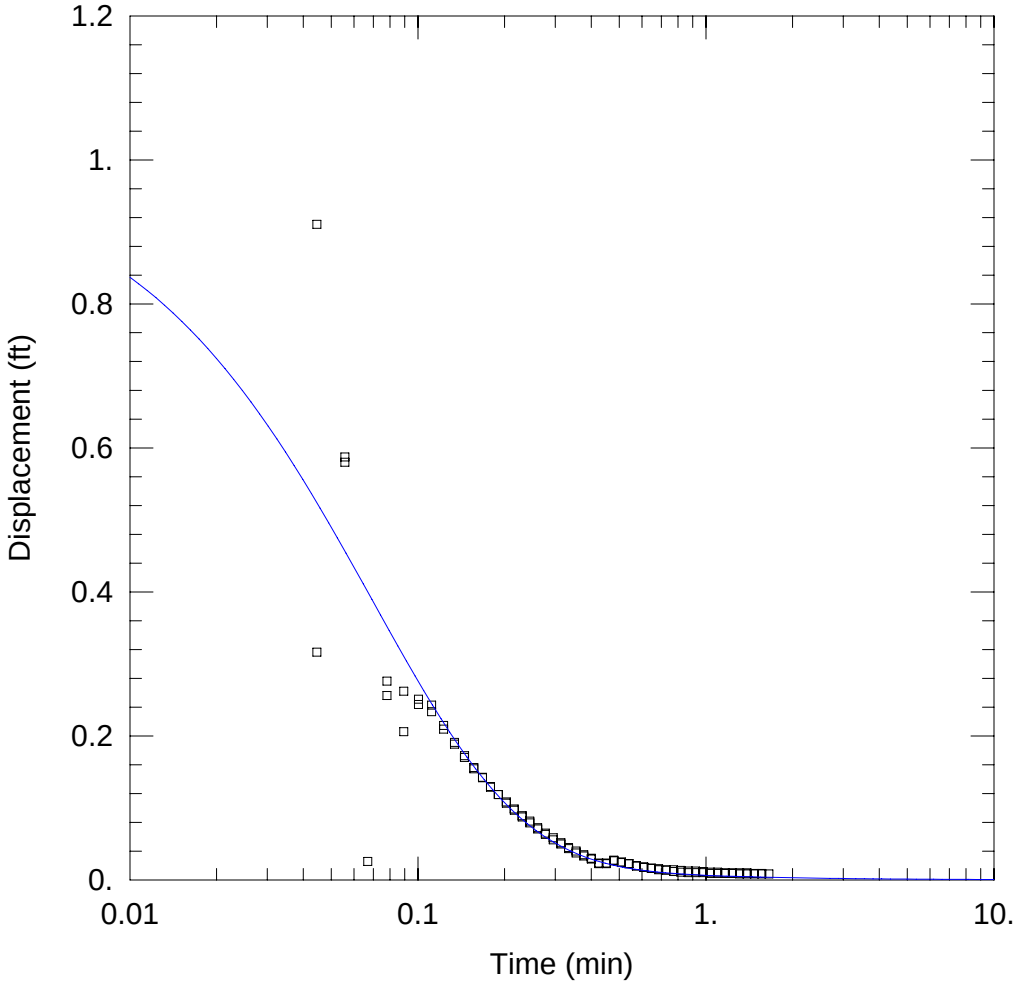
WELL DATA (MW24A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 33.2 ft
Casing Radius: 0.158 ft
Static Water Column Height: 33.2 ft
Screen Length: 20. ft
Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.03992 ft/min
C(D) = 0.8515



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW24Bin_KGS.aqt
Date: 08/02/07 Time: 12:14:35

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW24B
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 22. ft

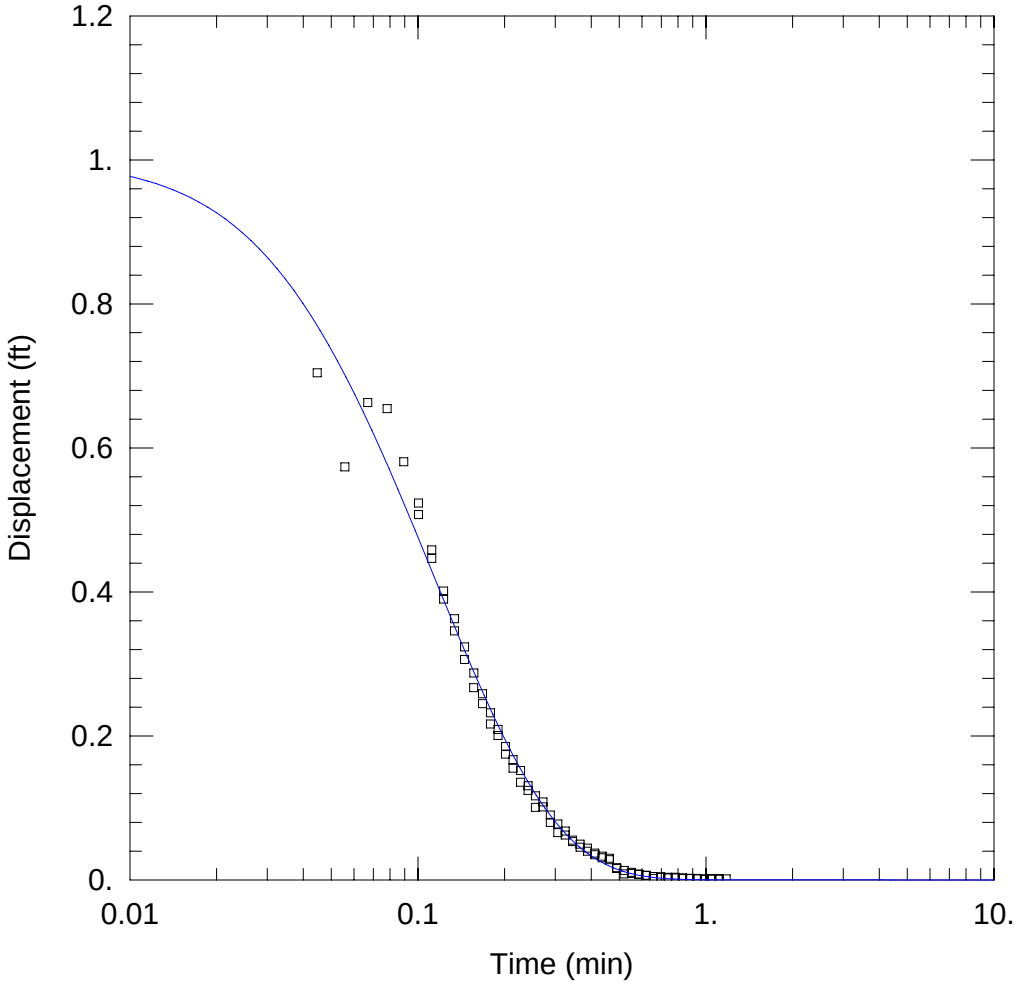
WELL DATA (MW24B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.08 ft
Static Water Column Height: 17. ft
Screen Length: 15. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.01343 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW24Bout_Butler.aqt
Date: 08/02/07 Time: 12:16:47

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW24B
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 22. ft Anisotropy Ratio (Kz/Kr): 0.1

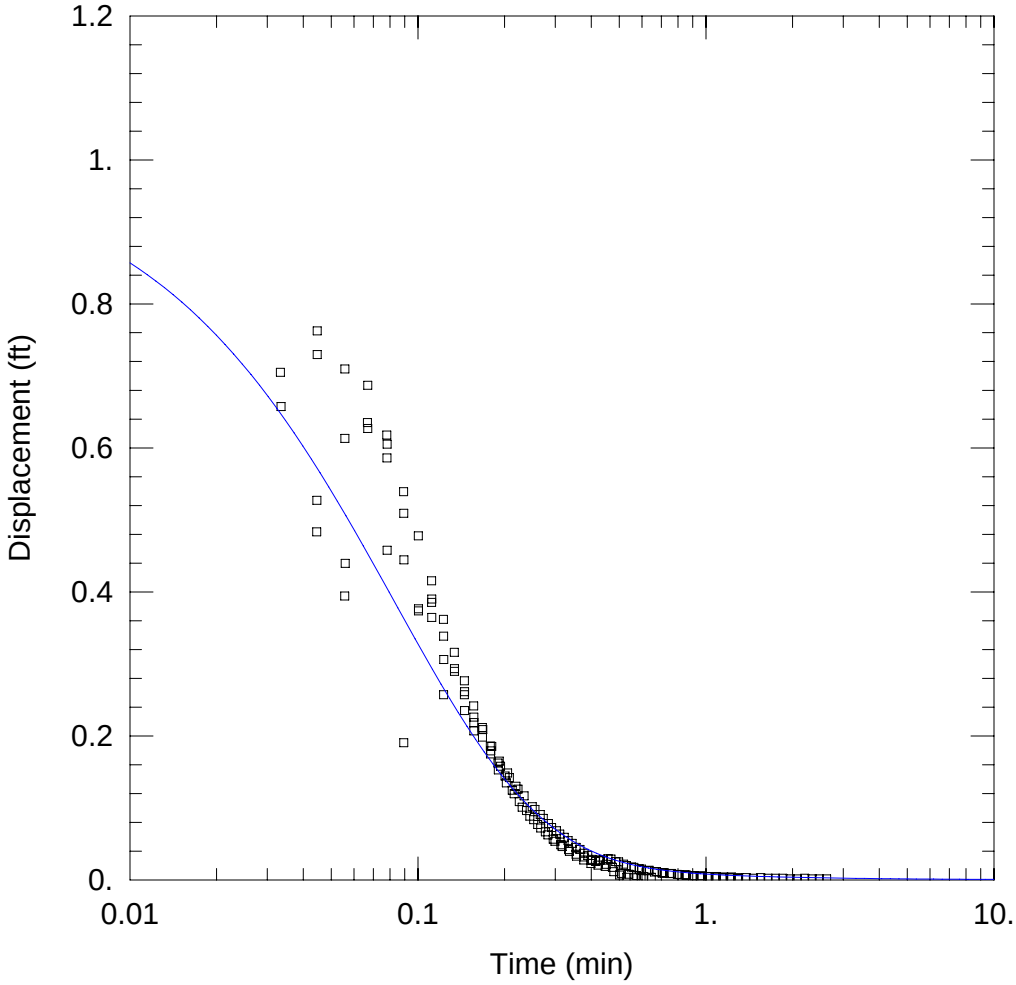
WELL DATA (MW24B)

Initial Displacement: 1. ft Static Water Column Height: 17. ft
Total Well Penetration Depth: 17. ft Screen Length: 15. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.01028 ft/min C(D) = 1.539



WELL TEST ANALYSIS

Data Set: R:\...\MW24Call_KGS.aqt
Date: 08/02/07 Time: 12:23:57

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW24C
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 30. ft

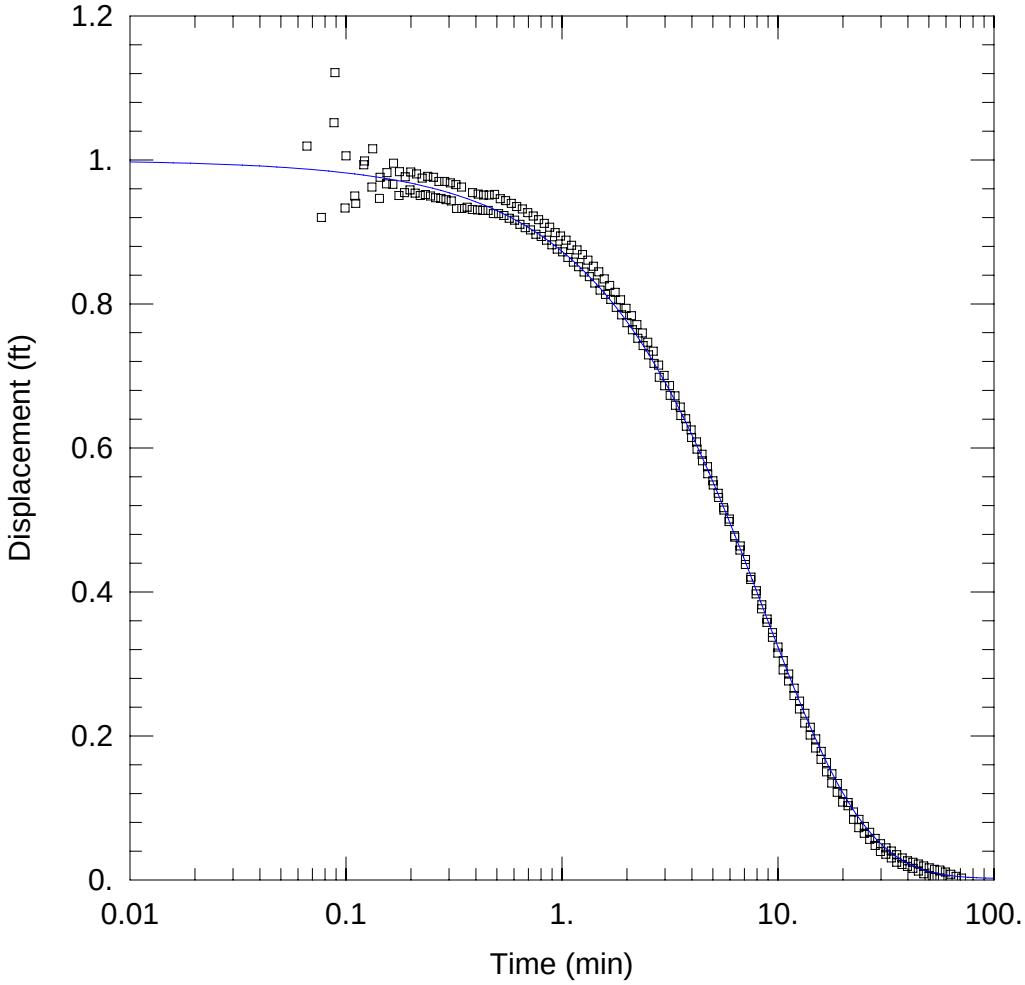
WELL DATA (MW24C)

Initial Displacement: 1. ft
Total Well Penetration Depth: 26. ft
Casing Radius: 0.158 ft
Static Water Column Height: 26. ft
Screen Length: 20. ft
Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.03151 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW24D\MW24Din_KGS.aqt
Date: 08/02/07 Time: 12:28:29

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW24D
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 22. ft

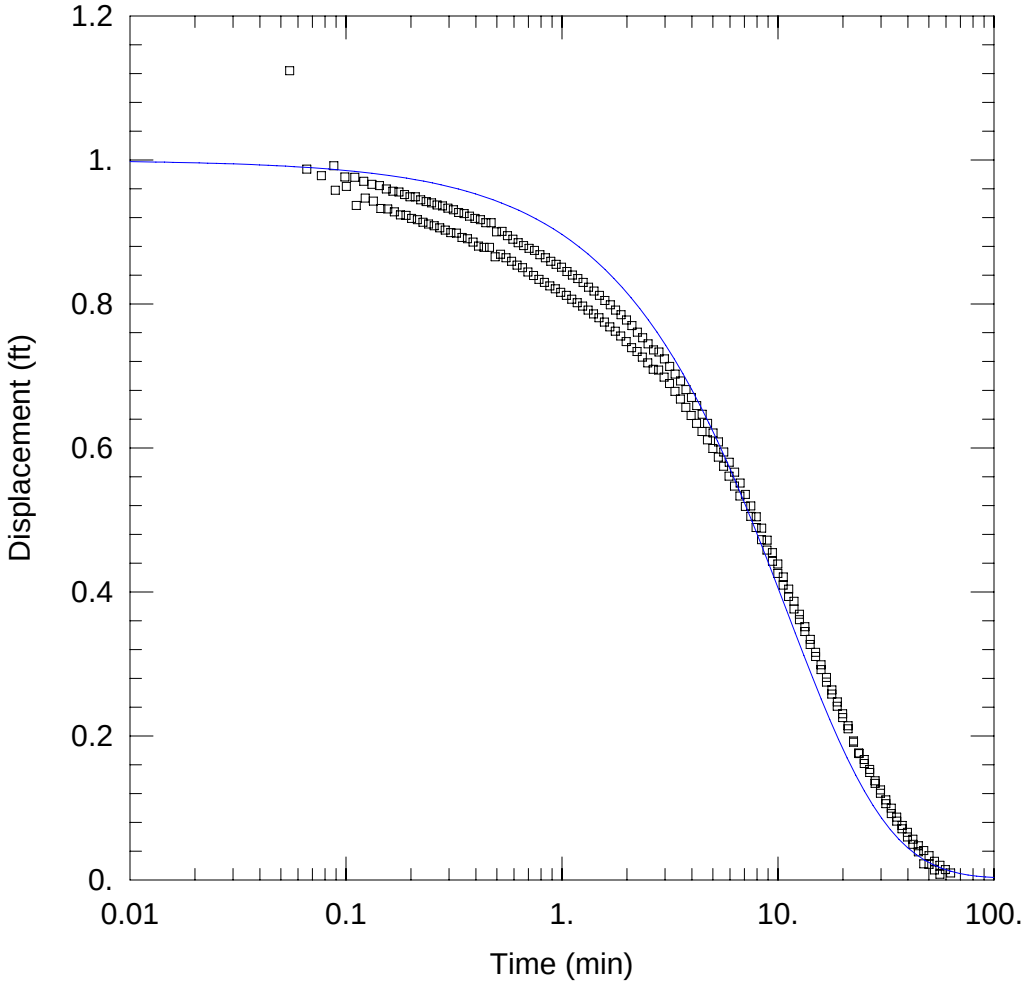
WELL DATA (MW24D)

Initial Displacement: 1. ft
Total Well Penetration Depth: 10. ft
Casing Radius: 0.08 ft
Static Water Column Height: 10. ft
Screen Length: 5. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.000325 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\MW24Dout_KGS.aqt
Date: 08/02/07 Time: 12:30:33

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW24D
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 22. ft

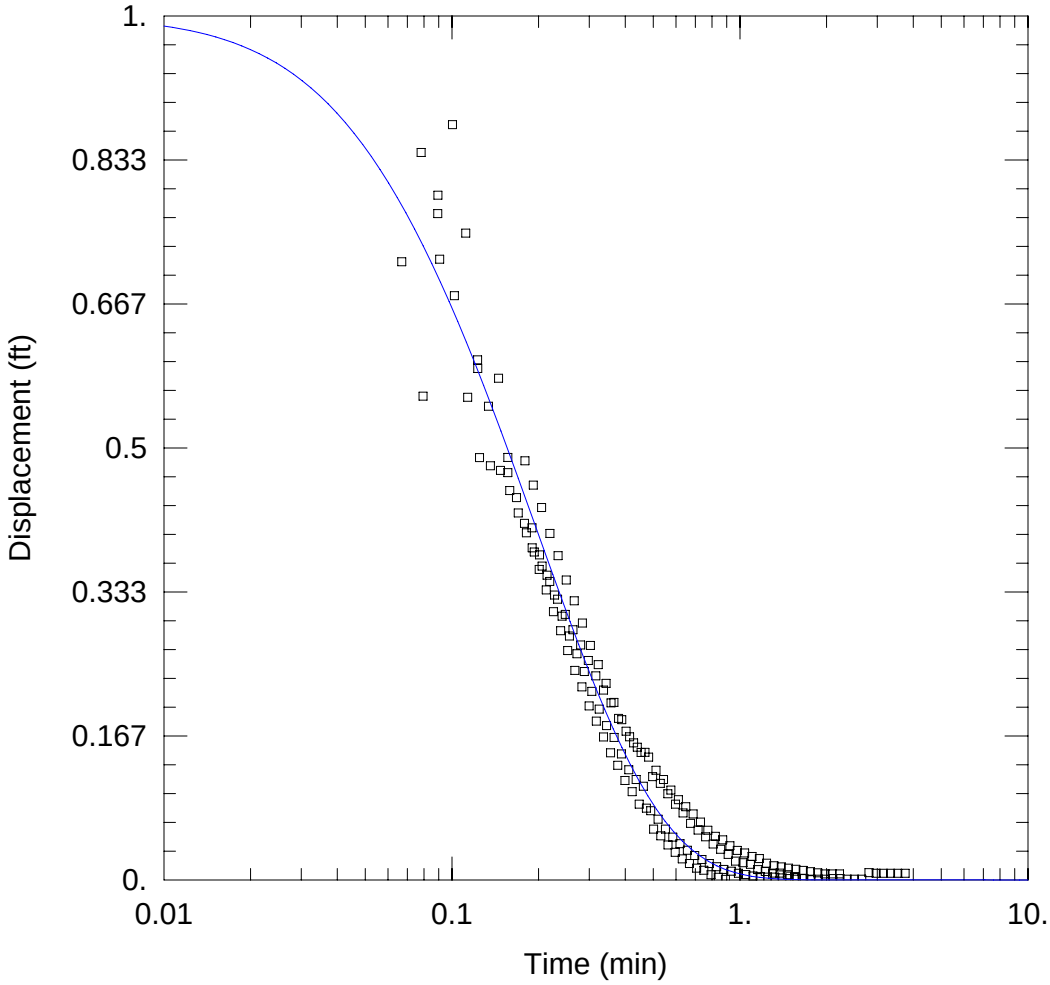
WELL DATA (MW24D)

Initial Displacement: 1. ft
Total Well Penetration Depth: 10. ft
Casing Radius: 0.08 ft
Static Water Column Height: 10. ft
Screen Length: 5. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.0002552 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW25B_Butler.aqt
Date: 08/02/07 Time: 13:46:42

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW25B
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 36. ft Anisotropy Ratio (Kz/Kr): 0.1

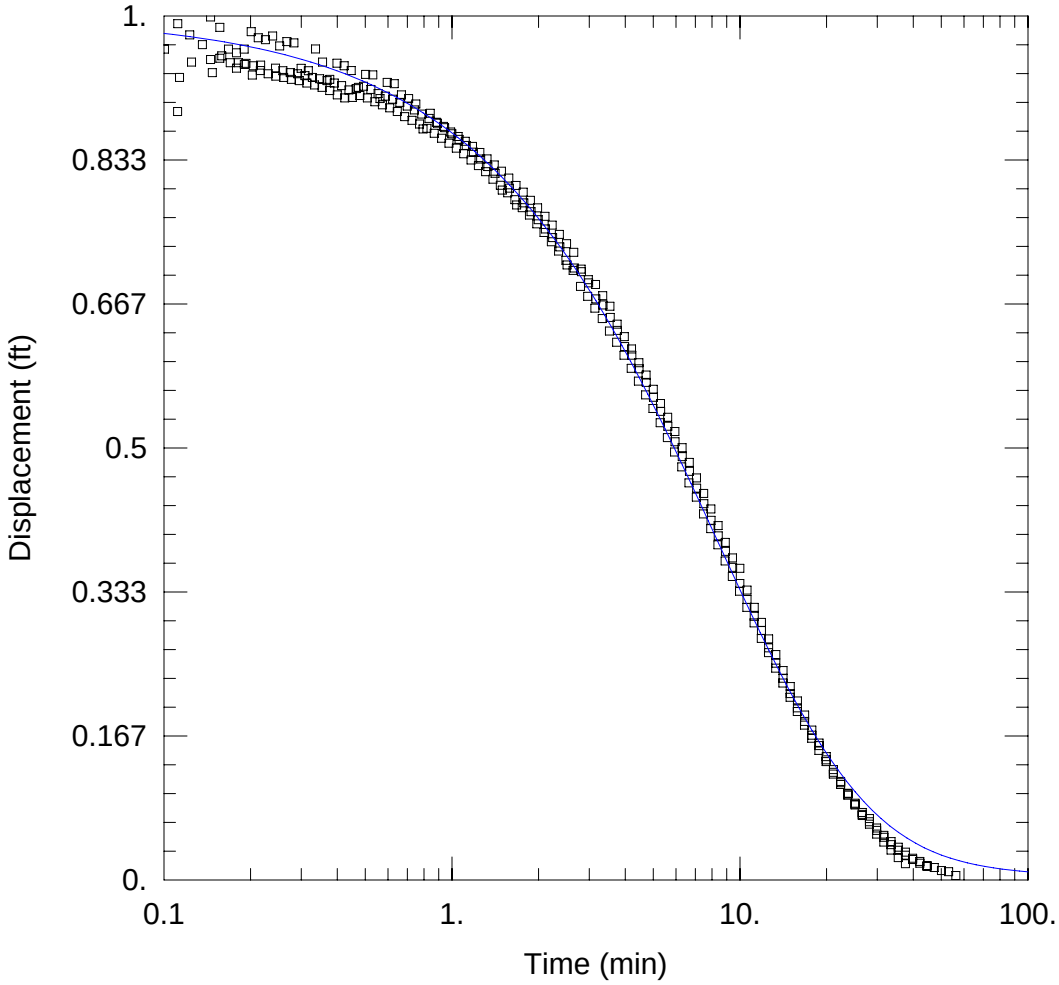
WELL DATA (MW25B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 25. ft
Casing Radius: 0.08 ft
Static Water Column Height: 30. ft
Screen Length: 20. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.004795 ft/min
C(D) = 1.817



WELL TEST ANALYSIS

Data Set: R:\...\MW25C_KGS_noskin.aqt
Date: 08/02/07 Time: 13:48:28

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW25C
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 13. ft

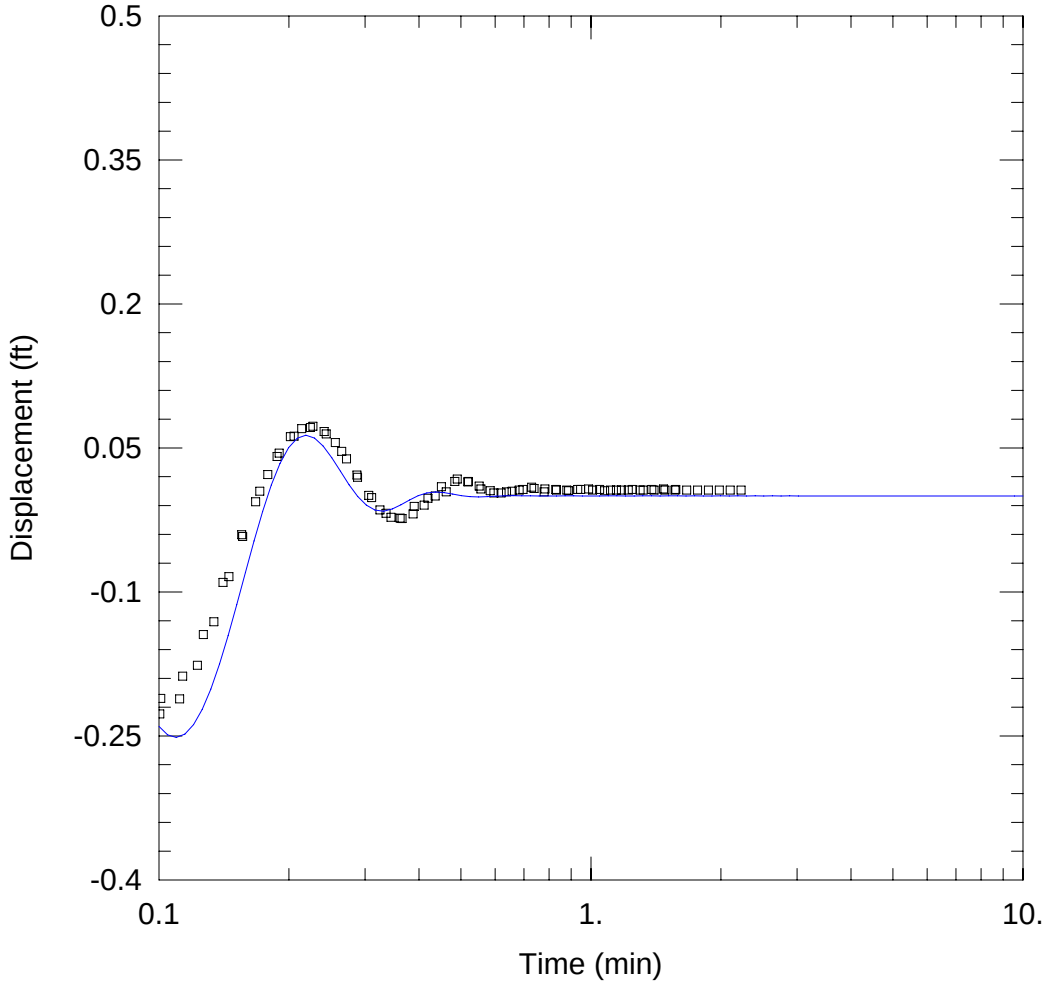
WELL DATA (MW25C)

Initial Displacement: 1. ft
Total Well Penetration Depth: 12. ft
Casing Radius: 0.158 ft
Static Water Column Height: 12. ft
Screen Length: 10. ft
Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.0006353 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\MW25D_in_Butler.aqt
Date: 08/02/07 Time: 13:49:53

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW25D
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 17. ft Anisotropy Ratio (Kz/Kr): 0.1

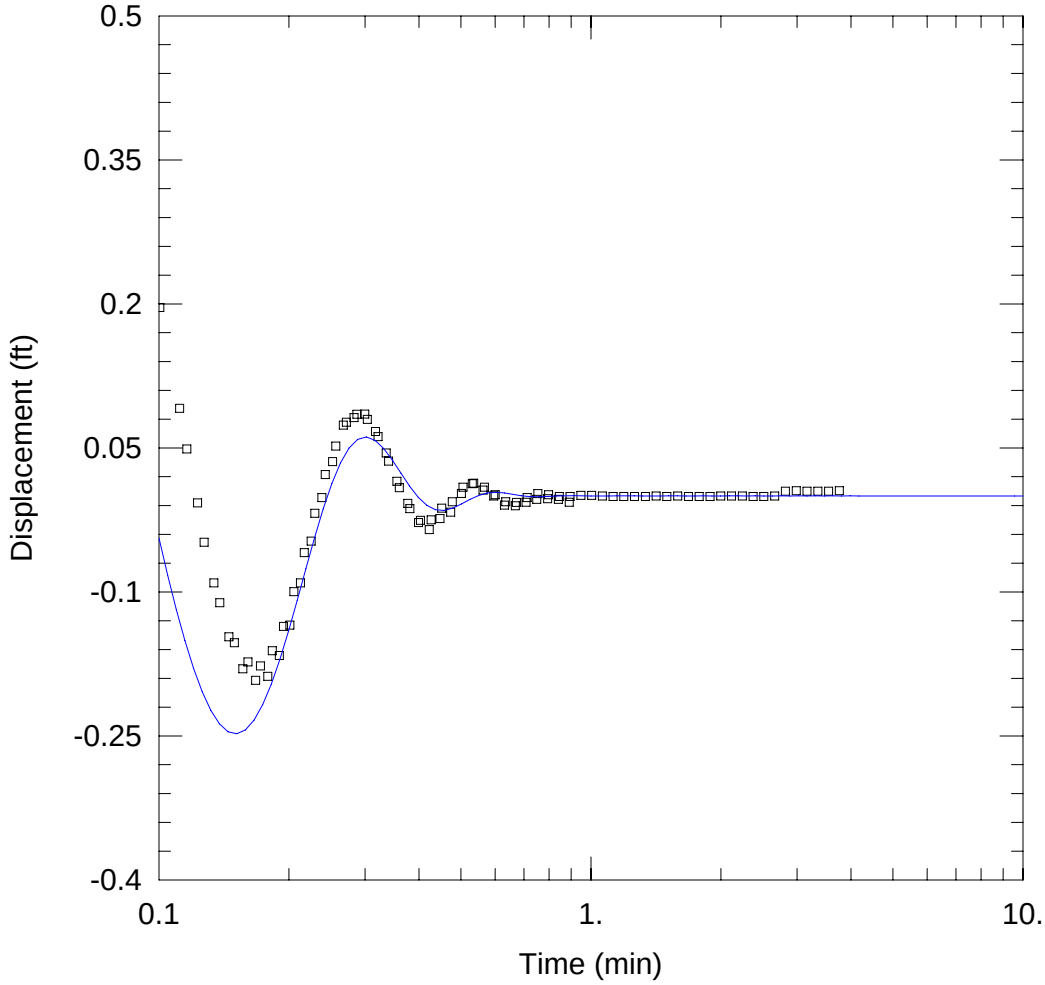
WELL DATA (MW25D)

Initial Displacement: 1. ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.08 ft
Static Water Column Height: 17. ft
Screen Length: 15. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.05708 ft/min C(D) = 0.4021



WELL TEST ANALYSIS

Data Set: R:\...\MW25D_out_Butler.aqt
Date: 08/02/07 Time: 13:50:49

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW25D
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 17. ft Anisotropy Ratio (Kz/Kr): 0.1

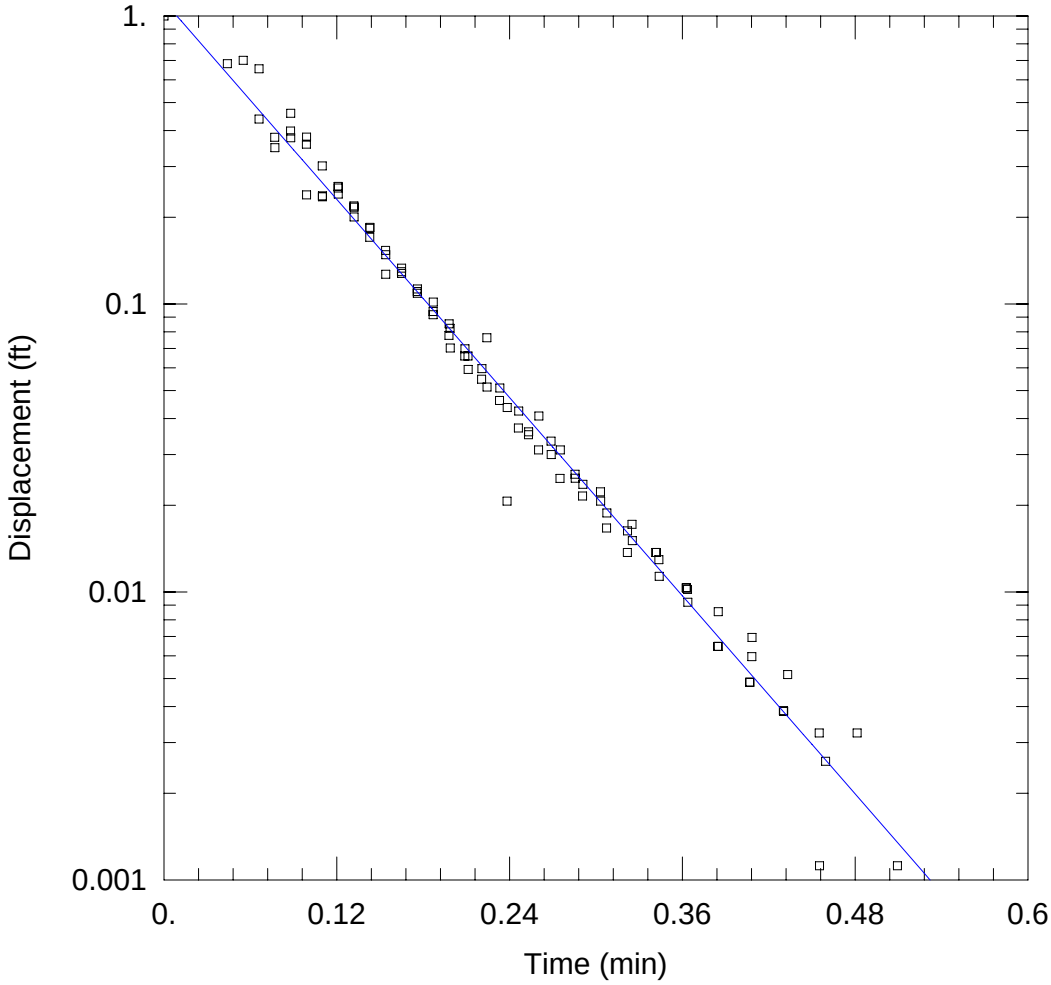
WELL DATA (MW25D)

Initial Displacement: 1. ft Static Water Column Height: 17. ft
Total Well Penetration Depth: 17. ft Screen Length: 15. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.04122 ft/min C(D) = 0.4058



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW26\MW26A_BandR.aqt
Date: 08/02/07 Time: 13:59:51

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW26A
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 27.4 ft
Anisotropy Ratio (Kz/Kr): 0.1

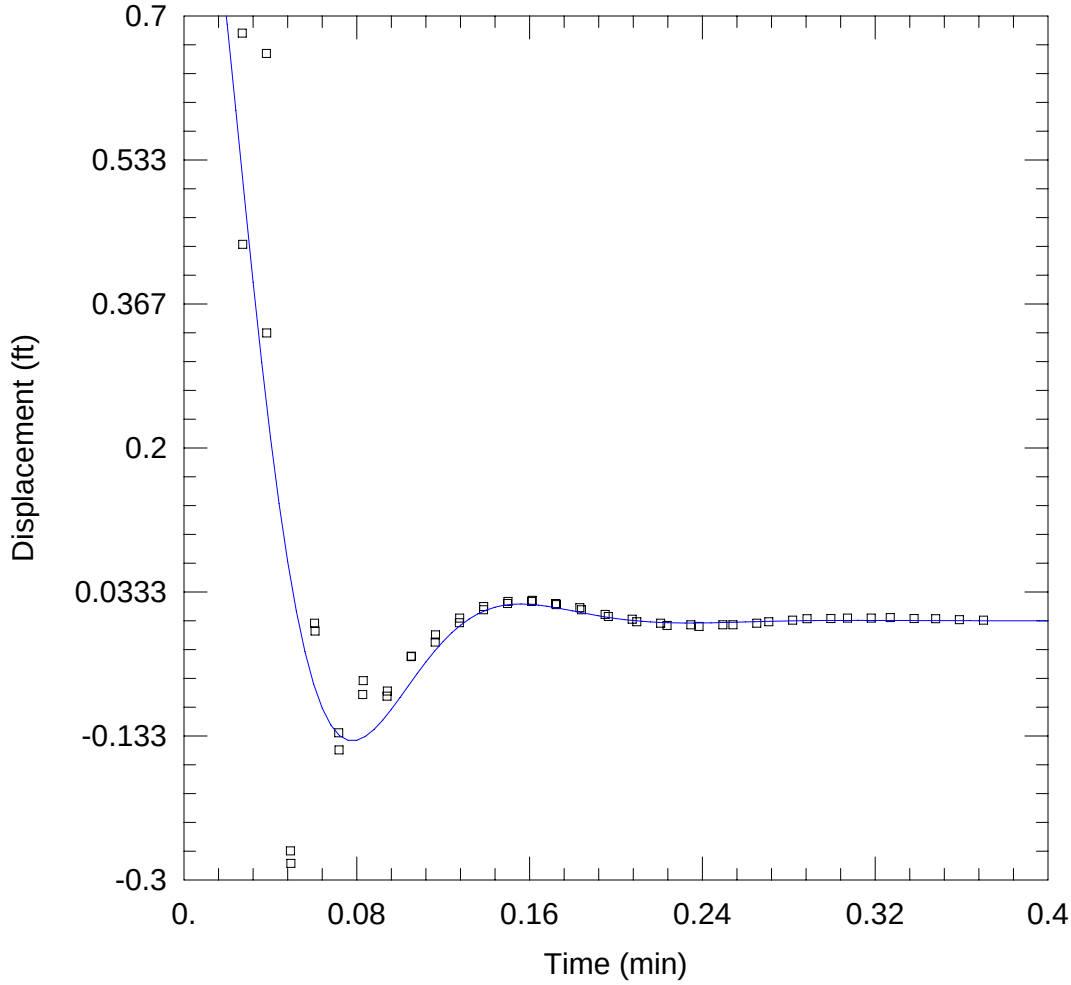
WELL DATA (MW26A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 22.4 ft
Casing Radius: 0.158 ft
Static Water Column Height: 22.4 ft
Screen Length: 20. ft
Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.0355 ft/min
y0 = 1.125 ft



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW26\MW26Bin_Butler.aqt
Date: 08/02/07 Time: 15:39:53

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW26B
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 30. ft
Anisotropy Ratio (Kz/Kr): 0.1

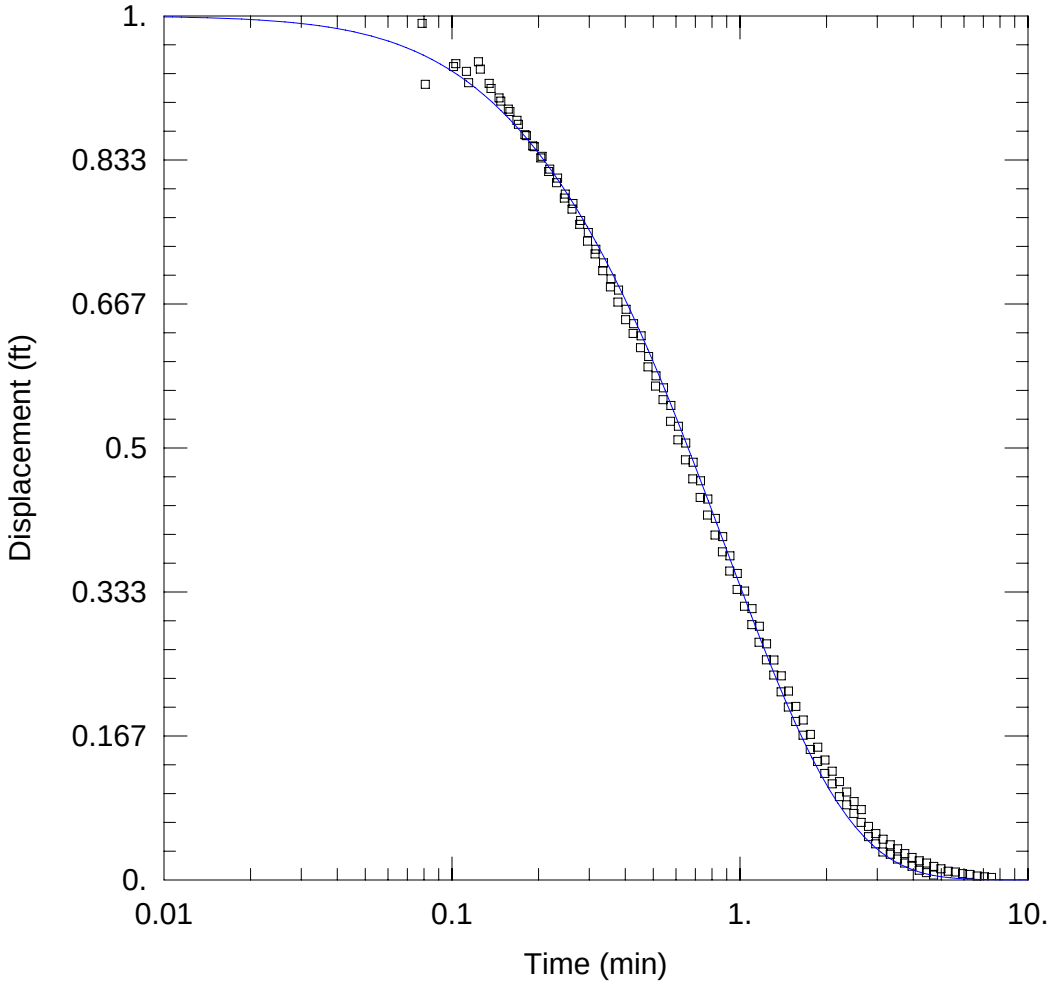
WELL DATA (MW26B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 15. ft
Casing Radius: 0.08 ft
Static Water Column Height: 15. ft
Screen Length: 15. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.05883 ft/min
C(D) = 0.5318



WELL TEST ANALYSIS

Data Set: R:\...\MW26C_Butler_in.aqt
Date: 08/02/07 Time: 15:52:57

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW26C
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 25. ft Anisotropy Ratio (Kz/Kr): 0.1

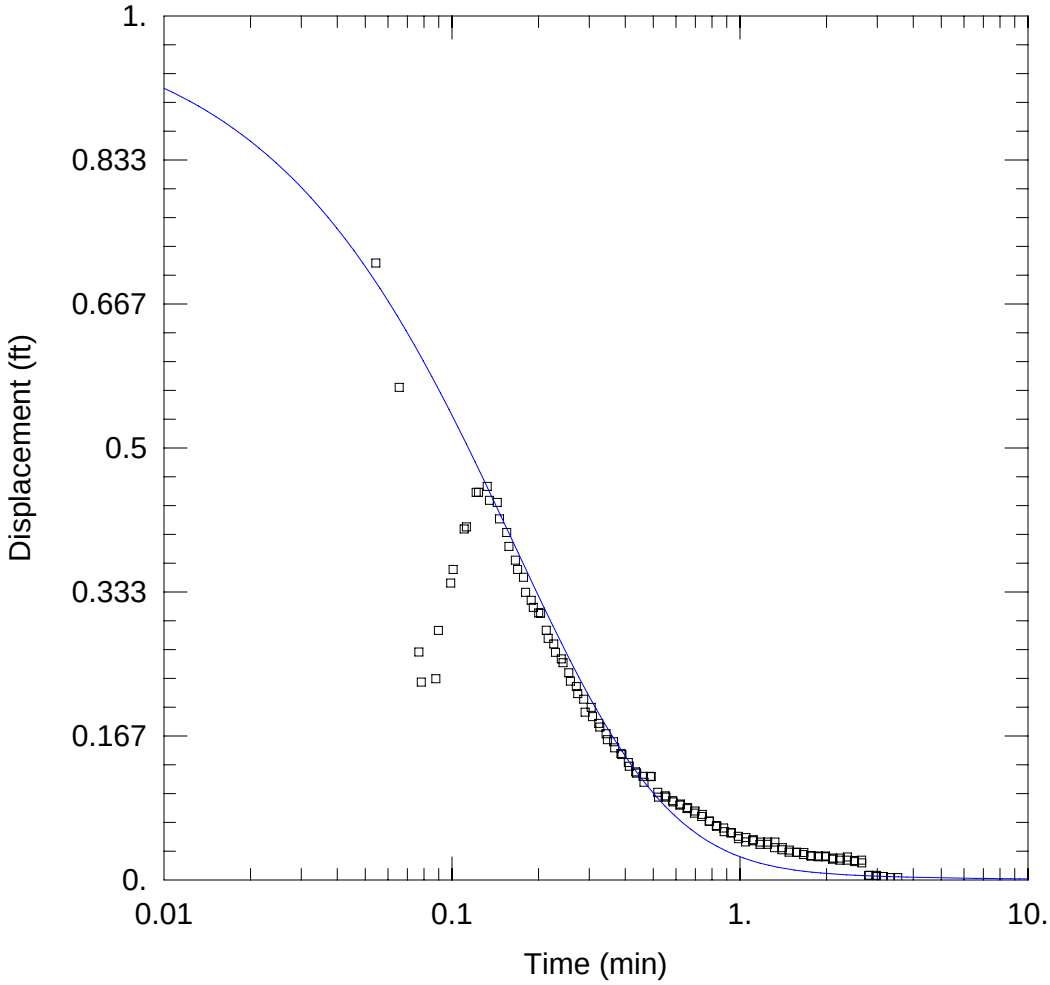
WELL DATA (MW26C)

Initial Displacement: 1. ft Static Water Column Height: 15. ft
Total Well Penetration Depth: 15. ft Screen Length: 15. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.001413 ft/min C(D) = 2.296



WELL TEST ANALYSIS

Data Set: R:\...\MW26Din_KGS_noskin.aqt
Date: 08/02/07 Time: 15:59:04

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW26D
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 36. ft

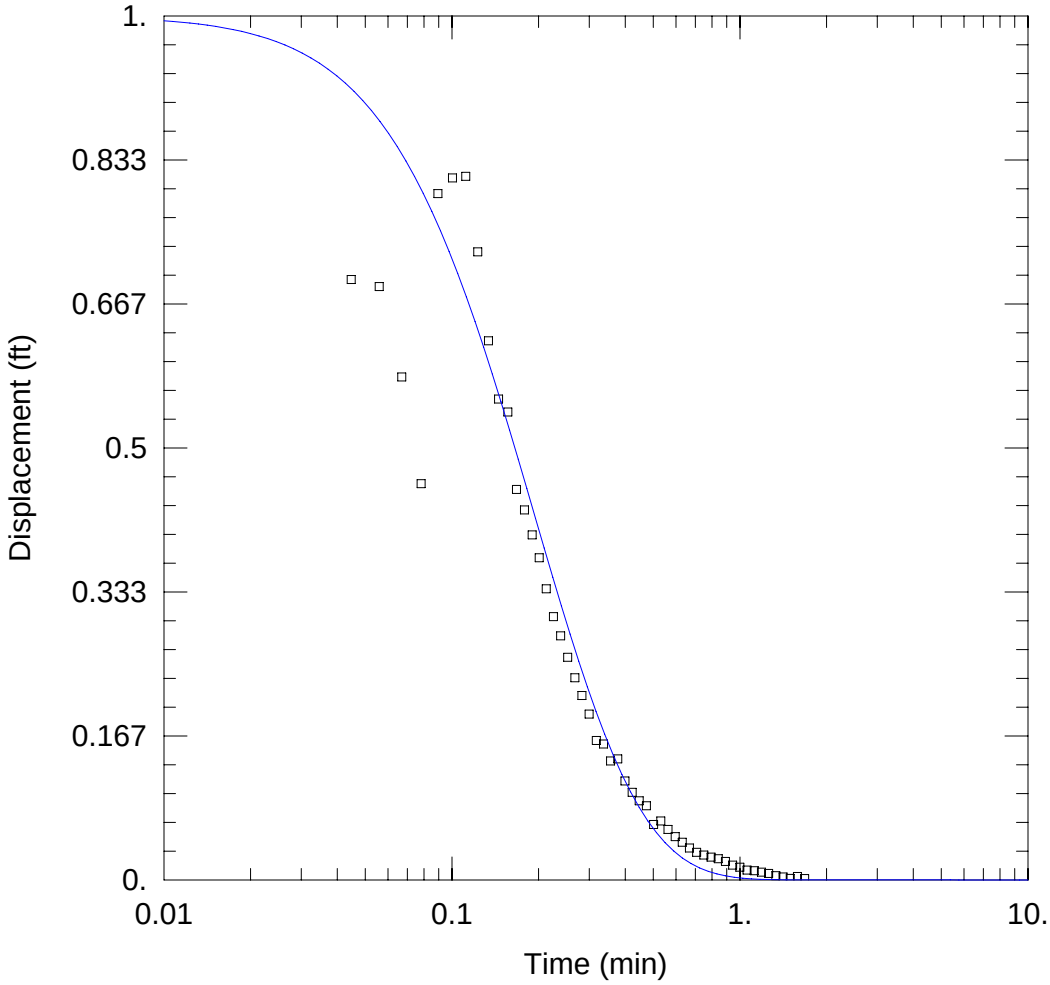
WELL DATA (MW26D)

Initial Displacement: 1. ft
Total Well Penetration Depth: 25. ft
Casing Radius: 0.08 ft
Static Water Column Height: 25. ft
Screen Length: 20. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.004178 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\MW26Dout_Butler.aqt
Date: 08/02/07 Time: 15:58:42

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW26D
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 36. ft Anisotropy Ratio (Kz/Kr): 0.1

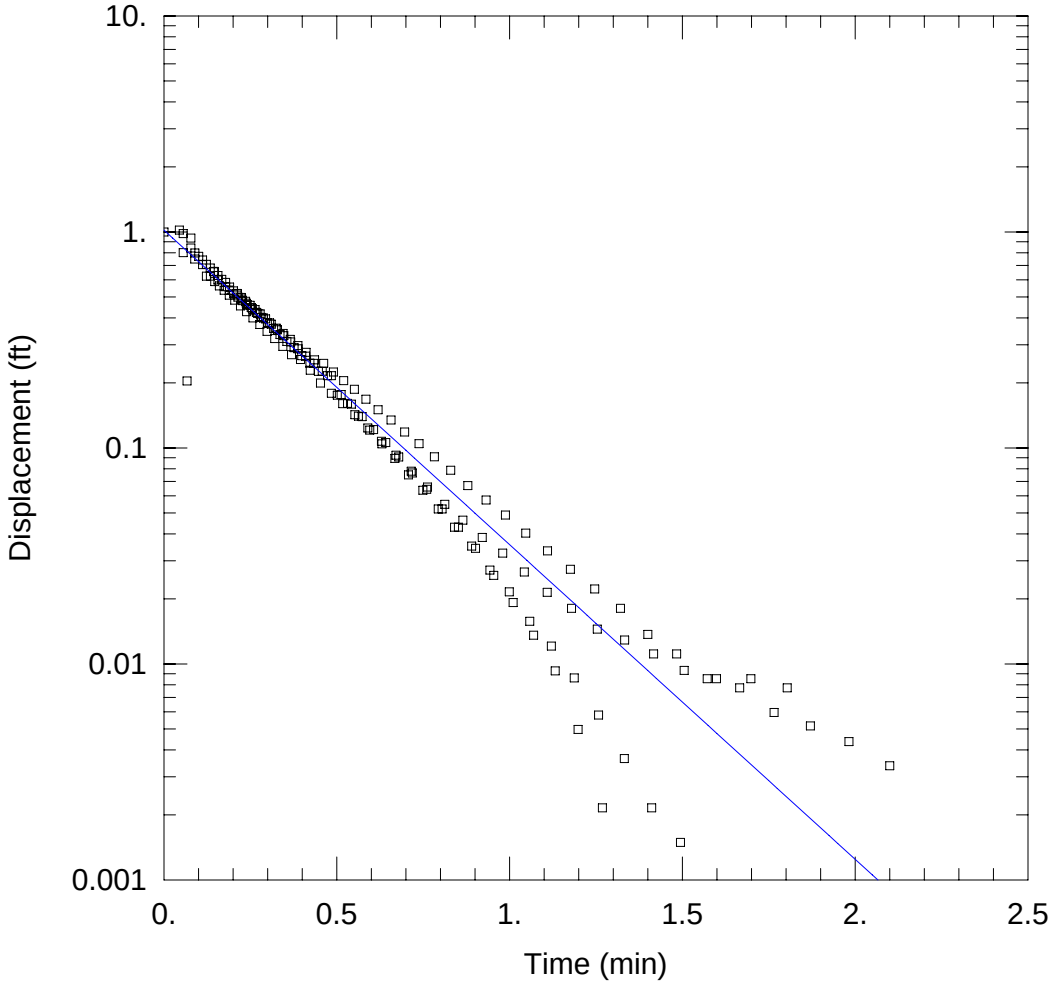
WELL DATA (MW26D)

Initial Displacement: 1. ft
Total Well Penetration Depth: 25. ft
Casing Radius: 0.08 ft
Static Water Column Height: 25. ft
Screen Length: 20. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.004972 ft/min
C(D) = 1.14



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW27\MW27A_B&Rall.aqt
Date: 08/02/07 Time: 16:02:21

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW27A
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 32.83 ft
Anisotropy Ratio (Kz/Kr): 0.1

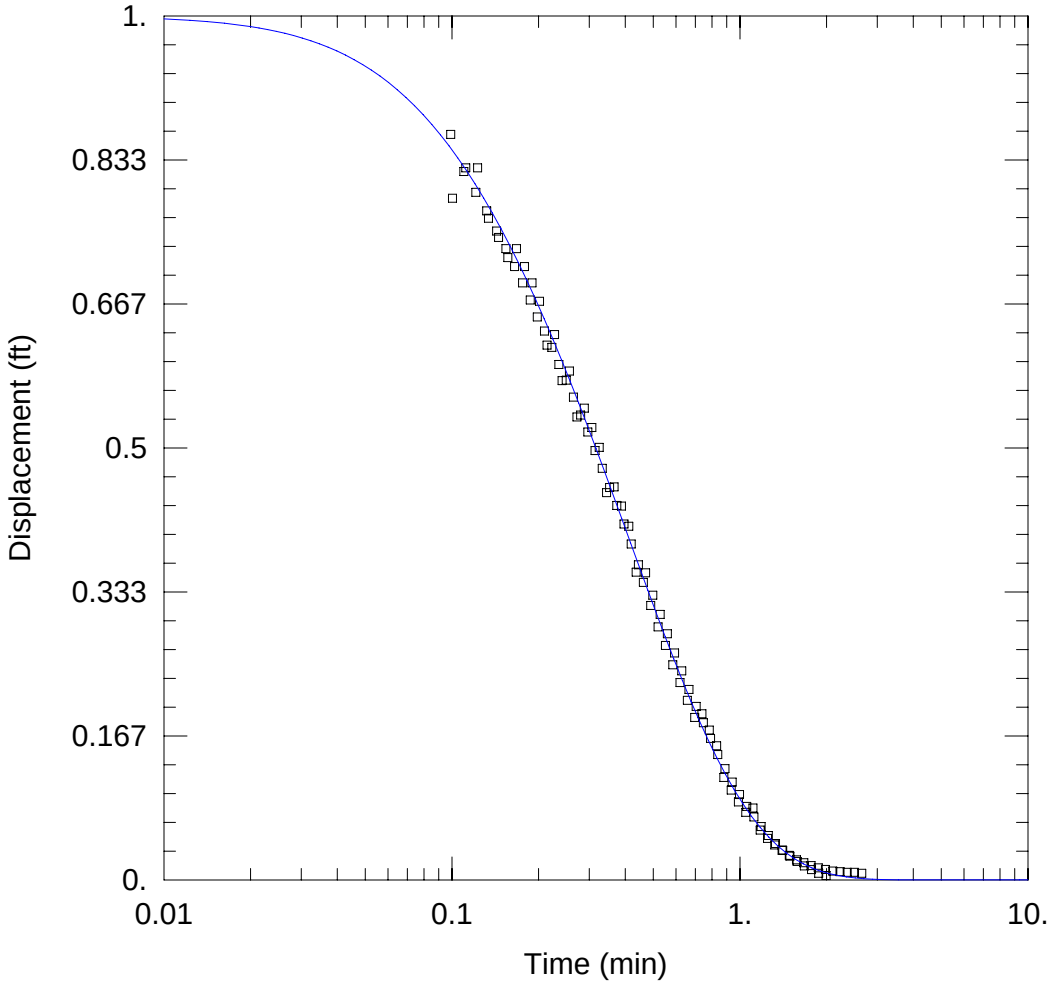
WELL DATA (MW27A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 32.83 ft
Casing Radius: 0.158 ft
Static Water Column Height: 32.83 ft
Screen Length: 20. ft
Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.01026 ft/min
y0 = 1.019 ft



WELL TEST ANALYSIS

Data Set: R:\...\MW27B_Butler_in.aqt
Date: 08/02/07 Time: 16:10:10

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW27B
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 20. ft Anisotropy Ratio (Kz/Kr): 0.1

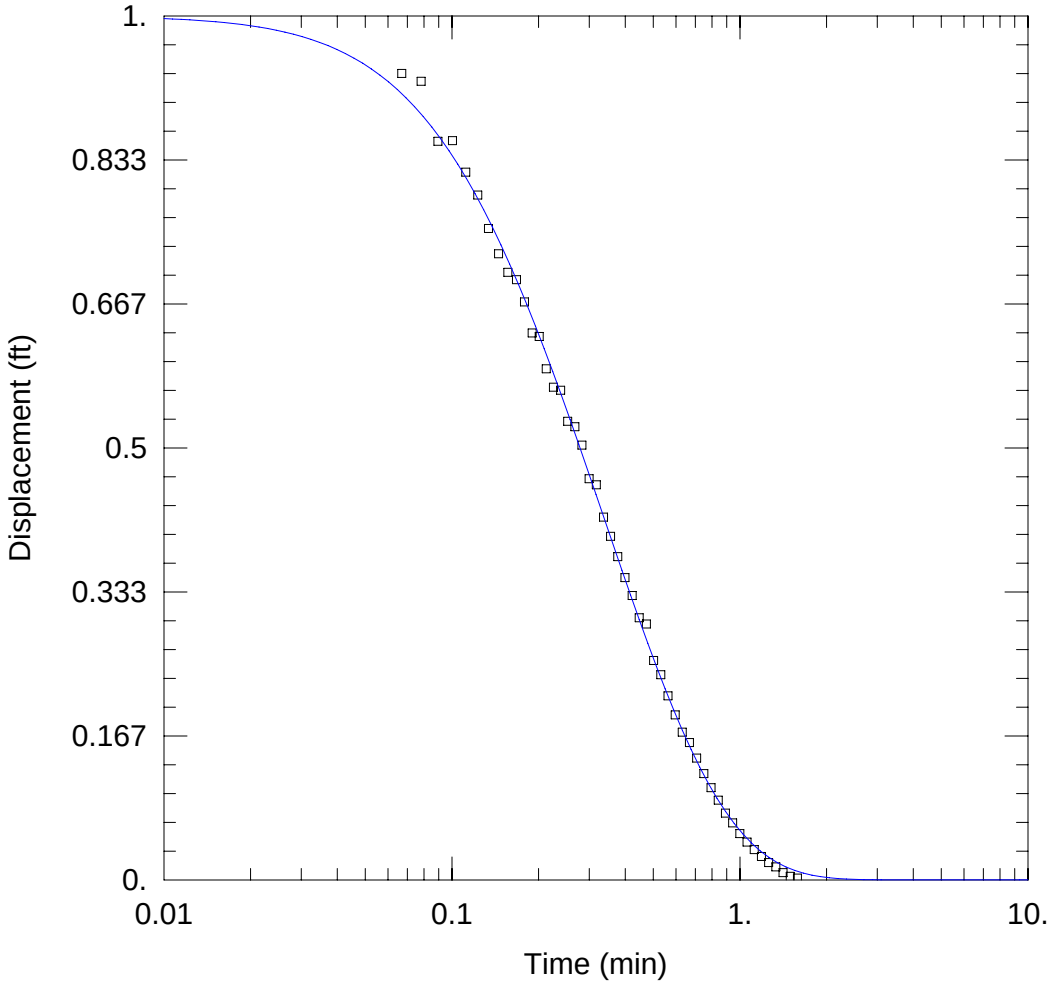
WELL DATA (MW27B)

Initial Displacement: 1. ft Static Water Column Height: 20. ft
Total Well Penetration Depth: 20. ft Screen Length: 20. ft
Casing Radius: 0.158 ft Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.007523 ft/min C(D) = 1.931



WELL TEST ANALYSIS

Data Set: R:\...\MW27B_Butler_out.aqt
Date: 08/02/07 Time: 16:11:56

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW27B
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 20. ft Anisotropy Ratio (Kz/Kr): 0.1

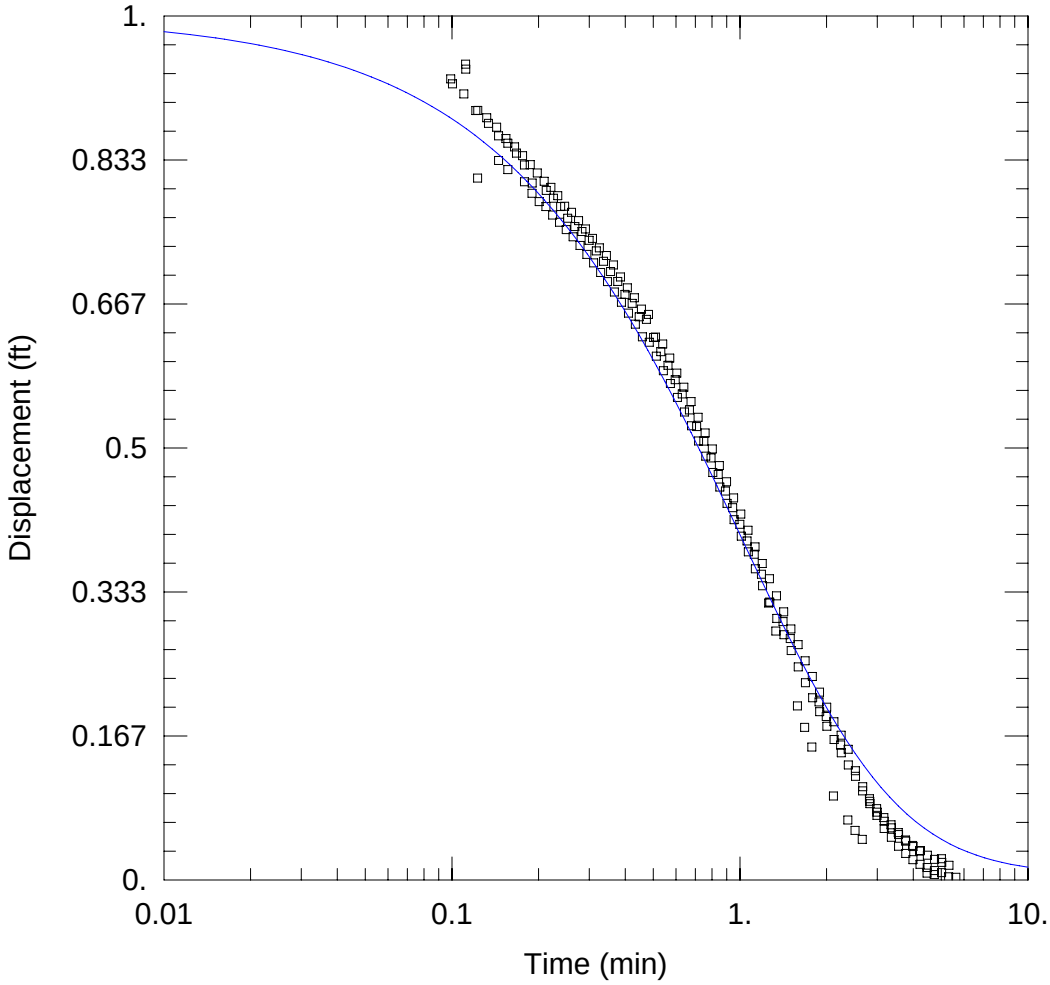
WELL DATA (MW27B)

Initial Displacement: 1. ft Static Water Column Height: 20. ft
Total Well Penetration Depth: 20. ft Screen Length: 20. ft
Casing Radius: 0.158 ft Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.008768 ft/min C(D) = 1.546



WELL TEST ANALYSIS

Data Set: R:\...\MW27C_KGS_noskin.aqt
Date: 08/02/07 Time: 16:21:02

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW27C
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 10. ft

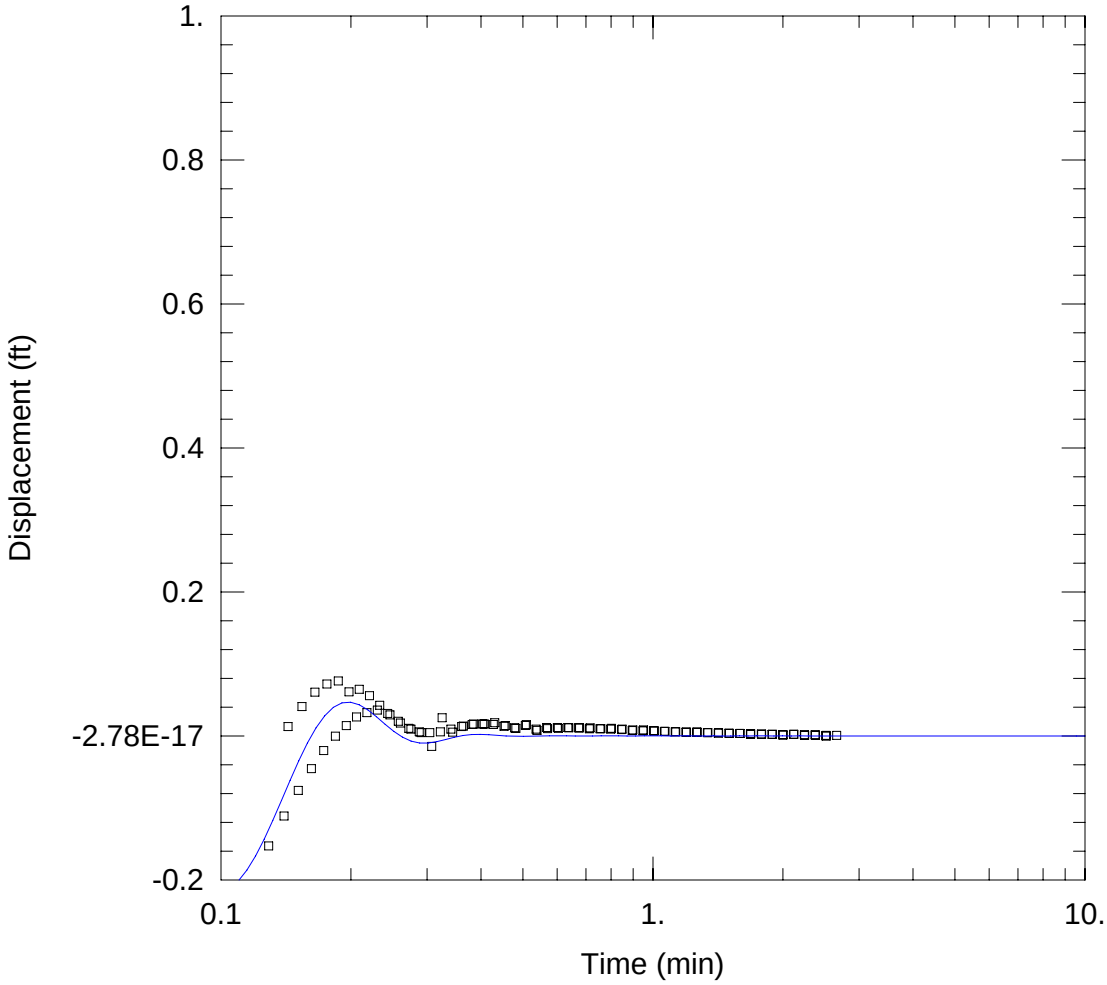
WELL DATA (MW27C)

Initial Displacement: 1. ft
Total Well Penetration Depth: 10. ft
Casing Radius: 0.08 ft
Static Water Column Height: 10. ft
Screen Length: 10. ft
Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.00148 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\MW27D_in_Butler.aqt
Date: 08/03/07 Time: 08:17:53

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW27D
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 0.1

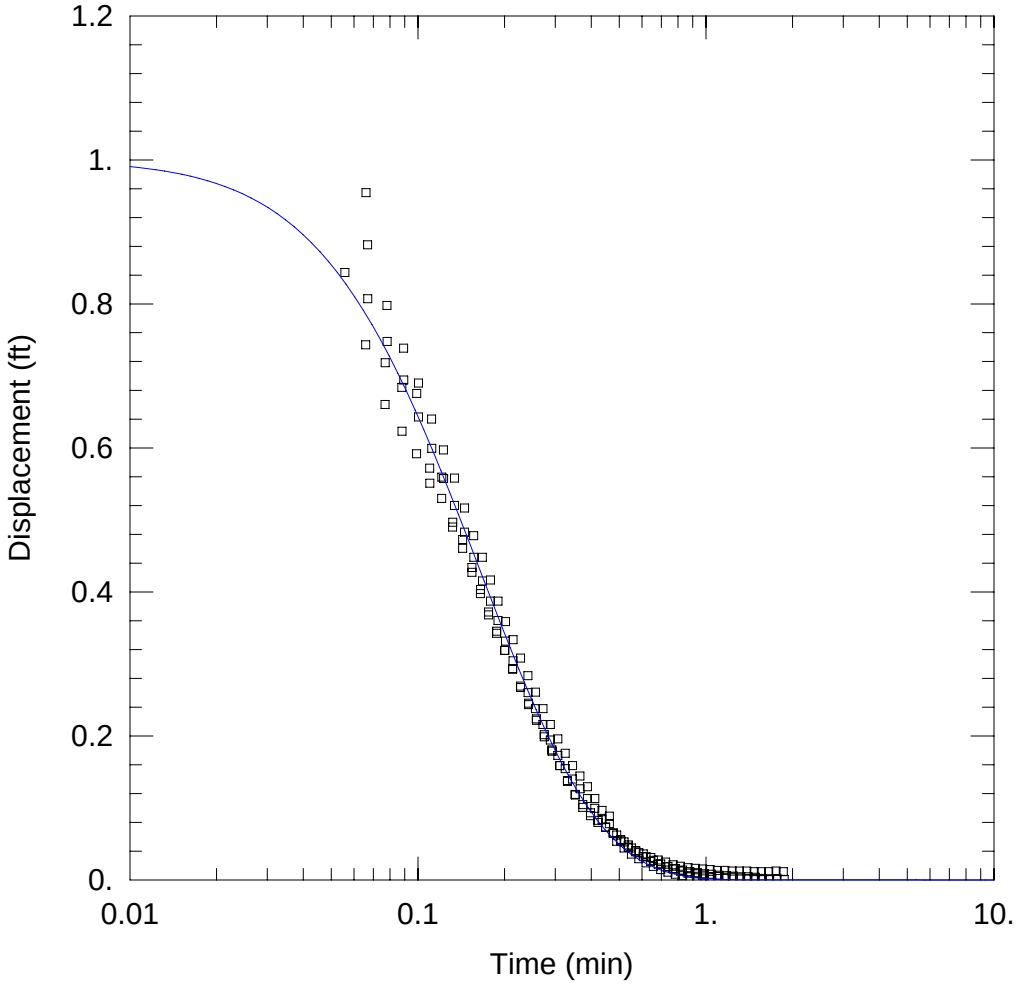
WELL DATA (MW27D)

Initial Displacement: 1. ft Static Water Column Height: 10. ft
Total Well Penetration Depth: 10. ft Screen Length: 10. ft
Casing Radius: 0.08 ft Wellbore Radius: 0.1 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.0688 ft/min C(D) = 0.4375



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW28_Butler.aqt
Date: 08/03/07 Time: 08:19:11

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW28
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 36.06 ft Anisotropy Ratio (Kz/Kr): 0.1

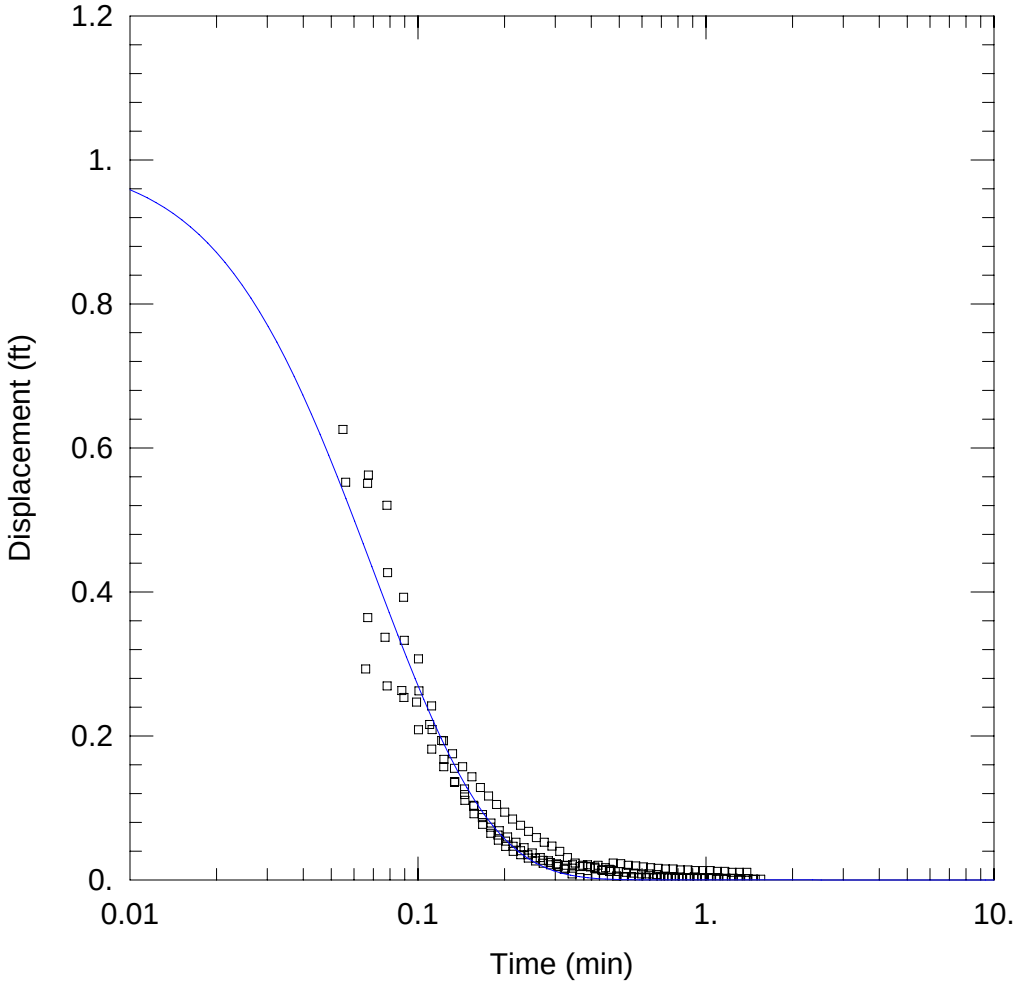
WELL DATA (MW28)

Initial Displacement: 1. ft
Total Well Penetration Depth: 31.06 ft
Casing Radius: 0.158 ft
Static Water Column Height: 31.06 ft
Screen Length: 20. ft
Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.01939 ft/min
C(D) = 1.347



WELL TEST ANALYSIS

Data Set: R:\...\Best_MW29_Butler.aqt
Date: 08/03/07 Time: 08:22:17

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW29
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 26. ft Anisotropy Ratio (Kz/Kr): 0.1

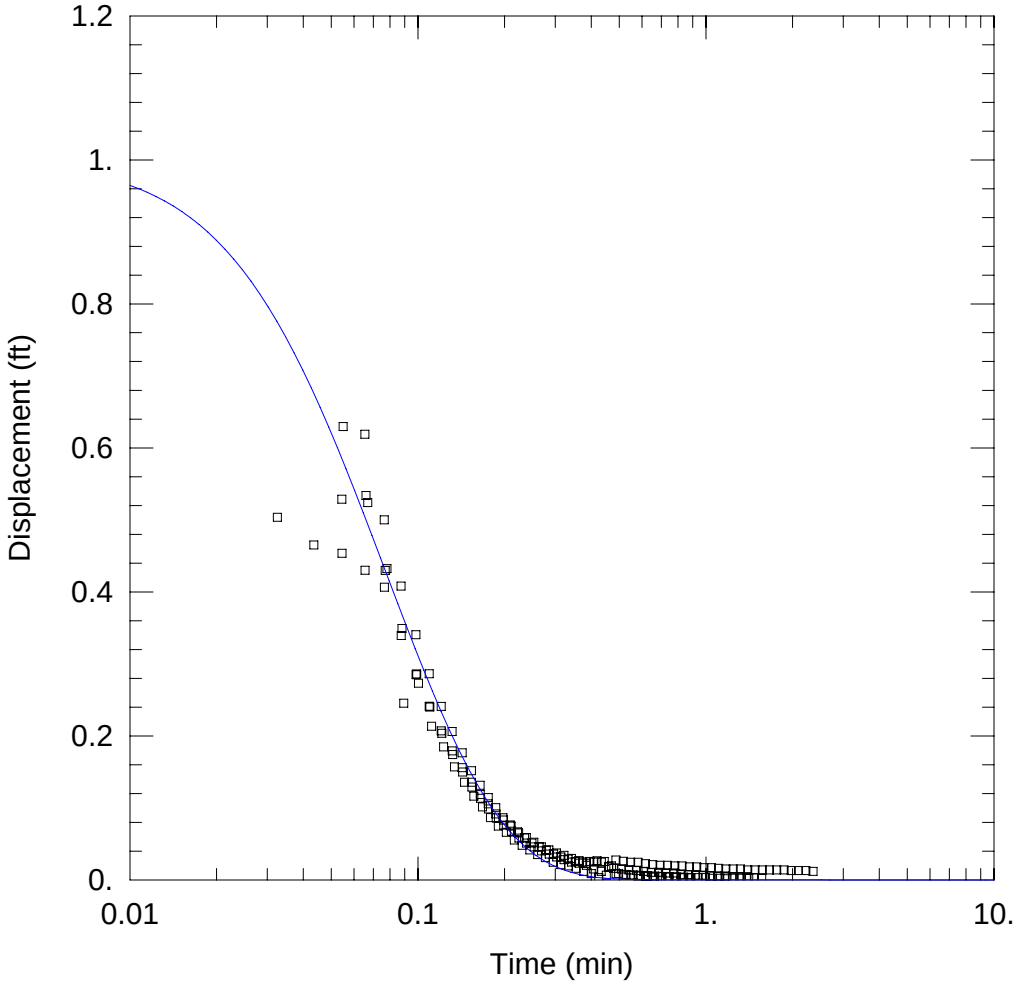
WELL DATA (MW29)

Initial Displacement: 1. ft Static Water Column Height: 23. ft
Total Well Penetration Depth: 23. ft Screen Length: 20. ft
Casing Radius: 0.158 ft Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.04585 ft/min C(D) = 1.295



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\MW30\MW30_Butler.aqt
Date: 08/03/07 Time: 08:26:06

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: MW30
Test Date: 2007

AQUIFER DATA

Saturated Thickness: 28.12 ft
Anisotropy Ratio (Kz/Kr): 0.1

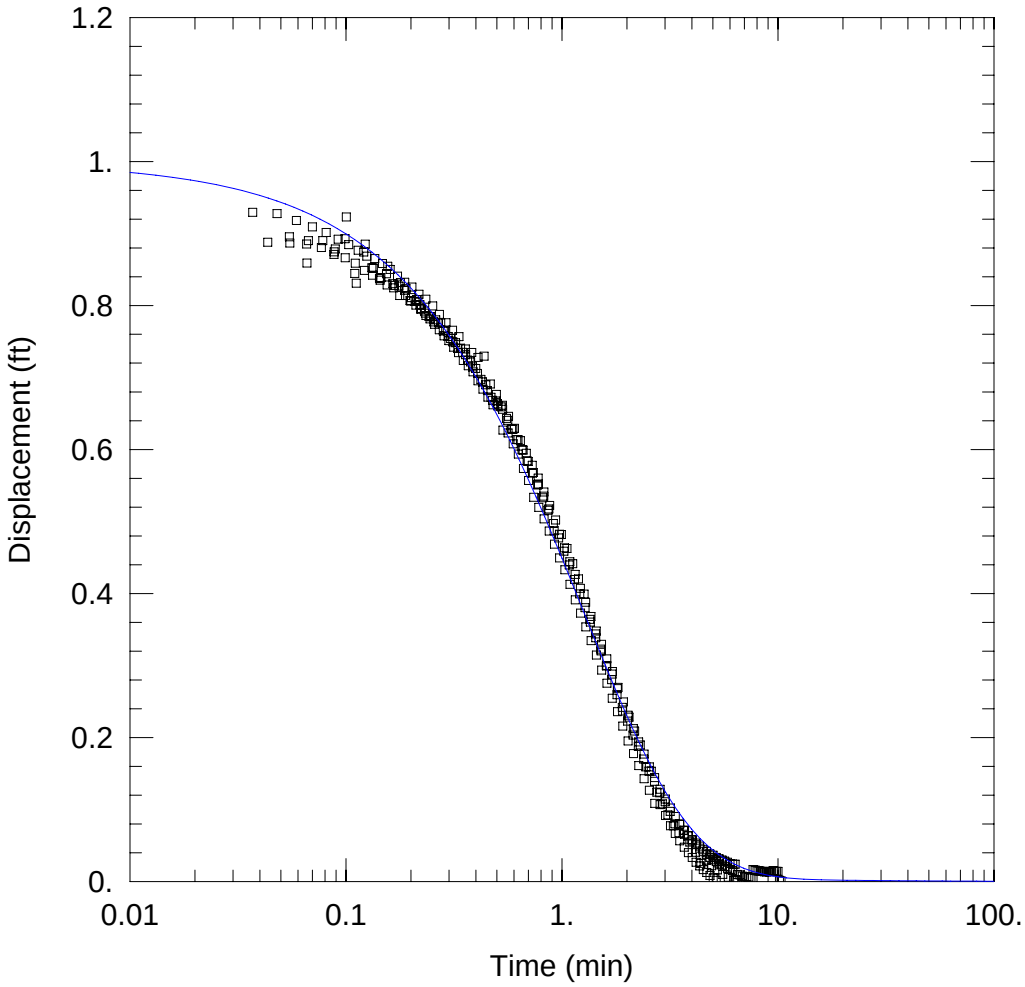
WELL DATA (MW30)

Initial Displacement: 1. ft
Static Water Column Height: 23.12 ft
Total Well Penetration Depth: 23.12 ft
Screen Length: 20. ft
Casing Radius: 0.158 ft
Wellbore Radius: 0.2 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.04163 ft/min
C(D) = 1.303



WELL TEST ANALYSIS

Data Set: R:\...\OW3B_10ft_15ft_Butler.aqt
Date: 08/03/07 Time: 15:43:55

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: OW3B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 41. ft

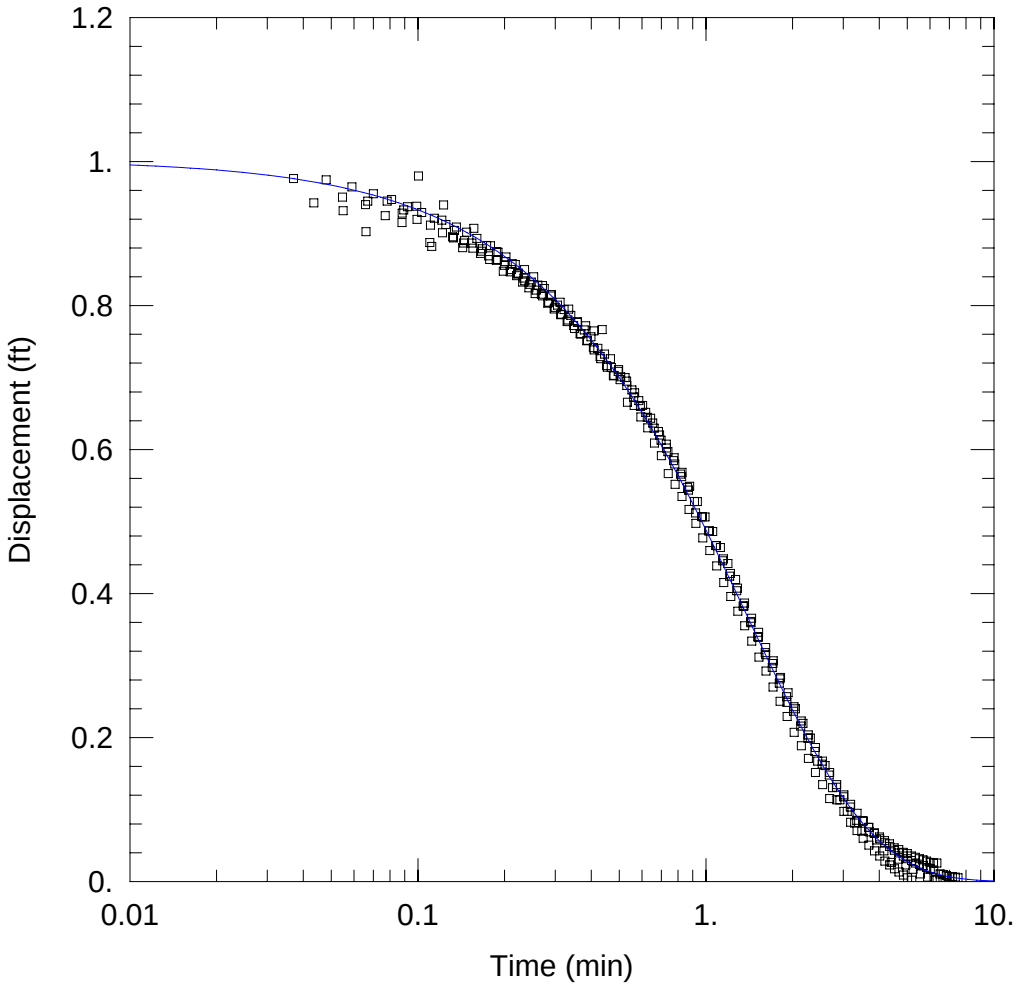
WELL DATA (OW3B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 41. ft
Casing Radius: 0.167 ft
Static Water Column Height: 41. ft
Screen Length: 10. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.005063 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\...\Best_OW3B_Butler.aqt
Date: 08/03/07 Time: 08:35:19

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: OW3B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 41. ft
Anisotropy Ratio (Kz/Kr): 0.1

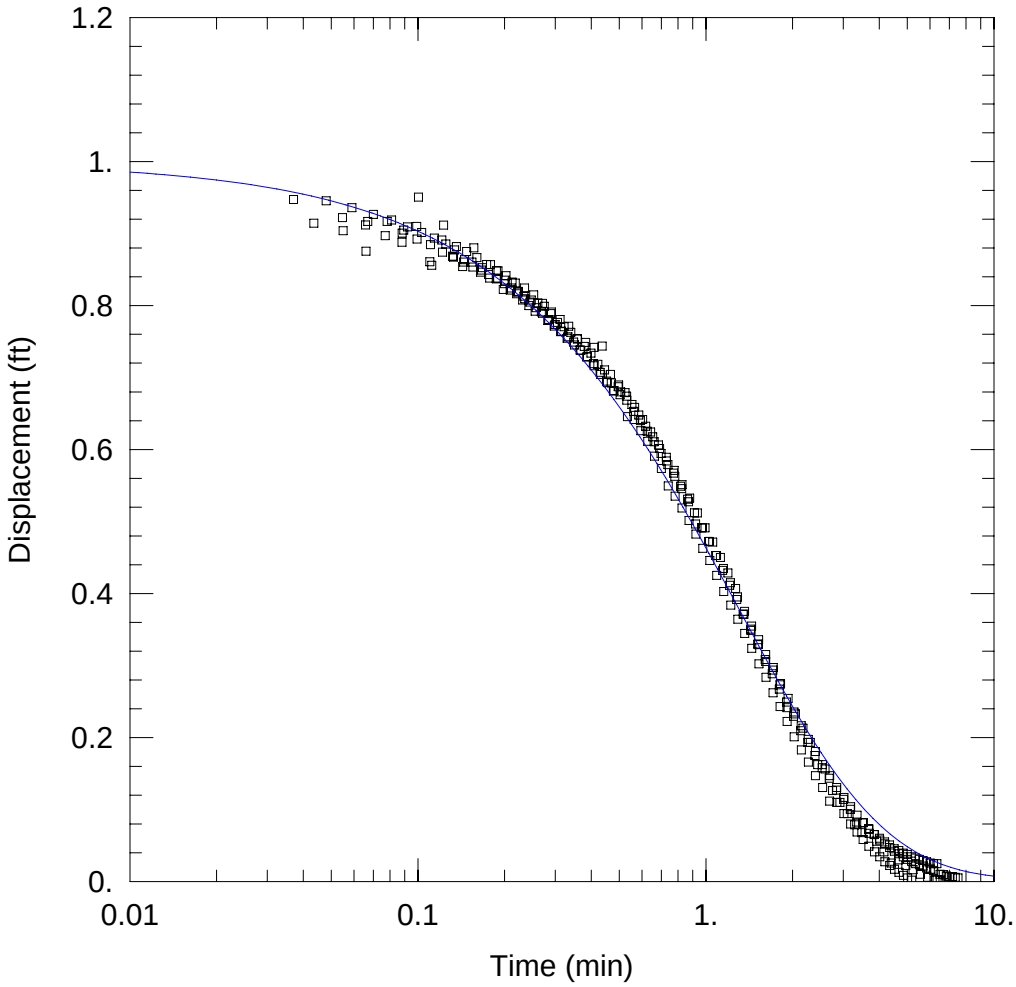
WELL DATA (OW3B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 41. ft
Casing Radius: 0.167 ft
Static Water Column Height: 41. ft
Screen Length: 10. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.005716 ft/min
C(D) = 10.



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\OW3B\OW3B_KGS.aqt
Date: 08/03/07 Time: 15:44:33

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: OW3B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 41. ft

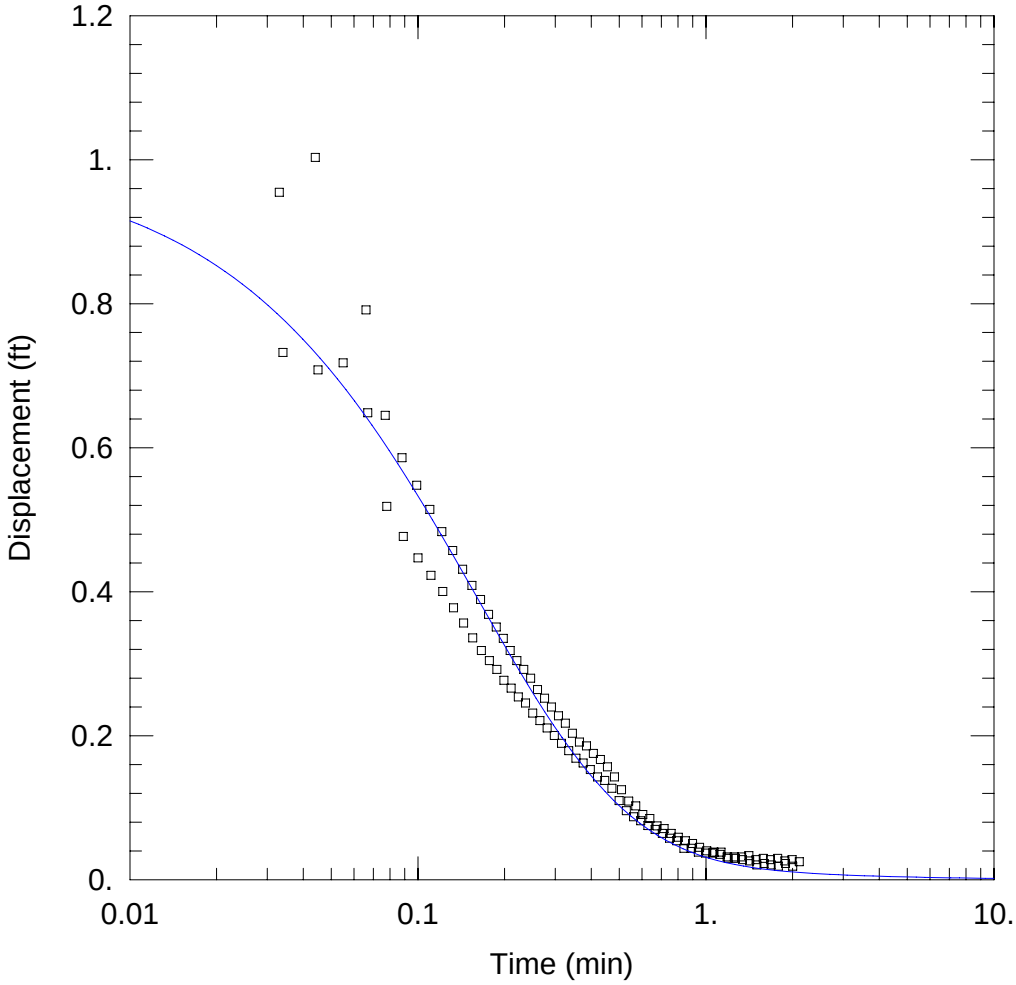
WELL DATA (OW3B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 41. ft
Casing Radius: 0.167 ft
Static Water Column Height: 41. ft
Screen Length: 10. ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.004842 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\OW4A\OW4A_in_KGS.aqt
Date: 08/03/07 Time: 10:45:24

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: OW4A
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 21.63 ft

WELL DATA (OW4A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 21.63 ft
Casing Radius: 0.168 ft

Static Water Column Height: 21.63 ft
Screen Length: 20. ft
Wellbore Radius: 0.209 ft

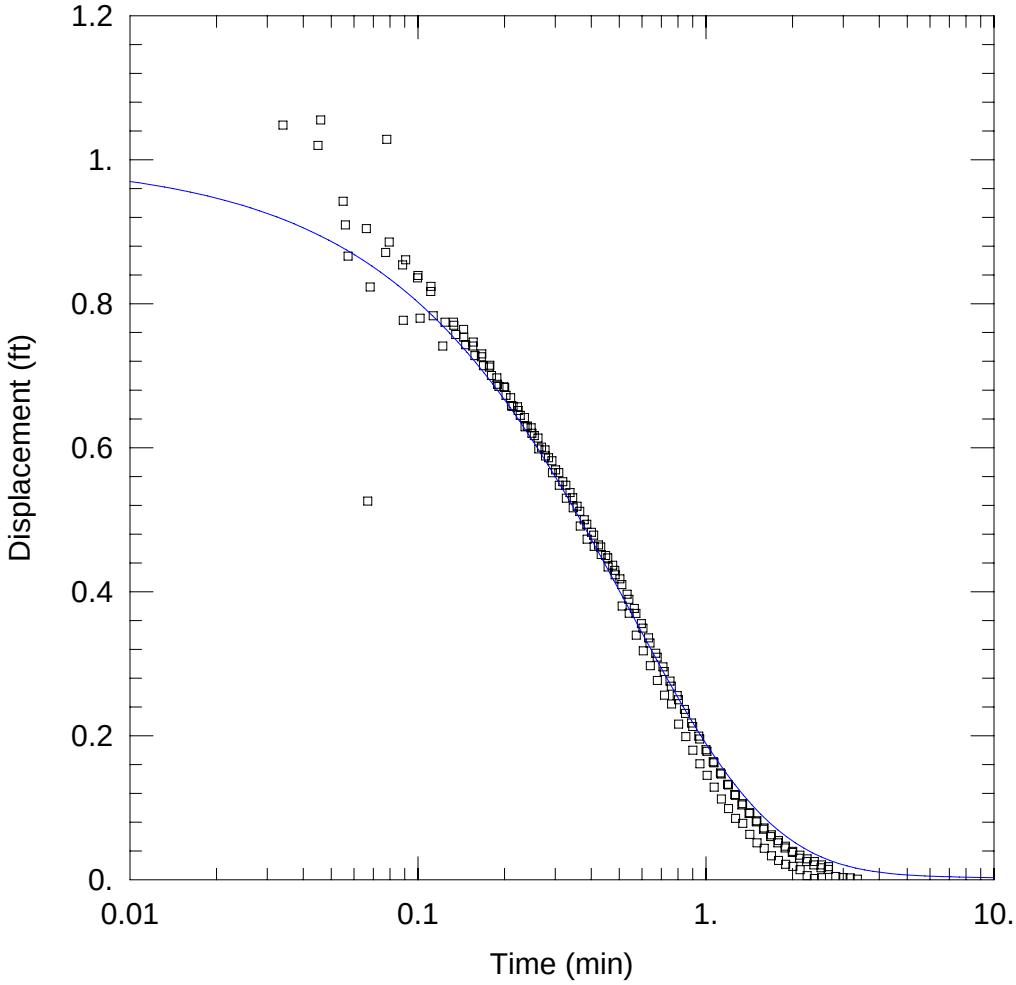
SOLUTION

Aquifer Model: Confined

Kr = 0.01883 ft/min
Kz/Kr = 0.1

Solution Method: KGS Model

Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\OW4B\OW4B_KGS_2.aqt
Date: 08/03/07 Time: 10:53:52

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: OW4B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 24. ft

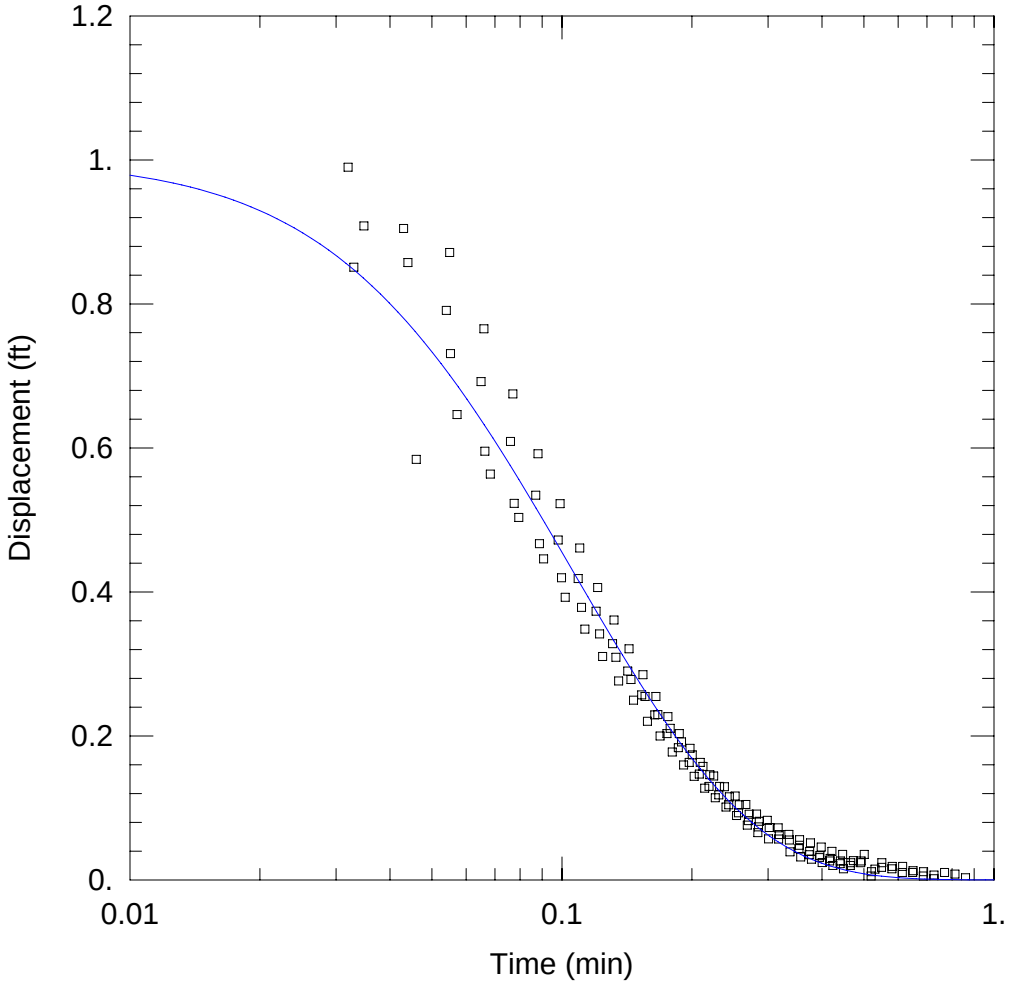
WELL DATA (OW4B)

Initial Displacement: 1. ft
Total Well Penetration Depth: 24. ft
Casing Radius: 0.168 ft
Static Water Column Height: 24. ft
Screen Length: 10.3 ft
Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.01155 ft/min
Kz/Kr = 0.1
Ss = 1.0E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\OW5\Best_OW5_Butler.aqt
Date: 08/03/07 Time: 10:59:17

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: OW5
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 13. ft
Anisotropy Ratio (Kz/Kr): 0.1

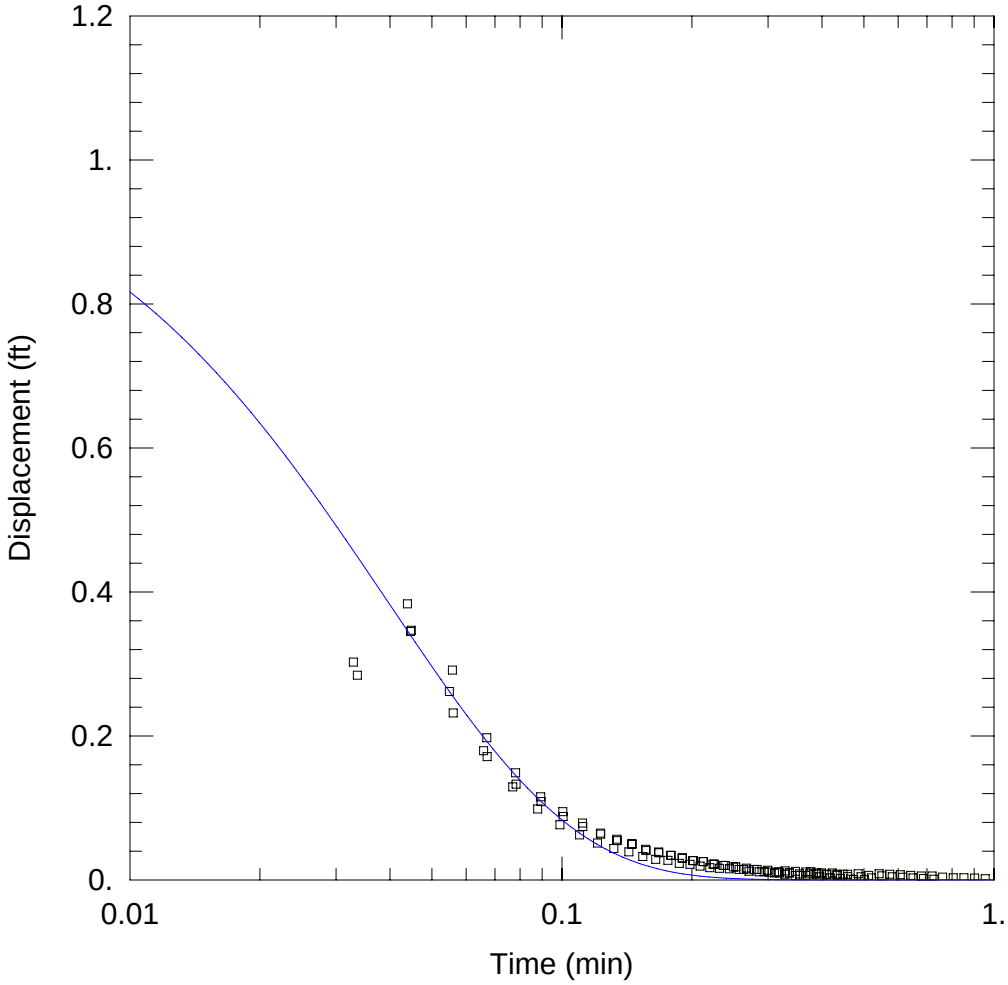
WELL DATA (OW5)

Initial Displacement: 1. ft
Total Well Penetration Depth: 13. ft
Casing Radius: 0.167 ft
Static Water Column Height: 13. ft
Screen Length: 13. ft
Wellbore Radius: 0.209 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.04328 ft/min
C(D) = 1.365



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\OW6\OW6_Butler.aqt
Date: 08/03/07 Time: 15:22:03

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: OW6
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 15.35 ft
Anisotropy Ratio (Kz/Kr): 0.1

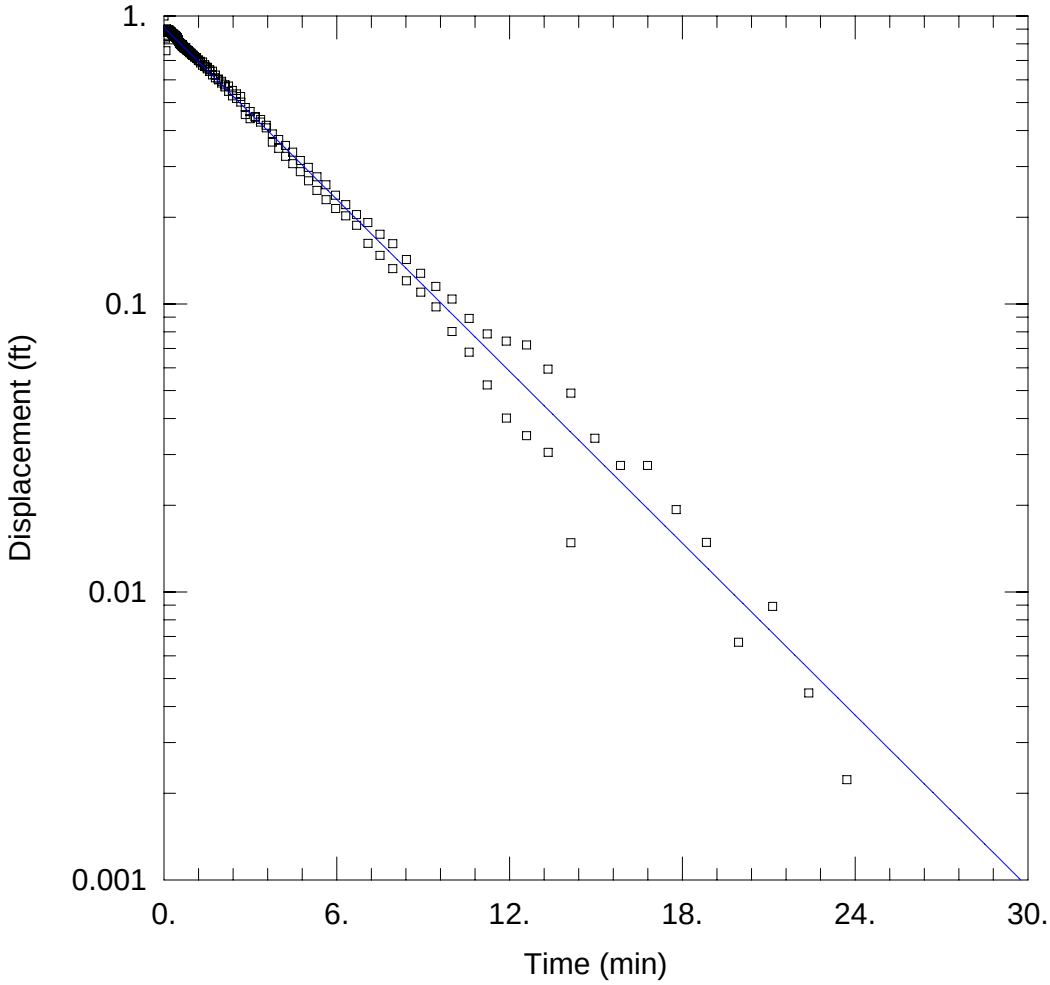
WELL DATA (OW6)

Initial Displacement: 1. ft
Total Well Penetration Depth: 15.35 ft
Casing Radius: 0.168 ft
Static Water Column Height: 15.35 ft
Screen Length: 20. ft
Wellbore Radius: 0.209 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 0.08953 ft/min
C(D) = 2.344



WELL TEST ANALYSIS

Data Set: R:\335392OmegaWA275\Field_Sampling\Slug_Testing\analysis\OW7\OW7_in_B&R.aqt
Date: 08/03/07 Time: 11:22:27

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: OW7
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 15.8 ft
Anisotropy Ratio (Kz/Kr): 0.1

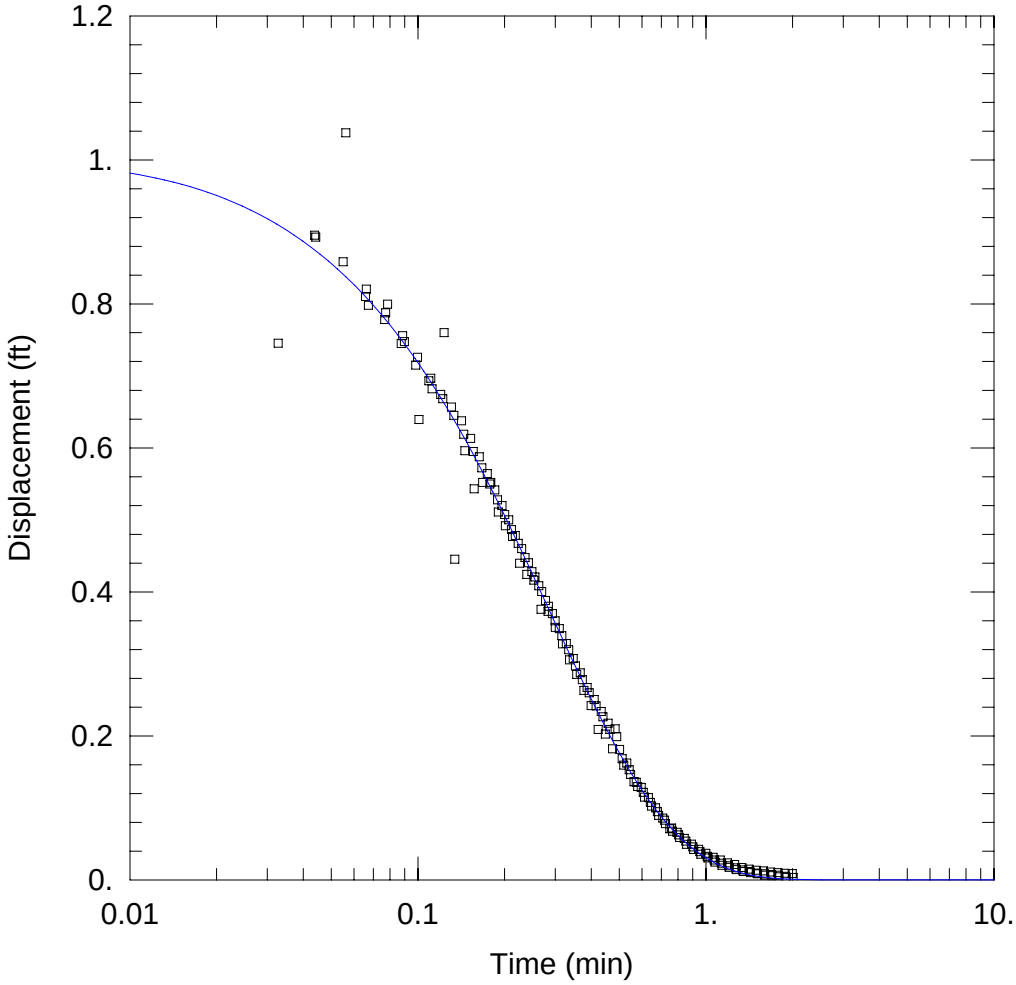
WELL DATA (OW7)

Initial Displacement: 1. ft
Total Well Penetration Depth: 15.8 ft
Casing Radius: 0.168 ft
Static Water Column Height: 15.8 ft
Screen Length: 15.8 ft
Wellbore Radius: 0.209 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 0.0006799 ft/min
y0 = 0.912 ft



WELL TEST ANALYSIS

Data Set: R:\...\Best_OW8B_Butler.aqt
Date: 08/03/07 Time: 11:23:55

PROJECT INFORMATION

Company: CH2M HILL
Client: EPA
Project: 335392
Location: RIV
Test Well: OW8B
Test Date: 2006

AQUIFER DATA

Saturated Thickness: 16. ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (OW8B)

Initial Displacement: 1. ft Static Water Column Height: 16. ft
Total Well Penetration Depth: 16. ft Screen Length: 10. ft
Casing Radius: 0.167 ft Wellbore Radius: 0.209 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 0.02741 ft/min C(D) = 3.617