

FW: LOOK AHEAD - Aquifer Testing Report



Andress, Lane, NMENV

Wed 10/23/2019 4:45 PM

To: Allen, Pam, NMENV <pam.allen@state.nm.us>;

 7 attachments

106157_AgarwalDrawdown_DB.pdf; 106157_AgarwalDrawdown_Moench.pdf; 106157_DB.pdf; 106157_Moench.pdf;
106157_ResidualDrawdown_DB.pdf; 106157_ResidualDrawdown_Moench.pdf; 106157_TheisHantush.pdf;

Pam,
Can you please add this email and attachments to the admin record?
Thanks,
Lane

Lane Andress, P.G.
NM Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6313

From: Cobrain, Dave, NMENV <dave.cobrain@state.nm.us>
Sent: Wednesday, October 23, 2019 4:03 PM
To: Andress, Lane, NMENV <Lane.Andress@state.nm.us>
Subject: FW: LOOK AHEAD - Aquifer Testing Report

Dave Cobrain
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East Bldg 1
Santa Fe, NM 87505-6313
Main Office Phone 505-476-6000
Direct Line 505-476-6055
Fax 505-476-6030

From: Kieling, John, NMENV <john.kieling@state.nm.us>
Sent: Tuesday, January 21, 2014 9:27 AM
To: Spalding, Susan (Spalding.Susan@epa.gov) <Spalding.Susan@epa.gov>; King, Laurie (king.laurie@epa.gov) <king.laurie@epa.gov>; Hubner, Tara (Hubner.Tara@epa.gov) <Hubner.Tara@epa.gov>; Torcoletti, Paul

KAFB4901



<Torcoletti.Paul@epa.gov>; Ellinger, Scott (Ellinger.Scott@epa.gov) <Ellinger.Scott@epa.gov>
Cc: Blaine, Tom, NMENV <Tom.Blaine@state.nm.us>; Cobrain, Dave, NMENV <dave.cobrain@state.nm.us>;
Reuter, Stephen, NMENV <stephen.reuter@state.nm.us>
Subject: RE: LOOK AHEAD - Aquifer Testing Report

Appendix E – AQTESOLV Solutions

From: Kieling, John, NMENV
Sent: Friday, January 17, 2014 2:50 PM
To: Spalding, Susan (Spalding.Susan@epa.gov); King, Laurie (king.laurie@epa.gov); Hubner, Tara (Hubner.Tara@epa.gov); Torcoletti, Paul; Ellinger, Scott (Ellinger.Scott@epa.gov)
Cc: Blaine, Tom, NMENV (Tom.Blaine@state.nm.us); Cobrain, Dave, NMENV; Reuter, Stephen, NMENV
Subject: FW: LOOK AHEAD - Aquifer Testing Report

Susan and others.

Attached is the Aquifer Test Report (in a draft form) regarding the Kirtland AFB fuel spill. I have ask the contractor to provide the appendices. Once we receive the appendices we will forward to EPA.

If you could please review and provide any comments on this document NMED would appreciate.

Thanks, John

John E. Kieling, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Bldg 1
Santa Fe, NM 87505

(505) 476-6000 (HWB Main)
(505) 476-6030 (fax)
john.kieling@state.nm.us

From: Agnew, Diane [<mailto:diane.agnew@CBIFederalServices.com>]
Sent: Wednesday, January 15, 2014 12:01 PM
To: Blaine, Tom, NMENV; Kieling, John, NMENV; Cobrain, Dave, NMENV; Reuter, Stephen, NMENV
Cc: Amdurer, Mike; Cooper, Thomas; Hobbs, Rachel G; BITNER, LUDIE W JR GS-13 USAF AFMC 377 MSG/CEIR; CLARK, SCOTT C GS-12 USAF AFMC 377 MSG/CEIR (scott.clark@us.af.mil); john.m.mcbee@usace.army.mil
Subject: LOOK AHEAD - Aquifer Testing Report

Hello:

Please see attached for the “Look Ahead” copy of the Aquifer Testing Results Report. Due to the size of appendices, they are not included in this look ahead copy.

We are asking for feedback by **COB Monday, January 21, 2014.**

Please let me know if you have any edits or comments.

Diane



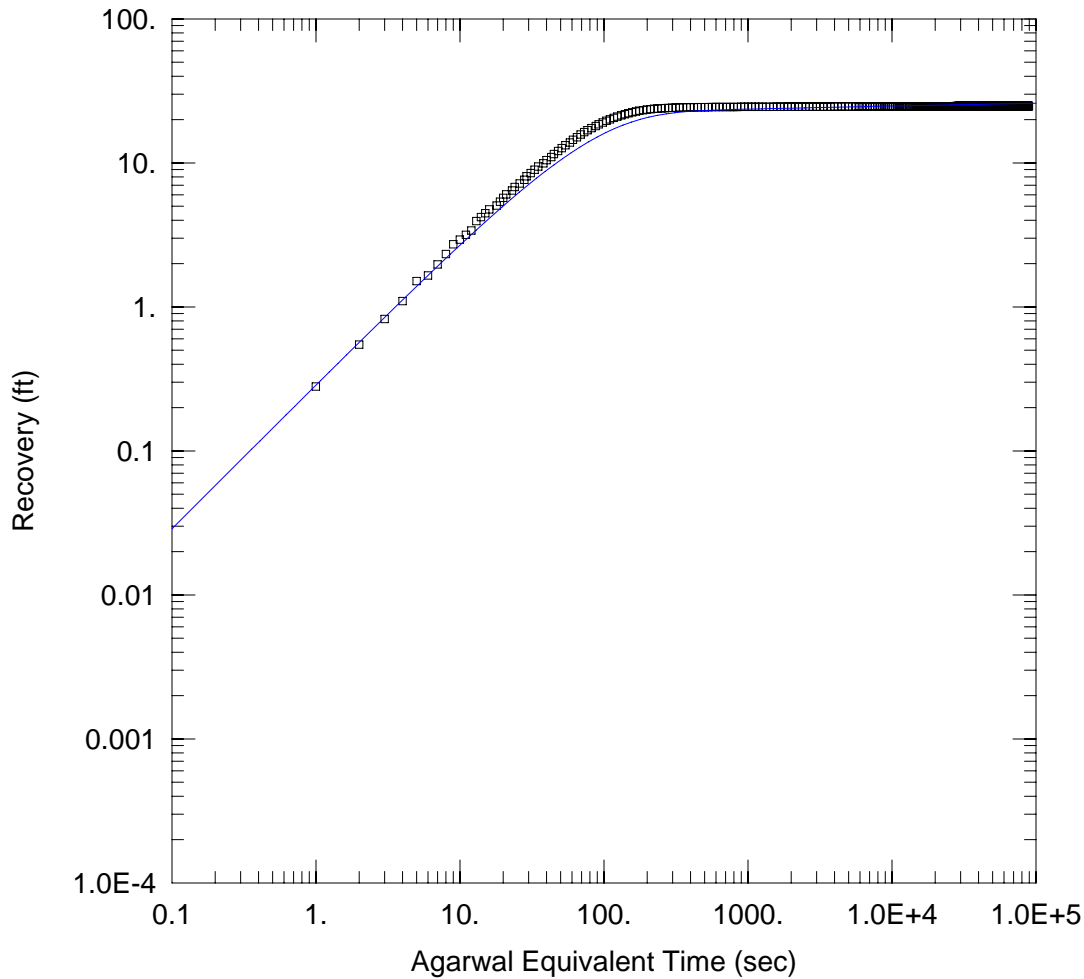
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WELL TEST ANALYSIS

Data Set: C:\...\106157_AgarwalDrawdown_DB.aqt

Date: 12/20/13

Time: 14:44:02

PROJECT INFORMATION

Company: CB&I

Test Well: KAFB-106157

AQUIFER DATA

Saturated Thickness: 100. ft

Anisotropy Ratio (Kz/Kr): 0.001

WELL DATA

Pumping Wells

Observation Wells

Well Name	X (ft)	Y (ft)
106157	0	0

Well Name	X (ft)	Y (ft)
□ 106157	0	0

SOLUTION

Aquifer Model: Confined

Solution Method: Dougherty-Babu

T = 1415.4 ft²/day

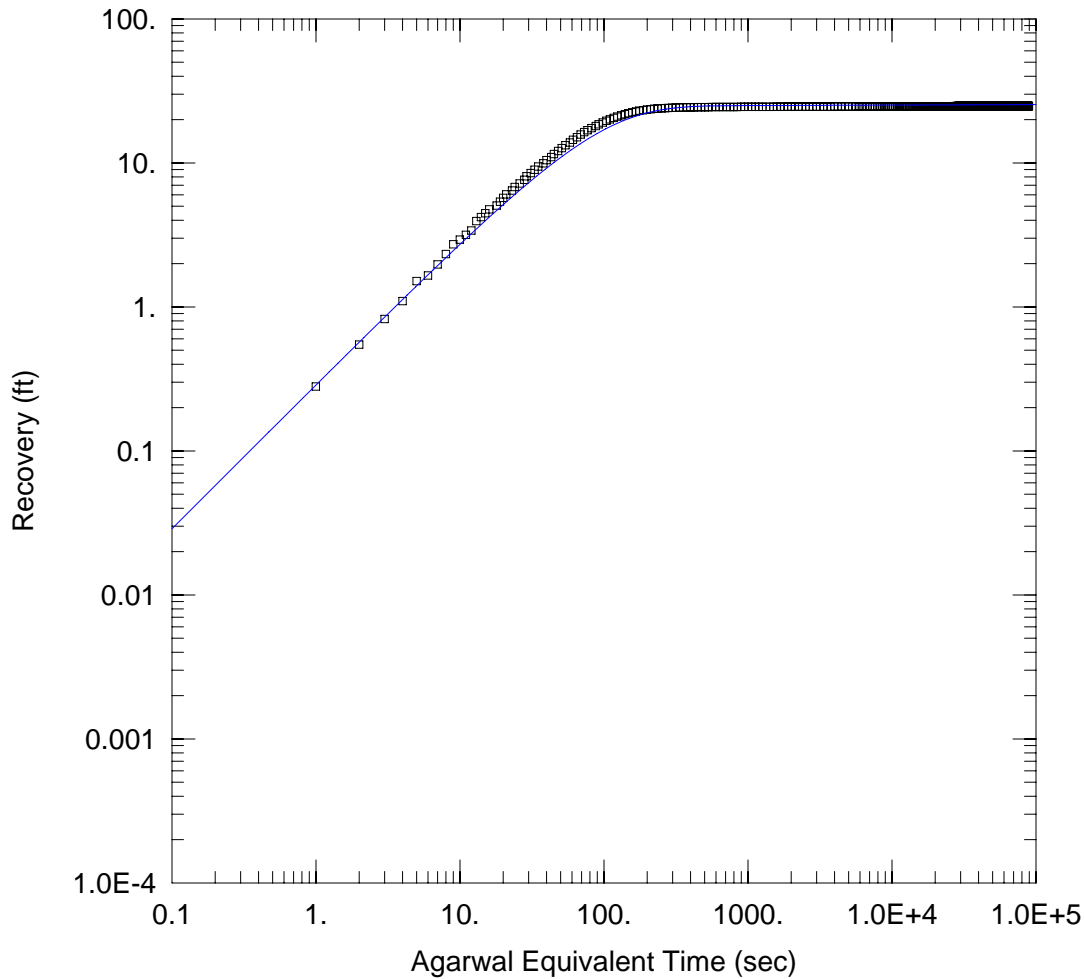
S = 1.0E-6

Kz/Kr = 0.001

Sw = 5.686

r(w) = 0.49 ft

r(c) = 0.333 ft



WELL TEST ANALYSIS

Data Set: C:\...\106157_AgarwalDrawdown_Moench.aqt
 Date: 12/24/13 Time: 15:53:51

PROJECT INFORMATION

Company: CB&I
 Test Well: KAFB-106157

AQUIFER DATA

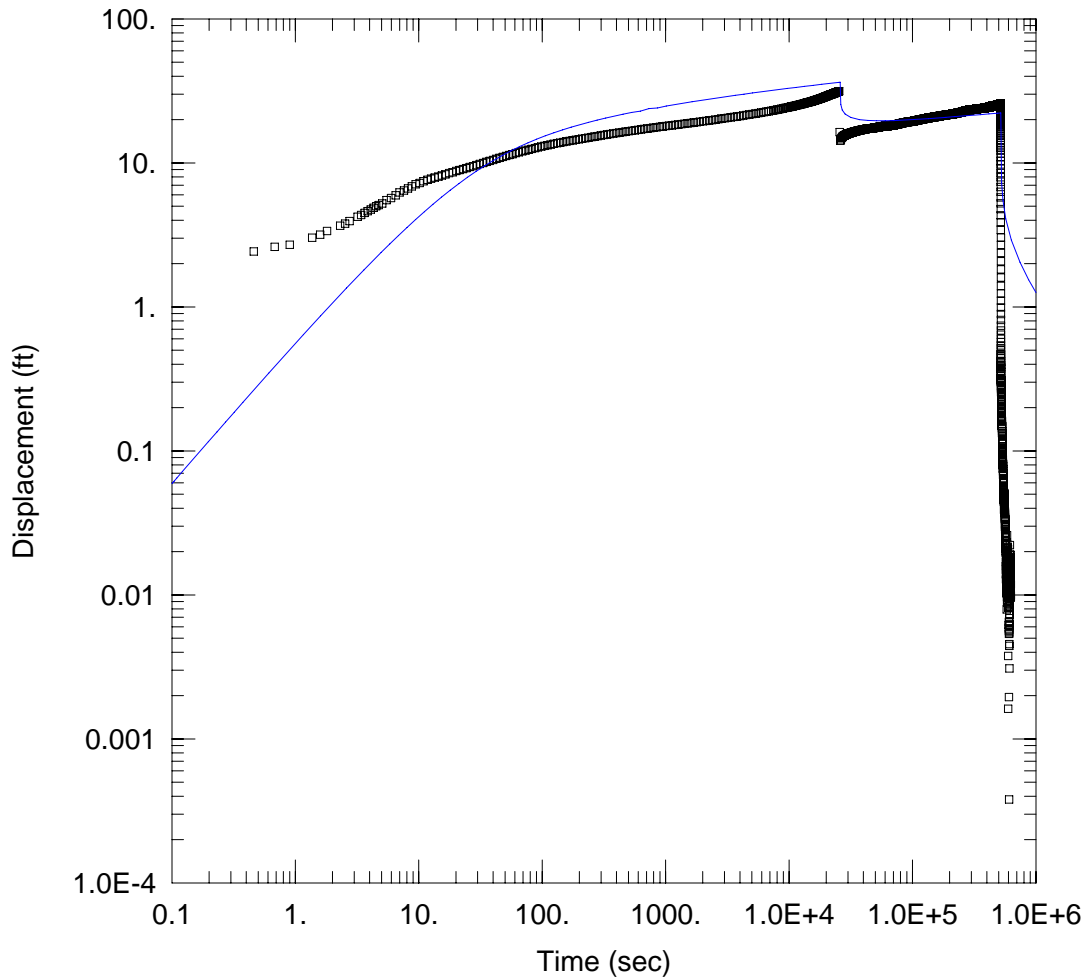
Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 0.4165

WELL DATA

Pumping Wells			Observation Wells		
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
106157	0	0	□ 106157	0	0

SOLUTION

Aquifer Model: <u>Unconfined</u>	Solution Method: <u>Moench</u>
T = <u>8499.8 ft²/day</u>	S = <u>0.03162</u>
Sy = <u>0.005957</u>	β = <u>1.0E-5</u>
Sw = <u>85.65</u>	r(w) = <u>0.49 ft</u>
r(c) = <u>0.333 ft</u>	alpha = <u>1.0E+30 sec⁻¹</u>



WELL TEST ANALYSIS

Data Set: C:\Program Files\HydroSOLVE\AQTESOLV Pro 4.0\data\106157\CR Test\106157_DB.aqt
 Date: 12/20/13 Time: 14:44:59

PROJECT INFORMATION

Company: CB&I
 Test Well: KAFB-106157

AQUIFER DATA

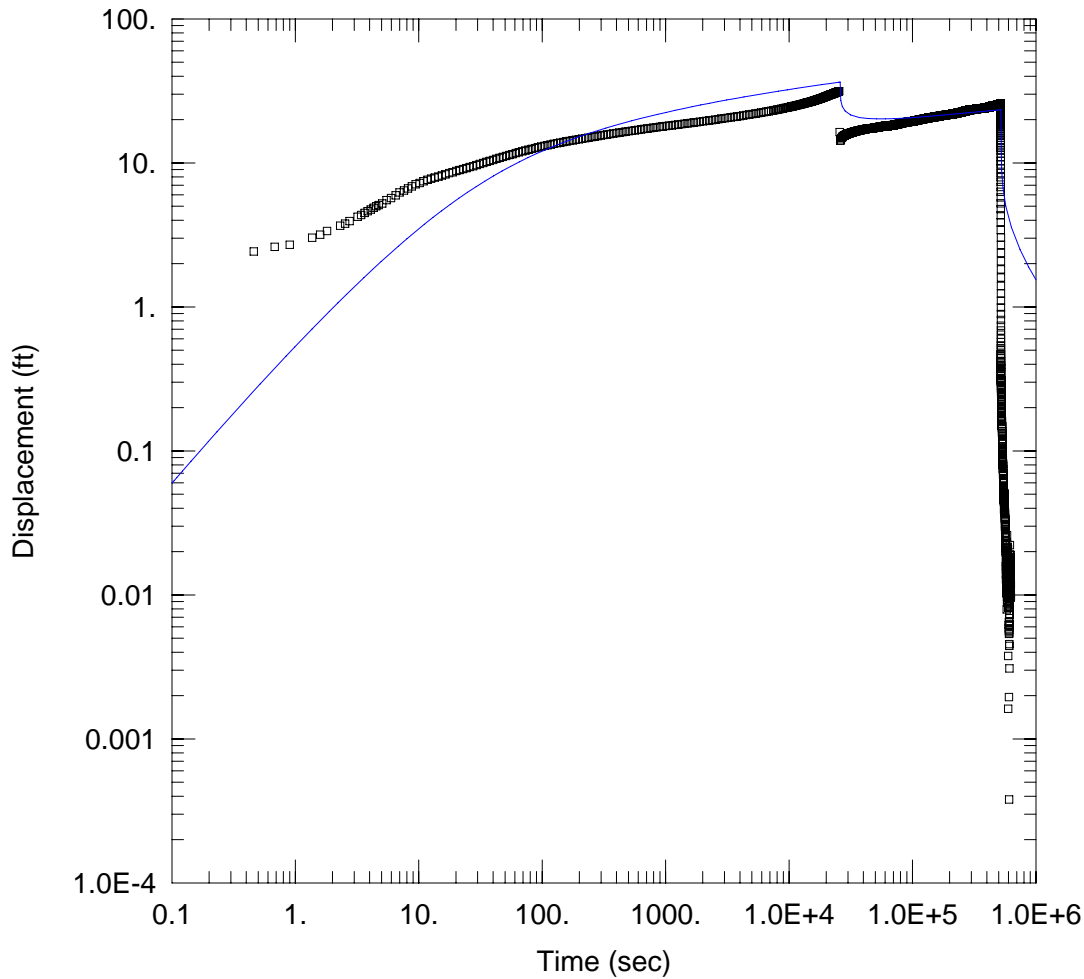
Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 0.3046

WELL DATA

Pumping Wells			Observation Wells		
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
106157	0	0	□ 106157	0	0

SOLUTION

Aquifer Model: <u>Confined</u> $T = 418.8 \text{ ft}^2/\text{day}$ $Kz/Kr = 0.3046$ $r(w) = 0.49 \text{ ft}$	Solution Method: <u>Dougherty-Babu</u> $S = 4.625E-6$ $Sw = -4.846$ $r(c) = 0.333 \text{ ft}$
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WELL TEST ANALYSIS

Data Set: C:\Program Files\HydroSOLVE\AQTESOLV Pro 4.0\data\106157\CR Test\106157_Moench.aqt
 Date: 12/20/13 Time: 14:45:18

PROJECT INFORMATION

Company: CB&I
 Test Well: KAFB-106157

AQUIFER DATA

Saturated Thickness: 100. ft Anisotropy Ratio (Kz/Kr): 9.318

WELL DATA

Pumping Wells

Observation Wells

Well Name	X (ft)	Y (ft)
106157	0	0

Well Name	X (ft)	Y (ft)
□ 106157	0	0

SOLUTION

Aquifer Model: Unconfined

Solution Method: Moench

T = 341. ft²/day

S = 1.0E-10

Sy = 1.0E-5

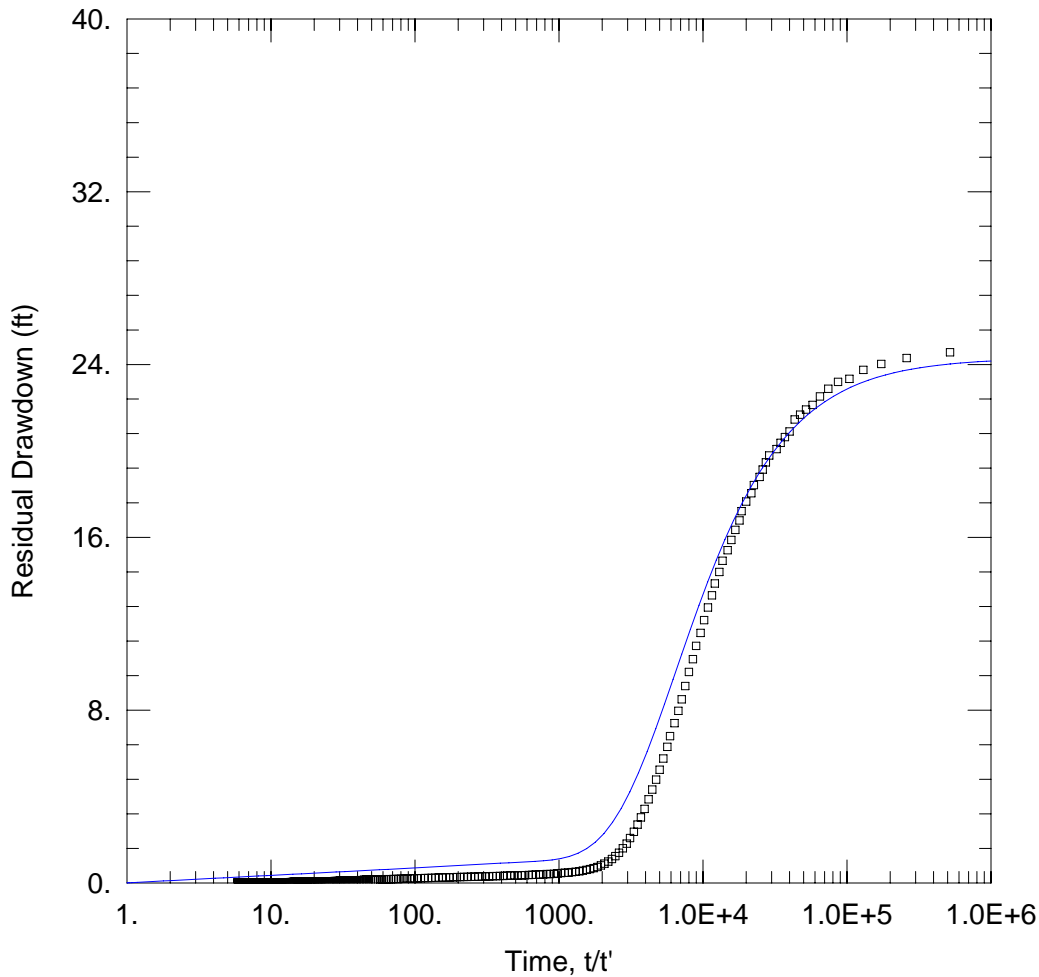
β = 0.0002237

Sw = -5.

r(w) = 0.49 ft

r(c) = 0.333 ft

alpha = 1.0E+30 sec⁻¹



WELL TEST ANALYSIS

Data Set: C:\...\106157_ResidualDrawdown_DB.aqt

Date: 12/20/13

Time: 14:45:34

PROJECT INFORMATION

Company: CB&I

Test Well: KAFB-106157

AQUIFER DATA

Saturated Thickness: 100. ft

Anisotropy Ratio (Kz/Kr): 0.001

WELL DATA

Pumping Wells

Observation Wells

Well Name	X (ft)	Y (ft)
106157	0	0

Well Name	X (ft)	Y (ft)
□ 106157	0	0

SOLUTION

Aquifer Model: Confined

Solution Method: Dougherty-Babu

T = 4650.1 ft²/day

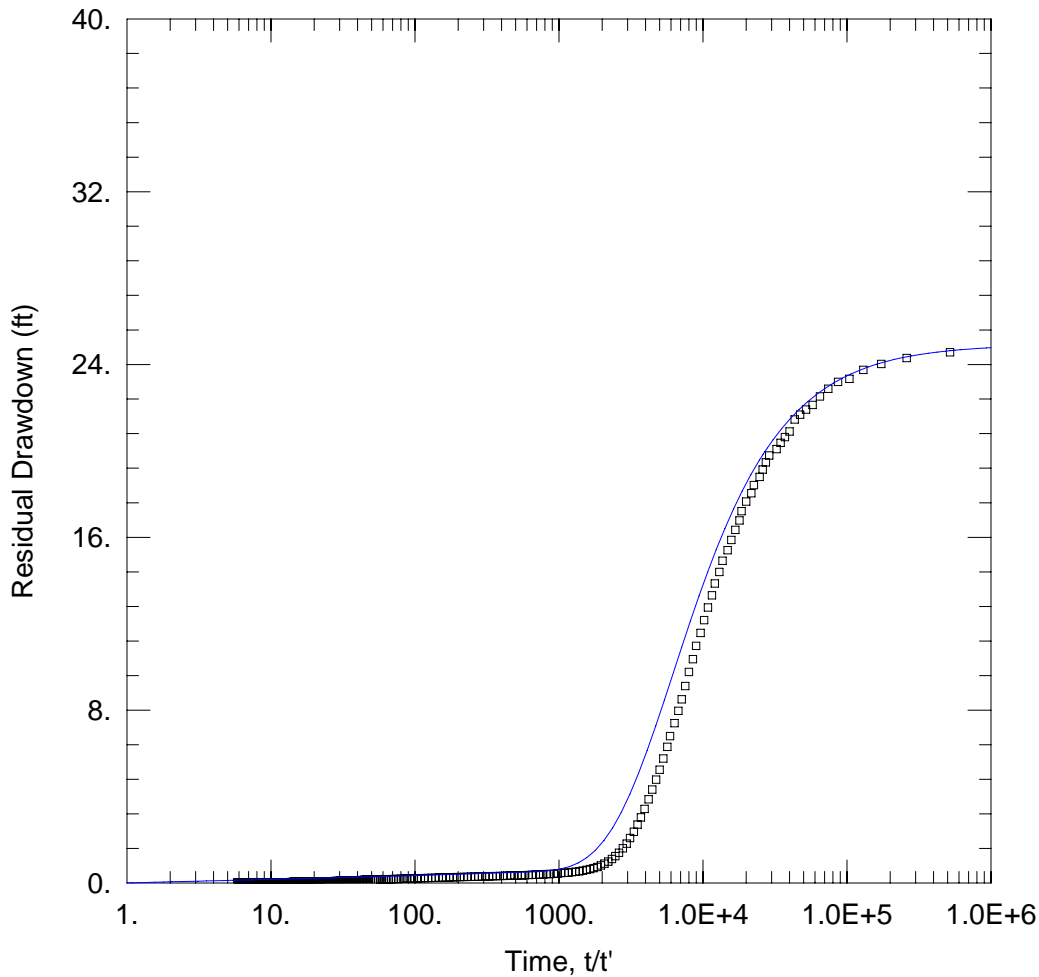
S = 1.0E-6

Kz/Kr = 0.001

Sw = 37.28

r(w) = 0.49 ft

r(c) = 0.333 ft



WELL TEST ANALYSIS

Data Set: C:\...\106157_ResidualDrawdown_Moench.aqt

Date: 12/24/13

Time: 15:43:59

PROJECT INFORMATION

Company: CB&I

Test Well: KAFB-106157

AQUIFER DATA

Saturated Thickness: 100. ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA

Pumping Wells

Observation Wells

Well Name	X (ft)	Y (ft)
106157	0	0

Well Name	X (ft)	Y (ft)
□ 106157	0	0

SOLUTION

Aquifer Model: Unconfined

Solution Method: Moench

T = 9941.7 ft²/day

S = 0.04102

Sy = 0.003467

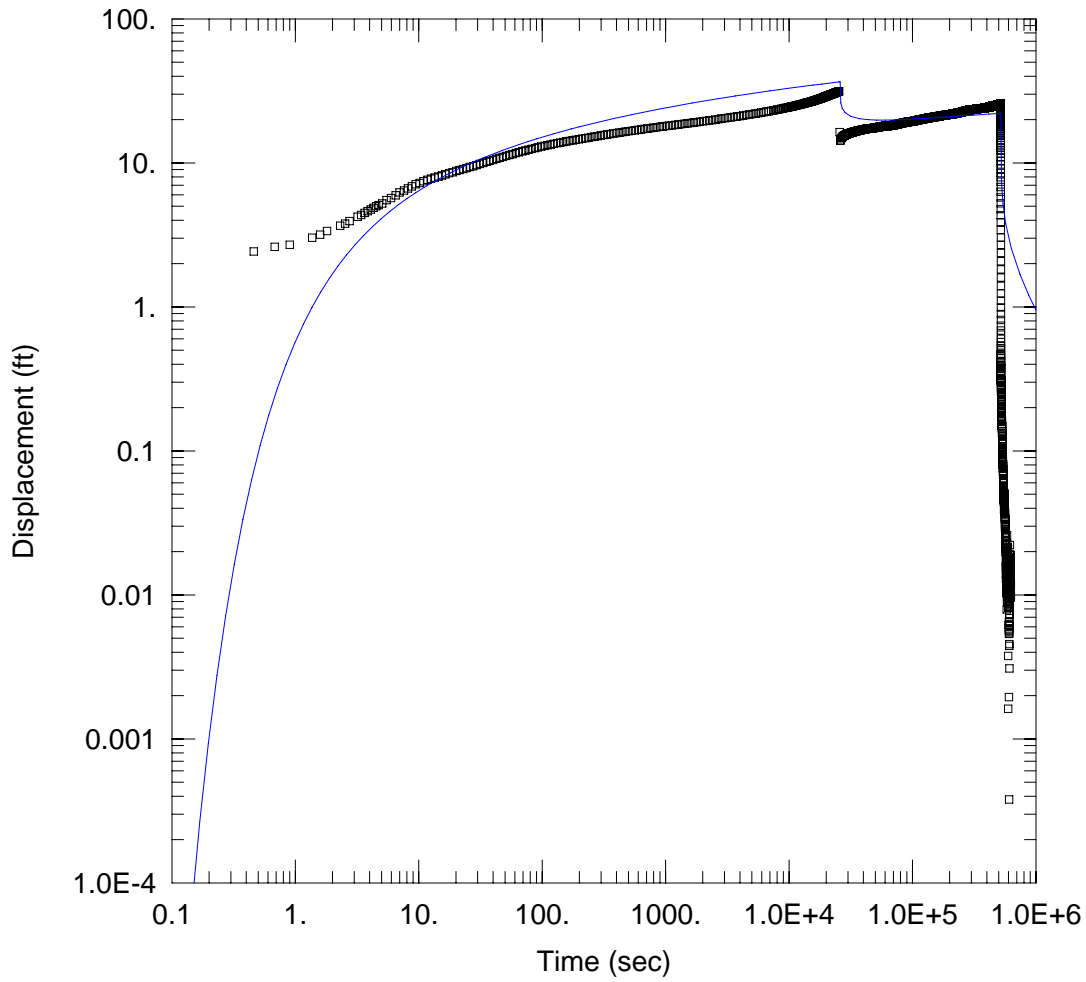
β = 2.401E-6

Sw = 98.42

r(w) = 0.49 ft

r(c) = 0.333 ft

alpha = 1.0E+30 sec⁻¹



WELL TEST ANALYSIS

Data Set: C:\...\106157_TheisHantush.aqt
 Date: 12/20/13

Time: 14:47:15

PROJECT INFORMATION

Company: CB&I
 Test Well: KAFB-106157

WELL DATA

Pumping Wells			Observation Wells		
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
106157	0	0	□ 106157	0	0

SOLUTION

Aquifer Model: Confined

Solution Method: Theis

T = 625.8 ft²/day

S = 0.152

Kz/Kr = 0.04414

b = 100. ft