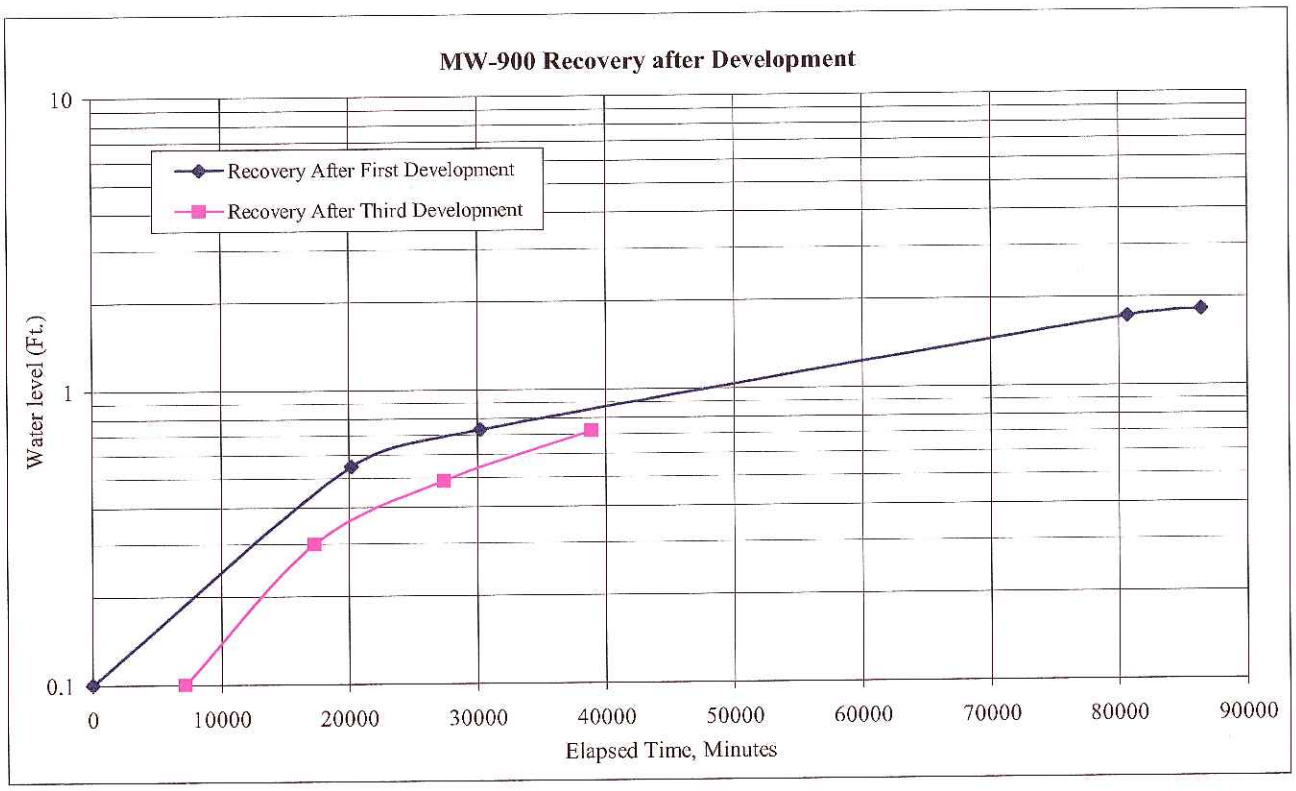


Bouwer and Rice(1976) Calculations

Well: **MW-900**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

		Definition Of Variables:
H = equal to Lw	feet	saturated aquifer thickness
Lw = 9.0	feet	height of water column in well
Le = 5	feet	effective screen length
C = 1.25		well geometry factor
rc = 0.08	feet	radius of the well casing
rw = 0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo = 0.72	feet	water level displacement at start time vs end time
t = 38880	min	recovery time from recovery vs time plot
Yt = 0.1	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

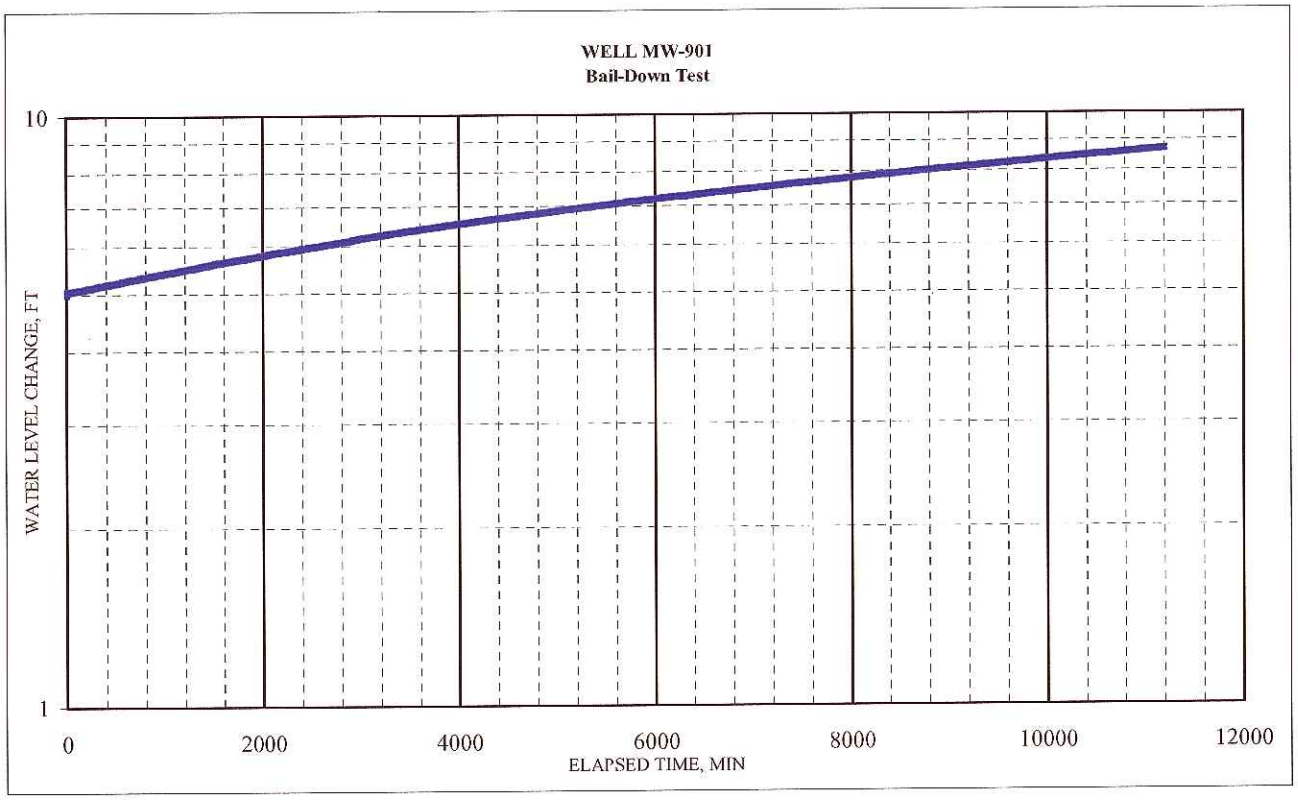
= 5.07737E-05

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.408247426

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

=< 7.8E-08	feet/minute
=< 1.1E-04	feet/day
=< 4.0E-08	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-901**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

			Definition Of Variables:
H =	equal to Lw	feet	saturated aquifer thickness
Lw =	14	feet	height of water column in well
Le =	5	feet	effective screen length
C =	1.25		well geometry factor
rc =	0.08	feet	radius of the well casing
rw =	0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo =	3.68	feet	water level displacement at start time vs end time
t =	11058	min	recovery time from recovery vs time plot
Yt =	0.04	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

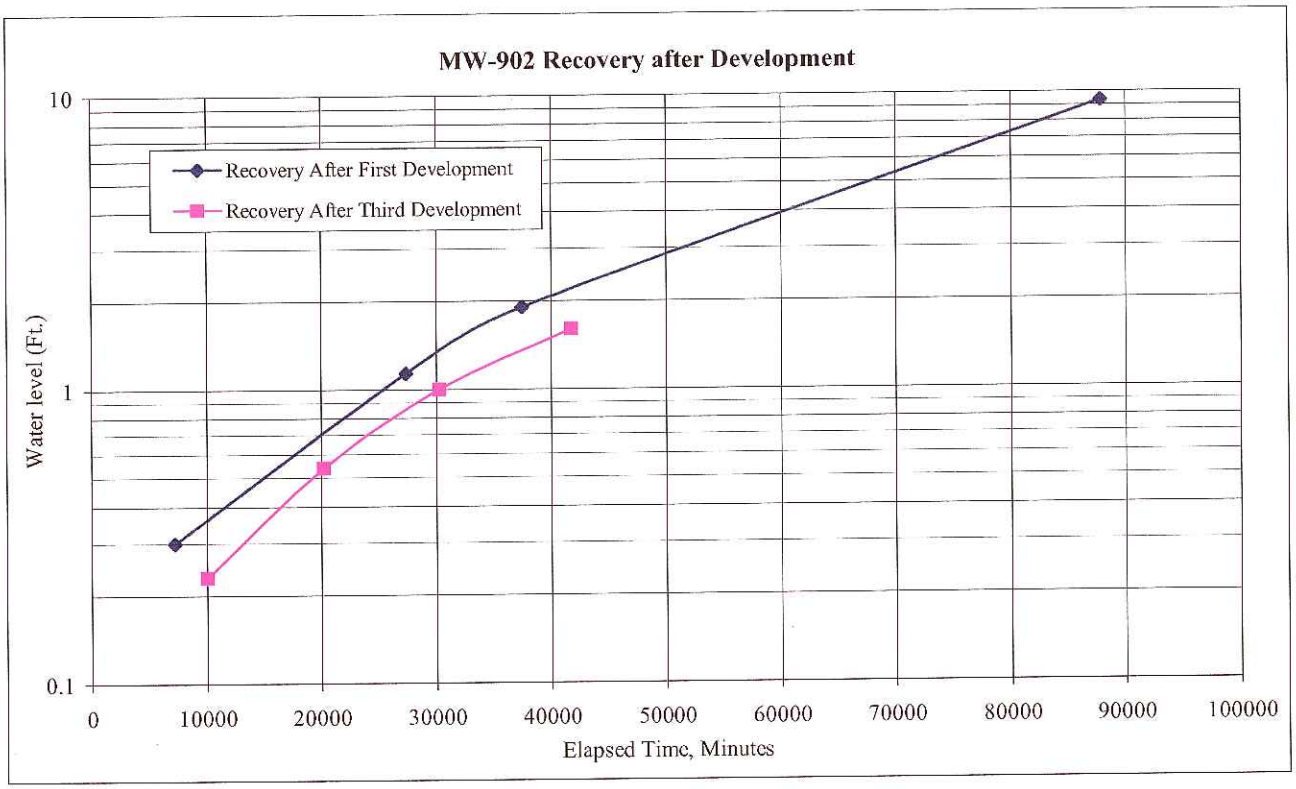
= 0.000415956

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.659491061

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

=	7.1E-07	feet/minute
=	1.0E-03	feet/day
=	3.6E-07	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-902**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

		Definition Of Variables:
H = equal to Lw	feet	saturated aquifer thickness
Lw = 9.4	feet	height of water column in well
Le = 5	feet	effective screen length
C = 1.25		well geometry factor
rc = 0.08	feet	radius of the well casing
rw = 0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo = 9.36	feet	water level displacement at start time vs end time
t = 87840	min	recovery time from recovery vs time plot
Yt = 0.3	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

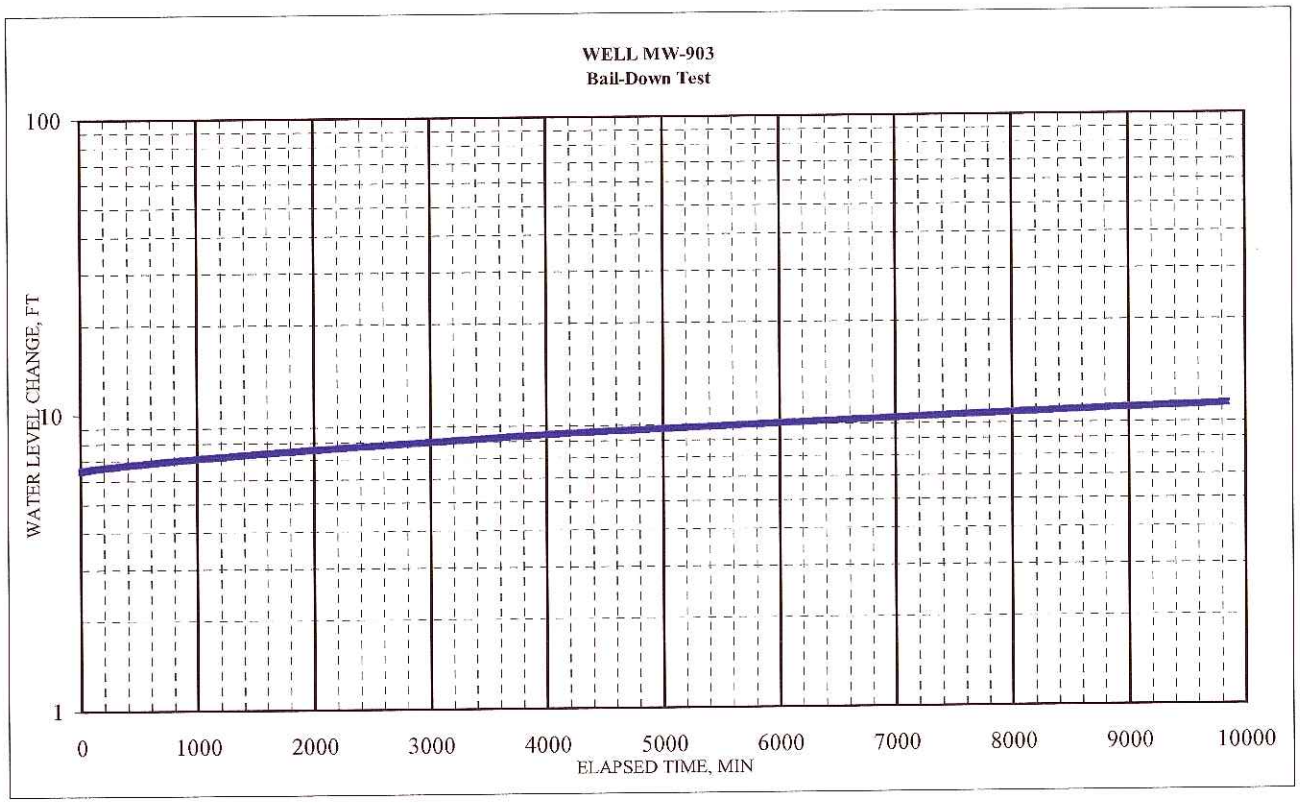
= 3.91669E-05

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.433565223

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

= < 6.1E-08	feet/minute
= < 8.8E-05	feet/day
= < 3.1E-08	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-903**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

			Definition Of Variables:
H =	equal to Lw	feet	saturated aquifer thickness
Lw =	14.5	feet	height of water column in well
Le =	5	feet	effective screen length
C =	1.25		well geometry factor
rc =	0.08	feet	radius of the well casing
rw =	0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo =	3.92	feet	water level displacement at start time vs end time
t =	9578	min	recovery time from recovery vs time plot
Yt =	0.1	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

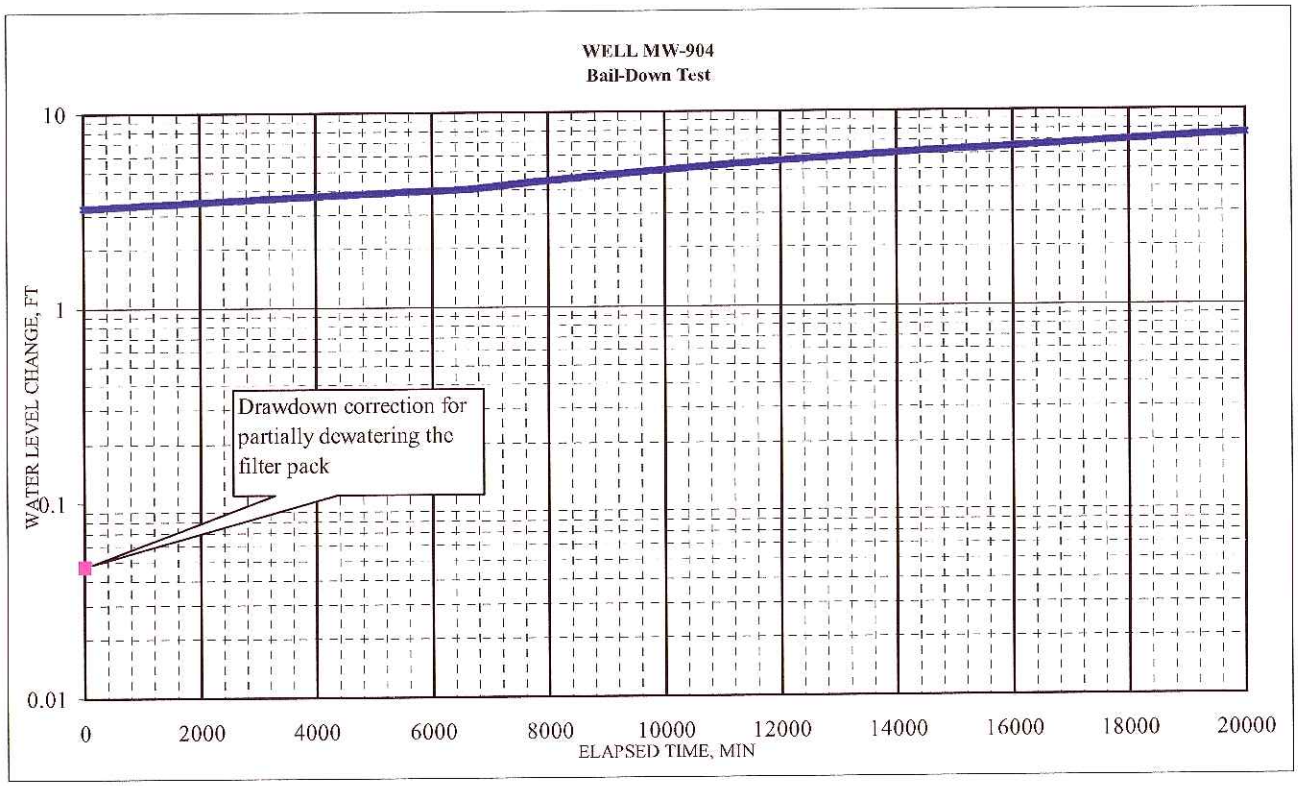
= 0.000408934

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.678889371

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

=	7.0E-07	feet/minute
=	1.0E-03	feet/day
=	3.6E-07	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-904**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

			Definition Of Variables:
H =	equal to Lw	feet	saturated aquifer thickness
Lw =	14.5	feet	height of water column in well
Le =	5	feet	effective screen length
C =	1.25		well geometry factor
rc =	0.08	feet	radius of the well casing
rw =	0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo =	6.74	feet	water level displacement at start time vs end time (corrected)
t =	19918	min	recovery time from recovery vs time plot
Yt =	0.03	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

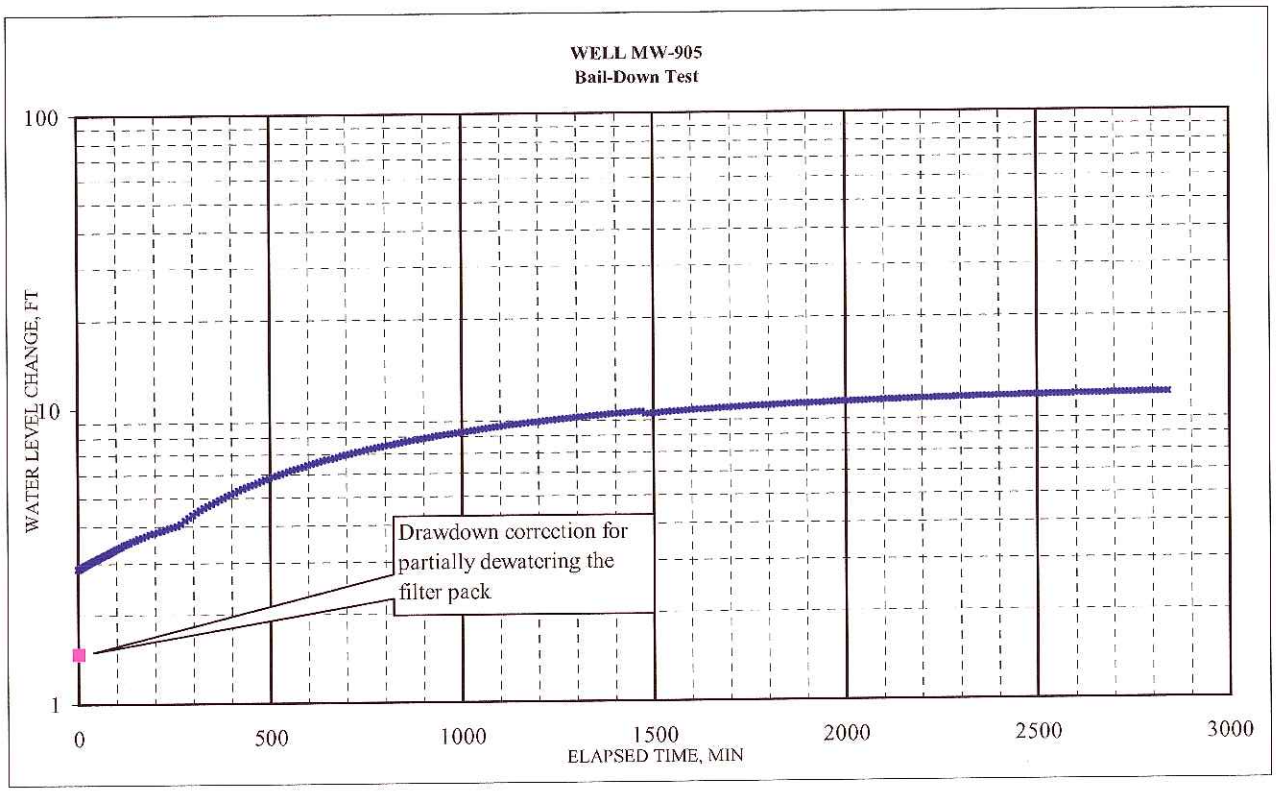
= 0.000268607

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.678889371

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

= 4.6E-07	feet/minute
= 6.6E-04	feet/day
= 2.3E-07	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-905**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

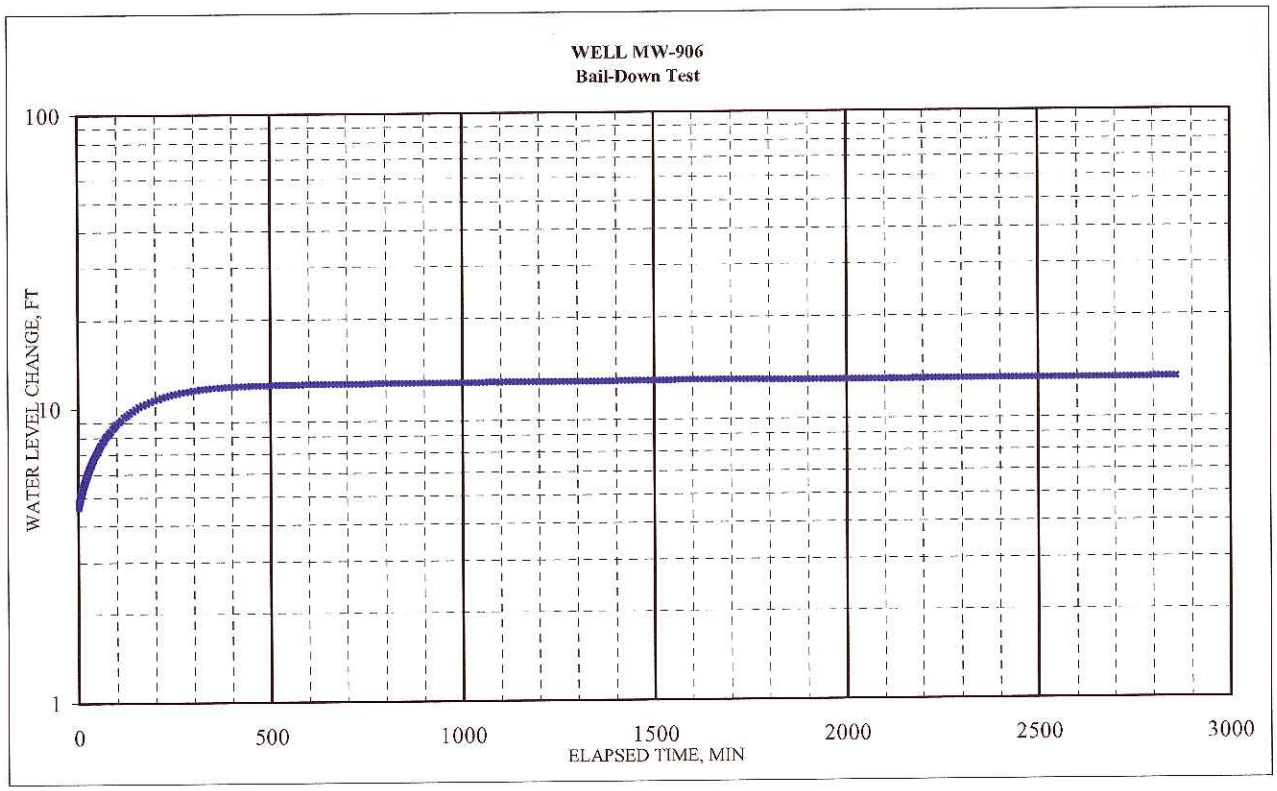
		Definition Of Variables:
H = equal to Lw	feet	saturated aquifer thickness
Lw = 15	feet	height of water column in well
Le = 5	feet	effective screen length
C = 1.25		well geometry factor
rc = 0.08	feet	radius of the well casing
rw = 0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo = 8.23	feet	water level displacement at start time vs end time (corrected)
t = 1200	min	recovery time from recovery vs time plot
Yt = 1.317	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)
= 0.001526863

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]
= 2.697554592

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

= 2.6E-06	feet/minute
= 3.8E-03	feet/day
= 1.3E-06	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-906**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

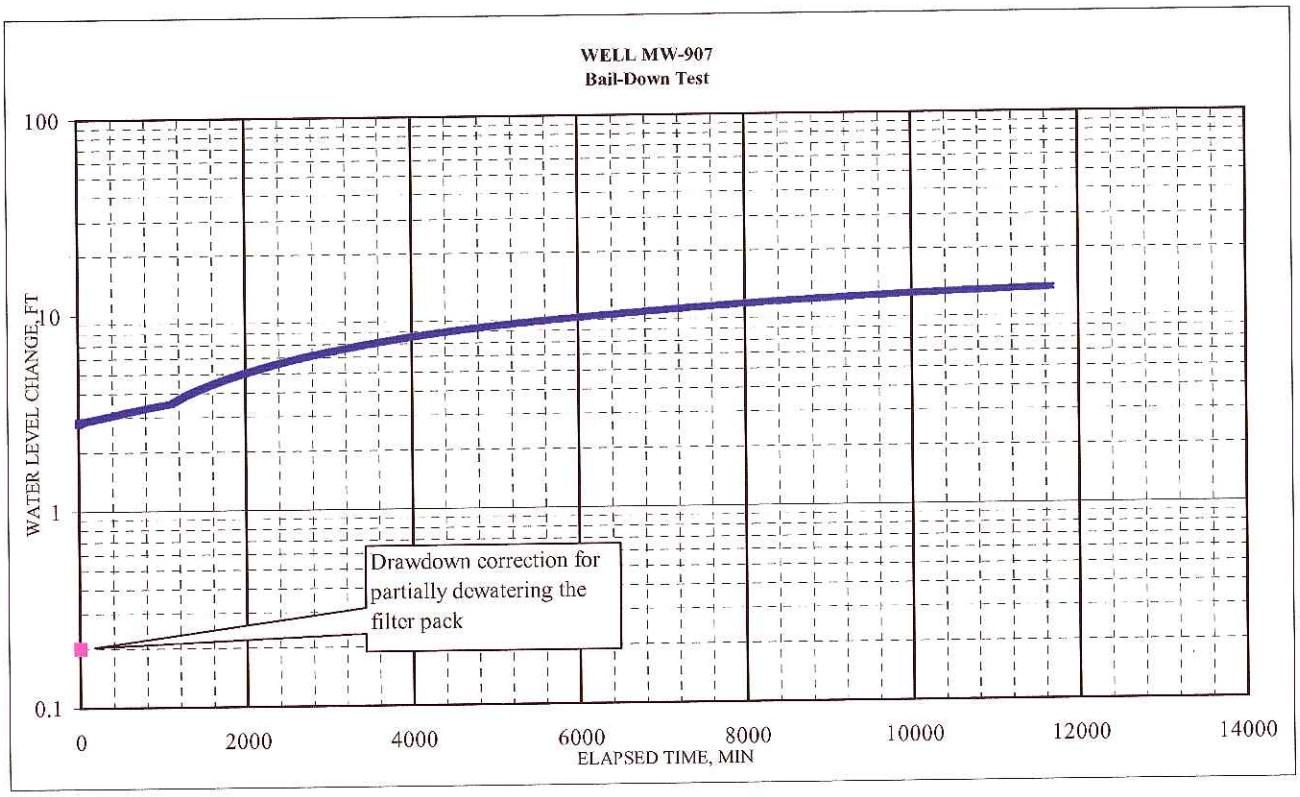
		Definition Of Variables:
H = equal to Lw	feet	saturated aquifer thickness
Lw = 13.65	feet	height of water column in well
Le = 5	feet	effective screen length
C = 1.25		well geometry factor
rc = 0.08	feet	radius of the well casing
rw = 0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo = 7.68	feet	water level displacement at start time vs end time
t = 438	min	recovery time from recovery vs time plot
Yt = 0.399	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)
= 0.006750896

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]
= 2.64544593

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

= 1.1E-05	feet/minute
= 1.6E-02	feet/day
= 5.8E-06	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-907**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

		Definition Of Variables:
H = equal to Lw	feet	saturated aquifer thickness
Lw = 13	feet	height of water column in well
Le = 5	feet	effective screen length
C = 1.25		well geometry factor
rc = 0.08	feet	radius of the well casing
rw = 0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo = 11.6	feet	water level displacement at start time vs end time
t = 10390	min	recovery time from recovery vs time plot
Yt = 0.1	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

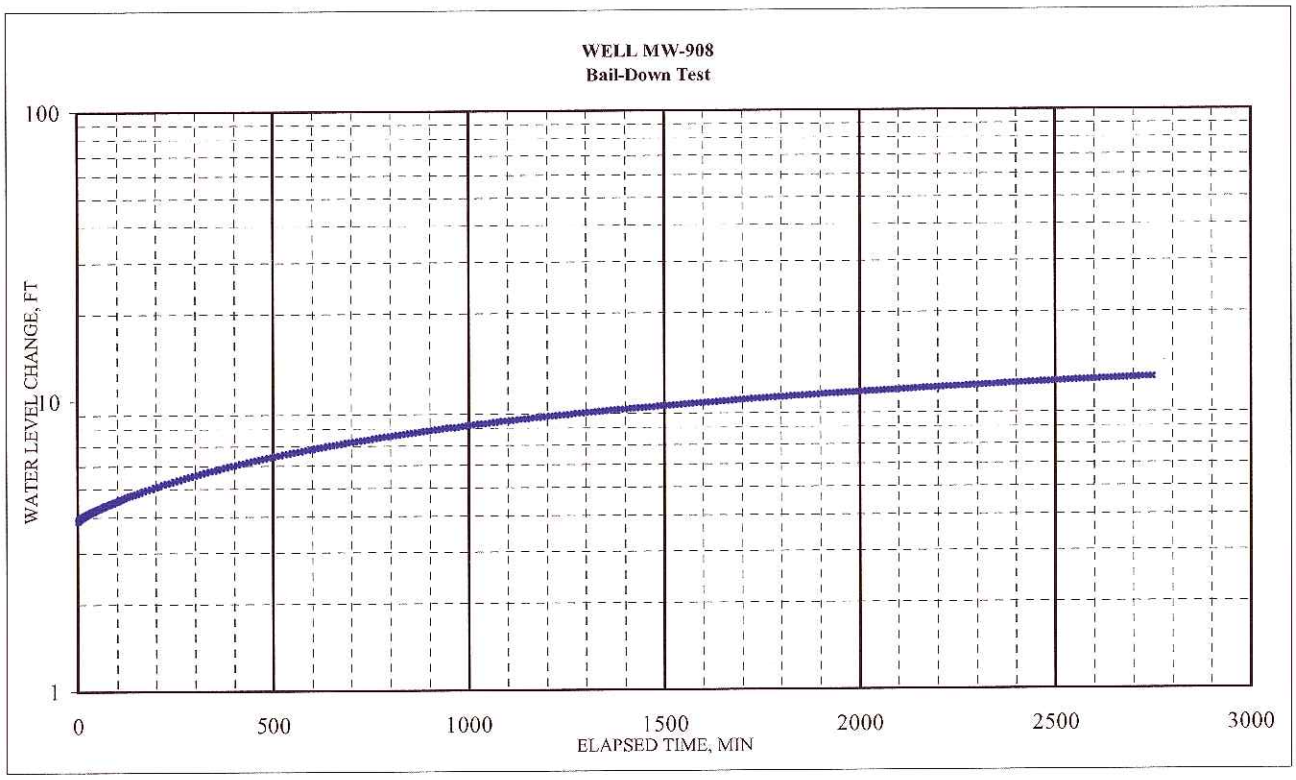
= 0.000515188

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.618261496

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

= 8.6E-07	feet/minute
= 1.2E-03	feet/day
= 4.4E-07	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-908**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

		Definition Of Variables:
H = equal to Lw	feet	saturated aquifer thickness
Lw = 12	feet	height of water column in well
Le = 5	feet	effective screen length
C = 1.25		well geometry factor
rc = 0.08	feet	radius of the well casing
rw = 0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo = 8.018	feet	water level displacement at start time vs end time
t = 2748	min	recovery time from recovery vs time plot
Yt = 0.40	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

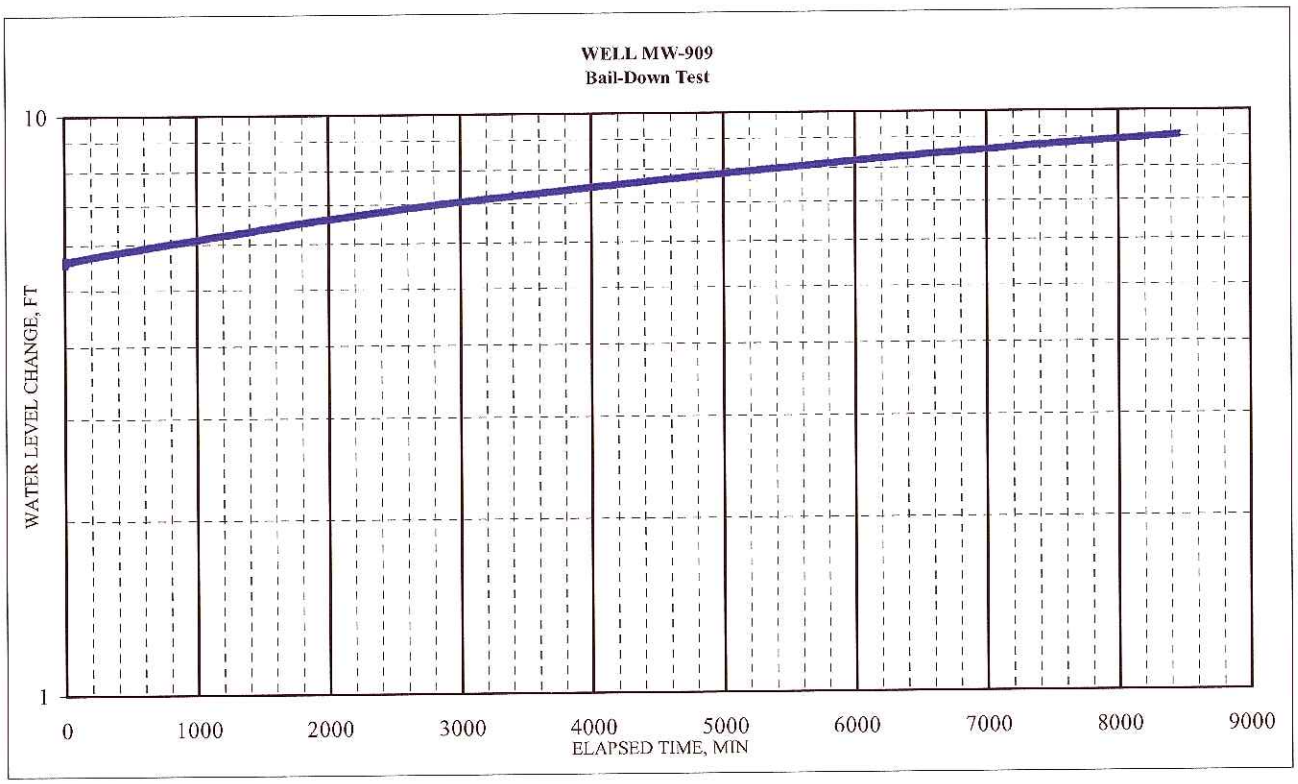
= 0.001087238

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.573324633

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

= 1.8E-06	feet/minute
= 2.6E-03	feet/day
= 9.1E-07	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-909**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

			Definition Of Variables:
H =	equal to Lw	feet	saturated aquifer thickness
Lw =	11.6	feet	height of water column in well
Le =	5	feet	effective screen length
C =	1.25		well geometry factor
rc =	0.08	feet	radius of the well casing
rw =	0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo =	3.56	feet	water level displacement at start time vs end time
t =	8308	min	recovery time from recovery vs time plot
Yt =	0.07	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

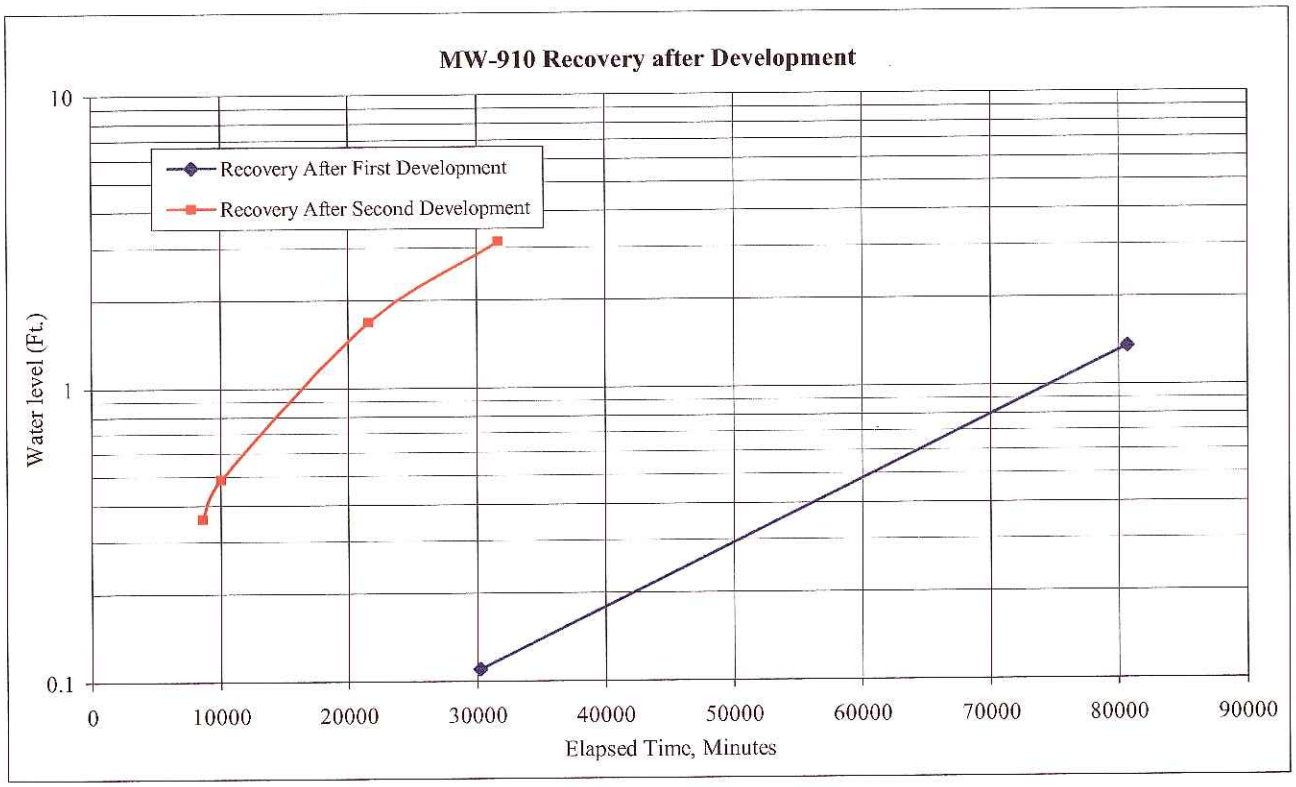
= 0.000480088

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.55416355

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

=	7.8E-07	feet/minute
=	1.1E-03	feet/day
=	4.0E-07	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-910**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

		Definition Of Variables:
H = equal to Lw	feet	saturated aquifer thickness
Lw = 9.4	feet	height of water column in well
Le = 5	feet	effective screen length
C = 1.25		well geometry factor
rc = 0.08	feet	radius of the well casing
rw = 0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo = 3.15	feet	water level displacement at start time vs end time
t = 31680	min	recovery time from recovery vs time plot
Yt = 0.36	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

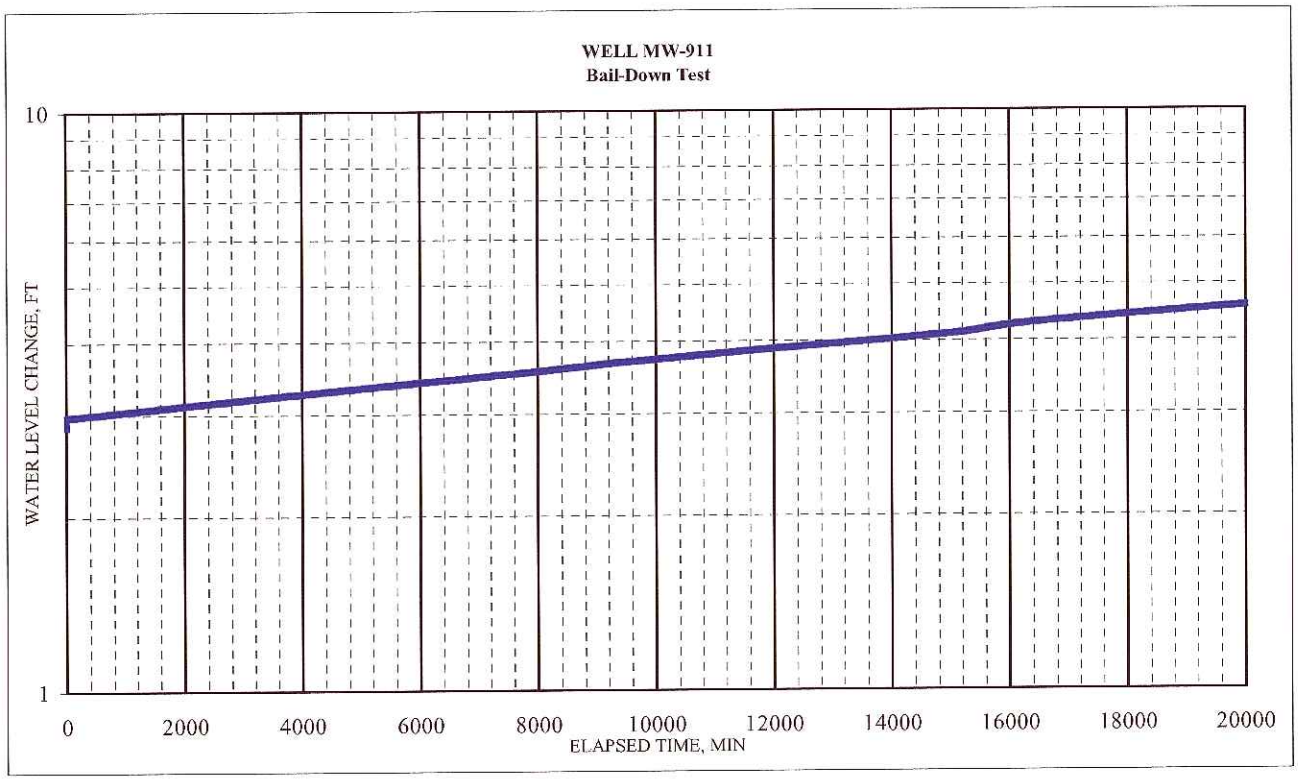
= 6.84676E-05

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.433565223

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

= < 1.1E-07	feet/minute
= < 1.5E-04	feet/day
= < 5.4E-08	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-911**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

		Definition Of Variables:
H = equal to Lw	feet	saturated aquifer thickness
Lw = 9.3	feet	height of water column in well
Le = 5	feet	effective screen length
C = 1.25		well geometry factor
rc = 0.08	feet	radius of the well casing
rw = 0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo = 1.72	feet	water level displacement at start time vs end time
t = 19788	min	recovery time from recovery vs time plot
Yt = 0.02	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

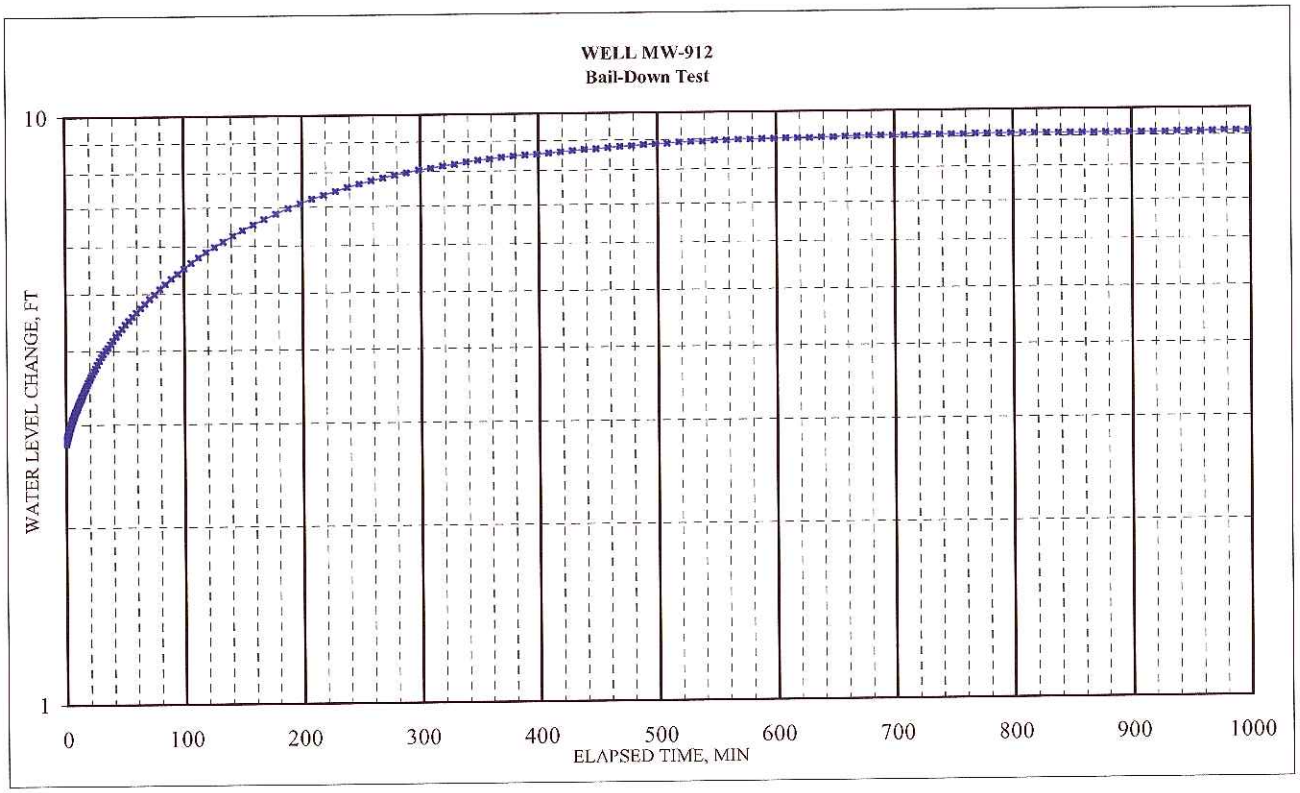
= 0.0002251

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.428599401

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

= 3.5E-07	feet/minute
= 5.0E-04	feet/day
= 1.8E-07	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-912**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

		Definition Of Variables:
H = equal to Lw	feet	saturated aquifer thickness
Lw = 7	feet	height of water column in well
Lc = 2	feet	effective screen length
C = 1		well geometry factor
rc = 0.08	feet	radius of the well casing
rw = 0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo = 6.38	feet	water level displacement at start time vs end time
t = 498	min	recovery time from recovery vs time plot
Yt = 0.31	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

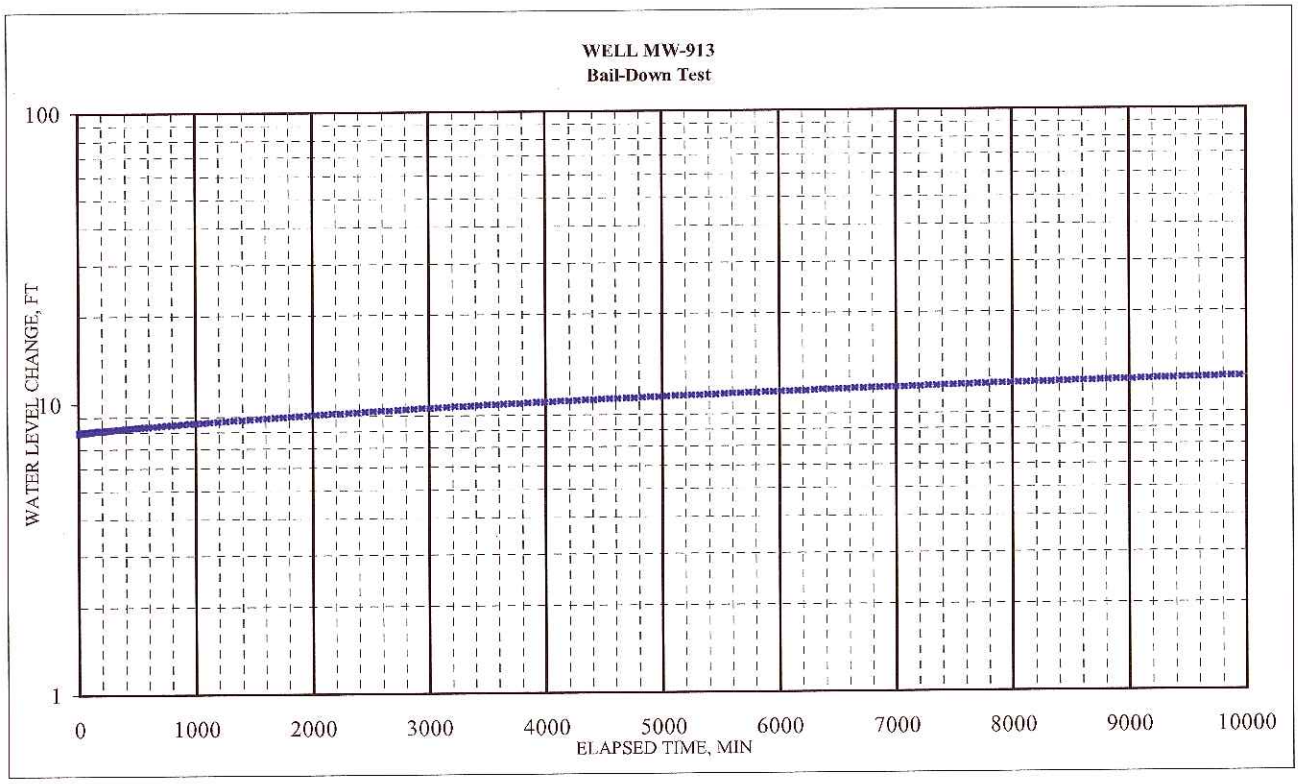
= 0.00606839

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Lc/rw)]

= 1.904341764

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Lc)

= 1.8E-05	feet/minute
= 2.7E-02	feet/day
= 9.4E-06	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-913**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

			Definition Of Variables:
H =	equal to Lw	feet	saturated aquifer thickness
Lw =	13	feet	height of water column in well
Le =	5	feet	effective screen length
C =	1.25		well geometry factor
rc =	0.08	feet	radius of the well casing
rw =	0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo =	4.04	feet	water level displacement at start time vs end time
t =	9309	min	recovery time from recovery vs time plot
Yt =	0.18	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

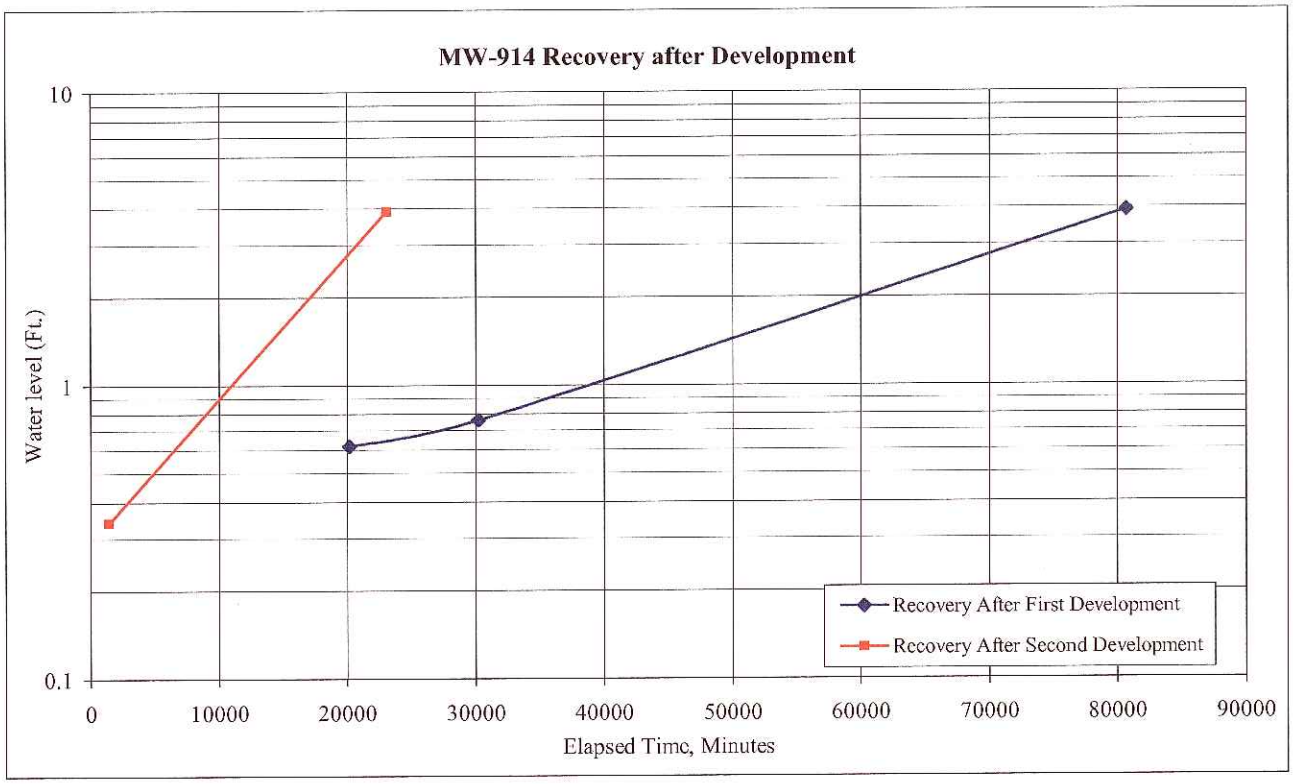
= 0.000332375

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.618261496

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

= 5.6E-07	feet/minute
= 8.0E-04	feet/day
= 2.8E-07	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-914**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

		Definition Of Variables:
H = equal to Lw	feet	saturated aquifer thickness
Lw = 14.2	feet	height of water column in well
Le = 5	feet	effective screen length
C = 1.25		well geometry factor
rc = 0.08	feet	radius of the well casing
rw = 0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo = 3.91	feet	water level displacement at start time vs end time
t = 23040	min	recovery time from recovery vs time plot
Yt = 0.62	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

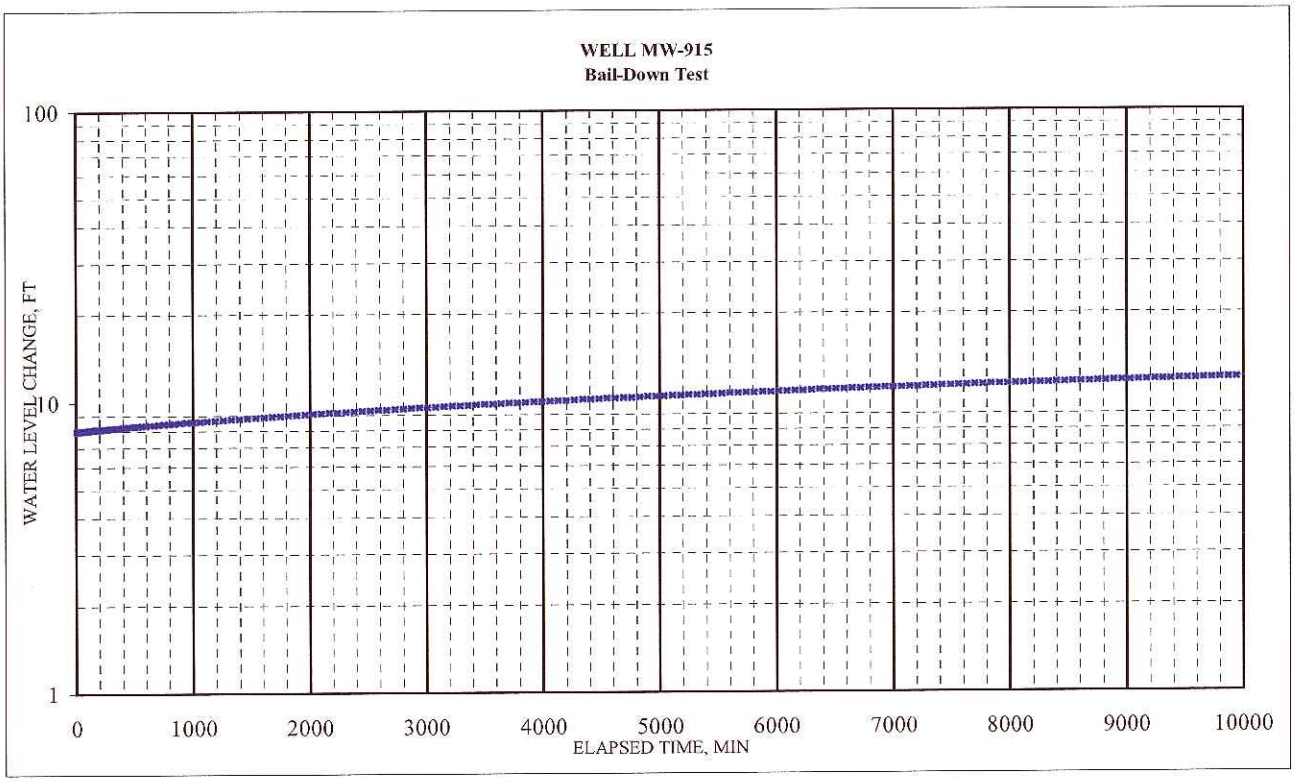
= 7.99294E-05

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Le/rw)]

= 2.665390784

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Le)

= < 1.4E-07	feet/minute
= < 2.0E-04	feet/day
= < 6.9E-08	cm/second



Bouwer and Rice(1976) Calculations

Well: **MW-915**

Case For Lw=H, Water Level above Screened interval

Determined Variables:

			Definition Of Variables:
H =	equal to Lw	feet	saturated aquifer thickness
Lw =	9.3	feet	height of water column in well
Lc =	5	feet	effective screen length
C =	1.25		well geometry factor
rc =	0.08	feet	radius of the well casing
rw =	0.33	feet	centerline radial distance to undisturbed portion of aquifer
Yo =	4.04	feet	water level displacement at start time vs end time
t =	9309	min	recovery time from recovery vs time plot
Yt =	0.18	feet	water level displacement end time (recovery) = t

Calculate: (1/t)*ln(Yo/Yt)

= 0.000332375

Calculate: ln(Re/rw) = 1/[1.1/ln(Lw/rw)+C/(Lc/rw)]

= 2.425471459

Calculate: K = rc^2*ln(Re/rw)*(1/t)*ln(Yo/Yt))/(2Lc)

=	5.2E-07	feet/minute
=	7.4E-04	feet/day
=	2.6E-07	cm/second