

Appendix 10-4- Hydraulic Permeability Data



WELL ID: RC3

INPUT

Construction:	
Casing dia. (d_c)	0.05 Meter
Annulus dia. (d_w)	0.1 Meter
Screen Length (L)	10 Meter
Depths to:	
water level (DTW)	1.9 Meter
top of screen (TOS)	3.5 Meter
Base of Aquifer (DTB)	40 Meter
Annular Fill:	
across screen --	Gravel
above screen --	Bentonite
Aquifer Material -- Limestone, Dolomite	

COMPUTED

L_{wetted}	10 Meter
D =	38.1 Meter
H =	11.6 Meter
L/r_w =	200.00
y_0 -DISPLACEMENT =	2.49 Meter
y_0 -SLUG =	2.05 Meter
From look-up table using L/r_w	
Partial penetrate A =	6.191
B =	1.169
$\ln(Re/r_w)$ =	3.732
Re =	6.85 Meter
Slope =	$0.002474 \log_{10}/\text{sec}$
$t_{90\%}$ recovery =	404 sec

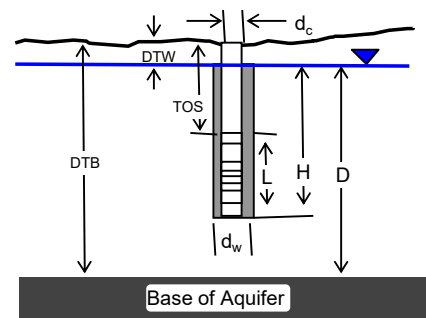
Input is consistent.

$$K = 6.6E-07 \text{ Meter/Second}$$

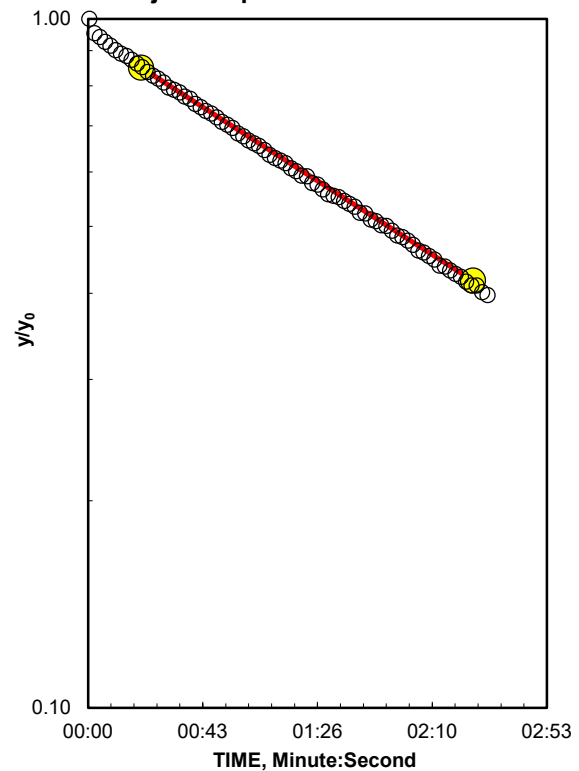
Local ID: Derryadd

Date: 01/09/2018

Time: 00:00



Adjust slope of line to estimate K



K= 0.00000066 is greater than likely maximum of 0.000000353 for Limestone, Dolomite

REMARKS:

Bouwer and Rice analysis of slug test, WRR 1976

WELL ID: RC4

Local ID: Derryadd

Date: 01/09/2018

Time: 00:00

INPUT

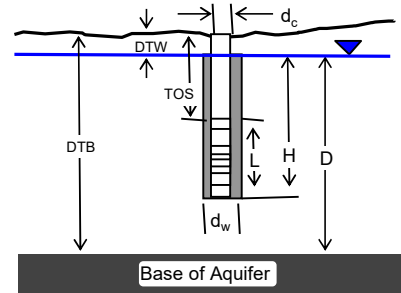
Construction:	
Casing dia. (d_c)	0.05 Meter
Annulus dia. (d_w)	0.1 Meter
Screen Length (L)	10 Meter
Depths to:	
water level (DTW)	1.6 Meter
top of screen (TOS)	3.5 Meter
Base of Aquifer (DTB)	40 Meter
Annular Fill:	
across screen --	Gravel
above screen --	Bentonite
Aquifer Material -- Limestone, Dolomite	

COMPUTED

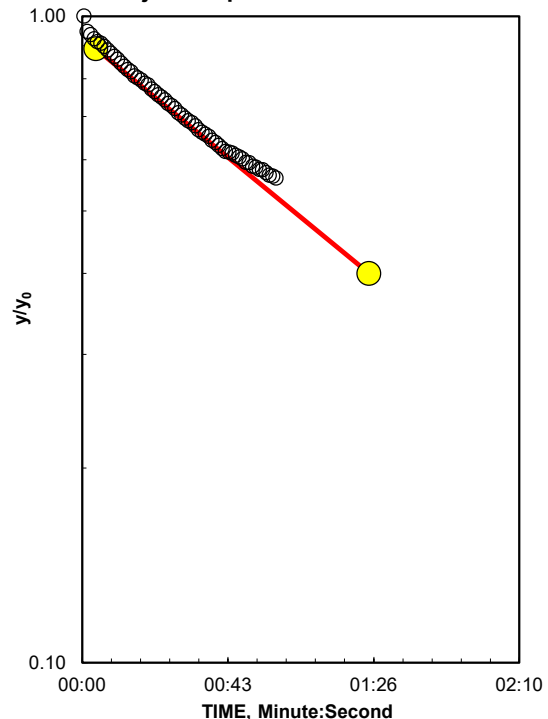
L_{wetted}	10 Meter
D =	38.4 Meter
H =	11.9 Meter
L/r_w =	200.00
y_0 -DISPLACEMENT =	2.55 Meter
y_0 -SLUG =	2.05 Meter
From look-up table using L/r_w	
Partial penetrate A =	6.191
B =	1.169
$\ln(Re/r_w)$ =	3.745
Re =	6.95 Meter
Slope =	0.004294 $\log_{10}/\text{sec}$
$t_{90\%}$ recovery =	233 sec

Input is consistent.

K = 1.2E-06 Meter/Second



Adjust slope of line to estimate K



K= 0.0000012 is greater than likely maximum of 0.000000353 for Limestone, Dolomite

REMARKS:

Bouwer and Rice analysis of slug test, WRR 1976