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               A Q T E S O L V   R E S U L T S
                        Version 2.01

               Developed by Glenn M. Duffield
           (c) 1988-1995  Geraghty & Miller, Inc.

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                  TEST DESCRIPTION

Data set........... KRRENS.DAT
Output file........ KRRENS.OUT
Data set title..... SLUG TEST FOR WELL KRRENS

Units of Measurement
   Length.......... ft
   Time........... d

Test Well Data
   Initial displacement in well..... 3.67
   Radius of well casing............ 0.0833
   Radius of wellbore.............. 0.25
   Aquifer saturated thickness...... 28.24
   Well screen length.............. 5
   Static height of water in well... 13.24
   Gravel pack porosity............ 0
   Effective well casing radius..... 0.0833
   Effective wellbore radius........ 0.25
   Log(Re/Rw)...................... 2.204
   Constants A, B and C............ 2.150 ,  0.337,  0.000
   No. of observations............. 14

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                  ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)
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= = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = =
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              RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

         Estimate        Std. Error
  K  =   2.4251E+001  +/-   4.3691E-001 ft/day
  y0 =    1.4173E+000  +/-   4.7164E-002 ft

ANALYSIS OF MODEL RESIDUALS

residual = observed - calculated
weighted residual = residual * weight

Weighted Residual Statistics:
  Number of residuals............... 14
  Number of estimated parameters.... 2
  Degrees of freedom................ 12
  Residual mean..................... 0.00559
  Residual standard deviation....... 0.04205
  Residual variance................. 0.001768

Model Residuals:

    Time        Observed     Calculated     Residual       Weight
 ------------- ------------- ------------- ------------- -------------
    5.8E-005          0.6      0.56509      0.034911           1
    6.9E-005         0.45       0.47466     -0.024656           1
    8.1E-005         0.41       0.39242      0.017576           1
    9.3E-005         0.33       0.32444     0.0055616          10
    0.000104          0.27       0.27252    -0.0025174          10
    0.000116          0.22       0.2253     -0.005305          10
    0.000127          0.19       0.18925    0.00075138          10
    0.000139          0.15       0.15646    -0.0064622          10
     0.00015         0.13       0.13142    -0.001423          10
    0.000162          0.11       0.10865     0.0013454          10
    0.000174          0.09      0.089831     0.00016935          10
    0.000185          0.08      0.075455      0.0045453          10
    0.000197          0.07      0.062383      0.0076175          10
    0.000208          0.06      0.052399      0.0076008           1
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              RESULTS FROM VISUAL CURVE MATCHING


VISUAL MATCH PARAMETER ESTIMATES

        Estimate
  K  =   2.4251E+001 ft/day
  y0 =    1.4173E+000 ft


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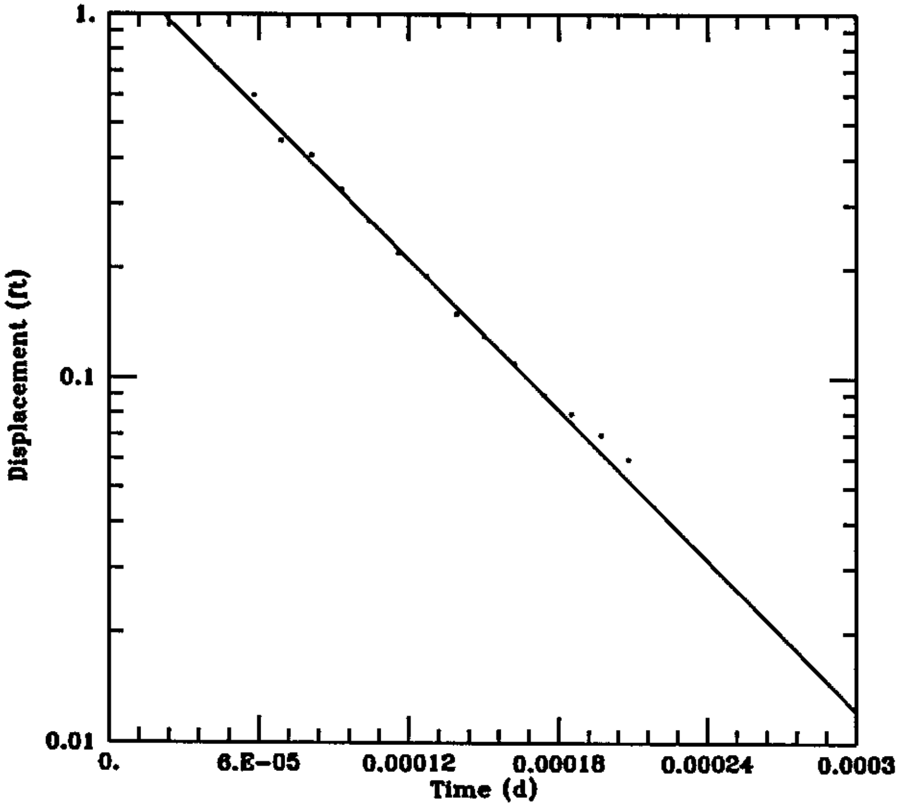
SLUG TEST FOR WELL KRRENS



DATA SET:
KRRENS.DAT
02/07/97

AQUIFER MODEL:
Unconfined

SOLUTION METHOD:
Bouwer-Rice

TEST DATA:
H0 = 3.67 ft
rc = 0.0833 ft
rw = 0.25 ft
L = 5. ft
b = 28.24 ft
H = 13.24 ft

PARAMETER ESTIMATES:
K = 24.25 ft/day
y0 = 1.417 ft

AQTESOLV

ELAPSED TIME (MIN)	HERMIT VALUE (FT)	ELAPSED TIME (DAYS)	DRAWDOWN (FT)	WEIGHT
0.000000	9.97	0.000000	0.30	1
0.003300	9.44	0.000002	0.83	1
0.006600	9.59	0.000005	0.68	1
0.009900	9.73	0.000007	0.54	1
0.013300	9.27	0.000009	1.00	1
0.016600	9.00	0.000012	1.27	1
0.020000	8.87	0.000014	1.40	1
0.023300	8.74	0.000016	1.53	1
0.026600	8.89	0.000018	1.38	1
0.030000	8.69	0.000021	1.58	1
0.033300	8.92	0.000023	1.35	1
0.050000	9.25	0.000035	1.02	1
0.066600	9.00	0.000046	1.27	1
0.083300	9.67	0.000058	0.60	1
0.100000	9.82	0.000069	0.45	1
0.116600	9.86	0.000081	0.41	1
0.133300	9.94	0.000093	0.33	1
0.150000	10.00	0.000104	0.27	1
0.166600	10.05	0.000116	0.22	1
0.183300	10.08	0.000127	0.19	1
0.200000	10.12	0.000139	0.15	1
0.216600	10.14	0.000150	0.13	1
0.233300	10.16	0.000162	0.11	1
0.250000	10.18	0.000174	0.09	1
0.266600	10.19	0.000185	0.08	1
0.283300	10.20	0.000197	0.07	1
0.300000	10.21	0.000208	0.06	1
0.316600	10.21	0.000220	0.06	1
0.333300	10.22	0.000231	0.05	1
0.416700	10.24	0.000289	0.03	1
0.500000	10.25	0.000347	0.02	1
0.583300	10.26	0.000405	0.01	1
0.666700	10.26	0.000463	0.01	1
0.750000	10.26	0.000521	0.01	1
0.833300	10.26	0.000579	0.01	1
0.916700	10.26	0.000637	0.01	1
1.000000	10.26	0.000694	0.01	1
1.083300	10.27	0.000752	0.00	1
1.166700	10.27	0.000810	0.00	1
1.250000	10.27	0.000868	0.00	1
1.333300	10.27	0.000926	0.00	1

ELAPSED TIME (MIN)	HERMIT VALUE (FT)	ELAPSED TIME (DAYS)	DRAWDOWN (FT)	WEIGHT
1.416600	10.27	0.000984	0.00	1
1.500000	10.27	0.001042	0.00	1
1.583300	10.27	0.001100	0.00	1
1.666700	10.27	0.001157	0.00	1
1.750000	10.27	0.001215	0.00	1
1.833300	10.27	0.001273	0.00	1
1.916700	10.27	0.001331	0.00	1
2.000000	10.27	0.001389	0.00	1
2.500000	10.27	0.001736	0.00	1
3.000000	10.27	0.002083	0.00	1
3.500000	10.27	0.002431	0.00	1
4.000000	10.27	0.002778	0.00	1
4.500000	10.27	0.003125	0.00	1
5.000000	10.27	0.003472	0.00	1
5.500000	10.27	0.003819	0.00	1
6.000000	10.27	0.004167	0.00	1
6.500000	10.27	0.004514	0.00	1
7.000000	10.27	0.004861	0.00	1
7.500000	10.27	0.005208	0.00	1
8.000000	10.27	0.005556	0.00	1
8.500000	10.27	0.005903	0.00	1
9.000000	10.27	0.006250	0.00	1
9.500000	10.27	0.006597	0.00	1
10.000000	10.27	0.006944	0.00	1

END

ELAPSED TIME (MIN)	HERMIT VALUE (FT)	ELAPSED TIME (DAYS)	DRAWDOWN (FT)	WEIGHT

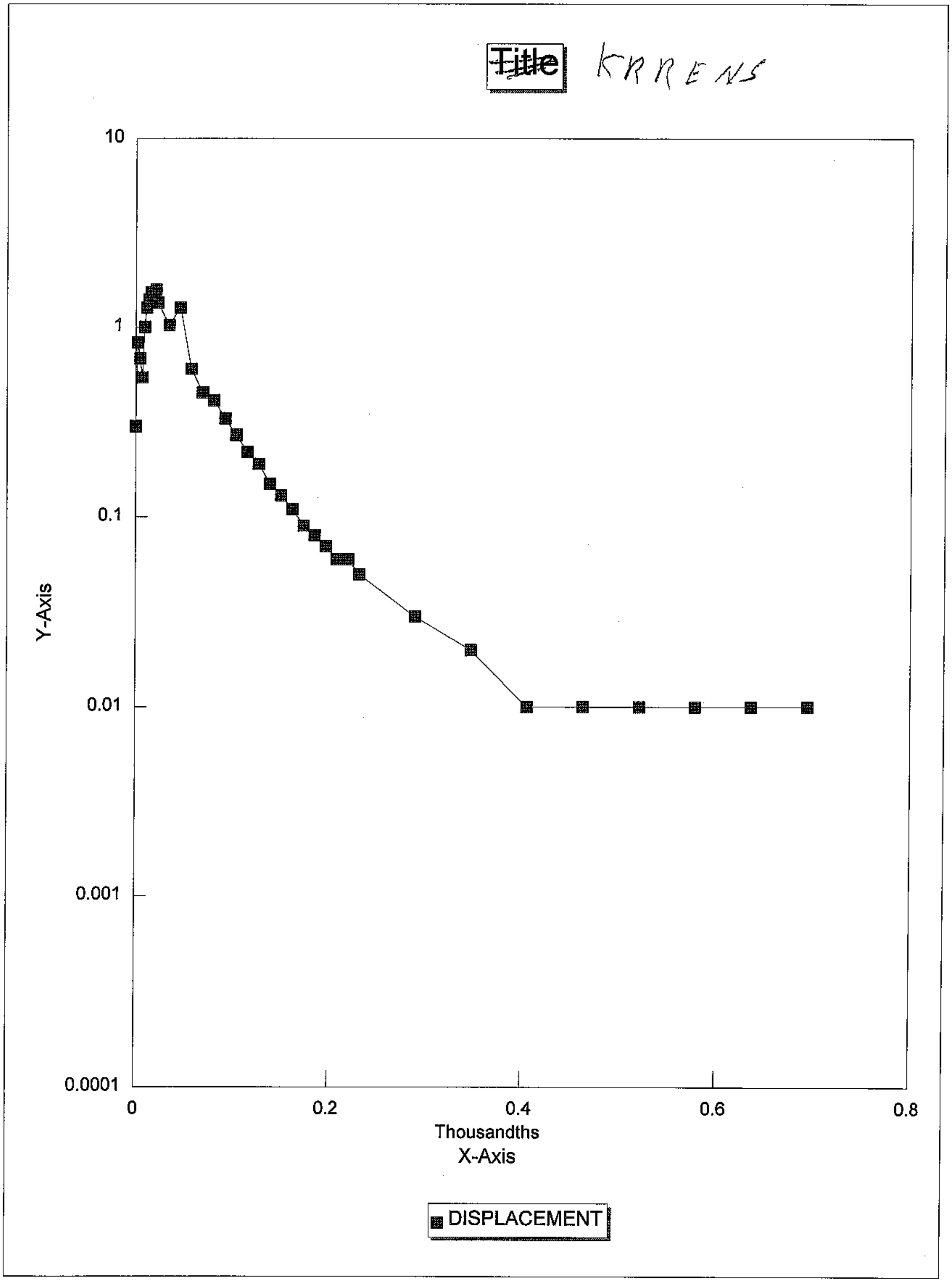
This is the slugtest data for well KRRENS
which is the 15 ft near-field well at Transect E.

TD = 15 ft
CD = 15 ft
DTW = (616-4.40) = 1.76 ft below land surface.

Rc = 1 in = 0.0833 ft
Rw = 3 in = 0.250 ft
screen length = 5
saturated thickness = H = 30 - 1.76 = 28.24
Static height of water in well = Lw =15 -1.76 = 13.24

Calculations for volume of slug
Rs = 0.6 in = 0.05 ft
Ls = 10.2 ft = lenght of slug
Vs= 3.14 * Rs^2 * Ls
Vs = 0.08007

Calculations for H0
H0 = Vs/(3.14 * Rc^2)
Ho= 3.67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KRRENS
10
1
0.1
0.01
0.001
0.0001
Y-Axis
0
0.2
0.4
0.6
0.8
Thousandths
X-Axis
▨ DISPLACEMENT