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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

Estimate Std. Error
 K = 1.4734E+001 +/- 9.8733E-001 ft/day
 y0 = 3.5340E+000 +/- 5.7094E-001 ft

ANALYSIS OF MODEL RESIDUALS

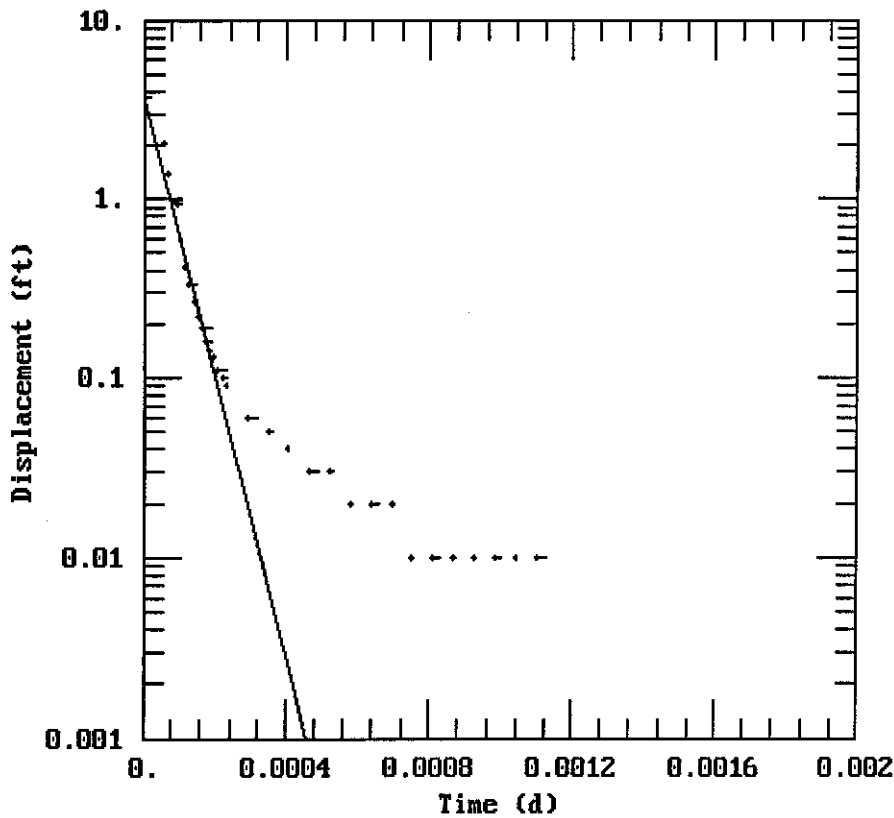
residual = observed - calculated
 weighted residual = residual * weight

Weighted Residual Statistics:
 Number of residuals..... 31
 Number of estimated parameters.... 2
 Degrees of freedom..... 29
 Residual mean..... 0.1226
 Residual standard deviation..... 0.2657
 Residual variance..... 0.07059

Model Residuals:

Time	Observed	Calculated	Residual	Weight
5.8E-005	2.04	1.2456	0.79437	1
6.9E-005	1.4	1.0221	0.37789	1
8.1E-005	0.99	0.82376	0.16624	1
9.3E-005	0.94	0.6639	0.2761	1
0.000104	0.58	0.54476	0.035236	1
0.000116	0.42	0.43905	-0.019045	10
0.000127	0.33	0.36026	-0.030262	10
0.000139	0.27	0.29035	-0.020348	10
0.00015	0.22	0.23825	-0.018247	10
0.000162	0.19	0.19201	-0.0020122	10
0.000174	0.16	0.15475	0.0052504	10
0.000185	0.14	0.12698	0.013019	10
0.000197	0.13	0.10234	0.027661	10
0.000208	0.11	0.083975	0.026025	10
0.00022	0.1	0.067678	0.032322	10

SLUG TEST FOR KRRENM1



DATA SET:
KRRENM1.DAT
02/07/97

AQUIFER MODEL:
Unconfined
SOLUTION METHOD:
Bower-Rice

TEST DATA:
H0 = 3.67 ft
rc = 0.0833 ft
rw = 0.25 ft
L = 15. ft
b = 28.41 ft
H = 28.41 ft

PARAMETER ESTIMATES:
K = 14.73 ft/day
y0 = 3.534 ft

KRRENM1 SLUG TEST DATA

ELASPED TIME (MIN)	HERMIT VALUE (FT)	ELASPED TIME (DAYS)	DRAWDOWN (FT)	WEIGHT
0.000000	19.98	0.000000	0.00	1
0.003300	19.53	0.000002	0.45	1
0.006600	19.05	0.000005	0.93	1
0.009900	18.82	0.000007	1.16	1
0.013300	18.86	0.000009	1.12	1
0.016600	18.96	0.000012	1.02	1
0.020000	18.69	0.000014	1.29	1
0.023300	18.90	0.000016	1.08	1
0.026600	19.11	0.000018	0.87	1
0.030000	19.36	0.000021	0.62	1
0.033300	19.00	0.000023	0.98	1
0.050000	18.76	0.000035	1.22	1
0.066600	18.55	0.000046	1.43	1
0.083300	17.94	0.000058	2.04	1
0.100000	18.58	0.000069	1.40	-10
0.116600	18.99	0.000081	0.99	-10
0.133300	19.04	0.000093	0.94	-10
0.150000	19.40	0.000104	0.58	-10
0.166600	19.56	0.000116	0.42	10
0.183300	19.65	0.000127	0.33	10
0.200000	19.71	0.000139	0.27	10
0.216600	19.76	0.000150	0.22	10
0.233300	19.79	0.000162	0.19	10
0.250000	19.82	0.000174	0.16	10
0.266600	19.84	0.000185	0.14	10
0.283300	19.85	0.000197	0.13	10
0.300000	19.87	0.000208	0.11	10
0.316600	19.88	0.000220	0.10	10
0.333300	19.89	0.000231	0.09	1 10
0.416700	19.92	0.000289	0.06	1 10
0.500000	19.93	0.000347	0.05	1 10
0.583300	19.94	0.000405	0.04	1 10
0.666700	19.95	0.000463	0.03	1 10
0.750000	19.95	0.000521	0.03	1
0.833300	19.96	0.000579	0.02	1
0.916700	19.96	0.000637	0.02	1
1.000000	19.96	0.000694	0.02	1
1.083300	19.97	0.000752	0.01	1
1.166700	19.97	0.000810	0.01	1
1.250000	19.97	0.000868	0.01	1

KRRENM1 SLUG TEST DATA

ELASPED TIME (MIN)	HERMIT VALUE (FT)	ELASPED TIME (DAYS)	DRAWDOWN (FT)	WEIGHT
1.333300	19.97	0.000926	0.01	1
1.416600	19.97	0.000984	0.01	1
1.500000	19.97	0.001042	0.01	1
1.583300	19.97	0.001100	0.01	1
1.666700	19.98	0.001157	0.00	1
1.750000	19.98	0.001215	0.00	1
1.833300	19.98	0.001273	0.00	1
1.916700	19.98	0.001331	0.00	1
2.000000	19.98	0.001389	0.00	1
2.500000	19.98	0.001736	0.00	1
3.000000	19.98	0.002083	0.00	1
3.500000	19.98	0.002431	0.00	1
4.000000	19.98	0.002778	0.00	1
4.500000	19.98	0.003125	0.00	1
5.000000	19.98	0.003472	0.00	1
5.500000	19.98	0.003819	0.00	1
6.000000	19.98	0.004167	0.00	1
6.500000	19.98	0.004514	0.00	1
7.000000	19.98	0.004861	0.00	1
7.500000	19.98	0.005208	0.00	1
8.000000	19.98	0.005556	0.00	1
8.500000	19.98	0.005903	0.00	1
9.000000	19.98	0.006250	0.00	1
9.500000	19.98	0.006597	0.00	1
10.000000	19.98	0.006944	0.00	1

END

KRRENM1 SLUG TEST DATA

ELASPED TIME (MIN)	HERMIT VALUE (FT)	ELASPED TIME (DAYS)	DRAWDOWN (FT)	WEIGHT
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TD = 30 ft

CD = 15 ft

DTW = (6.16 - 4.57) = 1.59 ft below land surface

Rc = 1 in = 0.0833 ft

Rw = 3 in = 0.250 ft

screen length = 15 ft

saturated thickness = H = (30-1.59) = 28.41 ft

Static height of water in well = Lw = (30 - 1.59) = 28.41 ft

Calculations for volume of slug

Rs = 0.6 in = 0.05 ft

Ls = 10.2 ft = length of slug

Vs = 3.14 * Rs² * Ls

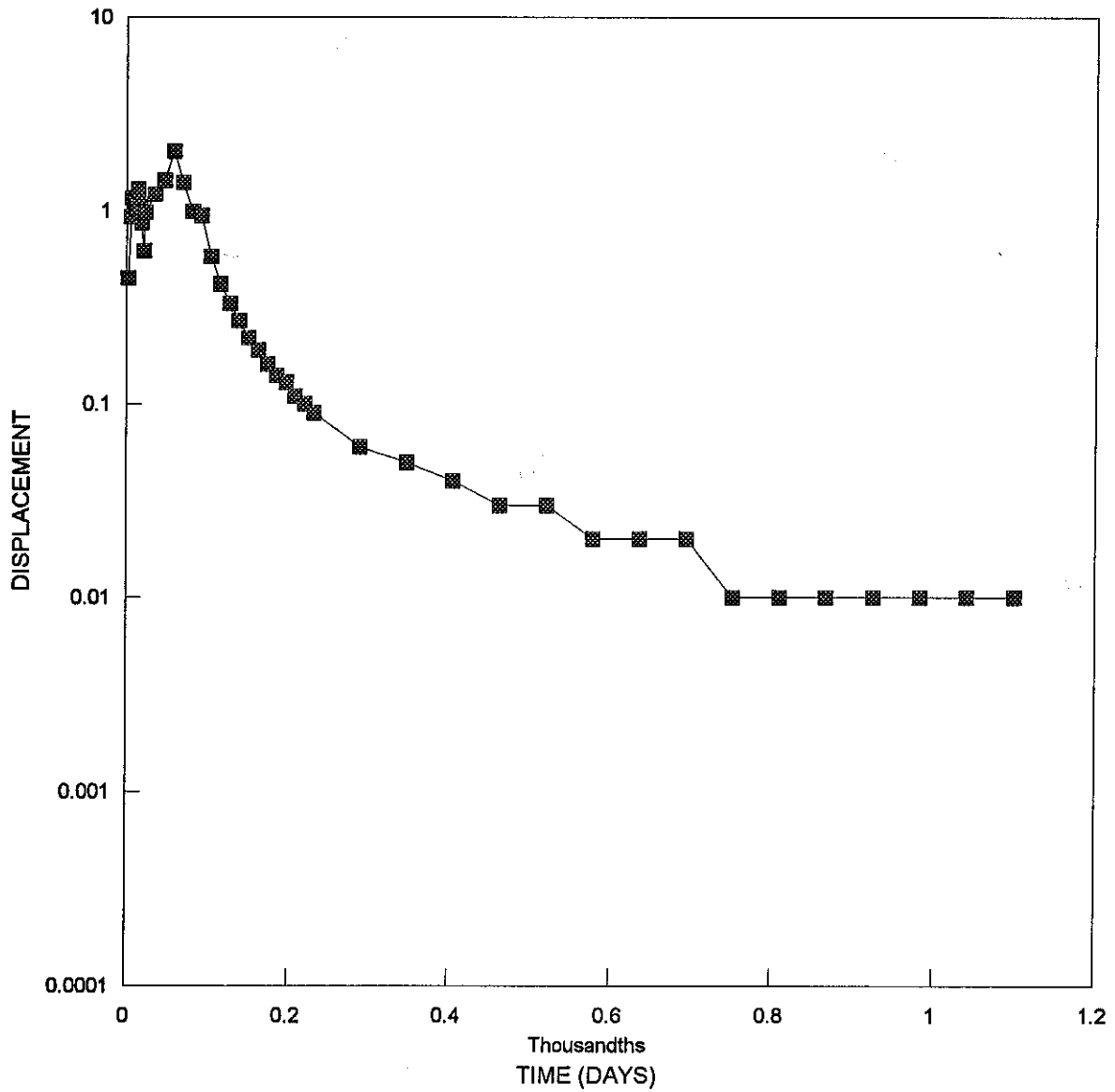
Vs = 0.08007

Calculations for H0

H0 = Vs / (3.14 * Rc²)

Ho = 3.67

KRRENM1 SLUG TEST



■ DISPLACEMENT