

Appendix G
Slug Test Data
River Terrace Site Remedial Investigation
July 1999-November 1999

**Appendix G: Table 1
Hydraulic Conductivity - Bouwer and Rice Graphical Method**

	Till		Alluvial Material						Fill (1)		Upper Plume	
	MW-15	MW-4A	MW-19	MW-9	MW-6	MW-12	MW-20	MW-24	MW-16	MW-25		
Hydraulic Conductivity (K in cm/sec)	1.90E-05	3.90E-03	3.40E-02	4.00E-02	1.40E-02	1.60E-02	4.50E-03	3.10E-03	5.90E-03	1.60E-01		
Hydraulic Conductivity (K in ft/d)	0.05	11.1	96	113	39.7	45.4	12.8	8.8	16.7	454		
Excel Spreadsheet Analysis (K in cm/sec)		5.00E-03	8.70E-03		1.60E-02		6.50E-04		3.00E-03			
Bower and Rice Automatic Parameter Estimation (cm/sec)	3.10E-05	7.00E-03	6.10E-02	6.00E-02	1.40E-02	2.30E-02	8.90E-03	1.10E-02	8.60E-03	1.50E-01		
Sensitivity Analysis Method (K in cm/sec)	6.30E-05	1.18E-02	6.70E-02	6.10E-02	1.40E-02	2.20E-02	2.60E-02	3.10E-02	9.70E-03	1.60E-01		
Transmissivity (ft ² /day)	1.4	73	386	624	159	231	102	27	75	2721		
Well Data Used in Calculations												
Well Screen Length	10	10	10	10	5	5	5	10	10	10		
Depth to Water (feet)	13.45	8.4	8.25	13.44	4.99	4.89	1.92	3.64	17.61	15.18		
Top Water to Bottom Screen	Lw	6.6	8 or (4)	5.5	4	3.1	5.08	3.1	4.5	6		
Saturated Aquifer Thickness	H	26	8 or (4)	5.5	4	5.1	8	3.1	4.5	6		
Static Water Level	24.17	7.85	5.61	7.48	6.26	4.66	7.33	10.33	5.25	7.31		
Gravel Pack Porosity Corr.	No	Yes	Yes	Yes	Yes	Yes	(Yes)/No	Yes	Yes	Yes		
Casing Radius (inches)	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032	1.032		
Effective Radius (Borehole)	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25		
Confidence in Result	Below Avg	Average	Below Avg	Good	Good	Good	Average	Average	Below Avg	Good		
Soil Classification	Till	Silt	Silty Sand Bottom 4 ft in Silt	Sand	Sand	Sand and Gravel	Silty Sand	Sand	Gravel w/ fine sand	Cobbles		
Notes:												
Selected Result	3.3E-05	6.3E-03	3.3E-02	5.3E-02	1.4E-02	2.0E-02	5.1E-03	1.0E-02	6.2E-03	1.6E-01		
Geometric Mean for Unit (K in cm/sec)	4.6E-04				1.9E-02			1.0E-02		3.1E-02		
(K in ft/day)	1.3				54			29		88		
Classification	Till				Alluvial Material			Fill (1)		Upper Plume		

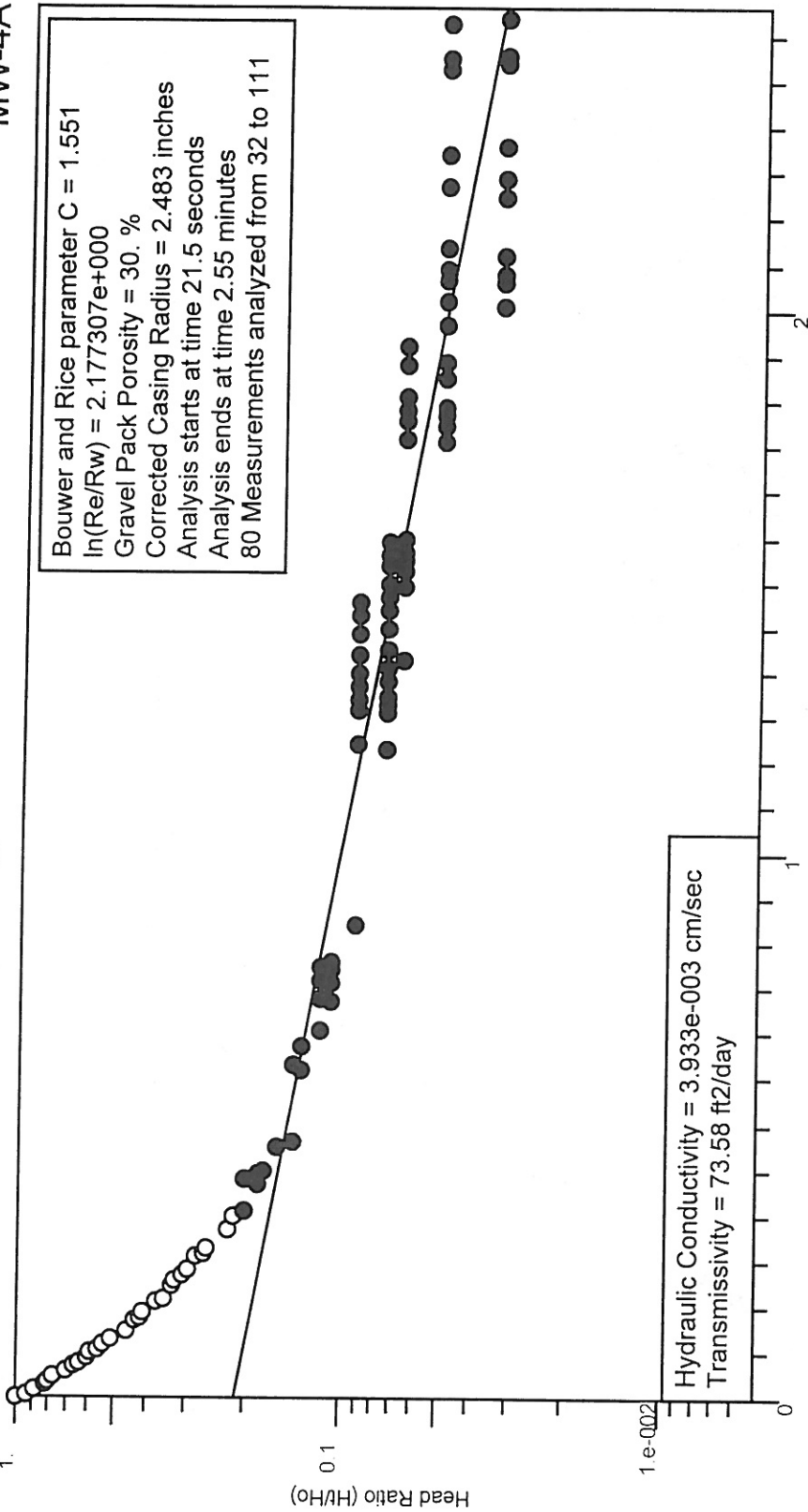
NOTE: (1) This material may either be alluvial deposits on top of the till or fill material.

River Terrace RV Park

River Terrace RV Park RI/FS 7-9-99

River Terrace RV Park Soldotna, Alaska

Bouwer and Rice Graph MW-4A

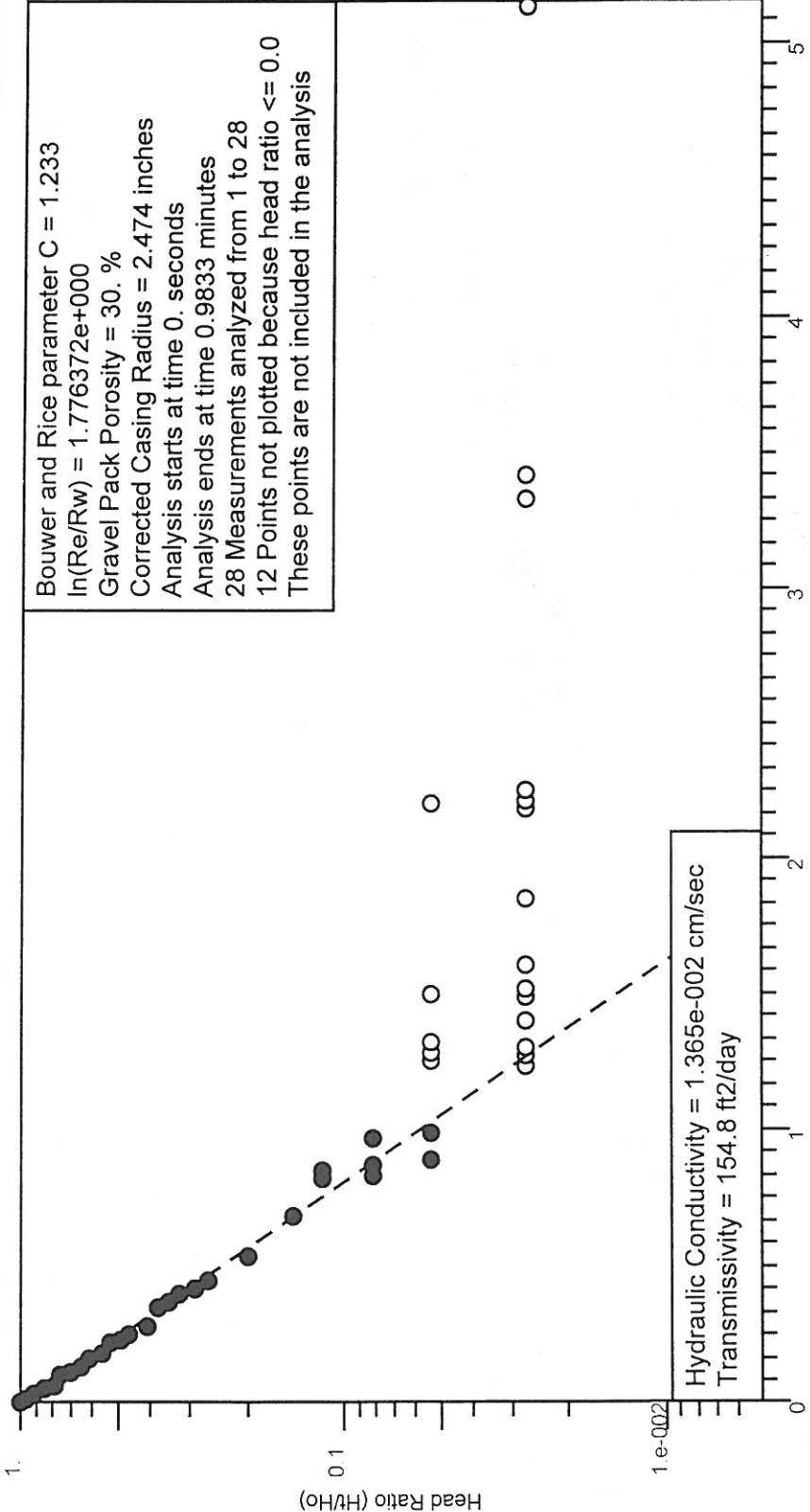


Project Number 20019 for ADEC
Analysis by Page 1

River Terrace RV Park

Slug Test Analysis 10-29-99 River Terrace RV Park Soldotna, Alaska Bouwer and Rice Graph MW-6

Bouwer and Rice parameter $C = 1.233$
 $\ln(R_e/R_w) = 1.776372e+000$
 Gravel Pack Porosity = 30. %
 Corrected Casing Radius = 2.474 inches
 Analysis starts at time 0. seconds
 Analysis ends at time 0.9833 minutes
 28 Measurements analyzed from 1 to 28
 12 Points not plotted because head ratio ≤ 0.0
 These points are not included in the analysis

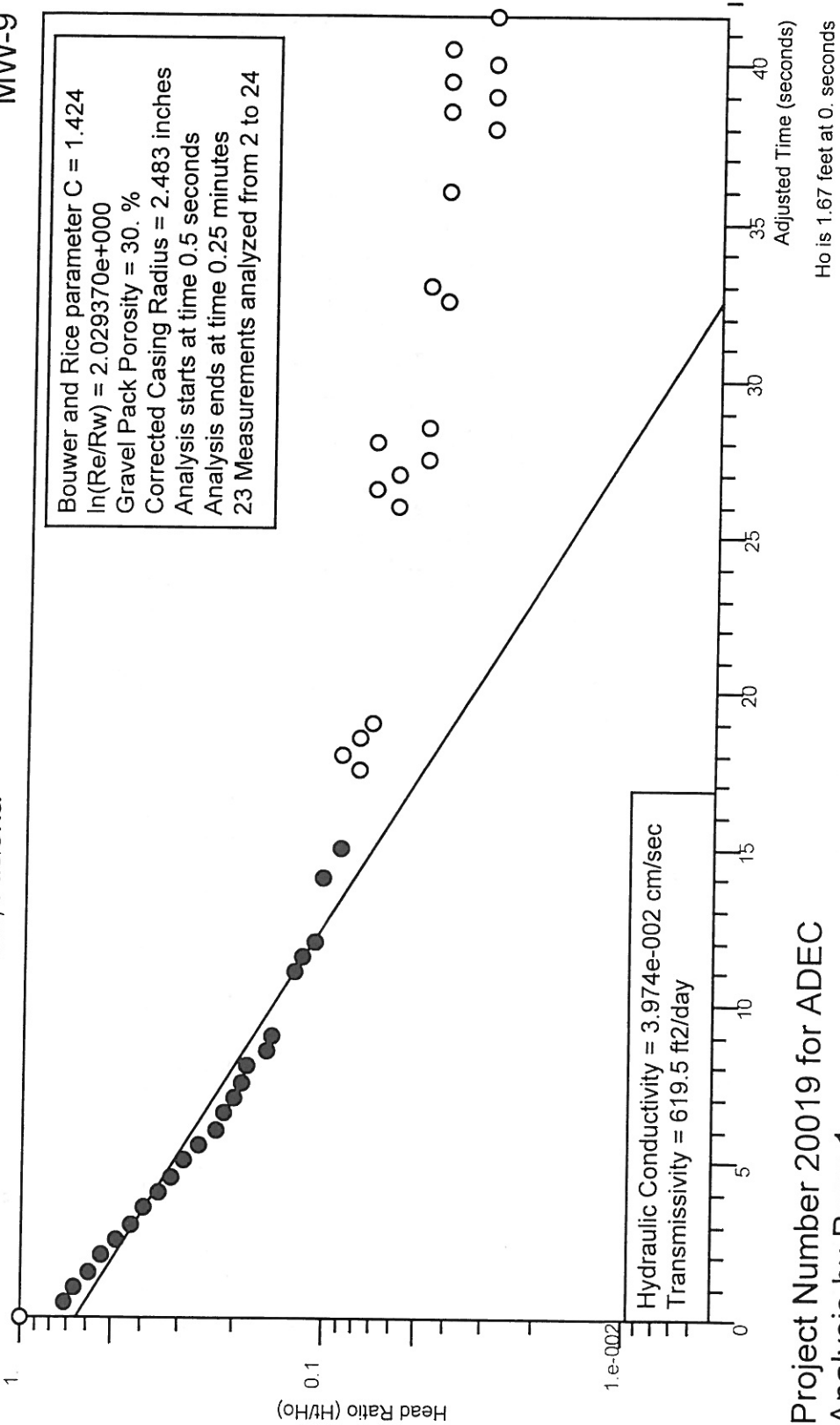


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Analysis by Page 1

River Terrace RV Park

River Terrace RV Park RI/FS 7-9-99
 River Terrace RV Park Soldotna, Alaska

Bouwer and Rice Graph
 MW-9



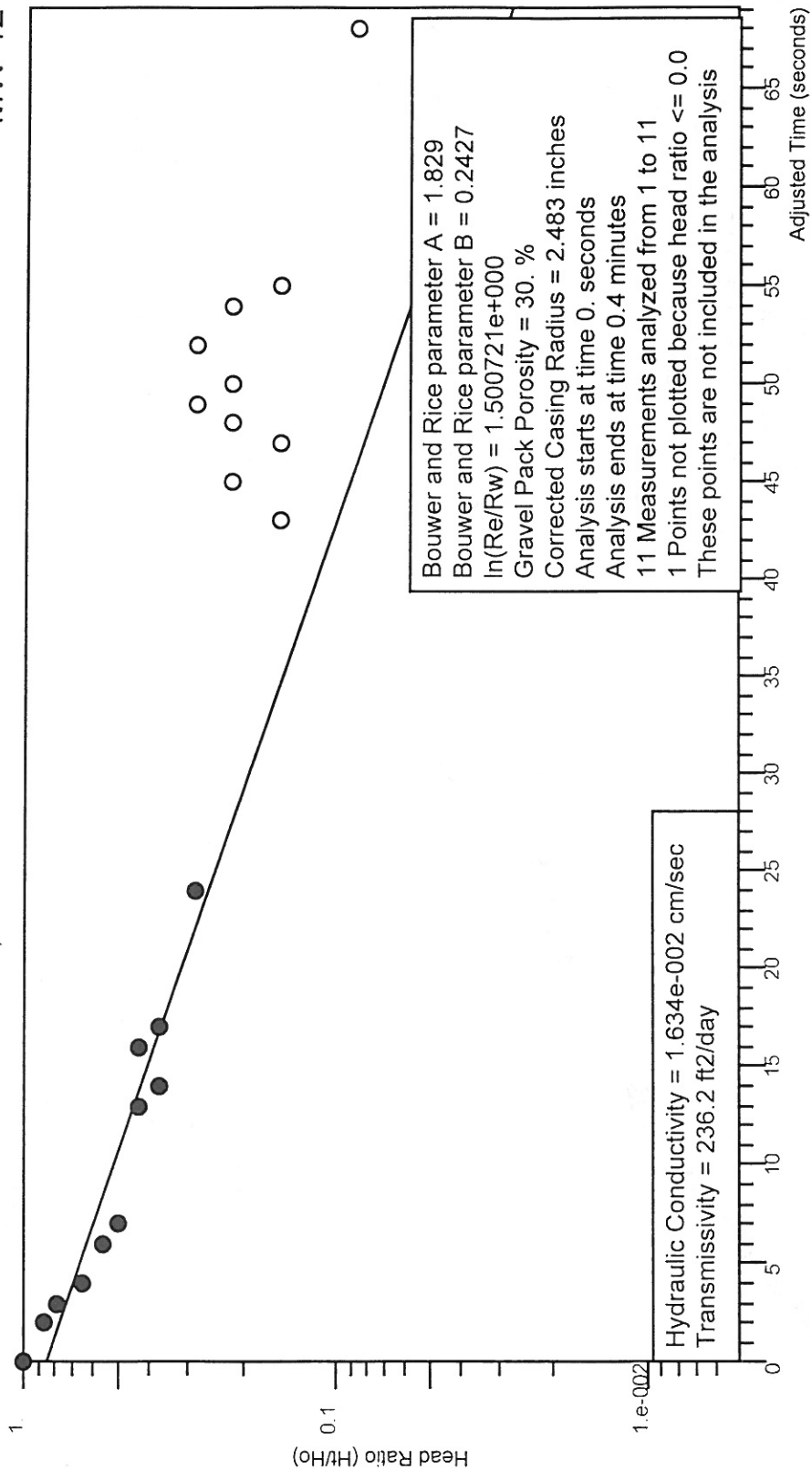
Project Number 20019 for ADEC
 Analysis by Page 1

River Terrace RV Park

Bouwer and Rice Graph

MW-12

Slug Test Analysis 10-28-99
 River Terrace RV Park Soldotna, Alaska



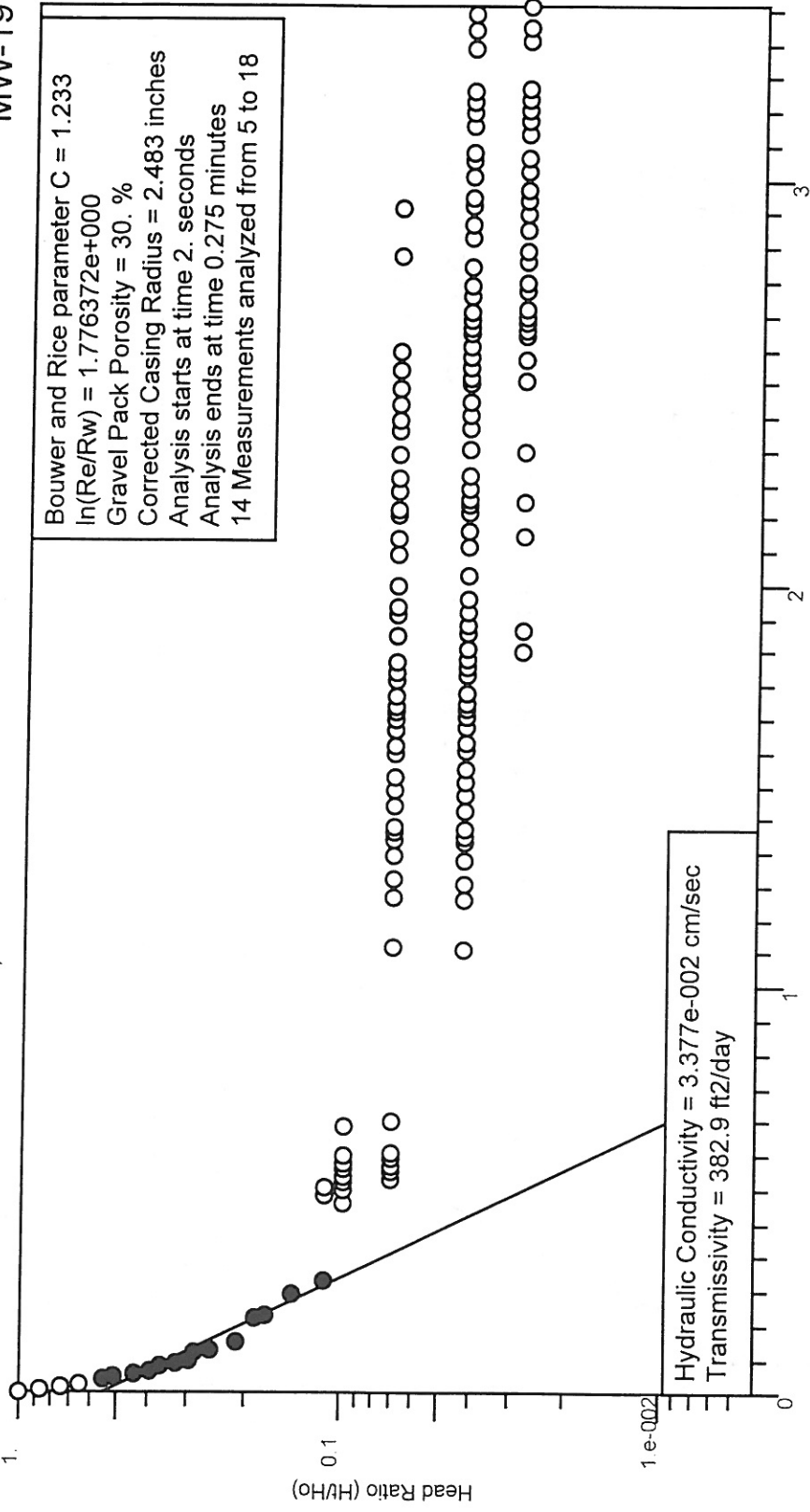
Client: ADEC
 Analysis by Page 1

River Terrace RV Park RI/FS 7-9-99

River Terrace RV Park Soldotna, Alaska

Bouwer and Rice Graph MW-19

Bouwer and Rice parameter C = 1.233
 $\ln(R_e/R_w) = 1.776372e+000$
Gravel Pack Porosity = 30. %
Corrected Casing Radius = 2.483 inches
Analysis starts at time 2. seconds
Analysis ends at time 0.275 minutes
14 Measurements analyzed from 5 to 18



Project Number 20019 for ADEC
Analysis by Page 1

Terrace #2 4' Soil Thickness

River Terrace RV Park

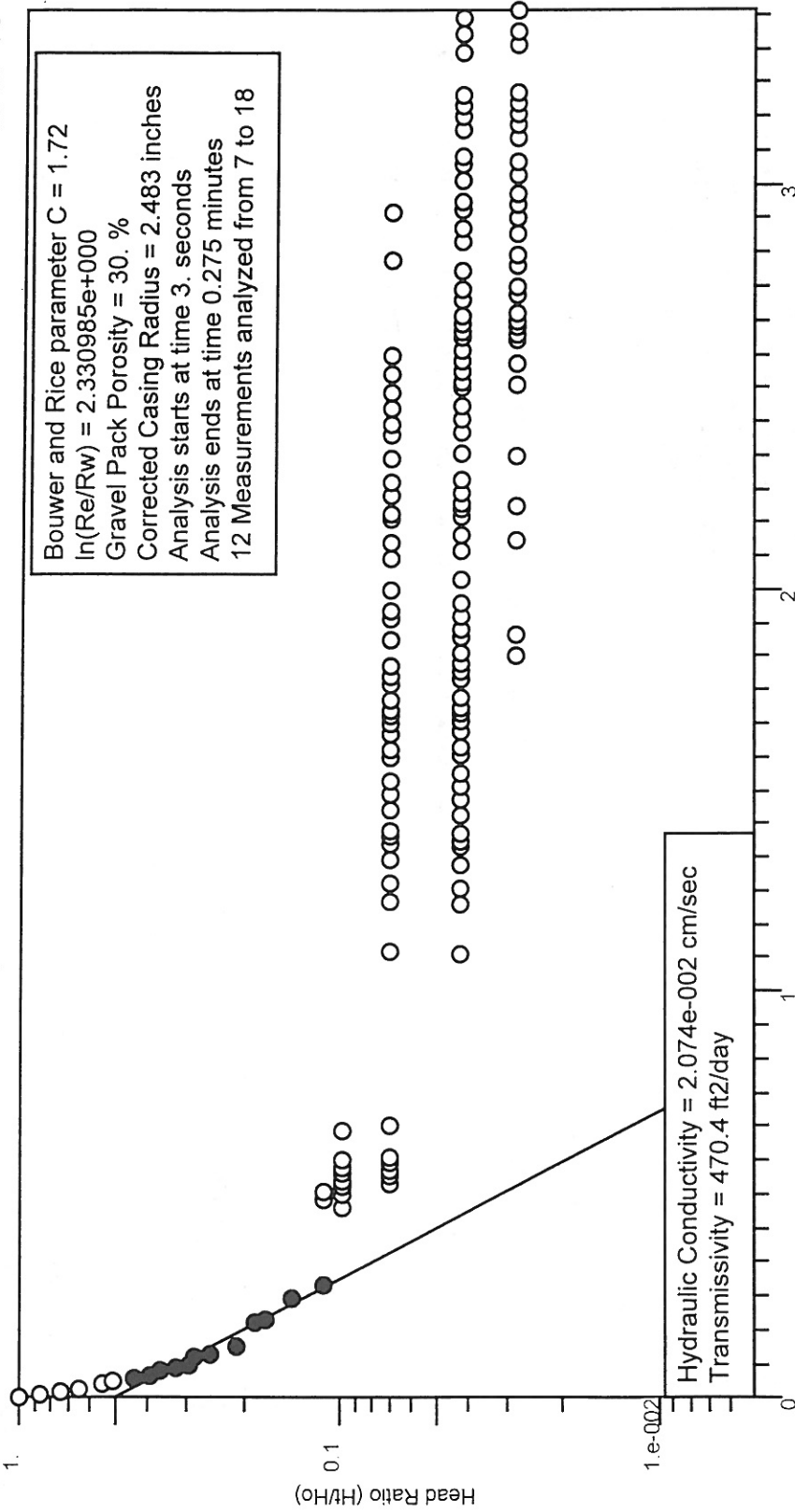
River Terrace RV Park RI/FS 7-9-99

River Terrace RV Park Soldotna, Alaska

Bouwer and Rice Graph

MW-19

Bouwer and Rice parameter C = 1.72
 ln(Re/Rw) = 2.330985e+000
 Gravel Pack Porosity = 30. %
 Corrected Casing Radius = 2.483 inches
 Analysis starts at time 3. seconds
 Analysis ends at time 0.275 minutes
 12 Measurements analyzed from 7 to 18



Ho is 0.71 feet at 0. seconds

Project Number 20019 for ADEC
 Analysis by Page 1

River Terrace RV Park

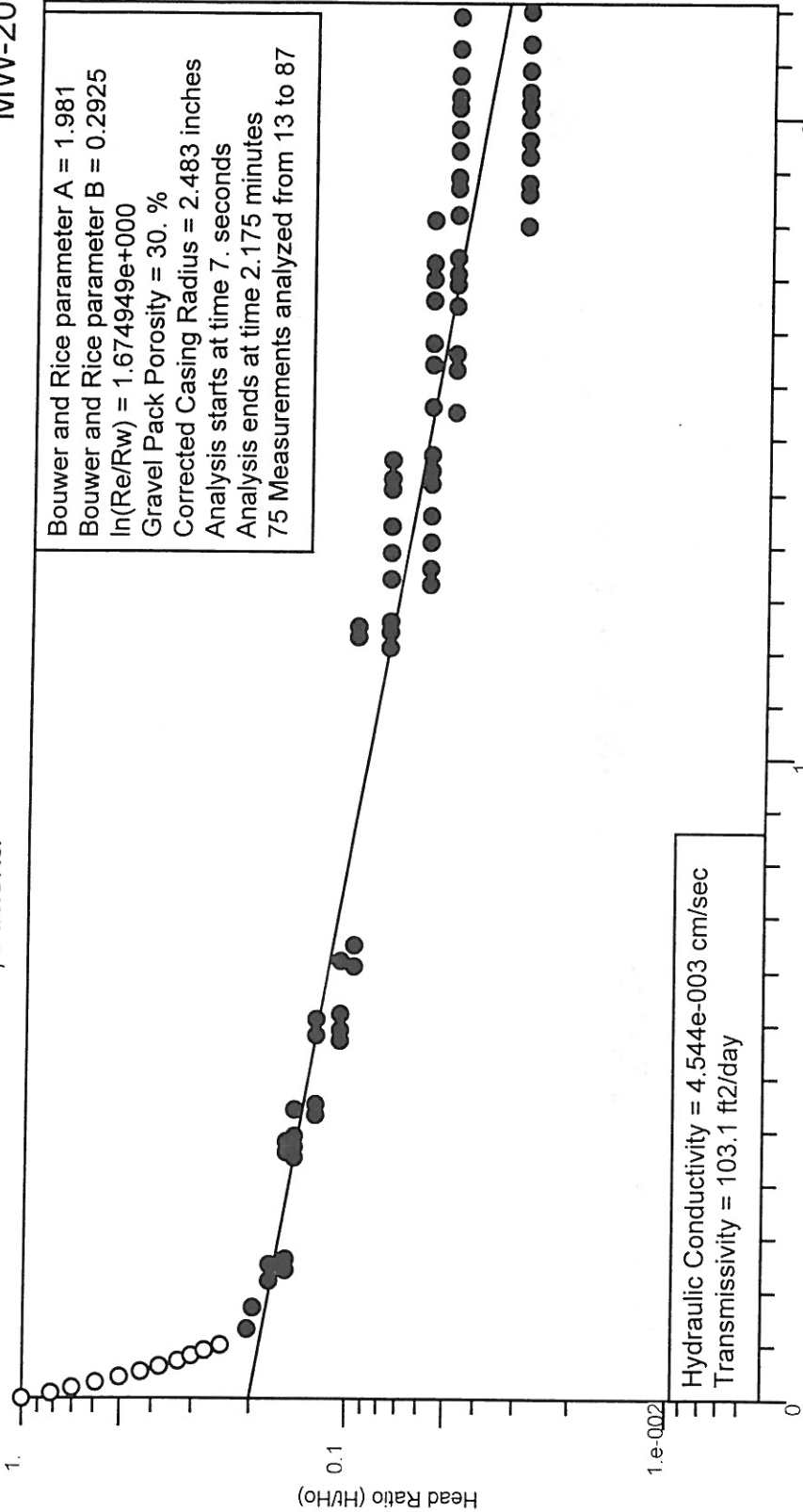
River Terrace RV Park RI/FS 7-9-99

River Terrace RV Park Soldotna, Alaska

Bouwer and Rice Graph

MW-20

Bouwer and Rice parameter A = 1.981
 Bouwer and Rice parameter B = 0.2925
 $\ln(R_e/R_w) = 1.674949e+000$
 Gravel Pack Porosity = 30. %
 Corrected Casing Radius = 2.483 inches
 Analysis starts at time 7. seconds
 Analysis ends at time 2.175 minutes
 75 Measurements analyzed from 13 to 87



Adjusted Time (minutes)

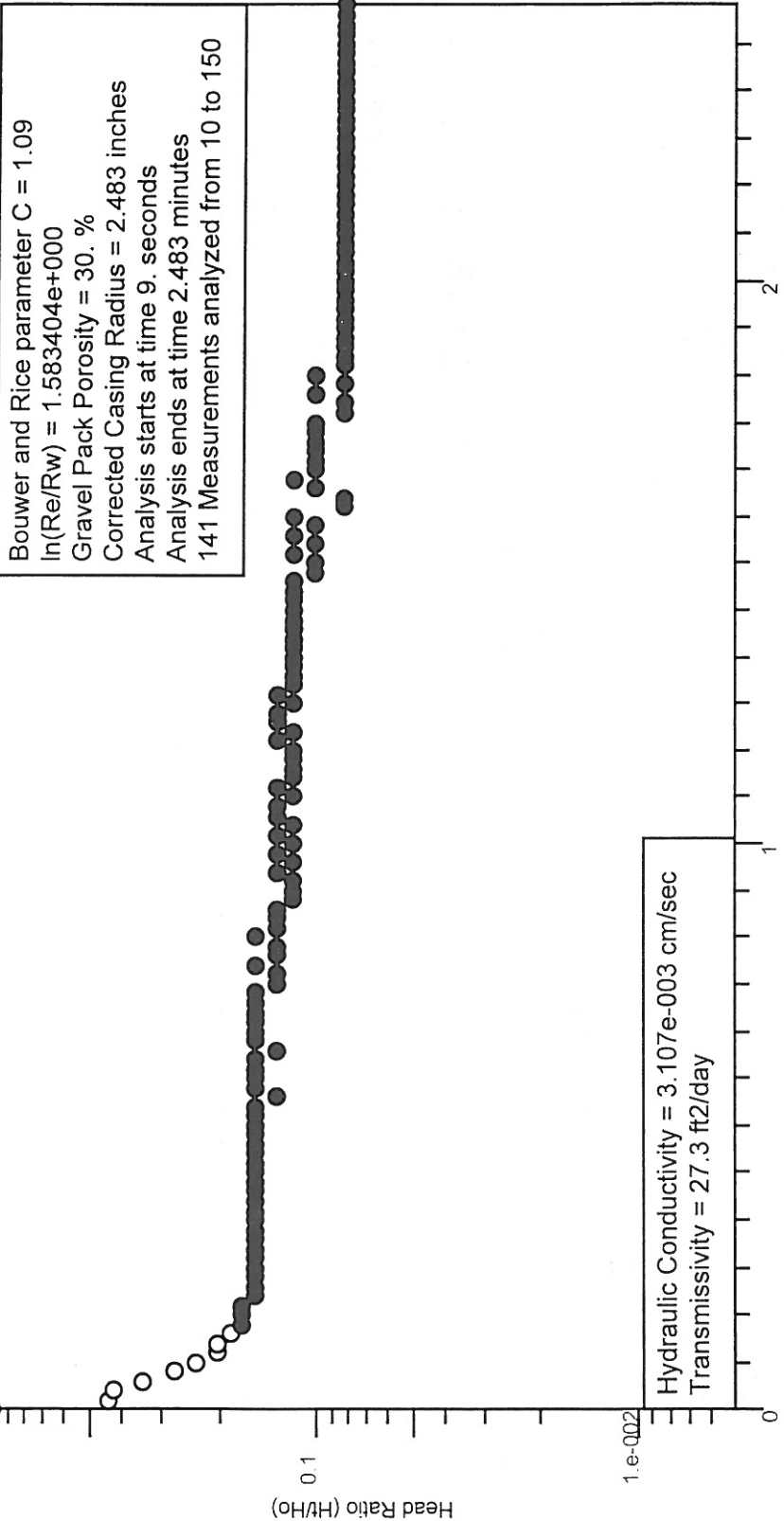
Ho is 1.03 feet at 0.5 seconds

Project Number 20019 for ADEC
 Analysis by Page 1

River Terrace RV Park

Bouwer and Rice Graph MW-24

Slug Test Analysis 10-28-99 River Terrace RV Park Soldotna, Alaska



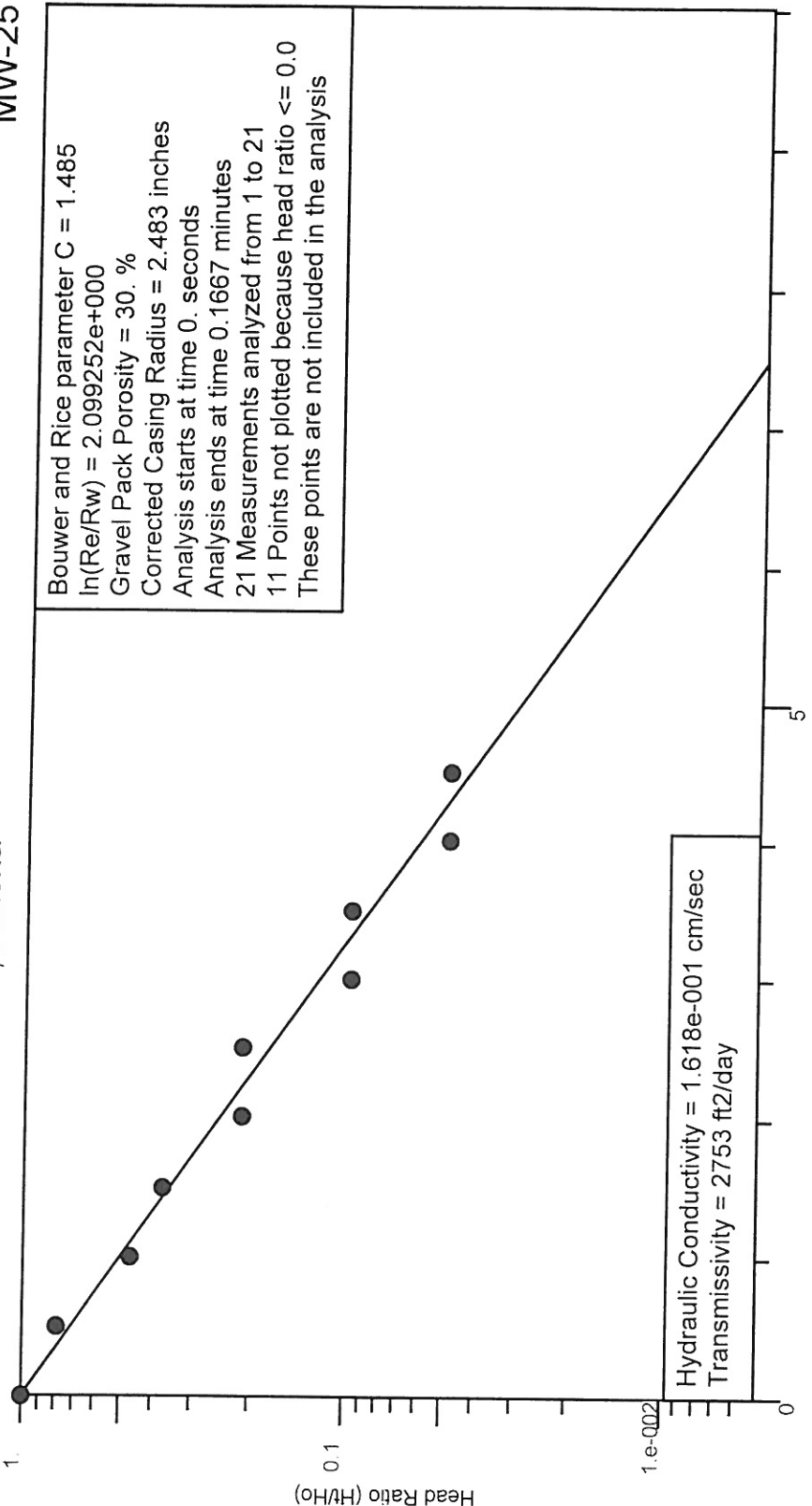
Client: ADEC
Analysis by Page 1

River Terrace RV Park

Slug Test Analysis 11-1-99
 River Terrace RV Park Soldotna, Alaska

Bouwer and Rice Graph
 MW-25

Bouwer and Rice parameter $C = 1.485$
 $\ln(R_e/R_w) = 2.099252e+000$
 Gravel Pack Porosity = 30. %
 Corrected Casing Radius = 2.483 inches
 Analysis starts at time 0. seconds
 Analysis ends at time 0.1667 minutes
 21 Measurements analyzed from 1 to 21
 11 Points not plotted because head ratio ≤ 0.0
 These points are not included in the analysis



Client: ADEC
 Analysis by Page 1

