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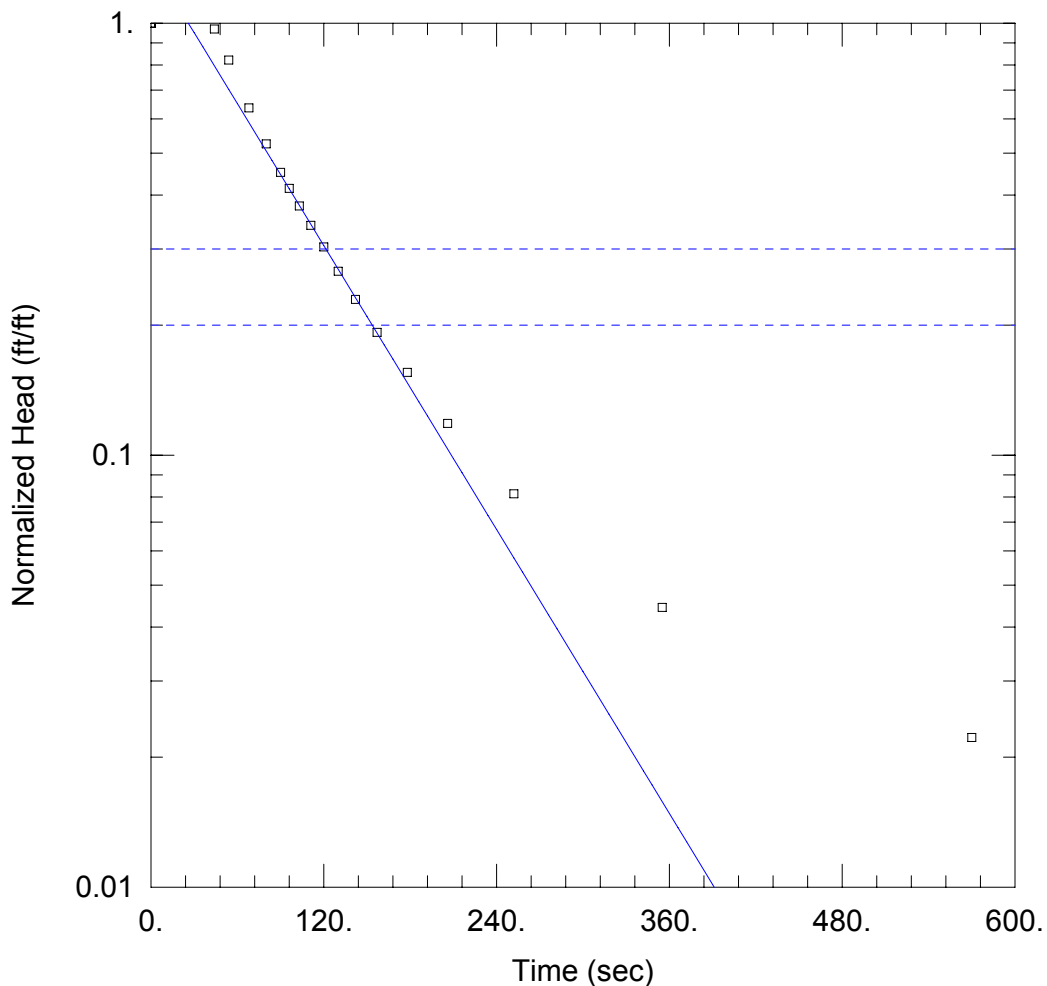
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**Date** 2-Mar-2004  
**Station ID**  
**Location** DSS-14 test 1  
**By** LRA, JAB

**Measuring Point** 1.55 ft. above land surface  
**Depth of Pump** 50.5 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments                                |
|------------|--------------|---------------|-------------------|----------|---|
| 13:30:00   | 0:00:00      |               |                   |          | Remove state transducer from well       |
| 13:40:00   | 0:10:00      |               | 20.97             |          | Static water level before lowering pump |
| 13:47:00   | 0:17:00      |               |                   |          | pump set to 50.5 ft. BMP                |
| 13:50:00   | 0:20:00      |               | 20.90             | 0.00     | water level after lowering pump         |
| 13:56:00   | 0:26:00      |               | 20.94             | 0.04     | start pumping. Pumping rate = 2.5gpm    |
| 13:57:00   | 0:27:00      |               | 25.50             | 4.60     |   |
| 13:57:22   | 0:27:22      |               | 26.00             | 5.10     |   |
| 13:58:25   | 0:28:25      |               | 27.00             | 6.10     |   |
| 14:00:30   | 0:30:30      |               | 33.00             | 12.10    |   |
| 14:02:48   | 0:32:48      |               | 34.00             | 13.10    | water level stable at 34.41 ft. BMP     |
| 14:10:00   | 0:40:00      | 0:00:00       | 34.41             | 13.51    | Pump off. Removed 33gal.                |
| 14:10:44   | 0:40:44      | 0:00:44       | 34.00             | 13.10    |   |
| 14:10:54   | 0:40:54      | 0:00:54       | 32.00             | 11.10    |   |
| 14:11:08   | 0:41:08      | 0:01:08       | 29.50             | 8.60     |   |
| 14:11:20   | 0:41:20      | 0:01:20       | 28.00             | 7.10     |   |
| 14:11:30   | 0:41:30      | 0:01:30       | 27.00             | 6.10     |   |
| 14:11:36   | 0:41:36      | 0:01:36       | 26.50             | 5.60     |   |
| 14:11:43   | 0:41:43      | 0:01:43       | 26.00             | 5.10     |   |
| 14:11:51   | 0:41:51      | 0:01:51       | 25.50             | 4.60     |   |
| 14:12:00   | 0:42:00      | 0:02:00       | 25.00             | 4.10     |   |
| 14:12:10   | 0:42:10      | 0:02:10       | 24.50             | 3.60     |   |
| 14:12:22   | 0:42:22      | 0:02:22       | 24.00             | 3.10     |   |
| 14:12:37   | 0:42:37      | 0:02:37       | 23.50             | 2.60     |   |
| 14:12:58   | 0:42:58      | 0:02:58       | 23.00             | 2.10     |   |
| 14:13:26   | 0:43:26      | 0:03:26       | 22.50             | 1.60     |   |
| 14:14:12   | 0:44:12      | 0:04:12       | 22.00             | 1.10     |   |
| 14:15:55   | 0:45:55      | 0:05:55       | 21.50             | 0.60     |   |
| 14:19:30   | 0:49:30      | 0:09:30       | 21.20             | 0.30     | End of Test #1                          |



### DSS 14\_TEST#1

Data Set: Y:\...\DSS14\_test1\_13JUL2010.aqt

Date: 07/26/10

Time: 15:58:58

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: DSS-14

Test Date: 03/02/2004

### AQUIFER DATA

Saturated Thickness: 40.15 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (DSS 14)

Initial Displacement: 13.51 ft

Static Water Column Height: 40.15 ft

Total Well Penetration Depth: 40.15 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 2.362E-5 ft/sec

y0 = 18.75 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\DSS 14\DSS14\_test1\_13JUL2  
Title: DSS 14\_test#1  
Date: 07/26/10  
Time: 15:59:18

PROJECT INFORMATION

Company: USGS  
Location: Wheat AgLUS  
Test Date: 03/02/2004  
Test Well: DSS-14

AQUIFER DATA

Saturated Thickness: 40.15 ft  
Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: DSS 14

X Location: 0. ft  
Y Location: 0. ft

Initial Displacement: 13.51 ft  
Static Water Column Height: 40.15 ft  
Casing Radius: 0.083 ft  
Well Radius: 0.375 ft  
Well Skin Radius: 0.375 ft  
Screen Length: 9.76 ft  
Total Well Penetration Depth: 40.15 ft

No. of Observations: 18

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 13.51             | 120.       | 4.1               |
| 44.              | 13.1              | 130.       | 3.6               |
| 54.              | 11.1              | 142.       | 3.1               |
| 68.              | 8.6               | 157.       | 2.6               |
| 80.              | 7.1               | 178.       | 2.1               |
| 90.              | 6.1               | 206.       | 1.6               |
| 96.              | 5.6               | 252.       | 1.1               |
| 103.             | 5.1               | 355.       | 0.6               |
| 111.             | 4.6               | 570.       | 0.3               |

SOLUTION

Slug Test  
Aquifer Model: Unconfined  
Solution Method: Bouwer-Rice  
ln(Re/rw): 5.306

VISUAL ESTIMATION RESULTS

Estimated Parameters

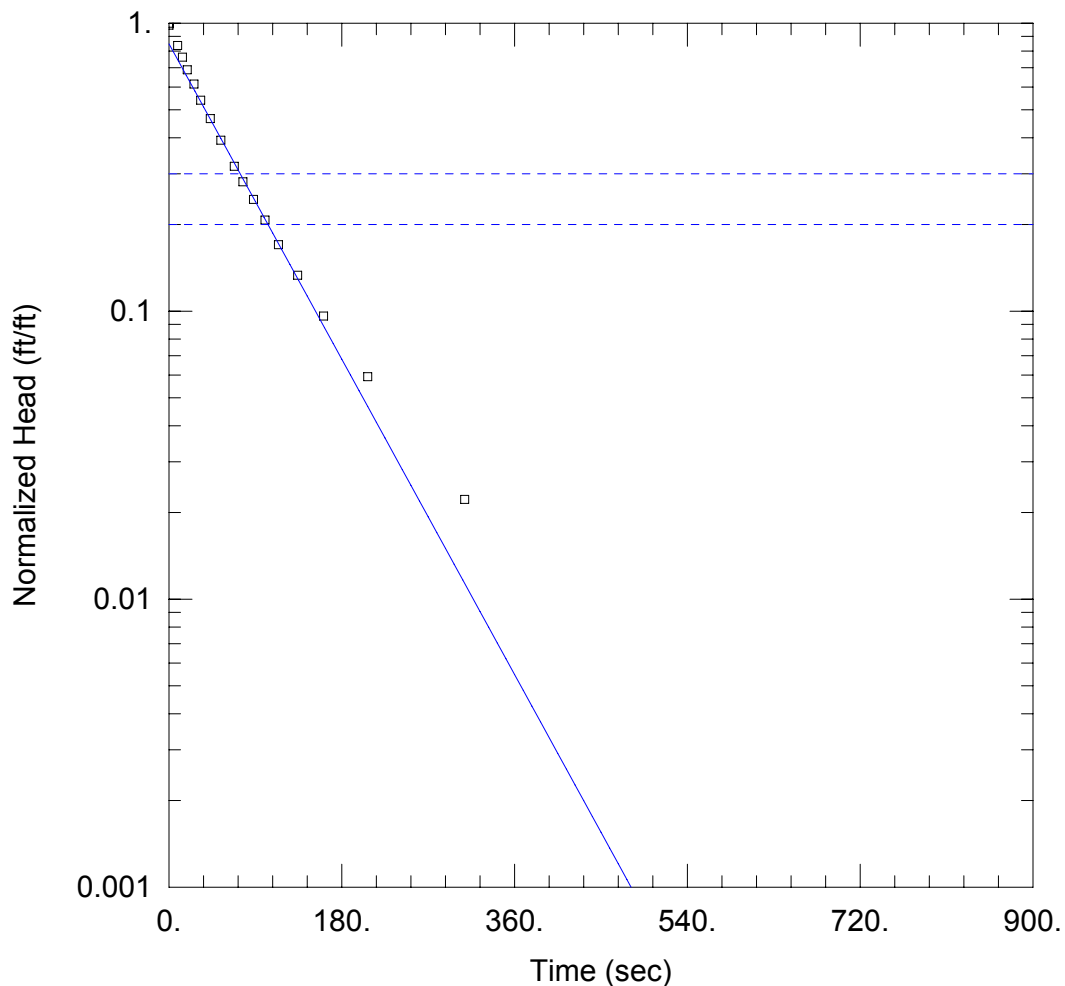
| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 2.362E-5 | ft/sec |
| y0        | 18.75    | ft     |

K = 0.0007199 cm/sec  
T = K\*b = 0.0009482 ft<sup>2</sup>/sec (0.881 sq. cm/sec)

**Date** 2-Mar-2004  
**Station ID**  
**Location** DSS-14 test 2  
**By** LRA, JAB  
**Measuring Point** 1.55 ft. above land surface  
**Depth of Pump** 50.5 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments   |
|------------|--------------|---------------|-------------------|----------|--|
| 14:19:55   | 0:00:00      |               | 21.20             |          | static water level before starting test #2                     |
| 14:20:00   | 0:00:05      |               |                   |          | start pumping. Pump set at 50.5 ft. BMP. Pumping rate = 2.5gpm |
| 14:20:30   | 0:00:35      |               | 27.00             | 5.80     |  |
| 14:21:00   | 0:01:05      |               | 30.00             | 8.80     |  |
| 14:22:10   | 0:02:15      |               | 33.00             | 11.80    |  |
| 14:23:35   | 0:03:40      |               | 34.00             | 12.80    | water level stable at 34.50 ft. BMP                            |
| 14:26:30   | 0:06:35      | 0:00:00       | 34.50             | 13.30    | Pump off. Removed 15gal.                                       |
| 14:26:39   | 0:06:44      | 0:00:09       | 32.50             | 11.30    |  |
| 14:26:44   | 0:06:49      | 0:00:14       | 31.50             | 10.30    |  |
| 14:26:49   | 0:06:54      | 0:00:19       | 30.50             | 9.30     |  |
| 14:26:56   | 0:07:01      | 0:00:26       | 29.50             | 8.30     |  |
| 14:27:03   | 0:07:08      | 0:00:33       | 28.50             | 7.30     |  |
| 14:27:13   | 0:07:18      | 0:00:43       | 27.50             | 6.30     |  |
| 14:27:24   | 0:07:29      | 0:00:54       | 26.50             | 5.30     |  |
| 14:27:38   | 0:07:43      | 0:01:08       | 25.50             | 4.30     |  |
| 14:27:47   | 0:07:52      | 0:01:17       | 25.00             | 3.80     |  |
| 14:27:58   | 0:08:03      | 0:01:28       | 24.50             | 3.30     |  |
| 14:28:10   | 0:08:15      | 0:01:40       | 24.00             | 2.80     |  |
| 14:28:24   | 0:08:29      | 0:01:54       | 23.50             | 2.30     |  |
| 14:28:44   | 0:08:49      | 0:02:14       | 23.00             | 1.80     |  |
| 14:29:11   | 0:09:16      | 0:02:41       | 22.50             | 1.30     |  |
| 14:29:57   | 0:10:02      | 0:03:27       | 22.00             | 0.80     |  |
| 14:31:38   | 0:11:43      | 0:05:08       | 21.50             | 0.30     |  |
| 14:41:24   | 0:21:29      | 0:14:54       | 21.10             | -0.10    | End of Test #2   |
| 14:47:00   |              |               |                   |          | State transducer back in place                                 |





### DSS 14\_TEST#2

Data Set: Y:\...\DSS14\_test2\_13JUL2010.aqt

Date: 07/26/10

Time: 16:01:10

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: DSS-14

Test Date: 03/02/2004

### AQUIFER DATA

Saturated Thickness: 40.15 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (DSS 14)

Initial Displacement: 13.51 ft

Static Water Column Height: 40.15 ft

Total Well Penetration Depth: 40.15 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 2.623E-5 ft/sec

y0 = 11.45 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\DSS 14\DSS14\_test2\_13JUL2  
 Title: DSS 14\_test#2  
 Date: 07/26/10  
 Time: 16:01:24

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/02/2004  
 Test Well: DSS-14

AQUIFER DATA

Saturated Thickness: 40.15 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: DSS 14

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 13.51 ft  
 Static Water Column Height: 40.15 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 40.15 ft

No. of Observations: 18

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 13.3              | 77.        | 3.8               |
| 9.               | 11.3              | 88.        | 3.3               |
| 14.              | 10.3              | 100.       | 2.8               |
| 19.              | 9.3               | 114.       | 2.3               |
| 26.              | 8.3               | 134.       | 1.8               |
| 33.              | 7.3               | 161.       | 1.3               |
| 43.              | 6.3               | 207.       | 0.8               |
| 54.              | 5.3               | 308.       | 0.3               |
| 68.              | 4.3               | 894.       | -0.1              |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 5.306

VISUAL ESTIMATION RESULTS

Estimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 2.623E-5 | ft/sec |
| y0        | 11.45    | ft     |

K = 0.0007996 cm/sec  
 T = K\*b = 0.001053 ft<sup>2</sup>/sec (0.9785 sq. cm/sec)

In-Situ Inc. MiniTroll Pro  
 Report generated: 4/19/2004 9:31:36  
 Report from file: ...\\SN09731 2004-03-31 120911 DSS15\_1.bin  
 Win-Situ Version 4.46  
 Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: DSS15\_1

Test defined on: 3/31/2004 12:08:26  
 Test started on: 3/31/2004 12:09:11  
 Test stopped on: 3/31/2004 12:31:47  
 Test extracted on: N/A N/A

Data gathered using Linear testing

Time between data points: 0.5 Seconds.  
 Number of data samples: 2713

TOTAL DATA SAMPLES 2713

Channel number [2]

Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1584.960 meters (5200.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:09:11 | 0        | 18.272              |
| 3/31/2004 | 12:09:11 | 0.5      | 18.287              |
| 3/31/2004 | 12:09:12 | 1        | 18.292              |
| 3/31/2004 | 12:09:12 | 1.5      | 18.293              |
| 3/31/2004 | 12:09:13 | 2        | 18.295              |
| 3/31/2004 | 12:09:13 | 2.5      | 18.295              |
| 3/31/2004 | 12:09:14 | 3        | 18.295              |
| 3/31/2004 | 12:09:14 | 3.5      | 18.295              |
| 3/31/2004 | 12:09:15 | 4        | 18.295              |
| 3/31/2004 | 12:09:15 | 4.5      | 18.297              |
| 3/31/2004 | 12:09:16 | 5        | 18.297              |
| 3/31/2004 | 12:09:16 | 5.5      | 18.297              |
| 3/31/2004 | 12:09:17 | 6        | 18.297              |
| 3/31/2004 | 12:09:17 | 6.5      | 18.298              |
| 3/31/2004 | 12:09:18 | 7        | 18.298              |
| 3/31/2004 | 12:09:18 | 7.5      | 18.298              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:09:43 | 32.5     | 11.046              |
| 3/31/2004 | 12:09:44 | 33       | 10.873              |
| 3/31/2004 | 12:09:44 | 33.5     | 10.708              |
| 3/31/2004 | 12:09:45 | 34       | 10.537              |
| 3/31/2004 | 12:09:45 | 34.5     | 10.369              |
| 3/31/2004 | 12:09:46 | 35       | 10.2                |
| 3/31/2004 | 12:09:46 | 35.5     | 10.031              |
| 3/31/2004 | 12:09:47 | 36       | 9.884               |
| 3/31/2004 | 12:09:47 | 36.5     | 9.716               |
| 3/31/2004 | 12:09:48 | 37       | 9.557               |
| 3/31/2004 | 12:09:48 | 37.5     | 9.422               |
| 3/31/2004 | 12:09:49 | 38       | 9.273               |
| 3/31/2004 | 12:09:49 | 38.5     | 9.089               |
| 3/31/2004 | 12:09:50 | 39       | 8.931               |
| 3/31/2004 | 12:09:50 | 39.5     | 8.79                |
| 3/31/2004 | 12:09:51 | 40       | 8.637               |
| 3/31/2004 | 12:09:51 | 40.5     | 8.494               |
| 3/31/2004 | 12:09:52 | 41       | 8.34                |
| 3/31/2004 | 12:09:52 | 41.5     | 8.189               |
| 3/31/2004 | 12:09:53 | 42       | 8.039               |
| 3/31/2004 | 12:09:53 | 42.5     | 7.889               |
| 3/31/2004 | 12:09:54 | 43       | 7.736               |
| 3/31/2004 | 12:09:54 | 43.5     | 7.571               |
| 3/31/2004 | 12:09:55 | 44       | 7.436               |
| 3/31/2004 | 12:09:55 | 44.5     | 7.316               |
| 3/31/2004 | 12:09:56 | 45       | 7.154               |
| 3/31/2004 | 12:09:56 | 45.5     | 7.017               |
| 3/31/2004 | 12:09:57 | 46       | 6.881               |
| 3/31/2004 | 12:09:57 | 46.5     | 6.736               |
| 3/31/2004 | 12:09:58 | 47       | 6.582               |
| 3/31/2004 | 12:09:58 | 47.5     | 6.42                |
| 3/31/2004 | 12:09:59 | 48       | 6.278               |
| 3/31/2004 | 12:09:59 | 48.5     | 6.138               |
| 3/31/2004 | 12:10:00 | 49       | 5.996               |
| 3/31/2004 | 12:10:00 | 49.5     | 5.847               |
| 3/31/2004 | 12:10:01 | 50       | 5.705               |
| 3/31/2004 | 12:10:01 | 50.5     | 5.56                |
| 3/31/2004 | 12:10:02 | 51       | 5.413               |
| 3/31/2004 | 12:10:02 | 51.5     | 5.271               |
| 3/31/2004 | 12:10:03 | 52       | 5.124               |
| 3/31/2004 | 12:10:03 | 52.5     | 4.973               |
| 3/31/2004 | 12:10:04 | 53       | 4.835               |
| 3/31/2004 | 12:10:04 | 53.5     | 4.688               |
| 3/31/2004 | 12:10:05 | 54       | 4.544               |
| 3/31/2004 | 12:10:05 | 54.5     | 4.4                 |
| 3/31/2004 | 12:10:06 | 55       | 4.251               |
| 3/31/2004 | 12:10:06 | 55.5     | 4.109               |
| 3/31/2004 | 12:10:07 | 56       | 3.969               |
| 3/31/2004 | 12:10:07 | 56.5     | 3.827               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:10:08 | 57       | 3.697               |
| 3/31/2004 | 12:10:08 | 57.5     | 3.547               |
| 3/31/2004 | 12:10:09 | 58       | 3.398               |
| 3/31/2004 | 12:10:09 | 58.5     | 3.278               |
| 3/31/2004 | 12:10:10 | 59       | 3.155               |
| 3/31/2004 | 12:10:10 | 59.5     | 3.02                |
| 3/31/2004 | 12:10:11 | 60       | 2.886               |
| 3/31/2004 | 12:10:11 | 60.5     | 2.739               |
| 3/31/2004 | 12:10:12 | 61       | 2.611               |
| 3/31/2004 | 12:10:12 | 61.5     | 2.484               |
| 3/31/2004 | 12:10:13 | 62       | 2.351               |
| 3/31/2004 | 12:10:13 | 62.5     | 2.221               |
| 3/31/2004 | 12:10:14 | 63       | 2.103               |
| 3/31/2004 | 12:10:14 | 63.5     | 1.973               |
| 3/31/2004 | 12:10:15 | 64       | 1.843               |
| 3/31/2004 | 12:10:15 | 64.5     | 1.714               |
| 3/31/2004 | 12:10:16 | 65       | 1.586               |
| 3/31/2004 | 12:10:16 | 65.5     | 1.458               |
| 3/31/2004 | 12:10:17 | 66       | 1.333               |
| 3/31/2004 | 12:10:17 | 66.5     | 1.208               |
| 3/31/2004 | 12:10:18 | 67       | 1.081               |
| 3/31/2004 | 12:10:18 | 67.5     | 0.951               |
| 3/31/2004 | 12:10:19 | 68       | 0.816               |
| 3/31/2004 | 12:10:19 | 68.5     | 0.683               |
| 3/31/2004 | 12:10:20 | 69       | 0.549               |
| 3/31/2004 | 12:10:20 | 69.5     | 0.414               |
| 3/31/2004 | 12:10:21 | 70       | 0.28                |
| 3/31/2004 | 12:10:21 | 70.5     | 0.155               |
| 3/31/2004 | 12:10:22 | 71       | 0.032               |
| 3/31/2004 | 12:10:22 | 71.5     | -0.007              |
| 3/31/2004 | 12:10:23 | 72       | -0.006              |
| 3/31/2004 | 12:10:23 | 72.5     | -0.004              |
| 3/31/2004 | 12:10:24 | 73       | -0.002              |
| 3/31/2004 | 12:10:24 | 73.5     | -0.002              |
| 3/31/2004 | 12:10:25 | 74       | -0.001              |
| 3/31/2004 | 12:10:25 | 74.5     | -0.001              |
| 3/31/2004 | 12:10:26 | 75       | 0.001               |
| 3/31/2004 | 12:10:26 | 75.5     | 0.001               |
| 3/31/2004 | 12:10:27 | 76       | 0.002               |
| 3/31/2004 | 12:10:27 | 76.5     | 0                   |
| 3/31/2004 | 12:10:28 | 77       | 0                   |
| 3/31/2004 | 12:10:28 | 77.5     | 0.002               |
| 3/31/2004 | 12:10:29 | 78       | 0.002               |
| 3/31/2004 | 12:10:29 | 78.5     | 0                   |
| 3/31/2004 | 12:10:30 | 79       | 0                   |
| 3/31/2004 | 12:10:30 | 79.5     | 0.002               |
| 3/31/2004 | 12:10:31 | 80       | 0.002               |
| 3/31/2004 | 12:10:31 | 80.5     | 0.06                |
| 3/31/2004 | 12:10:32 | 81       | 0.161               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:10:32 | 81.5     | 0.263               |
| 3/31/2004 | 12:10:33 | 82       | 0.363               |
| 3/31/2004 | 12:10:33 | 82.5     | 0.463               |
| 3/31/2004 | 12:10:34 | 83       | 0.563               |
| 3/31/2004 | 12:10:34 | 83.5     | 0.66                |
| 3/31/2004 | 12:10:35 | 84       | 0.756               |
| 3/31/2004 | 12:10:35 | 84.5     | 0.853               |
| 3/31/2004 | 12:10:36 | 85       | 0.949               |
| 3/31/2004 | 12:10:36 | 85.5     | 1.043               |
| 3/31/2004 | 12:10:37 | 86       | 1.13                |
| 3/31/2004 | 12:10:37 | 86.5     | 1.212               |
| 3/31/2004 | 12:10:38 | 87       | 1.294               |
| 3/31/2004 | 12:10:38 | 87.5     | 1.378               |
| 3/31/2004 | 12:10:39 | 88       | 1.46                |
| 3/31/2004 | 12:10:39 | 88.5     | 1.54                |
| 3/31/2004 | 12:10:40 | 89       | 1.621               |
| 3/31/2004 | 12:10:40 | 89.5     | 1.699               |
| 3/31/2004 | 12:10:41 | 90       | 1.78                |
| 3/31/2004 | 12:10:41 | 90.5     | 1.86                |
| 3/31/2004 | 12:10:42 | 91       | 1.937               |
| 3/31/2004 | 12:10:42 | 91.5     | 2.017               |
| 3/31/2004 | 12:10:43 | 92       | 2.096               |
| 3/31/2004 | 12:10:43 | 92.5     | 2.171               |
| 3/31/2004 | 12:10:44 | 93       | 2.248               |
| 3/31/2004 | 12:10:44 | 93.5     | 2.327               |
| 3/31/2004 | 12:10:45 | 94       | 2.402               |
| 3/31/2004 | 12:10:45 | 94.5     | 2.479               |
| 3/31/2004 | 12:10:46 | 95       | 2.554               |
| 3/31/2004 | 12:10:46 | 95.5     | 2.631               |
| 3/31/2004 | 12:10:47 | 96       | 2.704               |
| 3/31/2004 | 12:10:47 | 96.5     | 2.779               |
| 3/31/2004 | 12:10:48 | 97       | 2.855               |
| 3/31/2004 | 12:10:48 | 97.5     | 2.927               |
| 3/31/2004 | 12:10:49 | 98       | 3                   |
| 3/31/2004 | 12:10:49 | 98.5     | 3.072               |
| 3/31/2004 | 12:10:50 | 99       | 3.145               |
| 3/31/2004 | 12:10:50 | 99.5     | 3.219               |
| 3/31/2004 | 12:10:51 | 100      | 3.289               |
| 3/31/2004 | 12:10:51 | 100.5    | 3.364               |
| 3/31/2004 | 12:10:52 | 101      | 3.436               |
| 3/31/2004 | 12:10:52 | 101.5    | 3.506               |
| 3/31/2004 | 12:10:53 | 102      | 3.576               |
| 3/31/2004 | 12:10:53 | 102.5    | 3.648               |
| 3/31/2004 | 12:10:54 | 103      | 3.718               |
| 3/31/2004 | 12:10:54 | 103.5    | 3.788               |
| 3/31/2004 | 12:10:55 | 104      | 3.856               |
| 3/31/2004 | 12:10:55 | 104.5    | 3.925               |
| 3/31/2004 | 12:10:56 | 105      | 3.995               |
| 3/31/2004 | 12:10:56 | 105.5    | 4.061               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
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| 3/31/2004 | 12:10:57 | 106      | 4.13                |
| 3/31/2004 | 12:10:57 | 106.5    | 4.198               |
| 3/31/2004 | 12:10:58 | 107      | 4.266               |
| 3/31/2004 | 12:10:58 | 107.5    | 4.333               |
| 3/31/2004 | 12:10:59 | 108      | 4.4                 |
| 3/31/2004 | 12:10:59 | 108.5    | 4.465               |
| 3/31/2004 | 12:11:00 | 109      | 4.531               |
| 3/31/2004 | 12:11:00 | 109.5    | 4.596               |
| 3/31/2004 | 12:11:01 | 110      | 4.661               |
| 3/31/2004 | 12:11:01 | 110.5    | 4.724               |
| 3/31/2004 | 12:11:02 | 111      | 4.791               |
| 3/31/2004 | 12:11:02 | 111.5    | 4.856               |
| 3/31/2004 | 12:11:03 | 112      | 4.918               |
| 3/31/2004 | 12:11:03 | 112.5    | 4.981               |
| 3/31/2004 | 12:11:04 | 113      | 5.044               |
| 3/31/2004 | 12:11:04 | 113.5    | 5.107               |
| 3/31/2004 | 12:11:05 | 114      | 5.172               |
| 3/31/2004 | 12:11:05 | 114.5    | 5.234               |
| 3/31/2004 | 12:11:06 | 115      | 5.295               |
| 3/31/2004 | 12:11:06 | 115.5    | 5.358               |
| 3/31/2004 | 12:11:07 | 116      | 5.42                |
| 3/31/2004 | 12:11:07 | 116.5    | 5.48                |
| 3/31/2004 | 12:11:08 | 117      | 5.543               |
| 3/31/2004 | 12:11:08 | 117.5    | 5.601               |
| 3/31/2004 | 12:11:09 | 118      | 5.663               |
| 3/31/2004 | 12:11:09 | 118.5    | 5.722               |
| 3/31/2004 | 12:11:10 | 119      | 5.784               |
| 3/31/2004 | 12:11:10 | 119.5    | 5.844               |
| 3/31/2004 | 12:11:11 | 120      | 5.904               |
| 3/31/2004 | 12:11:11 | 120.5    | 5.96                |
| 3/31/2004 | 12:11:12 | 121      | 6.021               |
| 3/31/2004 | 12:11:12 | 121.5    | 6.081               |
| 3/31/2004 | 12:11:13 | 122      | 6.139               |
| 3/31/2004 | 12:11:13 | 122.5    | 6.198               |
| 3/31/2004 | 12:11:14 | 123      | 6.256               |
| 3/31/2004 | 12:11:14 | 123.5    | 6.314               |
| 3/31/2004 | 12:11:15 | 124      | 6.372               |
| 3/31/2004 | 12:11:15 | 124.5    | 6.428               |
| 3/31/2004 | 12:11:16 | 125      | 6.487               |
| 3/31/2004 | 12:11:16 | 125.5    | 6.543               |
| 3/31/2004 | 12:11:17 | 126      | 6.599               |
| 3/31/2004 | 12:11:17 | 126.5    | 6.656               |
| 3/31/2004 | 12:11:18 | 127      | 6.712               |
| 3/31/2004 | 12:11:18 | 127.5    | 6.768               |
| 3/31/2004 | 12:11:19 | 128      | 6.821               |
| 3/31/2004 | 12:11:19 | 128.5    | 6.876               |
| 3/31/2004 | 12:11:20 | 129      | 6.933               |
| 3/31/2004 | 12:11:20 | 129.5    | 6.987               |
| 3/31/2004 | 12:11:21 | 130      | 7.04                |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:09:19 | 8        | 18.298              |
| 3/31/2004 | 12:09:19 | 8.5      | 18.297              |
| 3/31/2004 | 12:09:20 | 9        | 18.298              |
| 3/31/2004 | 12:09:20 | 9.5      | 18.262              |
| 3/31/2004 | 12:09:21 | 10       | 17.994              |
| 3/31/2004 | 12:09:21 | 10.5     | 19.581              |
| 3/31/2004 | 12:09:22 | 11       | 17.132              |
| 3/31/2004 | 12:09:22 | 11.5     | 18.534              |
| 3/31/2004 | 12:09:23 | 12       | 18.676              |
| 3/31/2004 | 12:09:23 | 12.5     | 17.767              |
| 3/31/2004 | 12:09:24 | 13       | 18.548              |
| 3/31/2004 | 12:09:24 | 13.5     | 17.681              |
| 3/31/2004 | 12:09:25 | 14       | 18.148              |
| 3/31/2004 | 12:09:25 | 14.5     | 17.819              |
| 3/31/2004 | 12:09:26 | 15       | 17.63               |
| 3/31/2004 | 12:09:26 | 15.5     | 17.695              |
| 3/31/2004 | 12:09:27 | 16       | 17.452              |
| 3/31/2004 | 12:09:27 | 16.5     | 17.329              |
| 3/31/2004 | 12:09:28 | 17       | 16.982              |
| 3/31/2004 | 12:09:28 | 17.5     | 16.885              |
| 3/31/2004 | 12:09:29 | 18       | 16.733              |
| 3/31/2004 | 12:09:29 | 18.5     | 16.428              |
| 3/31/2004 | 12:09:30 | 19       | 16.252              |
| 3/31/2004 | 12:09:30 | 19.5     | 16.008              |
| 3/31/2004 | 12:09:31 | 20       | 15.796              |
| 3/31/2004 | 12:09:31 | 20.5     | 15.608              |
| 3/31/2004 | 12:09:32 | 21       | 15.398              |
| 3/31/2004 | 12:09:32 | 21.5     | 15.21               |
| 3/31/2004 | 12:09:33 | 22       | 14.993              |
| 3/31/2004 | 12:09:33 | 22.5     | 14.794              |
| 3/31/2004 | 12:09:34 | 23       | 14.601              |
| 3/31/2004 | 12:09:34 | 23.5     | 14.403              |
| 3/31/2004 | 12:09:35 | 24       | 14.22               |
| 3/31/2004 | 12:09:35 | 24.5     | 14.018              |
| 3/31/2004 | 12:09:36 | 25       | 13.824              |
| 3/31/2004 | 12:09:36 | 25.5     | 13.627              |
| 3/31/2004 | 12:09:37 | 26       | 13.436              |
| 3/31/2004 | 12:09:37 | 26.5     | 13.236              |
| 3/31/2004 | 12:09:38 | 27       | 13.044              |
| 3/31/2004 | 12:09:38 | 27.5     | 12.863              |
| 3/31/2004 | 12:09:39 | 28       | 12.67               |
| 3/31/2004 | 12:09:39 | 28.5     | 12.487              |
| 3/31/2004 | 12:09:40 | 29       | 12.306              |
| 3/31/2004 | 12:09:40 | 29.5     | 12.113              |
| 3/31/2004 | 12:09:41 | 30       | 11.931              |
| 3/31/2004 | 12:09:41 | 30.5     | 11.755              |
| 3/31/2004 | 12:09:42 | 31       | 11.566              |
| 3/31/2004 | 12:09:42 | 31.5     | 11.388              |
| 3/31/2004 | 12:09:43 | 32       | 11.217              |



| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
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| 3/31/2004 | 12:11:21 | 130.5    | 7.093               |
| 3/31/2004 | 12:11:22 | 131      | 7.151               |
| 3/31/2004 | 12:11:22 | 131.5    | 7.206               |
| 3/31/2004 | 12:11:23 | 132      | 7.257               |
| 3/31/2004 | 12:11:23 | 132.5    | 7.31                |
| 3/31/2004 | 12:11:24 | 133      | 7.365               |
| 3/31/2004 | 12:11:24 | 133.5    | 7.416               |
| 3/31/2004 | 12:11:25 | 134      | 7.469               |
| 3/31/2004 | 12:11:25 | 134.5    | 7.521               |
| 3/31/2004 | 12:11:26 | 135      | 7.574               |
| 3/31/2004 | 12:11:26 | 135.5    | 7.627               |
| 3/31/2004 | 12:11:27 | 136      | 7.68                |
| 3/31/2004 | 12:11:27 | 136.5    | 7.729               |
| 3/31/2004 | 12:11:28 | 137      | 7.78                |
| 3/31/2004 | 12:11:28 | 137.5    | 7.832               |
| 3/31/2004 | 12:11:29 | 138      | 7.881               |
| 3/31/2004 | 12:11:29 | 138.5    | 7.933               |
| 3/31/2004 | 12:11:30 | 139      | 7.982               |
| 3/31/2004 | 12:11:30 | 139.5    | 8.034               |
| 3/31/2004 | 12:11:31 | 140      | 8.083               |
| 3/31/2004 | 12:11:31 | 140.5    | 8.133               |
| 3/31/2004 | 12:11:32 | 141      | 8.182               |
| 3/31/2004 | 12:11:32 | 141.5    | 8.23                |
| 3/31/2004 | 12:11:33 | 142      | 8.28                |
| 3/31/2004 | 12:11:33 | 142.5    | 8.329               |
| 3/31/2004 | 12:11:34 | 143      | 8.379               |
| 3/31/2004 | 12:11:34 | 143.5    | 8.425               |
| 3/31/2004 | 12:11:35 | 144      | 8.475               |
| 3/31/2004 | 12:11:35 | 144.5    | 8.523               |
| 3/31/2004 | 12:11:36 | 145      | 8.57                |
| 3/31/2004 | 12:11:36 | 145.5    | 8.617               |
| 3/31/2004 | 12:11:37 | 146      | 8.665               |
| 3/31/2004 | 12:11:37 | 146.5    | 8.712               |
| 3/31/2004 | 12:11:38 | 147      | 8.759               |
| 3/31/2004 | 12:11:38 | 147.5    | 8.803               |
| 3/31/2004 | 12:11:39 | 148      | 8.853               |
| 3/31/2004 | 12:11:39 | 148.5    | 8.9                 |
| 3/31/2004 | 12:11:40 | 149      | 8.945               |
| 3/31/2004 | 12:11:40 | 149.5    | 8.993               |
| 3/31/2004 | 12:11:41 | 150      | 9.039               |
| 3/31/2004 | 12:11:41 | 150.5    | 9.083               |
| 3/31/2004 | 12:11:42 | 151      | 9.129               |
| 3/31/2004 | 12:11:42 | 151.5    | 9.174               |
| 3/31/2004 | 12:11:43 | 152      | 9.22                |
| 3/31/2004 | 12:11:43 | 152.5    | 9.265               |
| 3/31/2004 | 12:11:44 | 153      | 9.307               |
| 3/31/2004 | 12:11:44 | 153.5    | 9.352               |
| 3/31/2004 | 12:11:45 | 154      | 9.398               |
| 3/31/2004 | 12:11:45 | 154.5    | 9.441               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
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| 3/31/2004 | 12:11:46 | 155      | 9.484               |
| 3/31/2004 | 12:11:46 | 155.5    | 9.528               |
| 3/31/2004 | 12:11:47 | 156      | 9.572               |
| 3/31/2004 | 12:11:47 | 156.5    | 9.617               |
| 3/31/2004 | 12:11:48 | 157      | 9.66                |
| 3/31/2004 | 12:11:48 | 157.5    | 9.703               |
| 3/31/2004 | 12:11:49 | 158      | 9.745               |
| 3/31/2004 | 12:11:49 | 158.5    | 9.788               |
| 3/31/2004 | 12:11:50 | 159      | 9.831               |
| 3/31/2004 | 12:11:50 | 159.5    | 9.872               |
| 3/31/2004 | 12:11:51 | 160      | 9.914               |
| 3/31/2004 | 12:11:51 | 160.5    | 9.955               |
| 3/31/2004 | 12:11:52 | 161      | 9.997               |
| 3/31/2004 | 12:11:52 | 161.5    | 10.039              |
| 3/31/2004 | 12:11:53 | 162      | 10.082              |
| 3/31/2004 | 12:11:53 | 162.5    | 10.123              |
| 3/31/2004 | 12:11:54 | 163      | 10.162              |
| 3/31/2004 | 12:11:54 | 163.5    | 10.203              |
| 3/31/2004 | 12:11:55 | 164      | 10.245              |
| 3/31/2004 | 12:11:55 | 164.5    | 10.284              |
| 3/31/2004 | 12:11:56 | 165      | 10.323              |
| 3/31/2004 | 12:11:56 | 165.5    | 10.364              |
| 3/31/2004 | 12:11:57 | 166      | 10.405              |
| 3/31/2004 | 12:11:57 | 166.5    | 10.445              |
| 3/31/2004 | 12:11:58 | 167      | 10.484              |
| 3/31/2004 | 12:11:58 | 167.5    | 10.523              |
| 3/31/2004 | 12:11:59 | 168      | 10.564              |
| 3/31/2004 | 12:11:59 | 168.5    | 10.604              |
| 3/31/2004 | 12:12:00 | 169      | 10.641              |
| 3/31/2004 | 12:12:00 | 169.5    | 10.681              |
| 3/31/2004 | 12:12:01 | 170      | 10.72               |
| 3/31/2004 | 12:12:01 | 170.5    | 10.758              |
| 3/31/2004 | 12:12:02 | 171      | 10.795              |
| 3/31/2004 | 12:12:02 | 171.5    | 10.834              |
| 3/31/2004 | 12:12:03 | 172      | 10.872              |
| 3/31/2004 | 12:12:03 | 172.5    | 10.91               |
| 3/31/2004 | 12:12:04 | 173      | 10.947              |
| 3/31/2004 | 12:12:04 | 173.5    | 10.983              |
| 3/31/2004 | 12:12:05 | 174      | 11.022              |
| 3/31/2004 | 12:12:05 | 174.5    | 11.059              |
| 3/31/2004 | 12:12:06 | 175      | 11.096              |
| 3/31/2004 | 12:12:06 | 175.5    | 11.132              |
| 3/31/2004 | 12:12:07 | 176      | 11.17               |
| 3/31/2004 | 12:12:07 | 176.5    | 11.207              |
| 3/31/2004 | 12:12:08 | 177      | 11.243              |
| 3/31/2004 | 12:12:08 | 177.5    | 11.281              |
| 3/31/2004 | 12:12:09 | 178      | 11.315              |
| 3/31/2004 | 12:12:09 | 178.5    | 11.353              |
| 3/31/2004 | 12:12:10 | 179      | 11.387              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
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| 3/31/2004 | 12:12:10 | 179.5    | 11.423              |
| 3/31/2004 | 12:12:11 | 180      | 11.459              |
| 3/31/2004 | 12:12:11 | 180.5    | 11.495              |
| 3/31/2004 | 12:12:12 | 181      | 11.529              |
| 3/31/2004 | 12:12:12 | 181.5    | 11.565              |
| 3/31/2004 | 12:12:13 | 182      | 11.599              |
| 3/31/2004 | 12:12:13 | 182.5    | 11.633              |
| 3/31/2004 | 12:12:14 | 183      | 11.671              |
| 3/31/2004 | 12:12:14 | 183.5    | 11.705              |
| 3/31/2004 | 12:12:15 | 184      | 11.739              |
| 3/31/2004 | 12:12:15 | 184.5    | 11.773              |
| 3/31/2004 | 12:12:16 | 185      | 11.807              |
| 3/31/2004 | 12:12:16 | 185.5    | 11.84               |
| 3/31/2004 | 12:12:17 | 186      | 11.876              |
| 3/31/2004 | 12:12:17 | 186.5    | 11.91               |
| 3/31/2004 | 12:12:18 | 187      | 11.942              |
| 3/31/2004 | 12:12:18 | 187.5    | 11.977              |
| 3/31/2004 | 12:12:19 | 188      | 12.011              |
| 3/31/2004 | 12:12:19 | 188.5    | 12.043              |
| 3/31/2004 | 12:12:20 | 189      | 12.076              |
| 3/31/2004 | 12:12:20 | 189.5    | 12.108              |
| 3/31/2004 | 12:12:21 | 190      | 12.143              |
| 3/31/2004 | 12:12:21 | 190.5    | 12.175              |
| 3/31/2004 | 12:12:22 | 191      | 12.208              |
| 3/31/2004 | 12:12:22 | 191.5    | 12.24               |
| 3/31/2004 | 12:12:23 | 192      | 12.271              |
| 3/31/2004 | 12:12:23 | 192.5    | 12.303              |
| 3/31/2004 | 12:12:24 | 193      | 12.336              |
| 3/31/2004 | 12:12:24 | 193.5    | 12.368              |
| 3/31/2004 | 12:12:25 | 194      | 12.401              |
| 3/31/2004 | 12:12:25 | 194.5    | 12.43               |
| 3/31/2004 | 12:12:26 | 195      | 12.462              |
| 3/31/2004 | 12:12:26 | 195.5    | 12.495              |
| 3/31/2004 | 12:12:27 | 196      | 12.525              |
| 3/31/2004 | 12:12:27 | 196.5    | 12.556              |
| 3/31/2004 | 12:12:28 | 197      | 12.585              |
| 3/31/2004 | 12:12:28 | 197.5    | 12.618              |
| 3/31/2004 | 12:12:29 | 198      | 12.649              |
| 3/31/2004 | 12:12:29 | 198.5    | 12.68               |
| 3/31/2004 | 12:12:30 | 199      | 12.71               |
| 3/31/2004 | 12:12:30 | 199.5    | 12.739              |
| 3/31/2004 | 12:12:31 | 200      | 12.77               |
| 3/31/2004 | 12:12:31 | 200.5    | 12.801              |
| 3/31/2004 | 12:12:32 | 201      | 12.83               |
| 3/31/2004 | 12:12:32 | 201.5    | 12.861              |
| 3/31/2004 | 12:12:33 | 202      | 12.888              |
| 3/31/2004 | 12:12:33 | 202.5    | 12.919              |
| 3/31/2004 | 12:12:34 | 203      | 12.95               |
| 3/31/2004 | 12:12:34 | 203.5    | 12.979              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:12:35 | 204      | 13.008              |
| 3/31/2004 | 12:12:35 | 204.5    | 13.037              |
| 3/31/2004 | 12:12:36 | 205      | 13.066              |
| 3/31/2004 | 12:12:36 | 205.5    | 13.095              |
| 3/31/2004 | 12:12:37 | 206      | 13.122              |
| 3/31/2004 | 12:12:37 | 206.5    | 13.153              |
| 3/31/2004 | 12:12:38 | 207      | 13.18               |
| 3/31/2004 | 12:12:38 | 207.5    | 13.209              |
| 3/31/2004 | 12:12:39 | 208      | 13.237              |
| 3/31/2004 | 12:12:39 | 208.5    | 13.266              |
| 3/31/2004 | 12:12:40 | 209      | 13.293              |
| 3/31/2004 | 12:12:40 | 209.5    | 13.321              |
| 3/31/2004 | 12:12:41 | 210      | 13.348              |
| 3/31/2004 | 12:12:41 | 210.5    | 13.377              |
| 3/31/2004 | 12:12:42 | 211      | 13.404              |
| 3/31/2004 | 12:12:42 | 211.5    | 13.432              |
| 3/31/2004 | 12:12:43 | 212      | 13.459              |
| 3/31/2004 | 12:12:43 | 212.5    | 13.486              |
| 3/31/2004 | 12:12:44 | 213      | 13.514              |
| 3/31/2004 | 12:12:44 | 213.5    | 13.541              |
| 3/31/2004 | 12:12:45 | 214      | 13.567              |
| 3/31/2004 | 12:12:45 | 214.5    | 13.594              |
| 3/31/2004 | 12:12:46 | 215      | 13.621              |
| 3/31/2004 | 12:12:46 | 215.5    | 13.647              |
| 3/31/2004 | 12:12:47 | 216      | 13.673              |
| 3/31/2004 | 12:12:47 | 216.5    | 13.7                |
| 3/31/2004 | 12:12:48 | 217      | 13.726              |
| 3/31/2004 | 12:12:48 | 217.5    | 13.751              |
| 3/31/2004 | 12:12:49 | 218      | 13.779              |
| 3/31/2004 | 12:12:49 | 218.5    | 13.804              |
| 3/31/2004 | 12:12:50 | 219      | 13.83               |
| 3/31/2004 | 12:12:50 | 219.5    | 13.856              |
| 3/31/2004 | 12:12:51 | 220      | 13.881              |
| 3/31/2004 | 12:12:51 | 220.5    | 13.907              |
| 3/31/2004 | 12:12:52 | 221      | 13.932              |
| 3/31/2004 | 12:12:52 | 221.5    | 13.958              |
| 3/31/2004 | 12:12:53 | 222      | 13.982              |
| 3/31/2004 | 12:12:53 | 222.5    | 14.009              |
| 3/31/2004 | 12:12:54 | 223      | 14.033              |
| 3/31/2004 | 12:12:54 | 223.5    | 14.059              |
| 3/31/2004 | 12:12:55 | 224      | 14.083              |
| 3/31/2004 | 12:12:55 | 224.5    | 14.107              |
| 3/31/2004 | 12:12:56 | 225      | 14.131              |
| 3/31/2004 | 12:12:56 | 225.5    | 14.156              |
| 3/31/2004 | 12:12:57 | 226      | 14.18               |
| 3/31/2004 | 12:12:57 | 226.5    | 14.204              |
| 3/31/2004 | 12:12:58 | 227      | 14.228              |
| 3/31/2004 | 12:12:58 | 227.5    | 14.254              |
| 3/31/2004 | 12:12:59 | 228      | 14.28               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
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| 3/31/2004 | 12:12:59 | 228.5    | 14.302              |
| 3/31/2004 | 12:13:00 | 229      | 14.327              |
| 3/31/2004 | 12:13:00 | 229.5    | 14.35               |
| 3/31/2004 | 12:13:01 | 230      | 14.374              |
| 3/31/2004 | 12:13:01 | 230.5    | 14.397              |
| 3/31/2004 | 12:13:02 | 231      | 14.421              |
| 3/31/2004 | 12:13:02 | 231.5    | 14.445              |
| 3/31/2004 | 12:13:03 | 232      | 14.468              |
| 3/31/2004 | 12:13:03 | 232.5    | 14.492              |
| 3/31/2004 | 12:13:04 | 233      | 14.515              |
| 3/31/2004 | 12:13:04 | 233.5    | 14.538              |
| 3/31/2004 | 12:13:05 | 234      | 14.562              |
| 3/31/2004 | 12:13:05 | 234.5    | 14.584              |
| 3/31/2004 | 12:13:06 | 235      | 14.606              |
| 3/31/2004 | 12:13:06 | 235.5    | 14.63               |
| 3/31/2004 | 12:13:07 | 236      | 14.652              |
| 3/31/2004 | 12:13:07 | 236.5    | 14.674              |
| 3/31/2004 | 12:13:08 | 237      | 14.697              |
| 3/31/2004 | 12:13:08 | 237.5    | 14.719              |
| 3/31/2004 | 12:13:09 | 238      | 14.741              |
| 3/31/2004 | 12:13:09 | 238.5    | 14.763              |
| 3/31/2004 | 12:13:10 | 239      | 14.785              |
| 3/31/2004 | 12:13:10 | 239.5    | 14.808              |
| 3/31/2004 | 12:13:11 | 240      | 14.83               |
| 3/31/2004 | 12:13:11 | 240.5    | 14.85               |
| 3/31/2004 | 12:13:12 | 241      | 14.873              |
| 3/31/2004 | 12:13:12 | 241.5    | 14.895              |
| 3/31/2004 | 12:13:13 | 242      | 14.915              |
| 3/31/2004 | 12:13:13 | 242.5    | 14.938              |
| 3/31/2004 | 12:13:14 | 243      | 14.958              |
| 3/31/2004 | 12:13:14 | 243.5    | 14.979              |
| 3/31/2004 | 12:13:15 | 244      | 15.001              |
| 3/31/2004 | 12:13:15 | 244.5    | 15.02               |
| 3/31/2004 | 12:13:16 | 245      | 15.042              |
| 3/31/2004 | 12:13:16 | 245.5    | 15.062              |
| 3/31/2004 | 12:13:17 | 246      | 15.085              |
| 3/31/2004 | 12:13:17 | 246.5    | 15.105              |
| 3/31/2004 | 12:13:18 | 247      | 15.124              |
| 3/31/2004 | 12:13:18 | 247.5    | 15.146              |
| 3/31/2004 | 12:13:19 | 248      | 15.167              |
| 3/31/2004 | 12:13:19 | 248.5    | 15.185              |
| 3/31/2004 | 12:13:20 | 249      | 15.206              |
| 3/31/2004 | 12:13:20 | 249.5    | 15.226              |
| 3/31/2004 | 12:13:21 | 250      | 15.247              |
| 3/31/2004 | 12:13:21 | 250.5    | 15.267              |
| 3/31/2004 | 12:13:22 | 251      | 15.288              |
| 3/31/2004 | 12:13:22 | 251.5    | 15.308              |
| 3/31/2004 | 12:13:23 | 252      | 15.326              |
| 3/31/2004 | 12:13:23 | 252.5    | 15.348              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
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| 3/31/2004 | 12:13:24 | 253      | 15.368              |
| 3/31/2004 | 12:13:24 | 253.5    | 15.387              |
| 3/31/2004 | 12:13:25 | 254      | 15.406              |
| 3/31/2004 | 12:13:25 | 254.5    | 15.425              |
| 3/31/2004 | 12:13:26 | 255      | 15.443              |
| 3/31/2004 | 12:13:26 | 255.5    | 15.462              |
| 3/31/2004 | 12:13:27 | 256      | 15.483              |
| 3/31/2004 | 12:13:27 | 256.5    | 15.502              |
| 3/31/2004 | 12:13:28 | 257      | 15.52               |
| 3/31/2004 | 12:13:28 | 257.5    | 15.539              |
| 3/31/2004 | 12:13:29 | 258      | 15.558              |
| 3/31/2004 | 12:13:29 | 258.5    | 15.575              |
| 3/31/2004 | 12:13:30 | 259      | 15.594              |
| 3/31/2004 | 12:13:30 | 259.5    | 15.613              |
| 3/31/2004 | 12:13:31 | 260      | 15.631              |
| 3/31/2004 | 12:13:31 | 260.5    | 15.65               |
| 3/31/2004 | 12:13:32 | 261      | 15.669              |
| 3/31/2004 | 12:13:32 | 261.5    | 15.686              |
| 3/31/2004 | 12:13:33 | 262      | 15.705              |
| 3/31/2004 | 12:13:33 | 262.5    | 15.724              |
| 3/31/2004 | 12:13:34 | 263      | 15.741              |
| 3/31/2004 | 12:13:34 | 263.5    | 15.76               |
| 3/31/2004 | 12:13:35 | 264      | 15.777              |
| 3/31/2004 | 12:13:35 | 264.5    | 15.794              |
| 3/31/2004 | 12:13:36 | 265      | 15.813              |
| 3/31/2004 | 12:13:36 | 265.5    | 15.83               |
| 3/31/2004 | 12:13:37 | 266      | 15.847              |
| 3/31/2004 | 12:13:37 | 266.5    | 15.864              |
| 3/31/2004 | 12:13:38 | 267      | 15.881              |
| 3/31/2004 | 12:13:38 | 267.5    | 15.898              |
| 3/31/2004 | 12:13:39 | 268      | 15.915              |
| 3/31/2004 | 12:13:39 | 268.5    | 15.934              |
| 3/31/2004 | 12:13:40 | 269      | 15.951              |
| 3/31/2004 | 12:13:40 | 269.5    | 15.968              |
| 3/31/2004 | 12:13:41 | 270      | 15.984              |
| 3/31/2004 | 12:13:41 | 270.5    | 16.001              |
| 3/31/2004 | 12:13:42 | 271      | 16.018              |
| 3/31/2004 | 12:13:42 | 271.5    | 16.033              |
| 3/31/2004 | 12:13:43 | 272      | 16.05               |
| 3/31/2004 | 12:13:43 | 272.5    | 16.067              |
| 3/31/2004 | 12:13:44 | 273      | 16.085              |
| 3/31/2004 | 12:13:44 | 273.5    | 16.102              |
| 3/31/2004 | 12:13:45 | 274      | 16.117              |
| 3/31/2004 | 12:13:45 | 274.5    | 16.132              |
| 3/31/2004 | 12:13:46 | 275      | 16.149              |
| 3/31/2004 | 12:13:46 | 275.5    | 16.167              |
| 3/31/2004 | 12:13:47 | 276      | 16.182              |
| 3/31/2004 | 12:13:47 | 276.5    | 16.197              |
| 3/31/2004 | 12:13:48 | 277      | 16.213              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
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| 3/31/2004 | 12:13:48 | 277.5    | 16.23               |
| 3/31/2004 | 12:13:49 | 278      | 16.245              |
| 3/31/2004 | 12:13:49 | 278.5    | 16.261              |
| 3/31/2004 | 12:13:50 | 279      | 16.276              |
| 3/31/2004 | 12:13:50 | 279.5    | 16.291              |
| 3/31/2004 | 12:13:51 | 280      | 16.307              |
| 3/31/2004 | 12:13:51 | 280.5    | 16.324              |
| 3/31/2004 | 12:13:52 | 281      | 16.339              |
| 3/31/2004 | 12:13:52 | 281.5    | 16.355              |
| 3/31/2004 | 12:13:53 | 282      | 16.368              |
| 3/31/2004 | 12:13:53 | 282.5    | 16.385              |
| 3/31/2004 | 12:13:54 | 283      | 16.401              |
| 3/31/2004 | 12:13:54 | 283.5    | 16.416              |
| 3/31/2004 | 12:13:55 | 284      | 16.43               |
| 3/31/2004 | 12:13:55 | 284.5    | 16.443              |
| 3/31/2004 | 12:13:56 | 285      | 16.459              |
| 3/31/2004 | 12:13:56 | 285.5    | 16.474              |
| 3/31/2004 | 12:13:57 | 286      | 16.49               |
| 3/31/2004 | 12:13:57 | 286.5    | 16.503              |
| 3/31/2004 | 12:13:58 | 287      | 16.517              |
| 3/31/2004 | 12:13:58 | 287.5    | 16.534              |
| 3/31/2004 | 12:13:59 | 288      | 16.548              |
| 3/31/2004 | 12:13:59 | 288.5    | 16.563              |
| 3/31/2004 | 12:14:00 | 289      | 16.577              |
| 3/31/2004 | 12:14:00 | 289.5    | 16.59               |
| 3/31/2004 | 12:14:01 | 290      | 16.606              |
| 3/31/2004 | 12:14:01 | 290.5    | 16.621              |
| 3/31/2004 | 12:14:02 | 291      | 16.635              |
| 3/31/2004 | 12:14:02 | 291.5    | 16.647              |
| 3/31/2004 | 12:14:03 | 292      | 16.66               |
| 3/31/2004 | 12:14:03 | 292.5    | 16.674              |
| 3/31/2004 | 12:14:04 | 293      | 16.69               |
| 3/31/2004 | 12:14:04 | 293.5    | 16.701              |
| 3/31/2004 | 12:14:05 | 294      | 16.717              |
| 3/31/2004 | 12:14:05 | 294.5    | 16.731              |
| 3/31/2004 | 12:14:06 | 295      | 16.744              |
| 3/31/2004 | 12:14:06 | 295.5    | 16.758              |
| 3/31/2004 | 12:14:07 | 296      | 16.772              |
| 3/31/2004 | 12:14:07 | 296.5    | 16.785              |
| 3/31/2004 | 12:14:08 | 297      | 16.797              |
| 3/31/2004 | 12:14:08 | 297.5    | 16.811              |
| 3/31/2004 | 12:14:09 | 298      | 16.825              |
| 3/31/2004 | 12:14:09 | 298.5    | 16.838              |
| 3/31/2004 | 12:14:10 | 299      | 16.852              |
| 3/31/2004 | 12:14:10 | 299.5    | 16.864              |
| 3/31/2004 | 12:14:11 | 300      | 16.877              |
| 3/31/2004 | 12:14:11 | 300.5    | 16.893              |
| 3/31/2004 | 12:14:12 | 301      | 16.905              |
| 3/31/2004 | 12:14:12 | 301.5    | 16.919              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
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| 3/31/2004 | 12:14:13 | 302      | 16.931              |
| 3/31/2004 | 12:14:13 | 302.5    | 16.943              |
| 3/31/2004 | 12:14:14 | 303      | 16.956              |
| 3/31/2004 | 12:14:14 | 303.5    | 16.97               |
| 3/31/2004 | 12:14:15 | 304      | 16.982              |
| 3/31/2004 | 12:14:15 | 304.5    | 16.996              |
| 3/31/2004 | 12:14:16 | 305      | 17.006              |
| 3/31/2004 | 12:14:16 | 305.5    | 17.018              |
| 3/31/2004 | 12:14:17 | 306      | 17.03               |
| 3/31/2004 | 12:14:17 | 306.5    | 17.042              |
| 3/31/2004 | 12:14:18 | 307      | 17.055              |
| 3/31/2004 | 12:14:18 | 307.5    | 17.067              |
| 3/31/2004 | 12:14:19 | 308      | 17.079              |
| 3/31/2004 | 12:14:19 | 308.5    | 17.091              |
| 3/31/2004 | 12:14:20 | 309      | 17.105              |
| 3/31/2004 | 12:14:20 | 309.5    | 17.117              |
| 3/31/2004 | 12:14:21 | 310      | 17.129              |
| 3/31/2004 | 12:14:21 | 310.5    | 17.139              |
| 3/31/2004 | 12:14:22 | 311      | 17.153              |
| 3/31/2004 | 12:14:22 | 311.5    | 17.165              |
| 3/31/2004 | 12:14:23 | 312      | 17.175              |
| 3/31/2004 | 12:14:23 | 312.5    | 17.189              |
| 3/31/2004 | 12:14:24 | 313      | 17.199              |
| 3/31/2004 | 12:14:24 | 313.5    | 17.211              |
| 3/31/2004 | 12:14:25 | 314      | 17.223              |
| 3/31/2004 | 12:14:25 | 314.5    | 17.233              |
| 3/31/2004 | 12:14:26 | 315      | 17.247              |
| 3/31/2004 | 12:14:26 | 315.5    | 17.257              |
| 3/31/2004 | 12:14:27 | 316      | 17.269              |
| 3/31/2004 | 12:14:27 | 316.5    | 17.281              |
| 3/31/2004 | 12:14:28 | 317      | 17.291              |
| 3/31/2004 | 12:14:28 | 317.5    | 17.303              |
| 3/31/2004 | 12:14:29 | 318      | 17.313              |
| 3/31/2004 | 12:14:29 | 318.5    | 17.324              |
| 3/31/2004 | 12:14:30 | 319      | 17.336              |
| 3/31/2004 | 12:14:30 | 319.5    | 17.346              |
| 3/31/2004 | 12:14:31 | 320      | 17.358              |
| 3/31/2004 | 12:14:31 | 320.5    | 17.366              |
| 3/31/2004 | 12:14:32 | 321      | 17.378              |
| 3/31/2004 | 12:14:32 | 321.5    | 17.39               |
| 3/31/2004 | 12:14:33 | 322      | 17.401              |
| 3/31/2004 | 12:14:33 | 322.5    | 17.411              |
| 3/31/2004 | 12:14:34 | 323      | 17.423              |
| 3/31/2004 | 12:14:34 | 323.5    | 17.433              |
| 3/31/2004 | 12:14:35 | 324      | 17.445              |
| 3/31/2004 | 12:14:35 | 324.5    | 17.452              |
| 3/31/2004 | 12:14:36 | 325      | 17.466              |
| 3/31/2004 | 12:14:36 | 325.5    | 17.476              |
| 3/31/2004 | 12:14:37 | 326      | 17.486              |



| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
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| 3/31/2004 | 12:14:37 | 326.5    | 17.496              |
| 3/31/2004 | 12:14:38 | 327      | 17.507              |
| 3/31/2004 | 12:14:38 | 327.5    | 17.517              |
| 3/31/2004 | 12:14:39 | 328      | 17.527              |
| 3/31/2004 | 12:14:39 | 328.5    | 17.537              |
| 3/31/2004 | 12:14:40 | 329      | 17.549              |
| 3/31/2004 | 12:14:40 | 329.5    | 17.556              |
| 3/31/2004 | 12:14:41 | 330      | 17.568              |
| 3/31/2004 | 12:14:41 | 330.5    | 17.577              |
| 3/31/2004 | 12:14:42 | 331      | 17.589              |
| 3/31/2004 | 12:14:42 | 331.5    | 17.597              |
| 3/31/2004 | 12:14:43 | 332      | 17.607              |
| 3/31/2004 | 12:14:43 | 332.5    | 17.618              |
| 3/31/2004 | 12:14:44 | 333      | 17.628              |
| 3/31/2004 | 12:14:44 | 333.5    | 17.636              |
| 3/31/2004 | 12:14:45 | 334      | 17.647              |
| 3/31/2004 | 12:14:45 | 334.5    | 17.655              |
| 3/31/2004 | 12:14:46 | 335      | 17.666              |
| 3/31/2004 | 12:14:46 | 335.5    | 17.676              |
| 3/31/2004 | 12:14:47 | 336      | 17.684              |
| 3/31/2004 | 12:14:47 | 336.5    | 17.695              |
| 3/31/2004 | 12:14:48 | 337      | 17.703              |
| 3/31/2004 | 12:14:48 | 337.5    | 17.713              |
| 3/31/2004 | 12:14:49 | 338      | 17.722              |
| 3/31/2004 | 12:14:49 | 338.5    | 17.732              |
| 3/31/2004 | 12:14:50 | 339      | 17.741              |
| 3/31/2004 | 12:14:50 | 339.5    | 17.749              |
| 3/31/2004 | 12:14:51 | 340      | 17.76               |
| 3/31/2004 | 12:14:51 | 340.5    | 17.77               |
| 3/31/2004 | 12:14:52 | 341      | 17.778              |
| 3/31/2004 | 12:14:52 | 341.5    | 17.787              |
| 3/31/2004 | 12:14:53 | 342      | 17.795              |
| 3/31/2004 | 12:14:53 | 342.5    | 17.806              |
| 3/31/2004 | 12:14:54 | 343      | 17.813              |
| 3/31/2004 | 12:14:54 | 343.5    | 17.821              |
| 3/31/2004 | 12:14:55 | 344      | 17.83               |
| 3/31/2004 | 12:14:55 | 344.5    | 17.84               |
| 3/31/2004 | 12:14:56 | 345      | 17.848              |
| 3/31/2004 | 12:14:56 | 345.5    | 17.857              |
| 3/31/2004 | 12:14:57 | 346      | 17.867              |
| 3/31/2004 | 12:14:57 | 346.5    | 17.874              |
| 3/31/2004 | 12:14:58 | 347      | 17.883              |
| 3/31/2004 | 12:14:58 | 347.5    | 17.891              |
| 3/31/2004 | 12:14:59 | 348      | 17.9                |
| 3/31/2004 | 12:14:59 | 348.5    | 17.908              |
| 3/31/2004 | 12:15:00 | 349      | 17.917              |
| 3/31/2004 | 12:15:00 | 349.5    | 17.925              |
| 3/31/2004 | 12:15:01 | 350      | 17.934              |
| 3/31/2004 | 12:15:01 | 350.5    | 17.942              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:15:02 | 351      | 17.951              |
| 3/31/2004 | 12:15:02 | 351.5    | 17.959              |
| 3/31/2004 | 12:15:03 | 352      | 17.968              |
| 3/31/2004 | 12:15:03 | 352.5    | 17.977              |
| 3/31/2004 | 12:15:04 | 353      | 17.983              |
| 3/31/2004 | 12:15:04 | 353.5    | 17.994              |
| 3/31/2004 | 12:15:05 | 354      | 18                  |
| 3/31/2004 | 12:15:05 | 354.5    | 18.007              |
| 3/31/2004 | 12:15:06 | 355      | 18.016              |
| 3/31/2004 | 12:15:06 | 355.5    | 18.024              |
| 3/31/2004 | 12:15:07 | 356      | 18.033              |
| 3/31/2004 | 12:15:07 | 356.5    | 18.04               |
| 3/31/2004 | 12:15:08 | 357      | 18.047              |
| 3/31/2004 | 12:15:08 | 357.5    | 18.055              |
| 3/31/2004 | 12:15:09 | 358      | 18.064              |
| 3/31/2004 | 12:15:09 | 358.5    | 18.072              |
| 3/31/2004 | 12:15:10 | 359      | 18.081              |
| 3/31/2004 | 12:15:10 | 359.5    | 18.086              |
| 3/31/2004 | 12:15:11 | 360      | 18.093              |
| 3/31/2004 | 12:15:11 | 360.5    | 18.103              |
| 3/31/2004 | 12:15:12 | 361      | 18.11               |
| 3/31/2004 | 12:15:12 | 361.5    | 18.117              |
| 3/31/2004 | 12:15:13 | 362      | 18.125              |
| 3/31/2004 | 12:15:13 | 362.5    | 18.132              |
| 3/31/2004 | 12:15:14 | 363      | 18.141              |
| 3/31/2004 | 12:15:14 | 363.5    | 18.147              |
| 3/31/2004 | 12:15:15 | 364      | 18.154              |
| 3/31/2004 | 12:15:15 | 364.5    | 18.161              |
| 3/31/2004 | 12:15:16 | 365      | 18.17               |
| 3/31/2004 | 12:15:16 | 365.5    | 18.177              |
| 3/31/2004 | 12:15:17 | 366      | 18.183              |
| 3/31/2004 | 12:15:17 | 366.5    | 18.192              |
| 3/31/2004 | 12:15:18 | 367      | 18.197              |
| 3/31/2004 | 12:15:18 | 367.5    | 18.206              |
| 3/31/2004 | 12:15:19 | 368      | 18.212              |
| 3/31/2004 | 12:15:19 | 368.5    | 18.221              |
| 3/31/2004 | 12:15:20 | 369      | 18.226              |
| 3/31/2004 | 12:15:20 | 369.5    | 18.233              |
| 3/31/2004 | 12:15:21 | 370      | 18.24               |
| 3/31/2004 | 12:15:21 | 370.5    | 18.247              |
| 3/31/2004 | 12:15:22 | 371      | 18.255              |
| 3/31/2004 | 12:15:22 | 371.5    | 18.26               |
| 3/31/2004 | 12:15:23 | 372      | 18.267              |
| 3/31/2004 | 12:15:23 | 372.5    | 18.276              |
| 3/31/2004 | 12:15:24 | 373      | 18.281              |
| 3/31/2004 | 12:15:24 | 373.5    | 18.288              |
| 3/31/2004 | 12:15:25 | 374      | 18.294              |
| 3/31/2004 | 12:15:25 | 374.5    | 18.301              |
| 3/31/2004 | 12:15:26 | 375      | 18.306              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:15:26 | 375.5    | 18.315              |
| 3/31/2004 | 12:15:27 | 376      | 18.322              |
| 3/31/2004 | 12:15:27 | 376.5    | 18.329              |
| 3/31/2004 | 12:15:28 | 377      | 18.337              |
| 3/31/2004 | 12:15:28 | 377.5    | 18.346              |
| 3/31/2004 | 12:15:29 | 378      | 18.339              |
| 3/31/2004 | 12:15:29 | 378.5    | 18.366              |
| 3/31/2004 | 12:15:30 | 379      | 18.351              |
| 3/31/2004 | 12:15:30 | 379.5    | 18.373              |
| 3/31/2004 | 12:15:31 | 380      | 18.371              |
| 3/31/2004 | 12:15:31 | 380.5    | 18.383              |
| 3/31/2004 | 12:15:32 | 381      | 18.39               |
| 3/31/2004 | 12:15:32 | 381.5    | 18.394              |
| 3/31/2004 | 12:15:33 | 382      | 18.402              |
| 3/31/2004 | 12:15:33 | 382.5    | 18.407              |
| 3/31/2004 | 12:15:34 | 383      | 18.414              |
| 3/31/2004 | 12:15:34 | 383.5    | 18.419              |
| 3/31/2004 | 12:15:35 | 384      | 18.426              |
| 3/31/2004 | 12:15:35 | 384.5    | 18.431              |
| 3/31/2004 | 12:15:36 | 385      | 18.438              |
| 3/31/2004 | 12:15:36 | 385.5    | 18.445              |
| 3/31/2004 | 12:15:37 | 386      | 18.45               |
| 3/31/2004 | 12:15:37 | 386.5    | 18.457              |
| 3/31/2004 | 12:15:38 | 387      | 18.46               |
| 3/31/2004 | 12:15:38 | 387.5    | 18.467              |
| 3/31/2004 | 12:15:39 | 388      | 18.472              |
| 3/31/2004 | 12:15:39 | 388.5    | 18.477              |
| 3/31/2004 | 12:15:40 | 389      | 18.482              |
| 3/31/2004 | 12:15:40 | 389.5    | 18.488              |
| 3/31/2004 | 12:15:41 | 390      | 18.494              |
| 3/31/2004 | 12:15:41 | 390.5    | 18.5                |
| 3/31/2004 | 12:15:42 | 391      | 18.506              |
| 3/31/2004 | 12:15:42 | 391.5    | 18.511              |
| 3/31/2004 | 12:15:43 | 392      | 18.517              |
| 3/31/2004 | 12:15:43 | 392.5    | 18.522              |
| 3/31/2004 | 12:15:44 | 393      | 18.527              |
| 3/31/2004 | 12:15:44 | 393.5    | 18.532              |
| 3/31/2004 | 12:15:45 | 394      | 18.537              |
| 3/31/2004 | 12:15:45 | 394.5    | 18.541              |
| 3/31/2004 | 12:15:46 | 395      | 18.547              |
| 3/31/2004 | 12:15:46 | 395.5    | 18.552              |
| 3/31/2004 | 12:15:47 | 396      | 18.556              |
| 3/31/2004 | 12:15:47 | 396.5    | 18.563              |
| 3/31/2004 | 12:15:48 | 397      | 18.566              |
| 3/31/2004 | 12:15:48 | 397.5    | 18.571              |
| 3/31/2004 | 12:15:49 | 398      | 18.576              |
| 3/31/2004 | 12:15:49 | 398.5    | 18.583              |
| 3/31/2004 | 12:15:50 | 399      | 18.588              |
| 3/31/2004 | 12:15:50 | 399.5    | 18.592              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:15:51 | 400      | 18.597              |
| 3/31/2004 | 12:15:51 | 400.5    | 18.602              |
| 3/31/2004 | 12:15:52 | 401      | 18.605              |
| 3/31/2004 | 12:15:52 | 401.5    | 18.611              |
| 3/31/2004 | 12:15:53 | 402      | 18.614              |
| 3/31/2004 | 12:15:53 | 402.5    | 18.619              |
| 3/31/2004 | 12:15:54 | 403      | 18.624              |
| 3/31/2004 | 12:15:54 | 403.5    | 18.629              |
| 3/31/2004 | 12:15:55 | 404      | 18.633              |
| 3/31/2004 | 12:15:55 | 404.5    | 18.636              |
| 3/31/2004 | 12:15:56 | 405      | 18.641              |
| 3/31/2004 | 12:15:56 | 405.5    | 18.646              |
| 3/31/2004 | 12:15:57 | 406      | 18.65               |
| 3/31/2004 | 12:15:57 | 406.5    | 18.655              |
| 3/31/2004 | 12:15:58 | 407      | 18.658              |
| 3/31/2004 | 12:15:58 | 407.5    | 18.664              |
| 3/31/2004 | 12:15:59 | 408      | 18.669              |
| 3/31/2004 | 12:15:59 | 408.5    | 18.672              |
| 3/31/2004 | 12:16:00 | 409      | 18.676              |
| 3/31/2004 | 12:16:00 | 409.5    | 18.681              |
| 3/31/2004 | 12:16:01 | 410      | 18.684              |
| 3/31/2004 | 12:16:01 | 410.5    | 18.689              |
| 3/31/2004 | 12:16:02 | 411      | 18.694              |
| 3/31/2004 | 12:16:02 | 411.5    | 18.698              |
| 3/31/2004 | 12:16:03 | 412      | 18.701              |
| 3/31/2004 | 12:16:03 | 412.5    | 18.705              |
| 3/31/2004 | 12:16:04 | 413      | 18.71               |
| 3/31/2004 | 12:16:04 | 413.5    | 18.711              |
| 3/31/2004 | 12:16:05 | 414      | 18.717              |
| 3/31/2004 | 12:16:05 | 414.5    | 18.72               |
| 3/31/2004 | 12:16:06 | 415      | 18.725              |
| 3/31/2004 | 12:16:06 | 415.5    | 18.729              |
| 3/31/2004 | 12:16:07 | 416      | 18.73               |
| 3/31/2004 | 12:16:07 | 416.5    | 18.735              |
| 3/31/2004 | 12:16:08 | 417      | 18.739              |
| 3/31/2004 | 12:16:08 | 417.5    | 18.742              |
| 3/31/2004 | 12:16:09 | 418      | 18.746              |
| 3/31/2004 | 12:16:09 | 418.5    | 18.751              |
| 3/31/2004 | 12:16:10 | 419      | 18.754              |
| 3/31/2004 | 12:16:10 | 419.5    | 18.758              |
| 3/31/2004 | 12:16:11 | 420      | 18.761              |
| 3/31/2004 | 12:16:11 | 420.5    | 18.764              |
| 3/31/2004 | 12:16:12 | 421      | 18.768              |
| 3/31/2004 | 12:16:12 | 421.5    | 18.771              |
| 3/31/2004 | 12:16:13 | 422      | 18.775              |
| 3/31/2004 | 12:16:13 | 422.5    | 18.778              |
| 3/31/2004 | 12:16:14 | 423      | 18.781              |
| 3/31/2004 | 12:16:14 | 423.5    | 18.785              |
| 3/31/2004 | 12:16:15 | 424      | 18.788              |

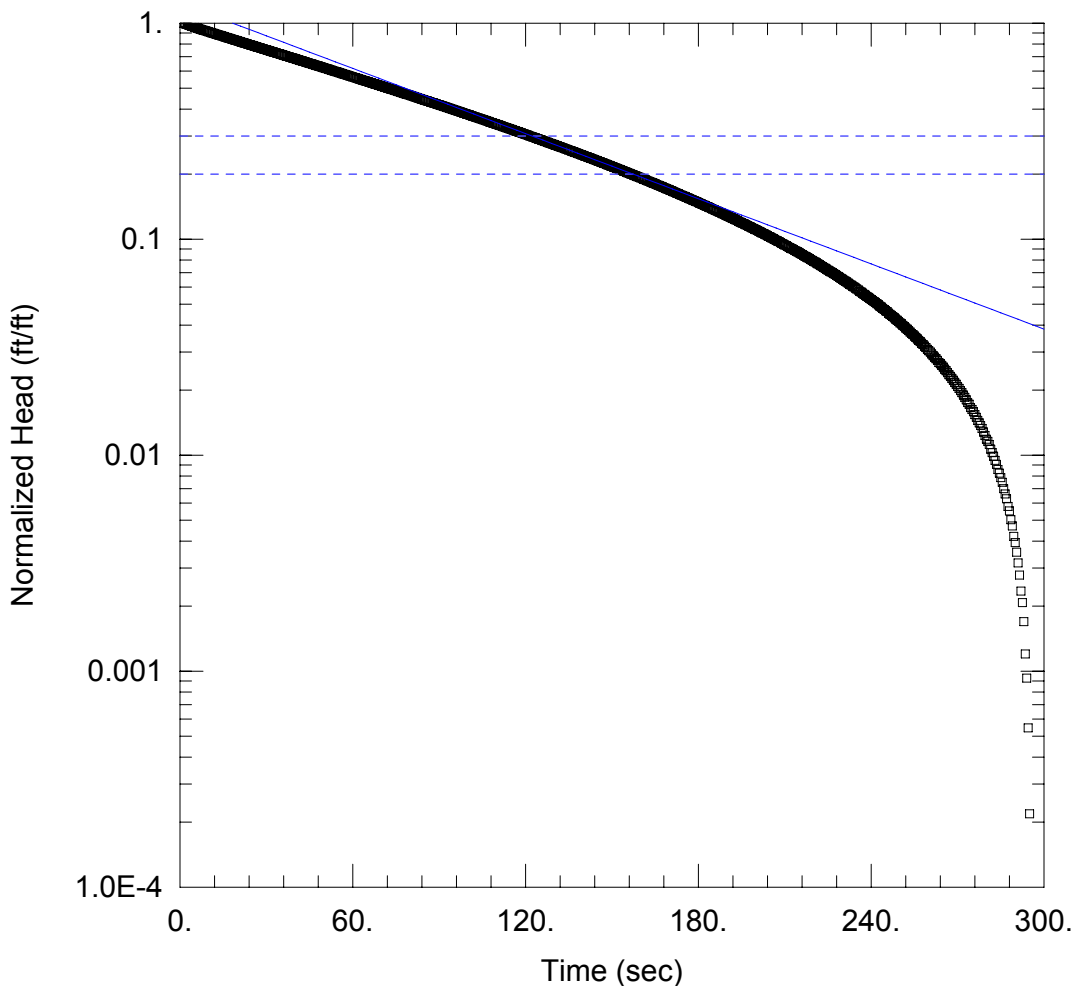
| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:16:15 | 424.5    | 18.792              |
| 3/31/2004 | 12:16:16 | 425      | 18.795              |
| 3/31/2004 | 12:16:16 | 425.5    | 18.799              |
| 3/31/2004 | 12:16:17 | 426      | 18.802              |
| 3/31/2004 | 12:16:17 | 426.5    | 18.805              |
| 3/31/2004 | 12:16:18 | 427      | 18.807              |
| 3/31/2004 | 12:16:18 | 427.5    | 18.811              |
| 3/31/2004 | 12:16:19 | 428      | 18.812              |
| 3/31/2004 | 12:16:19 | 428.5    | 18.817              |
| 3/31/2004 | 12:16:20 | 429      | 18.817              |
| 3/31/2004 | 12:16:20 | 429.5    | 18.822              |
| 3/31/2004 | 12:16:21 | 430      | 18.824              |
| 3/31/2004 | 12:16:21 | 430.5    | 18.828              |
| 3/31/2004 | 12:16:22 | 431      | 18.831              |
| 3/31/2004 | 12:16:22 | 431.5    | 18.834              |
| 3/31/2004 | 12:16:23 | 432      | 18.838              |
| 3/31/2004 | 12:16:23 | 432.5    | 18.841              |
| 3/31/2004 | 12:16:24 | 433      | 18.843              |
| 3/31/2004 | 12:16:24 | 433.5    | 18.848              |
| 3/31/2004 | 12:16:25 | 434      | 18.848              |
| 3/31/2004 | 12:16:25 | 434.5    | 18.852              |
| 3/31/2004 | 12:16:26 | 435      | 18.853              |
| 3/31/2004 | 12:16:26 | 435.5    | 18.857              |
| 3/31/2004 | 12:16:27 | 436      | 18.858              |
| 3/31/2004 | 12:16:27 | 436.5    | 18.862              |
| 3/31/2004 | 12:16:28 | 437      | 18.865              |
| 3/31/2004 | 12:16:28 | 437.5    | 18.867              |
| 3/31/2004 | 12:16:29 | 438      | 18.87               |
| 3/31/2004 | 12:16:29 | 438.5    | 18.872              |
| 3/31/2004 | 12:16:30 | 439      | 18.874              |
| 3/31/2004 | 12:16:30 | 439.5    | 18.877              |
| 3/31/2004 | 12:16:31 | 440      | 18.879              |
| 3/31/2004 | 12:16:31 | 440.5    | 18.882              |
| 3/31/2004 | 12:16:32 | 441      | 18.884              |
| 3/31/2004 | 12:16:32 | 441.5    | 18.886              |
| 3/31/2004 | 12:16:33 | 442      | 18.887              |
| 3/31/2004 | 12:16:33 | 442.5    | 18.889              |
| 3/31/2004 | 12:16:34 | 443      | 18.893              |
| 3/31/2004 | 12:16:34 | 443.5    | 18.896              |
| 3/31/2004 | 12:16:35 | 444      | 18.898              |
| 3/31/2004 | 12:16:35 | 444.5    | 18.899              |
| 3/31/2004 | 12:16:36 | 445      | 18.901              |
| 3/31/2004 | 12:16:36 | 445.5    | 18.905              |
| 3/31/2004 | 12:16:37 | 446      | 18.906              |
| 3/31/2004 | 12:16:37 | 446.5    | 18.908              |
| 3/31/2004 | 12:16:38 | 447      | 18.911              |
| 3/31/2004 | 12:16:38 | 447.5    | 18.913              |
| 3/31/2004 | 12:16:39 | 448      | 18.913              |
| 3/31/2004 | 12:16:39 | 448.5    | 18.916              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:16:40 | 449      | 18.918              |
| 3/31/2004 | 12:16:40 | 449.5    | 18.92               |
| 3/31/2004 | 12:16:41 | 450      | 18.922              |
| 3/31/2004 | 12:16:41 | 450.5    | 18.925              |
| 3/31/2004 | 12:16:42 | 451      | 18.927              |
| 3/31/2004 | 12:16:42 | 451.5    | 18.927              |
| 3/31/2004 | 12:16:43 | 452      | 18.93               |
| 3/31/2004 | 12:16:43 | 452.5    | 18.93               |
| 3/31/2004 | 12:16:44 | 453      | 18.932              |
| 3/31/2004 | 12:16:44 | 453.5    | 18.935              |
| 3/31/2004 | 12:16:45 | 454      | 18.937              |
| 3/31/2004 | 12:16:45 | 454.5    | 18.939              |
| 3/31/2004 | 12:16:46 | 455      | 18.94               |
| 3/31/2004 | 12:16:46 | 455.5    | 18.941              |
| 3/31/2004 | 12:16:47 | 456      | 18.944              |
| 3/31/2004 | 12:16:47 | 456.5    | 18.944              |
| 3/31/2004 | 12:16:48 | 457      | 18.946              |
| 3/31/2004 | 12:16:48 | 457.5    | 18.947              |
| 3/31/2004 | 12:16:49 | 458      | 18.949              |
| 3/31/2004 | 12:16:49 | 458.5    | 18.953              |
| 3/31/2004 | 12:16:50 | 459      | 18.953              |
| 3/31/2004 | 12:16:50 | 459.5    | 18.954              |
| 3/31/2004 | 12:16:51 | 460      | 18.956              |
| 3/31/2004 | 12:16:51 | 460.5    | 18.958              |
| 3/31/2004 | 12:16:52 | 461      | 18.959              |
| 3/31/2004 | 12:16:52 | 461.5    | 18.959              |
| 3/31/2004 | 12:16:53 | 462      | 18.961              |
| 3/31/2004 | 12:16:53 | 462.5    | 18.963              |
| 3/31/2004 | 12:16:54 | 463      | 18.965              |
| 3/31/2004 | 12:16:54 | 463.5    | 18.965              |
| 3/31/2004 | 12:16:55 | 464      | 18.966              |
| 3/31/2004 | 12:16:55 | 464.5    | 18.968              |
| 3/31/2004 | 12:16:56 | 465      | 18.97               |
| 3/31/2004 | 12:16:56 | 465.5    | 18.97               |
| 3/31/2004 | 12:16:57 | 466      | 18.97               |
| 3/31/2004 | 12:16:57 | 466.5    | 18.973              |
| 3/31/2004 | 12:16:58 | 467      | 18.975              |
| 3/31/2004 | 12:16:58 | 467.5    | 18.975              |
| 3/31/2004 | 12:16:59 | 468      | 18.977              |
| 3/31/2004 | 12:16:59 | 468.5    | 18.978              |
| 3/31/2004 | 12:17:00 | 469      | 18.977              |
| 3/31/2004 | 12:17:00 | 469.5    | 18.978              |
| 3/31/2004 | 12:17:01 | 470      | 18.98               |
| 3/31/2004 | 12:17:01 | 470.5    | 18.982              |
| 3/31/2004 | 12:17:02 | 471      | 18.982              |
| 3/31/2004 | 12:17:02 | 471.5    | 18.983              |
| 3/31/2004 | 12:17:03 | 472      | 18.983              |
| 3/31/2004 | 12:17:03 | 472.5    | 18.985              |
| 3/31/2004 | 12:17:04 | 473      | 18.985              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:17:04 | 473.5    | 18.987              |
| 3/31/2004 | 12:17:05 | 474      | 18.987              |
| 3/31/2004 | 12:17:05 | 474.5    | 18.988              |
| 3/31/2004 | 12:17:06 | 475      | 18.99               |
| 3/31/2004 | 12:17:06 | 475.5    | 18.99               |
| 3/31/2004 | 12:17:07 | 476      | 18.992              |
| 3/31/2004 | 12:17:07 | 476.5    | 18.994              |
| 3/31/2004 | 12:17:08 | 477      | 18.992              |
| 3/31/2004 | 12:17:08 | 477.5    | 18.994              |
| 3/31/2004 | 12:17:09 | 478      | 18.995              |
| 3/31/2004 | 12:17:09 | 478.5    | 18.995              |
| 3/31/2004 | 12:17:10 | 479      | 18.997              |
| 3/31/2004 | 12:17:10 | 479.5    | 18.997              |
| 3/31/2004 | 12:17:11 | 480      | 18.999              |
| 3/31/2004 | 12:17:11 | 480.5    | 18.999              |
| 3/31/2004 | 12:17:12 | 481      | 19                  |
| 3/31/2004 | 12:17:12 | 481.5    | 18.999              |
| 3/31/2004 | 12:17:13 | 482      | 18.999              |
| 3/31/2004 | 12:17:13 | 482.5    | 19                  |
| 3/31/2004 | 12:17:14 | 483      | 19.002              |
| 3/31/2004 | 12:17:14 | 483.5    | 19.002              |
| 3/31/2004 | 12:17:15 | 484      | 19.004              |
| 3/31/2004 | 12:17:15 | 484.5    | 19.004              |
| 3/31/2004 | 12:17:16 | 485      | 19.006              |
| 3/31/2004 | 12:17:16 | 485.5    | 19.006              |
| 3/31/2004 | 12:17:17 | 486      | 19.006              |
| 3/31/2004 | 12:17:17 | 486.5    | 19.007              |
| 3/31/2004 | 12:17:18 | 487      | 19.007              |
| 3/31/2004 | 12:17:18 | 487.5    | 19.007              |
| 3/31/2004 | 12:17:19 | 488      | 19.006              |
| 3/31/2004 | 12:17:19 | 488.5    | 19.007              |
| 3/31/2004 | 12:17:20 | 489      | 19.007              |
| 3/31/2004 | 12:17:20 | 489.5    | 19.007              |
| 3/31/2004 | 12:17:21 | 490      | 19.009              |
| 3/31/2004 | 12:17:21 | 490.5    | 19.009              |
| 3/31/2004 | 12:17:22 | 491      | 19.009              |
| 3/31/2004 | 12:17:22 | 491.5    | 19.011              |
| 3/31/2004 | 12:17:23 | 492      | 19.011              |
| 3/31/2004 | 12:17:23 | 492.5    | 19.011              |
| 3/31/2004 | 12:17:24 | 493      | 19.011              |
| 3/31/2004 | 12:17:24 | 493.5    | 19.011              |
| 3/31/2004 | 12:17:25 | 494      | 19.012              |
| 3/31/2004 | 12:17:25 | 494.5    | 19.011              |
| 3/31/2004 | 12:17:26 | 495      | 19.012              |
| 3/31/2004 | 12:17:26 | 495.5    | 19.012              |
| 3/31/2004 | 12:17:27 | 496      | 19.012              |
| 3/31/2004 | 12:17:27 | 496.5    | 19.012              |
| 3/31/2004 | 12:17:28 | 497      | 19.011              |
| 3/31/2004 | 12:17:28 | 497.5    | 19.012              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:17:29 | 498      | 19.012              |
| 3/31/2004 | 12:17:29 | 498.5    | 19.012              |
| 3/31/2004 | 12:17:30 | 499      | 19.012              |
| 3/31/2004 | 12:17:30 | 499.5    | 19.012              |
| 3/31/2004 | 12:17:31 | 500      | 19.012              |
| 3/31/2004 | 12:17:31 | 500.5    | 19.012              |
| 3/31/2004 | 12:17:32 | 501      | 19.012              |
| 3/31/2004 | 12:17:32 | 501.5    | 19.012              |
| 3/31/2004 | 12:17:33 | 502      | 19.012              |
| 3/31/2004 | 12:17:33 | 502.5    | 19.012              |
| 3/31/2004 | 12:17:34 | 503      | 19.014              |
| 3/31/2004 | 12:17:34 | 503.5    | 19.012              |
| 3/31/2004 | 12:17:35 | 504      | 19.012              |
| 3/31/2004 | 12:17:35 | 504.5    | 19.014              |
| 3/31/2004 | 12:17:36 | 505      | 19.012              |
| 3/31/2004 | 12:17:36 | 505.5    | 19.012              |
| 3/31/2004 | 12:17:37 | 506      | 19.014              |
| 3/31/2004 | 12:17:37 | 506.5    | 19.012              |
| 3/31/2004 | 12:17:38 | 507      | 19.014              |
| 3/31/2004 | 12:17:38 | 507.5    | 19.014              |
| 3/31/2004 | 12:17:39 | 508      | 19.014              |
| 3/31/2004 | 12:17:39 | 508.5    | 19.014              |
| 3/31/2004 | 12:17:40 | 509      | 19.013              |
| 3/31/2004 | 12:17:40 | 509.5    | 19.012              |
| 3/31/2004 | 12:17:41 | 510      | 19.012              |
| 3/31/2004 | 12:17:41 | 510.5    | 19.014              |
| 3/31/2004 | 12:17:42 | 511      | 19.012              |
| 3/31/2004 | 12:17:42 | 511.5    | 19.014              |
| 3/31/2004 | 12:17:43 | 512      | 19.013              |
| 3/31/2004 | 12:17:43 | 512.5    | 19.013              |
| 3/31/2004 | 12:17:44 | 513      | 19.012              |
| 3/31/2004 | 12:17:44 | 513.5    | 19.013              |
| 3/31/2004 | 12:17:45 | 514      | 19.013              |
| 3/31/2004 | 12:17:45 | 514.5    | 19.012              |
| 3/31/2004 | 12:17:46 | 515      | 19.013              |
| 3/31/2004 | 12:17:46 | 515.5    | 19.011              |
| 3/31/2004 | 12:17:47 | 516      | 19.011              |
| 3/31/2004 | 12:17:47 | 516.5    | 19.009              |
| 3/31/2004 | 12:17:48 | 517      | 19.011              |
| 3/31/2004 | 12:17:48 | 517.5    | 19.013              |
| 3/31/2004 | 12:17:49 | 518      | 19.011              |
| 3/31/2004 | 12:17:49 | 518.5    | 19.011              |
| 3/31/2004 | 12:17:50 | 519      | 19.011              |
| 3/31/2004 | 12:17:50 | 519.5    | 19.011              |





### DSS 15\_TEST#1

Data Set: Y:\...\DSS15\_test1\_03JAN2011.aqt

Date: 01/03/11

Time: 10:19:43

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: DSS 15

Test Date: 03/31/2004

### AQUIFER DATA

Saturated Thickness: 33.52 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (DSS 15)

Initial Displacement: 18.3 ft

Static Water Column Height: 33.52 ft

Total Well Penetration Depth: 33.52 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 2.121E-5 ft/sec

y0 = 22.63 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_03JAN2011\DSS 15\DSS15\_test1\_03JAN2011  
 Title: DSS 15\_test#1  
 Date: 01/03/11  
 Time: 10:18:35

### PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/31/2004  
 Test Well: DSS 15

### AQUIFER DATA

Saturated Thickness: 33.52 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

### SLUG TEST WELL DATA

Test Well: DSS 15

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 18.3 ft  
 Static Water Column Height: 33.52 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 33.52 ft

No. of Observations: 591

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 18.3              | 148.       | 4.07              |
| 0.5              | 18.3              | 148.5      | 4.044             |
| 1.               | 18.3              | 149.       | 4.018             |
| 1.5              | 18.24             | 149.5      | 3.996             |
| 2.               | 18.14             | 150.       | 3.971             |
| 2.5              | 18.04             | 150.5      | 3.948             |
| 3.               | 17.93             | 151.       | 3.924             |
| 3.5              | 17.84             | 151.5      | 3.901             |
| 4.               | 17.73             | 152.       | 3.877             |
| 4.5              | 17.64             | 152.5      | 3.853             |
| 5.               | 17.54             | 153.       | 3.83              |
| 5.5              | 17.45             | 153.5      | 3.806             |
| 6.               | 17.35             | 154.       | 3.783             |
| 6.5              | 17.25             | 154.5      | 3.76              |
| 7.               | 17.17             | 155.       | 3.736             |
| 7.5              | 17.09             | 155.5      | 3.714             |
| 8.               | 17.               | 156.       | 3.692             |
| 8.5              | 16.92             | 156.5      | 3.668             |
| 9.               | 16.84             | 157.       | 3.646             |
| 9.5              | 16.76             | 157.5      | 3.624             |
| 10.              | 16.68             | 158.       | 3.601             |
| 10.5             | 16.6              | 158.5      | 3.579             |
| 11.              | 16.52             | 159.       | 3.557             |
| 11.5             | 16.44             | 159.5      | 3.535             |
| 12.              | 16.36             | 160.       | 3.513             |
| 12.5             | 16.28             | 160.5      | 3.49              |
| 13.              | 16.2              | 161.       | 3.468             |
| 13.5             | 16.13             | 161.5      | 3.448             |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 14.               | 16.05                    | 162.              | 3.425                    |
| 14.5              | 15.97                    | 162.5             | 3.403                    |
| 15.               | 15.9                     | 163.              | 3.383                    |
| 15.5              | 15.82                    | 163.5             | 3.36                     |
| 16.               | 15.74                    | 164.              | 3.34                     |
| 16.5              | 15.67                    | 164.5             | 3.319                    |
| 17.               | 15.59                    | 165.              | 3.297                    |
| 17.5              | 15.52                    | 165.5             | 3.278                    |
| 18.               | 15.44                    | 166.              | 3.256                    |
| 18.5              | 15.37                    | 166.5             | 3.236                    |
| 19.               | 15.3                     | 167.              | 3.213                    |
| 19.5              | 15.23                    | 167.5             | 3.193                    |
| 20.               | 15.15                    | 168.              | 3.174                    |
| 20.5              | 15.08                    | 168.5             | 3.152                    |
| 21.               | 15.01                    | 169.              | 3.131                    |
| 21.5              | 14.93                    | 169.5             | 3.113                    |
| 22.               | 14.86                    | 170.              | 3.092                    |
| 22.5              | 14.79                    | 170.5             | 3.072                    |
| 23.               | 14.72                    | 171.              | 3.051                    |
| 23.5              | 14.65                    | 171.5             | 3.031                    |
| 24.               | 14.58                    | 172.              | 3.01                     |
| 24.5              | 14.51                    | 172.5             | 2.99                     |
| 25.               | 14.44                    | 173.              | 2.972                    |
| 25.5              | 14.37                    | 173.5             | 2.95                     |
| 26.               | 14.3                     | 174.              | 2.93                     |
| 26.5              | 14.24                    | 174.5             | 2.911                    |
| 27.               | 14.17                    | 175.              | 2.892                    |
| 27.5              | 14.1                     | 175.5             | 2.873                    |
| 28.               | 14.03                    | 176.              | 2.855                    |
| 28.5              | 13.97                    | 176.5             | 2.836                    |
| 29.               | 13.9                     | 177.              | 2.815                    |
| 29.5              | 13.83                    | 177.5             | 2.796                    |
| 30.               | 13.77                    | 178.              | 2.778                    |
| 30.5              | 13.7                     | 178.5             | 2.759                    |
| 31.               | 13.64                    | 179.              | 2.74                     |
| 31.5              | 13.57                    | 179.5             | 2.723                    |
| 32.               | 13.51                    | 180.              | 2.704                    |
| 32.5              | 13.44                    | 180.5             | 2.685                    |
| 33.               | 13.38                    | 181.              | 2.667                    |
| 33.5              | 13.32                    | 181.5             | 2.648                    |
| 34.               | 13.25                    | 182.              | 2.629                    |
| 34.5              | 13.19                    | 182.5             | 2.612                    |
| 35.               | 13.13                    | 183.              | 2.593                    |
| 35.5              | 13.06                    | 183.5             | 2.574                    |
| 36.               | 13.                      | 184.              | 2.557                    |
| 36.5              | 12.94                    | 184.5             | 2.538                    |
| 37.               | 12.88                    | 185.              | 2.521                    |
| 37.5              | 12.82                    | 185.5             | 2.504                    |
| 38.               | 12.76                    | 186.              | 2.485                    |
| 38.5              | 12.7                     | 186.5             | 2.468                    |
| 39.               | 12.64                    | 187.              | 2.451                    |
| 39.5              | 12.58                    | 187.5             | 2.434                    |
| 40.               | 12.51                    | 188.              | 2.417                    |
| 40.5              | 12.45                    | 188.5             | 2.4                      |
| 41.               | 12.39                    | 189.              | 2.383                    |
| 41.5              | 12.34                    | 189.5             | 2.364                    |
| 42.               | 12.28                    | 190.              | 2.347                    |
| 42.5              | 12.22                    | 190.5             | 2.33                     |
| 43.               | 12.16                    | 191.              | 2.314                    |
| 43.5              | 12.1                     | 191.5             | 2.297                    |
| 44.               | 12.04                    | 192.              | 2.28                     |
| 44.5              | 11.98                    | 192.5             | 2.265                    |
| 45.               | 11.93                    | 193.              | 2.248                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 45.5              | 11.87                    | 193.5             | 2.231                    |
| 46.               | 11.81                    | 194.              | 2.213                    |
| 46.5              | 11.76                    | 194.5             | 2.196                    |
| 47.               | 11.7                     | 195.              | 2.181                    |
| 47.5              | 11.64                    | 195.5             | 2.166                    |
| 48.               | 11.59                    | 196.              | 2.149                    |
| 48.5              | 11.53                    | 196.5             | 2.131                    |
| 49.               | 11.48                    | 197.              | 2.116                    |
| 49.5              | 11.42                    | 197.5             | 2.101                    |
| 50.               | 11.37                    | 198.              | 2.085                    |
| 50.5              | 11.31                    | 198.5             | 2.068                    |
| 51.               | 11.26                    | 199.              | 2.053                    |
| 51.5              | 11.21                    | 199.5             | 2.037                    |
| 52.               | 11.15                    | 200.              | 2.022                    |
| 52.5              | 11.09                    | 200.5             | 2.007                    |
| 53.               | 11.04                    | 201.              | 1.991                    |
| 53.5              | 10.99                    | 201.5             | 1.974                    |
| 54.               | 10.93                    | 202.              | 1.959                    |
| 54.5              | 10.88                    | 202.5             | 1.943                    |
| 55.               | 10.83                    | 203.              | 1.93                     |
| 55.5              | 10.78                    | 203.5             | 1.913                    |
| 56.               | 10.72                    | 204.              | 1.897                    |
| 56.5              | 10.67                    | 204.5             | 1.882                    |
| 57.               | 10.62                    | 205.              | 1.868                    |
| 57.5              | 10.57                    | 205.5             | 1.855                    |
| 58.               | 10.52                    | 206.              | 1.839                    |
| 58.5              | 10.47                    | 206.5             | 1.824                    |
| 59.               | 10.42                    | 207.              | 1.808                    |
| 59.5              | 10.37                    | 207.5             | 1.795                    |
| 60.               | 10.32                    | 208.              | 1.781                    |
| 60.5              | 10.26                    | 208.5             | 1.764                    |
| 61.               | 10.22                    | 209.              | 1.75                     |
| 61.5              | 10.16                    | 209.5             | 1.735                    |
| 62.               | 10.12                    | 210.              | 1.721                    |
| 62.5              | 10.07                    | 210.5             | 1.708                    |
| 63.               | 10.02                    | 211.              | 1.692                    |
| 63.5              | 9.969                    | 211.5             | 1.677                    |
| 64.               | 9.919                    | 212.              | 1.663                    |
| 64.5              | 9.873                    | 212.5             | 1.651                    |
| 65.               | 9.823                    | 213.              | 1.638                    |
| 65.5              | 9.775                    | 213.5             | 1.624                    |
| 66.               | 9.728                    | 214.              | 1.608                    |
| 66.5              | 9.681                    | 214.5             | 1.597                    |
| 67.               | 9.633                    | 215.              | 1.581                    |
| 67.5              | 9.586                    | 215.5             | 1.567                    |
| 68.               | 9.539                    | 216.              | 1.554                    |
| 68.5              | 9.495                    | 216.5             | 1.54                     |
| 69.               | 9.445                    | 217.              | 1.526                    |
| 69.5              | 9.398                    | 217.5             | 1.513                    |
| 70.               | 9.353                    | 218.              | 1.501                    |
| 70.5              | 9.305                    | 218.5             | 1.487                    |
| 71.               | 9.259                    | 219.              | 1.473                    |
| 71.5              | 9.215                    | 219.5             | 1.46                     |
| 72.               | 9.169                    | 220.              | 1.446                    |
| 72.5              | 9.124                    | 220.5             | 1.434                    |
| 73.               | 9.078                    | 221.              | 1.421                    |
| 73.5              | 9.033                    | 221.5             | 1.405                    |
| 74.               | 8.991                    | 222.              | 1.393                    |
| 74.5              | 8.946                    | 222.5             | 1.379                    |
| 75.               | 8.9                      | 223.              | 1.367                    |
| 75.5              | 8.857                    | 223.5             | 1.355                    |
| 76.               | 8.814                    | 224.              | 1.342                    |
| 76.5              | 8.77                     | 224.5             | 1.328                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 77.               | 8.726                    | 225.              | 1.316                    |
| 77.5              | 8.681                    | 225.5             | 1.302                    |
| 78.               | 8.638                    | 226.              | 1.292                    |
| 78.5              | 8.595                    | 226.5             | 1.28                     |
| 79.               | 8.553                    | 227.              | 1.268                    |
| 79.5              | 8.51                     | 227.5             | 1.256                    |
| 80.               | 8.467                    | 228.              | 1.243                    |
| 80.5              | 8.426                    | 228.5             | 1.231                    |
| 81.               | 8.384                    | 229.              | 1.219                    |
| 81.5              | 8.343                    | 229.5             | 1.207                    |
| 82.               | 8.301                    | 230.              | 1.193                    |
| 82.5              | 8.259                    | 230.5             | 1.181                    |
| 83.               | 8.216                    | 231.              | 1.169                    |
| 83.5              | 8.175                    | 231.5             | 1.159                    |
| 84.               | 8.136                    | 232.              | 1.145                    |
| 84.5              | 8.095                    | 232.5             | 1.133                    |
| 85.               | 8.053                    | 233.              | 1.123                    |
| 85.5              | 8.014                    | 233.5             | 1.109                    |
| 86.               | 7.975                    | 234.              | 1.099                    |
| 86.5              | 7.934                    | 234.5             | 1.087                    |
| 87.               | 7.893                    | 235.              | 1.075                    |
| 87.5              | 7.853                    | 235.5             | 1.065                    |
| 88.               | 7.814                    | 236.              | 1.051                    |
| 88.5              | 7.775                    | 236.5             | 1.041                    |
| 89.               | 7.734                    | 237.              | 1.029                    |
| 89.5              | 7.694                    | 237.5             | 1.017                    |
| 90.               | 7.657                    | 238.              | 1.007                    |
| 90.5              | 7.617                    | 238.5             | 0.995                    |
| 91.               | 7.578                    | 239.              | 0.985                    |
| 91.5              | 7.54                     | 239.5             | 0.974                    |
| 92.               | 7.503                    | 240.              | 0.962                    |
| 92.5              | 7.464                    | 240.5             | 0.952                    |
| 93.               | 7.426                    | 241.              | 0.94                     |
| 93.5              | 7.388                    | 241.5             | 0.932                    |
| 94.               | 7.351                    | 242.              | 0.92                     |
| 94.5              | 7.315                    | 242.5             | 0.908                    |
| 95.               | 7.276                    | 243.              | 0.897                    |
| 95.5              | 7.239                    | 243.5             | 0.887                    |
| 96.               | 7.202                    | 244.              | 0.875                    |
| 96.5              | 7.166                    | 244.5             | 0.865                    |
| 97.               | 7.128                    | 245.              | 0.853                    |
| 97.5              | 7.091                    | 245.5             | 0.846                    |
| 98.               | 7.055                    | 246.              | 0.832                    |
| 98.5              | 7.017                    | 246.5             | 0.822                    |
| 99.               | 6.983                    | 247.              | 0.812                    |
| 99.5              | 6.945                    | 247.5             | 0.802                    |
| 100.              | 6.911                    | 248.              | 0.791                    |
| 100.5             | 6.875                    | 248.5             | 0.781                    |
| 101.              | 6.839                    | 249.              | 0.771                    |
| 101.5             | 6.803                    | 249.5             | 0.761                    |
| 102.              | 6.769                    | 250.              | 0.749                    |
| 102.5             | 6.733                    | 250.5             | 0.742                    |
| 103.              | 6.699                    | 251.              | 0.73                     |
| 103.5             | 6.665                    | 251.5             | 0.721                    |
| 104.              | 6.627                    | 252.              | 0.709                    |
| 104.5             | 6.593                    | 252.5             | 0.701                    |
| 105.              | 6.559                    | 253.              | 0.691                    |
| 105.5             | 6.525                    | 253.5             | 0.68                     |
| 106.              | 6.491                    | 254.              | 0.67                     |
| 106.5             | 6.458                    | 254.5             | 0.662                    |
| 107.              | 6.422                    | 255.              | 0.651                    |
| 107.5             | 6.388                    | 255.5             | 0.643                    |
| 108.              | 6.356                    | 256.              | 0.632                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 108.5             | 6.321                    | 256.5             | 0.622                    |
| 109.              | 6.287                    | 257.              | 0.614                    |
| 109.5             | 6.255                    | 257.5             | 0.603                    |
| 110.              | 6.222                    | 258.              | 0.595                    |
| 110.5             | 6.19                     | 258.5             | 0.585                    |
| 111.              | 6.155                    | 259.              | 0.576                    |
| 111.5             | 6.123                    | 259.5             | 0.566                    |
| 112.              | 6.09                     | 260.              | 0.557                    |
| 112.5             | 6.058                    | 260.5             | 0.549                    |
| 113.              | 6.027                    | 261.              | 0.538                    |
| 113.5             | 5.995                    | 261.5             | 0.528                    |
| 114.              | 5.962                    | 262.              | 0.52                     |
| 114.5             | 5.93                     | 262.5             | 0.511                    |
| 115.              | 5.897                    | 263.              | 0.503                    |
| 115.5             | 5.868                    | 263.5             | 0.492                    |
| 116.              | 5.836                    | 264.              | 0.485                    |
| 116.5             | 5.803                    | 264.5             | 0.477                    |
| 117.              | 5.773                    | 265.              | 0.468                    |
| 117.5             | 5.742                    | 265.5             | 0.458                    |
| 118.              | 5.713                    | 266.              | 0.45                     |
| 118.5             | 5.68                     | 266.5             | 0.441                    |
| 119.              | 5.649                    | 267.              | 0.431                    |
| 119.5             | 5.618                    | 267.5             | 0.424                    |
| 120.              | 5.588                    | 268.              | 0.415                    |
| 120.5             | 5.559                    | 268.5             | 0.407                    |
| 121.              | 5.528                    | 269.              | 0.398                    |
| 121.5             | 5.497                    | 269.5             | 0.39                     |
| 122.              | 5.468                    | 270.              | 0.381                    |
| 122.5             | 5.437                    | 270.5             | 0.373                    |
| 123.              | 5.41                     | 271.              | 0.364                    |
| 123.5             | 5.379                    | 271.5             | 0.356                    |
| 124.              | 5.348                    | 272.              | 0.347                    |
| 124.5             | 5.319                    | 272.5             | 0.339                    |
| 125.              | 5.29                     | 273.              | 0.33                     |
| 125.5             | 5.261                    | 273.5             | 0.321                    |
| 126.              | 5.232                    | 274.              | 0.315                    |
| 126.5             | 5.203                    | 274.5             | 0.304                    |
| 127.              | 5.176                    | 275.              | 0.298                    |
| 127.5             | 5.145                    | 275.5             | 0.291                    |
| 128.              | 5.118                    | 276.              | 0.282                    |
| 128.5             | 5.089                    | 276.5             | 0.274                    |
| 129.              | 5.061                    | 277.              | 0.265                    |
| 129.5             | 5.032                    | 277.5             | 0.258                    |
| 130.              | 5.005                    | 278.              | 0.251                    |
| 130.5             | 4.977                    | 278.5             | 0.243                    |
| 131.              | 4.95                     | 279.              | 0.234                    |
| 131.5             | 4.921                    | 279.5             | 0.226                    |
| 132.              | 4.894                    | 280.              | 0.217                    |
| 132.5             | 4.866                    | 280.5             | 0.212                    |
| 133.              | 4.839                    | 281.              | 0.205                    |
| 133.5             | 4.812                    | 281.5             | 0.195                    |
| 134.              | 4.784                    | 282.              | 0.188                    |
| 134.5             | 4.757                    | 282.5             | 0.181                    |
| 135.              | 4.731                    | 283.              | 0.173                    |
| 135.5             | 4.704                    | 283.5             | 0.166                    |
| 136.              | 4.677                    | 284.              | 0.157                    |
| 136.5             | 4.651                    | 284.5             | 0.151                    |
| 137.              | 4.625                    | 285.              | 0.144                    |
| 137.5             | 4.598                    | 285.5             | 0.137                    |
| 138.              | 4.572                    | 286.              | 0.128                    |
| 138.5             | 4.547                    | 286.5             | 0.121                    |
| 139.              | 4.519                    | 287.              | 0.115                    |
| 139.5             | 4.494                    | 287.5             | 0.106                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 140.              | 4.468                    | 288.              | 0.101                    |
| 140.5             | 4.442                    | 288.5             | 0.092                    |
| 141.              | 4.417                    | 289.              | 0.086                    |
| 141.5             | 4.391                    | 289.5             | 0.077                    |
| 142.              | 4.366                    | 290.              | 0.072                    |
| 142.5             | 4.34                     | 290.5             | 0.065                    |
| 143.              | 4.316                    | 291.              | 0.058                    |
| 143.5             | 4.289                    | 291.5             | 0.051                    |
| 144.              | 4.265                    | 292.              | 0.043                    |
| 144.5             | 4.239                    | 292.5             | 0.038                    |
| 145.              | 4.215                    | 293.              | 0.031                    |
| 145.5             | 4.191                    | 293.5             | 0.022                    |
| 146.              | 4.167                    | 294.              | 0.017                    |
| 146.5             | 4.142                    | 294.5             | 0.01                     |
| 147.              | 4.118                    | 295.              | 0.004                    |
| 147.5             | 4.094                    |                   |                          |

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### SOLUTION

Slug Test

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$\ln(R_e/r_w)$ : 5.191

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### VISUAL ESTIMATION RESULTS

#### Estimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 2.121E-5        | ft/sec |
| y0               | 22.63           | ft     |

$K = 0.0006465$  cm/sec

$T = K*b = 0.000711$  ft<sup>2</sup>/sec (0.6605 sq. cm/sec)

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In-Situ Inc. MiniTroll Pro

Report generated: 4/28/2004 14:19:38  
 Report from file: ...\\SN09731 2004-03-31 123335 DSS15\_2.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: DSS15\_2

Test defined on: 3/31/2004 12:33:27  
 Test started on: 3/31/2004 12:33:35  
 Test stopped on: 3/31/2004 12:45:08  
 Test extracted on: N/A N/A

Data gathered using Linear testing

Time between data points: 1.0 Seconds.  
 Number of data samples: 694

TOTAL DATA SAMPLES 694

Channel number [2]

Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1584.960 meters (5200.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:33:35 | 0        | 18.233              |
| 3/31/2004 | 12:33:36 | 1        | 18.232              |
| 3/31/2004 | 12:33:37 | 2        | 18.232              |
| 3/31/2004 | 12:33:38 | 3        | 18.234              |
| 3/31/2004 | 12:33:39 | 4        | 17.979              |
| 3/31/2004 | 12:33:40 | 5        | 17.778              |
| 3/31/2004 | 12:33:41 | 6        | 17.323              |
| 3/31/2004 | 12:33:42 | 7        | 16.946              |
| 3/31/2004 | 12:33:43 | 8        | 16.46               |
| 3/31/2004 | 12:33:44 | 9        | 16.038              |
| 3/31/2004 | 12:33:45 | 10       | 15.566              |
| 3/31/2004 | 12:33:46 | 11       | 15.103              |
| 3/31/2004 | 12:33:47 | 12       | 14.661              |
| 3/31/2004 | 12:33:48 | 13       | 14.45               |
| 3/31/2004 | 12:33:49 | 14       | 13.897              |
| 3/31/2004 | 12:33:50 | 15       | 13.502              |



| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:33:51 | 16       | 13.064              |
| 3/31/2004 | 12:33:52 | 17       | 12.704              |
| 3/31/2004 | 12:33:53 | 18       | 12.227              |
| 3/31/2004 | 12:33:54 | 19       | 11.904              |
| 3/31/2004 | 12:33:55 | 20       | 11.466              |
| 3/31/2004 | 12:33:56 | 21       | 11.14               |
| 3/31/2004 | 12:33:57 | 22       | 10.844              |
| 3/31/2004 | 12:33:58 | 23       | 10.418              |
| 3/31/2004 | 12:33:59 | 24       | 9.996               |
| 3/31/2004 | 12:34:00 | 25       | 9.627               |
| 3/31/2004 | 12:34:01 | 26       | 9.256               |
| 3/31/2004 | 12:34:02 | 27       | 8.885               |
| 3/31/2004 | 12:34:03 | 28       | 8.524               |
| 3/31/2004 | 12:34:04 | 29       | 8.121               |
| 3/31/2004 | 12:34:05 | 30       | 7.755               |
| 3/31/2004 | 12:34:06 | 31       | 7.447               |
| 3/31/2004 | 12:34:07 | 32       | 7.018               |
| 3/31/2004 | 12:34:08 | 33       | 6.744               |
| 3/31/2004 | 12:34:09 | 34       | 6.467               |
| 3/31/2004 | 12:34:10 | 35       | 6.076               |
| 3/31/2004 | 12:34:11 | 36       | 5.708               |
| 3/31/2004 | 12:34:12 | 37       | 5.393               |
| 3/31/2004 | 12:34:13 | 38       | 5.024               |
| 3/31/2004 | 12:34:14 | 39       | 4.667               |
| 3/31/2004 | 12:34:15 | 40       | 4.354               |
| 3/31/2004 | 12:34:16 | 41       | 3.995               |
| 3/31/2004 | 12:34:17 | 42       | 3.641               |
| 3/31/2004 | 12:34:18 | 43       | 3.334               |
| 3/31/2004 | 12:34:19 | 44       | 2.98                |
| 3/31/2004 | 12:34:20 | 45       | 2.632               |
| 3/31/2004 | 12:34:21 | 46       | 2.341               |
| 3/31/2004 | 12:34:22 | 47       | 1.997               |
| 3/31/2004 | 12:34:23 | 48       | 1.667               |
| 3/31/2004 | 12:34:24 | 49       | 1.378               |
| 3/31/2004 | 12:34:25 | 50       | 1.039               |
| 3/31/2004 | 12:34:26 | 51       | 0.673               |
| 3/31/2004 | 12:34:27 | 52       | 0.377               |
| 3/31/2004 | 12:34:28 | 53       | 0.158               |
| 3/31/2004 | 12:34:29 | 54       | 0.151               |
| 3/31/2004 | 12:34:30 | 55       | 0.296               |
| 3/31/2004 | 12:34:31 | 56       | 0.464               |
| 3/31/2004 | 12:34:32 | 57       | 0.628               |
| 3/31/2004 | 12:34:33 | 58       | 0.767               |
| 3/31/2004 | 12:34:34 | 59       | 0.933               |
| 3/31/2004 | 12:34:35 | 60       | 1.085               |
| 3/31/2004 | 12:34:36 | 61       | 1.205               |
| 3/31/2004 | 12:34:37 | 62       | 1.345               |
| 3/31/2004 | 12:34:38 | 63       | 1.48                |
| 3/31/2004 | 12:34:39 | 64       | 1.596               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:34:40 | 65       | 1.731               |
| 3/31/2004 | 12:34:41 | 66       | 1.851               |
| 3/31/2004 | 12:34:42 | 67       | 1.983               |
| 3/31/2004 | 12:34:43 | 68       | 2.099               |
| 3/31/2004 | 12:34:44 | 69       | 2.231               |
| 3/31/2004 | 12:34:45 | 70       | 2.359               |
| 3/31/2004 | 12:34:46 | 71       | 2.483               |
| 3/31/2004 | 12:34:47 | 72       | 2.591               |
| 3/31/2004 | 12:34:48 | 73       | 2.716               |
| 3/31/2004 | 12:34:49 | 74       | 2.841               |
| 3/31/2004 | 12:34:50 | 75       | 2.947               |
| 3/31/2004 | 12:34:51 | 76       | 3.07                |
| 3/31/2004 | 12:34:52 | 77       | 3.191               |
| 3/31/2004 | 12:34:53 | 78       | 3.295               |
| 3/31/2004 | 12:34:54 | 79       | 3.415               |
| 3/31/2004 | 12:34:55 | 80       | 3.533               |
| 3/31/2004 | 12:34:56 | 81       | 3.632               |
| 3/31/2004 | 12:34:57 | 82       | 3.749               |
| 3/31/2004 | 12:34:58 | 83       | 3.865               |
| 3/31/2004 | 12:34:59 | 84       | 3.962               |
| 3/31/2004 | 12:35:00 | 85       | 4.077               |
| 3/31/2004 | 12:35:01 | 86       | 4.191               |
| 3/31/2004 | 12:35:02 | 87       | 4.285               |
| 3/31/2004 | 12:35:03 | 88       | 4.398               |
| 3/31/2004 | 12:35:04 | 89       | 4.506               |
| 3/31/2004 | 12:35:05 | 90       | 4.598               |
| 3/31/2004 | 12:35:06 | 91       | 4.706               |
| 3/31/2004 | 12:35:07 | 92       | 4.812               |
| 3/31/2004 | 12:35:08 | 93       | 4.902               |
| 3/31/2004 | 12:35:09 | 94       | 5.008               |
| 3/31/2004 | 12:35:10 | 95       | 5.113               |
| 3/31/2004 | 12:35:11 | 96       | 5.202               |
| 3/31/2004 | 12:35:12 | 97       | 5.304               |
| 3/31/2004 | 12:35:13 | 98       | 5.407               |
| 3/31/2004 | 12:35:14 | 99       | 5.492               |
| 3/31/2004 | 12:35:15 | 100      | 5.595               |
| 3/31/2004 | 12:35:16 | 101      | 5.696               |
| 3/31/2004 | 12:35:17 | 102      | 5.779               |
| 3/31/2004 | 12:35:18 | 103      | 5.875               |
| 3/31/2004 | 12:35:19 | 104      | 5.966               |
| 3/31/2004 | 12:35:20 | 105      | 6.062               |
| 3/31/2004 | 12:35:21 | 106      | 6.142               |
| 3/31/2004 | 12:35:22 | 107      | 6.245               |
| 3/31/2004 | 12:35:23 | 108      | 6.337               |
| 3/31/2004 | 12:35:24 | 109      | 6.431               |
| 3/31/2004 | 12:35:25 | 110      | 6.509               |
| 3/31/2004 | 12:35:26 | 111      | 6.602               |
| 3/31/2004 | 12:35:27 | 112      | 6.686               |
| 3/31/2004 | 12:35:28 | 113      | 6.774               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:35:29 | 114      | 6.852               |
| 3/31/2004 | 12:35:30 | 115      | 6.944               |
| 3/31/2004 | 12:35:31 | 116      | 7.035               |
| 3/31/2004 | 12:35:32 | 117      | 7.107               |
| 3/31/2004 | 12:35:33 | 118      | 7.197               |
| 3/31/2004 | 12:35:34 | 119      | 7.284               |
| 3/31/2004 | 12:35:35 | 120      | 7.353               |
| 3/31/2004 | 12:35:36 | 121      | 7.443               |
| 3/31/2004 | 12:35:37 | 122      | 7.529               |
| 3/31/2004 | 12:35:38 | 123      | 7.597               |
| 3/31/2004 | 12:35:39 | 124      | 7.686               |
| 3/31/2004 | 12:35:40 | 125      | 7.768               |
| 3/31/2004 | 12:35:41 | 126      | 7.831               |
| 3/31/2004 | 12:35:42 | 127      | 7.918               |
| 3/31/2004 | 12:35:43 | 128      | 8                   |
| 3/31/2004 | 12:35:44 | 129      | 8.064               |
| 3/31/2004 | 12:35:45 | 130      | 8.149               |
| 3/31/2004 | 12:35:46 | 131      | 8.23                |
| 3/31/2004 | 12:35:47 | 132      | 8.291               |
| 3/31/2004 | 12:35:48 | 133      | 8.373               |
| 3/31/2004 | 12:35:49 | 134      | 8.45                |
| 3/31/2004 | 12:35:50 | 135      | 8.512               |
| 3/31/2004 | 12:35:51 | 136      | 8.594               |
| 3/31/2004 | 12:35:52 | 137      | 8.669               |
| 3/31/2004 | 12:35:53 | 138      | 8.744               |
| 3/31/2004 | 12:35:54 | 139      | 8.806               |
| 3/31/2004 | 12:35:55 | 140      | 8.883               |
| 3/31/2004 | 12:35:56 | 141      | 8.955               |
| 3/31/2004 | 12:35:57 | 142      | 9.018               |
| 3/31/2004 | 12:35:58 | 143      | 9.09                |
| 3/31/2004 | 12:35:59 | 144      | 9.161               |
| 3/31/2004 | 12:36:00 | 145      | 9.223               |
| 3/31/2004 | 12:36:01 | 146      | 9.293               |
| 3/31/2004 | 12:36:02 | 147      | 9.355               |
| 3/31/2004 | 12:36:03 | 148      | 9.425               |
| 3/31/2004 | 12:36:04 | 149      | 9.481               |
| 3/31/2004 | 12:36:05 | 150      | 9.555               |
| 3/31/2004 | 12:36:06 | 151      | 9.623               |
| 3/31/2004 | 12:36:07 | 152      | 9.69                |
| 3/31/2004 | 12:36:08 | 153      | 9.748               |
| 3/31/2004 | 12:36:09 | 154      | 9.813               |
| 3/31/2004 | 12:36:10 | 155      | 9.88                |
| 3/31/2004 | 12:36:11 | 156      | 9.937               |
| 3/31/2004 | 12:36:12 | 157      | 10.001              |
| 3/31/2004 | 12:36:13 | 158      | 10.066              |
| 3/31/2004 | 12:36:14 | 159      | 10.119              |
| 3/31/2004 | 12:36:15 | 160      | 10.184              |
| 3/31/2004 | 12:36:16 | 161      | 10.247              |
| 3/31/2004 | 12:36:17 | 162      | 10.3                |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:36:18 | 163      | 10.362              |
| 3/31/2004 | 12:36:19 | 164      | 10.425              |
| 3/31/2004 | 12:36:20 | 165      | 10.476              |
| 3/31/2004 | 12:36:21 | 166      | 10.539              |
| 3/31/2004 | 12:36:22 | 167      | 10.597              |
| 3/31/2004 | 12:36:23 | 168      | 10.649              |
| 3/31/2004 | 12:36:24 | 169      | 10.709              |
| 3/31/2004 | 12:36:25 | 170      | 10.767              |
| 3/31/2004 | 12:36:26 | 171      | 10.818              |
| 3/31/2004 | 12:36:27 | 172      | 10.876              |
| 3/31/2004 | 12:36:28 | 173      | 10.932              |
| 3/31/2004 | 12:36:29 | 174      | 10.982              |
| 3/31/2004 | 12:36:30 | 175      | 11.038              |
| 3/31/2004 | 12:36:31 | 176      | 11.095              |
| 3/31/2004 | 12:36:32 | 177      | 11.143              |
| 3/31/2004 | 12:36:33 | 178      | 11.199              |
| 3/31/2004 | 12:36:34 | 179      | 11.252              |
| 3/31/2004 | 12:36:35 | 180      | 11.3                |
| 3/31/2004 | 12:36:36 | 181      | 11.355              |
| 3/31/2004 | 12:36:37 | 182      | 11.408              |
| 3/31/2004 | 12:36:38 | 183      | 11.454              |
| 3/31/2004 | 12:36:39 | 184      | 11.507              |
| 3/31/2004 | 12:36:40 | 185      | 11.555              |
| 3/31/2004 | 12:36:41 | 186      | 11.606              |
| 3/31/2004 | 12:36:42 | 187      | 11.645              |
| 3/31/2004 | 12:36:43 | 188      | 11.703              |
| 3/31/2004 | 12:36:44 | 189      | 11.756              |
| 3/31/2004 | 12:36:45 | 190      | 11.806              |
| 3/31/2004 | 12:36:46 | 191      | 11.849              |
| 3/31/2004 | 12:36:47 | 192      | 11.898              |
| 3/31/2004 | 12:36:48 | 193      | 11.948              |
| 3/31/2004 | 12:36:49 | 194      | 11.99               |
| 3/31/2004 | 12:36:50 | 195      | 12.04               |
| 3/31/2004 | 12:36:51 | 196      | 12.086              |
| 3/31/2004 | 12:36:52 | 197      | 12.129              |
| 3/31/2004 | 12:36:53 | 198      | 12.177              |
| 3/31/2004 | 12:36:54 | 199      | 12.225              |
| 3/31/2004 | 12:36:55 | 200      | 12.264              |
| 3/31/2004 | 12:36:56 | 201      | 12.312              |
| 3/31/2004 | 12:36:57 | 202      | 12.358              |
| 3/31/2004 | 12:36:58 | 203      | 12.397              |
| 3/31/2004 | 12:36:59 | 204      | 12.443              |
| 3/31/2004 | 12:37:00 | 205      | 12.486              |
| 3/31/2004 | 12:37:01 | 206      | 12.527              |
| 3/31/2004 | 12:37:02 | 207      | 12.571              |
| 3/31/2004 | 12:37:03 | 208      | 12.616              |
| 3/31/2004 | 12:37:04 | 209      | 12.655              |
| 3/31/2004 | 12:37:05 | 210      | 12.698              |
| 3/31/2004 | 12:37:06 | 211      | 12.741              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:37:07 | 212      | 12.778              |
| 3/31/2004 | 12:37:08 | 213      | 12.819              |
| 3/31/2004 | 12:37:09 | 214      | 12.86               |
| 3/31/2004 | 12:37:10 | 215      | 12.898              |
| 3/31/2004 | 12:37:11 | 216      | 12.939              |
| 3/31/2004 | 12:37:12 | 217      | 12.98               |
| 3/31/2004 | 12:37:13 | 218      | 13.014              |
| 3/31/2004 | 12:37:14 | 219      | 13.055              |
| 3/31/2004 | 12:37:15 | 220      | 13.094              |
| 3/31/2004 | 12:37:16 | 221      | 13.128              |
| 3/31/2004 | 12:37:17 | 222      | 13.171              |
| 3/31/2004 | 12:37:18 | 223      | 13.211              |
| 3/31/2004 | 12:37:19 | 224      | 13.243              |
| 3/31/2004 | 12:37:20 | 225      | 13.282              |
| 3/31/2004 | 12:37:21 | 226      | 13.318              |
| 3/31/2004 | 12:37:22 | 227      | 13.354              |
| 3/31/2004 | 12:37:23 | 228      | 13.38               |
| 3/31/2004 | 12:37:24 | 229      | 13.424              |
| 3/31/2004 | 12:37:25 | 230      | 13.462              |
| 3/31/2004 | 12:37:26 | 231      | 13.497              |
| 3/31/2004 | 12:37:27 | 232      | 13.53               |
| 3/31/2004 | 12:37:28 | 233      | 13.568              |
| 3/31/2004 | 12:37:29 | 234      | 13.602              |
| 3/31/2004 | 12:37:30 | 235      | 13.634              |
| 3/31/2004 | 12:37:31 | 236      | 13.668              |
| 3/31/2004 | 12:37:32 | 237      | 13.704              |
| 3/31/2004 | 12:37:33 | 238      | 13.733              |
| 3/31/2004 | 12:37:34 | 239      | 13.769              |
| 3/31/2004 | 12:37:35 | 240      | 13.803              |
| 3/31/2004 | 12:37:36 | 241      | 13.832              |
| 3/31/2004 | 12:37:37 | 242      | 13.868              |
| 3/31/2004 | 12:37:38 | 243      | 13.901              |
| 3/31/2004 | 12:37:39 | 244      | 13.93               |
| 3/31/2004 | 12:37:40 | 245      | 13.964              |
| 3/31/2004 | 12:37:41 | 246      | 13.996              |
| 3/31/2004 | 12:37:42 | 247      | 14.025              |
| 3/31/2004 | 12:37:43 | 248      | 14.058              |
| 3/31/2004 | 12:37:44 | 249      | 14.09               |
| 3/31/2004 | 12:37:45 | 250      | 14.118              |
| 3/31/2004 | 12:37:46 | 251      | 14.15               |
| 3/31/2004 | 12:37:47 | 252      | 14.181              |
| 3/31/2004 | 12:37:48 | 253      | 14.208              |
| 3/31/2004 | 12:37:49 | 254      | 14.239              |
| 3/31/2004 | 12:37:50 | 255      | 14.27               |
| 3/31/2004 | 12:37:51 | 256      | 14.297              |
| 3/31/2004 | 12:37:52 | 257      | 14.328              |
| 3/31/2004 | 12:37:53 | 258      | 14.359              |
| 3/31/2004 | 12:37:54 | 259      | 14.384              |
| 3/31/2004 | 12:37:55 | 260      | 14.415              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:37:56 | 261      | 14.442              |
| 3/31/2004 | 12:37:57 | 262      | 14.47               |
| 3/31/2004 | 12:37:58 | 263      | 14.499              |
| 3/31/2004 | 12:37:59 | 264      | 14.528              |
| 3/31/2004 | 12:38:00 | 265      | 14.55               |
| 3/31/2004 | 12:38:01 | 266      | 14.579              |
| 3/31/2004 | 12:38:02 | 267      | 14.606              |
| 3/31/2004 | 12:38:03 | 268      | 14.632              |
| 3/31/2004 | 12:38:04 | 269      | 14.647              |
| 3/31/2004 | 12:38:05 | 270      | 14.685              |
| 3/31/2004 | 12:38:06 | 271      | 14.714              |
| 3/31/2004 | 12:38:07 | 272      | 14.74               |
| 3/31/2004 | 12:38:08 | 273      | 14.763              |
| 3/31/2004 | 12:38:09 | 274      | 14.789              |
| 3/31/2004 | 12:38:10 | 275      | 14.815              |
| 3/31/2004 | 12:38:11 | 276      | 14.839              |
| 3/31/2004 | 12:38:12 | 277      | 14.864              |
| 3/31/2004 | 12:38:13 | 278      | 14.89               |
| 3/31/2004 | 12:38:14 | 279      | 14.912              |
| 3/31/2004 | 12:38:15 | 280      | 14.938              |
| 3/31/2004 | 12:38:16 | 281      | 14.963              |
| 3/31/2004 | 12:38:17 | 282      | 14.985              |
| 3/31/2004 | 12:38:18 | 283      | 15.011              |
| 3/31/2004 | 12:38:19 | 284      | 15.037              |
| 3/31/2004 | 12:38:20 | 285      | 15.057              |
| 3/31/2004 | 12:38:21 | 286      | 15.083              |
| 3/31/2004 | 12:38:22 | 287      | 15.107              |
| 3/31/2004 | 12:38:23 | 288      | 15.127              |
| 3/31/2004 | 12:38:24 | 289      | 15.151              |
| 3/31/2004 | 12:38:25 | 290      | 15.175              |
| 3/31/2004 | 12:38:26 | 291      | 15.196              |
| 3/31/2004 | 12:38:27 | 292      | 15.218              |
| 3/31/2004 | 12:38:28 | 293      | 15.242              |
| 3/31/2004 | 12:38:29 | 294      | 15.262              |
| 3/31/2004 | 12:38:30 | 295      | 15.285              |
| 3/31/2004 | 12:38:31 | 296      | 15.307              |
| 3/31/2004 | 12:38:32 | 297      | 15.327              |
| 3/31/2004 | 12:38:33 | 298      | 15.349              |
| 3/31/2004 | 12:38:34 | 299      | 15.37               |
| 3/31/2004 | 12:38:35 | 300      | 15.391              |
| 3/31/2004 | 12:38:36 | 301      | 15.411              |
| 3/31/2004 | 12:38:37 | 302      | 15.432              |
| 3/31/2004 | 12:38:38 | 303      | 15.452              |
| 3/31/2004 | 12:38:39 | 304      | 15.473              |
| 3/31/2004 | 12:38:40 | 305      | 15.491              |
| 3/31/2004 | 12:38:41 | 306      | 15.512              |
| 3/31/2004 | 12:38:42 | 307      | 15.521              |
| 3/31/2004 | 12:38:43 | 308      | 15.551              |
| 3/31/2004 | 12:38:44 | 309      | 15.572              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:38:45 | 310      | 15.592              |
| 3/31/2004 | 12:38:46 | 311      | 15.609              |
| 3/31/2004 | 12:38:47 | 312      | 15.63               |
| 3/31/2004 | 12:38:48 | 313      | 15.65               |
| 3/31/2004 | 12:38:49 | 314      | 15.665              |
| 3/31/2004 | 12:38:50 | 315      | 15.686              |
| 3/31/2004 | 12:38:51 | 316      | 15.705              |
| 3/31/2004 | 12:38:52 | 317      | 15.722              |
| 3/31/2004 | 12:38:53 | 318      | 15.742              |
| 3/31/2004 | 12:38:54 | 319      | 15.759              |
| 3/31/2004 | 12:38:55 | 320      | 15.775              |
| 3/31/2004 | 12:38:56 | 321      | 15.794              |
| 3/31/2004 | 12:38:57 | 322      | 15.812              |
| 3/31/2004 | 12:38:58 | 323      | 15.83               |
| 3/31/2004 | 12:38:59 | 324      | 15.848              |
| 3/31/2004 | 12:39:00 | 325      | 15.865              |
| 3/31/2004 | 12:39:01 | 326      | 15.882              |
| 3/31/2004 | 12:39:02 | 327      | 15.898              |
| 3/31/2004 | 12:39:03 | 328      | 15.917              |
| 3/31/2004 | 12:39:04 | 329      | 15.932              |
| 3/31/2004 | 12:39:05 | 330      | 15.949              |
| 3/31/2004 | 12:39:06 | 331      | 15.966              |
| 3/31/2004 | 12:39:07 | 332      | 15.982              |
| 3/31/2004 | 12:39:08 | 333      | 15.999              |
| 3/31/2004 | 12:39:09 | 334      | 16.016              |
| 3/31/2004 | 12:39:10 | 335      | 16.029              |
| 3/31/2004 | 12:39:11 | 336      | 16.045              |
| 3/31/2004 | 12:39:12 | 337      | 16.062              |
| 3/31/2004 | 12:39:13 | 338      | 16.076              |
| 3/31/2004 | 12:39:14 | 339      | 16.093              |
| 3/31/2004 | 12:39:15 | 340      | 16.108              |
| 3/31/2004 | 12:39:16 | 341      | 16.123              |
| 3/31/2004 | 12:39:17 | 342      | 16.139              |
| 3/31/2004 | 12:39:18 | 343      | 16.154              |
| 3/31/2004 | 12:39:19 | 344      | 16.17               |
| 3/31/2004 | 12:39:20 | 345      | 16.183              |
| 3/31/2004 | 12:39:21 | 346      | 16.197              |
| 3/31/2004 | 12:39:22 | 347      | 16.214              |
| 3/31/2004 | 12:39:23 | 348      | 16.216              |
| 3/31/2004 | 12:39:24 | 349      | 16.241              |
| 3/31/2004 | 12:39:25 | 350      | 16.257              |
| 3/31/2004 | 12:39:26 | 351      | 16.272              |
| 3/31/2004 | 12:39:27 | 352      | 16.284              |
| 3/31/2004 | 12:39:28 | 353      | 16.298              |
| 3/31/2004 | 12:39:29 | 354      | 16.315              |
| 3/31/2004 | 12:39:30 | 355      | 16.327              |
| 3/31/2004 | 12:39:31 | 356      | 16.339              |
| 3/31/2004 | 12:39:32 | 357      | 16.352              |
| 3/31/2004 | 12:39:33 | 358      | 16.366              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:39:34 | 359      | 16.38               |
| 3/31/2004 | 12:39:35 | 360      | 16.393              |
| 3/31/2004 | 12:39:36 | 361      | 16.404              |
| 3/31/2004 | 12:39:37 | 362      | 16.419              |
| 3/31/2004 | 12:39:38 | 363      | 16.433              |
| 3/31/2004 | 12:39:39 | 364      | 16.443              |
| 3/31/2004 | 12:39:40 | 365      | 16.457              |
| 3/31/2004 | 12:39:41 | 366      | 16.47               |
| 3/31/2004 | 12:39:42 | 367      | 16.482              |
| 3/31/2004 | 12:39:43 | 368      | 16.496              |
| 3/31/2004 | 12:39:44 | 369      | 16.508              |
| 3/31/2004 | 12:39:45 | 370      | 16.518              |
| 3/31/2004 | 12:39:46 | 371      | 16.53               |
| 3/31/2004 | 12:39:47 | 372      | 16.544              |
| 3/31/2004 | 12:39:48 | 373      | 16.556              |
| 3/31/2004 | 12:39:49 | 374      | 16.57               |
| 3/31/2004 | 12:39:50 | 375      | 16.58               |
| 3/31/2004 | 12:39:51 | 376      | 16.592              |
| 3/31/2004 | 12:39:52 | 377      | 16.604              |
| 3/31/2004 | 12:39:53 | 378      | 16.616              |
| 3/31/2004 | 12:39:54 | 379      | 16.626              |
| 3/31/2004 | 12:39:55 | 380      | 16.638              |
| 3/31/2004 | 12:39:56 | 381      | 16.65               |
| 3/31/2004 | 12:39:57 | 382      | 16.66               |
| 3/31/2004 | 12:39:58 | 383      | 16.672              |
| 3/31/2004 | 12:39:59 | 384      | 16.682              |
| 3/31/2004 | 12:40:00 | 385      | 16.693              |
| 3/31/2004 | 12:40:01 | 386      | 16.705              |
| 3/31/2004 | 12:40:02 | 387      | 16.715              |
| 3/31/2004 | 12:40:03 | 388      | 16.725              |
| 3/31/2004 | 12:40:04 | 389      | 16.724              |
| 3/31/2004 | 12:40:05 | 390      | 16.746              |
| 3/31/2004 | 12:40:06 | 391      | 16.754              |
| 3/31/2004 | 12:40:07 | 392      | 16.766              |
| 3/31/2004 | 12:40:08 | 393      | 16.778              |
| 3/31/2004 | 12:40:09 | 394      | 16.788              |
| 3/31/2004 | 12:40:10 | 395      | 16.797              |
| 3/31/2004 | 12:40:11 | 396      | 16.807              |
| 3/31/2004 | 12:40:12 | 397      | 16.807              |
| 3/31/2004 | 12:40:13 | 398      | 16.828              |
| 3/31/2004 | 12:40:14 | 399      | 16.838              |
| 3/31/2004 | 12:40:15 | 400      | 16.836              |
| 3/31/2004 | 12:40:16 | 401      | 16.857              |
| 3/31/2004 | 12:40:17 | 402      | 16.867              |
| 3/31/2004 | 12:40:18 | 403      | 16.865              |
| 3/31/2004 | 12:40:19 | 404      | 16.886              |
| 3/31/2004 | 12:40:20 | 405      | 16.894              |
| 3/31/2004 | 12:40:21 | 406      | 16.894              |
| 3/31/2004 | 12:40:22 | 407      | 16.913              |



| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:40:23 | 408      | 16.922              |
| 3/31/2004 | 12:40:24 | 409      | 16.92               |
| 3/31/2004 | 12:40:25 | 410      | 16.939              |
| 3/31/2004 | 12:40:26 | 411      | 16.949              |
| 3/31/2004 | 12:40:27 | 412      | 16.947              |
| 3/31/2004 | 12:40:28 | 413      | 16.966              |
| 3/31/2004 | 12:40:29 | 414      | 16.976              |
| 3/31/2004 | 12:40:30 | 415      | 16.985              |
| 3/31/2004 | 12:40:31 | 416      | 16.993              |
| 3/31/2004 | 12:40:32 | 417      | 17.002              |
| 3/31/2004 | 12:40:33 | 418      | 17.01               |
| 3/31/2004 | 12:40:34 | 419      | 17.019              |
| 3/31/2004 | 12:40:35 | 420      | 17.029              |
| 3/31/2004 | 12:40:36 | 421      | 17.036              |
| 3/31/2004 | 12:40:37 | 422      | 17.045              |
| 3/31/2004 | 12:40:38 | 423      | 17.053              |
| 3/31/2004 | 12:40:39 | 424      | 17.062              |
| 3/31/2004 | 12:40:40 | 425      | 17.07               |
| 3/31/2004 | 12:40:41 | 426      | 17.079              |
| 3/31/2004 | 12:40:42 | 427      | 17.086              |
| 3/31/2004 | 12:40:43 | 428      | 17.094              |
| 3/31/2004 | 12:40:44 | 429      | 17.103              |
| 3/31/2004 | 12:40:45 | 430      | 17.11               |
| 3/31/2004 | 12:40:46 | 431      | 17.116              |
| 3/31/2004 | 12:40:47 | 432      | 17.113              |
| 3/31/2004 | 12:40:48 | 433      | 17.13               |
| 3/31/2004 | 12:40:49 | 434      | 17.14               |
| 3/31/2004 | 12:40:50 | 435      | 17.147              |
| 3/31/2004 | 12:40:51 | 436      | 17.156              |
| 3/31/2004 | 12:40:52 | 437      | 17.163              |
| 3/31/2004 | 12:40:53 | 438      | 17.169              |
| 3/31/2004 | 12:40:54 | 439      | 17.178              |
| 3/31/2004 | 12:40:55 | 440      | 17.185              |
| 3/31/2004 | 12:40:56 | 441      | 17.192              |
| 3/31/2004 | 12:40:57 | 442      | 17.198              |
| 3/31/2004 | 12:40:58 | 443      | 17.207              |
| 3/31/2004 | 12:40:59 | 444      | 17.214              |
| 3/31/2004 | 12:41:00 | 445      | 17.221              |
| 3/31/2004 | 12:41:01 | 446      | 17.227              |
| 3/31/2004 | 12:41:02 | 447      | 17.234              |
| 3/31/2004 | 12:41:03 | 448      | 17.241              |
| 3/31/2004 | 12:41:04 | 449      | 17.248              |
| 3/31/2004 | 12:41:05 | 450      | 17.253              |
| 3/31/2004 | 12:41:06 | 451      | 17.262              |
| 3/31/2004 | 12:41:07 | 452      | 17.268              |
| 3/31/2004 | 12:41:08 | 453      | 17.274              |
| 3/31/2004 | 12:41:09 | 454      | 17.28               |
| 3/31/2004 | 12:41:10 | 455      | 17.287              |
| 3/31/2004 | 12:41:11 | 456      | 17.294              |

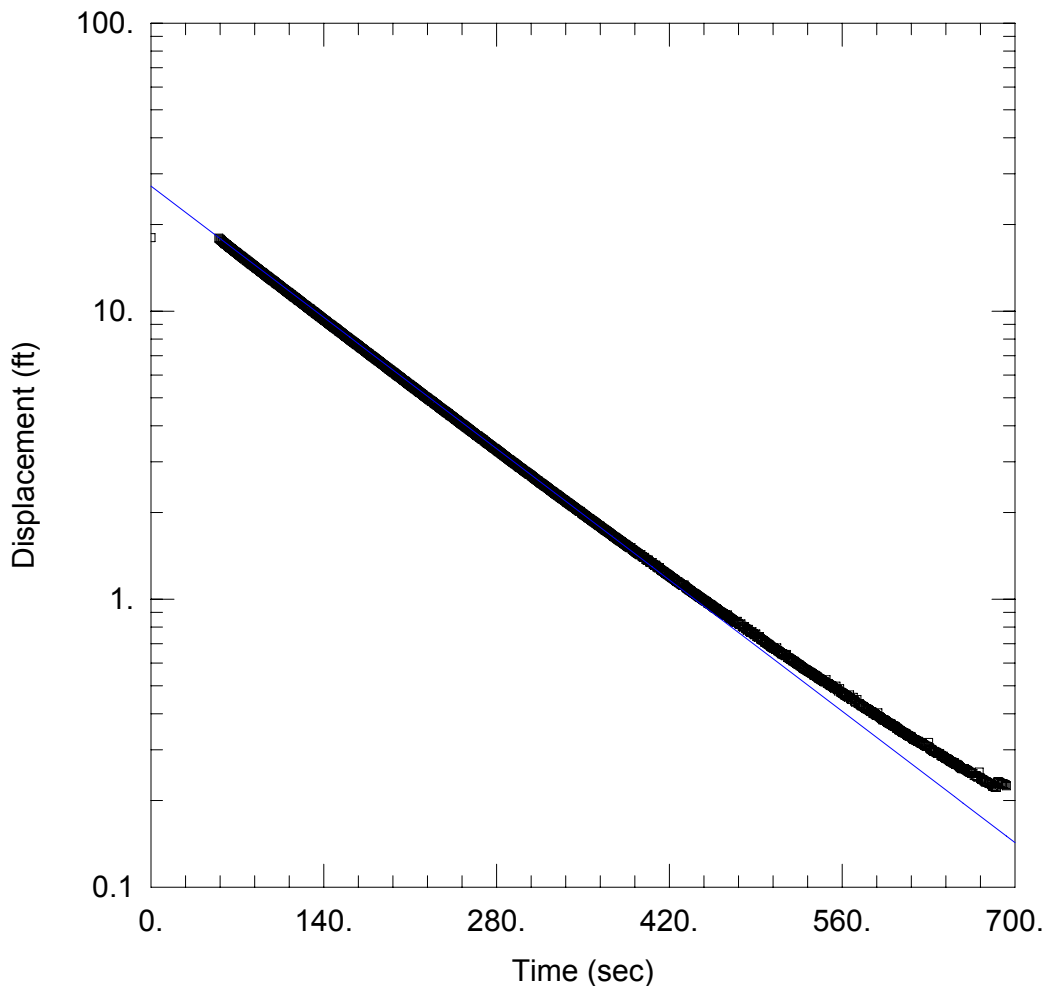
| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:41:12 | 457      | 17.301              |
| 3/31/2004 | 12:41:13 | 458      | 17.306              |
| 3/31/2004 | 12:41:14 | 459      | 17.313              |
| 3/31/2004 | 12:41:15 | 460      | 17.32               |
| 3/31/2004 | 12:41:16 | 461      | 17.327              |
| 3/31/2004 | 12:41:17 | 462      | 17.333              |
| 3/31/2004 | 12:41:18 | 463      | 17.339              |
| 3/31/2004 | 12:41:19 | 464      | 17.344              |
| 3/31/2004 | 12:41:20 | 465      | 17.349              |
| 3/31/2004 | 12:41:21 | 466      | 17.356              |
| 3/31/2004 | 12:41:22 | 467      | 17.351              |
| 3/31/2004 | 12:41:23 | 468      | 17.366              |
| 3/31/2004 | 12:41:24 | 469      | 17.373              |
| 3/31/2004 | 12:41:25 | 470      | 17.378              |
| 3/31/2004 | 12:41:26 | 471      | 17.385              |
| 3/31/2004 | 12:41:27 | 472      | 17.39               |
| 3/31/2004 | 12:41:28 | 473      | 17.397              |
| 3/31/2004 | 12:41:29 | 474      | 17.402              |
| 3/31/2004 | 12:41:30 | 475      | 17.395              |
| 3/31/2004 | 12:41:31 | 476      | 17.411              |
| 3/31/2004 | 12:41:32 | 477      | 17.417              |
| 3/31/2004 | 12:41:33 | 478      | 17.412              |
| 3/31/2004 | 12:41:34 | 479      | 17.428              |
| 3/31/2004 | 12:41:35 | 480      | 17.433              |
| 3/31/2004 | 12:41:36 | 481      | 17.43               |
| 3/31/2004 | 12:41:37 | 482      | 17.443              |
| 3/31/2004 | 12:41:38 | 483      | 17.452              |
| 3/31/2004 | 12:41:39 | 484      | 17.447              |
| 3/31/2004 | 12:41:40 | 485      | 17.46               |
| 3/31/2004 | 12:41:41 | 486      | 17.467              |
| 3/31/2004 | 12:41:42 | 487      | 17.462              |
| 3/31/2004 | 12:41:43 | 488      | 17.475              |
| 3/31/2004 | 12:41:44 | 489      | 17.481              |
| 3/31/2004 | 12:41:45 | 490      | 17.476              |
| 3/31/2004 | 12:41:46 | 491      | 17.491              |
| 3/31/2004 | 12:41:47 | 492      | 17.496              |
| 3/31/2004 | 12:41:48 | 493      | 17.491              |
| 3/31/2004 | 12:41:49 | 494      | 17.505              |
| 3/31/2004 | 12:41:50 | 495      | 17.51               |
| 3/31/2004 | 12:41:51 | 496      | 17.515              |
| 3/31/2004 | 12:41:52 | 497      | 17.523              |
| 3/31/2004 | 12:41:53 | 498      | 17.525              |
| 3/31/2004 | 12:41:54 | 499      | 17.53               |
| 3/31/2004 | 12:41:55 | 500      | 17.535              |
| 3/31/2004 | 12:41:56 | 501      | 17.54               |
| 3/31/2004 | 12:41:57 | 502      | 17.546              |
| 3/31/2004 | 12:41:58 | 503      | 17.551              |
| 3/31/2004 | 12:41:59 | 504      | 17.556              |
| 3/31/2004 | 12:42:00 | 505      | 17.559              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:42:01 | 506      | 17.564              |
| 3/31/2004 | 12:42:02 | 507      | 17.556              |
| 3/31/2004 | 12:42:03 | 508      | 17.571              |
| 3/31/2004 | 12:42:04 | 509      | 17.576              |
| 3/31/2004 | 12:42:05 | 510      | 17.581              |
| 3/31/2004 | 12:42:06 | 511      | 17.587              |
| 3/31/2004 | 12:42:07 | 512      | 17.588              |
| 3/31/2004 | 12:42:08 | 513      | 17.593              |
| 3/31/2004 | 12:42:09 | 514      | 17.597              |
| 3/31/2004 | 12:42:10 | 515      | 17.59               |
| 3/31/2004 | 12:42:11 | 516      | 17.606              |
| 3/31/2004 | 12:42:12 | 517      | 17.609              |
| 3/31/2004 | 12:42:13 | 518      | 17.614              |
| 3/31/2004 | 12:42:14 | 519      | 17.617              |
| 3/31/2004 | 12:42:15 | 520      | 17.622              |
| 3/31/2004 | 12:42:16 | 521      | 17.624              |
| 3/31/2004 | 12:42:17 | 522      | 17.629              |
| 3/31/2004 | 12:42:18 | 523      | 17.634              |
| 3/31/2004 | 12:42:19 | 524      | 17.638              |
| 3/31/2004 | 12:42:20 | 525      | 17.641              |
| 3/31/2004 | 12:42:21 | 526      | 17.646              |
| 3/31/2004 | 12:42:22 | 527      | 17.65               |
| 3/31/2004 | 12:42:23 | 528      | 17.655              |
| 3/31/2004 | 12:42:24 | 529      | 17.658              |
| 3/31/2004 | 12:42:25 | 530      | 17.662              |
| 3/31/2004 | 12:42:26 | 531      | 17.665              |
| 3/31/2004 | 12:42:27 | 532      | 17.669              |
| 3/31/2004 | 12:42:28 | 533      | 17.672              |
| 3/31/2004 | 12:42:29 | 534      | 17.675              |
| 3/31/2004 | 12:42:30 | 535      | 17.679              |
| 3/31/2004 | 12:42:31 | 536      | 17.682              |
| 3/31/2004 | 12:42:32 | 537      | 17.687              |
| 3/31/2004 | 12:42:33 | 538      | 17.689              |
| 3/31/2004 | 12:42:34 | 539      | 17.693              |
| 3/31/2004 | 12:42:35 | 540      | 17.696              |
| 3/31/2004 | 12:42:36 | 541      | 17.701              |
| 3/31/2004 | 12:42:37 | 542      | 17.704              |
| 3/31/2004 | 12:42:38 | 543      | 17.708              |
| 3/31/2004 | 12:42:39 | 544      | 17.711              |
| 3/31/2004 | 12:42:40 | 545      | 17.715              |
| 3/31/2004 | 12:42:41 | 546      | 17.717              |
| 3/31/2004 | 12:42:42 | 547      | 17.708              |
| 3/31/2004 | 12:42:43 | 548      | 17.723              |
| 3/31/2004 | 12:42:44 | 549      | 17.725              |
| 3/31/2004 | 12:42:45 | 550      | 17.729              |
| 3/31/2004 | 12:42:46 | 551      | 17.732              |
| 3/31/2004 | 12:42:47 | 552      | 17.735              |
| 3/31/2004 | 12:42:48 | 553      | 17.739              |
| 3/31/2004 | 12:42:49 | 554      | 17.742              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:42:50 | 555      | 17.734              |
| 3/31/2004 | 12:42:51 | 556      | 17.747              |
| 3/31/2004 | 12:42:52 | 557      | 17.753              |
| 3/31/2004 | 12:42:53 | 558      | 17.744              |
| 3/31/2004 | 12:42:54 | 559      | 17.758              |
| 3/31/2004 | 12:42:55 | 560      | 17.761              |
| 3/31/2004 | 12:42:56 | 561      | 17.764              |
| 3/31/2004 | 12:42:57 | 562      | 17.768              |
| 3/31/2004 | 12:42:58 | 563      | 17.77               |
| 3/31/2004 | 12:42:59 | 564      | 17.773              |
| 3/31/2004 | 12:43:00 | 565      | 17.776              |
| 3/31/2004 | 12:43:01 | 566      | 17.768              |
| 3/31/2004 | 12:43:02 | 567      | 17.782              |
| 3/31/2004 | 12:43:03 | 568      | 17.785              |
| 3/31/2004 | 12:43:04 | 569      | 17.777              |
| 3/31/2004 | 12:43:05 | 570      | 17.79               |
| 3/31/2004 | 12:43:06 | 571      | 17.794              |
| 3/31/2004 | 12:43:07 | 572      | 17.785              |
| 3/31/2004 | 12:43:08 | 573      | 17.799              |
| 3/31/2004 | 12:43:09 | 574      | 17.8                |
| 3/31/2004 | 12:43:10 | 575      | 17.804              |
| 3/31/2004 | 12:43:11 | 576      | 17.807              |
| 3/31/2004 | 12:43:12 | 577      | 17.809              |
| 3/31/2004 | 12:43:13 | 578      | 17.812              |
| 3/31/2004 | 12:43:14 | 579      | 17.816              |
| 3/31/2004 | 12:43:15 | 580      | 17.817              |
| 3/31/2004 | 12:43:16 | 581      | 17.819              |
| 3/31/2004 | 12:43:17 | 582      | 17.823              |
| 3/31/2004 | 12:43:18 | 583      | 17.826              |
| 3/31/2004 | 12:43:19 | 584      | 17.826              |
| 3/31/2004 | 12:43:20 | 585      | 17.831              |
| 3/31/2004 | 12:43:21 | 586      | 17.833              |
| 3/31/2004 | 12:43:22 | 587      | 17.836              |
| 3/31/2004 | 12:43:23 | 588      | 17.838              |
| 3/31/2004 | 12:43:24 | 589      | 17.83               |
| 3/31/2004 | 12:43:25 | 590      | 17.842              |
| 3/31/2004 | 12:43:26 | 591      | 17.845              |
| 3/31/2004 | 12:43:27 | 592      | 17.848              |
| 3/31/2004 | 12:43:28 | 593      | 17.852              |
| 3/31/2004 | 12:43:29 | 594      | 17.852              |
| 3/31/2004 | 12:43:30 | 595      | 17.854              |
| 3/31/2004 | 12:43:31 | 596      | 17.857              |
| 3/31/2004 | 12:43:32 | 597      | 17.86               |
| 3/31/2004 | 12:43:33 | 598      | 17.862              |
| 3/31/2004 | 12:43:34 | 599      | 17.864              |
| 3/31/2004 | 12:43:35 | 600      | 17.865              |
| 3/31/2004 | 12:43:36 | 601      | 17.869              |
| 3/31/2004 | 12:43:37 | 602      | 17.87               |
| 3/31/2004 | 12:43:38 | 603      | 17.872              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:43:39 | 604      | 17.876              |
| 3/31/2004 | 12:43:40 | 605      | 17.877              |
| 3/31/2004 | 12:43:41 | 606      | 17.881              |
| 3/31/2004 | 12:43:42 | 607      | 17.883              |
| 3/31/2004 | 12:43:43 | 608      | 17.886              |
| 3/31/2004 | 12:43:44 | 609      | 17.888              |
| 3/31/2004 | 12:43:45 | 610      | 17.889              |
| 3/31/2004 | 12:43:46 | 611      | 17.891              |
| 3/31/2004 | 12:43:47 | 612      | 17.893              |
| 3/31/2004 | 12:43:48 | 613      | 17.896              |
| 3/31/2004 | 12:43:49 | 614      | 17.898              |
| 3/31/2004 | 12:43:50 | 615      | 17.899              |
| 3/31/2004 | 12:43:51 | 616      | 17.901              |
| 3/31/2004 | 12:43:52 | 617      | 17.905              |
| 3/31/2004 | 12:43:53 | 618      | 17.907              |
| 3/31/2004 | 12:43:54 | 619      | 17.908              |
| 3/31/2004 | 12:43:55 | 620      | 17.91               |
| 3/31/2004 | 12:43:56 | 621      | 17.912              |
| 3/31/2004 | 12:43:57 | 622      | 17.912              |
| 3/31/2004 | 12:43:58 | 623      | 17.915              |
| 3/31/2004 | 12:43:59 | 624      | 17.917              |
| 3/31/2004 | 12:44:00 | 625      | 17.918              |
| 3/31/2004 | 12:44:01 | 626      | 17.92               |
| 3/31/2004 | 12:44:02 | 627      | 17.922              |
| 3/31/2004 | 12:44:03 | 628      | 17.924              |
| 3/31/2004 | 12:44:04 | 629      | 17.925              |
| 3/31/2004 | 12:44:05 | 630      | 17.915              |
| 3/31/2004 | 12:44:06 | 631      | 17.929              |
| 3/31/2004 | 12:44:07 | 632      | 17.932              |
| 3/31/2004 | 12:44:08 | 633      | 17.934              |
| 3/31/2004 | 12:44:09 | 634      | 17.937              |
| 3/31/2004 | 12:44:10 | 635      | 17.937              |
| 3/31/2004 | 12:44:11 | 636      | 17.939              |
| 3/31/2004 | 12:44:12 | 637      | 17.941              |
| 3/31/2004 | 12:44:13 | 638      | 17.942              |
| 3/31/2004 | 12:44:14 | 639      | 17.942              |
| 3/31/2004 | 12:44:15 | 640      | 17.946              |
| 3/31/2004 | 12:44:16 | 641      | 17.948              |
| 3/31/2004 | 12:44:17 | 642      | 17.948              |
| 3/31/2004 | 12:44:18 | 643      | 17.951              |
| 3/31/2004 | 12:44:19 | 644      | 17.953              |
| 3/31/2004 | 12:44:20 | 645      | 17.954              |
| 3/31/2004 | 12:44:21 | 646      | 17.956              |
| 3/31/2004 | 12:44:22 | 647      | 17.958              |
| 3/31/2004 | 12:44:23 | 648      | 17.96               |
| 3/31/2004 | 12:44:24 | 649      | 17.961              |
| 3/31/2004 | 12:44:25 | 650      | 17.963              |
| 3/31/2004 | 12:44:26 | 651      | 17.963              |
| 3/31/2004 | 12:44:27 | 652      | 17.966              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/31/2004 | 12:44:28 | 653      | 17.966              |
| 3/31/2004 | 12:44:29 | 654      | 17.968              |
| 3/31/2004 | 12:44:30 | 655      | 17.971              |
| 3/31/2004 | 12:44:31 | 656      | 17.973              |
| 3/31/2004 | 12:44:32 | 657      | 17.975              |
| 3/31/2004 | 12:44:33 | 658      | 17.975              |
| 3/31/2004 | 12:44:34 | 659      | 17.975              |
| 3/31/2004 | 12:44:35 | 660      | 17.977              |
| 3/31/2004 | 12:44:36 | 661      | 17.978              |
| 3/31/2004 | 12:44:37 | 662      | 17.98               |
| 3/31/2004 | 12:44:38 | 663      | 17.982              |
| 3/31/2004 | 12:44:39 | 664      | 17.983              |
| 3/31/2004 | 12:44:40 | 665      | 17.985              |
| 3/31/2004 | 12:44:41 | 666      | 17.985              |
| 3/31/2004 | 12:44:42 | 667      | 17.989              |
| 3/31/2004 | 12:44:43 | 668      | 17.989              |
| 3/31/2004 | 12:44:44 | 669      | 17.99               |
| 3/31/2004 | 12:44:45 | 670      | 17.992              |
| 3/31/2004 | 12:44:46 | 671      | 17.982              |
| 3/31/2004 | 12:44:47 | 672      | 17.994              |
| 3/31/2004 | 12:44:48 | 673      | 17.996              |
| 3/31/2004 | 12:44:49 | 674      | 17.997              |
| 3/31/2004 | 12:44:50 | 675      | 17.999              |
| 3/31/2004 | 12:44:51 | 676      | 18.001              |
| 3/31/2004 | 12:44:52 | 677      | 18.001              |
| 3/31/2004 | 12:44:53 | 678      | 18.002              |
| 3/31/2004 | 12:44:54 | 679      | 18.004              |
| 3/31/2004 | 12:44:55 | 680      | 18.004              |
| 3/31/2004 | 12:44:56 | 681      | 18.006              |
| 3/31/2004 | 12:44:57 | 682      | 18.009              |
| 3/31/2004 | 12:44:58 | 683      | 18.009              |
| 3/31/2004 | 12:44:59 | 684      | 18.011              |
| 3/31/2004 | 12:45:00 | 685      | 18.011              |
| 3/31/2004 | 12:45:01 | 686      | 18.001              |
| 3/31/2004 | 12:45:02 | 687      | 18.001              |
| 3/31/2004 | 12:45:03 | 688      | 18.003              |
| 3/31/2004 | 12:45:04 | 689      | 18.005              |
| 3/31/2004 | 12:45:05 | 690      | 18.005              |
| 3/31/2004 | 12:45:06 | 691      | 18.005              |
| 3/31/2004 | 12:45:07 | 692      | 18.006              |
| 3/31/2004 | 12:45:08 | 693      | 18.008              |



### DSS 15\_TEST#2

Data Set: Y:\...\DSS15\_test2\_03JAN2011.aqt

Date: 01/03/11

Time: 10:28:53

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: DSS 15

Test Date: 03/31/2004

### AQUIFER DATA

Saturated Thickness: 33.52 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (DSS 15)

Initial Displacement: 18. ft

Static Water Column Height: 33.52 ft

Total Well Penetration Depth: 33.52 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 1.374E-5 ft/sec

y0 = 27.18 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_03JAN2011\DSS 15\DSS15\_test2\_03JAN2011  
 Title: DSS 15\_test#2  
 Date: 01/03/11  
 Time: 10:31:49

### PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/31/2004  
 Test Well: DSS 15

### AQUIFER DATA

Saturated Thickness: 33.52 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

### SLUG TEST WELL DATA

Test Well: DSS 15

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 18. ft  
 Static Water Column Height: 33.52 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 33.52 ft

No. of Observations: 639

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 55.              | 17.94             | 375.       | 1.653             |
| 56.              | 17.77             | 376.       | 1.641             |
| 57.              | 17.61             | 377.       | 1.629             |
| 58.              | 17.47             | 378.       | 1.617             |
| 59.              | 17.3              | 379.       | 1.607             |
| 60.              | 17.15             | 380.       | 1.595             |
| 61.              | 17.03             | 381.       | 1.583             |
| 62.              | 16.89             | 382.       | 1.573             |
| 63.              | 16.75             | 383.       | 1.561             |
| 64.              | 16.64             | 384.       | 1.551             |
| 65.              | 16.5              | 385.       | 1.54              |
| 66.              | 16.38             | 386.       | 1.528             |
| 67.              | 16.25             | 387.       | 1.518             |
| 68.              | 16.13             | 388.       | 1.508             |
| 69.              | 16.               | 389.       | 1.509             |
| 70.              | 15.87             | 390.       | 1.487             |
| 71.              | 15.75             | 391.       | 1.479             |
| 72.              | 15.64             | 392.       | 1.467             |
| 73.              | 15.52             | 393.       | 1.455             |
| 74.              | 15.39             | 394.       | 1.445             |
| 75.              | 15.29             | 395.       | 1.436             |
| 76.              | 15.16             | 396.       | 1.426             |
| 77.              | 15.04             | 397.       | 1.426             |
| 78.              | 14.94             | 398.       | 1.405             |
| 79.              | 14.82             | 399.       | 1.395             |
| 80.              | 14.7              | 400.       | 1.397             |
| 81.              | 14.6              | 401.       | 1.376             |
| 82.              | 14.48             | 402.       | 1.366             |



| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 83.               | 14.37                    | 403.              | 1.368                    |
| 84.               | 14.27                    | 404.              | 1.347                    |
| 85.               | 14.16                    | 405.              | 1.339                    |
| 86.               | 14.04                    | 406.              | 1.339                    |
| 87.               | 13.95                    | 407.              | 1.32                     |
| 88.               | 13.84                    | 408.              | 1.311                    |
| 89.               | 13.73                    | 409.              | 1.313                    |
| 90.               | 13.64                    | 410.              | 1.294                    |
| 91.               | 13.53                    | 411.              | 1.284                    |
| 92.               | 13.42                    | 412.              | 1.286                    |
| 93.               | 13.33                    | 413.              | 1.267                    |
| 94.               | 13.23                    | 414.              | 1.257                    |
| 95.               | 13.12                    | 415.              | 1.248                    |
| 96.               | 13.03                    | 416.              | 1.24                     |
| 97.               | 12.93                    | 417.              | 1.231                    |
| 98.               | 12.83                    | 418.              | 1.223                    |
| 99.               | 12.74                    | 419.              | 1.214                    |
| 100.              | 12.64                    | 420.              | 1.204                    |
| 101.              | 12.54                    | 421.              | 1.197                    |
| 102.              | 12.45                    | 422.              | 1.188                    |
| 103.              | 12.36                    | 423.              | 1.18                     |
| 104.              | 12.27                    | 424.              | 1.171                    |
| 105.              | 12.17                    | 425.              | 1.163                    |
| 106.              | 12.09                    | 426.              | 1.154                    |
| 107.              | 11.99                    | 427.              | 1.147                    |
| 108.              | 11.9                     | 428.              | 1.139                    |
| 109.              | 11.8                     | 429.              | 1.13                     |
| 110.              | 11.72                    | 430.              | 1.123                    |
| 111.              | 11.63                    | 431.              | 1.117                    |
| 112.              | 11.55                    | 432.              | 1.12                     |
| 113.              | 11.46                    | 433.              | 1.103                    |
| 114.              | 11.38                    | 434.              | 1.093                    |
| 115.              | 11.29                    | 435.              | 1.086                    |
| 116.              | 11.2                     | 436.              | 1.077                    |
| 117.              | 11.13                    | 437.              | 1.07                     |
| 118.              | 11.04                    | 438.              | 1.064                    |
| 119.              | 10.95                    | 439.              | 1.055                    |
| 120.              | 10.88                    | 440.              | 1.048                    |
| 121.              | 10.79                    | 441.              | 1.041                    |
| 122.              | 10.7                     | 442.              | 1.035                    |
| 123.              | 10.64                    | 443.              | 1.026                    |
| 124.              | 10.55                    | 444.              | 1.019                    |
| 125.              | 10.47                    | 445.              | 1.012                    |
| 126.              | 10.4                     | 446.              | 1.006                    |
| 127.              | 10.32                    | 447.              | 0.999                    |
| 128.              | 10.23                    | 448.              | 0.992                    |
| 129.              | 10.17                    | 449.              | 0.985                    |
| 130.              | 10.08                    | 450.              | 0.98                     |
| 131.              | 10.                      | 451.              | 0.971                    |
| 132.              | 9.942                    | 452.              | 0.965                    |
| 133.              | 9.86                     | 453.              | 0.959                    |
| 134.              | 9.783                    | 454.              | 0.953                    |
| 135.              | 9.721                    | 455.              | 0.946                    |
| 136.              | 9.639                    | 456.              | 0.939                    |
| 137.              | 9.564                    | 457.              | 0.932                    |
| 138.              | 9.489                    | 458.              | 0.927                    |
| 139.              | 9.427                    | 459.              | 0.92                     |
| 140.              | 9.35                     | 460.              | 0.913                    |
| 141.              | 9.278                    | 461.              | 0.906                    |
| 142.              | 9.215                    | 462.              | 0.9                      |
| 143.              | 9.143                    | 463.              | 0.894                    |
| 144.              | 9.072                    | 464.              | 0.889                    |
| 145.              | 9.01                     | 465.              | 0.884                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 146.              | 8.94                     | 466.              | 0.877                    |
| 147.              | 8.878                    | 467.              | 0.882                    |
| 148.              | 8.808                    | 468.              | 0.867                    |
| 149.              | 8.752                    | 469.              | 0.86                     |
| 150.              | 8.678                    | 470.              | 0.855                    |
| 151.              | 8.61                     | 471.              | 0.848                    |
| 152.              | 8.543                    | 472.              | 0.843                    |
| 153.              | 8.485                    | 473.              | 0.836                    |
| 154.              | 8.42                     | 474.              | 0.831                    |
| 155.              | 8.353                    | 475.              | 0.838                    |
| 156.              | 8.296                    | 476.              | 0.822                    |
| 157.              | 8.232                    | 477.              | 0.816                    |
| 158.              | 8.167                    | 478.              | 0.821                    |
| 159.              | 8.114                    | 479.              | 0.805                    |
| 160.              | 8.049                    | 480.              | 0.8                      |
| 161.              | 7.986                    | 481.              | 0.803                    |
| 162.              | 7.933                    | 482.              | 0.79                     |
| 163.              | 7.871                    | 483.              | 0.781                    |
| 164.              | 7.808                    | 484.              | 0.786                    |
| 165.              | 7.757                    | 485.              | 0.773                    |
| 166.              | 7.694                    | 486.              | 0.766                    |
| 167.              | 7.636                    | 487.              | 0.771                    |
| 168.              | 7.584                    | 488.              | 0.758                    |
| 169.              | 7.524                    | 489.              | 0.752                    |
| 170.              | 7.466                    | 490.              | 0.757                    |
| 171.              | 7.415                    | 491.              | 0.742                    |
| 172.              | 7.357                    | 492.              | 0.737                    |
| 173.              | 7.301                    | 493.              | 0.742                    |
| 174.              | 7.251                    | 494.              | 0.728                    |
| 175.              | 7.195                    | 495.              | 0.723                    |
| 176.              | 7.138                    | 496.              | 0.718                    |
| 177.              | 7.09                     | 497.              | 0.71                     |
| 178.              | 7.034                    | 498.              | 0.708                    |
| 179.              | 6.981                    | 499.              | 0.703                    |
| 180.              | 6.933                    | 500.              | 0.698                    |
| 181.              | 6.878                    | 501.              | 0.693                    |
| 182.              | 6.825                    | 502.              | 0.687                    |
| 183.              | 6.779                    | 503.              | 0.682                    |
| 184.              | 6.726                    | 504.              | 0.677                    |
| 185.              | 6.678                    | 505.              | 0.674                    |
| 186.              | 6.627                    | 506.              | 0.669                    |
| 187.              | 6.588                    | 507.              | 0.677                    |
| 188.              | 6.53                     | 508.              | 0.662                    |
| 189.              | 6.477                    | 509.              | 0.657                    |
| 190.              | 6.427                    | 510.              | 0.652                    |
| 191.              | 6.384                    | 511.              | 0.646                    |
| 192.              | 6.335                    | 512.              | 0.645                    |
| 193.              | 6.285                    | 513.              | 0.64                     |
| 194.              | 6.243                    | 514.              | 0.636                    |
| 195.              | 6.193                    | 515.              | 0.643                    |
| 196.              | 6.147                    | 516.              | 0.627                    |
| 197.              | 6.104                    | 517.              | 0.624                    |
| 198.              | 6.056                    | 518.              | 0.619                    |
| 199.              | 6.008                    | 519.              | 0.616                    |
| 200.              | 5.969                    | 520.              | 0.611                    |
| 201.              | 5.921                    | 521.              | 0.609                    |
| 202.              | 5.875                    | 522.              | 0.604                    |
| 203.              | 5.836                    | 523.              | 0.599                    |
| 204.              | 5.79                     | 524.              | 0.595                    |
| 205.              | 5.747                    | 525.              | 0.592                    |
| 206.              | 5.706                    | 526.              | 0.587                    |
| 207.              | 5.662                    | 527.              | 0.583                    |
| 208.              | 5.617                    | 528.              | 0.578                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 209.              | 5.578                    | 529.              | 0.575                    |
| 210.              | 5.535                    | 530.              | 0.571                    |
| 211.              | 5.492                    | 531.              | 0.568                    |
| 212.              | 5.455                    | 532.              | 0.564                    |
| 213.              | 5.414                    | 533.              | 0.561                    |
| 214.              | 5.373                    | 534.              | 0.558                    |
| 215.              | 5.335                    | 535.              | 0.554                    |
| 216.              | 5.294                    | 536.              | 0.551                    |
| 217.              | 5.253                    | 537.              | 0.546                    |
| 218.              | 5.219                    | 538.              | 0.544                    |
| 219.              | 5.178                    | 539.              | 0.54                     |
| 220.              | 5.139                    | 540.              | 0.537                    |
| 221.              | 5.105                    | 541.              | 0.532                    |
| 222.              | 5.062                    | 542.              | 0.529                    |
| 223.              | 5.022                    | 543.              | 0.525                    |
| 224.              | 4.99                     | 544.              | 0.522                    |
| 225.              | 4.951                    | 545.              | 0.518                    |
| 226.              | 4.915                    | 546.              | 0.516                    |
| 227.              | 4.879                    | 547.              | 0.525                    |
| 228.              | 4.853                    | 548.              | 0.51                     |
| 229.              | 4.809                    | 549.              | 0.508                    |
| 230.              | 4.771                    | 550.              | 0.504                    |
| 231.              | 4.736                    | 551.              | 0.501                    |
| 232.              | 4.703                    | 552.              | 0.498                    |
| 233.              | 4.665                    | 553.              | 0.494                    |
| 234.              | 4.631                    | 554.              | 0.491                    |
| 235.              | 4.599                    | 555.              | 0.499                    |
| 236.              | 4.565                    | 556.              | 0.486                    |
| 237.              | 4.529                    | 557.              | 0.48                     |
| 238.              | 4.5                      | 558.              | 0.489                    |
| 239.              | 4.464                    | 559.              | 0.475                    |
| 240.              | 4.43                     | 560.              | 0.472                    |
| 241.              | 4.401                    | 561.              | 0.469                    |
| 242.              | 4.365                    | 562.              | 0.465                    |
| 243.              | 4.332                    | 563.              | 0.463                    |
| 244.              | 4.303                    | 564.              | 0.46                     |
| 245.              | 4.269                    | 565.              | 0.457                    |
| 246.              | 4.237                    | 566.              | 0.465                    |
| 247.              | 4.208                    | 567.              | 0.451                    |
| 248.              | 4.175                    | 568.              | 0.448                    |
| 249.              | 4.143                    | 569.              | 0.456                    |
| 250.              | 4.115                    | 570.              | 0.443                    |
| 251.              | 4.083                    | 571.              | 0.439                    |
| 252.              | 4.052                    | 572.              | 0.448                    |
| 253.              | 4.025                    | 573.              | 0.434                    |
| 254.              | 3.994                    | 574.              | 0.433                    |
| 255.              | 3.963                    | 575.              | 0.429                    |
| 256.              | 3.936                    | 576.              | 0.426                    |
| 257.              | 3.905                    | 577.              | 0.424                    |
| 258.              | 3.874                    | 578.              | 0.421                    |
| 259.              | 3.849                    | 579.              | 0.417                    |
| 260.              | 3.818                    | 580.              | 0.416                    |
| 261.              | 3.791                    | 581.              | 0.414                    |
| 262.              | 3.763                    | 582.              | 0.41                     |
| 263.              | 3.734                    | 583.              | 0.407                    |
| 264.              | 3.705                    | 584.              | 0.407                    |
| 265.              | 3.683                    | 585.              | 0.402                    |
| 266.              | 3.654                    | 586.              | 0.4                      |
| 267.              | 3.627                    | 587.              | 0.397                    |
| 268.              | 3.601                    | 588.              | 0.395                    |
| 269.              | 3.586                    | 589.              | 0.403                    |
| 270.              | 3.548                    | 590.              | 0.391                    |
| 271.              | 3.519                    | 591.              | 0.388                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 272.              | 3.493                    | 592.              | 0.385                    |
| 273.              | 3.47                     | 593.              | 0.381                    |
| 274.              | 3.444                    | 594.              | 0.381                    |
| 275.              | 3.418                    | 595.              | 0.379                    |
| 276.              | 3.394                    | 596.              | 0.376                    |
| 277.              | 3.369                    | 597.              | 0.373                    |
| 278.              | 3.343                    | 598.              | 0.371                    |
| 279.              | 3.321                    | 599.              | 0.369                    |
| 280.              | 3.295                    | 600.              | 0.368                    |
| 281.              | 3.27                     | 601.              | 0.364                    |
| 282.              | 3.248                    | 602.              | 0.363                    |
| 283.              | 3.222                    | 603.              | 0.361                    |
| 284.              | 3.196                    | 604.              | 0.357                    |
| 285.              | 3.176                    | 605.              | 0.356                    |
| 286.              | 3.15                     | 606.              | 0.352                    |
| 287.              | 3.126                    | 607.              | 0.35                     |
| 288.              | 3.106                    | 608.              | 0.347                    |
| 289.              | 3.082                    | 609.              | 0.345                    |
| 290.              | 3.058                    | 610.              | 0.344                    |
| 291.              | 3.037                    | 611.              | 0.342                    |
| 292.              | 3.015                    | 612.              | 0.34                     |
| 293.              | 2.991                    | 613.              | 0.337                    |
| 294.              | 2.971                    | 614.              | 0.335                    |
| 295.              | 2.948                    | 615.              | 0.334                    |
| 296.              | 2.926                    | 616.              | 0.332                    |
| 297.              | 2.906                    | 617.              | 0.328                    |
| 298.              | 2.884                    | 618.              | 0.326                    |
| 299.              | 2.863                    | 619.              | 0.325                    |
| 300.              | 2.842                    | 620.              | 0.323                    |
| 301.              | 2.822                    | 621.              | 0.321                    |
| 302.              | 2.801                    | 622.              | 0.321                    |
| 303.              | 2.781                    | 623.              | 0.318                    |
| 304.              | 2.76                     | 624.              | 0.316                    |
| 305.              | 2.742                    | 625.              | 0.315                    |
| 306.              | 2.721                    | 626.              | 0.313                    |
| 307.              | 2.712                    | 627.              | 0.311                    |
| 308.              | 2.682                    | 628.              | 0.309                    |
| 309.              | 2.661                    | 629.              | 0.308                    |
| 310.              | 2.641                    | 630.              | 0.318                    |
| 311.              | 2.624                    | 631.              | 0.304                    |
| 312.              | 2.603                    | 632.              | 0.301                    |
| 313.              | 2.583                    | 633.              | 0.299                    |
| 314.              | 2.568                    | 634.              | 0.296                    |
| 315.              | 2.547                    | 635.              | 0.296                    |
| 316.              | 2.528                    | 636.              | 0.294                    |
| 317.              | 2.511                    | 637.              | 0.292                    |
| 318.              | 2.491                    | 638.              | 0.291                    |
| 319.              | 2.474                    | 639.              | 0.291                    |
| 320.              | 2.458                    | 640.              | 0.287                    |
| 321.              | 2.439                    | 641.              | 0.285                    |
| 322.              | 2.421                    | 642.              | 0.285                    |
| 323.              | 2.403                    | 643.              | 0.282                    |
| 324.              | 2.385                    | 644.              | 0.28                     |
| 325.              | 2.368                    | 645.              | 0.279                    |
| 326.              | 2.351                    | 646.              | 0.277                    |
| 327.              | 2.335                    | 647.              | 0.275                    |
| 328.              | 2.316                    | 648.              | 0.273                    |
| 329.              | 2.301                    | 649.              | 0.272                    |
| 330.              | 2.284                    | 650.              | 0.27                     |
| 331.              | 2.267                    | 651.              | 0.27                     |
| 332.              | 2.251                    | 652.              | 0.267                    |
| 333.              | 2.234                    | 653.              | 0.267                    |
| 334.              | 2.217                    | 654.              | 0.265                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 335.              | 2.204                    | 655.              | 0.262                    |
| 336.              | 2.188                    | 656.              | 0.26                     |
| 337.              | 2.171                    | 657.              | 0.258                    |
| 338.              | 2.157                    | 658.              | 0.258                    |
| 339.              | 2.14                     | 659.              | 0.258                    |
| 340.              | 2.125                    | 660.              | 0.256                    |
| 341.              | 2.11                     | 661.              | 0.255                    |
| 342.              | 2.094                    | 662.              | 0.253                    |
| 343.              | 2.079                    | 663.              | 0.251                    |
| 344.              | 2.063                    | 664.              | 0.25                     |
| 345.              | 2.05                     | 665.              | 0.248                    |
| 346.              | 2.036                    | 666.              | 0.248                    |
| 347.              | 2.019                    | 667.              | 0.244                    |
| 348.              | 2.017                    | 668.              | 0.244                    |
| 349.              | 1.992                    | 669.              | 0.243                    |
| 350.              | 1.976                    | 670.              | 0.241                    |
| 351.              | 1.961                    | 671.              | 0.251                    |
| 352.              | 1.949                    | 672.              | 0.239                    |
| 353.              | 1.935                    | 673.              | 0.237                    |
| 354.              | 1.918                    | 674.              | 0.236                    |
| 355.              | 1.906                    | 675.              | 0.234                    |
| 356.              | 1.894                    | 676.              | 0.232                    |
| 357.              | 1.881                    | 677.              | 0.232                    |
| 358.              | 1.867                    | 678.              | 0.231                    |
| 359.              | 1.853                    | 679.              | 0.229                    |
| 360.              | 1.84                     | 680.              | 0.229                    |
| 361.              | 1.829                    | 681.              | 0.227                    |
| 362.              | 1.814                    | 682.              | 0.224                    |
| 363.              | 1.8                      | 683.              | 0.224                    |
| 364.              | 1.79                     | 684.              | 0.222                    |
| 365.              | 1.776                    | 685.              | 0.222                    |
| 366.              | 1.763                    | 686.              | 0.232                    |
| 367.              | 1.751                    | 687.              | 0.232                    |
| 368.              | 1.737                    | 688.              | 0.23                     |
| 369.              | 1.725                    | 689.              | 0.228                    |
| 370.              | 1.715                    | 690.              | 0.228                    |
| 371.              | 1.703                    | 691.              | 0.228                    |
| 372.              | 1.689                    | 692.              | 0.227                    |
| 373.              | 1.677                    | 693.              | 0.225                    |
| 374.              | 1.663                    |                   |                          |

SOLUTION

Slug Test

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

ln(Re/rw): 5.191

VISUAL ESTIMATION RESULTSEstimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 1.374E-5        | ft/sec |
| y0               | 27.18           | ft     |

K = 0.0004187 cm/sec

T = K\*b = 0.0004604 ft<sup>2</sup>/sec (0.4277 sq. cm/sec)

In-Situ Inc. MiniTroll Pro  
 Report generated: 4/28/2004 14:27:20  
 Report from file: ...\\SN09731 2004-03-31 124617 DSS15\_3.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: DSS15\_3

Test defined on: 3/31/2004 12:46:12  
 Test started on: 3/31/2004 12:46:17  
 Test stopped on: 3/31/2004 12:58:46  
 Test extracted on: N/A N/A

Data gathered using Logarithmic testing  
 Maximum time between data points: 10.0 Seconds.  
 Number of data samples: 137

TOTAL DATA SAMPLES 137

Channel number [2]  
 Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1584.960 meters (5200.000 feet)

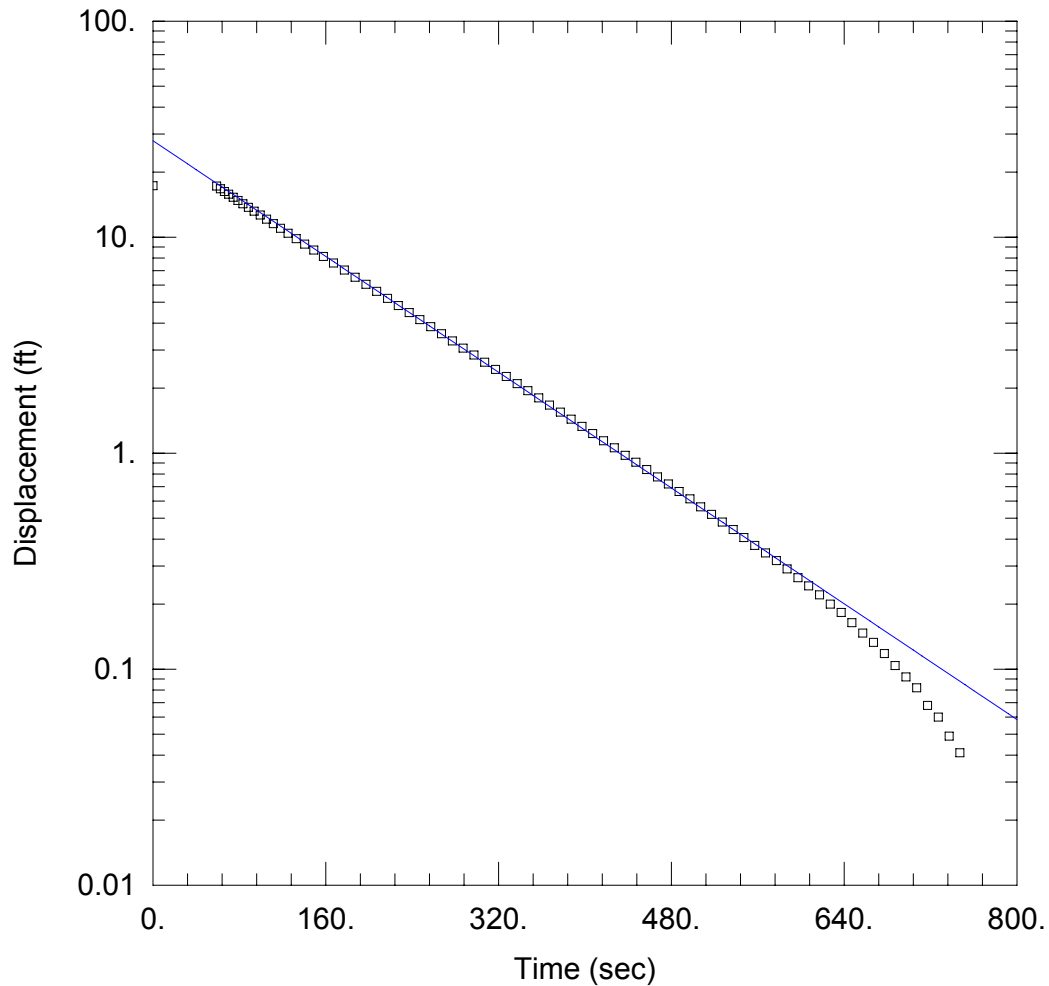
| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:46:17 | 0        | 18.068              |
| 3/31/2004 | 12:46:17 | 0.3      | 18.081              |
| 3/31/2004 | 12:46:18 | 0.6      | 18.085              |
| 3/31/2004 | 12:46:18 | 0.9      | 18.086              |
| 3/31/2004 | 12:46:18 | 1.2      | 18.088              |
| 3/31/2004 | 12:46:19 | 1.5      | 18.09               |
| 3/31/2004 | 12:46:19 | 1.8      | 18.09               |
| 3/31/2004 | 12:46:19 | 2.1      | 18.091              |
| 3/31/2004 | 12:46:20 | 2.4      | 18.091              |
| 3/31/2004 | 12:46:20 | 2.7      | 18.093              |
| 3/31/2004 | 12:46:20 | 3        | 18.093              |
| 3/31/2004 | 12:46:20 | 3.3      | 18.093              |
| 3/31/2004 | 12:46:21 | 3.6      | 18.094              |
| 3/31/2004 | 12:46:21 | 3.9      | 18.094              |
| 3/31/2004 | 12:46:21 | 4.2      | 18.094              |
| 3/31/2004 | 12:46:22 | 4.5      | 18.094              |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:46:22 | 4.8      | 18.096              |
| 3/31/2004 | 12:46:22 | 5.1      | 18.096              |
| 3/31/2004 | 12:46:23 | 5.4      | 18.096              |
| 3/31/2004 | 12:46:23 | 5.7      | 18.096              |
| 3/31/2004 | 12:46:23 | 6        | 18.096              |
| 3/31/2004 | 12:46:23 | 6.4      | 18.096              |
| 3/31/2004 | 12:46:24 | 6.7      | 18.091              |
| 3/31/2004 | 12:46:24 | 7.1      | 18.1                |
| 3/31/2004 | 12:46:25 | 7.5      | 18.094              |
| 3/31/2004 | 12:46:25 | 8        | 18.098              |
| 3/31/2004 | 12:46:26 | 8.4      | 18.098              |
| 3/31/2004 | 12:46:26 | 8.9      | 18.096              |
| 3/31/2004 | 12:46:27 | 9.5      | 17.987              |
| 3/31/2004 | 12:46:27 | 10       | 17.811              |
| 3/31/2004 | 12:46:28 | 10.6     | 17.678              |
| 3/31/2004 | 12:46:28 | 11.3     | 17.512              |
| 3/31/2004 | 12:46:29 | 11.9     | 17.264              |
| 3/31/2004 | 12:46:30 | 12.6     | 16.922              |
| 3/31/2004 | 12:46:31 | 13.4     | 16.541              |
| 3/31/2004 | 12:46:31 | 14.2     | 16.208              |
| 3/31/2004 | 12:46:32 | 15       | 15.841              |
| 3/31/2004 | 12:46:33 | 15.9     | 15.432              |
| 3/31/2004 | 12:46:34 | 16.8     | 15.003              |
| 3/31/2004 | 12:46:35 | 17.8     | 14.557              |
| 3/31/2004 | 12:46:36 | 18.9     | 14.081              |
| 3/31/2004 | 12:46:37 | 20       | 13.594              |
| 3/31/2004 | 12:46:38 | 21.2     | 13.091              |
| 3/31/2004 | 12:46:40 | 22.4     | 12.554              |
| 3/31/2004 | 12:46:41 | 23.8     | 11.99               |
| 3/31/2004 | 12:46:42 | 25.2     | 11.411              |
| 3/31/2004 | 12:46:44 | 26.7     | 10.811              |
| 3/31/2004 | 12:46:45 | 28.2     | 10.204              |
| 3/31/2004 | 12:46:47 | 29.8     | 9.567               |
| 3/31/2004 | 12:46:49 | 31.5     | 8.903               |
| 3/31/2004 | 12:46:50 | 33.3     | 8.215               |
| 3/31/2004 | 12:46:52 | 35.2     | 7.502               |
| 3/31/2004 | 12:46:54 | 37.3     | 6.729               |
| 3/31/2004 | 12:46:57 | 39.5     | 5.932               |
| 3/31/2004 | 12:46:59 | 41.8     | 5.118               |
| 3/31/2004 | 12:47:01 | 44.3     | 4.26                |
| 3/31/2004 | 12:47:04 | 46.9     | 3.376               |
| 3/31/2004 | 12:47:07 | 49.7     | 2.451               |
| 3/31/2004 | 12:47:10 | 52.6     | 1.519               |
| 3/31/2004 | 12:47:13 | 55.7     | 0.587               |
| 3/31/2004 | 12:47:16 | 59       | 0.826               |
| 3/31/2004 | 12:47:20 | 62.5     | 1.317               |
| 3/31/2004 | 12:47:23 | 66.2     | 1.784               |
| 3/31/2004 | 12:47:27 | 70.1     | 2.265               |
| 3/31/2004 | 12:47:31 | 74.3     | 2.766               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 12:47:36 | 78.7     | 3.27                |
| 3/31/2004 | 12:47:41 | 83.4     | 3.807               |
| 3/31/2004 | 12:47:46 | 88.4     | 4.329               |
| 3/31/2004 | 12:47:51 | 93.7     | 4.863               |
| 3/31/2004 | 12:47:56 | 99.3     | 5.408               |
| 3/31/2004 | 12:48:02 | 105.2    | 5.959               |
| 3/31/2004 | 12:48:09 | 111.5    | 6.526               |
| 3/31/2004 | 12:48:15 | 118.1    | 7.084               |
| 3/31/2004 | 12:48:22 | 125.1    | 7.646               |
| 3/31/2004 | 12:48:30 | 132.6    | 8.224               |
| 3/31/2004 | 12:48:38 | 140.5    | 8.788               |
| 3/31/2004 | 12:48:46 | 148.9    | 9.356               |
| 3/31/2004 | 12:48:55 | 157.8    | 9.922               |
| 3/31/2004 | 12:49:04 | 167.2    | 10.479              |
| 3/31/2004 | 12:49:14 | 177.2    | 11.029              |
| 3/31/2004 | 12:49:24 | 187.2    | 11.541              |
| 3/31/2004 | 12:49:34 | 197.2    | 12.014              |
| 3/31/2004 | 12:49:44 | 207.2    | 12.455              |
| 3/31/2004 | 12:49:54 | 217.2    | 12.863              |
| 3/31/2004 | 12:50:04 | 227.2    | 13.241              |
| 3/31/2004 | 12:50:14 | 237.2    | 13.593              |
| 3/31/2004 | 12:50:24 | 247.2    | 13.918              |
| 3/31/2004 | 12:50:34 | 257.2    | 14.22               |
| 3/31/2004 | 12:50:44 | 267.2    | 14.498              |
| 3/31/2004 | 12:50:54 | 277.2    | 14.76               |
| 3/31/2004 | 12:51:04 | 287.2    | 15.002              |
| 3/31/2004 | 12:51:14 | 297.2    | 15.223              |
| 3/31/2004 | 12:51:24 | 307.2    | 15.433              |
| 3/31/2004 | 12:51:34 | 317.2    | 15.626              |
| 3/31/2004 | 12:51:44 | 327.2    | 15.804              |
| 3/31/2004 | 12:51:54 | 337.2    | 15.969              |
| 3/31/2004 | 12:52:04 | 347.2    | 16.123              |
| 3/31/2004 | 12:52:14 | 357.2    | 16.265              |
| 3/31/2004 | 12:52:24 | 367.2    | 16.398              |
| 3/31/2004 | 12:52:34 | 377.2    | 16.518              |
| 3/31/2004 | 12:52:44 | 387.2    | 16.632              |
| 3/31/2004 | 12:52:54 | 397.2    | 16.738              |
| 3/31/2004 | 12:53:04 | 407.2    | 16.836              |
| 3/31/2004 | 12:53:14 | 417.2    | 16.926              |
| 3/31/2004 | 12:53:24 | 427.2    | 17.01               |
| 3/31/2004 | 12:53:34 | 437.2    | 17.09               |
| 3/31/2004 | 12:53:44 | 447.2    | 17.16               |
| 3/31/2004 | 12:53:54 | 457.2    | 17.229              |
| 3/31/2004 | 12:54:04 | 467.2    | 17.292              |
| 3/31/2004 | 12:54:14 | 477.2    | 17.348              |
| 3/31/2004 | 12:54:24 | 487.2    | 17.403              |
| 3/31/2004 | 12:54:34 | 497.2    | 17.454              |
| 3/31/2004 | 12:54:44 | 507.2    | 17.504              |
| 3/31/2004 | 12:54:54 | 517.2    | 17.547              |



| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/31/2004 | 12:55:04 | 527.2    | 17.588              |
| 3/31/2004 | 12:55:14 | 537.2    | 17.625              |
| 3/31/2004 | 12:55:24 | 547.2    | 17.661              |
| 3/31/2004 | 12:55:34 | 557.2    | 17.694              |
| 3/31/2004 | 12:55:44 | 567.2    | 17.723              |
| 3/31/2004 | 12:55:54 | 577.2    | 17.75               |
| 3/31/2004 | 12:56:04 | 587.2    | 17.777              |
| 3/31/2004 | 12:56:14 | 597.2    | 17.803              |
| 3/31/2004 | 12:56:24 | 607.2    | 17.825              |
| 3/31/2004 | 12:56:34 | 617.2    | 17.847              |
| 3/31/2004 | 12:56:44 | 627.2    | 17.868              |
| 3/31/2004 | 12:56:54 | 637.2    | 17.885              |
| 3/31/2004 | 12:57:04 | 647.2    | 17.904              |
| 3/31/2004 | 12:57:14 | 657.2    | 17.921              |
| 3/31/2004 | 12:57:24 | 667.2    | 17.935              |
| 3/31/2004 | 12:57:34 | 677.2    | 17.95               |
| 3/31/2004 | 12:57:44 | 687.2    | 17.964              |
| 3/31/2004 | 12:57:54 | 697.2    | 17.976              |
| 3/31/2004 | 12:58:04 | 707.2    | 17.986              |
| 3/31/2004 | 12:58:14 | 717.2    | 18                  |
| 3/31/2004 | 12:58:24 | 727.2    | 18.008              |
| 3/31/2004 | 12:58:34 | 737.2    | 18.019              |
| 3/31/2004 | 12:58:44 | 747.2    | 18.027              |



### DSS 15\_TEST#3

Data Set: Y:\...\DSS15\_test3\_03JAN2011.aqt

Date: 01/03/11

Time: 10:38:04

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: DSS 15

Test Date: 03/31/2004

### AQUIFER DATA

Saturated Thickness: 33.52 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (DSS 15)

Initial Displacement: 17.3 ft

Static Water Column Height: 33.52 ft

Total Well Penetration Depth: 33.52 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 1.413E-5 ft/sec

y0 = 27.96 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_03JAN2011\DSS 15\DSS15\_test3\_03JAN2011  
 Title: DSS 15\_test#3  
 Date: 01/03/11  
 Time: 10:39:14

### PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/31/2004  
 Test Well: DSS 15

### AQUIFER DATA

Saturated Thickness: 33.52 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

### SLUG TEST WELL DATA

Test Well: DSS 15

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 17.3 ft  
 Static Water Column Height: 33.52 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 33.52 ft

No. of Observations: 77

| Time (sec) | Observation Data  |            | Displacement (ft) |
|------------|-------------------|------------|-------------------|
|            | Displacement (ft) | Time (sec) |                   |
| 59.        | 17.24             | 377.2      | 1.55              |
| 62.5       | 16.75             | 387.2      | 1.436             |
| 66.2       | 16.28             | 397.2      | 1.33              |
| 70.1       | 15.8              | 407.2      | 1.232             |
| 74.3       | 15.3              | 417.2      | 1.142             |
| 78.7       | 14.8              | 427.2      | 1.058             |
| 83.4       | 14.26             | 437.2      | 0.978             |
| 88.4       | 13.74             | 447.2      | 0.908             |
| 93.7       | 13.21             | 457.2      | 0.839             |
| 99.3       | 12.66             | 467.2      | 0.776             |
| 105.2      | 12.11             | 477.2      | 0.72              |
| 111.5      | 11.54             | 487.2      | 0.665             |
| 118.1      | 10.98             | 497.2      | 0.614             |
| 125.1      | 10.42             | 507.2      | 0.564             |
| 132.6      | 9.844             | 517.2      | 0.521             |
| 140.5      | 9.28              | 527.2      | 0.48              |
| 148.9      | 8.712             | 537.2      | 0.443             |
| 157.8      | 8.146             | 547.2      | 0.407             |
| 167.2      | 7.589             | 557.2      | 0.374             |
| 177.2      | 7.039             | 567.2      | 0.345             |
| 187.2      | 6.527             | 577.2      | 0.318             |
| 197.2      | 6.054             | 587.2      | 0.291             |
| 207.2      | 5.613             | 597.2      | 0.265             |
| 217.2      | 5.205             | 607.2      | 0.243             |
| 227.2      | 4.827             | 617.2      | 0.221             |
| 237.2      | 4.475             | 627.2      | 0.2               |
| 247.2      | 4.15              | 637.2      | 0.183             |
| 257.2      | 3.848             | 647.2      | 0.164             |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 267.2             | 3.57                     | 657.2             | 0.147                    |
| 277.2             | 3.308                    | 667.2             | 0.133                    |
| 287.2             | 3.066                    | 677.2             | 0.118                    |
| 297.2             | 2.845                    | 687.2             | 0.104                    |
| 307.2             | 2.635                    | 697.2             | 0.092                    |
| 317.2             | 2.442                    | 707.2             | 0.082                    |
| 327.2             | 2.264                    | 717.2             | 0.068                    |
| 337.2             | 2.099                    | 727.2             | 0.06                     |
| 347.2             | 1.945                    | 737.2             | 0.049                    |
| 357.2             | 1.803                    | 747.2             | 0.041                    |
| 367.2             | 1.67                     |                   |                          |

---

### SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 5.191

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### VISUAL ESTIMATION RESULTS

#### Estimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 1.413E-5        | ft/sec |
| y0               | 27.96           | ft     |

K = 0.0004307 cm/sec

T = K\*b = 0.0004737 ft<sup>2</sup>/sec (0.44 sq. cm/sec)

---

In-Situ Inc. MiniTroll Pro  
 Report generated: 4/19/2004 9:29:58  
 Report from file: ...\\SN09731 2004-03-31 104935 AgLUS3\_1.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS3\_1

Test defined on: 3/31/2004 10:47:23  
 Test started on: 3/31/2004 10:49:35  
 Test stopped on: 3/31/2004 10:54:20  
 Test extracted on: N/A N/A

Data gathered using Linear testing

Time between data points: 0.5 Seconds.  
 Number of data samples: 569

TOTAL DATA SAMPLES 569

Channel number [2]

Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1584.960 meters (5200.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:49:35 | 0        | 9.43                |
| 3/31/2004 | 10:49:36 | 0.5      | 9.438               |
| 3/31/2004 | 10:49:36 | 1        | 9.44                |
| 3/31/2004 | 10:49:37 | 1.5      | 9.44                |
| 3/31/2004 | 10:49:37 | 2        | 9.441               |
| 3/31/2004 | 10:49:38 | 2.5      | 9.456               |
| 3/31/2004 | 10:49:38 | 3        | 9.439               |
| 3/31/2004 | 10:49:39 | 3.5      | 9.439               |
| 3/31/2004 | 10:49:39 | 4        | 9.441               |
| 3/31/2004 | 10:49:40 | 4.5      | 9.441               |
| 3/31/2004 | 10:49:40 | 5        | 9.424               |
| 3/31/2004 | 10:49:41 | 5.5      | 9.397               |
| 3/31/2004 | 10:49:41 | 6        | 9.703               |
| 3/31/2004 | 10:49:42 | 6.5      | 9.431               |
| 3/31/2004 | 10:49:42 | 7        | 9.222               |
| 3/31/2004 | 10:49:43 | 7.5      | 9.716               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:49:43 | 8        | 9.441               |
| 3/31/2004 | 10:49:44 | 8.5      | 9.297               |
| 3/31/2004 | 10:49:44 | 9        | 9.636               |
| 3/31/2004 | 10:49:45 | 9.5      | 9.405               |
| 3/31/2004 | 10:49:45 | 10       | 9.8                 |
| 3/31/2004 | 10:49:46 | 10.5     | 9.454               |
| 3/31/2004 | 10:49:46 | 11       | 9.409               |
| 3/31/2004 | 10:49:47 | 11.5     | 9.342               |
| 3/31/2004 | 10:49:47 | 12       | 9.694               |
| 3/31/2004 | 10:49:48 | 12.5     | 9.364               |
| 3/31/2004 | 10:49:48 | 13       | 9.297               |
| 3/31/2004 | 10:49:49 | 13.5     | 9.759               |
| 3/31/2004 | 10:49:49 | 14       | 9.444               |
| 3/31/2004 | 10:49:50 | 14.5     | 9.425               |
| 3/31/2004 | 10:49:50 | 15       | 9.466               |
| 3/31/2004 | 10:49:51 | 15.5     | 9.319               |
| 3/31/2004 | 10:49:51 | 16       | 9.591               |
| 3/31/2004 | 10:49:52 | 16.5     | 9.415               |
| 3/31/2004 | 10:49:52 | 17       | 9.463               |
| 3/31/2004 | 10:49:53 | 17.5     | 9.465               |
| 3/31/2004 | 10:49:53 | 18       | 9.46                |
| 3/31/2004 | 10:49:54 | 18.5     | 9.456               |
| 3/31/2004 | 10:49:54 | 19       | 9.388               |
| 3/31/2004 | 10:49:55 | 19.5     | 9.448               |
| 3/31/2004 | 10:49:55 | 20       | 9.542               |
| 3/31/2004 | 10:49:56 | 20.5     | 9.444               |
| 3/31/2004 | 10:49:56 | 21       | 9.258               |
| 3/31/2004 | 10:49:57 | 21.5     | 9.631               |
| 3/31/2004 | 10:49:57 | 22       | 9.371               |
| 3/31/2004 | 10:49:58 | 22.5     | 9.458               |
| 3/31/2004 | 10:49:58 | 23       | 9.227               |
| 3/31/2004 | 10:49:59 | 23.5     | 9.719               |
| 3/31/2004 | 10:49:59 | 24       | 9.364               |
| 3/31/2004 | 10:50:00 | 24.5     | 9.453               |
| 3/31/2004 | 10:50:00 | 25       | 9.47                |
| 3/31/2004 | 10:50:01 | 25.5     | 9.343               |
| 3/31/2004 | 10:50:01 | 26       | 9.668               |
| 3/31/2004 | 10:50:02 | 26.5     | 9.439               |
| 3/31/2004 | 10:50:02 | 27       | 9.473               |
| 3/31/2004 | 10:50:03 | 27.5     | 9.468               |
| 3/31/2004 | 10:50:03 | 28       | 9.186               |
| 3/31/2004 | 10:50:04 | 28.5     | 9.692               |
| 3/31/2004 | 10:50:04 | 29       | 9.386               |
| 3/31/2004 | 10:50:05 | 29.5     | 9.468               |
| 3/31/2004 | 10:50:05 | 30       | 9.478               |
| 3/31/2004 | 10:50:06 | 30.5     | 9.47                |
| 3/31/2004 | 10:50:06 | 31       | 9.077               |
| 3/31/2004 | 10:50:07 | 31.5     | 9.759               |
| 3/31/2004 | 10:50:07 | 32       | 9.552               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:50:08 | 32.5     | 9.463               |
| 3/31/2004 | 10:50:08 | 33       | 9.492               |
| 3/31/2004 | 10:50:09 | 33.5     | 9.477               |
| 3/31/2004 | 10:50:09 | 34       | 9.473               |
| 3/31/2004 | 10:50:10 | 34.5     | 9.475               |
| 3/31/2004 | 10:50:10 | 35       | 9.473               |
| 3/31/2004 | 10:50:11 | 35.5     | 9.352               |
| 3/31/2004 | 10:50:11 | 36       | 9.781               |
| 3/31/2004 | 10:50:12 | 36.5     | 9.391               |
| 3/31/2004 | 10:50:12 | 37       | 9.48                |
| 3/31/2004 | 10:50:13 | 37.5     | 9.482               |
| 3/31/2004 | 10:50:13 | 38       | 9.475               |
| 3/31/2004 | 10:50:14 | 38.5     | 9.285               |
| 3/31/2004 | 10:50:14 | 39       | 9.547               |
| 3/31/2004 | 10:50:15 | 39.5     | 9.492               |
| 3/31/2004 | 10:50:15 | 40       | 9.451               |
| 3/31/2004 | 10:50:16 | 40.5     | 9.488               |
| 3/31/2004 | 10:50:16 | 41       | 9.483               |
| 3/31/2004 | 10:50:17 | 41.5     | 9.235               |
| 3/31/2004 | 10:50:17 | 42       | 9.763               |
| 3/31/2004 | 10:50:18 | 42.5     | 9.384               |
| 3/31/2004 | 10:50:18 | 43       | 9.485               |
| 3/31/2004 | 10:50:19 | 43.5     | 9.487               |
| 3/31/2004 | 10:50:19 | 44       | 9.401               |
| 3/31/2004 | 10:50:20 | 44.5     | 9.567               |
| 3/31/2004 | 10:50:20 | 45       | 9.567               |
| 3/31/2004 | 10:50:21 | 45.5     | 9.459               |
| 3/31/2004 | 10:50:21 | 46       | 9.491               |
| 3/31/2004 | 10:50:22 | 46.5     | 9.491               |
| 3/31/2004 | 10:50:22 | 47       | 9.144               |
| 3/31/2004 | 10:50:23 | 47.5     | 9.804               |
| 3/31/2004 | 10:50:23 | 48       | 9.291               |
| 3/31/2004 | 10:50:24 | 48.5     | 9.479               |
| 3/31/2004 | 10:50:24 | 49       | 9.496               |
| 3/31/2004 | 10:50:25 | 49.5     | 9.488               |
| 3/31/2004 | 10:50:25 | 50       | 9.346               |
| 3/31/2004 | 10:50:26 | 50.5     | 9.79                |
| 3/31/2004 | 10:50:26 | 51       | 9.337               |
| 3/31/2004 | 10:50:27 | 51.5     | 9.491               |
| 3/31/2004 | 10:50:27 | 52       | 9.488               |
| 3/31/2004 | 10:50:28 | 52.5     | 9.483               |
| 3/31/2004 | 10:50:28 | 53       | 9.195               |
| 3/31/2004 | 10:50:29 | 53.5     | 9.804               |
| 3/31/2004 | 10:50:29 | 54       | 9.294               |
| 3/31/2004 | 10:50:30 | 54.5     | 9.477               |
| 3/31/2004 | 10:50:30 | 55       | 9.445               |
| 3/31/2004 | 10:50:31 | 55.5     | 9.416               |
| 3/31/2004 | 10:50:31 | 56       | 9.477               |
| 3/31/2004 | 10:50:32 | 56.5     | 9.171               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:50:32 | 57       | 9.843               |
| 3/31/2004 | 10:50:33 | 57.5     | 9.32                |
| 3/31/2004 | 10:50:33 | 58       | 9.489               |
| 3/31/2004 | 10:50:34 | 58.5     | 9.18                |
| 3/31/2004 | 10:50:34 | 59       | 9.779               |
| 3/31/2004 | 10:50:35 | 59.5     | 9.448               |
| 3/31/2004 | 10:50:35 | 60       | 9.208               |
| 3/31/2004 | 10:50:36 | 60.5     | 9.819               |
| 3/31/2004 | 10:50:36 | 61       | 9.448               |
| 3/31/2004 | 10:50:37 | 61.5     | 9.471               |
| 3/31/2004 | 10:50:37 | 62       | 9.401               |
| 3/31/2004 | 10:50:38 | 62.5     | 9.543               |
| 3/31/2004 | 10:50:38 | 63       | 9.449               |
| 3/31/2004 | 10:50:39 | 63.5     | 9.482               |
| 3/31/2004 | 10:50:39 | 64       | 9.495               |
| 3/31/2004 | 10:50:40 | 64.5     | 9.176               |
| 3/31/2004 | 10:50:40 | 65       | 9.989               |
| 3/31/2004 | 10:50:41 | 65.5     | 9.348               |
| 3/31/2004 | 10:50:41 | 66       | 9.495               |
| 3/31/2004 | 10:50:42 | 66.5     | 9.498               |
| 3/31/2004 | 10:50:42 | 67       | 9.492               |
| 3/31/2004 | 10:50:43 | 67.5     | 9.281               |
| 3/31/2004 | 10:50:43 | 68       | 9.789               |
| 3/31/2004 | 10:50:44 | 68.5     | 9.517               |
| 3/31/2004 | 10:50:44 | 69       | 9.489               |
| 3/31/2004 | 10:50:45 | 69.5     | 9.486               |
| 3/31/2004 | 10:50:45 | 70       | 9.488               |
| 3/31/2004 | 10:50:46 | 70.5     | 9.294               |
| 3/31/2004 | 10:50:46 | 71       | 9.9                 |
| 3/31/2004 | 10:50:47 | 71.5     | 9.429               |
| 3/31/2004 | 10:50:47 | 72       | 9.492               |
| 3/31/2004 | 10:50:48 | 72.5     | 9.334               |
| 3/31/2004 | 10:50:48 | 73       | 9.873               |
| 3/31/2004 | 10:50:49 | 73.5     | 9.412               |
| 3/31/2004 | 10:50:49 | 74       | 9.484               |
| 3/31/2004 | 10:50:50 | 74.5     | 9.501               |
| 3/31/2004 | 10:50:50 | 75       | 9.495               |
| 3/31/2004 | 10:50:51 | 75.5     | 9.488               |
| 3/31/2004 | 10:50:51 | 76       | 9.488               |
| 3/31/2004 | 10:50:52 | 76.5     | 9.49                |
| 3/31/2004 | 10:50:52 | 77       | 9.492               |
| 3/31/2004 | 10:50:53 | 77.5     | 9.49                |
| 3/31/2004 | 10:50:53 | 78       | 9.49                |
| 3/31/2004 | 10:50:54 | 78.5     | 9.49                |
| 3/31/2004 | 10:50:54 | 79       | 9.488               |
| 3/31/2004 | 10:50:55 | 79.5     | 9.49                |
| 3/31/2004 | 10:50:55 | 80       | 9.488               |
| 3/31/2004 | 10:50:56 | 80.5     | 9.488               |
| 3/31/2004 | 10:50:56 | 81       | 9.489               |



| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:50:57 | 81.5     | 9.487               |
| 3/31/2004 | 10:50:57 | 82       | 9.487               |
| 3/31/2004 | 10:50:58 | 82.5     | 9.434               |
| 3/31/2004 | 10:50:58 | 83       | 9.362               |
| 3/31/2004 | 10:50:59 | 83.5     | 9.595               |
| 3/31/2004 | 10:50:59 | 84       | 9.485               |
| 3/31/2004 | 10:51:00 | 84.5     | 9.49                |
| 3/31/2004 | 10:51:00 | 85       | 9.489               |
| 3/31/2004 | 10:51:01 | 85.5     | 9.487               |
| 3/31/2004 | 10:51:01 | 86       | 9.482               |
| 3/31/2004 | 10:51:02 | 86.5     | 9.482               |
| 3/31/2004 | 10:51:02 | 87       | 9.487               |
| 3/31/2004 | 10:51:03 | 87.5     | 9.483               |
| 3/31/2004 | 10:51:03 | 88       | 9.483               |
| 3/31/2004 | 10:51:04 | 88.5     | 9.485               |
| 3/31/2004 | 10:51:04 | 89       | 9.483               |
| 3/31/2004 | 10:51:05 | 89.5     | 9.485               |
| 3/31/2004 | 10:51:05 | 90       | 9.485               |
| 3/31/2004 | 10:51:06 | 90.5     | 9.483               |
| 3/31/2004 | 10:51:06 | 91       | 9.483               |
| 3/31/2004 | 10:51:07 | 91.5     | 9.481               |
| 3/31/2004 | 10:51:07 | 92       | 9.483               |
| 3/31/2004 | 10:51:08 | 92.5     | 9.481               |
| 3/31/2004 | 10:51:08 | 93       | 9.483               |
| 3/31/2004 | 10:51:09 | 93.5     | 9.238               |
| 3/31/2004 | 10:51:09 | 94       | 9.765               |
| 3/31/2004 | 10:51:10 | 94.5     | 9.281               |
| 3/31/2004 | 10:51:10 | 95       | 9.477               |
| 3/31/2004 | 10:51:11 | 95.5     | 9.236               |
| 3/31/2004 | 10:51:11 | 96       | 9.78                |
| 3/31/2004 | 10:51:12 | 96.5     | 9.201               |
| 3/31/2004 | 10:51:12 | 97       | 9.465               |
| 3/31/2004 | 10:51:13 | 97.5     | 9.323               |
| 3/31/2004 | 10:51:13 | 98       | 9.648               |
| 3/31/2004 | 10:51:14 | 98.5     | 9.457               |
| 3/31/2004 | 10:51:14 | 99       | 9.508               |
| 3/31/2004 | 10:51:15 | 99.5     | 9.5                 |
| 3/31/2004 | 10:51:15 | 100      | 9.479               |
| 3/31/2004 | 10:51:16 | 100.5    | 9.518               |
| 3/31/2004 | 10:51:16 | 101      | 9.465               |
| 3/31/2004 | 10:51:17 | 101.5    | 9.504               |
| 3/31/2004 | 10:51:17 | 102      | 9.494               |
| 3/31/2004 | 10:51:18 | 102.5    | 9.489               |
| 3/31/2004 | 10:51:18 | 103      | 9.481               |
| 3/31/2004 | 10:51:19 | 103.5    | 9.126               |
| 3/31/2004 | 10:51:19 | 104      | 9.709               |
| 3/31/2004 | 10:51:20 | 104.5    | 9.299               |
| 3/31/2004 | 10:51:20 | 105      | 9.41                |
| 3/31/2004 | 10:51:21 | 105.5    | 9.412               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:51:21 | 106      | 9.405               |
| 3/31/2004 | 10:51:22 | 106.5    | 9.406               |
| 3/31/2004 | 10:51:22 | 107      | 9.37                |
| 3/31/2004 | 10:51:23 | 107.5    | 9.41                |
| 3/31/2004 | 10:51:23 | 108      | 9.401               |
| 3/31/2004 | 10:51:24 | 108.5    | 9.355               |
| 3/31/2004 | 10:51:24 | 109      | 9.356               |
| 3/31/2004 | 10:51:25 | 109.5    | 9.362               |
| 3/31/2004 | 10:51:25 | 110      | 9.368               |
| 3/31/2004 | 10:51:26 | 110.5    | 9.378               |
| 3/31/2004 | 10:51:26 | 111      | 9.361               |
| 3/31/2004 | 10:51:27 | 111.5    | 9.365               |
| 3/31/2004 | 10:51:27 | 112      | 9.361               |
| 3/31/2004 | 10:51:28 | 112.5    | 9.359               |
| 3/31/2004 | 10:51:28 | 113      | 9.349               |
| 3/31/2004 | 10:51:29 | 113.5    | 9.354               |
| 3/31/2004 | 10:51:29 | 114      | 9.349               |
| 3/31/2004 | 10:51:30 | 114.5    | 9.368               |
| 3/31/2004 | 10:51:30 | 115      | 9.351               |
| 3/31/2004 | 10:51:31 | 115.5    | 9.351               |
| 3/31/2004 | 10:51:31 | 116      | 9.349               |
| 3/31/2004 | 10:51:32 | 116.5    | 9.352               |
| 3/31/2004 | 10:51:32 | 117      | 9.346               |
| 3/31/2004 | 10:51:33 | 117.5    | 9.334               |
| 3/31/2004 | 10:51:33 | 118      | 9.346               |
| 3/31/2004 | 10:51:34 | 118.5    | 9.346               |
| 3/31/2004 | 10:51:34 | 119      | 9.344               |
| 3/31/2004 | 10:51:35 | 119.5    | 9.332               |
| 3/31/2004 | 10:51:35 | 120      | 9.347               |
| 3/31/2004 | 10:51:36 | 120.5    | 9.341               |
| 3/31/2004 | 10:51:36 | 121      | 9.324               |
| 3/31/2004 | 10:51:37 | 121.5    | 9.346               |
| 3/31/2004 | 10:51:37 | 122      | 9.349               |
| 3/31/2004 | 10:51:38 | 122.5    | 9.336               |
| 3/31/2004 | 10:51:38 | 123      | 9.348               |
| 3/31/2004 | 10:51:39 | 123.5    | 9.337               |
| 3/31/2004 | 10:51:39 | 124      | 9.341               |
| 3/31/2004 | 10:51:40 | 124.5    | 9.339               |
| 3/31/2004 | 10:51:40 | 125      | 9.338               |
| 3/31/2004 | 10:51:41 | 125.5    | 9.336               |
| 3/31/2004 | 10:51:41 | 126      | 9.333               |
| 3/31/2004 | 10:51:42 | 126.5    | 9.331               |
| 3/31/2004 | 10:51:42 | 127      | 9.317               |
| 3/31/2004 | 10:51:43 | 127.5    | 9.331               |
| 3/31/2004 | 10:51:43 | 128      | 9.335               |
| 3/31/2004 | 10:51:44 | 128.5    | 9.335               |
| 3/31/2004 | 10:51:44 | 129      | 9.33                |
| 3/31/2004 | 10:51:45 | 129.5    | 9.331               |
| 3/31/2004 | 10:51:45 | 130      | 9.331               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:51:46 | 130.5    | 9.332               |
| 3/31/2004 | 10:51:46 | 131      | 9.333               |
| 3/31/2004 | 10:51:47 | 131.5    | 9.332               |
| 3/31/2004 | 10:51:47 | 132      | 9.327               |
| 3/31/2004 | 10:51:48 | 132.5    | 9.327               |
| 3/31/2004 | 10:51:48 | 133      | 9.329               |
| 3/31/2004 | 10:51:49 | 133.5    | 9.329               |
| 3/31/2004 | 10:51:49 | 134      | 9.33                |
| 3/31/2004 | 10:51:50 | 134.5    | 9.319               |
| 3/31/2004 | 10:51:50 | 135      | 9.319               |
| 3/31/2004 | 10:51:51 | 135.5    | 9.329               |
| 3/31/2004 | 10:51:51 | 136      | 9.329               |
| 3/31/2004 | 10:51:52 | 136.5    | 9.327               |
| 3/31/2004 | 10:51:52 | 137      | 9.327               |
| 3/31/2004 | 10:51:53 | 137.5    | 9.331               |
| 3/31/2004 | 10:51:53 | 138      | 9.331               |
| 3/31/2004 | 10:51:54 | 138.5    | 9.333               |
| 3/31/2004 | 10:51:54 | 139      | 9.333               |
| 3/31/2004 | 10:51:55 | 139.5    | 9.33                |
| 3/31/2004 | 10:51:55 | 140      | 9.313               |
| 3/31/2004 | 10:51:56 | 140.5    | 9.323               |
| 3/31/2004 | 10:51:56 | 141      | 9.321               |
| 3/31/2004 | 10:51:57 | 141.5    | 9.332               |
| 3/31/2004 | 10:51:57 | 142      | 9.33                |
| 3/31/2004 | 10:51:58 | 142.5    | 9.33                |
| 3/31/2004 | 10:51:58 | 143      | 9.324               |
| 3/31/2004 | 10:51:59 | 143.5    | 9.315               |
| 3/31/2004 | 10:51:59 | 144      | 9.327               |
| 3/31/2004 | 10:52:00 | 144.5    | 9.326               |
| 3/31/2004 | 10:52:00 | 145      | 9.322               |
| 3/31/2004 | 10:52:01 | 145.5    | 9.324               |
| 3/31/2004 | 10:52:01 | 146      | 9.326               |
| 3/31/2004 | 10:52:02 | 146.5    | 9.319               |
| 3/31/2004 | 10:52:02 | 147      | 9.318               |
| 3/31/2004 | 10:52:03 | 147.5    | 9.328               |
| 3/31/2004 | 10:52:03 | 148      | 9.326               |
| 3/31/2004 | 10:52:04 | 148.5    | 9.325               |
| 3/31/2004 | 10:52:04 | 149      | 9.323               |
| 3/31/2004 | 10:52:05 | 149.5    | 9.325               |
| 3/31/2004 | 10:52:05 | 150      | 9.322               |
| 3/31/2004 | 10:52:06 | 150.5    | 9.323               |
| 3/31/2004 | 10:52:06 | 151      | 9.319               |
| 3/31/2004 | 10:52:07 | 151.5    | 9.319               |
| 3/31/2004 | 10:52:07 | 152      | 9.324               |
| 3/31/2004 | 10:52:08 | 152.5    | 9.32                |
| 3/31/2004 | 10:52:08 | 153      | 9.322               |
| 3/31/2004 | 10:52:09 | 153.5    | 9.324               |
| 3/31/2004 | 10:52:09 | 154      | 9.323               |
| 3/31/2004 | 10:52:10 | 154.5    | 9.319               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:52:10 | 155      | 9.324               |
| 3/31/2004 | 10:52:11 | 155.5    | 9.328               |
| 3/31/2004 | 10:52:11 | 156      | 9.325               |
| 3/31/2004 | 10:52:12 | 156.5    | 9.327               |
| 3/31/2004 | 10:52:12 | 157      | 9.32                |
| 3/31/2004 | 10:52:13 | 157.5    | 9.315               |
| 3/31/2004 | 10:52:13 | 158      | 9.32                |
| 3/31/2004 | 10:52:14 | 158.5    | 9.317               |
| 3/31/2004 | 10:52:14 | 159      | 9.322               |
| 3/31/2004 | 10:52:15 | 159.5    | 9.324               |
| 3/31/2004 | 10:52:15 | 160      | 9.319               |
| 3/31/2004 | 10:52:16 | 160.5    | 9.315               |
| 3/31/2004 | 10:52:16 | 161      | 9.326               |
| 3/31/2004 | 10:52:17 | 161.5    | 9.326               |
| 3/31/2004 | 10:52:17 | 162      | 9.331               |
| 3/31/2004 | 10:52:18 | 162.5    | 9.324               |
| 3/31/2004 | 10:52:18 | 163      | 9.319               |
| 3/31/2004 | 10:52:19 | 163.5    | 9.323               |
| 3/31/2004 | 10:52:19 | 164      | 9.328               |
| 3/31/2004 | 10:52:20 | 164.5    | 9.318               |
| 3/31/2004 | 10:52:20 | 165      | 9.32                |
| 3/31/2004 | 10:52:21 | 165.5    | 9.32                |
| 3/31/2004 | 10:52:21 | 166      | 9.32                |
| 3/31/2004 | 10:52:22 | 166.5    | 9.32                |
| 3/31/2004 | 10:52:22 | 167      | 9.317               |
| 3/31/2004 | 10:52:23 | 167.5    | 9.319               |
| 3/31/2004 | 10:52:23 | 168      | 9.319               |
| 3/31/2004 | 10:52:24 | 168.5    | 9.315               |
| 3/31/2004 | 10:52:24 | 169      | 9.32                |
| 3/31/2004 | 10:52:25 | 169.5    | 9.319               |
| 3/31/2004 | 10:52:25 | 170      | 9.319               |
| 3/31/2004 | 10:52:26 | 170.5    | 9.321               |
| 3/31/2004 | 10:52:26 | 171      | 9.321               |
| 3/31/2004 | 10:52:27 | 171.5    | 9.321               |
| 3/31/2004 | 10:52:27 | 172      | 9.311               |
| 3/31/2004 | 10:52:28 | 172.5    | 9.309               |
| 3/31/2004 | 10:52:28 | 173      | 9.302               |
| 3/31/2004 | 10:52:29 | 173.5    | 9.313               |
| 3/31/2004 | 10:52:29 | 174      | 9.318               |
| 3/31/2004 | 10:52:30 | 174.5    | 9.308               |
| 3/31/2004 | 10:52:30 | 175      | 9.318               |
| 3/31/2004 | 10:52:31 | 175.5    | 9.315               |
| 3/31/2004 | 10:52:31 | 176      | 9.315               |
| 3/31/2004 | 10:52:32 | 176.5    | 9.317               |
| 3/31/2004 | 10:52:32 | 177      | 9.315               |
| 3/31/2004 | 10:52:33 | 177.5    | 9.314               |
| 3/31/2004 | 10:52:33 | 178      | 9.317               |
| 3/31/2004 | 10:52:34 | 178.5    | 9.314               |
| 3/31/2004 | 10:52:34 | 179      | 9.317               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:52:35 | 179.5    | 9.321               |
| 3/31/2004 | 10:52:35 | 180      | 9.312               |
| 3/31/2004 | 10:52:36 | 180.5    | 9.317               |
| 3/31/2004 | 10:52:36 | 181      | 9.312               |
| 3/31/2004 | 10:52:37 | 181.5    | 9.312               |
| 3/31/2004 | 10:52:37 | 182      | 9.302               |
| 3/31/2004 | 10:52:38 | 182.5    | 9.309               |
| 3/31/2004 | 10:52:38 | 183      | 9.319               |
| 3/31/2004 | 10:52:39 | 183.5    | 9.309               |
| 3/31/2004 | 10:52:39 | 184      | 9.315               |
| 3/31/2004 | 10:52:40 | 184.5    | 9.311               |
| 3/31/2004 | 10:52:40 | 185      | 9.316               |
| 3/31/2004 | 10:52:41 | 185.5    | 9.313               |
| 3/31/2004 | 10:52:41 | 186      | 9.316               |
| 3/31/2004 | 10:52:42 | 186.5    | 9.318               |
| 3/31/2004 | 10:52:42 | 187      | 9.312               |
| 3/31/2004 | 10:52:43 | 187.5    | 9.31                |
| 3/31/2004 | 10:52:43 | 188      | 9.312               |
| 3/31/2004 | 10:52:44 | 188.5    | 9.313               |
| 3/31/2004 | 10:52:44 | 189      | 9.319               |
| 3/31/2004 | 10:52:45 | 189.5    | 9.324               |
| 3/31/2004 | 10:52:45 | 190      | 9.314               |
| 3/31/2004 | 10:52:46 | 190.5    | 9.314               |
| 3/31/2004 | 10:52:46 | 191      | 9.312               |
| 3/31/2004 | 10:52:47 | 191.5    | 9.31                |
| 3/31/2004 | 10:52:47 | 192      | 9.316               |
| 3/31/2004 | 10:52:48 | 192.5    | 9.309               |
| 3/31/2004 | 10:52:48 | 193      | 9.312               |
| 3/31/2004 | 10:52:49 | 193.5    | 9.314               |
| 3/31/2004 | 10:52:49 | 194      | 9.314               |
| 3/31/2004 | 10:52:50 | 194.5    | 9.313               |
| 3/31/2004 | 10:52:50 | 195      | 9.313               |
| 3/31/2004 | 10:52:51 | 195.5    | 9.319               |
| 3/31/2004 | 10:52:51 | 196      | 9.314               |
| 3/31/2004 | 10:52:52 | 196.5    | 9.309               |
| 3/31/2004 | 10:52:52 | 197      | 9.311               |
| 3/31/2004 | 10:52:53 | 197.5    | 9.311               |
| 3/31/2004 | 10:52:53 | 198      | 9.313               |
| 3/31/2004 | 10:52:54 | 198.5    | 9.316               |
| 3/31/2004 | 10:52:54 | 199      | 9.315               |
| 3/31/2004 | 10:52:55 | 199.5    | 9.315               |
| 3/31/2004 | 10:52:55 | 200      | 9.317               |
| 3/31/2004 | 10:52:56 | 200.5    | 9.31                |
| 3/31/2004 | 10:52:56 | 201      | 9.313               |
| 3/31/2004 | 10:52:57 | 201.5    | 9.317               |
| 3/31/2004 | 10:52:57 | 202      | 9.301               |
| 3/31/2004 | 10:52:58 | 202.5    | 9.307               |
| 3/31/2004 | 10:52:58 | 203      | 9.317               |
| 3/31/2004 | 10:52:59 | 203.5    | 9.32                |

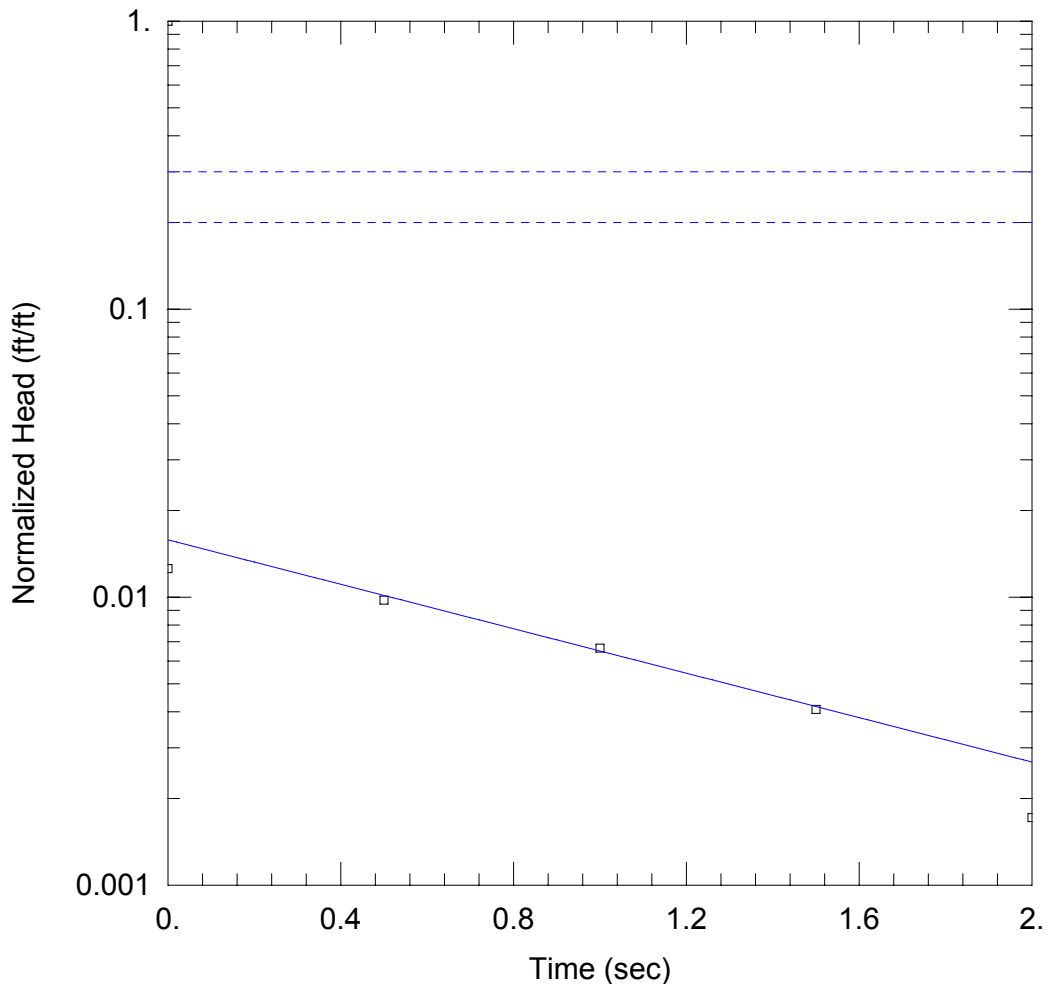
| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:52:59 | 204      | 9.312               |
| 3/31/2004 | 10:53:00 | 204.5    | 9.315               |
| 3/31/2004 | 10:53:00 | 205      | 9.317               |
| 3/31/2004 | 10:53:01 | 205.5    | 9.307               |
| 3/31/2004 | 10:53:01 | 206      | 9.321               |
| 3/31/2004 | 10:53:02 | 206.5    | 9.321               |
| 3/31/2004 | 10:53:02 | 207      | 9.316               |
| 3/31/2004 | 10:53:03 | 207.5    | 9.314               |
| 3/31/2004 | 10:53:03 | 208      | 9.316               |
| 3/31/2004 | 10:53:04 | 208.5    | 9.321               |
| 3/31/2004 | 10:53:04 | 209      | 9.319               |
| 3/31/2004 | 10:53:05 | 209.5    | 9.309               |
| 3/31/2004 | 10:53:05 | 210      | 9.316               |
| 3/31/2004 | 10:53:06 | 210.5    | 9.316               |
| 3/31/2004 | 10:53:06 | 211      | 9.311               |
| 3/31/2004 | 10:53:07 | 211.5    | 9.309               |
| 3/31/2004 | 10:53:07 | 212      | 9.325               |
| 3/31/2004 | 10:53:08 | 212.5    | 9.319               |
| 3/31/2004 | 10:53:08 | 213      | 9.314               |
| 3/31/2004 | 10:53:09 | 213.5    | 9.313               |
| 3/31/2004 | 10:53:09 | 214      | 9.313               |
| 3/31/2004 | 10:53:10 | 214.5    | 9.308               |
| 3/31/2004 | 10:53:10 | 215      | 9.309               |
| 3/31/2004 | 10:53:11 | 215.5    | 9.309               |
| 3/31/2004 | 10:53:11 | 216      | 9.304               |
| 3/31/2004 | 10:53:12 | 216.5    | 9.308               |
| 3/31/2004 | 10:53:12 | 217      | 9.313               |
| 3/31/2004 | 10:53:13 | 217.5    | 9.311               |
| 3/31/2004 | 10:53:13 | 218      | 9.311               |
| 3/31/2004 | 10:53:14 | 218.5    | 9.313               |
| 3/31/2004 | 10:53:14 | 219      | 9.312               |
| 3/31/2004 | 10:53:15 | 219.5    | 9.315               |
| 3/31/2004 | 10:53:15 | 220      | 9.315               |
| 3/31/2004 | 10:53:16 | 220.5    | 9.317               |
| 3/31/2004 | 10:53:16 | 221      | 9.313               |
| 3/31/2004 | 10:53:17 | 221.5    | 9.339               |
| 3/31/2004 | 10:53:17 | 222      | 9.368               |
| 3/31/2004 | 10:53:18 | 222.5    | 9.392               |
| 3/31/2004 | 10:53:18 | 223      | 9.414               |
| 3/31/2004 | 10:53:19 | 223.5    | 9.443               |
| 3/31/2004 | 10:53:19 | 224      | 9.481               |
| 3/31/2004 | 10:53:20 | 224.5    | 9.45                |
| 3/31/2004 | 10:53:20 | 225      | 9.461               |
| 3/31/2004 | 10:53:21 | 225.5    | 9.466               |
| 3/31/2004 | 10:53:21 | 226      | 9.462               |
| 3/31/2004 | 10:53:22 | 226.5    | 9.459               |
| 3/31/2004 | 10:53:22 | 227      | 9.463               |
| 3/31/2004 | 10:53:23 | 227.5    | 9.461               |
| 3/31/2004 | 10:53:23 | 228      | 9.463               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:53:24 | 228.5    | 9.464               |
| 3/31/2004 | 10:53:24 | 229      | 9.461               |
| 3/31/2004 | 10:53:25 | 229.5    | 9.463               |
| 3/31/2004 | 10:53:25 | 230      | 9.464               |
| 3/31/2004 | 10:53:26 | 230.5    | 9.463               |
| 3/31/2004 | 10:53:26 | 231      | 9.464               |
| 3/31/2004 | 10:53:27 | 231.5    | 9.463               |
| 3/31/2004 | 10:53:27 | 232      | 9.464               |
| 3/31/2004 | 10:53:28 | 232.5    | 9.464               |
| 3/31/2004 | 10:53:28 | 233      | 9.464               |
| 3/31/2004 | 10:53:29 | 233.5    | 9.464               |
| 3/31/2004 | 10:53:29 | 234      | 9.465               |
| 3/31/2004 | 10:53:30 | 234.5    | 9.465               |
| 3/31/2004 | 10:53:30 | 235      | 9.465               |
| 3/31/2004 | 10:53:31 | 235.5    | 9.466               |
| 3/31/2004 | 10:53:31 | 236      | 9.466               |
| 3/31/2004 | 10:53:32 | 236.5    | 9.465               |
| 3/31/2004 | 10:53:32 | 237      | 9.465               |
| 3/31/2004 | 10:53:33 | 237.5    | 9.465               |
| 3/31/2004 | 10:53:33 | 238      | 9.467               |
| 3/31/2004 | 10:53:34 | 238.5    | 9.467               |
| 3/31/2004 | 10:53:34 | 239      | 9.465               |
| 3/31/2004 | 10:53:35 | 239.5    | 9.467               |
| 3/31/2004 | 10:53:35 | 240      | 9.465               |
| 3/31/2004 | 10:53:36 | 240.5    | 9.465               |
| 3/31/2004 | 10:53:36 | 241      | 9.465               |
| 3/31/2004 | 10:53:37 | 241.5    | 9.465               |
| 3/31/2004 | 10:53:37 | 242      | 9.467               |
| 3/31/2004 | 10:53:38 | 242.5    | 9.467               |
| 3/31/2004 | 10:53:38 | 243      | 9.465               |
| 3/31/2004 | 10:53:39 | 243.5    | 9.465               |
| 3/31/2004 | 10:53:39 | 244      | 9.465               |
| 3/31/2004 | 10:53:40 | 244.5    | 9.465               |
| 3/31/2004 | 10:53:40 | 245      | 9.465               |
| 3/31/2004 | 10:53:41 | 245.5    | 9.465               |
| 3/31/2004 | 10:53:41 | 246      | 9.465               |
| 3/31/2004 | 10:53:42 | 246.5    | 9.465               |
| 3/31/2004 | 10:53:42 | 247      | 9.465               |
| 3/31/2004 | 10:53:43 | 247.5    | 9.465               |
| 3/31/2004 | 10:53:43 | 248      | 9.467               |
| 3/31/2004 | 10:53:44 | 248.5    | 9.467               |
| 3/31/2004 | 10:53:44 | 249      | 9.467               |
| 3/31/2004 | 10:53:45 | 249.5    | 9.467               |
| 3/31/2004 | 10:53:45 | 250      | 9.467               |
| 3/31/2004 | 10:53:46 | 250.5    | 9.469               |
| 3/31/2004 | 10:53:46 | 251      | 9.467               |
| 3/31/2004 | 10:53:47 | 251.5    | 9.467               |
| 3/31/2004 | 10:53:47 | 252      | 9.467               |
| 3/31/2004 | 10:53:48 | 252.5    | 9.469               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:53:48 | 253      | 9.469               |
| 3/31/2004 | 10:53:49 | 253.5    | 9.467               |
| 3/31/2004 | 10:53:49 | 254      | 9.467               |
| 3/31/2004 | 10:53:50 | 254.5    | 9.467               |
| 3/31/2004 | 10:53:50 | 255      | 9.467               |
| 3/31/2004 | 10:53:51 | 255.5    | 9.467               |
| 3/31/2004 | 10:53:51 | 256      | 9.467               |
| 3/31/2004 | 10:53:52 | 256.5    | 9.467               |
| 3/31/2004 | 10:53:52 | 257      | 9.467               |
| 3/31/2004 | 10:53:53 | 257.5    | 9.467               |
| 3/31/2004 | 10:53:53 | 258      | 9.469               |
| 3/31/2004 | 10:53:54 | 258.5    | 9.467               |
| 3/31/2004 | 10:53:54 | 259      | 9.467               |
| 3/31/2004 | 10:53:55 | 259.5    | 9.467               |
| 3/31/2004 | 10:53:55 | 260      | 9.467               |
| 3/31/2004 | 10:53:56 | 260.5    | 9.469               |
| 3/31/2004 | 10:53:56 | 261      | 9.467               |
| 3/31/2004 | 10:53:57 | 261.5    | 9.467               |
| 3/31/2004 | 10:53:57 | 262      | 9.469               |
| 3/31/2004 | 10:53:58 | 262.5    | 9.469               |
| 3/31/2004 | 10:53:58 | 263      | 9.469               |
| 3/31/2004 | 10:53:59 | 263.5    | 9.469               |
| 3/31/2004 | 10:53:59 | 264      | 9.469               |
| 3/31/2004 | 10:54:00 | 264.5    | 9.469               |
| 3/31/2004 | 10:54:00 | 265      | 9.469               |
| 3/31/2004 | 10:54:01 | 265.5    | 9.468               |
| 3/31/2004 | 10:54:01 | 266      | 9.469               |
| 3/31/2004 | 10:54:02 | 266.5    | 9.468               |
| 3/31/2004 | 10:54:02 | 267      | 9.468               |
| 3/31/2004 | 10:54:03 | 267.5    | 9.468               |
| 3/31/2004 | 10:54:03 | 268      | 9.468               |
| 3/31/2004 | 10:54:04 | 268.5    | 9.468               |
| 3/31/2004 | 10:54:04 | 269      | 9.468               |
| 3/31/2004 | 10:54:05 | 269.5    | 9.469               |
| 3/31/2004 | 10:54:05 | 270      | 9.469               |
| 3/31/2004 | 10:54:06 | 270.5    | 9.469               |
| 3/31/2004 | 10:54:06 | 271      | 9.469               |
| 3/31/2004 | 10:54:07 | 271.5    | 9.469               |
| 3/31/2004 | 10:54:07 | 272      | 9.469               |
| 3/31/2004 | 10:54:08 | 272.5    | 9.469               |
| 3/31/2004 | 10:54:08 | 273      | 9.469               |
| 3/31/2004 | 10:54:09 | 273.5    | 9.469               |
| 3/31/2004 | 10:54:09 | 274      | 9.468               |
| 3/31/2004 | 10:54:10 | 274.5    | 9.47                |
| 3/31/2004 | 10:54:10 | 275      | 9.47                |
| 3/31/2004 | 10:54:11 | 275.5    | 9.468               |
| 3/31/2004 | 10:54:11 | 276      | 9.468               |
| 3/31/2004 | 10:54:12 | 276.5    | 9.468               |
| 3/31/2004 | 10:54:12 | 277      | 9.468               |



| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/31/2004 | 10:54:13 | 277.5    | 9.468               |
| 3/31/2004 | 10:54:13 | 278      | 9.468               |
| 3/31/2004 | 10:54:14 | 278.5    | 9.468               |
| 3/31/2004 | 10:54:14 | 279      | 9.468               |
| 3/31/2004 | 10:54:15 | 279.5    | 9.468               |
| 3/31/2004 | 10:54:15 | 280      | 9.468               |
| 3/31/2004 | 10:54:16 | 280.5    | 9.47                |
| 3/31/2004 | 10:54:16 | 281      | 9.468               |
| 3/31/2004 | 10:54:17 | 281.5    | 9.47                |
| 3/31/2004 | 10:54:17 | 282      | 9.47                |
| 3/31/2004 | 10:54:18 | 282.5    | 9.47                |
| 3/31/2004 | 10:54:18 | 283      | 9.47                |
| 3/31/2004 | 10:54:19 | 283.5    | 9.47                |
| 3/31/2004 | 10:54:19 | 284      | 9.468               |



AGLUS 3 TEST #1

Data Set: Y:\...\AgLUS3\_test1\_13JUL2010.aqt

Date: 07/26/10

Time: 14:38:30

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 3

Test Date: 03/31/2004

AQUIFER DATA

Saturated Thickness: 11.96 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 3)

Initial Displacement: 9.317 ft

Static Water Column Height: 11.96 ft

Total Well Penetration Depth: 11.96 ft

Screen Length: 9.69 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.001424 ft/sec

y0 = 0.1473 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV\_files\_13JULY2010\AgLUS 3\AgLUS3\_test1\_13JU  
 Title: AgLUS 3 test #1  
 Date: 07/26/10  
 Time: 14:38:50

### PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/31/2004  
 Test Well: AgLUS 3

### AQUIFER DATA

Saturated Thickness: 11.96 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

### SLUG TEST WELL DATA

Test Well: AgLUS 3

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 9.317 ft  
 Static Water Column Height: 11.96 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.69 ft  
 Total Well Penetration Depth: 11.96 ft

No. of Observations: 5

| Time (sec) | Observation Data  |            | Displacement (ft) |
|------------|-------------------|------------|-------------------|
|            | Displacement (ft) | Time (sec) |                   |
| 0.         | 0.117             | 1.5        | 0.038             |
| 0.5        | 0.091             | 2.         | 0.016             |
| 1.         | 0.062             |            |                   |

### SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 In(Re/rw): 4.511

### VISUAL ESTIMATION RESULTS

#### Estimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 0.001424 | ft/sec |
| y0        | 0.1473   | ft     |

K = 0.04341 cm/sec  
 T = K\*b = 0.01704 ft<sup>2</sup>/sec (15.83 sq. cm/sec)

In-Situ Inc. MiniTroll Pro

Report generated: 4/19/2004 9:30:23  
 Report from file: ...\\SN09731 2004-03-31 105729 AgLUS3\_2.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS3\_2

Test defined on: 3/31/2004 10:56:23  
 Test started on: 3/31/2004 10:57:29  
 Test stopped on: 3/31/2004 10:59:08  
 Test extracted on: N/A N/A

Data gathered using Linear testing

Time between data points: 0.5 Seconds.  
 Number of data samples: 199

TOTAL DATA SAMPLES 199

Channel number [2]

Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1584.960 meters (5200.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:57:29 | 0        | 9.458               |
| 3/31/2004 | 10:57:29 | 0.5      | 9.466               |
| 3/31/2004 | 10:57:30 | 1        | 9.466               |
| 3/31/2004 | 10:57:30 | 1.5      | 9.468               |
| 3/31/2004 | 10:57:31 | 2        | 9.469               |
| 3/31/2004 | 10:57:31 | 2.5      | 9.468               |
| 3/31/2004 | 10:57:32 | 3        | 9.469               |
| 3/31/2004 | 10:57:32 | 3.5      | 9.469               |
| 3/31/2004 | 10:57:33 | 4        | 9.442               |
| 3/31/2004 | 10:57:33 | 4.5      | 9.389               |
| 3/31/2004 | 10:57:34 | 5        | 9.35                |
| 3/31/2004 | 10:57:34 | 5.5      | 9.336               |
| 3/31/2004 | 10:57:35 | 6        | 9.341               |
| 3/31/2004 | 10:57:35 | 6.5      | 9.331               |
| 3/31/2004 | 10:57:36 | 7        | 9.238               |
| 3/31/2004 | 10:57:36 | 7.5      | 9.29                |

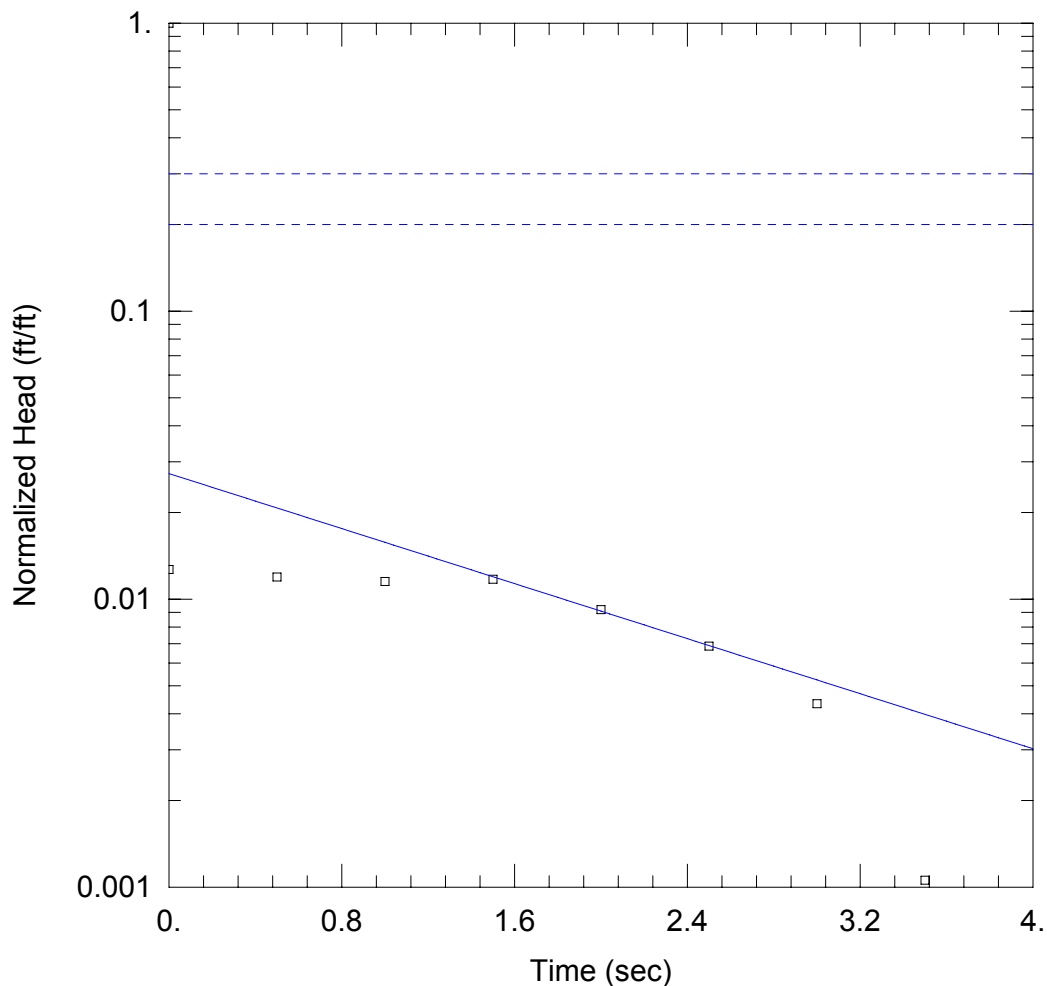
| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:57:37 | 8        | 9.334               |
| 3/31/2004 | 10:57:37 | 8.5      | 9.336               |
| 3/31/2004 | 10:57:38 | 9        | 9.435               |
| 3/31/2004 | 10:57:38 | 9.5      | 9.337               |
| 3/31/2004 | 10:57:39 | 10       | 9.336               |
| 3/31/2004 | 10:57:39 | 10.5     | 9.32                |
| 3/31/2004 | 10:57:40 | 11       | 9.329               |
| 3/31/2004 | 10:57:40 | 11.5     | 9.324               |
| 3/31/2004 | 10:57:41 | 12       | 9.325               |
| 3/31/2004 | 10:57:41 | 12.5     | 9.337               |
| 3/31/2004 | 10:57:42 | 13       | 9.341               |
| 3/31/2004 | 10:57:42 | 13.5     | 9.339               |
| 3/31/2004 | 10:57:43 | 14       | 9.347               |
| 3/31/2004 | 10:57:43 | 14.5     | 9.327               |
| 3/31/2004 | 10:57:44 | 15       | 9.327               |
| 3/31/2004 | 10:57:44 | 15.5     | 9.337               |
| 3/31/2004 | 10:57:45 | 16       | 9.34                |
| 3/31/2004 | 10:57:45 | 16.5     | 9.358               |
| 3/31/2004 | 10:57:46 | 17       | 9.358               |
| 3/31/2004 | 10:57:46 | 17.5     | 9.361               |
| 3/31/2004 | 10:57:47 | 18       | 9.315               |
| 3/31/2004 | 10:57:47 | 18.5     | 9.347               |
| 3/31/2004 | 10:57:48 | 19       | 9.361               |
| 3/31/2004 | 10:57:48 | 19.5     | 9.322               |
| 3/31/2004 | 10:57:49 | 20       | 9.327               |
| 3/31/2004 | 10:57:49 | 20.5     | 9.387               |
| 3/31/2004 | 10:57:50 | 21       | 9.33                |
| 3/31/2004 | 10:57:50 | 21.5     | 9.32                |
| 3/31/2004 | 10:57:51 | 22       | 9.349               |
| 3/31/2004 | 10:57:51 | 22.5     | 9.393               |
| 3/31/2004 | 10:57:52 | 23       | 9.364               |
| 3/31/2004 | 10:57:52 | 23.5     | 9.362               |
| 3/31/2004 | 10:57:53 | 24       | 9.354               |
| 3/31/2004 | 10:57:53 | 24.5     | 9.368               |
| 3/31/2004 | 10:57:54 | 25       | 9.364               |
| 3/31/2004 | 10:57:54 | 25.5     | 9.349               |
| 3/31/2004 | 10:57:55 | 26       | 9.354               |
| 3/31/2004 | 10:57:55 | 26.5     | 9.366               |
| 3/31/2004 | 10:57:56 | 27       | 9.368               |
| 3/31/2004 | 10:57:56 | 27.5     | 9.381               |
| 3/31/2004 | 10:57:57 | 28       | 9.323               |
| 3/31/2004 | 10:57:57 | 28.5     | 9.334               |
| 3/31/2004 | 10:57:58 | 29       | 9.387               |
| 3/31/2004 | 10:57:58 | 29.5     | 9.361               |
| 3/31/2004 | 10:57:59 | 30       | 9.369               |
| 3/31/2004 | 10:57:59 | 30.5     | 9.364               |
| 3/31/2004 | 10:58:00 | 31       | 9.369               |
| 3/31/2004 | 10:58:00 | 31.5     | 9.373               |
| 3/31/2004 | 10:58:01 | 32       | 9.356               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:58:01 | 32.5     | 9.363               |
| 3/31/2004 | 10:58:02 | 33       | 9.337               |
| 3/31/2004 | 10:58:02 | 33.5     | 9.358               |
| 3/31/2004 | 10:58:03 | 34       | 9.354               |
| 3/31/2004 | 10:58:03 | 34.5     | 9.361               |
| 3/31/2004 | 10:58:04 | 35       | 9.366               |
| 3/31/2004 | 10:58:04 | 35.5     | 9.344               |
| 3/31/2004 | 10:58:05 | 36       | 9.349               |
| 3/31/2004 | 10:58:05 | 36.5     | 9.332               |
| 3/31/2004 | 10:58:06 | 37       | 9.352               |
| 3/31/2004 | 10:58:06 | 37.5     | 9.359               |
| 3/31/2004 | 10:58:07 | 38       | 9.363               |
| 3/31/2004 | 10:58:07 | 38.5     | 9.347               |
| 3/31/2004 | 10:58:08 | 39       | 9.344               |
| 3/31/2004 | 10:58:08 | 39.5     | 9.368               |
| 3/31/2004 | 10:58:09 | 40       | 9.347               |
| 3/31/2004 | 10:58:09 | 40.5     | 9.344               |
| 3/31/2004 | 10:58:10 | 41       | 9.344               |
| 3/31/2004 | 10:58:10 | 41.5     | 9.349               |
| 3/31/2004 | 10:58:11 | 42       | 9.34                |
| 3/31/2004 | 10:58:11 | 42.5     | 9.347               |
| 3/31/2004 | 10:58:12 | 43       | 9.351               |
| 3/31/2004 | 10:58:12 | 43.5     | 9.349               |
| 3/31/2004 | 10:58:13 | 44       | 9.373               |
| 3/31/2004 | 10:58:13 | 44.5     | 9.395               |
| 3/31/2004 | 10:58:14 | 45       | 9.419               |
| 3/31/2004 | 10:58:14 | 45.5     | 9.45                |
| 3/31/2004 | 10:58:15 | 46       | 9.487               |
| 3/31/2004 | 10:58:15 | 46.5     | 9.446               |
| 3/31/2004 | 10:58:16 | 47       | 9.458               |
| 3/31/2004 | 10:58:16 | 47.5     | 9.46                |
| 3/31/2004 | 10:58:17 | 48       | 9.457               |
| 3/31/2004 | 10:58:17 | 48.5     | 9.458               |
| 3/31/2004 | 10:58:18 | 49       | 9.462               |
| 3/31/2004 | 10:58:18 | 49.5     | 9.457               |
| 3/31/2004 | 10:58:19 | 50       | 9.462               |
| 3/31/2004 | 10:58:19 | 50.5     | 9.459               |
| 3/31/2004 | 10:58:20 | 51       | 9.462               |
| 3/31/2004 | 10:58:20 | 51.5     | 9.459               |
| 3/31/2004 | 10:58:21 | 52       | 9.46                |
| 3/31/2004 | 10:58:21 | 52.5     | 9.46                |
| 3/31/2004 | 10:58:22 | 53       | 9.462               |
| 3/31/2004 | 10:58:22 | 53.5     | 9.462               |
| 3/31/2004 | 10:58:23 | 54       | 9.462               |
| 3/31/2004 | 10:58:23 | 54.5     | 9.462               |
| 3/31/2004 | 10:58:24 | 55       | 9.464               |
| 3/31/2004 | 10:58:24 | 55.5     | 9.462               |
| 3/31/2004 | 10:58:25 | 56       | 9.464               |
| 3/31/2004 | 10:58:25 | 56.5     | 9.462               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 10:58:26 | 57       | 9.462               |
| 3/31/2004 | 10:58:26 | 57.5     | 9.462               |
| 3/31/2004 | 10:58:27 | 58       | 9.462               |
| 3/31/2004 | 10:58:27 | 58.5     | 9.462               |
| 3/31/2004 | 10:58:28 | 59       | 9.464               |
| 3/31/2004 | 10:58:28 | 59.5     | 9.464               |
| 3/31/2004 | 10:58:29 | 60       | 9.464               |
| 3/31/2004 | 10:58:29 | 60.5     | 9.464               |
| 3/31/2004 | 10:58:30 | 61       | 9.462               |
| 3/31/2004 | 10:58:30 | 61.5     | 9.464               |
| 3/31/2004 | 10:58:31 | 62       | 9.462               |
| 3/31/2004 | 10:58:31 | 62.5     | 9.464               |
| 3/31/2004 | 10:58:32 | 63       | 9.462               |
| 3/31/2004 | 10:58:32 | 63.5     | 9.464               |
| 3/31/2004 | 10:58:33 | 64       | 9.464               |
| 3/31/2004 | 10:58:33 | 64.5     | 9.464               |
| 3/31/2004 | 10:58:34 | 65       | 9.464               |
| 3/31/2004 | 10:58:34 | 65.5     | 9.464               |
| 3/31/2004 | 10:58:35 | 66       | 9.464               |
| 3/31/2004 | 10:58:35 | 66.5     | 9.464               |
| 3/31/2004 | 10:58:36 | 67       | 9.464               |
| 3/31/2004 | 10:58:36 | 67.5     | 9.464               |
| 3/31/2004 | 10:58:37 | 68       | 9.462               |
| 3/31/2004 | 10:58:37 | 68.5     | 9.464               |
| 3/31/2004 | 10:58:38 | 69       | 9.467               |
| 3/31/2004 | 10:58:38 | 69.5     | 9.464               |
| 3/31/2004 | 10:58:39 | 70       | 9.466               |
| 3/31/2004 | 10:58:39 | 70.5     | 9.466               |
| 3/31/2004 | 10:58:40 | 71       | 9.466               |
| 3/31/2004 | 10:58:40 | 71.5     | 9.466               |
| 3/31/2004 | 10:58:41 | 72       | 9.466               |
| 3/31/2004 | 10:58:41 | 72.5     | 9.466               |
| 3/31/2004 | 10:58:42 | 73       | 9.466               |
| 3/31/2004 | 10:58:42 | 73.5     | 9.467               |
| 3/31/2004 | 10:58:43 | 74       | 9.466               |
| 3/31/2004 | 10:58:43 | 74.5     | 9.466               |
| 3/31/2004 | 10:58:44 | 75       | 9.466               |
| 3/31/2004 | 10:58:44 | 75.5     | 9.466               |
| 3/31/2004 | 10:58:45 | 76       | 9.466               |
| 3/31/2004 | 10:58:45 | 76.5     | 9.466               |
| 3/31/2004 | 10:58:46 | 77       | 9.467               |
| 3/31/2004 | 10:58:46 | 77.5     | 9.467               |
| 3/31/2004 | 10:58:47 | 78       | 9.466               |
| 3/31/2004 | 10:58:47 | 78.5     | 9.467               |
| 3/31/2004 | 10:58:48 | 79       | 9.466               |
| 3/31/2004 | 10:58:48 | 79.5     | 9.466               |
| 3/31/2004 | 10:58:49 | 80       | 9.466               |
| 3/31/2004 | 10:58:49 | 80.5     | 9.464               |
| 3/31/2004 | 10:58:50 | 81       | 9.466               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/31/2004 | 10:58:50 | 81.5     | 9.466               |
| 3/31/2004 | 10:58:51 | 82       | 9.466               |
| 3/31/2004 | 10:58:51 | 82.5     | 9.466               |
| 3/31/2004 | 10:58:52 | 83       | 9.466               |
| 3/31/2004 | 10:58:52 | 83.5     | 9.466               |
| 3/31/2004 | 10:58:53 | 84       | 9.466               |
| 3/31/2004 | 10:58:53 | 84.5     | 9.466               |
| 3/31/2004 | 10:58:54 | 85       | 9.466               |
| 3/31/2004 | 10:58:54 | 85.5     | 9.464               |
| 3/31/2004 | 10:58:55 | 86       | 9.466               |
| 3/31/2004 | 10:58:55 | 86.5     | 9.466               |
| 3/31/2004 | 10:58:56 | 87       | 9.464               |
| 3/31/2004 | 10:58:56 | 87.5     | 9.466               |
| 3/31/2004 | 10:58:57 | 88       | 9.466               |
| 3/31/2004 | 10:58:57 | 88.5     | 9.466               |
| 3/31/2004 | 10:58:58 | 89       | 9.464               |
| 3/31/2004 | 10:58:58 | 89.5     | 9.466               |
| 3/31/2004 | 10:58:59 | 90       | 9.466               |
| 3/31/2004 | 10:58:59 | 90.5     | 9.466               |
| 3/31/2004 | 10:59:00 | 91       | 9.466               |
| 3/31/2004 | 10:59:00 | 91.5     | 9.466               |
| 3/31/2004 | 10:59:01 | 92       | 9.466               |
| 3/31/2004 | 10:59:01 | 92.5     | 9.466               |
| 3/31/2004 | 10:59:02 | 93       | 9.466               |
| 3/31/2004 | 10:59:02 | 93.5     | 9.466               |
| 3/31/2004 | 10:59:03 | 94       | 9.466               |
| 3/31/2004 | 10:59:03 | 94.5     | 9.466               |
| 3/31/2004 | 10:59:04 | 95       | 9.466               |
| 3/31/2004 | 10:59:04 | 95.5     | 9.466               |
| 3/31/2004 | 10:59:05 | 96       | 9.466               |
| 3/31/2004 | 10:59:05 | 96.5     | 9.466               |
| 3/31/2004 | 10:59:06 | 97       | 9.466               |
| 3/31/2004 | 10:59:06 | 97.5     | 9.466               |
| 3/31/2004 | 10:59:07 | 98       | 9.466               |
| 3/31/2004 | 10:59:07 | 98.5     | 9.466               |
| 3/31/2004 | 10:59:08 | 99       | 9.466               |





### AGLUS 3 TEST #2

Data Set: Y:\...\AgLUS3\_test2\_13JUL2010.aqt

Date: 07/26/10

Time: 14:40:13

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 3

Test Date: 03/31/2004

### AQUIFER DATA

Saturated Thickness: 11.96 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (AgLUS 3)

Initial Displacement: 9.46 ft

Static Water Column Height: 11.96 ft

Total Well Penetration Depth: 11.96 ft

Screen Length: 9.69 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.0008819 ft/sec

y0 = 0.2582 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV\_files\_13JULY2010\AgLUS 3\AgLUS3\_test2\_13JU  
 Title: AgLUS 3 test #2  
 Date: 07/26/10  
 Time: 14:40:45

---

### PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/31/2004  
 Test Well: AgLUS 3

---

### AQUIFER DATA

Saturated Thickness: 11.96 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

---

### SLUG TEST WELL DATA

Test Well: AgLUS 3

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 9.46 ft  
 Static Water Column Height: 11.96 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.69 ft  
 Total Well Penetration Depth: 11.96 ft

No. of Observations: 8

| Time (sec) | Observation Data  |            | Displacement (ft) |
|------------|-------------------|------------|-------------------|
|            | Displacement (ft) | Time (sec) |                   |
| 0.         | 0.12              | 2.         | 0.087             |
| 0.5        | 0.113             | 2.5        | 0.065             |
| 1.         | 0.109             | 3.         | 0.041             |
| 1.5        | 0.111             | 3.5        | 0.01              |

---

### SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 In(Re/rw): 4.511

---

### VISUAL ESTIMATION RESULTS

#### Estimated Parameters

| Parameter | Estimate  |        |
|-----------|-----------|--------|
| K         | 0.0008819 | ft/sec |
| y0        | 0.2582    | ft     |

K = 0.02688 cm/sec  
 T = K\*b = 0.01055 ft<sup>2</sup>/sec (9.799 sq. cm/sec)

---

In-Situ Inc. MiniTroll Pro  
 Report generated: 4/19/2004 9:30:45  
 Report from file: ...\\SN09731 2004-03-31 110241 AgLUS3\_3.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS3\_3

Test defined on: 3/31/2004 11:01:25  
 Test started on: 3/31/2004 11:02:41  
 Test stopped on: 3/31/2004 11:03:59  
 Test extracted on: N/A N/A

Data gathered using Linear testing

Time between data points: 0.5 Seconds.  
 Number of data samples: 155

TOTAL DATA SAMPLES 155

Channel number [2]

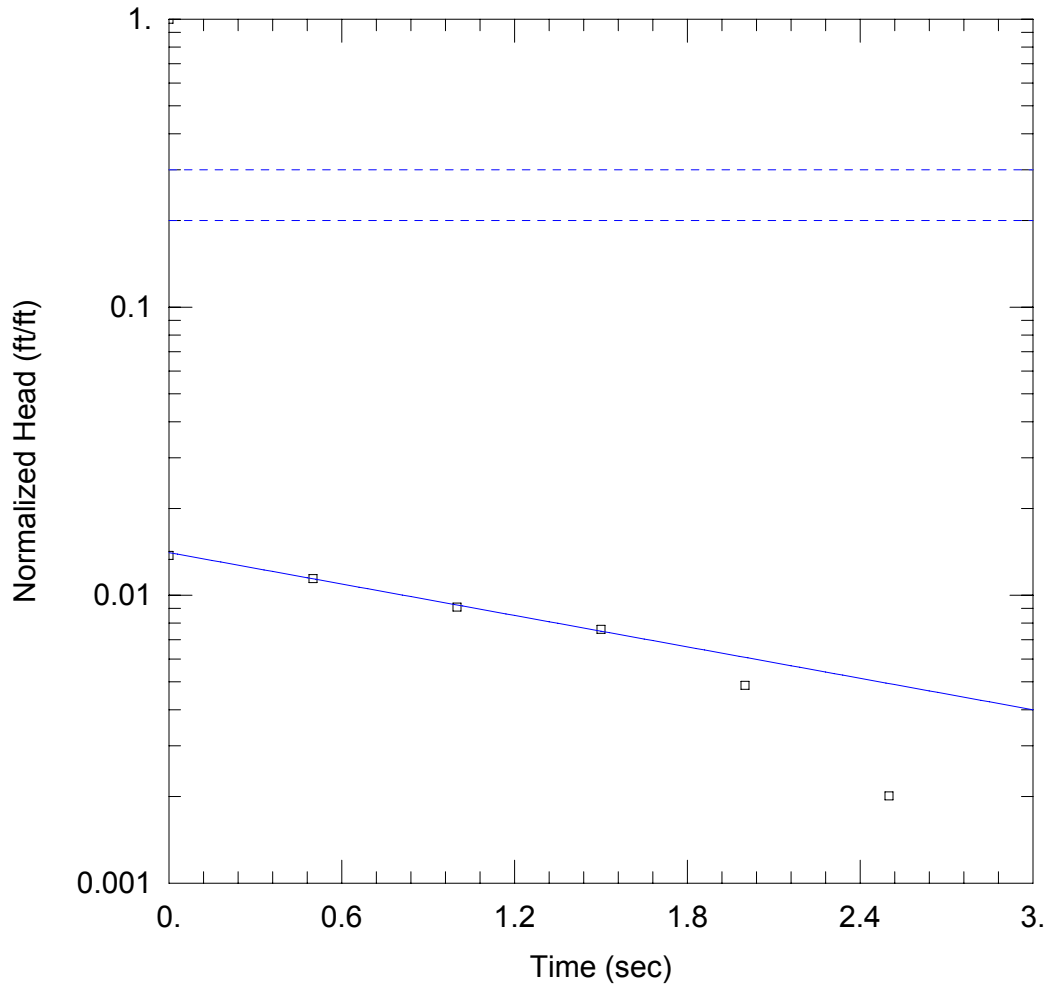
Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1584.960 meters (5200.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 11:02:41 | 0        | 9.457               |
| 3/31/2004 | 11:02:42 | 0.5      | 9.466               |
| 3/31/2004 | 11:02:42 | 1        | 9.466               |
| 3/31/2004 | 11:02:43 | 1.5      | 9.467               |
| 3/31/2004 | 11:02:43 | 2        | 9.469               |
| 3/31/2004 | 11:02:44 | 2.5      | 9.469               |
| 3/31/2004 | 11:02:44 | 3        | 9.469               |
| 3/31/2004 | 11:02:45 | 3.5      | 9.467               |
| 3/31/2004 | 11:02:45 | 4        | 9.469               |
| 3/31/2004 | 11:02:46 | 4.5      | 9.426               |
| 3/31/2004 | 11:02:46 | 5        | 9.368               |
| 3/31/2004 | 11:02:47 | 5.5      | 9.334               |
| 3/31/2004 | 11:02:47 | 6        | 9.33                |
| 3/31/2004 | 11:02:48 | 6.5      | 9.33                |
| 3/31/2004 | 11:02:48 | 7        | 9.339               |
| 3/31/2004 | 11:02:49 | 7.5      | 9.339               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 11:02:49 | 8        | 9.328               |
| 3/31/2004 | 11:02:50 | 8.5      | 9.332               |
| 3/31/2004 | 11:02:50 | 9        | 9.339               |
| 3/31/2004 | 11:02:51 | 9.5      | 9.343               |
| 3/31/2004 | 11:02:51 | 10       | 9.337               |
| 3/31/2004 | 11:02:52 | 10.5     | 9.342               |
| 3/31/2004 | 11:02:52 | 11       | 9.326               |
| 3/31/2004 | 11:02:53 | 11.5     | 9.328               |
| 3/31/2004 | 11:02:53 | 12       | 9.338               |
| 3/31/2004 | 11:02:54 | 12.5     | 9.337               |
| 3/31/2004 | 11:02:54 | 13       | 9.34                |
| 3/31/2004 | 11:02:55 | 13.5     | 9.337               |
| 3/31/2004 | 11:02:55 | 14       | 9.337               |
| 3/31/2004 | 11:02:56 | 14.5     | 9.294               |
| 3/31/2004 | 11:02:56 | 15       | 9.34                |
| 3/31/2004 | 11:02:57 | 15.5     | 9.287               |
| 3/31/2004 | 11:02:57 | 16       | 9.335               |
| 3/31/2004 | 11:02:58 | 16.5     | 9.347               |
| 3/31/2004 | 11:02:58 | 17       | 9.352               |
| 3/31/2004 | 11:02:59 | 17.5     | 9.343               |
| 3/31/2004 | 11:02:59 | 18       | 9.318               |
| 3/31/2004 | 11:03:00 | 18.5     | 9.331               |
| 3/31/2004 | 11:03:00 | 19       | 9.347               |
| 3/31/2004 | 11:03:01 | 19.5     | 9.335               |
| 3/31/2004 | 11:03:01 | 20       | 9.335               |
| 3/31/2004 | 11:03:02 | 20.5     | 9.333               |
| 3/31/2004 | 11:03:02 | 21       | 9.334               |
| 3/31/2004 | 11:03:03 | 21.5     | 9.331               |
| 3/31/2004 | 11:03:03 | 22       | 9.333               |
| 3/31/2004 | 11:03:04 | 22.5     | 9.329               |
| 3/31/2004 | 11:03:04 | 23       | 9.365               |
| 3/31/2004 | 11:03:05 | 23.5     | 9.326               |
| 3/31/2004 | 11:03:05 | 24       | 9.33                |
| 3/31/2004 | 11:03:06 | 24.5     | 9.333               |
| 3/31/2004 | 11:03:06 | 25       | 9.333               |
| 3/31/2004 | 11:03:07 | 25.5     | 9.329               |
| 3/31/2004 | 11:03:07 | 26       | 9.328               |
| 3/31/2004 | 11:03:08 | 26.5     | 9.333               |
| 3/31/2004 | 11:03:08 | 27       | 9.328               |
| 3/31/2004 | 11:03:09 | 27.5     | 9.333               |
| 3/31/2004 | 11:03:09 | 28       | 9.33                |
| 3/31/2004 | 11:03:10 | 28.5     | 9.329               |
| 3/31/2004 | 11:03:10 | 29       | 9.33                |
| 3/31/2004 | 11:03:11 | 29.5     | 9.331               |
| 3/31/2004 | 11:03:11 | 30       | 9.333               |
| 3/31/2004 | 11:03:12 | 30.5     | 9.333               |
| 3/31/2004 | 11:03:12 | 31       | 9.335               |
| 3/31/2004 | 11:03:13 | 31.5     | 9.333               |
| 3/31/2004 | 11:03:13 | 32       | 9.338               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 11:03:14 | 32.5     | 9.343               |
| 3/31/2004 | 11:03:14 | 33       | 9.345               |
| 3/31/2004 | 11:03:15 | 33.5     | 9.33                |
| 3/31/2004 | 11:03:15 | 34       | 9.323               |
| 3/31/2004 | 11:03:16 | 34.5     | 9.338               |
| 3/31/2004 | 11:03:16 | 35       | 9.347               |
| 3/31/2004 | 11:03:17 | 35.5     | 9.345               |
| 3/31/2004 | 11:03:17 | 36       | 9.33                |
| 3/31/2004 | 11:03:18 | 36.5     | 9.352               |
| 3/31/2004 | 11:03:18 | 37       | 9.374               |
| 3/31/2004 | 11:03:19 | 37.5     | 9.388               |
| 3/31/2004 | 11:03:19 | 38       | 9.414               |
| 3/31/2004 | 11:03:20 | 38.5     | 9.441               |
| 3/31/2004 | 11:03:20 | 39       | 9.48                |
| 3/31/2004 | 11:03:21 | 39.5     | 9.381               |
| 3/31/2004 | 11:03:21 | 40       | 9.461               |
| 3/31/2004 | 11:03:22 | 40.5     | 9.465               |
| 3/31/2004 | 11:03:22 | 41       | 9.465               |
| 3/31/2004 | 11:03:23 | 41.5     | 9.461               |
| 3/31/2004 | 11:03:23 | 42       | 9.461               |
| 3/31/2004 | 11:03:24 | 42.5     | 9.463               |
| 3/31/2004 | 11:03:24 | 43       | 9.461               |
| 3/31/2004 | 11:03:25 | 43.5     | 9.461               |
| 3/31/2004 | 11:03:25 | 44       | 9.463               |
| 3/31/2004 | 11:03:26 | 44.5     | 9.461               |
| 3/31/2004 | 11:03:26 | 45       | 9.463               |
| 3/31/2004 | 11:03:27 | 45.5     | 9.462               |
| 3/31/2004 | 11:03:27 | 46       | 9.463               |
| 3/31/2004 | 11:03:28 | 46.5     | 9.463               |
| 3/31/2004 | 11:03:28 | 47       | 9.463               |
| 3/31/2004 | 11:03:29 | 47.5     | 9.463               |
| 3/31/2004 | 11:03:29 | 48       | 9.463               |
| 3/31/2004 | 11:03:30 | 48.5     | 9.462               |
| 3/31/2004 | 11:03:30 | 49       | 9.465               |
| 3/31/2004 | 11:03:31 | 49.5     | 9.463               |
| 3/31/2004 | 11:03:31 | 50       | 9.465               |
| 3/31/2004 | 11:03:32 | 50.5     | 9.463               |
| 3/31/2004 | 11:03:32 | 51       | 9.463               |
| 3/31/2004 | 11:03:33 | 51.5     | 9.465               |
| 3/31/2004 | 11:03:33 | 52       | 9.465               |
| 3/31/2004 | 11:03:34 | 52.5     | 9.463               |
| 3/31/2004 | 11:03:34 | 53       | 9.463               |
| 3/31/2004 | 11:03:35 | 53.5     | 9.463               |
| 3/31/2004 | 11:03:35 | 54       | 9.465               |
| 3/31/2004 | 11:03:36 | 54.5     | 9.465               |
| 3/31/2004 | 11:03:36 | 55       | 9.465               |
| 3/31/2004 | 11:03:37 | 55.5     | 9.465               |
| 3/31/2004 | 11:03:37 | 56       | 9.465               |
| 3/31/2004 | 11:03:38 | 56.5     | 9.467               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/31/2004 | 11:03:38 | 57       | 9.465               |
| 3/31/2004 | 11:03:39 | 57.5     | 9.465               |
| 3/31/2004 | 11:03:39 | 58       | 9.463               |
| 3/31/2004 | 11:03:40 | 58.5     | 9.465               |
| 3/31/2004 | 11:03:40 | 59       | 9.467               |
| 3/31/2004 | 11:03:41 | 59.5     | 9.467               |
| 3/31/2004 | 11:03:41 | 60       | 9.465               |
| 3/31/2004 | 11:03:42 | 60.5     | 9.465               |
| 3/31/2004 | 11:03:42 | 61       | 9.465               |
| 3/31/2004 | 11:03:43 | 61.5     | 9.465               |
| 3/31/2004 | 11:03:43 | 62       | 9.465               |
| 3/31/2004 | 11:03:44 | 62.5     | 9.467               |
| 3/31/2004 | 11:03:44 | 63       | 9.465               |
| 3/31/2004 | 11:03:45 | 63.5     | 9.465               |
| 3/31/2004 | 11:03:45 | 64       | 9.467               |
| 3/31/2004 | 11:03:46 | 64.5     | 9.467               |
| 3/31/2004 | 11:03:46 | 65       | 9.467               |
| 3/31/2004 | 11:03:47 | 65.5     | 9.467               |
| 3/31/2004 | 11:03:47 | 66       | 9.467               |
| 3/31/2004 | 11:03:48 | 66.5     | 9.467               |
| 3/31/2004 | 11:03:48 | 67       | 9.467               |
| 3/31/2004 | 11:03:49 | 67.5     | 9.467               |
| 3/31/2004 | 11:03:49 | 68       | 9.467               |
| 3/31/2004 | 11:03:50 | 68.5     | 9.467               |
| 3/31/2004 | 11:03:50 | 69       | 9.467               |
| 3/31/2004 | 11:03:51 | 69.5     | 9.467               |
| 3/31/2004 | 11:03:51 | 70       | 9.467               |
| 3/31/2004 | 11:03:52 | 70.5     | 9.467               |
| 3/31/2004 | 11:03:52 | 71       | 9.467               |
| 3/31/2004 | 11:03:53 | 71.5     | 9.467               |
| 3/31/2004 | 11:03:53 | 72       | 9.467               |
| 3/31/2004 | 11:03:54 | 72.5     | 9.467               |
| 3/31/2004 | 11:03:54 | 73       | 9.465               |
| 3/31/2004 | 11:03:55 | 73.5     | 9.465               |
| 3/31/2004 | 11:03:55 | 74       | 9.465               |
| 3/31/2004 | 11:03:56 | 74.5     | 9.465               |
| 3/31/2004 | 11:03:56 | 75       | 9.465               |
| 3/31/2004 | 11:03:57 | 75.5     | 9.467               |
| 3/31/2004 | 11:03:57 | 76       | 9.465               |
| 3/31/2004 | 11:03:58 | 76.5     | 9.467               |
| 3/31/2004 | 11:03:58 | 77       | 9.467               |



### AGLUS 3 TEST #3

Data Set: Y:\...\AgLUS3\_test3\_13JUL2010.aqt

Date: 07/26/10

Time: 14:44:25

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 3

Test Date: 03/31/2004

### AQUIFER DATA

Saturated Thickness: 11.96 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (AgLUS 3)

Initial Displacement: 9.46 ft

Static Water Column Height: 11.96 ft

Total Well Penetration Depth: 11.96 ft

Screen Length: 9.69 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.0006714 ft/sec

y0 = 0.1329 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV\_files\_13JULY2010\AgLUS 3\AgLUS3\_test3\_13JU  
 Title: AgLUS 3 test #3  
 Date: 07/26/10  
 Time: 14:44:45

### PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/31/2004  
 Test Well: AgLUS 3

### AQUIFER DATA

Saturated Thickness: 11.96 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

### SLUG TEST WELL DATA

Test Well: AgLUS 3

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 9.46 ft  
 Static Water Column Height: 11.96 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.69 ft  
 Total Well Penetration Depth: 11.96 ft

No. of Observations: 6

| Time (sec) | Observation Data  |            | Displacement (ft) |
|------------|-------------------|------------|-------------------|
|            | Displacement (ft) | Time (sec) |                   |
| 0.         | 0.13              | 1.5        | 0.072             |
| 0.5        | 0.108             | 2.         | 0.046             |
| 1.         | 0.086             | 2.5        | 0.019             |

### SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 In(Re/rw): 4.511

### VISUAL ESTIMATION RESULTS

#### Estimated Parameters

| Parameter | Estimate  |        |
|-----------|-----------|--------|
| K         | 0.0006714 | ft/sec |
| y0        | 0.1329    | ft     |

K = 0.02046 cm/sec  
 T = K\*b = 0.00803 ft<sup>2</sup>/sec (7.46 sq. cm/sec)



In-Situ Inc. MiniTroll Pro  
 Report generated: 4/19/2004 9:31:08  
 Report from file: ...\\SN09731 2004-03-31 110535 AgLUS3\_4.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS3\_4

Test defined on: 3/31/2004 11:05:25  
 Test started on: 3/31/2004 11:05:35  
 Test stopped on: 3/31/2004 11:06:55  
 Test extracted on: N/A N/A

Data gathered using Logarithmic testing

Maximum time between data points: 1.0 Seconds.  
 Number of data samples: 101

TOTAL DATA SAMPLES 101

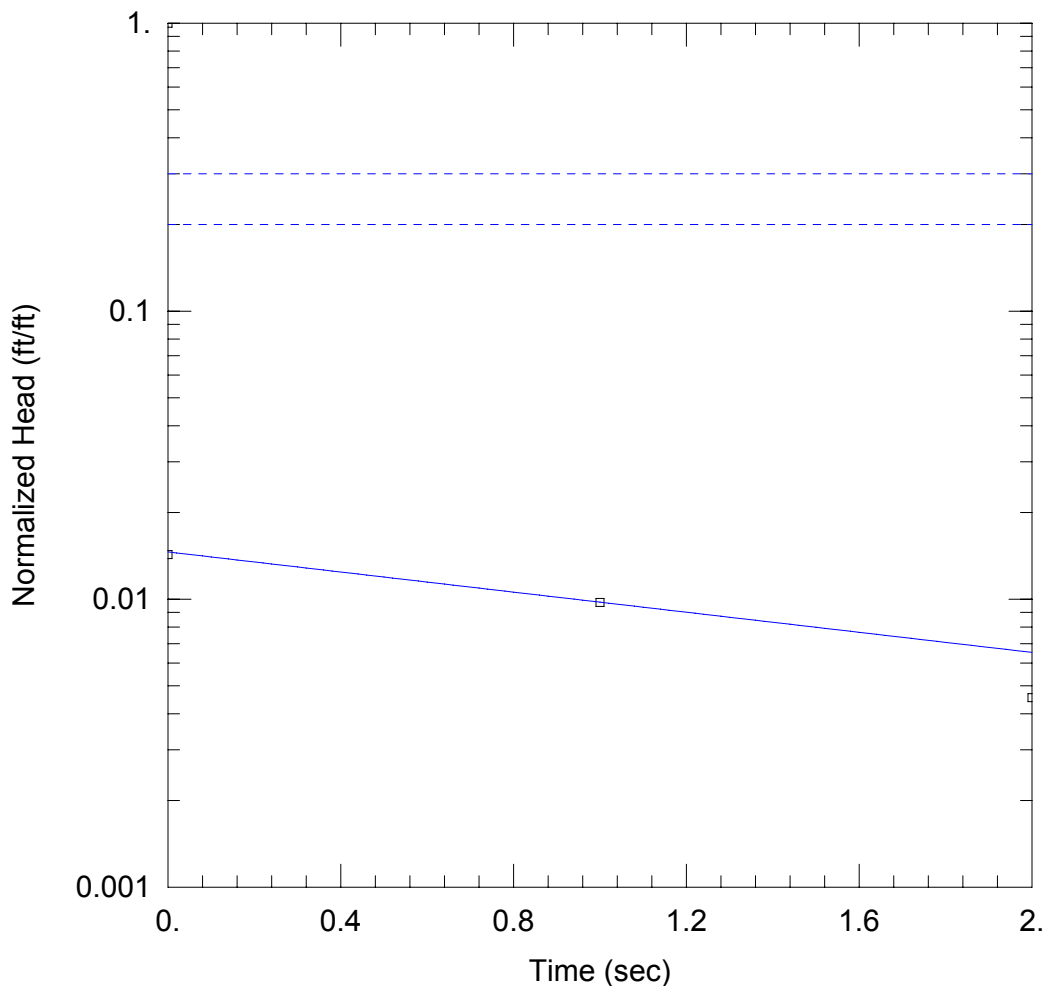
Channel number [2]

Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1584.960 meters (5200.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 11:05:35 | 0        | 9.454               |
| 3/31/2004 | 11:05:35 | 0.3      | 9.464               |
| 3/31/2004 | 11:05:36 | 0.6      | 9.467               |
| 3/31/2004 | 11:05:36 | 0.9      | 9.469               |
| 3/31/2004 | 11:05:36 | 1.2      | 9.469               |
| 3/31/2004 | 11:05:37 | 1.5      | 9.471               |
| 3/31/2004 | 11:05:37 | 1.8      | 9.472               |
| 3/31/2004 | 11:05:37 | 2.1      | 9.47                |
| 3/31/2004 | 11:05:38 | 2.4      | 9.47                |
| 3/31/2004 | 11:05:38 | 2.7      | 9.47                |
| 3/31/2004 | 11:05:38 | 3        | 9.472               |
| 3/31/2004 | 11:05:38 | 3.3      | 9.472               |
| 3/31/2004 | 11:05:39 | 3.6      | 9.472               |
| 3/31/2004 | 11:05:39 | 3.9      | 9.453               |
| 3/31/2004 | 11:05:39 | 4.2      | 9.445               |
| 3/31/2004 | 11:05:40 | 4.5      | 9.405               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/31/2004 | 11:05:40 | 4.8      | 9.375               |
| 3/31/2004 | 11:05:40 | 5.1      | 9.359               |
| 3/31/2004 | 11:05:41 | 5.4      | 9.342               |
| 3/31/2004 | 11:05:41 | 5.7      | 9.349               |
| 3/31/2004 | 11:05:41 | 6        | 9.339               |
| 3/31/2004 | 11:05:42 | 6.4      | 9.322               |
| 3/31/2004 | 11:05:42 | 6.7      | 9.332               |
| 3/31/2004 | 11:05:42 | 7.1      | 9.335               |
| 3/31/2004 | 11:05:43 | 7.5      | 9.339               |
| 3/31/2004 | 11:05:43 | 8        | 9.333               |
| 3/31/2004 | 11:05:44 | 8.4      | 9.339               |
| 3/31/2004 | 11:05:44 | 8.9      | 9.332               |
| 3/31/2004 | 11:05:45 | 9.5      | 9.335               |
| 3/31/2004 | 11:05:45 | 10       | 9.325               |
| 3/31/2004 | 11:05:46 | 10.6     | 9.33                |
| 3/31/2004 | 11:05:46 | 11.3     | 9.327               |
| 3/31/2004 | 11:05:47 | 11.9     | 9.318               |
| 3/31/2004 | 11:05:48 | 12.6     | 9.32                |
| 3/31/2004 | 11:05:49 | 13.4     | 9.32                |
| 3/31/2004 | 11:05:49 | 14.2     | 9.317               |
| 3/31/2004 | 11:05:50 | 15       | 9.318               |
| 3/31/2004 | 11:05:51 | 15.9     | 9.315               |
| 3/31/2004 | 11:05:52 | 16.8     | 9.311               |
| 3/31/2004 | 11:05:53 | 17.8     | 9.317               |
| 3/31/2004 | 11:05:54 | 18.8     | 9.32                |
| 3/31/2004 | 11:05:55 | 19.8     | 9.322               |
| 3/31/2004 | 11:05:56 | 20.8     | 9.322               |
| 3/31/2004 | 11:05:57 | 21.8     | 9.318               |
| 3/31/2004 | 11:05:58 | 22.8     | 9.323               |
| 3/31/2004 | 11:05:59 | 23.8     | 9.313               |
| 3/31/2004 | 11:06:00 | 24.8     | 9.33                |
| 3/31/2004 | 11:06:01 | 25.8     | 9.323               |
| 3/31/2004 | 11:06:02 | 26.8     | 9.315               |
| 3/31/2004 | 11:06:03 | 27.8     | 9.358               |
| 3/31/2004 | 11:06:04 | 28.8     | 9.407               |
| 3/31/2004 | 11:06:05 | 29.8     | 9.474               |
| 3/31/2004 | 11:06:06 | 30.8     | 9.457               |
| 3/31/2004 | 11:06:07 | 31.8     | 9.453               |
| 3/31/2004 | 11:06:08 | 32.8     | 9.448               |
| 3/31/2004 | 11:06:09 | 33.8     | 9.453               |
| 3/31/2004 | 11:06:10 | 34.8     | 9.452               |
| 3/31/2004 | 11:06:11 | 35.8     | 9.454               |
| 3/31/2004 | 11:06:12 | 36.8     | 9.452               |
| 3/31/2004 | 11:06:13 | 37.8     | 9.454               |
| 3/31/2004 | 11:06:14 | 38.8     | 9.454               |
| 3/31/2004 | 11:06:15 | 39.8     | 9.454               |
| 3/31/2004 | 11:06:16 | 40.8     | 9.454               |
| 3/31/2004 | 11:06:17 | 41.8     | 9.454               |
| 3/31/2004 | 11:06:18 | 42.8     | 9.454               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/31/2004 | 11:06:19 | 43.8     | 9.454               |
| 3/31/2004 | 11:06:20 | 44.8     | 9.454               |
| 3/31/2004 | 11:06:21 | 45.8     | 9.454               |
| 3/31/2004 | 11:06:22 | 46.8     | 9.455               |
| 3/31/2004 | 11:06:23 | 47.8     | 9.455               |
| 3/31/2004 | 11:06:24 | 48.8     | 9.455               |
| 3/31/2004 | 11:06:25 | 49.8     | 9.455               |
| 3/31/2004 | 11:06:26 | 50.8     | 9.455               |
| 3/31/2004 | 11:06:27 | 51.8     | 9.455               |
| 3/31/2004 | 11:06:28 | 52.8     | 9.455               |
| 3/31/2004 | 11:06:29 | 53.8     | 9.455               |
| 3/31/2004 | 11:06:30 | 54.8     | 9.457               |
| 3/31/2004 | 11:06:31 | 55.8     | 9.457               |
| 3/31/2004 | 11:06:32 | 56.8     | 9.457               |
| 3/31/2004 | 11:06:33 | 57.8     | 9.457               |
| 3/31/2004 | 11:06:34 | 58.8     | 9.457               |
| 3/31/2004 | 11:06:35 | 59.8     | 9.457               |
| 3/31/2004 | 11:06:36 | 60.8     | 9.457               |
| 3/31/2004 | 11:06:37 | 61.8     | 9.457               |
| 3/31/2004 | 11:06:38 | 62.8     | 9.457               |
| 3/31/2004 | 11:06:39 | 63.8     | 9.457               |
| 3/31/2004 | 11:06:40 | 64.8     | 9.457               |
| 3/31/2004 | 11:06:41 | 65.8     | 9.457               |
| 3/31/2004 | 11:06:42 | 66.8     | 9.457               |
| 3/31/2004 | 11:06:43 | 67.8     | 9.457               |
| 3/31/2004 | 11:06:44 | 68.8     | 9.459               |
| 3/31/2004 | 11:06:45 | 69.8     | 9.455               |
| 3/31/2004 | 11:06:46 | 70.8     | 9.455               |
| 3/31/2004 | 11:06:47 | 71.8     | 9.457               |
| 3/31/2004 | 11:06:48 | 72.8     | 9.457               |
| 3/31/2004 | 11:06:49 | 73.8     | 9.457               |
| 3/31/2004 | 11:06:50 | 74.8     | 9.457               |
| 3/31/2004 | 11:06:51 | 75.8     | 9.457               |
| 3/31/2004 | 11:06:52 | 76.8     | 9.457               |
| 3/31/2004 | 11:06:53 | 77.8     | 9.457               |
| 3/31/2004 | 11:06:54 | 78.8     | 9.457               |



#### AGLUS 3 TEST #4

Data Set: Y:\...\AgLUS3\_test4\_13JUL2010.aqt

Date: 07/26/10

Time: 14:59:20

#### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 3

Test Date: 03/31/2004

#### AQUIFER DATA

Saturated Thickness: 11.96 ft

Anisotropy Ratio (Kz/Kr): 0.01

#### WELL DATA (AgLUS 3)

Initial Displacement: 9.45 ft

Static Water Column Height: 11.96 ft

Total Well Penetration Depth: 11.96 ft

Screen Length: 9.69 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

#### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.0006441 ft/sec

y0 = 0.1379 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV\_files\_13JULY2010\AgLUS 3\AgLUS3\_test4\_13JU  
 Title: AgLUS 3 test #4  
 Date: 07/26/10  
 Time: 14:59:39

---

### PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/31/2004  
 Test Well: AgLUS 3

---

### AQUIFER DATA

Saturated Thickness: 11.96 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

---

### SLUG TEST WELL DATA

Test Well: AgLUS 3

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 9.45 ft  
 Static Water Column Height: 11.96 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.69 ft  
 Total Well Penetration Depth: 11.96 ft

No. of Observations: 3

| Time (sec) | Observation Data  |            | Displacement (ft) |
|------------|-------------------|------------|-------------------|
|            | Displacement (ft) | Time (sec) |                   |
| 0.         | 0.135             | 2.         | 0.043             |
| 1.         | 0.092             |            |                   |

---

### SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 $\ln(R_e/r_w)$ : 4.511

---

### VISUAL ESTIMATION RESULTS

#### Estimated Parameters

| Parameter | Estimate  |        |
|-----------|-----------|--------|
| K         | 0.0006441 | ft/sec |
| y0        | 0.1379    | ft     |

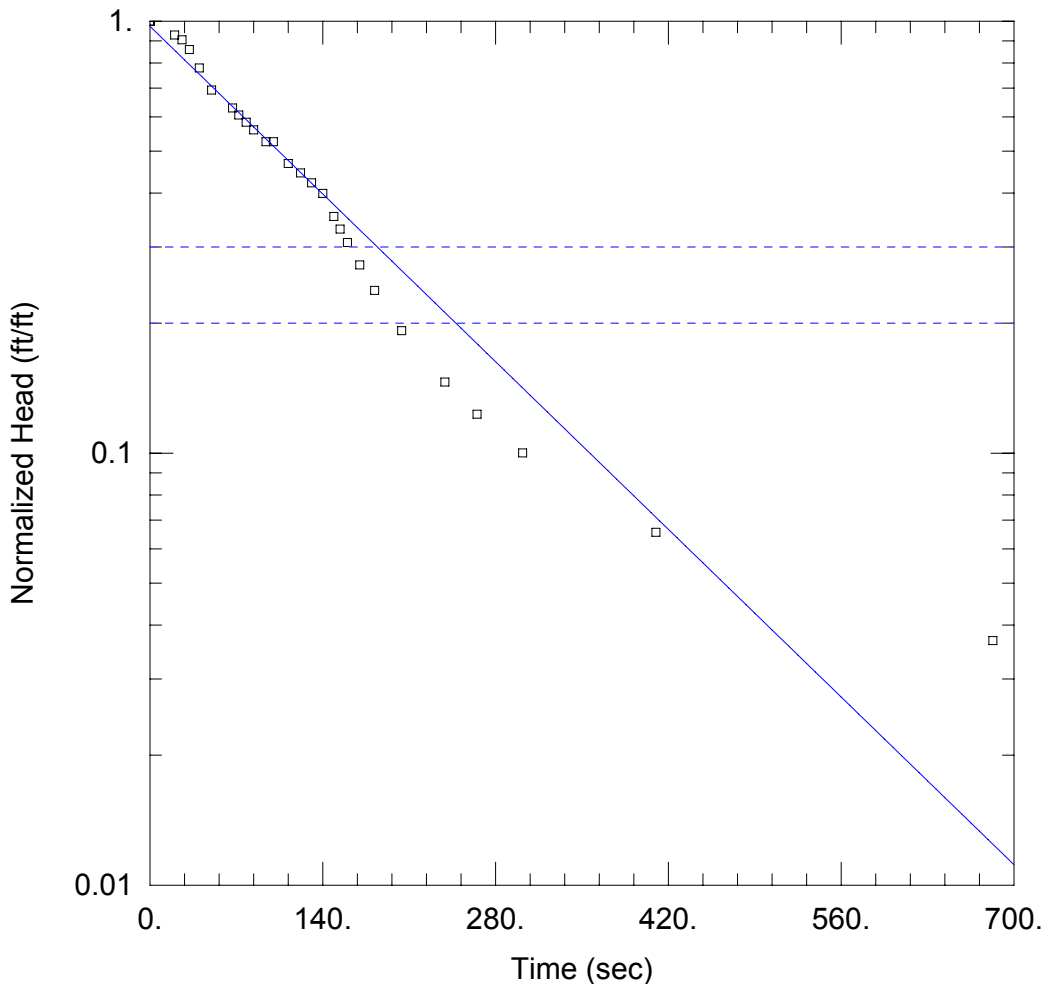
K = 0.01963 cm/sec  
 T = K\*b = 0.007703 ft<sup>2</sup>/sec (7.157 sq. cm/sec)

---

**Date** 25-Feb-2004  
**Station ID** 3954501104402700  
**Location** AGLUS-5, t est 1  
**By** SSP, JAB

**Measuring Point** 2.40 ft. above land surface  
**Depth of Pump** 87 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments                      |
|------------|--------------|---------------|-------------------|----------|-------------------------------|
| 14:16:00   | 0:00:00      |               | 78.93             |          | static before setting pump    |
| 14:32:00   | 0:16:00      |               | 78.93             |          | after setting pump            |
| 14:52:00   | 0:36:00      |               |                   |          | pump on. Pumping rate = 4 gpm |
| 14:52:39   | 0:36:39      |               | 83.75             | 4.82     |                               |
| 14:52:54   | 0:36:54      |               | 84.07             | 5.14     |                               |
| 14:53:09   | 0:37:09      |               | 84.34             | 5.41     |                               |
| 14:53:26   | 0:37:26      |               | 84.72             | 5.79     |                               |
| 14:54:06   | 0:38:06      |               | 86.40             | 7.47     |                               |
| 14:54:15   | 0:38:15      |               | 86.72             | 7.79     |                               |
| 14:54:34   | 0:38:34      |               | 87.17             | 8.24     |                               |
| 14:54:51   | 0:38:51      |               | 87.62             | 8.69     |                               |
| 14:55:30   | 0:39:30      | 0:00:00       |                   |          | Pump off. Removed 10gal.      |
| 14:55:50   | 0:39:50      | 0:00:20       | 87.00             | 8.07     |                               |
| 14:55:56   | 0:39:56      | 0:00:26       | 86.80             | 7.87     |                               |
| 14:56:02   | 0:40:02      | 0:00:32       | 86.40             | 7.47     |                               |
| 14:56:10   | 0:40:10      | 0:00:40       | 85.70             | 6.77     |                               |
| 14:56:20   | 0:40:20      | 0:00:50       | 84.95             | 6.02     |                               |
| 14:56:37   | 0:40:37      | 0:01:07       | 84.40             | 5.47     |                               |
| 14:56:42   | 0:40:42      | 0:01:12       | 84.20             | 5.27     |                               |
| 14:56:48   | 0:40:48      | 0:01:18       | 84.00             | 5.07     |                               |
| 14:56:54   | 0:40:54      | 0:01:24       | 83.80             | 4.87     |                               |
| 14:57:04   | 0:41:04      | 0:01:34       | 83.50             | 4.57     |                               |
| 14:57:10   | 0:41:10      | 0:01:40       | 83.50             | 4.57     |                               |
| 14:57:22   | 0:41:22      | 0:01:52       | 83.00             | 4.07     |                               |
| 14:57:32   | 0:41:32      | 0:02:02       | 82.80             | 3.87     |                               |
| 14:57:41   | 0:41:41      | 0:02:11       | 82.60             | 3.67     |                               |
| 14:57:50   | 0:41:50      | 0:02:20       | 82.40             | 3.47     |                               |
| 14:57:59   | 0:41:59      | 0:02:29       | 82.00             | 3.07     |                               |
| 14:58:04   | 0:42:04      | 0:02:34       | 81.80             | 2.87     |                               |
| 14:58:10   | 0:42:10      | 0:02:40       | 81.60             | 2.67     |                               |
| 14:58:20   | 0:42:20      | 0:02:50       | 81.30             | 2.37     |                               |
| 14:58:32   | 0:42:32      | 0:03:02       | 81.00             | 2.07     |                               |
| 14:58:54   | 0:42:54      | 0:03:24       | 80.60             | 1.67     |                               |
| 14:59:29   | 0:43:29      | 0:03:59       | 80.20             | 1.27     |                               |
| 14:59:55   | 0:43:55      | 0:04:25       | 80.00             | 1.07     |                               |
| 15:00:32   | 0:44:32      | 0:05:02       | 79.80             | 0.87     |                               |
| 15:02:20   | 0:46:20      | 0:06:50       | 79.50             | 0.57     |                               |
| 15:06:53   | 0:50:53      | 0:11:23       | 79.25             | 0.32     | End of Test #1                |



AGLUS 5 TEST #1

Data Set: Y:\...\AgLUS5\_test1\_13JUL2010.aqt

Date: 07/26/10

Time: 15:03:01

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 5

Test Date: 02/25/2004

AQUIFER DATA

Saturated Thickness: 13.59 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 5)

Initial Displacement: 8.69 ft

Static Water Column Height: 13.59 ft

Total Well Penetration Depth: 13.59 ft

Screen Length: 9.79 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 1.033E-5 ft/sec

y0 = 8.452 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV\_files\_13JULY2010\AgLUS 5\AgLUS5\_test1\_13JU  
 Title: AgLUS 5\_test #1  
 Date: 07/26/10  
 Time: 15:03:15

### PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/25/2004  
 Test Well: AgLUS 5

### AQUIFER DATA

Saturated Thickness: 13.59 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

### SLUG TEST WELL DATA

Test Well: AgLUS 5

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 8.69 ft  
 Static Water Column Height: 13.59 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.79 ft  
 Total Well Penetration Depth: 13.59 ft

No. of Observations: 27

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 8.69              | 131.       | 3.67              |
| 20.              | 8.07              | 140.       | 3.47              |
| 26.              | 7.87              | 149.       | 3.07              |
| 32.              | 7.47              | 154.       | 2.87              |
| 40.              | 6.77              | 160.       | 2.67              |
| 50.              | 6.02              | 170.       | 2.37              |
| 67.              | 5.47              | 182.       | 2.07              |
| 72.              | 5.27              | 204.       | 1.67              |
| 78.              | 5.07              | 239.       | 1.27              |
| 84.              | 4.87              | 265.       | 1.07              |
| 94.              | 4.57              | 302.       | 0.87              |
| 100.             | 4.57              | 410.       | 0.57              |
| 112.             | 4.07              | 683.       | 0.32              |
| 122.             | 3.87              |            |                   |

### SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 4.6

### VISUAL ESTIMATION RESULTS

#### Estimated Parameters

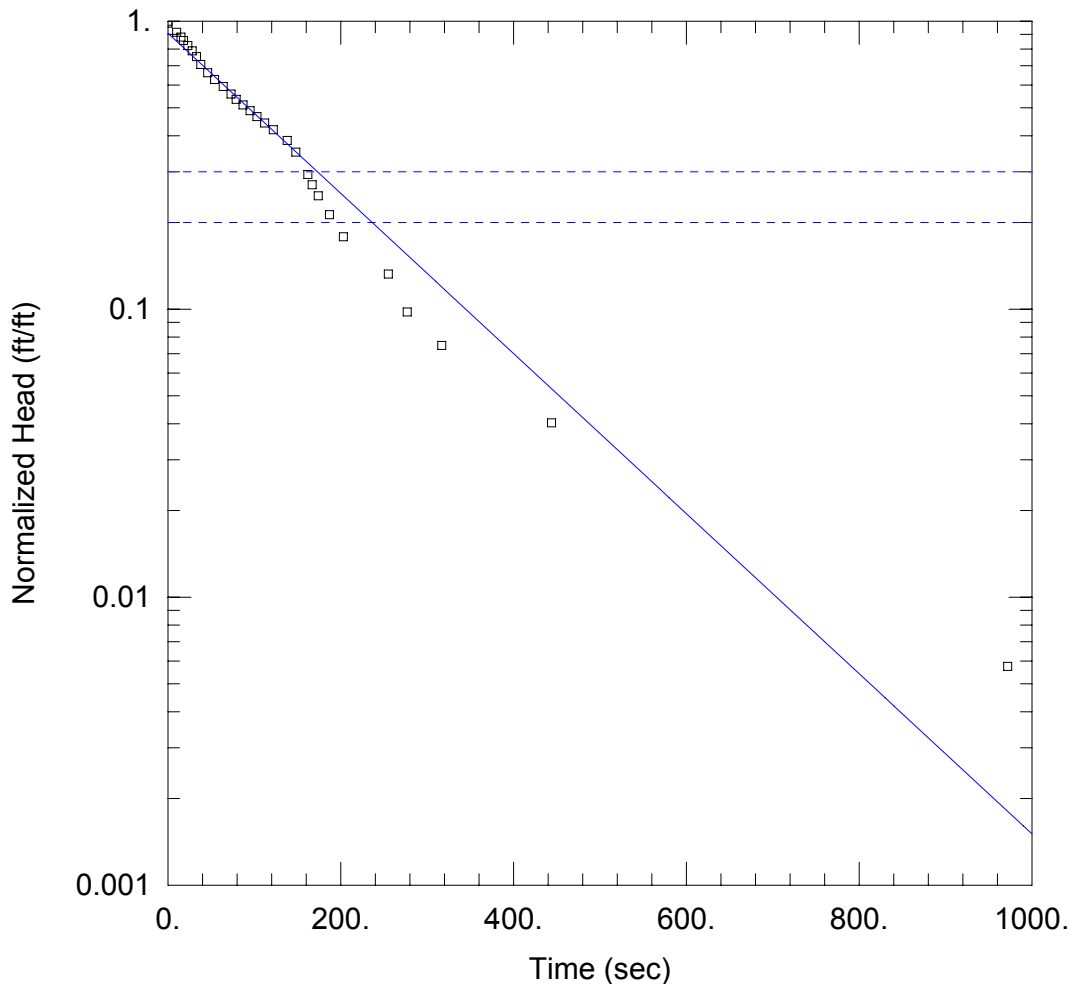
| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 1.033E-5 | ft/sec |



**Date** 25-Feb-2004  
**Station ID** 3954501104402700  
**Location** AGLUS-5, test 2  
**By** SSP, JAB

**Measuring Point** 2.40 ft. above land surface  
**Depth of Pump** 87 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments                      |
|------------|--------------|---------------|-------------------|----------|-------------------------------|
| 15:10:00   | 0:00:00      |               | 79.15             |          | static before setting pump    |
| 15:11:00   | 0:01:00      |               |                   |          | after setting pump            |
| 15:11:30   | 0:01:30      |               | 83.90             | 4.75     | pump on. Pumping rate = 4 gpm |
| 15:11:43   | 0:01:43      |               | 84.64             | 5.49     |                               |
| 15:11:49   | 0:01:49      |               | 85.00             | 5.85     |                               |
| 15:11:56   | 0:01:56      |               | 85.27             | 6.12     |                               |
| 15:12:17   | 0:02:17      |               | 86.11             | 6.96     |                               |
| 15:12:30   | 0:02:30      |               | 87.07             | 7.92     |                               |
| 15:12:35   | 0:02:35      |               | 87.30             | 8.15     |                               |
| 15:12:44   | 0:02:44      |               | 87.57             | 8.42     |                               |
| 15:13:10   | 0:03:10      |               |                   |          | Pump off. Removed 10gal.      |
| 15:13:23   | 0:03:23      | 0:00:00       | 87.70             | 8.55     |                               |
| 15:13:33   | 0:03:33      | 0:00:10       | 87.10             | 7.95     |                               |
| 15:13:38   | 0:03:38      | 0:00:15       | 86.80             | 7.65     |                               |
| 15:13:41   | 0:03:41      | 0:00:18       | 86.60             | 7.45     |                               |
| 15:13:46   | 0:03:46      | 0:00:23       | 86.30             | 7.15     |                               |
| 15:13:51   | 0:03:51      | 0:00:28       | 86.00             | 6.85     |                               |
| 15:13:56   | 0:03:56      | 0:00:33       | 85.70             | 6.55     |                               |
| 15:14:01   | 0:04:01      | 0:00:38       | 85.30             | 6.15     |                               |
| 15:14:09   | 0:04:09      | 0:00:46       | 84.90             | 5.75     |                               |
| 15:14:17   | 0:04:17      | 0:00:54       | 84.60             | 5.45     |                               |
| 15:14:27   | 0:04:27      | 0:01:04       | 84.30             | 5.15     |                               |
| 15:14:36   | 0:04:36      | 0:01:13       | 84.00             | 4.85     |                               |
| 15:14:42   | 0:04:42      | 0:01:19       | 83.80             | 4.65     |                               |
| 15:14:50   | 0:04:50      | 0:01:27       | 83.60             | 4.45     |                               |
| 15:14:58   | 0:04:58      | 0:01:35       | 83.40             | 4.25     |                               |
| 15:15:06   | 0:05:06      | 0:01:43       | 83.20             | 4.05     |                               |
| 15:15:15   | 0:05:15      | 0:01:52       | 83.00             | 3.85     |                               |
| 15:15:25   | 0:05:25      | 0:02:02       | 82.80             | 3.65     |                               |
| 15:15:41   | 0:05:41      | 0:02:18       | 82.50             | 3.35     |                               |
| 15:15:51   | 0:05:51      | 0:02:28       | 82.20             | 3.05     |                               |
| 15:16:05   | 0:06:05      | 0:02:42       | 81.70             | 2.55     |                               |
| 15:16:10   | 0:06:10      | 0:02:47       | 81.50             | 2.35     |                               |
| 15:16:17   | 0:06:17      | 0:02:54       | 81.30             | 2.15     |                               |
| 15:16:30   | 0:06:30      | 0:03:07       | 81.00             | 1.85     |                               |
| 15:16:46   | 0:06:46      | 0:03:23       | 80.70             | 1.55     |                               |
| 15:17:18   | 0:07:18      | 0:03:55       | 80.30             | 1.15     |                               |
| 15:18:00   | 0:08:00      | 0:04:37       | 80.00             | 0.85     |                               |
| 15:18:40   | 0:08:40      | 0:05:17       | 79.80             | 0.65     |                               |
| 15:20:47   | 0:10:47      | 0:07:24       | 79.50             | 0.35     |                               |
| 15:29:35   | 0:19:35      | 0:16:12       | 79.20             | 0.05     | End of Test #2                |



AGLUS 5 TEST #2

Data Set: Y:\...\AgLUS5\_test2\_13JUL2010.aqt

Date: 07/26/10

Time: 15:02:01

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 5

Test Date: 02/25/2004

AQUIFER DATA

Saturated Thickness: 13.59 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 5)

Initial Displacement: 8.69 ft

Static Water Column Height: 13.59 ft

Total Well Penetration Depth: 13.59 ft

Screen Length: 9.79 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 1.036E-5 ft/sec

y0 = 7.887 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV\_files\_13JULY2010\AgLUS 5\AgLUS5\_test2\_13JU  
 Title: AgLUS 5\_test #2  
 Date: 07/26/10  
 Time: 15:02:16

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/25/2004  
 Test Well: AgLUS 5

AQUIFER DATA

Saturated Thickness: 13.59 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 5

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 8.69 ft  
 Static Water Column Height: 13.59 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.79 ft  
 Total Well Penetration Depth: 13.59 ft

No. of Observations: 30

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 8.55              | 103.       | 4.05              |
| 10.              | 7.95              | 112.       | 3.85              |
| 15.              | 7.65              | 122.       | 3.65              |
| 18.              | 7.45              | 138.       | 3.35              |
| 23.              | 7.15              | 148.       | 3.05              |
| 28.              | 6.85              | 162.       | 2.55              |
| 33.              | 6.55              | 167.       | 2.35              |
| 38.              | 6.15              | 174.       | 2.15              |
| 46.              | 5.75              | 187.       | 1.85              |
| 54.              | 5.45              | 203.       | 1.55              |
| 64.              | 5.15              | 255.       | 1.15              |
| 73.              | 4.85              | 277.       | 0.85              |
| 79.              | 4.65              | 317.       | 0.65              |
| 87.              | 4.45              | 444.       | 0.35              |
| 95.              | 4.25              | 972.       | 0.05              |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 4.6

VISUAL ESTIMATION RESULTSEstimated Parameters

| Parameter | Estimate |
|-----------|----------|
|-----------|----------|

In-Situ Inc. MiniTroll Pro

Report generated: 4/28/2004 14:47:45  
 Report from file: ...\\SN09731 2004-04-20 114033 AgLUS6\_1.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS6\_1

Test defined on: 4/20/2004 11:36:04  
 Test started on: 4/20/2004 11:40:33  
 Test stopped on: 4/20/2004 11:45:41  
 Test extracted on: N/A N/A

Data gathered using Logarithmic testing  
 Maximum time between data points: 60.0 Seconds.  
 Number of data samples: 89

TOTAL DATA SAMPLES 89

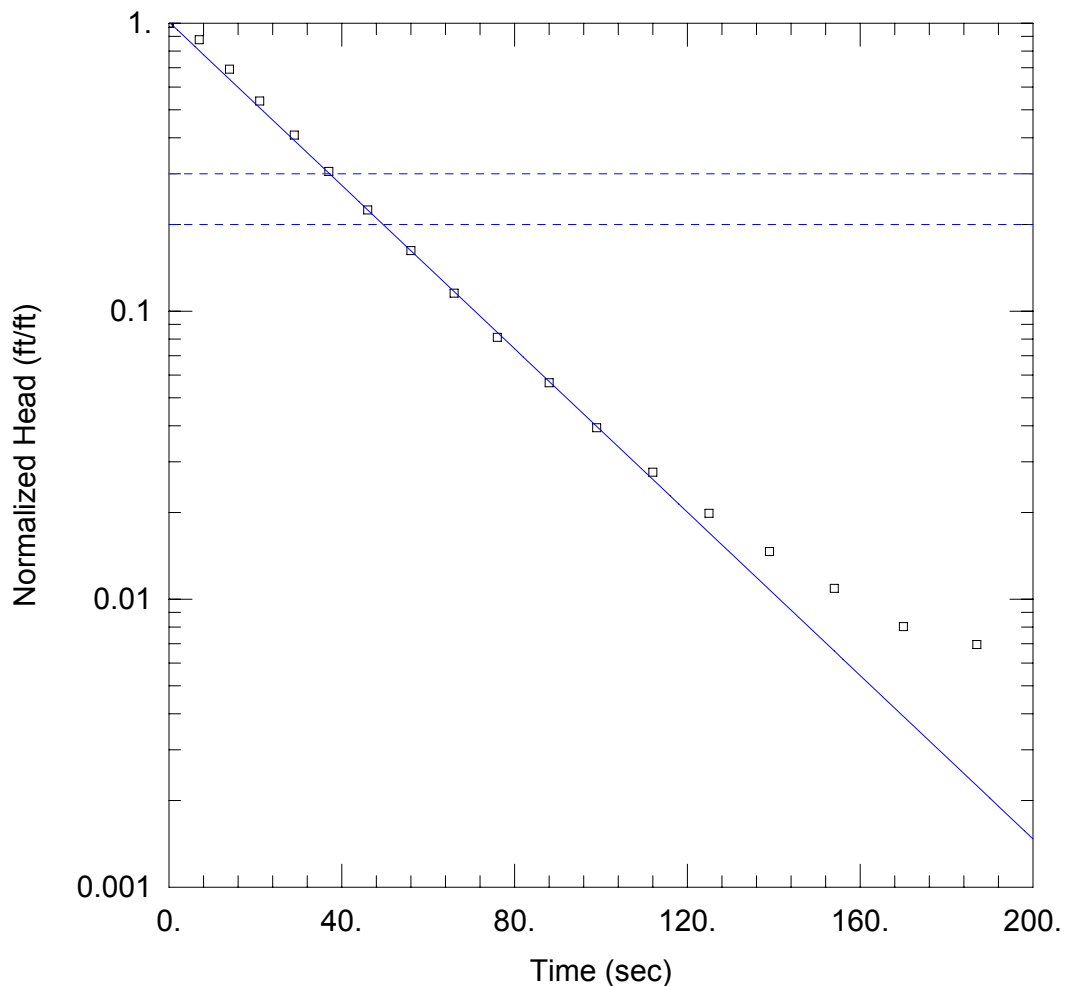
Channel number [1]  
 Measurement type: Temperature  
 Channel name: OnBoard Temp

Channel number [2]  
 Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1551.432 meters (5090.000 feet)

| Date      | Time     | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|----------|----------|-----------------------|---------------------|
| 4/20/2004 | 11:40:33 | 0        | 54.06                 | 13.922              |
| 4/20/2004 | 11:40:33 | 0.3      | 54.08                 | 13.935              |
| 4/20/2004 | 11:40:33 | 0.6      | 54.1                  | 13.94               |
| 4/20/2004 | 11:40:33 | 0.9      | 54.1                  | 13.94               |
| 4/20/2004 | 11:40:34 | 1.2      | 54.13                 | 13.943              |
| 4/20/2004 | 11:40:34 | 1.5      | 54.13                 | 13.943              |
| 4/20/2004 | 11:40:34 | 1.8      | 54.13                 | 13.945              |
| 4/20/2004 | 11:40:35 | 2.1      | 54.13                 | 13.945              |
| 4/20/2004 | 11:40:35 | 2.4      | 54.13                 | 13.945              |
| 4/20/2004 | 11:40:35 | 2.7      | 54.13                 | 13.945              |
| 4/20/2004 | 11:40:36 | 3        | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:36 | 3.3      | 54.13                 | 13.945              |
| 4/20/2004 | 11:40:36 | 3.6      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:36 | 3.9      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:37 | 4.2      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:37 | 4.5      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:37 | 4.8      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:38 | 5.1      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:38 | 5.4      | 54.15                 | 13.946              |

| Date      | Time     | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|----------|----------|-----------------------|---------------------|
| 4/20/2004 | 11:40:38 | 5.7      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:39 | 6        | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:39 | 6.4      | 54.15                 | 13.948              |
| 4/20/2004 | 11:40:39 | 6.7      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:40 | 7.1      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:40 | 7.5      | 54.15                 | 13.948              |
| 4/20/2004 | 11:40:41 | 8        | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:41 | 8.4      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:42 | 8.9      | 54.15                 | 13.948              |
| 4/20/2004 | 11:40:42 | 9.5      | 54.15                 | 13.946              |
| 4/20/2004 | 11:40:43 | 10       | 54.13                 | 13.938              |
| 4/20/2004 | 11:40:43 | 10.6     | 54.13                 | 13.938              |
| 4/20/2004 | 11:40:44 | 11.3     | 54.1                  | 13.935              |
| 4/20/2004 | 11:40:44 | 11.9     | 54.1                  | 13.935              |
| 4/20/2004 | 11:40:45 | 12.6     | 54.1                  | 13.933              |
| 4/20/2004 | 11:40:46 | 13.4     | 54.1                  | 13.931              |
| 4/20/2004 | 11:40:47 | 14.2     | 54.08                 | 13.93               |
| 4/20/2004 | 11:40:48 | 15       | 54.08                 | 13.93               |
| 4/20/2004 | 11:40:48 | 15.9     | 54.08                 | 13.93               |
| 4/20/2004 | 11:40:49 | 16.8     | 54.08                 | 13.932              |
| 4/20/2004 | 11:40:50 | 17.8     | 54.08                 | 13.93               |
| 4/20/2004 | 11:40:51 | 18.9     | 54.08                 | 13.93               |
| 4/20/2004 | 11:40:53 | 20       | 54.08                 | 13.928              |
| 4/20/2004 | 11:40:54 | 21.2     | 54.06                 | 13.928              |
| 4/20/2004 | 11:40:55 | 22.4     | 54.06                 | 13.927              |
| 4/20/2004 | 11:40:56 | 23.8     | 54.06                 | 13.927              |
| 4/20/2004 | 11:40:58 | 25.2     | 54.06                 | 13.925              |
| 4/20/2004 | 11:40:59 | 26.7     | 54.06                 | 13.923              |
| 4/20/2004 | 11:41:01 | 28.2     | 54.06                 | 13.925              |
| 4/20/2004 | 11:41:02 | 29.8     | 54.04                 | 13.923              |
| 4/20/2004 | 11:41:04 | 31.5     | 54.04                 | 13.923              |
| 4/20/2004 | 11:41:06 | 33.3     | 54.04                 | 13.923              |
| 4/20/2004 | 11:41:08 | 35.2     | 54.06                 | 13.934              |
| 4/20/2004 | 11:41:10 | 37.3     | 54.06                 | 13.928              |
| 4/20/2004 | 11:41:12 | 39.5     | 54.04                 | 13.923              |
| 4/20/2004 | 11:41:14 | 41.8     | 54.01                 | 13.924              |
| 4/20/2004 | 11:41:17 | 44.3     | 54.04                 | 13.929              |
| 4/20/2004 | 11:41:19 | 46.9     | 54.01                 | 13.669              |
| 4/20/2004 | 11:41:22 | 49.7     | 54.01                 | 12.861              |
| 4/20/2004 | 11:41:25 | 52.6     | 54.01                 | 11.702              |
| 4/20/2004 | 11:41:28 | 55.7     | 54.01                 | 10.557              |
| 4/20/2004 | 11:41:32 | 59       | 54.06                 | 9.474               |
| 4/20/2004 | 11:41:35 | 62.5     | 54.06                 | 8.452               |
| 4/20/2004 | 11:41:39 | 66.2     | 54.06                 | 7.419               |
| 4/20/2004 | 11:41:43 | 70.1     | 54.08                 | 6.436               |
| 4/20/2004 | 11:41:47 | 74.3     | 54.06                 | 5.624               |
| 4/20/2004 | 11:41:51 | 78.7     | 54.06                 | 4.848               |
| 4/20/2004 | 11:41:56 | 83.4     | 54.1                  | 4.152               |
| 4/20/2004 | 11:42:01 | 88.4     | 54.08                 | 3.427               |
| 4/20/2004 | 11:42:06 | 93.7     | 54.08                 | 2.683               |
| 4/20/2004 | 11:42:12 | 99.3     | 54.08                 | 1.87                |
| 4/20/2004 | 11:42:18 | 105.2    | 54.1                  | 0.955               |
| 4/20/2004 | 11:42:24 | 111.5    | 54.06                 | -0.009              |
| 4/20/2004 | 11:42:31 | 118.1    | 54.06                 | 1.73                |
| 4/20/2004 | 11:42:38 | 125.1    | 53.99                 | 4.291               |
| 4/20/2004 | 11:42:45 | 132.6    | 53.97                 | 6.466               |

| Date      | Time     | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|----------|----------|-----------------------|---------------------|
| 4/20/2004 | 11:42:53 | 140.5    | 53.95                 | 8.244               |
| 4/20/2004 | 11:43:01 | 148.9    | 53.92                 | 9.682               |
| 4/20/2004 | 11:43:10 | 157.8    | 53.9                  | 10.812              |
| 4/20/2004 | 11:43:20 | 167.2    | 53.88                 | 11.683              |
| 4/20/2004 | 11:43:30 | 177.2    | 53.88                 | 12.335              |
| 4/20/2004 | 11:43:40 | 187.8    | 53.86                 | 12.814              |
| 4/20/2004 | 11:43:52 | 199      | 53.86                 | 13.159              |
| 4/20/2004 | 11:44:03 | 210.9    | 53.83                 | 13.397              |
| 4/20/2004 | 11:44:16 | 223.5    | 53.86                 | 13.561              |
| 4/20/2004 | 11:44:29 | 236.8    | 53.83                 | 13.669              |
| 4/20/2004 | 11:44:43 | 250.9    | 53.83                 | 13.742              |
| 4/20/2004 | 11:44:58 | 265.8    | 53.83                 | 13.794              |
| 4/20/2004 | 11:45:14 | 281.6    | 53.88                 | 13.834              |
| 4/20/2004 | 11:45:31 | 298.4    | 53.9                  | 13.849              |



### AGLUS 6 TEST #1

Data Set: Y:\...\AgLUS6\_test1\_03JAN2011.aqt

Date: 01/03/11

Time: 10:55:15

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 6

Test Date: 04/20/2004

### AQUIFER DATA

Saturated Thickness: 19.32 ft

Anisotropy Ratio ( $K_z/K_r$ ): 0.01

### WELL DATA (AgLUS 6)

Initial Displacement: 13.95 ft

Static Water Column Height: 19.32 ft

Total Well Penetration Depth: 19.32 ft

Screen Length: 9.81 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 5.543E-5$  ft/sec

$y_0 = 14.07$  ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV\_files\_03JAN2011\AgLUS 6\AgLUS6\_test1\_03JAN  
 Title: AgLUS 6\_test #1  
 Date: 01/03/11  
 Time: 10:56:03

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 04/20/2004  
 Test Well: AgLUS 6

AQUIFER DATA

Saturated Thickness: 19.32 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 6

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 13.95 ft  
 Static Water Column Height: 19.32 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.81 ft  
 Total Well Penetration Depth: 19.32 ft

No. of Observations: 18

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 13.95             | 76.        | 1.132             |
| 7.               | 12.22             | 88.        | 0.787             |
| 14.              | 9.655             | 99.        | 0.549             |
| 21.              | 7.48              | 112.       | 0.385             |
| 29.              | 5.702             | 125.       | 0.277             |
| 37.              | 4.264             | 139.       | 0.204             |
| 46.              | 3.134             | 154.       | 0.152             |
| 56.              | 2.263             | 170.       | 0.112             |
| 66.              | 1.611             | 187.       | 0.097             |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 4.834

VISUAL ESTIMATION RESULTSEstimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 5.543E-5 | ft/sec |
| y0        | 14.07    | ft     |

K = 0.001689 cm/sec  
 T = K\*b = 0.001071 ft<sup>2</sup>/sec (0.9949 sq. cm/sec)



In-Situ Inc. MiniTroll Pro

Report generated: 4/29/2004 9:31:35  
 Report from file: ...\\SN09731 2004-04-20 114729 AgLUS6\_2.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS6\_2

Test defined on: 4/20/2004 11:46:51  
 Test started on: 4/20/2004 11:47:29  
 Test stopped on: 4/20/2004 11:53:08  
 Test extracted on: N/A N/A

Data gathered using Logarithmic testing

Maximum time between data points: 60.0 Seconds.  
 Number of data samples: 91

TOTAL DATA SAMPLES 91

Channel number [1]

Measurement type: Temperature  
 Channel name: OnBoard Temp

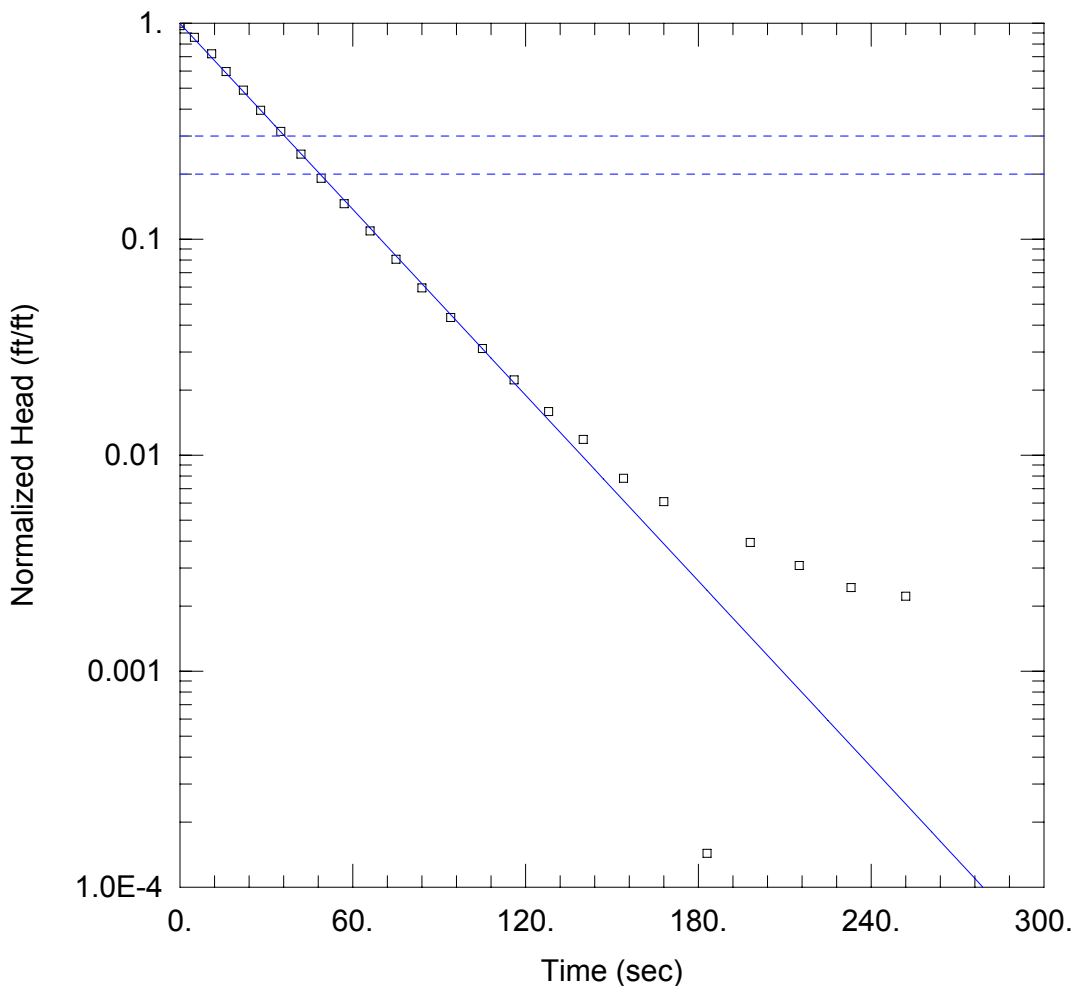
Channel number [2]

Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1551.432 meters (5090.000 feet)

| Date      | Time     | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|----------|----------|-----------------------|---------------------|
| 4/20/2004 | 11:47:29 | 0        | 54.22                 | 13.891              |
| 4/20/2004 | 11:47:29 | 0.3      | 54.26                 | 13.903              |
| 4/20/2004 | 11:47:29 | 0.6      | 54.28                 | 13.906              |
| 4/20/2004 | 11:47:30 | 0.9      | 54.28                 | 13.909              |
| 4/20/2004 | 11:47:30 | 1.2      | 54.31                 | 13.909              |
| 4/20/2004 | 11:47:30 | 1.5      | 54.31                 | 13.912              |
| 4/20/2004 | 11:47:31 | 1.8      | 54.31                 | 13.912              |
| 4/20/2004 | 11:47:31 | 2.1      | 54.33                 | 13.911              |
| 4/20/2004 | 11:47:31 | 2.4      | 54.33                 | 13.914              |
| 4/20/2004 | 11:47:32 | 2.7      | 54.33                 | 13.914              |
| 4/20/2004 | 11:47:32 | 3        | 54.33                 | 13.912              |
| 4/20/2004 | 11:47:32 | 3.3      | 54.33                 | 13.914              |
| 4/20/2004 | 11:47:32 | 3.6      | 54.33                 | 13.914              |
| 4/20/2004 | 11:47:33 | 3.9      | 54.35                 | 13.914              |
| 4/20/2004 | 11:47:33 | 4.2      | 54.35                 | 13.914              |
| 4/20/2004 | 11:47:33 | 4.5      | 54.35                 | 13.914              |
| 4/20/2004 | 11:47:34 | 4.8      | 54.35                 | 13.912              |
| 4/20/2004 | 11:47:34 | 5.1      | 54.35                 | 13.914              |
| 4/20/2004 | 11:47:34 | 5.4      | 54.35                 | 13.914              |

| Date      | Time     | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|----------|----------|-----------------------|---------------------|
| 4/20/2004 | 11:47:35 | 5.7      | 54.35                 | 13.915              |
| 4/20/2004 | 11:47:35 | 6        | 54.37                 | 13.917              |
| 4/20/2004 | 11:47:35 | 6.4      | 54.37                 | 13.917              |
| 4/20/2004 | 11:47:36 | 6.7      | 54.37                 | 13.917              |
| 4/20/2004 | 11:47:36 | 7.1      | 54.37                 | 13.917              |
| 4/20/2004 | 11:47:36 | 7.5      | 54.37                 | 13.915              |
| 4/20/2004 | 11:47:37 | 8        | 54.37                 | 13.917              |
| 4/20/2004 | 11:47:37 | 8.4      | 54.37                 | 13.917              |
| 4/20/2004 | 11:47:38 | 8.9      | 54.37                 | 13.917              |
| 4/20/2004 | 11:47:38 | 9.5      | 54.4                  | 13.917              |
| 4/20/2004 | 11:47:39 | 10       | 54.37                 | 13.908              |
| 4/20/2004 | 11:47:39 | 10.6     | 54.37                 | 13.907              |
| 4/20/2004 | 11:47:40 | 11.3     | 54.37                 | 13.905              |
| 4/20/2004 | 11:47:41 | 11.9     | 54.37                 | 13.903              |
| 4/20/2004 | 11:47:41 | 12.6     | 54.37                 | 13.902              |
| 4/20/2004 | 11:47:42 | 13.4     | 54.37                 | 13.902              |
| 4/20/2004 | 11:47:43 | 14.2     | 54.37                 | 13.902              |
| 4/20/2004 | 11:47:44 | 15       | 54.37                 | 13.9                |
| 4/20/2004 | 11:47:45 | 15.9     | 54.37                 | 13.9                |
| 4/20/2004 | 11:47:46 | 16.8     | 54.37                 | 13.898              |
| 4/20/2004 | 11:47:47 | 17.8     | 54.37                 | 13.903              |
| 4/20/2004 | 11:47:48 | 18.9     | 54.37                 | 13.89               |
| 4/20/2004 | 11:47:49 | 20       | 54.37                 | 13.9                |
| 4/20/2004 | 11:47:50 | 21.2     | 54.4                  | 13.79               |
| 4/20/2004 | 11:47:51 | 22.4     | 54.4                  | 13.548              |
| 4/20/2004 | 11:47:53 | 23.8     | 54.4                  | 13.014              |
| 4/20/2004 | 11:47:54 | 25.2     | 54.4                  | 12.517              |
| 4/20/2004 | 11:47:56 | 26.7     | 54.4                  | 11.898              |
| 4/20/2004 | 11:47:57 | 28.2     | 54.4                  | 11.293              |
| 4/20/2004 | 11:47:59 | 29.8     | 54.42                 | 10.698              |
| 4/20/2004 | 11:48:00 | 31.5     | 54.4                  | 10.104              |
| 4/20/2004 | 11:48:02 | 33.3     | 54.4                  | 9.507               |
| 4/20/2004 | 11:48:04 | 35.2     | 54.37                 | 8.924               |
| 4/20/2004 | 11:48:06 | 37.3     | 54.35                 | 8.311               |
| 4/20/2004 | 11:48:08 | 39.5     | 54.33                 | 7.709               |
| 4/20/2004 | 11:48:11 | 41.8     | 54.35                 | 7.094               |
| 4/20/2004 | 11:48:13 | 44.3     | 54.31                 | 6.566               |
| 4/20/2004 | 11:48:16 | 46.9     | 54.31                 | 5.971               |
| 4/20/2004 | 11:48:19 | 49.7     | 54.28                 | 5.417               |
| 4/20/2004 | 11:48:21 | 52.6     | 54.22                 | 4.893               |
| 4/20/2004 | 11:48:25 | 55.7     | 54.24                 | 4.361               |
| 4/20/2004 | 11:48:28 | 59       | 54.19                 | 3.882               |
| 4/20/2004 | 11:48:31 | 62.5     | 54.15                 | 3.353               |
| 4/20/2004 | 11:48:35 | 66.2     | 54.1                  | 2.811               |
| 4/20/2004 | 11:48:39 | 70.1     | 54.1                  | 2.248               |
| 4/20/2004 | 11:48:43 | 74.3     | 54.06                 | 1.621               |
| 4/20/2004 | 11:48:48 | 78.7     | 54.06                 | 0.962               |
| 4/20/2004 | 11:48:52 | 83.4     | 53.99                 | 0.304               |
| 4/20/2004 | 11:48:57 | 88.4     | 53.97                 | 1.904               |
| 4/20/2004 | 11:49:03 | 93.7     | 53.95                 | 3.825               |
| 4/20/2004 | 11:49:08 | 99.3     | 53.9                  | 5.566               |
| 4/20/2004 | 11:49:14 | 105.2    | 53.92                 | 7.062               |
| 4/20/2004 | 11:49:20 | 111.5    | 53.88                 | 8.382               |
| 4/20/2004 | 11:49:27 | 118.1    | 53.86                 | 9.495               |
| 4/20/2004 | 11:49:34 | 125.1    | 53.86                 | 10.437              |
| 4/20/2004 | 11:49:41 | 132.6    | 53.83                 | 11.221              |

| Date      | Time     | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|----------|----------|-----------------------|---------------------|
| 4/20/2004 | 11:49:49 | 140.5    | 53.83                 | 11.857              |
| 4/20/2004 | 11:49:58 | 148.9    | 53.83                 | 12.368              |
| 4/20/2004 | 11:50:07 | 157.8    | 53.86                 | 12.765              |
| 4/20/2004 | 11:50:16 | 167.2    | 53.81                 | 13.061              |
| 4/20/2004 | 11:50:26 | 177.2    | 53.81                 | 13.286              |
| 4/20/2004 | 11:50:37 | 187.8    | 53.81                 | 13.456              |
| 4/20/2004 | 11:50:48 | 199      | 53.83                 | 13.58               |
| 4/20/2004 | 11:51:00 | 210.9    | 53.83                 | 13.669              |
| 4/20/2004 | 11:51:12 | 223.5    | 53.79                 | 13.726              |
| 4/20/2004 | 11:51:26 | 236.8    | 53.86                 | 13.782              |
| 4/20/2004 | 11:51:40 | 250.9    | 53.83                 | 13.806              |
| 4/20/2004 | 11:51:55 | 265.8    | 53.88                 | 13.889              |
| 4/20/2004 | 11:52:10 | 281.6    | 53.83                 | 13.836              |
| 4/20/2004 | 11:52:27 | 298.4    | 53.83                 | 13.848              |
| 4/20/2004 | 11:52:45 | 316.2    | 53.88                 | 13.857              |
| 4/20/2004 | 11:53:04 | 335      | 53.88                 | 13.86               |



### AGLUS 6 TEST #2

Data Set: Y:\...\AgLUS6\_test2\_03JAN2011.aqt

Date: 01/03/11

Time: 11:09:05

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 6

Test Date: 04/20/2004

### AQUIFER DATA

Saturated Thickness: 19.32 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (AgLUS 6)

Initial Displacement: 13.95 ft

Static Water Column Height: 19.32 ft

Total Well Penetration Depth: 19.32 ft

Screen Length: 9.81 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 5.605E-5 ft/sec

y0 = 13.89 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV\_files\_03JAN2011\AgLUS 6\AgLUS6\_test2\_03JAN  
 Title: AgLUS 6\_test #2  
 Date: 01/03/11  
 Time: 11:10:13

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 04/20/2004  
 Test Well: AgLUS 6

AQUIFER DATA

Saturated Thickness: 19.32 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 6

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 13.95 ft  
 Static Water Column Height: 19.32 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.81 ft  
 Total Well Penetration Depth: 19.32 ft

No. of Observations: 25

| Time (sec) | Observation Data  |            | Displacement (ft) |
|------------|-------------------|------------|-------------------|
|            | Displacement (ft) | Time (sec) |                   |
| 0.         | 13.59             | 94.        | 0.605             |
| 5.         | 11.99             | 105.       | 0.435             |
| 11.        | 10.07             | 116.       | 0.311             |
| 16.        | 8.325             | 128.       | 0.222             |
| 22.        | 6.829             | 140.       | 0.165             |
| 28.        | 5.509             | 154.       | 0.109             |
| 35.        | 4.396             | 168.       | 0.085             |
| 42.        | 3.454             | 183.       | 0.002             |
| 49.        | 2.67              | 198.       | 0.055             |
| 57.        | 2.034             | 215.       | 0.043             |
| 66.        | 1.523             | 233.       | 0.034             |
| 75.        | 1.126             | 252.       | 0.031             |
| 84.        | 0.83              |            |                   |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 $\ln(R_e/r_w)$ : 4.834

VISUAL ESTIMATION RESULTSEstimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 5.605E-5 | ft/sec |
| y0        | 13.89    | ft     |

In-Situ Inc. MiniTroll Pro  
 Report generated: 4/29/2004 9:33:49  
 Report from file: ...\\SN09731 2004-04-20 115437 AgLUS6\_3.bin  
 Win-Situ Version 4.46  
 Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS6\_3  
 Test defined on: 4/20/2004 11:54:18  
 Test started on: 4/20/2004 11:54:37  
 Test stopped on: 4/20/2004 12:00:06  
 Test extracted on: N/A N/A

Data gathered using Linear testing  
 Time between data points: 3.0 Seconds.  
 Number of data samples: 110

TOTAL DATA SAMPLES 110

Channel number [1]  
 Measurement type: Temperature  
 Channel name: OnBoard Temp

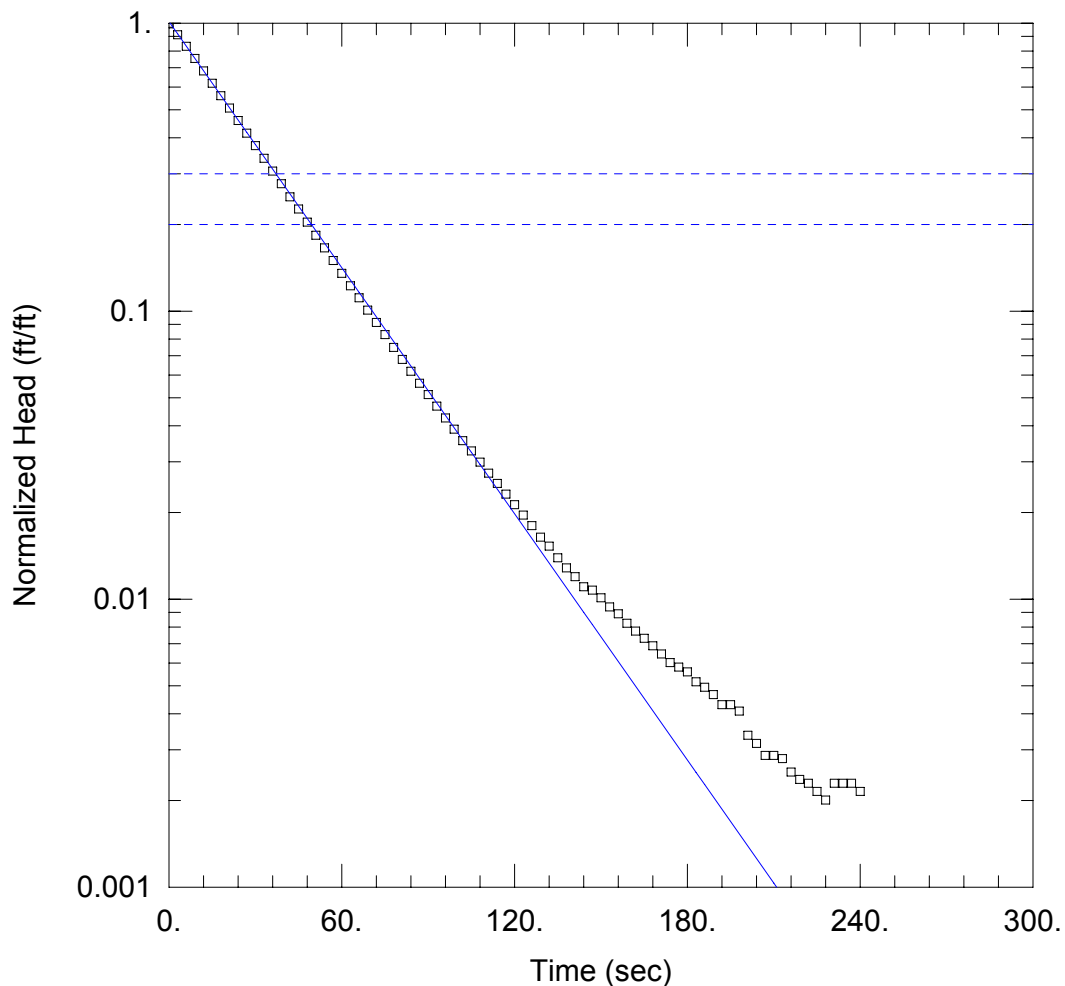
Channel number [2]  
 Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1551.432 meters (5090.000 feet)

| Date      | Time     | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|----------|----------|-----------------------|---------------------|
| 4/20/2004 | 11:54:37 | 0        | 54.01                 | 13.879              |
| 4/20/2004 | 11:54:40 | 3        | 54.01                 | 13.879              |
| 4/20/2004 | 11:54:43 | 6        | 54.04                 | 13.881              |
| 4/20/2004 | 11:54:46 | 9        | 54.06                 | 13.881              |
| 4/20/2004 | 11:54:49 | 12       | 54.06                 | 13.882              |
| 4/20/2004 | 11:54:52 | 15       | 54.08                 | 13.882              |
| 4/20/2004 | 11:54:55 | 18       | 54.08                 | 13.88               |
| 4/20/2004 | 11:54:58 | 21       | 54.1                  | 13.88               |
| 4/20/2004 | 11:55:01 | 24       | 54.13                 | 13.4                |
| 4/20/2004 | 11:55:04 | 27       | 54.13                 | 12.147              |
| 4/20/2004 | 11:55:07 | 30       | 54.15                 | 10.919              |
| 4/20/2004 | 11:55:10 | 33       | 54.15                 | 9.791               |
| 4/20/2004 | 11:55:13 | 36       | 54.15                 | 8.819               |
| 4/20/2004 | 11:55:16 | 39       | 54.15                 | 7.94                |
| 4/20/2004 | 11:55:19 | 42       | 54.13                 | 7.162               |
| 4/20/2004 | 11:55:22 | 45       | 54.13                 | 6.412               |
| 4/20/2004 | 11:55:25 | 48       | 54.1                  | 5.733               |
| 4/20/2004 | 11:55:28 | 51       | 54.08                 | 5.114               |
| 4/20/2004 | 11:55:31 | 54       | 54.06                 | 4.538               |

| Date      | Time     | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|----------|----------|-----------------------|---------------------|
| 4/20/2004 | 11:55:34 | 57       | 54.08                 | 3.959               |
| 4/20/2004 | 11:55:37 | 60       | 54.06                 | 3.494               |
| 4/20/2004 | 11:55:40 | 63       | 54.06                 | 2.981               |
| 4/20/2004 | 11:55:43 | 66       | 54.04                 | 2.481               |
| 4/20/2004 | 11:55:46 | 69       | 54.04                 | 1.967               |
| 4/20/2004 | 11:55:49 | 72       | 54.01                 | 1.467               |
| 4/20/2004 | 11:55:52 | 75       | 54.01                 | 0.922               |
| 4/20/2004 | 11:55:55 | 78       | 53.99                 | 0.347               |
| 4/20/2004 | 11:55:58 | 81       | 53.97                 | 0.022               |
| 4/20/2004 | 11:56:01 | 84       | 53.97                 | 0.017               |
| 4/20/2004 | 11:56:04 | 87       | 53.95                 | 0.017               |
| 4/20/2004 | 11:56:07 | 90       | 53.95                 | 1.174               |
| 4/20/2004 | 11:56:10 | 93       | 53.92                 | 2.282               |
| 4/20/2004 | 11:56:13 | 96       | 53.92                 | 3.356               |
| 4/20/2004 | 11:56:16 | 99       | 53.92                 | 4.358               |
| 4/20/2004 | 11:56:19 | 102      | 53.9                  | 5.253               |
| 4/20/2004 | 11:56:22 | 105      | 53.9                  | 6.067               |
| 4/20/2004 | 11:56:25 | 108      | 53.9                  | 6.805               |
| 4/20/2004 | 11:56:28 | 111      | 53.88                 | 7.477               |
| 4/20/2004 | 11:56:31 | 114      | 53.88                 | 8.089               |
| 4/20/2004 | 11:56:34 | 117      | 53.88                 | 8.643               |
| 4/20/2004 | 11:56:37 | 120      | 53.88                 | 9.146               |
| 4/20/2004 | 11:56:40 | 123      | 53.86                 | 9.604               |
| 4/20/2004 | 11:56:43 | 126      | 53.86                 | 10.016              |
| 4/20/2004 | 11:56:46 | 129      | 53.88                 | 10.401              |
| 4/20/2004 | 11:56:49 | 132      | 53.86                 | 10.724              |
| 4/20/2004 | 11:56:52 | 135      | 53.86                 | 11.038              |
| 4/20/2004 | 11:56:55 | 138      | 53.86                 | 11.32               |
| 4/20/2004 | 11:56:58 | 141      | 53.86                 | 11.565              |
| 4/20/2004 | 11:57:01 | 144      | 53.86                 | 11.789              |
| 4/20/2004 | 11:57:04 | 147      | 53.83                 | 11.991              |
| 4/20/2004 | 11:57:07 | 150      | 53.83                 | 12.172              |
| 4/20/2004 | 11:57:10 | 153      | 53.81                 | 12.327              |
| 4/20/2004 | 11:57:13 | 156      | 53.79                 | 12.473              |
| 4/20/2004 | 11:57:16 | 159      | 53.79                 | 12.605              |
| 4/20/2004 | 11:57:19 | 162      | 53.79                 | 12.722              |
| 4/20/2004 | 11:57:22 | 165      | 53.81                 | 12.835              |
| 4/20/2004 | 11:57:25 | 168      | 53.81                 | 12.931              |
| 4/20/2004 | 11:57:28 | 171      | 53.81                 | 13.016              |
| 4/20/2004 | 11:57:31 | 174      | 53.81                 | 13.095              |
| 4/20/2004 | 11:57:34 | 177      | 53.81                 | 13.163              |
| 4/20/2004 | 11:57:37 | 180      | 53.81                 | 13.226              |
| 4/20/2004 | 11:57:40 | 183      | 53.81                 | 13.285              |
| 4/20/2004 | 11:57:43 | 186      | 53.81                 | 13.336              |
| 4/20/2004 | 11:57:46 | 189      | 53.81                 | 13.384              |
| 4/20/2004 | 11:57:49 | 192      | 53.81                 | 13.423              |
| 4/20/2004 | 11:57:52 | 195      | 53.81                 | 13.462              |
| 4/20/2004 | 11:57:55 | 198      | 53.81                 | 13.497              |
| 4/20/2004 | 11:57:58 | 201      | 53.81                 | 13.527              |
| 4/20/2004 | 11:58:01 | 204      | 53.81                 | 13.556              |
| 4/20/2004 | 11:58:04 | 207      | 53.81                 | 13.582              |
| 4/20/2004 | 11:58:07 | 210      | 53.81                 | 13.606              |
| 4/20/2004 | 11:58:10 | 213      | 53.81                 | 13.628              |
| 4/20/2004 | 11:58:13 | 216      | 53.81                 | 13.65               |
| 4/20/2004 | 11:58:16 | 219      | 53.81                 | 13.666              |
| 4/20/2004 | 11:58:19 | 222      | 53.81                 | 13.685              |

| Date      | Time     | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|----------|----------|-----------------------|---------------------|
| 4/20/2004 | 11:58:22 | 225      | 53.81                 | 13.7                |
| 4/20/2004 | 11:58:25 | 228      | 53.81                 | 13.712              |
| 4/20/2004 | 11:58:28 | 231      | 53.83                 | 13.725              |
| 4/20/2004 | 11:58:31 | 234      | 53.79                 | 13.729              |
| 4/20/2004 | 11:58:34 | 237      | 53.76                 | 13.738              |
| 4/20/2004 | 11:58:37 | 240      | 53.76                 | 13.748              |
| 4/20/2004 | 11:58:40 | 243      | 53.76                 | 13.755              |
| 4/20/2004 | 11:58:43 | 246      | 53.76                 | 13.764              |
| 4/20/2004 | 11:58:46 | 249      | 53.74                 | 13.771              |
| 4/20/2004 | 11:58:49 | 252      | 53.74                 | 13.777              |
| 4/20/2004 | 11:58:52 | 255      | 53.74                 | 13.783              |
| 4/20/2004 | 11:58:55 | 258      | 53.74                 | 13.789              |
| 4/20/2004 | 11:58:58 | 261      | 53.74                 | 13.795              |
| 4/20/2004 | 11:59:01 | 264      | 53.74                 | 13.798              |
| 4/20/2004 | 11:59:04 | 267      | 53.74                 | 13.801              |
| 4/20/2004 | 11:59:07 | 270      | 53.72                 | 13.807              |
| 4/20/2004 | 11:59:10 | 273      | 53.72                 | 13.81               |
| 4/20/2004 | 11:59:13 | 276      | 53.72                 | 13.814              |
| 4/20/2004 | 11:59:16 | 279      | 53.72                 | 13.819              |
| 4/20/2004 | 11:59:19 | 282      | 53.72                 | 13.819              |
| 4/20/2004 | 11:59:22 | 285      | 53.72                 | 13.822              |
| 4/20/2004 | 11:59:25 | 288      | 53.74                 | 13.832              |
| 4/20/2004 | 11:59:28 | 291      | 53.76                 | 13.835              |
| 4/20/2004 | 11:59:31 | 294      | 53.76                 | 13.839              |
| 4/20/2004 | 11:59:34 | 297      | 53.76                 | 13.839              |
| 4/20/2004 | 11:59:37 | 300      | 53.76                 | 13.84               |
| 4/20/2004 | 11:59:40 | 303      | 53.76                 | 13.844              |
| 4/20/2004 | 11:59:43 | 306      | 53.76                 | 13.846              |
| 4/20/2004 | 11:59:46 | 309      | 53.76                 | 13.847              |
| 4/20/2004 | 11:59:49 | 312      | 53.79                 | 13.849              |
| 4/20/2004 | 11:59:52 | 315      | 53.79                 | 13.851              |
| 4/20/2004 | 11:59:55 | 318      | 53.76                 | 13.847              |
| 4/20/2004 | 11:59:58 | 321      | 53.74                 | 13.847              |
| 4/20/2004 | 12:00:01 | 324      | 53.74                 | 13.847              |
| 4/20/2004 | 12:00:04 | 327      | 53.74                 | 13.849              |





### AGLUS 6 TEST #3

Data Set: Y:\...\AgLUS6\_test3\_03JAN2011.aqt

Date: 01/03/11

Time: 11:13:44

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 6

Test Date: 04/20/2004

### AQUIFER DATA

Saturated Thickness: 19.32 ft

Anisotropy Ratio ( $K_z/K_r$ ): 0.01

### WELL DATA (AgLUS 6)

Initial Displacement: 13.95 ft

Static Water Column Height: 19.32 ft

Total Well Penetration Depth: 19.32 ft

Screen Length: 9.81 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

$K = 5.568E-5$  ft/sec

$y_0 = 14.13$  ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_03JAN2011\AgLUS 6\AgLUS6\_test3\_03JAN  
 Title: AgLUS 6\_test #3  
 Date: 01/03/11  
 Time: 11:14:37

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 04/20/2004  
 Test Well: AgLUS 6

AQUIFER DATA

Saturated Thickness: 19.32 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 6

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 13.95 ft  
 Static Water Column Height: 19.32 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.81 ft  
 Total Well Penetration Depth: 19.32 ft

No. of Observations: 81

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 13.86             | 123.       | 0.273             |
| 3.               | 12.71             | 126.       | 0.251             |
| 6.               | 11.6              | 129.       | 0.229             |
| 9.               | 10.52             | 132.       | 0.213             |
| 12.              | 9.521             | 135.       | 0.194             |
| 15.              | 8.626             | 138.       | 0.179             |
| 18.              | 7.812             | 141.       | 0.167             |
| 21.              | 7.074             | 144.       | 0.154             |
| 24.              | 6.402             | 147.       | 0.15              |
| 27.              | 5.79              | 150.       | 0.141             |
| 30.              | 5.236             | 153.       | 0.131             |
| 33.              | 4.733             | 156.       | 0.124             |
| 36.              | 4.275             | 159.       | 0.115             |
| 39.              | 3.863             | 162.       | 0.108             |
| 42.              | 3.478             | 165.       | 0.102             |
| 45.              | 3.155             | 168.       | 0.096             |
| 48.              | 2.841             | 171.       | 0.09              |
| 51.              | 2.559             | 174.       | 0.084             |
| 54.              | 2.314             | 177.       | 0.081             |
| 57.              | 2.09              | 180.       | 0.078             |
| 60.              | 1.888             | 183.       | 0.072             |
| 63.              | 1.707             | 186.       | 0.069             |
| 66.              | 1.552             | 189.       | 0.065             |
| 69.              | 1.406             | 192.       | 0.06              |
| 72.              | 1.274             | 195.       | 0.06              |
| 75.              | 1.157             | 198.       | 0.057             |
| 78.              | 1.044             | 201.       | 0.047             |
| 81.              | 0.948             | 204.       | 0.044             |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 84.               | 0.863                    | 207.              | 0.04                     |
| 87.               | 0.784                    | 210.              | 0.04                     |
| 90.               | 0.716                    | 213.              | 0.039                    |
| 93.               | 0.653                    | 216.              | 0.035                    |
| 96.               | 0.594                    | 219.              | 0.033                    |
| 99.               | 0.543                    | 222.              | 0.032                    |
| 102.              | 0.495                    | 225.              | 0.03                     |
| 105.              | 0.456                    | 228.              | 0.028                    |
| 108.              | 0.417                    | 231.              | 0.032                    |
| 111.              | 0.382                    | 234.              | 0.032                    |
| 114.              | 0.352                    | 237.              | 0.032                    |
| 117.              | 0.323                    | 240.              | 0.03                     |
| 120.              | 0.297                    |                   |                          |

SOLUTION

Slug Test

Aquifer Model: Confined

Solution Method: Bouwer-Rice

ln(Re/rw): 4.834

VISUAL ESTIMATION RESULTSEstimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 5.568E-5        | ft/sec |
| y0               | 14.13           | ft     |

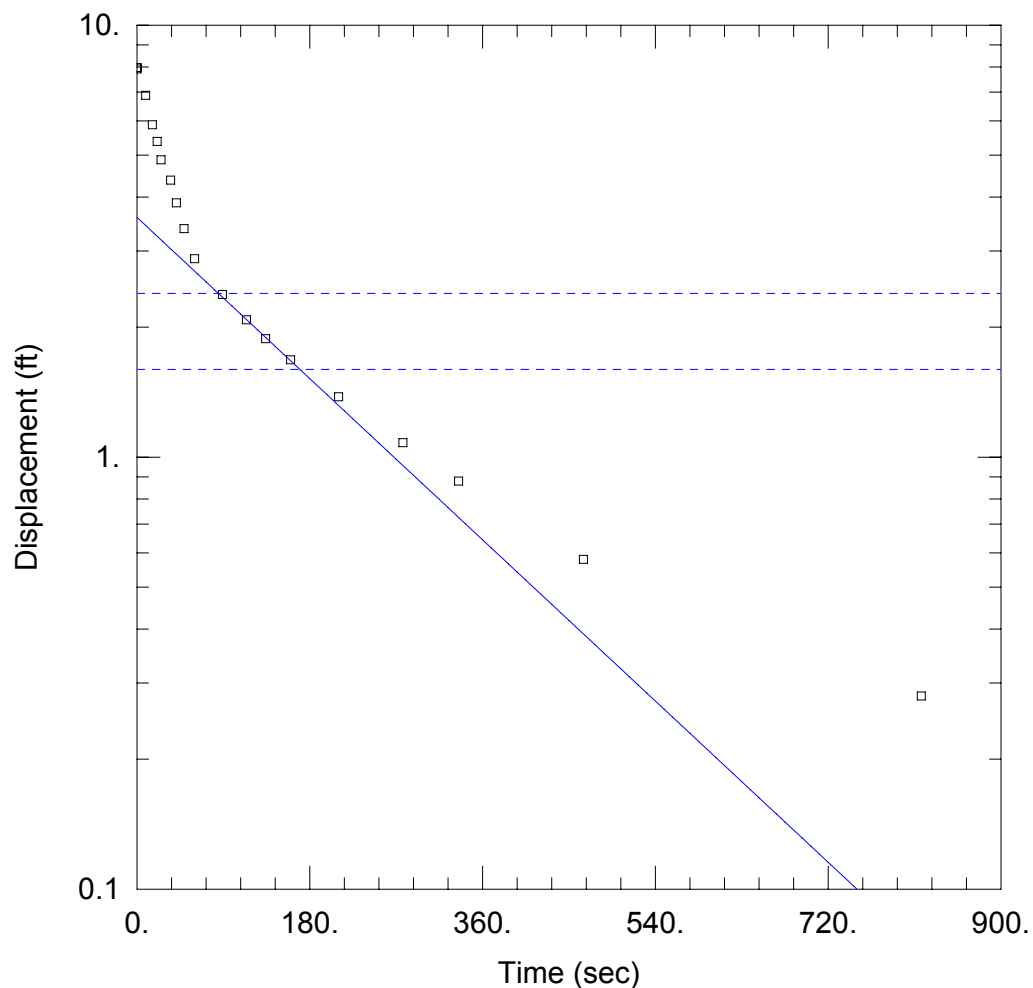
K = 0.001697 cm/sec

T = K\*b = 0.001076 ft<sup>2</sup>/sec (0.9993 sq. cm/sec)

**Date** 27-Feb-2004  
**Station ID** 39521104351601  
**Location** AGLUS-8, test 1  
**By** SSP, JAB

**Measuring Point** 1.86 ft. above land surface  
**Depth of Pump** 68 ft BMP

| <b>Clock Time</b> | <b>Elapsed Time</b> | <b>Recovery Time</b> | <b>Water Level (BMP)</b> | <b>Drawdown</b> | <b>Comments</b>                         |
|-------------------|---------------------|----------------------|--------------------------|-----------------|---|
| 10:15:00          | 0:00:00             |                      | 60.12                    |                 | Static water level before lowering pump |
| 10:17:00          | 0:02:00             |                      |                          |                 | lower pump to 68 ft BMP                 |
| 10:22:00          | 0:07:00             |                      | 60.12                    |                 | water level after lowering pump         |
| 10:25:00          | 0:10:00             |                      | 61.00                    | 0.88            | pump on. Pumping rate = 1.7 gpm         |
| 10:25:10          | 0:10:10             |                      | 61.10                    | 0.98            |   |
| 10:25:30          | 0:10:30             |                      | 61.32                    | 1.20            |   |
| 10:25:40          | 0:10:40             |                      | 61.60                    | 1.48            |   |
| 10:26:00          | 0:11:00             |                      | 61.70                    | 1.58            |   |
| 10:26:10          | 0:11:10             |                      | 61.95                    | 1.83            |   |
| 10:26:30          | 0:11:30             |                      | 62.20                    | 2.08            |   |
| 10:26:42          | 0:11:42             |                      | 62.35                    | 2.23            |   |
| 10:26:52          | 0:11:52             |                      | 62.50                    | 2.38            |   |
| 10:27:08          | 0:12:08             |                      | 62.66                    | 2.54            |   |
| 10:27:25          | 0:12:25             |                      | 62.75                    | 2.63            |   |
| 10:27:36          | 0:12:36             |                      | 63.00                    | 2.88            |   |
| 10:27:46          | 0:12:46             |                      | 63.25                    | 3.13            |   |
| 10:28:02          | 0:13:02             |                      | 63.60                    | 3.48            |   |
| 10:28:16          | 0:13:16             |                      | 63.90                    | 3.78            |   |
| 10:28:29          | 0:13:29             |                      | 64.20                    | 4.08            |   |
| 10:28:45          | 0:13:45             |                      | 64.32                    | 4.20            |   |
| 10:29:30          | 0:14:30             |                      | 64.70                    | 4.58            |   |
| 10:30:23          | 0:15:23             |                      | 65.72                    | 5.60            | turn pump up                            |
| 10:31:35          | 0:16:35             |                      | 65.90                    | 5.78            |   |
| 10:31:50          | 0:16:50             |                      | 66.00                    | 5.88            |   |
| 10:32:02          | 0:17:02             |                      | 66.15                    | 6.03            |   |
| 10:32:15          | 0:17:15             |                      | 66.40                    | 6.28            |   |
| 10:32:34          | 0:17:34             |                      | 66.70                    | 6.58            |   |
| 10:33:08          | 0:18:08             |                      | 66.95                    | 6.83            |   |
| 10:33:19          | 0:18:19             |                      | 67.12                    | 7.00            |   |
| 10:33:26          | 0:18:26             |                      | 67.25                    | 7.13            |   |
| 10:33:33          | 0:18:33             |                      | 67.35                    | 7.23            |   |
| 10:33:40          | 0:18:40             |                      | 67.45                    | 7.33            |   |
| 10:33:50          | 0:18:50             |                      | 67.57                    | 7.45            |   |
| 10:34:02          | 0:19:02             |                      | 67.75                    | 7.63            |   |
| 10:34:32          | 0:19:32             |                      | 68.04                    | 7.92            |   |
| 10:35:09          | 0:20:09             | 0:00:00              |                          |                 | Pump off. Removed 17gal.                |
| 10:35:18          | 0:20:18             | 0:00:09              | 67.00                    | 6.88            |   |
| 10:35:25          | 0:20:25             | 0:00:16              | 66.00                    | 5.88            |   |
| 10:35:30          | 0:20:30             | 0:00:21              | 65.50                    | 5.38            |   |
| 10:35:34          | 0:20:34             | 0:00:25              | 65.00                    | 4.88            |   |
| 10:35:44          | 0:20:44             | 0:00:35              | 64.50                    | 4.38            |   |
| 10:35:50          | 0:20:50             | 0:00:41              | 64.00                    | 3.88            |   |
| 10:35:58          | 0:20:58             | 0:00:49              | 63.50                    | 3.38            |   |
| 10:36:09          | 0:21:09             | 0:01:00              | 63.00                    | 2.88            |   |
| 10:36:38          | 0:21:38             | 0:01:29              | 62.50                    | 2.38            |   |
| 10:37:03          | 0:22:03             | 0:01:54              | 62.20                    | 2.08            |   |
| 10:37:23          | 0:22:23             | 0:02:14              | 62.00                    | 1.88            |   |
| 10:37:49          | 0:22:49             | 0:02:40              | 61.80                    | 1.68            |   |
| 10:38:39          | 0:23:39             | 0:03:30              | 61.50                    | 1.38            |   |
| 10:39:46          | 0:24:46             | 0:04:37              | 61.20                    | 1.08            |   |
| 10:40:44          | 0:25:44             | 0:05:35              | 61.00                    | 0.88            |   |
| 10:42:54          | 0:27:54             | 0:07:45              | 60.70                    | 0.58            |   |
| 10:48:46          | 0:33:46             | 0:13:37              | 60.40                    | 0.28            | End of Test #1                          |



### AGLUS 8\_TEST#1

Data Set: Y:\...\AgLUS8\_test1\_03JAN2011.aqt

Date: 01/03/11

Time: 11:40:56

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 8

Test Date: 02/27/2004

### AQUIFER DATA

Saturated Thickness: 9.63 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (AgLUS 8)

Initial Displacement: 7.98 ft

Static Water Column Height: 9.63 ft

Total Well Penetration Depth: 9.72 ft

Screen Length: 9.72 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 4.171E-6 ft/sec

y0 = 3.589 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV\_files\_03JAN2011\AgLUS 8\AgLUS8\_test1\_03JAN  
 Title: AgLUS 8\_test#1  
 Date: 01/03/11  
 Time: 11:41:46

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/27/2004  
 Test Well: AgLUS 8

AQUIFER DATA

Saturated Thickness: 9.63 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 8

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 7.98 ft  
 Static Water Column Height: 9.63 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.72 ft  
 Total Well Penetration Depth: 9.72 ft

No. of Observations: 18

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 7.92              | 89.        | 2.38              |
| 9.               | 6.88              | 114.       | 2.08              |
| 16.              | 5.88              | 134.       | 1.88              |
| 21.              | 5.38              | 160.       | 1.68              |
| 25.              | 4.88              | 210.       | 1.38              |
| 35.              | 4.38              | 277.       | 1.08              |
| 41.              | 3.88              | 335.       | 0.88              |
| 49.              | 3.38              | 465.       | 0.58              |
| 60.              | 2.88              | 817.       | 0.28              |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 2.443

VISUAL ESTIMATION RESULTSEstimated Parameters

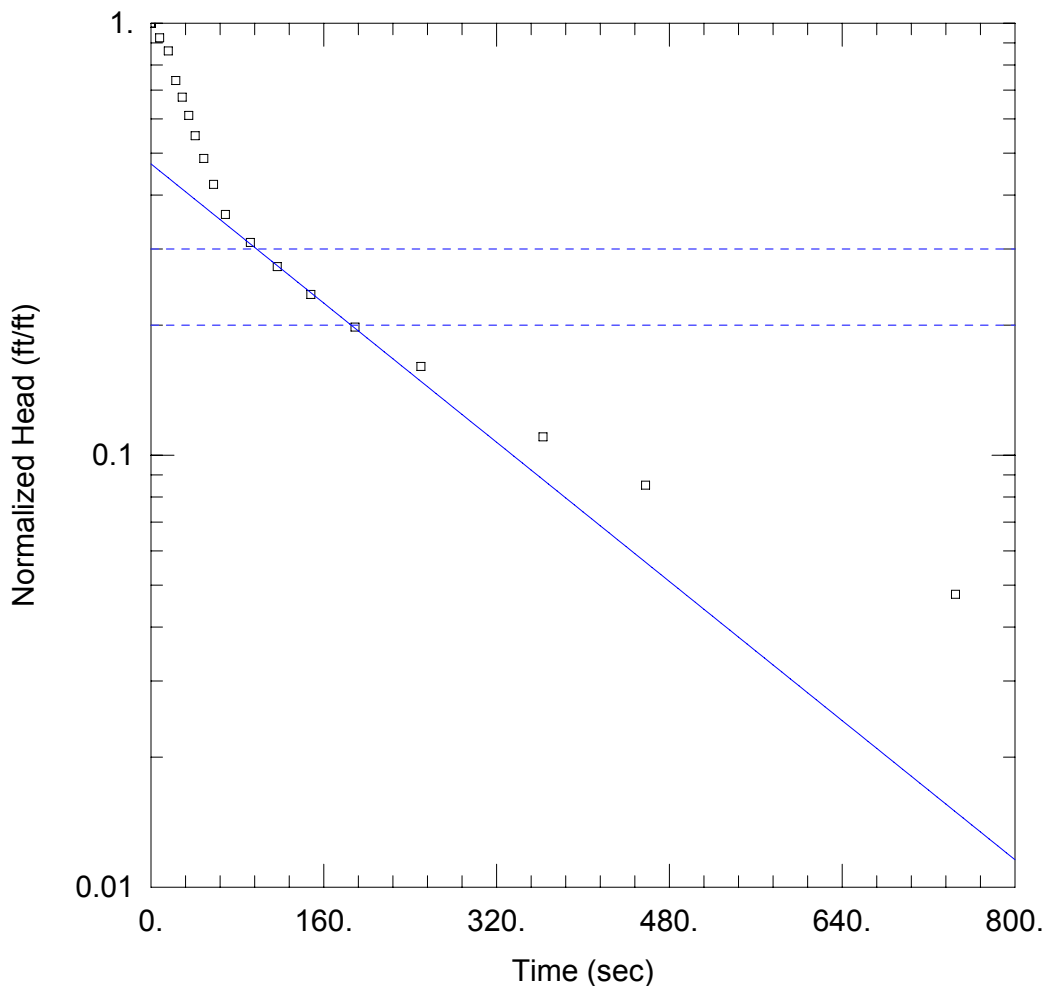
| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 4.171E-6 | ft/sec |
| y0        | 3.589    | ft     |

K = 0.0001271 cm/sec  
 T = K\*b = 4.017E-5 ft<sup>2</sup>/sec (0.03732 sq. cm/sec)

Date 27-Feb-2004  
 Station ID 39521104351601  
 Location AGLUS-8, test 2  
 By SSP, JAB

Measuring Point 1.86 ft. above land surface  
 Depth of Pump 68 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments  |
|------------|--------------|---------------|-------------------|----------|---|
| 11:04:00   | 0:00:00      |               | 60.25             |          | Static water level before starting test #2. Pump at 68 ft BMP |
| 11:05:00   | 0:01:00      |               |                   |          | pump on. Pumping rate = 1.8 gpm                               |
| 11:05:07   | 0:01:07      |               | 60.80             | 0.68     |   |
| 11:05:12   | 0:01:12      |               | 60.95             | 0.83     |   |
| 11:05:18   | 0:01:18      |               | 61.10             | 0.98     |   |
| 11:05:24   | 0:01:24      |               | 61.22             | 1.10     |   |
| 11:05:33   | 0:01:33      |               | 61.41             | 1.29     |   |
| 11:05:43   | 0:01:43      |               | 61.58             | 1.46     |   |
| 11:05:52   | 0:01:52      |               | 61.72             | 1.60     |   |
| 11:06:00   | 0:02:00      |               | 61.83             | 1.71     |   |
| 11:06:09   | 0:02:09      |               | 62.00             | 1.88     |   |
| 11:06:20   | 0:02:20      |               | 62.15             | 2.03     |   |
| 11:06:32   | 0:02:32      |               | 62.30             | 2.18     |   |
| 11:06:40   | 0:02:40      |               | 62.47             | 2.35     |   |
| 11:07:00   | 0:03:00      |               | 62.75             | 2.63     |   |
| 11:07:12   | 0:03:12      |               | 62.92             | 2.80     |   |
| 11:07:23   | 0:03:23      |               | 63.15             | 3.03     |   |
| 11:07:33   | 0:03:33      |               | 63.49             | 3.37     |   |
| 11:07:50   | 0:03:50      |               | 63.92             | 3.80     |   |
| 11:08:08   | 0:04:08      |               | 64.30             | 4.18     |   |
| 11:08:22   | 0:04:22      |               | 64.42             | 4.30     |   |
| 11:08:35   | 0:04:35      |               | 64.63             | 4.51     |   |
| 11:08:50   | 0:04:50      |               | 64.90             | 4.78     |   |
| 11:09:09   | 0:05:09      |               | 65.10             | 4.98     |   |
| 11:09:22   | 0:05:22      |               | 65.25             | 5.13     |   |
| 11:09:39   | 0:05:39      |               | 65.45             | 5.33     |   |
| 11:09:47   | 0:05:47      |               | 65.53             | 5.41     |   |
| 11:09:58   | 0:05:58      |               | 65.63             | 5.51     |   |
| 11:10:10   | 0:06:10      |               | 65.76             | 5.64     |   |
| 11:10:35   | 0:06:35      |               | 66.00             | 5.88     |   |
| 11:10:45   | 0:06:45      |               | 66.07             | 5.95     |   |
| 11:11:00   | 0:07:00      |               | 66.35             | 6.23     |   |
| 11:11:18   | 0:07:18      |               | 66.85             | 6.73     |   |
| 11:11:35   | 0:07:35      |               | 67.07             | 6.95     |   |
| 11:11:50   | 0:07:50      |               | 67.35             | 7.23     |   |
| 11:12:00   | 0:08:00      |               | 67.55             | 7.43     |   |
| 11:12:42   | 0:08:42      |               | 68.00             | 7.88     |   |
| 11:13:04   | 0:09:04      |               | 68.10             | 7.98     |   |
| 11:13:30   | 0:09:30      | 0:00:00       |                   |          | Pump off. Removed 16gal.                                      |
| 11:13:38   | 0:09:38      | 0:00:08       | 67.50             | 7.38     |   |
| 11:13:46   | 0:09:46      | 0:00:16       | 67.00             | 6.88     |   |
| 11:13:53   | 0:09:53      | 0:00:23       | 66.00             | 5.88     |   |
| 11:13:59   | 0:09:59      | 0:00:29       | 65.50             | 5.38     |   |
| 11:14:05   | 0:10:05      | 0:00:35       | 65.00             | 4.88     |   |
| 11:14:11   | 0:10:11      | 0:00:41       | 64.50             | 4.38     |   |
| 11:14:19   | 0:10:19      | 0:00:49       | 64.00             | 3.88     |   |
| 11:14:28   | 0:10:28      | 0:00:58       | 63.50             | 3.38     |   |
| 11:14:39   | 0:10:39      | 0:01:09       | 63.00             | 2.88     |   |
| 11:15:02   | 0:11:02      | 0:01:32       | 62.60             | 2.48     |   |
| 11:15:27   | 0:11:27      | 0:01:57       | 62.30             | 2.18     |   |
| 11:15:58   | 0:11:58      | 0:02:28       | 62.00             | 1.88     |   |
| 11:16:39   | 0:12:39      | 0:03:09       | 61.70             | 1.58     |   |
| 11:17:40   | 0:13:40      | 0:04:10       | 61.40             | 1.28     |   |
| 11:19:33   | 0:15:33      | 0:06:03       | 61.00             | 0.88     |   |
| 11:21:08   | 0:17:08      | 0:07:38       | 60.80             | 0.68     |   |
| 11:25:55   | 0:21:55      | 0:12:25       | 60.50             | 0.38     | End of Test #2  |



### AGLUS 8\_TEST#2

Data Set: Y:\...\AgLUS8\_test2\_03JAN2011.aqt

Date: 01/03/11

Time: 11:52:59

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 8

Test Date: 02/27/2004

### AQUIFER DATA

Saturated Thickness: 9.63 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (AgLUS 8)

Initial Displacement: 7.98 ft

Static Water Column Height: 9.63 ft

Total Well Penetration Depth: 9.72 ft

Screen Length: 9.72 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 4.051E-6 ft/sec

y0 = 3.768 ft



Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV\_files\_03JAN2011\AgLUS 8\AgLUS8\_test2\_03JAN  
 Title: AgLUS 8\_test#2  
 Date: 01/03/11  
 Time: 11:54:54

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/27/2004  
 Test Well: AgLUS 8

AQUIFER DATA

Saturated Thickness: 9.63 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 8

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 7.98 ft  
 Static Water Column Height: 9.63 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.72 ft  
 Total Well Penetration Depth: 9.72 ft

No. of Observations: 18

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 7.98              | 69.        | 2.88              |
| 8.               | 7.38              | 92.        | 2.48              |
| 16.              | 6.88              | 117.       | 2.18              |
| 23.              | 5.88              | 148.       | 1.88              |
| 29.              | 5.38              | 189.       | 1.58              |
| 35.              | 4.88              | 250.       | 1.28              |
| 41.              | 4.38              | 363.       | 0.88              |
| 49.              | 3.88              | 458.       | 0.68              |
| 58.              | 3.38              | 745.       | 0.38              |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 2.443

VISUAL ESTIMATION RESULTSEstimated Parameters

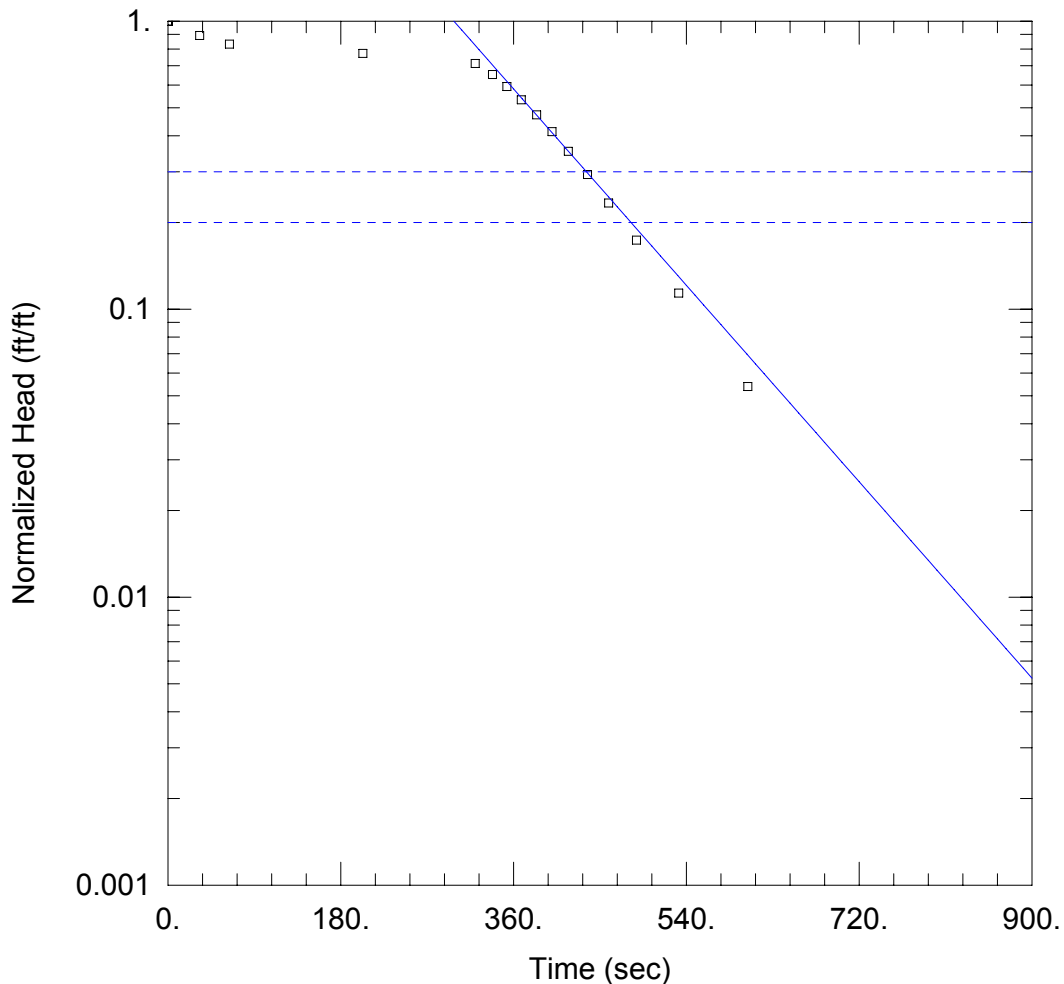
| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 4.051E-6 | ft/sec |
| y0        | 3.768    | ft     |

K = 0.0001235 cm/sec  
 T = K\*b = 3.901E-5 ft<sup>2</sup>/sec (0.03624 sq. cm/sec)

**Date** 2-Mar-2004  
**Station ID** 394539104305901  
**Location** AGLUS-12, test1  
**By** LRA, JAB

**Measuring Point** 2.5 ft. above land surface  
**Depth of Pump** 45 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments                                |
|------------|--------------|---------------|-------------------|----------|---|
| 10:21:00   | 0:00:00      |               | 33.50             |          | Static water level before lowering pump |
| 10:39:00   | 0:18:00      |               |                   |          | pump set to 45 ft. BMP                  |
| 10:40:00   | 0:19:00      |               | 33.55             |          | water level after lowering pump         |
| 10:45:30   | 0:24:30      |               |                   |          | start pumping. Pumping rate = 1.2gpm    |
| 10:47:30   | 0:26:30      |               | 41.90             | 8.35     |   |
| 10:48:00   | 0:27:00      | 0:00:00       |                   |          | Pump off. Removed 3 gal.                |
| 10:48:33   | 0:27:33      | 0:00:33       | 41.00             | 7.45     |   |
| 10:49:04   | 0:28:04      | 0:01:04       | 40.50             | 6.95     |   |
| 10:51:23   | 0:30:23      | 0:03:23       | 40.00             | 6.45     |   |
| 10:53:20   | 0:32:20      | 0:05:20       | 39.50             | 5.95     |   |
| 10:53:38   | 0:32:38      | 0:05:38       | 39.00             | 5.45     |   |
| 10:53:53   | 0:32:53      | 0:05:53       | 38.50             | 4.95     |   |
| 10:54:08   | 0:33:08      | 0:06:08       | 38.00             | 4.45     |   |
| 10:54:24   | 0:33:24      | 0:06:24       | 37.50             | 3.95     |   |
| 10:54:40   | 0:33:40      | 0:06:40       | 37.00             | 3.45     |   |
| 10:54:57   | 0:33:57      | 0:06:57       | 36.50             | 2.95     |   |
| 10:55:17   | 0:34:17      | 0:07:17       | 36.00             | 2.45     |   |
| 10:55:39   | 0:34:39      | 0:07:39       | 35.50             | 1.95     |   |
| 10:56:08   | 0:35:08      | 0:08:08       | 35.00             | 1.45     |   |
| 10:56:52   | 0:35:52      | 0:08:52       | 34.50             | 0.95     |   |
| 10:58:04   | 0:37:04      | 0:10:04       | 34.00             | 0.45     |   |
| 11:03:00   | 0:42:00      | 0:15:00       | 33.55             | 0.00     | End of test #1                          |



AGLUS 12 TEST #1

Data Set: Y:\...\AgLUS12\_test1\_13JUL2010.aqt

Date: 07/26/10

Time: 15:30:04

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 12

Test Date: 03/02/2004

AQUIFER DATA

Saturated Thickness: 13.38 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 12)

Initial Displacement: 8.35 ft

Static Water Column Height: 13.38 ft

Total Well Penetration Depth: 13.38 ft

Screen Length: 9.69 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 1.422E-5 ft/sec

y0 = 112.2 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 12\AgLUS12\_test1\_13  
 Title: AgLUS 12 test #1  
 Date: 07/26/10  
 Time: 15:30:24

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/02/2004  
 Test Well: AgLUS 12

AQUIFER DATA

Saturated Thickness: 13.38 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 12

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 8.35 ft  
 Static Water Column Height: 13.38 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.69 ft  
 Total Well Penetration Depth: 13.38 ft

No. of Observations: 17

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 8.35              | 400.       | 3.45              |
| 33.              | 7.45              | 417.       | 2.95              |
| 64.              | 6.95              | 437.       | 2.45              |
| 203.             | 6.45              | 459.       | 1.95              |
| 320.             | 5.95              | 488.       | 1.45              |
| 338.             | 5.45              | 532.       | 0.95              |
| 353.             | 4.95              | 604.       | 0.45              |
| 368.             | 4.45              | 900.       | 0.                |
| 384.             | 3.95              |            |                   |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 4.586

VISUAL ESTIMATION RESULTSEstimated Parameters

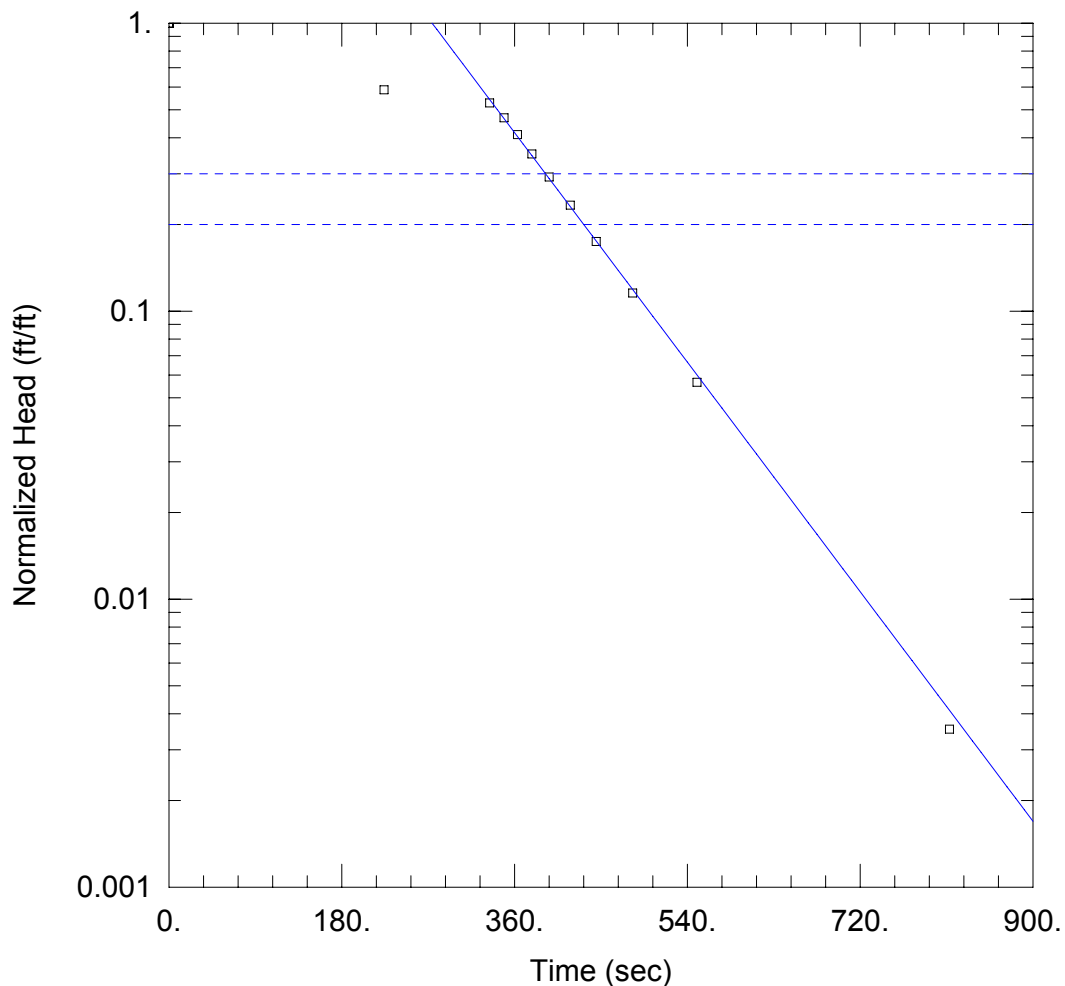
| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 1.422E-5 | ft/sec |
| y0        | 112.2    | ft     |

K = 0.0004335 cm/sec  
 T = K\*b = 0.0001903 ft<sup>2</sup>/sec (0.1768 sq. cm/sec)

**Date** 2-Mar-2004  
**Station ID** 394539104305901  
**Location** AGLUS-12, test 2  
**By** LRA, JAB

**Measuring Point** 2.5 ft. above land surface  
**Depth of Pump** 45 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments                                   |
|------------|--------------|---------------|-------------------|----------|--|
| 11:05:00   | 0:00:00      |               | 33.52             |          | Static water level before starting test #2 |
| 11:08:32   | 0:03:32      |               |                   |          | start pumping. Pumping rate = 4 gpm        |
| 11:09:30   | 0:04:30      | 0:00:00       |                   |          | Pump off. Removed 4 gal.                   |
| 11:09:48   | 0:04:48      | 0:00:18       | 42.00             | 8.48     |  |
| 11:13:32   | 0:08:32      | 0:04:02       | 38.50             | 4.98     |  |
| 11:15:22   | 0:10:22      | 0:05:52       | 38.00             | 4.48     |  |
| 11:15:37   | 0:10:37      | 0:06:07       | 37.50             | 3.98     |  |
| 11:15:51   | 0:10:51      | 0:06:21       | 37.00             | 3.48     |  |
| 11:16:06   | 0:11:06      | 0:06:36       | 36.50             | 2.98     |  |
| 11:16:24   | 0:11:24      | 0:06:54       | 36.00             | 2.48     |  |
| 11:16:46   | 0:11:46      | 0:07:16       | 35.50             | 1.98     |  |
| 11:17:13   | 0:12:13      | 0:07:43       | 35.00             | 1.48     |  |
| 11:17:51   | 0:12:51      | 0:08:21       | 34.50             | 0.98     |  |
| 11:18:58   | 0:13:58      | 0:09:28       | 34.00             | 0.48     |  |
| 11:23:21   | 0:18:21      | 0:13:51       | 33.55             | 0.03     | End of Test #2                             |



### AGLUS 12 TEST #2

Data Set: Y:\...\AgLUS12\_test2\_13JUL2010.aqt

Date: 07/26/10

Time: 15:32:49

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 12

Test Date: 03/02/2004

### AQUIFER DATA

Saturated Thickness: 13.38 ft

Anisotropy Ratio ( $K_z/K_r$ ): 0.01

### WELL DATA (AgLUS 12)

Initial Displacement: 8.48 ft

Static Water Column Height: 13.38 ft

Total Well Penetration Depth: 13.38 ft

Screen Length: 9.69 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 1.662E-5$  ft/sec

$y_0 = 138.8$  ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 12\AgLUS12\_test2\_13  
 Title: AgLUS 12 test #2  
 Date: 07/26/10  
 Time: 15:34:12

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/02/2004  
 Test Well: AgLUS 12

AQUIFER DATA

Saturated Thickness: 13.38 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 12

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 8.48 ft  
 Static Water Column Height: 13.38 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.69 ft  
 Total Well Penetration Depth: 13.38 ft

No. of Observations: 12

| Time (sec) | Observation Data  |            | Displacement (ft) |
|------------|-------------------|------------|-------------------|
|            | Displacement (ft) | Time (sec) |                   |
| 0.         | 8.48              | 396.       | 2.48              |
| 224.       | 4.98              | 418.       | 1.98              |
| 334.       | 4.48              | 445.       | 1.48              |
| 349.       | 3.98              | 483.       | 0.98              |
| 363.       | 3.48              | 550.       | 0.48              |
| 378.       | 2.98              | 813.       | 0.03              |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 $\ln(R_e/r_w)$ : 4.586

VISUAL ESTIMATION RESULTSEstimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 1.662E-5 | ft/sec |
| y0        | 138.8    | ft     |

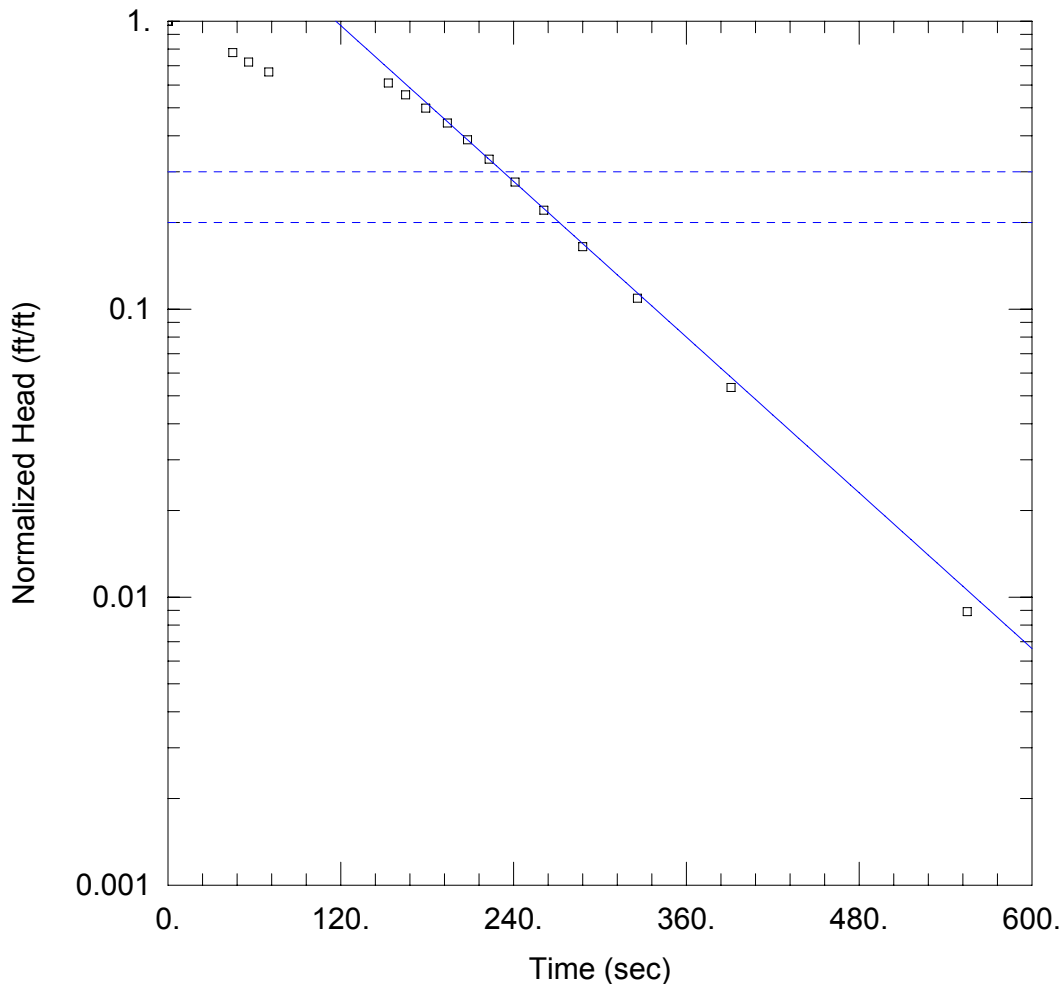
K = 0.0005066 cm/sec  
 T = K\*b = 0.0002224 ft<sup>2</sup>/sec (0.2066 sq. cm/sec)

**Date** 2-Mar-2004  
**Station ID** 394539104305901  
**Location** AGLUS-12, test 3  
**By** LRA, JAB

**Measuring Point** 2.5 ft. above land surface  
**Depth of Pump** 45 ft BMP

| <b>Clock Time</b> | <b>Elapsed Time</b> | <b>Recovery Time</b> | <b>Water Level (BMP)</b> | <b>Drawdown</b> | <b>Comments</b>                            |
|-------------------|---------------------|----------------------|--------------------------|-----------------|--|
| 11:26:55          | 0:00:00             |                      | 33.52                    |                 | Static water level before starting test #3 |
| 11:28:00          | 0:01:05             |                      |                          |                 | start pumping. Pumping rate = 2.5 gpm      |
| 11:28:59          | 0:02:04             | 0:00:00              | 42.50                    | 8.98            | Pump off. Removed 2.5 gal.                 |
| 11:29:44          | 0:02:49             | 0:00:45              | 40.50                    | 6.98            |  |
| 11:29:55          | 0:03:00             | 0:00:56              | 40.00                    | 6.48            |  |
| 11:30:09          | 0:03:14             | 0:01:10              | 39.50                    | 5.98            |  |
| 11:31:32          | 0:04:37             | 0:02:33              | 39.00                    | 5.48            |  |
| 11:31:44          | 0:04:49             | 0:02:45              | 38.50                    | 4.98            |  |
| 11:31:58          | 0:05:03             | 0:02:59              | 38.00                    | 4.48            |  |
| 11:32:13          | 0:05:18             | 0:03:14              | 37.50                    | 3.98            |  |
| 11:32:27          | 0:05:32             | 0:03:28              | 37.00                    | 3.48            |  |
| 11:32:42          | 0:05:47             | 0:03:43              | 36.50                    | 2.98            |  |
| 11:33:00          | 0:06:05             | 0:04:01              | 36.00                    | 2.48            |  |
| 11:33:20          | 0:06:25             | 0:04:21              | 35.50                    | 1.98            |  |
| 11:33:47          | 0:06:52             | 0:04:48              | 35.00                    | 1.48            |  |
| 11:34:25          | 0:07:30             | 0:05:26              | 34.50                    | 0.98            |  |
| 11:35:30          | 0:08:35             | 0:06:31              | 34.00                    | 0.48            |  |
| 11:38:14          | 0:11:19             | 0:09:15              | 33.60                    | 0.08            | End of Test #3                             |





AGLUS 12 TEST #3

Data Set: Y:\...\AgLUS12\_test3\_13JUL2010.aqt

Date: 07/26/10

Time: 15:34:40

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 12

Test Date: 03/02/2004

AQUIFER DATA

Saturated Thickness: 13.38 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 12)

Initial Displacement: 8.98 ft

Static Water Column Height: 13.38 ft

Total Well Penetration Depth: 13.38 ft

Screen Length: 9.69 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 1.692E-5 ft/sec

y0 = 30.1 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 12\AgLUS12\_test3\_13  
 Title: AgLUS 12 test #3  
 Date: 07/26/10  
 Time: 15:35:01

### PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/02/2004  
 Test Well: AgLUS 12

### AQUIFER DATA

Saturated Thickness: 13.38 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

### SLUG TEST WELL DATA

Test Well: AgLUS 12

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 8.98 ft  
 Static Water Column Height: 13.38 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.69 ft  
 Total Well Penetration Depth: 13.38 ft

No. of Observations: 16

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 8.98              | 208.       | 3.48              |
| 45.              | 6.98              | 223.       | 2.98              |
| 56.              | 6.48              | 241.       | 2.48              |
| 70.              | 5.98              | 261.       | 1.98              |
| 153.             | 5.48              | 288.       | 1.48              |
| 165.             | 4.98              | 326.       | 0.98              |
| 179.             | 4.48              | 391.       | 0.48              |
| 194.             | 3.98              | 555.       | 0.08              |

### SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 $\ln(R_e/r_w)$ : 4.586

### VISUAL ESTIMATION RESULTS

#### Estimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 1.692E-5 | ft/sec |
| y0        | 30.1     | ft     |

K = 0.0005156 cm/sec  
 T = K\*b = 0.0002263 ft<sup>2</sup>/sec (0.2103 sq. cm/sec)

In-Situ Inc. MiniTroll Pro

Report generated: 4/28/2004 14:45:27  
 Report from file: ...\\SN09731 2004-04-20 085657 AgLUS13\_1.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS13\_1

Test defined on: 4/20/2004 8:43:57  
 Test started on: 4/20/2004 8:56:57  
 Test stopped on: 4/20/2004 9:31:32  
 Test extracted on: N/A N/A

## Data gathered using Linear testing

Time between data points: 3.0 Seconds.  
 Number of data samples: 692

TOTAL DATA SAMPLES 692

## Channel number [1]

Measurement type: Temperature  
 Channel name: OnBoard Temp

## Channel number [2]

Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1645.920 meters (5400.000 feet)

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| 4/20/2004 | 8:56:57 | 0        | 53.99                 | 11.666              |
| 4/20/2004 | 8:57:00 | 3        | 53.99                 | 11.666              |
| 4/20/2004 | 8:57:03 | 6        | 53.99                 | 11.665              |
| 4/20/2004 | 8:57:06 | 9        | 53.97                 | 11.684              |
| 4/20/2004 | 8:57:09 | 12       | 53.97                 | 10.686              |
| 4/20/2004 | 8:57:12 | 15       | 53.97                 | 12.19               |
| 4/20/2004 | 8:57:15 | 18       | 53.97                 | 10.824              |
| 4/20/2004 | 8:57:18 | 21       | 53.97                 | 11.631              |
| 4/20/2004 | 8:57:21 | 24       | 53.95                 | 11.628              |
| 4/20/2004 | 8:57:24 | 27       | 53.95                 | 11.686              |
| 4/20/2004 | 8:57:27 | 30       | 53.95                 | 10.913              |
| 4/20/2004 | 8:57:30 | 33       | 53.95                 | 9.946               |
| 4/20/2004 | 8:57:33 | 36       | 53.95                 | 8.927               |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 8:57:36 | 39       | 53.95                 | 7.925               |
| 4/20/2004 | 8:57:39 | 42       | 53.92                 | 6.838               |
| 4/20/2004 | 8:57:42 | 45       | 53.92                 | 5.783               |
| 4/20/2004 | 8:57:45 | 48       | 53.92                 | 4.728               |
| 4/20/2004 | 8:57:48 | 51       | 53.92                 | 4.242               |
| 4/20/2004 | 8:57:51 | 54       | 53.92                 | 4.082               |
| 4/20/2004 | 8:57:54 | 57       | 53.92                 | 3.926               |
| 4/20/2004 | 8:57:57 | 60       | 53.92                 | 3.726               |
| 4/20/2004 | 8:58:00 | 63       | 53.92                 | 3.524               |
| 4/20/2004 | 8:58:03 | 66       | 53.92                 | 3.329               |
| 4/20/2004 | 8:58:06 | 69       | 53.92                 | 3.136               |
| 4/20/2004 | 8:58:09 | 72       | 53.92                 | 2.924               |
| 4/20/2004 | 8:58:12 | 75       | 53.9                  | 2.681               |
| 4/20/2004 | 8:58:15 | 78       | 53.9                  | 2.44                |
| 4/20/2004 | 8:58:18 | 81       | 53.9                  | 2.199               |
| 4/20/2004 | 8:58:21 | 84       | 53.9                  | 1.951               |
| 4/20/2004 | 8:58:24 | 87       | 53.88                 | 1.693               |
| 4/20/2004 | 8:58:27 | 90       | 53.88                 | 1.397               |
| 4/20/2004 | 8:58:30 | 93       | 53.88                 | 1.017               |
| 4/20/2004 | 8:58:33 | 96       | 53.86                 | 0.574               |
| 4/20/2004 | 8:58:36 | 99       | 53.86                 | 0.237               |
| 4/20/2004 | 8:58:39 | 102      | 53.86                 | -0.016              |
| 4/20/2004 | 8:58:42 | 105      | 53.83                 | -0.023              |
| 4/20/2004 | 8:58:45 | 108      | 53.83                 | -0.021              |
| 4/20/2004 | 8:58:48 | 111      | 53.83                 | -0.021              |
| 4/20/2004 | 8:58:51 | 114      | 53.83                 | -0.019              |
| 4/20/2004 | 8:58:54 | 117      | 53.86                 | -0.019              |
| 4/20/2004 | 8:58:57 | 120      | 53.86                 | -0.018              |
| 4/20/2004 | 8:59:00 | 123      | 53.86                 | -0.018              |
| 4/20/2004 | 8:59:03 | 126      | 53.86                 | -0.018              |
| 4/20/2004 | 8:59:06 | 129      | 53.88                 | -0.018              |
| 4/20/2004 | 8:59:09 | 132      | 53.88                 | -0.018              |
| 4/20/2004 | 8:59:12 | 135      | 53.88                 | -0.018              |
| 4/20/2004 | 8:59:15 | 138      | 53.88                 | -0.02               |
| 4/20/2004 | 8:59:18 | 141      | 53.88                 | -0.018              |
| 4/20/2004 | 8:59:21 | 144      | 53.88                 | -0.018              |
| 4/20/2004 | 8:59:24 | 147      | 53.88                 | -0.018              |
| 4/20/2004 | 8:59:27 | 150      | 53.88                 | -0.018              |
| 4/20/2004 | 8:59:30 | 153      | 53.86                 | -0.019              |
| 4/20/2004 | 8:59:33 | 156      | 53.83                 | -0.019              |
| 4/20/2004 | 8:59:36 | 159      | 53.83                 | -0.019              |
| 4/20/2004 | 8:59:39 | 162      | 53.83                 | -0.019              |
| 4/20/2004 | 8:59:42 | 165      | 53.86                 | -0.018              |
| 4/20/2004 | 8:59:45 | 168      | 53.88                 | -0.016              |
| 4/20/2004 | 8:59:48 | 171      | 53.88                 | -0.016              |
| 4/20/2004 | 8:59:51 | 174      | 53.88                 | -0.016              |
| 4/20/2004 | 8:59:54 | 177      | 53.88                 | -0.016              |
| 4/20/2004 | 8:59:57 | 180      | 53.88                 | -0.016              |
| 4/20/2004 | 9:00:00 | 183      | 53.88                 | 0.008               |
| 4/20/2004 | 9:00:03 | 186      | 53.88                 | 0.051               |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:00:06 | 189      | 53.9                  | 0.09                |
| 4/20/2004 | 9:00:09 | 192      | 53.9                  | 0.132               |
| 4/20/2004 | 9:00:12 | 195      | 53.9                  | 0.172               |
| 4/20/2004 | 9:00:15 | 198      | 53.9                  | 0.211               |
| 4/20/2004 | 9:00:18 | 201      | 53.9                  | 0.25                |
| 4/20/2004 | 9:00:21 | 204      | 53.9                  | 0.288               |
| 4/20/2004 | 9:00:24 | 207      | 53.9                  | 0.324               |
| 4/20/2004 | 9:00:27 | 210      | 53.9                  | 0.358               |
| 4/20/2004 | 9:00:30 | 213      | 53.9                  | 0.392               |
| 4/20/2004 | 9:00:33 | 216      | 53.9                  | 0.425               |
| 4/20/2004 | 9:00:36 | 219      | 53.9                  | 0.459               |
| 4/20/2004 | 9:00:39 | 222      | 53.9                  | 0.492               |
| 4/20/2004 | 9:00:42 | 225      | 53.9                  | 0.524               |
| 4/20/2004 | 9:00:45 | 228      | 53.9                  | 0.557               |
| 4/20/2004 | 9:00:48 | 231      | 53.92                 | 0.589               |
| 4/20/2004 | 9:00:51 | 234      | 53.92                 | 0.621               |
| 4/20/2004 | 9:00:54 | 237      | 53.92                 | 0.654               |
| 4/20/2004 | 9:00:57 | 240      | 53.92                 | 0.685               |
| 4/20/2004 | 9:01:00 | 243      | 53.95                 | 0.717               |
| 4/20/2004 | 9:01:03 | 246      | 53.95                 | 0.744               |
| 4/20/2004 | 9:01:06 | 249      | 53.97                 | 0.775               |
| 4/20/2004 | 9:01:09 | 252      | 53.99                 | 0.804               |
| 4/20/2004 | 9:01:12 | 255      | 53.99                 | 0.833               |
| 4/20/2004 | 9:01:15 | 258      | 54.01                 | 0.862               |
| 4/20/2004 | 9:01:18 | 261      | 54.04                 | 0.892               |
| 4/20/2004 | 9:01:21 | 264      | 54.06                 | 0.921               |
| 4/20/2004 | 9:01:24 | 267      | 54.08                 | 0.95                |
| 4/20/2004 | 9:01:27 | 270      | 54.1                  | 0.979               |
| 4/20/2004 | 9:01:30 | 273      | 54.15                 | 1.006               |
| 4/20/2004 | 9:01:33 | 276      | 54.17                 | 1.033               |
| 4/20/2004 | 9:01:36 | 279      | 54.19                 | 1.06                |
| 4/20/2004 | 9:01:39 | 282      | 54.24                 | 1.089               |
| 4/20/2004 | 9:01:42 | 285      | 54.26                 | 1.12                |
| 4/20/2004 | 9:01:45 | 288      | 54.31                 | 1.153               |
| 4/20/2004 | 9:01:48 | 291      | 54.33                 | 1.196               |
| 4/20/2004 | 9:01:51 | 294      | 54.37                 | 1.233               |
| 4/20/2004 | 9:01:54 | 297      | 54.4                  | 1.266               |
| 4/20/2004 | 9:01:57 | 300      | 54.44                 | 1.294               |
| 4/20/2004 | 9:02:00 | 303      | 54.46                 | 1.321               |
| 4/20/2004 | 9:02:03 | 306      | 54.51                 | 1.348               |
| 4/20/2004 | 9:02:06 | 309      | 54.56                 | 1.375               |
| 4/20/2004 | 9:02:09 | 312      | 54.58                 | 1.401               |
| 4/20/2004 | 9:02:12 | 315      | 54.62                 | 1.424               |
| 4/20/2004 | 9:02:15 | 318      | 54.65                 | 1.45                |
| 4/20/2004 | 9:02:18 | 321      | 54.69                 | 1.473               |
| 4/20/2004 | 9:02:21 | 324      | 54.71                 | 1.497               |
| 4/20/2004 | 9:02:24 | 327      | 54.74                 | 1.521               |
| 4/20/2004 | 9:02:27 | 330      | 54.76                 | 1.546               |
| 4/20/2004 | 9:02:30 | 333      | 54.78                 | 1.57                |
| 4/20/2004 | 9:02:33 | 336      | 54.8                  | 1.594               |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:02:36 | 339      | 54.8                  | 1.618               |
| 4/20/2004 | 9:02:39 | 342      | 54.83                 | 1.64                |
| 4/20/2004 | 9:02:42 | 345      | 54.85                 | 1.663               |
| 4/20/2004 | 9:02:45 | 348      | 54.85                 | 1.686               |
| 4/20/2004 | 9:02:48 | 351      | 54.87                 | 1.706               |
| 4/20/2004 | 9:02:51 | 354      | 54.89                 | 1.728               |
| 4/20/2004 | 9:02:54 | 357      | 54.89                 | 1.75                |
| 4/20/2004 | 9:02:57 | 360      | 54.92                 | 1.772               |
| 4/20/2004 | 9:03:00 | 363      | 54.94                 | 1.793               |
| 4/20/2004 | 9:03:03 | 366      | 54.94                 | 1.815               |
| 4/20/2004 | 9:03:06 | 369      | 54.96                 | 1.835               |
| 4/20/2004 | 9:03:09 | 372      | 54.98                 | 1.857               |
| 4/20/2004 | 9:03:12 | 375      | 55.01                 | 1.878               |
| 4/20/2004 | 9:03:15 | 378      | 55.01                 | 1.9                 |
| 4/20/2004 | 9:03:18 | 381      | 55.03                 | 1.922               |
| 4/20/2004 | 9:03:21 | 384      | 55.05                 | 1.94                |
| 4/20/2004 | 9:03:24 | 387      | 55.07                 | 1.962               |
| 4/20/2004 | 9:03:27 | 390      | 55.1                  | 1.983               |
| 4/20/2004 | 9:03:30 | 393      | 55.12                 | 2.001               |
| 4/20/2004 | 9:03:33 | 396      | 55.16                 | 2.022               |
| 4/20/2004 | 9:03:36 | 399      | 55.19                 | 2.042               |
| 4/20/2004 | 9:03:39 | 402      | 55.21                 | 2.06                |
| 4/20/2004 | 9:03:42 | 405      | 55.26                 | 2.081               |
| 4/20/2004 | 9:03:45 | 408      | 55.28                 | 2.099               |
| 4/20/2004 | 9:03:48 | 411      | 55.32                 | 2.119               |
| 4/20/2004 | 9:03:51 | 414      | 55.35                 | 2.138               |
| 4/20/2004 | 9:03:54 | 417      | 55.39                 | 2.155               |
| 4/20/2004 | 9:03:57 | 420      | 55.41                 | 2.175               |
| 4/20/2004 | 9:04:00 | 423      | 55.44                 | 2.195               |
| 4/20/2004 | 9:04:03 | 426      | 55.46                 | 2.214               |
| 4/20/2004 | 9:04:06 | 429      | 55.48                 | 2.234               |
| 4/20/2004 | 9:04:09 | 432      | 55.5                  | 2.253               |
| 4/20/2004 | 9:04:12 | 435      | 55.53                 | 2.271               |
| 4/20/2004 | 9:04:15 | 438      | 55.55                 | 2.29                |
| 4/20/2004 | 9:04:18 | 441      | 55.57                 | 2.309               |
| 4/20/2004 | 9:04:21 | 444      | 55.57                 | 2.328               |
| 4/20/2004 | 9:04:24 | 447      | 55.59                 | 2.343               |
| 4/20/2004 | 9:04:27 | 450      | 55.62                 | 2.361               |
| 4/20/2004 | 9:04:30 | 453      | 55.62                 | 2.378               |
| 4/20/2004 | 9:04:33 | 456      | 55.64                 | 2.397               |
| 4/20/2004 | 9:04:36 | 459      | 55.66                 | 2.416               |
| 4/20/2004 | 9:04:39 | 462      | 55.66                 | 2.434               |
| 4/20/2004 | 9:04:42 | 465      | 55.66                 | 2.453               |
| 4/20/2004 | 9:04:45 | 468      | 55.68                 | 2.47                |
| 4/20/2004 | 9:04:48 | 471      | 55.68                 | 2.489               |
| 4/20/2004 | 9:04:51 | 474      | 55.71                 | 2.508               |
| 4/20/2004 | 9:04:54 | 477      | 55.71                 | 2.525               |
| 4/20/2004 | 9:04:57 | 480      | 55.73                 | 2.543               |
| 4/20/2004 | 9:05:00 | 483      | 55.73                 | 2.562               |
| 4/20/2004 | 9:05:03 | 486      | 55.73                 | 2.578               |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:05:06 | 489      | 55.75                 | 2.598               |
| 4/20/2004 | 9:05:09 | 492      | 55.75                 | 2.617               |
| 4/20/2004 | 9:05:12 | 495      | 55.77                 | 2.635               |
| 4/20/2004 | 9:05:15 | 498      | 55.77                 | 2.652               |
| 4/20/2004 | 9:05:18 | 501      | 55.77                 | 2.669               |
| 4/20/2004 | 9:05:21 | 504      | 55.8                  | 2.686               |
| 4/20/2004 | 9:05:24 | 507      | 55.8                  | 2.703               |
| 4/20/2004 | 9:05:27 | 510      | 55.8                  | 2.722               |
| 4/20/2004 | 9:05:30 | 513      | 55.82                 | 2.739               |
| 4/20/2004 | 9:05:33 | 516      | 55.82                 | 2.758               |
| 4/20/2004 | 9:05:36 | 519      | 55.84                 | 2.773               |
| 4/20/2004 | 9:05:39 | 522      | 55.84                 | 2.792               |
| 4/20/2004 | 9:05:42 | 525      | 55.86                 | 2.809               |
| 4/20/2004 | 9:05:45 | 528      | 55.86                 | 2.828               |
| 4/20/2004 | 9:05:48 | 531      | 55.86                 | 2.845               |
| 4/20/2004 | 9:05:51 | 534      | 55.89                 | 2.862               |
| 4/20/2004 | 9:05:54 | 537      | 55.89                 | 2.879               |
| 4/20/2004 | 9:05:57 | 540      | 55.91                 | 2.897               |
| 4/20/2004 | 9:06:00 | 543      | 55.91                 | 2.913               |
| 4/20/2004 | 9:06:03 | 546      | 55.93                 | 2.93                |
| 4/20/2004 | 9:06:06 | 549      | 55.93                 | 2.943               |
| 4/20/2004 | 9:06:09 | 552      | 55.93                 | 2.961               |
| 4/20/2004 | 9:06:12 | 555      | 55.95                 | 2.976               |
| 4/20/2004 | 9:06:15 | 558      | 55.95                 | 2.991               |
| 4/20/2004 | 9:06:18 | 561      | 55.95                 | 3.008               |
| 4/20/2004 | 9:06:21 | 564      | 55.98                 | 3.023               |
| 4/20/2004 | 9:06:24 | 567      | 55.98                 | 3.04                |
| 4/20/2004 | 9:06:27 | 570      | 56                    | 3.056               |
| 4/20/2004 | 9:06:30 | 573      | 56                    | 3.073               |
| 4/20/2004 | 9:06:33 | 576      | 56                    | 3.09                |
| 4/20/2004 | 9:06:36 | 579      | 56.02                 | 3.105               |
| 4/20/2004 | 9:06:39 | 582      | 56.02                 | 3.12                |
| 4/20/2004 | 9:06:42 | 585      | 56.02                 | 3.134               |
| 4/20/2004 | 9:06:45 | 588      | 56.05                 | 3.149               |
| 4/20/2004 | 9:06:48 | 591      | 56.05                 | 3.165               |
| 4/20/2004 | 9:06:51 | 594      | 56.05                 | 3.18                |
| 4/20/2004 | 9:06:54 | 597      | 56.05                 | 3.196               |
| 4/20/2004 | 9:06:57 | 600      | 56.07                 | 3.211               |
| 4/20/2004 | 9:07:00 | 603      | 56.07                 | 3.226               |
| 4/20/2004 | 9:07:03 | 606      | 56.07                 | 3.24                |
| 4/20/2004 | 9:07:06 | 609      | 56.07                 | 3.257               |
| 4/20/2004 | 9:07:09 | 612      | 56.07                 | 3.272               |
| 4/20/2004 | 9:07:12 | 615      | 56.09                 | 3.286               |
| 4/20/2004 | 9:07:15 | 618      | 56.09                 | 3.301               |
| 4/20/2004 | 9:07:18 | 621      | 56.09                 | 3.318               |
| 4/20/2004 | 9:07:21 | 624      | 56.09                 | 3.332               |
| 4/20/2004 | 9:07:24 | 627      | 56.09                 | 3.347               |
| 4/20/2004 | 9:07:27 | 630      | 56.09                 | 3.364               |
| 4/20/2004 | 9:07:30 | 633      | 56.09                 | 3.378               |
| 4/20/2004 | 9:07:33 | 636      | 56.09                 | 3.392               |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:07:36 | 639      | 56.11                 | 3.407               |
| 4/20/2004 | 9:07:39 | 642      | 56.11                 | 3.421               |
| 4/20/2004 | 9:07:42 | 645      | 56.11                 | 3.436               |
| 4/20/2004 | 9:07:45 | 648      | 56.11                 | 3.451               |
| 4/20/2004 | 9:07:48 | 651      | 56.11                 | 3.467               |
| 4/20/2004 | 9:07:51 | 654      | 56.11                 | 3.482               |
| 4/20/2004 | 9:07:54 | 657      | 56.11                 | 3.498               |
| 4/20/2004 | 9:07:57 | 660      | 56.11                 | 3.513               |
| 4/20/2004 | 9:08:00 | 663      | 56.11                 | 3.527               |
| 4/20/2004 | 9:08:03 | 666      | 56.11                 | 3.544               |
| 4/20/2004 | 9:08:06 | 669      | 56.11                 | 3.557               |
| 4/20/2004 | 9:08:09 | 672      | 56.11                 | 3.573               |
| 4/20/2004 | 9:08:12 | 675      | 56.11                 | 3.588               |
| 4/20/2004 | 9:08:15 | 678      | 56.11                 | 3.604               |
| 4/20/2004 | 9:08:18 | 681      | 56.11                 | 3.619               |
| 4/20/2004 | 9:08:21 | 684      | 56.11                 | 3.634               |
| 4/20/2004 | 9:08:24 | 687      | 56.11                 | 3.65                |
| 4/20/2004 | 9:08:27 | 690      | 56.11                 | 3.665               |
| 4/20/2004 | 9:08:30 | 693      | 56.11                 | 3.681               |
| 4/20/2004 | 9:08:33 | 696      | 56.11                 | 3.696               |
| 4/20/2004 | 9:08:36 | 699      | 56.11                 | 3.711               |
| 4/20/2004 | 9:08:39 | 702      | 56.11                 | 3.728               |
| 4/20/2004 | 9:08:42 | 705      | 56.11                 | 3.742               |
| 4/20/2004 | 9:08:45 | 708      | 56.11                 | 3.759               |
| 4/20/2004 | 9:08:48 | 711      | 56.11                 | 3.776               |
| 4/20/2004 | 9:08:51 | 714      | 56.09                 | 3.792               |
| 4/20/2004 | 9:08:54 | 717      | 56.11                 | 3.807               |
| 4/20/2004 | 9:08:57 | 720      | 56.09                 | 3.823               |
| 4/20/2004 | 9:09:00 | 723      | 56.09                 | 3.84                |
| 4/20/2004 | 9:09:03 | 726      | 56.09                 | 3.855               |
| 4/20/2004 | 9:09:06 | 729      | 56.09                 | 3.869               |
| 4/20/2004 | 9:09:09 | 732      | 56.09                 | 3.884               |
| 4/20/2004 | 9:09:12 | 735      | 56.09                 | 3.9                 |
| 4/20/2004 | 9:09:15 | 738      | 56.09                 | 3.915               |
| 4/20/2004 | 9:09:18 | 741      | 56.09                 | 3.929               |
| 4/20/2004 | 9:09:21 | 744      | 56.07                 | 3.944               |
| 4/20/2004 | 9:09:24 | 747      | 56.07                 | 3.96                |
| 4/20/2004 | 9:09:27 | 750      | 56.07                 | 3.972               |
| 4/20/2004 | 9:09:30 | 753      | 56.07                 | 3.985               |
| 4/20/2004 | 9:09:33 | 756      | 56.07                 | 3.999               |
| 4/20/2004 | 9:09:36 | 759      | 56.07                 | 4.013               |
| 4/20/2004 | 9:09:39 | 762      | 56.05                 | 4.027               |
| 4/20/2004 | 9:09:42 | 765      | 56.05                 | 4.04                |
| 4/20/2004 | 9:09:45 | 768      | 56.05                 | 4.052               |
| 4/20/2004 | 9:09:48 | 771      | 56.05                 | 4.066               |
| 4/20/2004 | 9:09:51 | 774      | 56.05                 | 4.078               |
| 4/20/2004 | 9:09:54 | 777      | 56.05                 | 4.09                |
| 4/20/2004 | 9:09:57 | 780      | 56.02                 | 4.102               |
| 4/20/2004 | 9:10:00 | 783      | 56.02                 | 4.117               |
| 4/20/2004 | 9:10:03 | 786      | 56.02                 | 4.128               |



| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:10:06 | 789      | 56                    | 4.142               |
| 4/20/2004 | 9:10:09 | 792      | 56                    | 4.154               |
| 4/20/2004 | 9:10:12 | 795      | 56                    | 4.167               |
| 4/20/2004 | 9:10:15 | 798      | 56                    | 4.181               |
| 4/20/2004 | 9:10:18 | 801      | 55.98                 | 4.193               |
| 4/20/2004 | 9:10:21 | 804      | 55.98                 | 4.205               |
| 4/20/2004 | 9:10:24 | 807      | 55.98                 | 4.217               |
| 4/20/2004 | 9:10:27 | 810      | 55.98                 | 4.229               |
| 4/20/2004 | 9:10:30 | 813      | 55.98                 | 4.241               |
| 4/20/2004 | 9:10:33 | 816      | 55.95                 | 4.255               |
| 4/20/2004 | 9:10:36 | 819      | 55.95                 | 4.267               |
| 4/20/2004 | 9:10:39 | 822      | 55.95                 | 4.279               |
| 4/20/2004 | 9:10:42 | 825      | 55.95                 | 4.292               |
| 4/20/2004 | 9:10:45 | 828      | 55.93                 | 4.305               |
| 4/20/2004 | 9:10:48 | 831      | 55.93                 | 4.317               |
| 4/20/2004 | 9:10:51 | 834      | 55.93                 | 4.329               |
| 4/20/2004 | 9:10:54 | 837      | 55.93                 | 4.341               |
| 4/20/2004 | 9:10:57 | 840      | 55.91                 | 4.356               |
| 4/20/2004 | 9:11:00 | 843      | 55.91                 | 4.366               |
| 4/20/2004 | 9:11:03 | 846      | 55.89                 | 4.379               |
| 4/20/2004 | 9:11:06 | 849      | 55.89                 | 4.391               |
| 4/20/2004 | 9:11:09 | 852      | 55.86                 | 4.401               |
| 4/20/2004 | 9:11:12 | 855      | 55.86                 | 4.415               |
| 4/20/2004 | 9:11:15 | 858      | 55.86                 | 4.427               |
| 4/20/2004 | 9:11:18 | 861      | 55.86                 | 4.44                |
| 4/20/2004 | 9:11:21 | 864      | 55.86                 | 4.452               |
| 4/20/2004 | 9:11:24 | 867      | 55.84                 | 4.464               |
| 4/20/2004 | 9:11:27 | 870      | 55.84                 | 4.476               |
| 4/20/2004 | 9:11:30 | 873      | 55.84                 | 4.488               |
| 4/20/2004 | 9:11:33 | 876      | 55.82                 | 4.501               |
| 4/20/2004 | 9:11:36 | 879      | 55.82                 | 4.514               |
| 4/20/2004 | 9:11:39 | 882      | 55.82                 | 4.526               |
| 4/20/2004 | 9:11:42 | 885      | 55.82                 | 4.538               |
| 4/20/2004 | 9:11:45 | 888      | 55.82                 | 4.55                |
| 4/20/2004 | 9:11:48 | 891      | 55.8                  | 4.564               |
| 4/20/2004 | 9:11:51 | 894      | 55.8                  | 4.576               |
| 4/20/2004 | 9:11:54 | 897      | 55.8                  | 4.59                |
| 4/20/2004 | 9:11:57 | 900      | 55.8                  | 4.602               |
| 4/20/2004 | 9:12:00 | 903      | 55.77                 | 4.614               |
| 4/20/2004 | 9:12:03 | 906      | 55.77                 | 4.628               |
| 4/20/2004 | 9:12:06 | 909      | 55.77                 | 4.641               |
| 4/20/2004 | 9:12:09 | 912      | 55.77                 | 4.653               |
| 4/20/2004 | 9:12:12 | 915      | 55.75                 | 4.667               |
| 4/20/2004 | 9:12:15 | 918      | 55.75                 | 4.677               |
| 4/20/2004 | 9:12:18 | 921      | 55.75                 | 4.689               |
| 4/20/2004 | 9:12:21 | 924      | 55.73                 | 4.701               |
| 4/20/2004 | 9:12:24 | 927      | 55.73                 | 4.713               |
| 4/20/2004 | 9:12:27 | 930      | 55.73                 | 4.724               |
| 4/20/2004 | 9:12:30 | 933      | 55.73                 | 4.737               |
| 4/20/2004 | 9:12:33 | 936      | 55.73                 | 4.749               |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:12:36 | 939      | 55.71                 | 4.762               |
| 4/20/2004 | 9:12:39 | 942      | 55.71                 | 4.774               |
| 4/20/2004 | 9:12:42 | 945      | 55.68                 | 4.799               |
| 4/20/2004 | 9:12:45 | 948      | 55.68                 | 4.844               |
| 4/20/2004 | 9:12:48 | 951      | 55.68                 | 4.887               |
| 4/20/2004 | 9:12:51 | 954      | 55.66                 | 4.93                |
| 4/20/2004 | 9:12:54 | 957      | 55.66                 | 4.976               |
| 4/20/2004 | 9:12:57 | 960      | 55.66                 | 5.017               |
| 4/20/2004 | 9:13:00 | 963      | 55.66                 | 5.059               |
| 4/20/2004 | 9:13:03 | 966      | 55.64                 | 5.102               |
| 4/20/2004 | 9:13:06 | 969      | 55.64                 | 5.145               |
| 4/20/2004 | 9:13:09 | 972      | 55.64                 | 5.186               |
| 4/20/2004 | 9:13:12 | 975      | 55.62                 | 5.227               |
| 4/20/2004 | 9:13:15 | 978      | 55.62                 | 5.268               |
| 4/20/2004 | 9:13:18 | 981      | 55.62                 | 5.31                |
| 4/20/2004 | 9:13:21 | 984      | 55.59                 | 5.351               |
| 4/20/2004 | 9:13:24 | 987      | 55.59                 | 5.39                |
| 4/20/2004 | 9:13:27 | 990      | 55.59                 | 5.429               |
| 4/20/2004 | 9:13:30 | 993      | 55.57                 | 5.469               |
| 4/20/2004 | 9:13:33 | 996      | 55.57                 | 5.508               |
| 4/20/2004 | 9:13:36 | 999      | 55.57                 | 5.549               |
| 4/20/2004 | 9:13:39 | 1002     | 55.55                 | 5.587               |
| 4/20/2004 | 9:13:42 | 1005     | 55.55                 | 5.626               |
| 4/20/2004 | 9:13:45 | 1008     | 55.55                 | 5.664               |
| 4/20/2004 | 9:13:48 | 1011     | 55.53                 | 5.702               |
| 4/20/2004 | 9:13:51 | 1014     | 55.53                 | 5.739               |
| 4/20/2004 | 9:13:54 | 1017     | 55.53                 | 5.777               |
| 4/20/2004 | 9:13:57 | 1020     | 55.5                  | 5.815               |
| 4/20/2004 | 9:14:00 | 1023     | 55.5                  | 5.853               |
| 4/20/2004 | 9:14:03 | 1026     | 55.5                  | 5.888               |
| 4/20/2004 | 9:14:06 | 1029     | 55.48                 | 5.925               |
| 4/20/2004 | 9:14:09 | 1032     | 55.48                 | 5.962               |
| 4/20/2004 | 9:14:12 | 1035     | 55.48                 | 5.998               |
| 4/20/2004 | 9:14:15 | 1038     | 55.46                 | 6.036               |
| 4/20/2004 | 9:14:18 | 1041     | 55.46                 | 6.072               |
| 4/20/2004 | 9:14:21 | 1044     | 55.46                 | 6.104               |
| 4/20/2004 | 9:14:24 | 1047     | 55.44                 | 6.142               |
| 4/20/2004 | 9:14:27 | 1050     | 55.44                 | 6.178               |
| 4/20/2004 | 9:14:30 | 1053     | 55.44                 | 6.21                |
| 4/20/2004 | 9:14:33 | 1056     | 55.41                 | 6.245               |
| 4/20/2004 | 9:14:36 | 1059     | 55.41                 | 6.279               |
| 4/20/2004 | 9:14:39 | 1062     | 55.41                 | 6.313               |
| 4/20/2004 | 9:14:42 | 1065     | 55.39                 | 6.349               |
| 4/20/2004 | 9:14:45 | 1068     | 55.39                 | 6.382               |
| 4/20/2004 | 9:14:48 | 1071     | 55.39                 | 6.414               |
| 4/20/2004 | 9:14:51 | 1074     | 55.37                 | 6.449               |
| 4/20/2004 | 9:14:54 | 1077     | 55.37                 | 6.48                |
| 4/20/2004 | 9:14:57 | 1080     | 55.37                 | 6.512               |
| 4/20/2004 | 9:15:00 | 1083     | 55.35                 | 6.546               |
| 4/20/2004 | 9:15:03 | 1086     | 55.35                 | 6.577               |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:15:06 | 1089     | 55.35                 | 6.61                |
| 4/20/2004 | 9:15:09 | 1092     | 55.35                 | 6.642               |
| 4/20/2004 | 9:15:12 | 1095     | 55.32                 | 6.675               |
| 4/20/2004 | 9:15:15 | 1098     | 55.32                 | 6.706               |
| 4/20/2004 | 9:15:18 | 1101     | 55.32                 | 6.736               |
| 4/20/2004 | 9:15:21 | 1104     | 55.3                  | 6.767               |
| 4/20/2004 | 9:15:24 | 1107     | 55.3                  | 6.798               |
| 4/20/2004 | 9:15:27 | 1110     | 55.3                  | 6.829               |
| 4/20/2004 | 9:15:30 | 1113     | 55.28                 | 6.858               |
| 4/20/2004 | 9:15:33 | 1116     | 55.28                 | 6.891               |
| 4/20/2004 | 9:15:36 | 1119     | 55.28                 | 6.92                |
| 4/20/2004 | 9:15:39 | 1122     | 55.26                 | 6.949               |
| 4/20/2004 | 9:15:42 | 1125     | 55.26                 | 6.98                |
| 4/20/2004 | 9:15:45 | 1128     | 55.26                 | 7.009               |
| 4/20/2004 | 9:15:48 | 1131     | 55.23                 | 7.038               |
| 4/20/2004 | 9:15:51 | 1134     | 55.23                 | 7.067               |
| 4/20/2004 | 9:15:54 | 1137     | 55.23                 | 7.096               |
| 4/20/2004 | 9:15:57 | 1140     | 55.21                 | 7.126               |
| 4/20/2004 | 9:16:00 | 1143     | 55.21                 | 7.153               |
| 4/20/2004 | 9:16:03 | 1146     | 55.21                 | 7.182               |
| 4/20/2004 | 9:16:06 | 1149     | 55.19                 | 7.209               |
| 4/20/2004 | 9:16:09 | 1152     | 55.19                 | 7.237               |
| 4/20/2004 | 9:16:12 | 1155     | 55.19                 | 7.262               |
| 4/20/2004 | 9:16:15 | 1158     | 55.16                 | 7.292               |
| 4/20/2004 | 9:16:18 | 1161     | 55.16                 | 7.319               |
| 4/20/2004 | 9:16:21 | 1164     | 55.16                 | 7.346               |
| 4/20/2004 | 9:16:24 | 1167     | 55.14                 | 7.372               |
| 4/20/2004 | 9:16:27 | 1170     | 55.14                 | 7.4                 |
| 4/20/2004 | 9:16:30 | 1173     | 55.14                 | 7.427               |
| 4/20/2004 | 9:16:33 | 1176     | 55.12                 | 7.453               |
| 4/20/2004 | 9:16:36 | 1179     | 55.12                 | 7.48                |
| 4/20/2004 | 9:16:39 | 1182     | 55.1                  | 7.504               |
| 4/20/2004 | 9:16:42 | 1185     | 55.1                  | 7.53                |
| 4/20/2004 | 9:16:45 | 1188     | 55.1                  | 7.556               |
| 4/20/2004 | 9:16:48 | 1191     | 55.07                 | 7.581               |
| 4/20/2004 | 9:16:51 | 1194     | 55.07                 | 7.607               |
| 4/20/2004 | 9:16:54 | 1197     | 55.07                 | 7.633               |
| 4/20/2004 | 9:16:57 | 1200     | 55.07                 | 7.658               |
| 4/20/2004 | 9:17:00 | 1203     | 55.05                 | 7.683               |
| 4/20/2004 | 9:17:03 | 1206     | 55.05                 | 7.706               |
| 4/20/2004 | 9:17:06 | 1209     | 55.05                 | 7.732               |
| 4/20/2004 | 9:17:09 | 1212     | 55.03                 | 7.756               |
| 4/20/2004 | 9:17:12 | 1215     | 55.03                 | 7.78                |
| 4/20/2004 | 9:17:15 | 1218     | 55.03                 | 7.802               |
| 4/20/2004 | 9:17:18 | 1221     | 55.01                 | 7.827               |
| 4/20/2004 | 9:17:21 | 1224     | 55.01                 | 7.85                |
| 4/20/2004 | 9:17:24 | 1227     | 55.01                 | 7.873               |
| 4/20/2004 | 9:17:27 | 1230     | 54.98                 | 7.897               |
| 4/20/2004 | 9:17:30 | 1233     | 54.98                 | 7.919               |
| 4/20/2004 | 9:17:33 | 1236     | 54.98                 | 7.945               |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:17:36 | 1239     | 54.98                 | 7.965               |
| 4/20/2004 | 9:17:39 | 1242     | 54.96                 | 7.988               |
| 4/20/2004 | 9:17:42 | 1245     | 54.96                 | 8.01                |
| 4/20/2004 | 9:17:45 | 1248     | 54.96                 | 8.034               |
| 4/20/2004 | 9:17:48 | 1251     | 54.96                 | 8.054               |
| 4/20/2004 | 9:17:51 | 1254     | 54.94                 | 8.077               |
| 4/20/2004 | 9:17:54 | 1257     | 54.94                 | 8.097               |
| 4/20/2004 | 9:17:57 | 1260     | 54.94                 | 8.121               |
| 4/20/2004 | 9:18:00 | 1263     | 54.92                 | 8.142               |
| 4/20/2004 | 9:18:03 | 1266     | 54.92                 | 8.164               |
| 4/20/2004 | 9:18:06 | 1269     | 54.92                 | 8.183               |
| 4/20/2004 | 9:18:09 | 1272     | 54.92                 | 8.205               |
| 4/20/2004 | 9:18:12 | 1275     | 54.92                 | 8.226               |
| 4/20/2004 | 9:18:15 | 1278     | 54.89                 | 8.248               |
| 4/20/2004 | 9:18:18 | 1281     | 54.89                 | 8.267               |
| 4/20/2004 | 9:18:21 | 1284     | 54.89                 | 8.289               |
| 4/20/2004 | 9:18:24 | 1287     | 54.89                 | 8.308               |
| 4/20/2004 | 9:18:27 | 1290     | 54.87                 | 8.329               |
| 4/20/2004 | 9:18:30 | 1293     | 54.87                 | 8.347               |
| 4/20/2004 | 9:18:33 | 1296     | 54.87                 | 8.368               |
| 4/20/2004 | 9:18:36 | 1299     | 54.87                 | 8.389               |
| 4/20/2004 | 9:18:39 | 1302     | 54.85                 | 8.408               |
| 4/20/2004 | 9:18:42 | 1305     | 54.85                 | 8.428               |
| 4/20/2004 | 9:18:45 | 1308     | 54.85                 | 8.447               |
| 4/20/2004 | 9:18:48 | 1311     | 54.85                 | 8.466               |
| 4/20/2004 | 9:18:51 | 1314     | 54.85                 | 8.484               |
| 4/20/2004 | 9:18:54 | 1317     | 54.83                 | 8.503               |
| 4/20/2004 | 9:18:57 | 1320     | 54.83                 | 8.521               |
| 4/20/2004 | 9:19:00 | 1323     | 54.83                 | 8.536               |
| 4/20/2004 | 9:19:03 | 1326     | 54.83                 | 8.551               |
| 4/20/2004 | 9:19:06 | 1329     | 54.83                 | 8.567               |
| 4/20/2004 | 9:19:09 | 1332     | 54.8                  | 8.581               |
| 4/20/2004 | 9:19:12 | 1335     | 54.8                  | 8.598               |
| 4/20/2004 | 9:19:15 | 1338     | 54.8                  | 8.61                |
| 4/20/2004 | 9:19:18 | 1341     | 54.8                  | 8.625               |
| 4/20/2004 | 9:19:21 | 1344     | 54.8                  | 8.64                |
| 4/20/2004 | 9:19:24 | 1347     | 54.8                  | 8.656               |
| 4/20/2004 | 9:19:27 | 1350     | 54.78                 | 8.671               |
| 4/20/2004 | 9:19:30 | 1353     | 54.78                 | 8.685               |
| 4/20/2004 | 9:19:33 | 1356     | 54.78                 | 8.7                 |
| 4/20/2004 | 9:19:36 | 1359     | 54.78                 | 8.716               |
| 4/20/2004 | 9:19:39 | 1362     | 54.78                 | 8.73                |
| 4/20/2004 | 9:19:42 | 1365     | 54.76                 | 8.743               |
| 4/20/2004 | 9:19:45 | 1368     | 54.76                 | 8.757               |
| 4/20/2004 | 9:19:48 | 1371     | 54.76                 | 8.771               |
| 4/20/2004 | 9:19:51 | 1374     | 54.76                 | 8.783               |
| 4/20/2004 | 9:19:54 | 1377     | 54.76                 | 8.796               |
| 4/20/2004 | 9:19:57 | 1380     | 54.76                 | 8.81                |
| 4/20/2004 | 9:20:00 | 1383     | 54.76                 | 8.824               |
| 4/20/2004 | 9:20:03 | 1386     | 54.76                 | 8.837               |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:20:06 | 1389     | 54.74                 | 8.851               |
| 4/20/2004 | 9:20:09 | 1392     | 54.74                 | 8.863               |
| 4/20/2004 | 9:20:12 | 1395     | 54.74                 | 8.877               |
| 4/20/2004 | 9:20:15 | 1398     | 54.74                 | 8.889               |
| 4/20/2004 | 9:20:18 | 1401     | 54.74                 | 8.903               |
| 4/20/2004 | 9:20:21 | 1404     | 54.74                 | 8.916               |
| 4/20/2004 | 9:20:24 | 1407     | 54.74                 | 8.928               |
| 4/20/2004 | 9:20:27 | 1410     | 54.74                 | 8.942               |
| 4/20/2004 | 9:20:30 | 1413     | 54.74                 | 8.954               |
| 4/20/2004 | 9:20:33 | 1416     | 54.71                 | 8.964               |
| 4/20/2004 | 9:20:36 | 1419     | 54.71                 | 8.978               |
| 4/20/2004 | 9:20:39 | 1422     | 54.71                 | 8.99                |
| 4/20/2004 | 9:20:42 | 1425     | 54.71                 | 9.002               |
| 4/20/2004 | 9:20:45 | 1428     | 54.71                 | 9.016               |
| 4/20/2004 | 9:20:48 | 1431     | 54.71                 | 9.026               |
| 4/20/2004 | 9:20:51 | 1434     | 54.71                 | 9.04                |
| 4/20/2004 | 9:20:54 | 1437     | 54.69                 | 9.05                |
| 4/20/2004 | 9:20:57 | 1440     | 54.69                 | 9.062               |
| 4/20/2004 | 9:21:00 | 1443     | 54.69                 | 9.074               |
| 4/20/2004 | 9:21:03 | 1446     | 54.69                 | 9.086               |
| 4/20/2004 | 9:21:06 | 1449     | 54.69                 | 9.098               |
| 4/20/2004 | 9:21:09 | 1452     | 54.69                 | 9.108               |
| 4/20/2004 | 9:21:12 | 1455     | 54.69                 | 9.12                |
| 4/20/2004 | 9:21:15 | 1458     | 54.69                 | 9.13                |
| 4/20/2004 | 9:21:18 | 1461     | 54.69                 | 9.142               |
| 4/20/2004 | 9:21:21 | 1464     | 54.69                 | 9.154               |
| 4/20/2004 | 9:21:24 | 1467     | 54.67                 | 9.165               |
| 4/20/2004 | 9:21:27 | 1470     | 54.67                 | 9.177               |
| 4/20/2004 | 9:21:30 | 1473     | 54.67                 | 9.187               |
| 4/20/2004 | 9:21:33 | 1476     | 54.67                 | 9.199               |
| 4/20/2004 | 9:21:36 | 1479     | 54.67                 | 9.209               |
| 4/20/2004 | 9:21:39 | 1482     | 54.67                 | 9.219               |
| 4/20/2004 | 9:21:42 | 1485     | 54.67                 | 9.231               |
| 4/20/2004 | 9:21:45 | 1488     | 54.67                 | 9.242               |
| 4/20/2004 | 9:21:48 | 1491     | 54.67                 | 9.252               |
| 4/20/2004 | 9:21:51 | 1494     | 54.67                 | 9.262               |
| 4/20/2004 | 9:21:54 | 1497     | 54.67                 | 9.272               |
| 4/20/2004 | 9:21:57 | 1500     | 54.67                 | 9.284               |
| 4/20/2004 | 9:22:00 | 1503     | 54.65                 | 9.295               |
| 4/20/2004 | 9:22:03 | 1506     | 54.65                 | 9.305               |
| 4/20/2004 | 9:22:06 | 1509     | 54.65                 | 9.315               |
| 4/20/2004 | 9:22:09 | 1512     | 54.65                 | 9.324               |
| 4/20/2004 | 9:22:12 | 1515     | 54.65                 | 9.334               |
| 4/20/2004 | 9:22:15 | 1518     | 54.65                 | 9.344               |
| 4/20/2004 | 9:22:18 | 1521     | 54.65                 | 9.355               |
| 4/20/2004 | 9:22:21 | 1524     | 54.65                 | 9.365               |
| 4/20/2004 | 9:22:24 | 1527     | 54.65                 | 9.375               |
| 4/20/2004 | 9:22:27 | 1530     | 54.62                 | 9.386               |
| 4/20/2004 | 9:22:30 | 1533     | 54.62                 | 9.394               |
| 4/20/2004 | 9:22:33 | 1536     | 54.62                 | 9.404               |

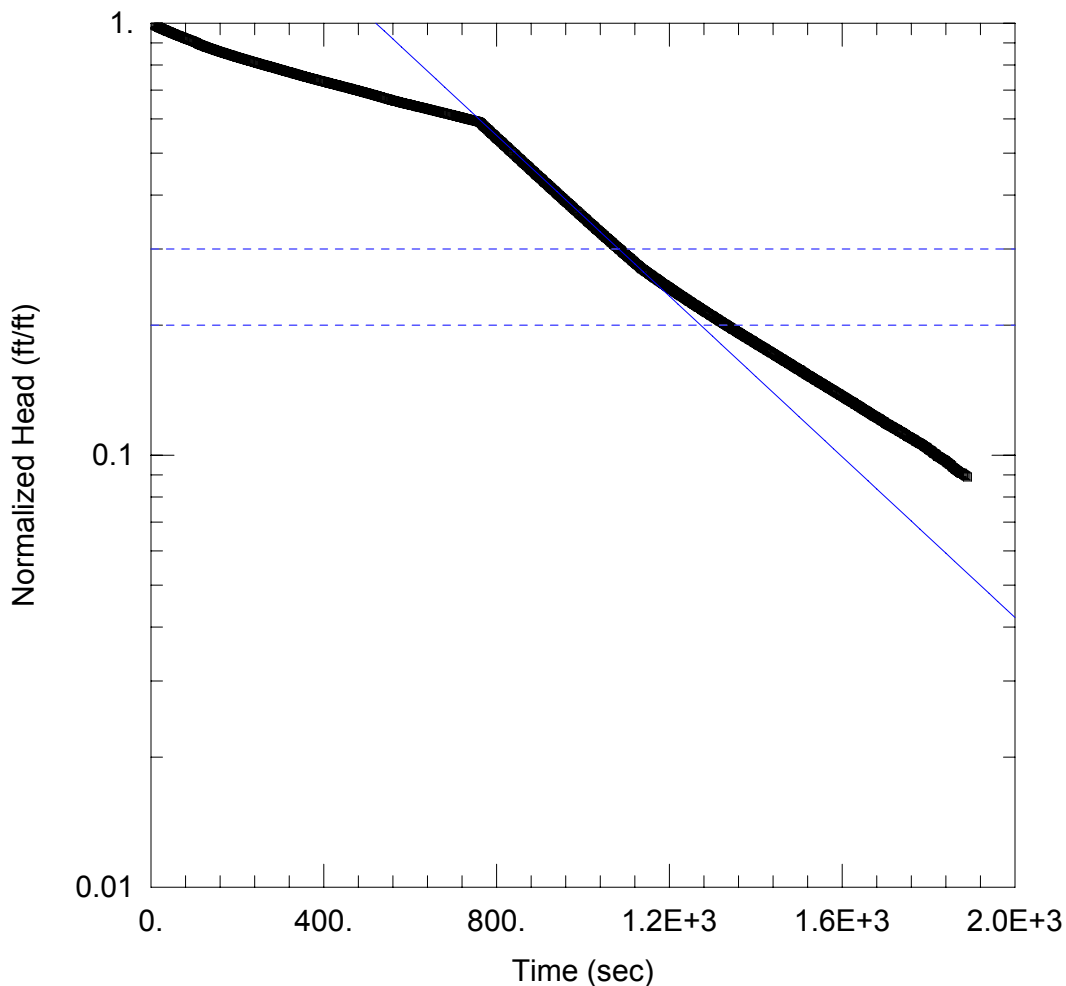
| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:22:36 | 1539     | 54.62                 | 9.415               |
| 4/20/2004 | 9:22:39 | 1542     | 54.62                 | 9.423               |
| 4/20/2004 | 9:22:42 | 1545     | 54.62                 | 9.434               |
| 4/20/2004 | 9:22:45 | 1548     | 54.62                 | 9.442               |
| 4/20/2004 | 9:22:48 | 1551     | 54.62                 | 9.451               |
| 4/20/2004 | 9:22:51 | 1554     | 54.62                 | 9.463               |
| 4/20/2004 | 9:22:54 | 1557     | 54.62                 | 9.471               |
| 4/20/2004 | 9:22:57 | 1560     | 54.62                 | 9.48                |
| 4/20/2004 | 9:23:00 | 1563     | 54.6                  | 9.488               |
| 4/20/2004 | 9:23:03 | 1566     | 54.6                  | 9.499               |
| 4/20/2004 | 9:23:06 | 1569     | 54.6                  | 9.507               |
| 4/20/2004 | 9:23:09 | 1572     | 54.6                  | 9.516               |
| 4/20/2004 | 9:23:12 | 1575     | 54.6                  | 9.524               |
| 4/20/2004 | 9:23:15 | 1578     | 54.6                  | 9.535               |
| 4/20/2004 | 9:23:18 | 1581     | 54.6                  | 9.543               |
| 4/20/2004 | 9:23:21 | 1584     | 54.6                  | 9.553               |
| 4/20/2004 | 9:23:24 | 1587     | 54.6                  | 9.562               |
| 4/20/2004 | 9:23:27 | 1590     | 54.6                  | 9.57                |
| 4/20/2004 | 9:23:30 | 1593     | 54.6                  | 9.579               |
| 4/20/2004 | 9:23:33 | 1596     | 54.58                 | 9.588               |
| 4/20/2004 | 9:23:36 | 1599     | 54.58                 | 9.596               |
| 4/20/2004 | 9:23:39 | 1602     | 54.58                 | 9.605               |
| 4/20/2004 | 9:23:42 | 1605     | 54.58                 | 9.613               |
| 4/20/2004 | 9:23:45 | 1608     | 54.58                 | 9.624               |
| 4/20/2004 | 9:23:48 | 1611     | 54.58                 | 9.631               |
| 4/20/2004 | 9:23:51 | 1614     | 54.58                 | 9.639               |
| 4/20/2004 | 9:23:54 | 1617     | 54.58                 | 9.648               |
| 4/20/2004 | 9:23:57 | 1620     | 54.58                 | 9.656               |
| 4/20/2004 | 9:24:00 | 1623     | 54.58                 | 9.665               |
| 4/20/2004 | 9:24:03 | 1626     | 54.58                 | 9.673               |
| 4/20/2004 | 9:24:06 | 1629     | 54.56                 | 9.682               |
| 4/20/2004 | 9:24:09 | 1632     | 54.58                 | 9.69                |
| 4/20/2004 | 9:24:12 | 1635     | 54.56                 | 9.699               |
| 4/20/2004 | 9:24:15 | 1638     | 54.56                 | 9.708               |
| 4/20/2004 | 9:24:18 | 1641     | 54.56                 | 9.716               |
| 4/20/2004 | 9:24:21 | 1644     | 54.56                 | 9.723               |
| 4/20/2004 | 9:24:24 | 1647     | 54.56                 | 9.733               |
| 4/20/2004 | 9:24:27 | 1650     | 54.56                 | 9.74                |
| 4/20/2004 | 9:24:30 | 1653     | 54.56                 | 9.749               |
| 4/20/2004 | 9:24:33 | 1656     | 54.56                 | 9.757               |
| 4/20/2004 | 9:24:36 | 1659     | 54.56                 | 9.766               |
| 4/20/2004 | 9:24:39 | 1662     | 54.56                 | 9.771               |
| 4/20/2004 | 9:24:42 | 1665     | 54.56                 | 9.781               |
| 4/20/2004 | 9:24:45 | 1668     | 54.56                 | 9.79                |
| 4/20/2004 | 9:24:48 | 1671     | 54.53                 | 9.797               |
| 4/20/2004 | 9:24:51 | 1674     | 54.53                 | 9.805               |
| 4/20/2004 | 9:24:54 | 1677     | 54.53                 | 9.814               |
| 4/20/2004 | 9:24:57 | 1680     | 54.53                 | 9.821               |
| 4/20/2004 | 9:25:00 | 1683     | 54.53                 | 9.829               |
| 4/20/2004 | 9:25:03 | 1686     | 54.53                 | 9.834               |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:25:06 | 1689     | 54.53                 | 9.843               |
| 4/20/2004 | 9:25:09 | 1692     | 54.53                 | 9.853               |
| 4/20/2004 | 9:25:12 | 1695     | 54.53                 | 9.86                |
| 4/20/2004 | 9:25:15 | 1698     | 54.53                 | 9.869               |
| 4/20/2004 | 9:25:18 | 1701     | 54.53                 | 9.875               |
| 4/20/2004 | 9:25:21 | 1704     | 54.53                 | 9.884               |
| 4/20/2004 | 9:25:24 | 1707     | 54.51                 | 9.891               |
| 4/20/2004 | 9:25:27 | 1710     | 54.51                 | 9.898               |
| 4/20/2004 | 9:25:30 | 1713     | 54.51                 | 9.905               |
| 4/20/2004 | 9:25:33 | 1716     | 54.51                 | 9.915               |
| 4/20/2004 | 9:25:36 | 1719     | 54.51                 | 9.922               |
| 4/20/2004 | 9:25:39 | 1722     | 54.51                 | 9.929               |
| 4/20/2004 | 9:25:42 | 1725     | 54.51                 | 9.935               |
| 4/20/2004 | 9:25:45 | 1728     | 54.51                 | 9.944               |
| 4/20/2004 | 9:25:48 | 1731     | 54.51                 | 9.951               |
| 4/20/2004 | 9:25:51 | 1734     | 54.51                 | 9.956               |
| 4/20/2004 | 9:25:54 | 1737     | 54.51                 | 9.963               |
| 4/20/2004 | 9:25:57 | 1740     | 54.51                 | 9.971               |
| 4/20/2004 | 9:26:00 | 1743     | 54.51                 | 9.978               |
| 4/20/2004 | 9:26:03 | 1746     | 54.51                 | 9.985               |
| 4/20/2004 | 9:26:06 | 1749     | 54.49                 | 9.994               |
| 4/20/2004 | 9:26:09 | 1752     | 54.49                 | 9.999               |
| 4/20/2004 | 9:26:12 | 1755     | 54.49                 | 10.007              |
| 4/20/2004 | 9:26:15 | 1758     | 54.51                 | 10.014              |
| 4/20/2004 | 9:26:18 | 1761     | 54.49                 | 10.019              |
| 4/20/2004 | 9:26:21 | 1764     | 54.49                 | 10.026              |
| 4/20/2004 | 9:26:24 | 1767     | 54.49                 | 10.035              |
| 4/20/2004 | 9:26:27 | 1770     | 54.49                 | 10.042              |
| 4/20/2004 | 9:26:30 | 1773     | 54.49                 | 10.047              |
| 4/20/2004 | 9:26:33 | 1776     | 54.49                 | 10.054              |
| 4/20/2004 | 9:26:36 | 1779     | 54.49                 | 10.062              |
| 4/20/2004 | 9:26:39 | 1782     | 54.49                 | 10.067              |
| 4/20/2004 | 9:26:42 | 1785     | 54.49                 | 10.076              |
| 4/20/2004 | 9:26:45 | 1788     | 54.49                 | 10.081              |
| 4/20/2004 | 9:26:48 | 1791     | 54.49                 | 10.088              |
| 4/20/2004 | 9:26:51 | 1794     | 54.49                 | 10.095              |
| 4/20/2004 | 9:26:54 | 1797     | 54.46                 | 10.103              |
| 4/20/2004 | 9:26:57 | 1800     | 54.46                 | 10.108              |
| 4/20/2004 | 9:27:00 | 1803     | 54.46                 | 10.115              |
| 4/20/2004 | 9:27:03 | 1806     | 54.46                 | 10.122              |
| 4/20/2004 | 9:27:06 | 1809     | 54.46                 | 10.127              |
| 4/20/2004 | 9:27:09 | 1812     | 54.46                 | 10.136              |
| 4/20/2004 | 9:27:12 | 1815     | 54.46                 | 10.141              |
| 4/20/2004 | 9:27:15 | 1818     | 54.46                 | 10.148              |
| 4/20/2004 | 9:27:18 | 1821     | 54.46                 | 10.155              |
| 4/20/2004 | 9:27:21 | 1824     | 54.46                 | 10.16               |
| 4/20/2004 | 9:27:24 | 1827     | 54.46                 | 10.168              |
| 4/20/2004 | 9:27:27 | 1830     | 54.46                 | 10.175              |
| 4/20/2004 | 9:27:30 | 1833     | 54.46                 | 10.182              |
| 4/20/2004 | 9:27:33 | 1836     | 54.46                 | 10.187              |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:27:36 | 1839     | 54.46                 | 10.194              |
| 4/20/2004 | 9:27:39 | 1842     | 54.46                 | 10.199              |
| 4/20/2004 | 9:27:42 | 1845     | 54.46                 | 10.206              |
| 4/20/2004 | 9:27:45 | 1848     | 54.46                 | 10.214              |
| 4/20/2004 | 9:27:48 | 1851     | 54.46                 | 10.22               |
| 4/20/2004 | 9:27:51 | 1854     | 54.46                 | 10.225              |
| 4/20/2004 | 9:27:54 | 1857     | 54.44                 | 10.232              |
| 4/20/2004 | 9:27:57 | 1860     | 54.46                 | 10.237              |
| 4/20/2004 | 9:28:00 | 1863     | 54.44                 | 10.242              |
| 4/20/2004 | 9:28:03 | 1866     | 54.44                 | 10.249              |
| 4/20/2004 | 9:28:06 | 1869     | 54.44                 | 10.254              |
| 4/20/2004 | 9:28:09 | 1872     | 54.44                 | 10.261              |
| 4/20/2004 | 9:28:12 | 1875     | 54.44                 | 10.268              |
| 4/20/2004 | 9:28:15 | 1878     | 54.44                 | 10.273              |
| 4/20/2004 | 9:28:18 | 1881     | 54.44                 | 10.278              |
| 4/20/2004 | 9:28:21 | 1884     | 54.44                 | 10.286              |
| 4/20/2004 | 9:28:24 | 1887     | 54.44                 | 10.292              |
| 4/20/2004 | 9:28:27 | 1890     | 54.44                 | 10.298              |
| 4/20/2004 | 9:28:30 | 1893     | 54.44                 | 10.302              |
| 4/20/2004 | 9:28:33 | 1896     | 54.44                 | 10.309              |
| 4/20/2004 | 9:28:36 | 1899     | 54.44                 | 10.314              |
| 4/20/2004 | 9:28:39 | 1902     | 54.44                 | 10.319              |
| 4/20/2004 | 9:28:42 | 1905     | 54.44                 | 10.324              |
| 4/20/2004 | 9:28:45 | 1908     | 54.44                 | 10.329              |
| 4/20/2004 | 9:28:48 | 1911     | 54.44                 | 10.334              |
| 4/20/2004 | 9:28:51 | 1914     | 54.44                 | 10.341              |
| 4/20/2004 | 9:28:54 | 1917     | 54.44                 | 10.346              |
| 4/20/2004 | 9:28:57 | 1920     | 54.44                 | 10.351              |
| 4/20/2004 | 9:29:00 | 1923     | 54.44                 | 10.356              |
| 4/20/2004 | 9:29:03 | 1926     | 54.44                 | 10.363              |
| 4/20/2004 | 9:29:06 | 1929     | 54.44                 | 10.367              |
| 4/20/2004 | 9:29:09 | 1932     | 54.44                 | 10.375              |
| 4/20/2004 | 9:29:12 | 1935     | 54.44                 | 10.38               |
| 4/20/2004 | 9:29:15 | 1938     | 54.44                 | 10.384              |
| 4/20/2004 | 9:29:18 | 1941     | 54.44                 | 10.389              |
| 4/20/2004 | 9:29:21 | 1944     | 54.44                 | 10.394              |
| 4/20/2004 | 9:29:24 | 1947     | 54.44                 | 10.399              |
| 4/20/2004 | 9:29:27 | 1950     | 54.44                 | 10.404              |
| 4/20/2004 | 9:29:30 | 1953     | 54.44                 | 10.411              |
| 4/20/2004 | 9:29:33 | 1956     | 54.44                 | 10.416              |
| 4/20/2004 | 9:29:36 | 1959     | 54.42                 | 10.422              |
| 4/20/2004 | 9:29:39 | 1962     | 54.44                 | 10.425              |
| 4/20/2004 | 9:29:42 | 1965     | 54.44                 | 10.43               |
| 4/20/2004 | 9:29:45 | 1968     | 54.42                 | 10.435              |
| 4/20/2004 | 9:29:48 | 1971     | 54.42                 | 10.442              |
| 4/20/2004 | 9:29:51 | 1974     | 54.42                 | 10.447              |
| 4/20/2004 | 9:29:54 | 1977     | 54.44                 | 10.452              |
| 4/20/2004 | 9:29:57 | 1980     | 54.42                 | 10.458              |
| 4/20/2004 | 9:30:00 | 1983     | 54.42                 | 10.466              |
| 4/20/2004 | 9:30:03 | 1986     | 54.42                 | 10.471              |



| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| -----     | -----   | -----    | -----                 | -----               |
| 4/20/2004 | 9:30:06 | 1989     | 54.42                 | 10.476              |
| 4/20/2004 | 9:30:09 | 1992     | 54.42                 | 10.483              |
| 4/20/2004 | 9:30:12 | 1995     | 54.42                 | 10.49               |
| 4/20/2004 | 9:30:15 | 1998     | 54.42                 | 10.495              |
| 4/20/2004 | 9:30:18 | 2001     | 54.42                 | 10.502              |
| 4/20/2004 | 9:30:21 | 2004     | 54.42                 | 10.509              |
| 4/20/2004 | 9:30:24 | 2007     | 54.42                 | 10.512              |
| 4/20/2004 | 9:30:27 | 2010     | 54.4                  | 10.518              |
| 4/20/2004 | 9:30:30 | 2013     | 54.37                 | 10.523              |
| 4/20/2004 | 9:30:33 | 2016     | 54.37                 | 10.528              |
| 4/20/2004 | 9:30:36 | 2019     | 54.37                 | 10.533              |
| 4/20/2004 | 9:30:39 | 2022     | 54.37                 | 10.538              |
| 4/20/2004 | 9:30:42 | 2025     | 54.35                 | 10.545              |
| 4/20/2004 | 9:30:45 | 2028     | 54.35                 | 10.55               |
| 4/20/2004 | 9:30:48 | 2031     | 54.35                 | 10.557              |
| 4/20/2004 | 9:30:51 | 2034     | 54.35                 | 10.561              |
| 4/20/2004 | 9:30:54 | 2037     | 54.35                 | 10.568              |
| 4/20/2004 | 9:30:57 | 2040     | 54.37                 | 10.578              |
| 4/20/2004 | 9:31:00 | 2043     | 54.37                 | 10.584              |
| 4/20/2004 | 9:31:03 | 2046     | 54.37                 | 10.588              |
| 4/20/2004 | 9:31:06 | 2049     | 54.37                 | 10.595              |
| 4/20/2004 | 9:31:09 | 2052     | 54.37                 | 10.6                |
| 4/20/2004 | 9:31:12 | 2055     | 54.37                 | 10.605              |
| 4/20/2004 | 9:31:15 | 2058     | 54.37                 | 10.61               |
| 4/20/2004 | 9:31:18 | 2061     | 54.35                 | 10.61               |
| 4/20/2004 | 9:31:21 | 2064     | 54.33                 | 10.616              |
| 4/20/2004 | 9:31:24 | 2067     | 54.33                 | 10.621              |
| 4/20/2004 | 9:31:27 | 2070     | 54.33                 | 10.626              |
| 4/20/2004 | 9:31:30 | 2073     | 54.33                 | 10.631              |



### AGLUS 13 TEST #1

Data Set: Y:\...\AgLUS13\_test1\_13JUL2010.aqt

Date: 07/26/10

Time: 15:36:00

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 13

Test Date: 04/20/2004

### AQUIFER DATA

Saturated Thickness: 16.51 ft

Anisotropy Ratio ( $K_z/K_r$ ): 0.01

### WELL DATA (AgLUS 13)

Initial Displacement: 11.67 ft

Static Water Column Height: 16.51 ft

Total Well Penetration Depth: 16.51 ft

Screen Length: 9.72 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 3.587E-6$  ft/sec

$y_0 = 35.59$  ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 13\AgLUS13\_test1\_13  
 Title: AgLUS 13 test #1  
 Date: 07/26/10  
 Time: 15:36:29

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 04/20/2004  
 Test Well: AgLUS 13

AQUIFER DATA

Saturated Thickness: 16.51 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 13

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 11.67 ft  
 Static Water Column Height: 16.51 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.72 ft  
 Total Well Penetration Depth: 16.51 ft

No. of Observations: 631

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 11.66             | 948.       | 4.632             |
| 3.               | 11.62             | 951.       | 4.603             |
| 6.               | 11.58             | 954.       | 4.574             |
| 9.               | 11.54             | 957.       | 4.544             |
| 12.              | 11.5              | 960.       | 4.517             |
| 15.              | 11.46             | 963.       | 4.488             |
| 18.              | 11.42             | 966.       | 4.461             |
| 21.              | 11.38             | 969.       | 4.433             |
| 24.              | 11.35             | 972.       | 4.408             |
| 27.              | 11.31             | 975.       | 4.378             |
| 30.              | 11.28             | 978.       | 4.351             |
| 33.              | 11.24             | 981.       | 4.324             |
| 36.              | 11.21             | 984.       | 4.298             |
| 39.              | 11.18             | 987.       | 4.27              |
| 42.              | 11.15             | 990.       | 4.243             |
| 45.              | 11.11             | 993.       | 4.217             |
| 48.              | 11.08             | 996.       | 4.19              |
| 51.              | 11.05             | 999.       | 4.166             |
| 54.              | 11.02             | 1002.      | 4.14              |
| 57.              | 10.98             | 1005.      | 4.114             |
| 60.              | 10.95             | 1008.      | 4.089             |
| 63.              | 10.93             | 1011.      | 4.063             |
| 66.              | 10.9              | 1014.      | 4.037             |
| 69.              | 10.87             | 1017.      | 4.012             |
| 72.              | 10.84             | 1020.      | 3.987             |
| 75.              | 10.81             | 1023.      | 3.964             |
| 78.              | 10.78             | 1026.      | 3.938             |
| 81.              | 10.75             | 1029.      | 3.914             |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 84.               | 10.72                    | 1032.             | 3.89                     |
| 87.               | 10.69                    | 1035.             | 3.868                    |
| 90.               | 10.66                    | 1038.             | 3.843                    |
| 93.               | 10.64                    | 1041.             | 3.82                     |
| 96.               | 10.61                    | 1044.             | 3.797                    |
| 99.               | 10.58                    | 1047.             | 3.773                    |
| 102.              | 10.55                    | 1050.             | 3.751                    |
| 105.              | 10.52                    | 1053.             | 3.725                    |
| 108.              | 10.47                    | 1056.             | 3.705                    |
| 111.              | 10.44                    | 1059.             | 3.682                    |
| 114.              | 10.4                     | 1062.             | 3.66                     |
| 117.              | 10.38                    | 1065.             | 3.636                    |
| 120.              | 10.35                    | 1068.             | 3.616                    |
| 123.              | 10.32                    | 1071.             | 3.593                    |
| 126.              | 10.3                     | 1074.             | 3.573                    |
| 129.              | 10.27                    | 1077.             | 3.549                    |
| 132.              | 10.25                    | 1080.             | 3.528                    |
| 135.              | 10.22                    | 1083.             | 3.506                    |
| 138.              | 10.2                     | 1086.             | 3.487                    |
| 141.              | 10.17                    | 1089.             | 3.465                    |
| 144.              | 10.15                    | 1092.             | 3.444                    |
| 147.              | 10.12                    | 1095.             | 3.422                    |
| 150.              | 10.1                     | 1098.             | 3.403                    |
| 153.              | 10.08                    | 1101.             | 3.381                    |
| 156.              | 10.05                    | 1104.             | 3.362                    |
| 159.              | 10.03                    | 1107.             | 3.341                    |
| 162.              | 10.01                    | 1110.             | 3.323                    |
| 165.              | 9.984                    | 1113.             | 3.302                    |
| 168.              | 9.964                    | 1116.             | 3.281                    |
| 171.              | 9.942                    | 1119.             | 3.262                    |
| 174.              | 9.92                     | 1122.             | 3.242                    |
| 177.              | 9.898                    | 1125.             | 3.223                    |
| 180.              | 9.877                    | 1128.             | 3.204                    |
| 183.              | 9.855                    | 1131.             | 3.186                    |
| 186.              | 9.835                    | 1134.             | 3.167                    |
| 189.              | 9.813                    | 1137.             | 3.149                    |
| 192.              | 9.792                    | 1140.             | 3.134                    |
| 195.              | 9.77                     | 1143.             | 3.119                    |
| 198.              | 9.748                    | 1146.             | 3.103                    |
| 201.              | 9.73                     | 1149.             | 3.089                    |
| 204.              | 9.708                    | 1152.             | 3.072                    |
| 207.              | 9.687                    | 1155.             | 3.06                     |
| 210.              | 9.669                    | 1158.             | 3.045                    |
| 213.              | 9.648                    | 1161.             | 3.03                     |
| 216.              | 9.628                    | 1164.             | 3.014                    |
| 219.              | 9.61                     | 1167.             | 2.999                    |
| 222.              | 9.589                    | 1170.             | 2.985                    |
| 225.              | 9.571                    | 1173.             | 2.97                     |
| 228.              | 9.551                    | 1176.             | 2.954                    |
| 231.              | 9.532                    | 1179.             | 2.94                     |
| 234.              | 9.515                    | 1182.             | 2.927                    |
| 237.              | 9.495                    | 1185.             | 2.913                    |
| 240.              | 9.475                    | 1188.             | 2.899                    |
| 243.              | 9.456                    | 1191.             | 2.887                    |
| 246.              | 9.436                    | 1194.             | 2.874                    |
| 249.              | 9.417                    | 1197.             | 2.86                     |
| 252.              | 9.399                    | 1200.             | 2.846                    |
| 255.              | 9.38                     | 1203.             | 2.833                    |
| 258.              | 9.361                    | 1206.             | 2.819                    |
| 261.              | 9.342                    | 1209.             | 2.807                    |
| 264.              | 9.327                    | 1212.             | 2.793                    |
| 267.              | 9.309                    | 1215.             | 2.781                    |
| 270.              | 9.292                    | 1218.             | 2.767                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 273.              | 9.273                    | 1221.             | 2.754                    |
| 276.              | 9.254                    | 1224.             | 2.742                    |
| 279.              | 9.236                    | 1227.             | 2.728                    |
| 282.              | 9.217                    | 1230.             | 2.716                    |
| 285.              | 9.2                      | 1233.             | 2.706                    |
| 288.              | 9.181                    | 1236.             | 2.692                    |
| 291.              | 9.162                    | 1239.             | 2.68                     |
| 294.              | 9.145                    | 1242.             | 2.668                    |
| 297.              | 9.127                    | 1245.             | 2.654                    |
| 300.              | 9.108                    | 1248.             | 2.644                    |
| 303.              | 9.092                    | 1251.             | 2.63                     |
| 306.              | 9.072                    | 1254.             | 2.62                     |
| 309.              | 9.053                    | 1257.             | 2.608                    |
| 312.              | 9.035                    | 1260.             | 2.596                    |
| 315.              | 9.018                    | 1263.             | 2.584                    |
| 318.              | 9.001                    | 1266.             | 2.572                    |
| 321.              | 8.984                    | 1269.             | 2.562                    |
| 324.              | 8.967                    | 1272.             | 2.55                     |
| 327.              | 8.948                    | 1275.             | 2.54                     |
| 330.              | 8.931                    | 1278.             | 2.528                    |
| 333.              | 8.912                    | 1281.             | 2.516                    |
| 336.              | 8.897                    | 1284.             | 2.505                    |
| 339.              | 8.878                    | 1287.             | 2.493                    |
| 342.              | 8.861                    | 1290.             | 2.483                    |
| 345.              | 8.842                    | 1293.             | 2.471                    |
| 348.              | 8.825                    | 1296.             | 2.461                    |
| 351.              | 8.808                    | 1299.             | 2.451                    |
| 354.              | 8.791                    | 1302.             | 2.439                    |
| 357.              | 8.773                    | 1305.             | 2.428                    |
| 360.              | 8.757                    | 1308.             | 2.418                    |
| 363.              | 8.74                     | 1311.             | 2.408                    |
| 366.              | 8.727                    | 1314.             | 2.398                    |
| 369.              | 8.709                    | 1317.             | 2.386                    |
| 372.              | 8.694                    | 1320.             | 2.375                    |
| 375.              | 8.679                    | 1323.             | 2.365                    |
| 378.              | 8.662                    | 1326.             | 2.355                    |
| 381.              | 8.647                    | 1329.             | 2.346                    |
| 384.              | 8.63                     | 1332.             | 2.336                    |
| 387.              | 8.614                    | 1335.             | 2.326                    |
| 390.              | 8.597                    | 1338.             | 2.315                    |
| 393.              | 8.58                     | 1341.             | 2.305                    |
| 396.              | 8.565                    | 1344.             | 2.295                    |
| 399.              | 8.55                     | 1347.             | 2.284                    |
| 402.              | 8.536                    | 1350.             | 2.276                    |
| 405.              | 8.521                    | 1353.             | 2.266                    |
| 408.              | 8.505                    | 1356.             | 2.255                    |
| 411.              | 8.49                     | 1359.             | 2.247                    |
| 414.              | 8.474                    | 1362.             | 2.236                    |
| 417.              | 8.459                    | 1365.             | 2.228                    |
| 420.              | 8.444                    | 1368.             | 2.219                    |
| 423.              | 8.43                     | 1371.             | 2.207                    |
| 426.              | 8.413                    | 1374.             | 2.199                    |
| 429.              | 8.398                    | 1377.             | 2.19                     |
| 432.              | 8.384                    | 1380.             | 2.182                    |
| 435.              | 8.369                    | 1383.             | 2.171                    |
| 438.              | 8.352                    | 1386.             | 2.163                    |
| 441.              | 8.338                    | 1389.             | 2.154                    |
| 444.              | 8.323                    | 1392.             | 2.146                    |
| 447.              | 8.306                    | 1395.             | 2.135                    |
| 450.              | 8.292                    | 1398.             | 2.127                    |
| 453.              | 8.278                    | 1401.             | 2.117                    |
| 456.              | 8.263                    | 1404.             | 2.108                    |
| 459.              | 8.249                    | 1407.             | 2.1                      |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 462.              | 8.234                    | 1410.             | 2.091                    |
| 465.              | 8.219                    | 1413.             | 2.082                    |
| 468.              | 8.203                    | 1416.             | 2.074                    |
| 471.              | 8.188                    | 1419.             | 2.065                    |
| 474.              | 8.172                    | 1422.             | 2.057                    |
| 477.              | 8.157                    | 1425.             | 2.046                    |
| 480.              | 8.143                    | 1428.             | 2.039                    |
| 483.              | 8.126                    | 1431.             | 2.031                    |
| 486.              | 8.113                    | 1434.             | 2.022                    |
| 489.              | 8.097                    | 1437.             | 2.014                    |
| 492.              | 8.082                    | 1440.             | 2.005                    |
| 495.              | 8.066                    | 1443.             | 1.997                    |
| 498.              | 8.051                    | 1446.             | 1.988                    |
| 501.              | 8.036                    | 1449.             | 1.98                     |
| 504.              | 8.02                     | 1452.             | 1.971                    |
| 507.              | 8.005                    | 1455.             | 1.962                    |
| 510.              | 7.989                    | 1458.             | 1.954                    |
| 513.              | 7.974                    | 1461.             | 1.947                    |
| 516.              | 7.959                    | 1464.             | 1.937                    |
| 519.              | 7.942                    | 1467.             | 1.93                     |
| 522.              | 7.928                    | 1470.             | 1.921                    |
| 525.              | 7.911                    | 1473.             | 1.913                    |
| 528.              | 7.894                    | 1476.             | 1.904                    |
| 531.              | 7.878                    | 1479.             | 1.899                    |
| 534.              | 7.863                    | 1482.             | 1.889                    |
| 537.              | 7.847                    | 1485.             | 1.88                     |
| 540.              | 7.83                     | 1488.             | 1.873                    |
| 543.              | 7.815                    | 1491.             | 1.865                    |
| 546.              | 7.801                    | 1494.             | 1.856                    |
| 549.              | 7.786                    | 1497.             | 1.849                    |
| 552.              | 7.77                     | 1500.             | 1.841                    |
| 555.              | 7.755                    | 1503.             | 1.836                    |
| 558.              | 7.741                    | 1506.             | 1.827                    |
| 561.              | 7.726                    | 1509.             | 1.817                    |
| 564.              | 7.71                     | 1512.             | 1.81                     |
| 567.              | 7.698                    | 1515.             | 1.801                    |
| 570.              | 7.685                    | 1518.             | 1.795                    |
| 573.              | 7.671                    | 1521.             | 1.786                    |
| 576.              | 7.657                    | 1524.             | 1.779                    |
| 579.              | 7.643                    | 1527.             | 1.772                    |
| 582.              | 7.63                     | 1530.             | 1.765                    |
| 585.              | 7.618                    | 1533.             | 1.755                    |
| 588.              | 7.604                    | 1536.             | 1.748                    |
| 591.              | 7.592                    | 1539.             | 1.741                    |
| 594.              | 7.58                     | 1542.             | 1.735                    |
| 597.              | 7.568                    | 1545.             | 1.726                    |
| 600.              | 7.553                    | 1548.             | 1.719                    |
| 603.              | 7.542                    | 1551.             | 1.714                    |
| 606.              | 7.528                    | 1554.             | 1.707                    |
| 609.              | 7.516                    | 1557.             | 1.699                    |
| 612.              | 7.503                    | 1560.             | 1.692                    |
| 615.              | 7.489                    | 1563.             | 1.685                    |
| 618.              | 7.477                    | 1566.             | 1.676                    |
| 621.              | 7.465                    | 1569.             | 1.671                    |
| 624.              | 7.453                    | 1572.             | 1.663                    |
| 627.              | 7.441                    | 1575.             | 1.656                    |
| 630.              | 7.429                    | 1578.             | 1.651                    |
| 633.              | 7.415                    | 1581.             | 1.644                    |
| 636.              | 7.403                    | 1584.             | 1.635                    |
| 639.              | 7.391                    | 1587.             | 1.628                    |
| 642.              | 7.378                    | 1590.             | 1.623                    |
| 645.              | 7.365                    | 1593.             | 1.616                    |
| 648.              | 7.353                    | 1596.             | 1.608                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 651.              | 7.341                    | 1599.             | 1.603                    |
| 654.              | 7.329                    | 1602.             | 1.594                    |
| 657.              | 7.314                    | 1605.             | 1.589                    |
| 660.              | 7.304                    | 1608.             | 1.582                    |
| 663.              | 7.291                    | 1611.             | 1.575                    |
| 666.              | 7.279                    | 1614.             | 1.567                    |
| 669.              | 7.269                    | 1617.             | 1.562                    |
| 672.              | 7.255                    | 1620.             | 1.555                    |
| 675.              | 7.243                    | 1623.             | 1.548                    |
| 678.              | 7.23                     | 1626.             | 1.543                    |
| 681.              | 7.218                    | 1629.             | 1.534                    |
| 684.              | 7.206                    | 1632.             | 1.529                    |
| 687.              | 7.194                    | 1635.             | 1.522                    |
| 690.              | 7.182                    | 1638.             | 1.515                    |
| 693.              | 7.169                    | 1641.             | 1.51                     |
| 696.              | 7.156                    | 1644.             | 1.502                    |
| 699.              | 7.144                    | 1647.             | 1.495                    |
| 702.              | 7.132                    | 1650.             | 1.488                    |
| 705.              | 7.12                     | 1653.             | 1.483                    |
| 708.              | 7.106                    | 1656.             | 1.476                    |
| 711.              | 7.094                    | 1659.             | 1.471                    |
| 714.              | 7.08                     | 1662.             | 1.464                    |
| 717.              | 7.068                    | 1665.             | 1.456                    |
| 720.              | 7.056                    | 1668.             | 1.45                     |
| 723.              | 7.042                    | 1671.             | 1.445                    |
| 726.              | 7.029                    | 1674.             | 1.438                    |
| 729.              | 7.017                    | 1677.             | 1.433                    |
| 732.              | 7.003                    | 1680.             | 1.428                    |
| 735.              | 6.993                    | 1683.             | 1.421                    |
| 738.              | 6.981                    | 1686.             | 1.416                    |
| 741.              | 6.969                    | 1689.             | 1.409                    |
| 744.              | 6.957                    | 1692.             | 1.402                    |
| 747.              | 6.946                    | 1695.             | 1.397                    |
| 750.              | 6.933                    | 1698.             | 1.392                    |
| 753.              | 6.921                    | 1701.             | 1.384                    |
| 756.              | 6.908                    | 1704.             | 1.378                    |
| 759.              | 6.896                    | 1707.             | 1.372                    |
| 762.              | 6.871                    | 1710.             | 1.368                    |
| 765.              | 6.826                    | 1713.             | 1.361                    |
| 768.              | 6.783                    | 1716.             | 1.356                    |
| 771.              | 6.74                     | 1719.             | 1.351                    |
| 774.              | 6.694                    | 1722.             | 1.346                    |
| 777.              | 6.653                    | 1725.             | 1.341                    |
| 780.              | 6.611                    | 1728.             | 1.336                    |
| 783.              | 6.568                    | 1731.             | 1.329                    |
| 786.              | 6.525                    | 1734.             | 1.324                    |
| 789.              | 6.484                    | 1737.             | 1.319                    |
| 792.              | 6.443                    | 1740.             | 1.314                    |
| 795.              | 6.402                    | 1743.             | 1.307                    |
| 798.              | 6.36                     | 1746.             | 1.303                    |
| 801.              | 6.319                    | 1749.             | 1.295                    |
| 804.              | 6.28                     | 1752.             | 1.29                     |
| 807.              | 6.241                    | 1755.             | 1.286                    |
| 810.              | 6.201                    | 1758.             | 1.281                    |
| 813.              | 6.162                    | 1761.             | 1.276                    |
| 816.              | 6.121                    | 1764.             | 1.271                    |
| 819.              | 6.083                    | 1767.             | 1.266                    |
| 822.              | 6.044                    | 1770.             | 1.259                    |
| 825.              | 6.006                    | 1773.             | 1.254                    |
| 828.              | 5.968                    | 1776.             | 1.248                    |
| 831.              | 5.931                    | 1779.             | 1.245                    |
| 834.              | 5.893                    | 1782.             | 1.24                     |
| 837.              | 5.855                    | 1785.             | 1.235                    |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 840.              | 5.817                    | 1788.             | 1.228                    |
| 843.              | 5.782                    | 1791.             | 1.223                    |
| 846.              | 5.745                    | 1794.             | 1.218                    |
| 849.              | 5.708                    | 1797.             | 1.212                    |
| 852.              | 5.672                    | 1800.             | 1.204                    |
| 855.              | 5.634                    | 1803.             | 1.199                    |
| 858.              | 5.598                    | 1806.             | 1.194                    |
| 861.              | 5.566                    | 1809.             | 1.187                    |
| 864.              | 5.528                    | 1812.             | 1.18                     |
| 867.              | 5.492                    | 1815.             | 1.175                    |
| 870.              | 5.46                     | 1818.             | 1.168                    |
| 873.              | 5.425                    | 1821.             | 1.161                    |
| 876.              | 5.391                    | 1824.             | 1.158                    |
| 879.              | 5.357                    | 1827.             | 1.152                    |
| 882.              | 5.321                    | 1830.             | 1.147                    |
| 885.              | 5.288                    | 1833.             | 1.142                    |
| 888.              | 5.256                    | 1836.             | 1.137                    |
| 891.              | 5.221                    | 1839.             | 1.132                    |
| 894.              | 5.19                     | 1842.             | 1.125                    |
| 897.              | 5.158                    | 1845.             | 1.12                     |
| 900.              | 5.124                    | 1848.             | 1.113                    |
| 903.              | 5.093                    | 1851.             | 1.109                    |
| 906.              | 5.06                     | 1854.             | 1.102                    |
| 909.              | 5.028                    | 1857.             | 1.092                    |
| 912.              | 4.995                    | 1860.             | 1.086                    |
| 915.              | 4.964                    | 1863.             | 1.082                    |
| 918.              | 4.934                    | 1866.             | 1.075                    |
| 921.              | 4.903                    | 1869.             | 1.07                     |
| 924.              | 4.872                    | 1872.             | 1.065                    |
| 927.              | 4.841                    | 1875.             | 1.06                     |
| 930.              | 4.812                    | 1878.             | 1.06                     |
| 933.              | 4.779                    | 1881.             | 1.054                    |
| 936.              | 4.75                     | 1884.             | 1.049                    |
| 939.              | 4.721                    | 1887.             | 1.044                    |
| 942.              | 4.69                     | 1890.             | 1.039                    |
| 945.              | 4.661                    |                   |                          |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 4.727

VISUAL ESTIMATION RESULTSEstimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 3.587E-6        | ft/sec |
| y0               | 35.59           | ft     |

K = 0.0001093 cm/sec  
 T = K\*b = 5.923E-5 ft<sup>2</sup>/sec (0.05502 sq. cm/sec)



In-Situ Inc. MiniTroll Pro  
 Report generated: 4/28/2004 14:46:35  
 Report from file: ...\\SN09731 2004-04-20 093526 AgLUS13\_2.bin  
 Win-Situ Version 4.46  
 Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS13\_2

Test defined on: 4/20/2004 9:35:17  
 Test started on: 4/20/2004 9:35:26  
 Test stopped on: 4/20/2004 10:07:33  
 Test extracted on: N/A N/A

Data gathered using Logarithmic testing  
 Maximum time between data points: 60.0 Seconds.  
 Number of data samples: 125

TOTAL DATA SAMPLES 125

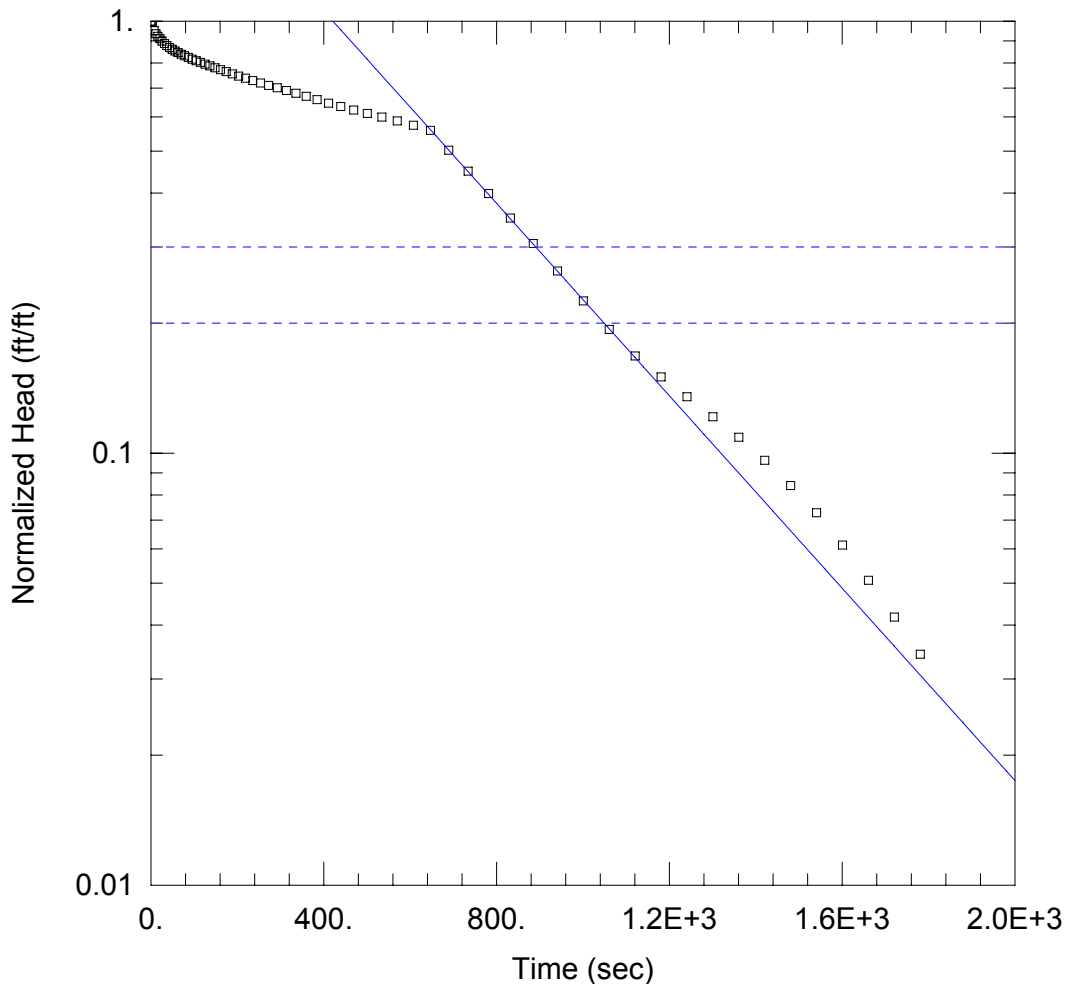
Channel number [1]  
 Measurement type: Temperature  
 Channel name: OnBoard Temp

Channel number [2]  
 Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1645.920 meters (5400.000 feet)

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| 4/20/2004 | 9:35:26 | 0        | 54.15                 | 10.933              |
| 4/20/2004 | 9:35:26 | 0.3      | 54.17                 | 10.944              |
| 4/20/2004 | 9:35:27 | 0.6      | 54.19                 | 10.947              |
| 4/20/2004 | 9:35:27 | 0.9      | 54.19                 | 10.948              |
| 4/20/2004 | 9:35:27 | 1.2      | 54.22                 | 10.95               |
| 4/20/2004 | 9:35:28 | 1.5      | 54.22                 | 10.95               |
| 4/20/2004 | 9:35:28 | 1.8      | 54.22                 | 10.952              |
| 4/20/2004 | 9:35:28 | 2.1      | 54.22                 | 10.952              |
| 4/20/2004 | 9:35:28 | 2.4      | 54.24                 | 10.953              |
| 4/20/2004 | 9:35:29 | 2.7      | 54.24                 | 10.953              |
| 4/20/2004 | 9:35:29 | 3        | 54.24                 | 10.953              |
| 4/20/2004 | 9:35:29 | 3.3      | 54.24                 | 10.953              |
| 4/20/2004 | 9:35:30 | 3.6      | 54.24                 | 10.955              |
| 4/20/2004 | 9:35:30 | 3.9      | 54.24                 | 10.955              |
| 4/20/2004 | 9:35:30 | 4.2      | 54.24                 | 10.955              |
| 4/20/2004 | 9:35:31 | 4.5      | 54.24                 | 10.955              |
| 4/20/2004 | 9:35:31 | 4.8      | 54.24                 | 10.955              |
| 4/20/2004 | 9:35:31 | 5.1      | 54.26                 | 10.956              |
| 4/20/2004 | 9:35:31 | 5.4      | 54.24                 | 10.957              |

| Date      | Time    | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|---------|----------|-----------------------|---------------------|
| 4/20/2004 | 9:35:32 | 5.7      | 54.26                 | 10.956              |
| 4/20/2004 | 9:35:32 | 6        | 54.26                 | 10.909              |
| 4/20/2004 | 9:35:32 | 6.4      | 54.26                 | 10.987              |
| 4/20/2004 | 9:35:33 | 6.7      | 54.26                 | 10.96               |
| 4/20/2004 | 9:35:33 | 7.1      | 54.26                 | 10.932              |
| 4/20/2004 | 9:35:34 | 7.5      | 54.26                 | 10.96               |
| 4/20/2004 | 9:35:34 | 8        | 54.26                 | 10.948              |
| 4/20/2004 | 9:35:34 | 8.4      | 54.26                 | 10.902              |
| 4/20/2004 | 9:35:35 | 8.9      | 54.26                 | 10.801              |
| 4/20/2004 | 9:35:35 | 9.5      | 54.26                 | 10.709              |
| 4/20/2004 | 9:35:36 | 10       | 54.24                 | 10.584              |
| 4/20/2004 | 9:35:37 | 10.6     | 54.24                 | 10.415              |
| 4/20/2004 | 9:35:37 | 11.3     | 54.24                 | 10.163              |
| 4/20/2004 | 9:35:38 | 11.9     | 54.24                 | 9.943               |
| 4/20/2004 | 9:35:39 | 12.6     | 54.24                 | 9.683               |
| 4/20/2004 | 9:35:39 | 13.4     | 54.22                 | 9.41                |
| 4/20/2004 | 9:35:40 | 14.2     | 54.22                 | 9.116               |
| 4/20/2004 | 9:35:41 | 15       | 54.22                 | 8.808               |
| 4/20/2004 | 9:35:42 | 15.9     | 54.22                 | 8.48                |
| 4/20/2004 | 9:35:43 | 16.8     | 54.22                 | 8.138               |
| 4/20/2004 | 9:35:44 | 17.8     | 54.22                 | 7.767               |
| 4/20/2004 | 9:35:45 | 18.9     | 54.22                 | 7.384               |
| 4/20/2004 | 9:35:46 | 20       | 54.22                 | 6.977               |
| 4/20/2004 | 9:35:47 | 21.2     | 54.22                 | 6.551               |
| 4/20/2004 | 9:35:48 | 22.4     | 54.22                 | 6.11                |
| 4/20/2004 | 9:35:50 | 23.8     | 54.22                 | 5.647               |
| 4/20/2004 | 9:35:51 | 25.2     | 54.22                 | 5.165               |
| 4/20/2004 | 9:35:53 | 26.7     | 54.22                 | 4.653               |
| 4/20/2004 | 9:35:54 | 28.2     | 54.22                 | 4.272               |
| 4/20/2004 | 9:35:56 | 29.8     | 54.22                 | 4.021               |
| 4/20/2004 | 9:35:57 | 31.5     | 54.24                 | 3.807               |
| 4/20/2004 | 9:35:59 | 33.3     | 54.24                 | 3.598               |
| 4/20/2004 | 9:36:01 | 35.2     | 54.24                 | 3.407               |
| 4/20/2004 | 9:36:03 | 37.3     | 54.24                 | 3.177               |
| 4/20/2004 | 9:36:05 | 39.5     | 54.31                 | 2.972               |
| 4/20/2004 | 9:36:08 | 41.8     | 54.28                 | 2.748               |
| 4/20/2004 | 9:36:10 | 44.3     | 54.28                 | 2.474               |
| 4/20/2004 | 9:36:13 | 46.9     | 54.28                 | 2.173               |
| 4/20/2004 | 9:36:16 | 49.7     | 54.31                 | 1.855               |
| 4/20/2004 | 9:36:19 | 52.6     | 54.31                 | 1.523               |
| 4/20/2004 | 9:36:22 | 55.7     | 54.33                 | 1.102               |
| 4/20/2004 | 9:36:25 | 59       | 54.28                 | 0.562               |
| 4/20/2004 | 9:36:28 | 62.5     | 54.31                 | 0.04                |
| 4/20/2004 | 9:36:32 | 66.2     | 54.26                 | -0.015              |
| 4/20/2004 | 9:36:36 | 70.1     | 54.26                 | 0.066               |
| 4/20/2004 | 9:36:40 | 74.3     | 54.24                 | 0.533               |
| 4/20/2004 | 9:36:45 | 78.7     | 54.24                 | 0.708               |
| 4/20/2004 | 9:36:49 | 83.4     | 54.22                 | 0.846               |
| 4/20/2004 | 9:36:54 | 88.4     | 54.19                 | 0.97                |
| 4/20/2004 | 9:37:00 | 93.7     | 54.22                 | 1.094               |
| 4/20/2004 | 9:37:05 | 99.3     | 54.17                 | 1.221               |
| 4/20/2004 | 9:37:11 | 105.2    | 54.15                 | 1.334               |
| 4/20/2004 | 9:37:17 | 111.5    | 54.17                 | 1.432               |
| 4/20/2004 | 9:37:24 | 118.1    | 54.13                 | 1.514               |
| 4/20/2004 | 9:37:31 | 125.1    | 54.1                  | 1.602               |
| 4/20/2004 | 9:37:39 | 132.6    | 54.15                 | 1.683               |

| Date      | Time     | ET (sec) | Chan[1]<br>Fahrenheit | Chan[2]<br>Feet H2O |
|-----------|----------|----------|-----------------------|---------------------|
| 4/20/2004 | 9:37:46  | 140.5    | 54.13                 | 1.764               |
| 4/20/2004 | 9:37:55  | 148.9    | 54.08                 | 1.841               |
| 4/20/2004 | 9:38:04  | 157.8    | 54.08                 | 1.92                |
| 4/20/2004 | 9:38:13  | 167.2    | 54.06                 | 1.999               |
| 4/20/2004 | 9:38:23  | 177.2    | 54.06                 | 2.076               |
| 4/20/2004 | 9:38:34  | 187.8    | 54.1                  | 2.156               |
| 4/20/2004 | 9:38:45  | 199      | 54.08                 | 2.235               |
| 4/20/2004 | 9:38:57  | 210.9    | 54.08                 | 2.319               |
| 4/20/2004 | 9:39:09  | 223.5    | 54.13                 | 2.402               |
| 4/20/2004 | 9:39:23  | 236.8    | 54.13                 | 2.491               |
| 4/20/2004 | 9:39:37  | 250.9    | 54.15                 | 2.581               |
| 4/20/2004 | 9:39:52  | 265.8    | 54.19                 | 2.675               |
| 4/20/2004 | 9:40:08  | 281.6    | 54.22                 | 2.774               |
| 4/20/2004 | 9:40:24  | 298.4    | 54.19                 | 2.867               |
| 4/20/2004 | 9:40:42  | 316.2    | 54.24                 | 2.965               |
| 4/20/2004 | 9:41:01  | 335      | 54.33                 | 3.067               |
| 4/20/2004 | 9:41:21  | 354.9    | 54.44                 | 3.169               |
| 4/20/2004 | 9:41:42  | 376      | 54.46                 | 3.269               |
| 4/20/2004 | 9:42:04  | 398.4    | 54.56                 | 3.378               |
| 4/20/2004 | 9:42:28  | 422.1    | 54.67                 | 3.49                |
| 4/20/2004 | 9:42:53  | 447.2    | 54.78                 | 3.607               |
| 4/20/2004 | 9:43:20  | 473.8    | 54.89                 | 3.736               |
| 4/20/2004 | 9:43:48  | 502      | 55.03                 | 3.872               |
| 4/20/2004 | 9:44:18  | 531.9    | 55.1                  | 3.999               |
| 4/20/2004 | 9:44:49  | 563.5    | 55.23                 | 4.128               |
| 4/20/2004 | 9:45:23  | 597      | 55.23                 | 4.246               |
| 4/20/2004 | 9:45:58  | 632.5    | 55.3                  | 4.38                |
| 4/20/2004 | 9:46:36  | 670.1    | 55.28                 | 4.511               |
| 4/20/2004 | 9:47:16  | 709.9    | 55.26                 | 4.656               |
| 4/20/2004 | 9:47:58  | 752.1    | 55.23                 | 4.827               |
| 4/20/2004 | 9:48:43  | 796.8    | 55.26                 | 5.439               |
| 4/20/2004 | 9:49:30  | 844.2    | 55.19                 | 6.021               |
| 4/20/2004 | 9:50:20  | 894.4    | 55.16                 | 6.575               |
| 4/20/2004 | 9:51:13  | 947.5    | 55.19                 | 7.11                |
| 4/20/2004 | 9:52:10  | 1003.8   | 55.12                 | 7.598               |
| 4/20/2004 | 9:53:09  | 1063.4   | 55.05                 | 8.055               |
| 4/20/2004 | 9:54:09  | 1123.4   | 55.03                 | 8.481               |
| 4/20/2004 | 9:55:09  | 1183.4   | 55.01                 | 8.828               |
| 4/20/2004 | 9:56:09  | 1243.4   | 54.96                 | 9.107               |
| 4/20/2004 | 9:57:09  | 1303.4   | 54.89                 | 9.301               |
| 4/20/2004 | 9:58:09  | 1363.4   | 54.85                 | 9.466               |
| 4/20/2004 | 9:59:09  | 1423.4   | 54.83                 | 9.615               |
| 4/20/2004 | 10:00:09 | 1483.4   | 54.78                 | 9.753               |
| 4/20/2004 | 10:01:09 | 1543.4   | 54.71                 | 9.891               |
| 4/20/2004 | 10:02:09 | 1603.4   | 54.69                 | 10.024              |
| 4/20/2004 | 10:03:09 | 1663.4   | 54.65                 | 10.148              |
| 4/20/2004 | 10:04:09 | 1723.4   | 54.67                 | 10.274              |
| 4/20/2004 | 10:05:09 | 1783.4   | 54.65                 | 10.389              |
| 4/20/2004 | 10:06:09 | 1843.4   | 54.62                 | 10.488              |
| 4/20/2004 | 10:07:09 | 1903.4   | 54.6                  | 10.57               |



AGLUS 13 TEST #2

Data Set: Y:\...\AgLUS13\_test2\_13JUL2010.aqt

Date: 07/26/10

Time: 15:36:56

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 13

Test Date: 04/20/2004

AQUIFER DATA

Saturated Thickness: 16.51 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 13)

Initial Displacement: 10.95 ft

Static Water Column Height: 16.51 ft

Total Well Penetration Depth: 16.51 ft

Screen Length: 9.72 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 4.295E-6 ft/sec

y0 = 32.24 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 13\AgLUS13\_test2\_13  
 Title: AgLUS 13 test #2  
 Date: 07/26/10  
 Time: 15:37:17

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 04/20/2004  
 Test Well: AgLUS 13

AQUIFER DATA

Saturated Thickness: 16.51 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 13

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 10.95 ft  
 Static Water Column Height: 16.51 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.72 ft  
 Total Well Penetration Depth: 16.51 ft

No. of Observations: 63

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 10.95             | 335.9      | 7.455             |
| 3.7              | 10.88             | 359.6      | 7.338             |
| 7.6              | 10.41             | 384.7      | 7.209             |
| 11.8             | 10.24             | 411.3      | 7.073             |
| 16.2             | 10.1              | 439.5      | 6.946             |
| 20.9             | 9.975             | 469.4      | 6.817             |
| 25.9             | 9.851             | 501.       | 6.699             |
| 31.2             | 9.724             | 534.5      | 6.565             |
| 36.8             | 9.611             | 570.       | 6.434             |
| 42.7             | 9.513             | 607.6      | 6.289             |
| 49.              | 9.431             | 647.4      | 6.118             |
| 55.6             | 9.343             | 689.6      | 5.506             |
| 62.6             | 9.262             | 734.3      | 4.924             |
| 70.1             | 9.181             | 781.7      | 4.37              |
| 78.              | 9.104             | 831.9      | 3.835             |
| 86.4             | 9.025             | 885.       | 3.347             |
| 95.3             | 8.946             | 941.3      | 2.89              |
| 104.7            | 8.869             | 1000.9     | 2.464             |
| 114.7            | 8.789             | 1060.9     | 2.117             |
| 125.3            | 8.71              | 1120.9     | 1.838             |
| 136.5            | 8.626             | 1180.9     | 1.644             |
| 148.4            | 8.543             | 1240.9     | 1.479             |
| 161.             | 8.454             | 1300.9     | 1.33              |
| 174.3            | 8.364             | 1360.9     | 1.192             |
| 188.4            | 8.27              | 1420.9     | 1.054             |
| 203.3            | 8.171             | 1480.9     | 0.921             |
| 219.1            | 8.078             | 1540.9     | 0.797             |
| 235.9            | 7.98              | 1600.9     | 0.671             |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 253.7             | 7.878                    | 1660.9            | 0.556                    |
| 272.5             | 7.776                    | 1720.9            | 0.457                    |
| 292.4             | 7.676                    | 1780.9            | 0.375                    |
| 313.5             | 7.567                    |                   |                          |

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### SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 In(Re/rw): 4.727

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### VISUAL ESTIMATION RESULTS

#### Estimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 4.295E-6        | ft/sec |
| y0               | 32.24           | ft     |

K = 0.0001309 cm/sec

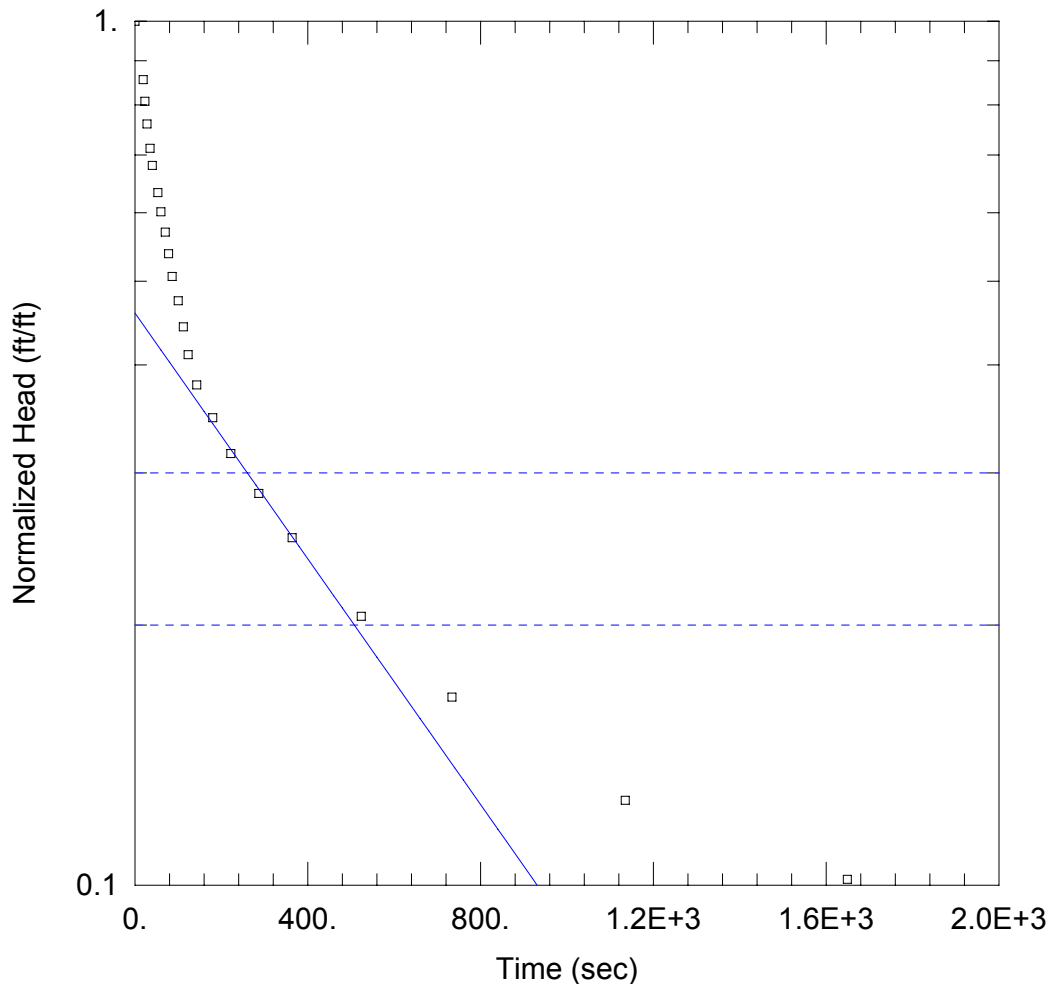
T = K\*b = 7.092E-5 ft<sup>2</sup>/sec (0.06588 sq. cm/sec)

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**Date** 27-Feb-2004  
**Station ID** 394947104335201  
**Location** AGLUS-14, test 1  
**By** SSP, JAB

**Measuring Point** 1.75 ft. above land surface  
**Depth of Pump** 30 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments                                |
|------------|--------------|---------------|-------------------|----------|---|
| 8:20:00    | 0:00:00      |               | 22.21             |          | Static water level before lowering pump |
| 8:21:00    | 0:01:00      |               |                   |          | lower pump to 30 ft BMP                 |
| 8:40:00    | 0:20:00      |               | 22.17             |          | water level after lowering pump         |
| 8:41:00    | 0:21:00      |               |                   |          | pump on. Pumping rate = 4.0 gpm         |
| 8:41:36    | 0:21:36      |               | 29.12             | 6.91     |   |
| 8:41:40    | 0:21:40      | 0:00:00       |                   |          | Pump off. Removed 2gal.                 |
| 8:41:59    | 0:21:59      | 0:00:19       | 27.60             | 5.39     |   |
| 8:42:03    | 0:22:03      | 0:00:23       | 27.30             | 5.09     |   |
| 8:42:08    | 0:22:08      | 0:00:28       | 27.00             | 4.79     |   |
| 8:42:15    | 0:22:15      | 0:00:35       | 26.70             | 4.49     |   |
| 8:42:20    | 0:22:20      | 0:00:40       | 26.50             | 4.29     |   |
| 8:42:33    | 0:22:33      | 0:00:53       | 26.20             | 3.99     |   |
| 8:42:40    | 0:22:40      | 0:01:00       | 26.00             | 3.79     |   |
| 8:42:50    | 0:22:50      | 0:01:10       | 25.80             | 3.59     |   |
| 8:42:58    | 0:22:58      | 0:01:18       | 25.60             | 3.39     |   |
| 8:43:06    | 0:23:06      | 0:01:26       | 25.40             | 3.19     |   |
| 8:43:20    | 0:23:20      | 0:01:40       | 25.20             | 2.99     |   |
| 8:43:32    | 0:23:32      | 0:01:52       | 25.00             | 2.79     |   |
| 8:43:43    | 0:23:43      | 0:02:03       | 24.80             | 2.59     |   |
| 8:44:03    | 0:24:03      | 0:02:23       | 24.60             | 2.39     |   |
| 8:44:40    | 0:24:40      | 0:03:00       | 24.40             | 2.19     |   |
| 8:45:22    | 0:25:22      | 0:03:42       | 24.20             | 1.99     |   |
| 8:46:27    | 0:26:27      | 0:04:47       | 24.00             | 1.79     |   |
| 8:47:44    | 0:27:44      | 0:06:04       | 23.80             | 1.59     |   |
| 8:50:24    | 0:30:24      | 0:08:44       | 23.50             | 1.29     |   |
| 8:53:54    | 0:33:54      | 0:12:14       | 23.25             | 1.04     |   |
| 9:00:35    | 0:40:35      | 0:18:55       | 23.00             | 0.79     |   |
| 9:09:09    | 0:49:09      | 0:27:29       | 22.85             | 0.64     | End of Test #1                          |



AGLUS 14 TEST #1

Data Set: Y:\...\AgLUS14\_test1\_13JUL2010.aqt

Date: 07/26/10

Time: 15:38:11

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 14

Test Date: 02/27/2004

AQUIFER DATA

Saturated Thickness: 12.91 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 14)

Initial Displacement: 6.3 ft

Static Water Column Height: 12.91 ft

Total Well Penetration Depth: 12.91 ft

Screen Length: 9.71 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 2.65E-6 ft/sec

y0 = 2.893 ft



Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 14\AgLUS14\_test1\_13  
 Title: AgLUS 14 test #1  
 Date: 07/26/10  
 Time: 15:38:42

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/27/2004  
 Test Well: AgLUS 14

AQUIFER DATA

Saturated Thickness: 12.91 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 14

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 6.3 ft  
 Static Water Column Height: 12.91 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.71 ft  
 Total Well Penetration Depth: 12.91 ft

No. of Observations: 23

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 6.91              | 112.       | 2.79              |
| 19.              | 5.39              | 123.       | 2.59              |
| 23.              | 5.09              | 143.       | 2.39              |
| 28.              | 4.79              | 180.       | 2.19              |
| 35.              | 4.49              | 222.       | 1.99              |
| 40.              | 4.29              | 287.       | 1.79              |
| 53.              | 3.99              | 364.       | 1.59              |
| 60.              | 3.79              | 524.       | 1.29              |
| 70.              | 3.59              | 734.       | 1.04              |
| 78.              | 3.39              | 1135.      | 0.79              |
| 86.              | 3.19              | 1649.      | 0.64              |
| 100.             | 2.99              |            |                   |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 4.563

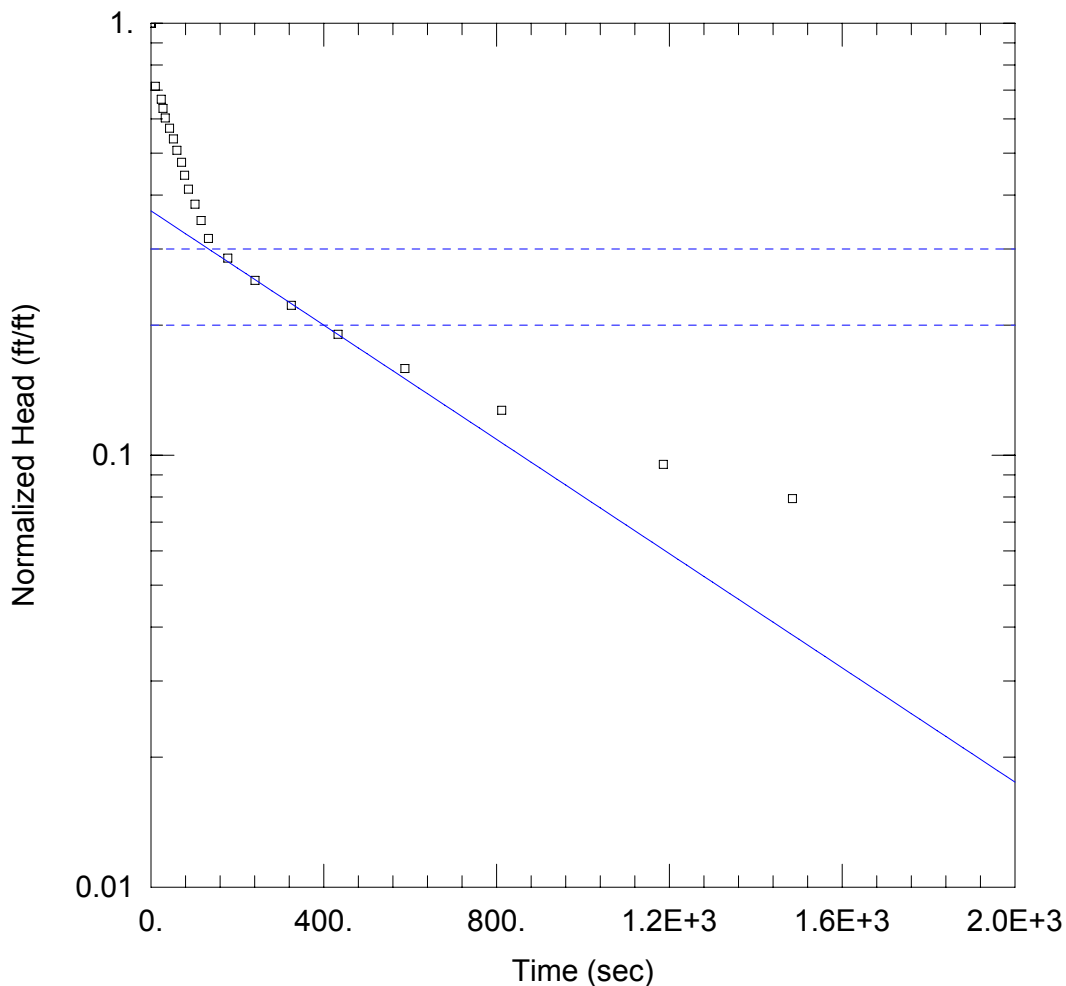
VISUAL ESTIMATION RESULTSEstimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 2.65E-6  | ft/sec |
| y0        | 2.893    | ft     |

**Date** 27-Feb-2004  
**Station ID** 394947104335201  
**Location** AGLUS-14, test 2  
**By** SSP, JAB

**Measuring Point** 1.75 ft. above land surface  
**Depth of Pump** 30 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments  |
|------------|--------------|---------------|-------------------|----------|---|
| 9:15:00    | 0:00:00      |               | 22.80             |          | Static water level before starting test #2. Pump set at 30 ft BMP |
| 9:16:30    | 0:01:30      |               |                   |          | pump on. Pumping rate = 1.0 gpm                                   |
| 9:17:01    | 0:02:01      |               | 26.35             | 3.55     |   |
| 9:17:20    | 0:02:20      |               | 29.10             | 6.30     |   |
| 9:17:37    | 0:02:37      | 0:00:00       |                   |          | Pump off. Removed 2gal.   |
| 9:17:47    | 0:02:47      | 0:00:10       | 27.30             | 4.50     |   |
| 9:18:01    | 0:03:01      | 0:00:24       | 27.00             | 4.20     |   |
| 9:18:05    | 0:03:05      | 0:00:28       | 26.80             | 4.00     |   |
| 9:18:10    | 0:03:10      | 0:00:33       | 26.60             | 3.80     |   |
| 9:18:20    | 0:03:20      | 0:00:43       | 26.40             | 3.60     |   |
| 9:18:29    | 0:03:29      | 0:00:52       | 26.20             | 3.40     |   |
| 9:18:37    | 0:03:37      | 0:01:00       | 26.00             | 3.20     |   |
| 9:18:48    | 0:03:48      | 0:01:11       | 25.80             | 3.00     |   |
| 9:18:55    | 0:03:55      | 0:01:18       | 25.60             | 2.80     |   |
| 9:19:04    | 0:04:04      | 0:01:27       | 25.40             | 2.60     |   |
| 9:19:19    | 0:04:19      | 0:01:42       | 25.20             | 2.40     |   |
| 9:19:33    | 0:04:33      | 0:01:56       | 25.00             | 2.20     |   |
| 9:19:50    | 0:04:50      | 0:02:13       | 24.80             | 2.00     |   |
| 9:20:35    | 0:05:35      | 0:02:58       | 24.60             | 1.80     |   |
| 9:21:38    | 0:06:38      | 0:04:01       | 24.40             | 1.60     |   |
| 9:23:02    | 0:08:02      | 0:05:25       | 24.20             | 1.40     |   |
| 9:24:50    | 0:09:50      | 0:07:13       | 24.00             | 1.20     |   |
| 9:27:25    | 0:12:25      | 0:09:48       | 23.80             | 1.00     |   |
| 9:31:09    | 0:16:09      | 0:13:32       | 23.60             | 0.80     |   |
| 9:37:23    | 0:22:23      | 0:19:46       | 23.40             | 0.60     |   |
| 9:42:22    | 0:27:22      | 0:24:45       | 23.30             | 0.50     | End of test #2  |



### AGLUS 14 TEST #2

Data Set: Y:\...\AgLUS14\_test2\_13JUL2010.aqt

Date: 07/26/10

Time: 15:39:17

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 14

Test Date: 02/27/2004

### AQUIFER DATA

Saturated Thickness: 12.91 ft

Anisotropy Ratio ( $K_z/K_r$ ): 0.01

### WELL DATA (AgLUS 14)

Initial Displacement: 6.3 ft

Static Water Column Height: 12.91 ft

Total Well Penetration Depth: 12.91 ft

Screen Length: 9.71 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 2.464E-6$  ft/sec

$y_0 = 2.316$  ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 14\AgLUS14\_test2\_13  
 Title: AgLUS 14 test #2  
 Date: 07/26/10  
 Time: 15:39:45

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/27/2004  
 Test Well: AgLUS 14

AQUIFER DATA

Saturated Thickness: 12.91 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 14

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 6.3 ft  
 Static Water Column Height: 12.91 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.71 ft  
 Total Well Penetration Depth: 12.91 ft

No. of Observations: 22

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 6.3               | 102.       | 2.4               |
| 10.              | 4.5               | 116.       | 2.2               |
| 24.              | 4.2               | 133.       | 2.                |
| 28.              | 4.                | 178.       | 1.8               |
| 33.              | 3.8               | 241.       | 1.6               |
| 43.              | 3.6               | 325.       | 1.4               |
| 52.              | 3.4               | 433.       | 1.2               |
| 60.              | 3.2               | 588.       | 1.                |
| 71.              | 3.                | 812.       | 0.8               |
| 78.              | 2.8               | 1186.      | 0.6               |
| 87.              | 2.6               | 1485.      | 0.5               |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 In(Re/rw): 4.563

VISUAL ESTIMATION RESULTSEstimated Parameters

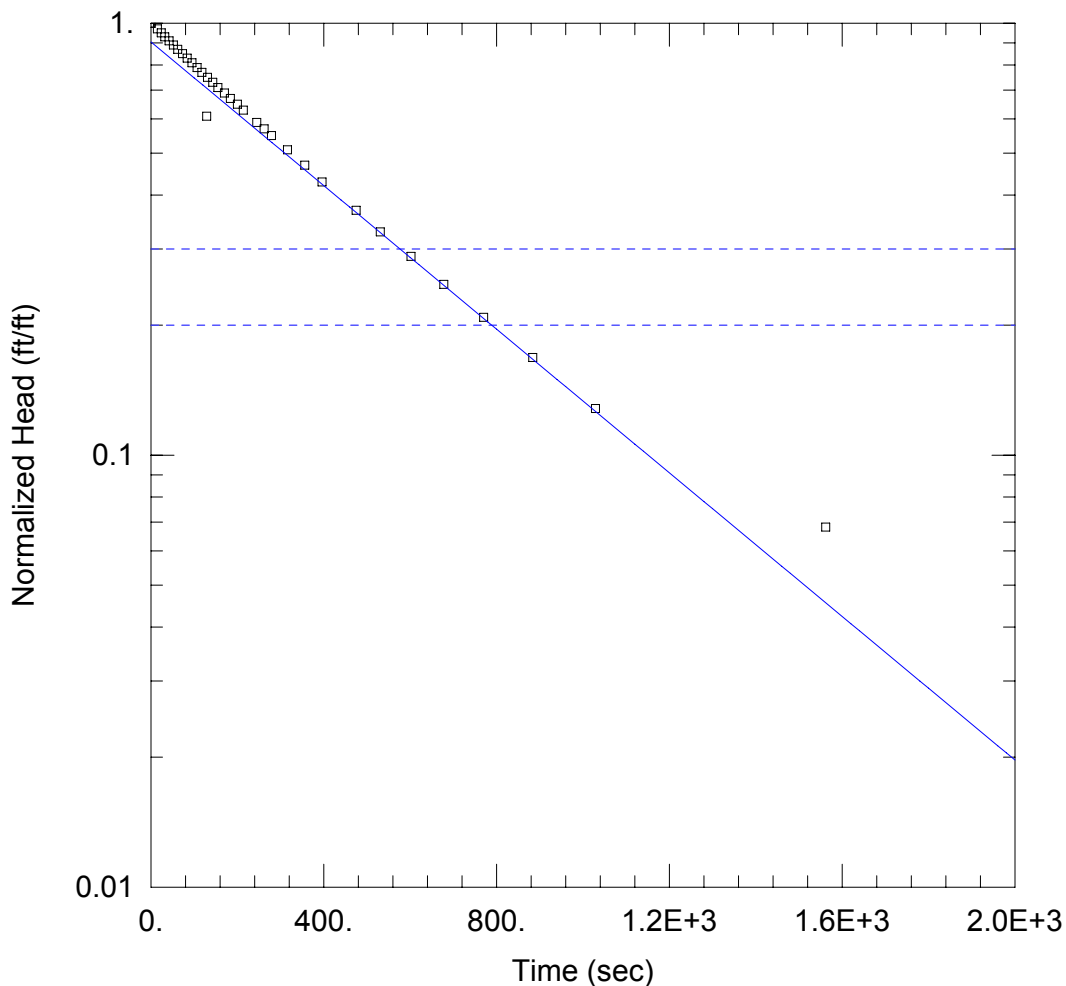
| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 2.464E-6 | ft/sec |
| y0        | 2.316    | ft     |

K = 7.51E-5 cm/sec

**Date** 25-Feb-2004  
**Station ID** 395540104353601  
**Location** AGLUS-17, test 1  
**By** SSP, JAB

**Measuring Point** 1.88 ft. above land surface  
**Depth of Pump** 78 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments                                     |
|------------|--------------|---------------|-------------------|----------|--|
| 11:45:00   | 0:00:00      |               | 68.16             |          | static. Before lowering pump                 |
| 12:01:00   | 0:16:00      |               | 67.92             |          | after lowering pump                          |
| 12:05:00   | 0:20:00      |               | 68.01             |          |  |
| 12:10:00   | 0:25:00      |               | 68.08             |          | recovered. Pump on. Pumping rate = 0.69 gpm. |
| 12:13:00   | 0:28:00      |               |                   |          |  |
| 12:14:00   | 0:29:00      |               |                   |          |  |
| 12:15:00   | 0:30:00      | 0:00:00       |                   |          | Pump off. Removed 1 gal.                     |
| 12:15:50   | 0:30:50      | 0:00:50       | 73.15             | 4.99     |  |
| 12:16:05   | 0:31:05      | 0:01:05       | 73.00             | 4.84     |  |
| 12:16:14   | 0:31:14      | 0:01:14       | 72.90             | 4.74     |  |
| 12:16:22   | 0:31:22      | 0:01:22       | 72.80             | 4.64     |  |
| 12:16:32   | 0:31:32      | 0:01:32       | 72.70             | 4.54     |  |
| 12:16:42   | 0:31:42      | 0:01:42       | 72.60             | 4.44     |  |
| 12:16:52   | 0:31:52      | 0:01:52       | 72.50             | 4.34     |  |
| 12:17:03   | 0:32:03      | 0:02:03       | 72.40             | 4.24     |  |
| 12:17:14   | 0:32:14      | 0:02:14       | 72.30             | 4.14     |  |
| 12:17:25   | 0:32:25      | 0:02:25       | 72.20             | 4.04     |  |
| 12:17:37   | 0:32:37      | 0:02:37       | 72.10             | 3.94     |  |
| 12:17:48   | 0:32:48      | 0:02:48       | 72.00             | 3.84     |  |
| 12:18:01   | 0:33:01      | 0:03:01       | 71.90             | 3.74     |  |
| 12:18:13   | 0:33:13      | 0:03:13       | 71.80             | 3.64     |  |
| 12:18:25   | 0:33:25      | 0:03:25       | 71.70             | 3.54     |  |
| 12:18:40   | 0:33:40      | 0:03:40       | 71.60             | 3.44     |  |
| 12:18:54   | 0:33:54      | 0:03:54       | 71.50             | 3.34     |  |
| 12:19:10   | 0:34:10      | 0:04:10       | 71.40             | 3.24     |  |
| 12:19:24   | 0:34:24      | 0:04:24       | 71.30             | 3.14     |  |
| 12:19:39   | 0:34:39      | 0:04:39       | 71.20             | 3.04     |  |
| 12:19:55   | 0:34:55      | 0:04:55       | 71.10             | 2.94     |  |
| 12:20:12   | 0:35:12      | 0:05:12       | 71.00             | 2.84     |  |
| 12:20:29   | 0:35:29      | 0:05:29       | 70.90             | 2.74     |  |
| 12:21:06   | 0:36:06      | 0:06:06       | 70.70             | 2.54     |  |
| 12:21:46   | 0:36:46      | 0:06:46       | 70.50             | 2.34     |  |
| 12:22:26   | 0:37:26      | 0:07:26       | 70.30             | 2.14     |  |
| 12:23:45   | 0:38:45      | 0:08:45       | 70.00             | 1.84     |  |
| 12:24:41   | 0:39:41      | 0:09:41       | 69.80             | 1.64     |  |
| 12:25:52   | 0:40:52      | 0:10:52       | 69.60             | 1.44     |  |
| 12:27:08   | 0:42:08      | 0:12:08       | 69.40             | 1.24     |  |
| 12:28:40   | 0:43:40      | 0:13:40       | 69.20             | 1.04     |  |
| 12:30:34   | 0:45:34      | 0:15:34       | 69.00             | 0.84     |  |
| 12:32:59   | 0:47:59      | 0:17:59       | 68.80             | 0.64     |  |
| 12:38:52   | 0:53:52      | 0:23:52       | 68.50             | 0.34     | End of Test #1                               |



### AGLUS 17 TEST #1

Data Set: Y:\...\AgLUS17\_test1\_13JUL2010.aqt

Date: 01/03/11

Time: 13:42:19

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 17

Test Date: 02/25/2004

### AQUIFER DATA

Saturated Thickness: 9.24 ft

Anisotropy Ratio ( $K_z/K_r$ ): 0.01

### WELL DATA (AgLUS 17)

Initial Displacement: 4.99 ft

Static Water Column Height: 14.92 ft

Total Well Penetration Depth: 9.24 ft

Screen Length: 9.24 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

$K = 1.713E-6$  ft/sec

$y_0 = 4.514$  ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_03JAN2011\AgLUS 17\AgLUS17\_test1\_13J  
 Title: AgLUS 17 test #1  
 Date: 01/03/11  
 Time: 13:43:28

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/25/2004  
 Test Well: AgLUS 17

AQUIFER DATA

Saturated Thickness: 9.24 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 17

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 4.99 ft  
 Static Water Column Height: 14.92 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.24 ft  
 Total Well Penetration Depth: 9.24 ft

No. of Observations: 34

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 4.99              | 184.       | 3.34              |
| 15.              | 4.84              | 200.       | 3.24              |
| 24.              | 4.74              | 214.       | 3.14              |
| 32.              | 4.64              | 245.       | 2.94              |
| 42.              | 4.54              | 262.       | 2.84              |
| 52.              | 4.44              | 279.       | 2.74              |
| 62.              | 4.34              | 316.       | 2.54              |
| 73.              | 4.24              | 356.       | 2.34              |
| 84.              | 4.14              | 396.       | 2.14              |
| 95.              | 4.04              | 475.       | 1.84              |
| 107.             | 3.94              | 531.       | 1.64              |
| 118.             | 3.84              | 602.       | 1.44              |
| 129.             | 3.04              | 678.       | 1.24              |
| 131.             | 3.74              | 770.       | 1.04              |
| 143.             | 3.64              | 884.       | 0.84              |
| 155.             | 3.54              | 1029.      | 0.64              |
| 170.             | 3.44              | 1562.      | 0.34              |

SOLUTION

Slug Test  
 Aquifer Model: Confined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 2.401

VISUAL ESTIMATION RESULTS

Estimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 1.713E-6 | ft/sec |
| y0        | 4.514    | ft     |

$K = 5.222E-5$  cm/sec

$T = K*b = 1.583E-5$  ft<sup>2</sup>/sec (0.01471 sq. cm/sec)

---

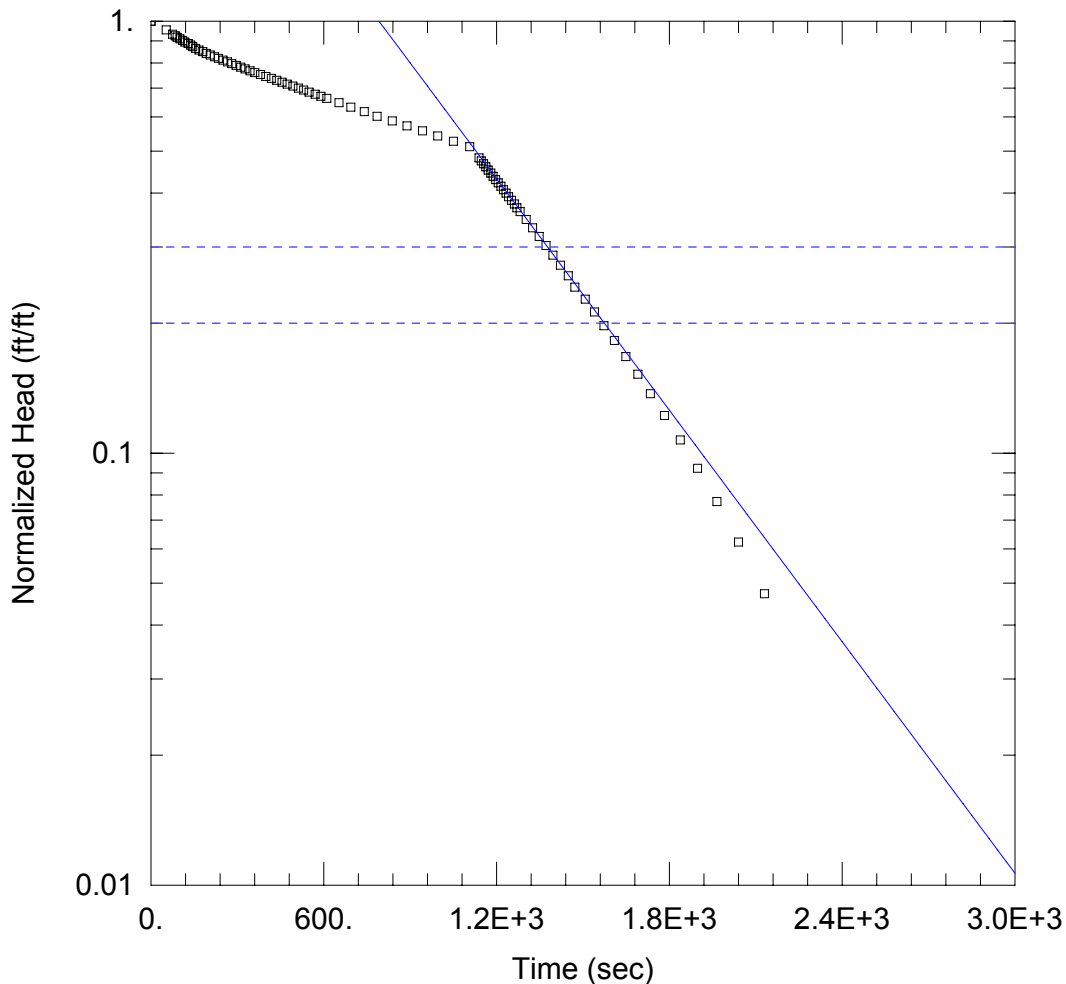


**Date** 25-Feb-2004  
**Station ID** 395540104353601  
**Location** AGLUS-17, test 2  
**By** SSP, JAB

**Measuring Point** 1.88 ft. above land surface  
**Depth of Pump** 80 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments                        |
|------------|--------------|---------------|-------------------|----------|---------------------------------|
| 12:40:00   | 0:00:00      |               |                   |          |                                 |
| 12:43:00   | 0:03:00      |               | 68.17             |          | Set pump to 80 ft BMP           |
| 12:45:00   | 0:05:00      |               |                   |          | after setting pump              |
| 12:45:20   | 0:05:20      |               | 69.98             | 1.81     | pump on. Pumping rate = 1.5 gpm |
| 12:45:55   | 0:05:55      |               | 73.80             | 5.63     |                                 |
| 12:46:15   | 0:06:15      |               | 75.30             | 7.13     |                                 |
| 12:46:49   | 0:06:49      |               | 75.60             | 7.43     |                                 |
| 12:47:05   | 0:07:05      |               | 75.93             | 7.76     |                                 |
| 12:47:29   | 0:07:29      |               | 76.40             | 8.23     |                                 |
| 12:47:40   | 0:07:40      |               | 76.72             | 8.55     |                                 |
| 12:48:08   | 0:08:08      |               | 77.20             | 9.03     |                                 |
| 12:48:25   | 0:08:25      |               | 77.55             | 9.38     |                                 |
| 12:48:42   | 0:08:42      |               | 77.85             | 9.68     |                                 |
| 12:49:00   | 0:09:00      |               | 78.20             | 10.03    |                                 |
| 12:49:25   | 0:09:25      |               | 78.60             | 10.43    |                                 |
| 12:49:44   | 0:09:44      |               | 78.93             | 10.76    |                                 |
| 12:50:02   | 0:10:02      |               | 79.25             | 11.08    |                                 |
| 12:50:13   | 0:10:13      |               | 79.45             | 11.28    |                                 |
| 12:50:26   | 0:10:26      |               | 79.70             | 11.53    |                                 |
| 12:50:38   | 0:10:38      |               | 79.91             | 11.74    |                                 |
| 12:51:07   | 0:11:07      |               | 80.40             | 12.23    |                                 |
| 12:51:19   | 0:11:19      |               | 80.62             | 12.45    |                                 |
| 12:51:39   | 0:11:39      |               | 80.98             | 12.81    |                                 |
| 12:51:53   | 0:11:53      |               | 81.20             | 13.03    |                                 |
| 12:52:40   | 0:12:40      |               | 81.50             | 13.33    |                                 |
| 12:53:00   | 0:13:00      | 0:00:00       |                   |          | Pump off. Removed 10gal.        |
| 12:53:53   | 0:13:53      | 0:00:53       | 80.90             | 12.73    |                                 |
| 12:54:15   | 0:14:15      | 0:01:15       | 80.60             | 12.43    |                                 |
| 12:54:24   | 0:14:24      | 0:01:24       | 80.50             | 12.33    |                                 |
| 12:54:31   | 0:14:31      | 0:01:31       | 80.40             | 12.23    |                                 |
| 12:54:41   | 0:14:41      | 0:01:41       | 80.30             | 12.13    |                                 |
| 12:54:50   | 0:14:50      | 0:01:50       | 80.20             | 12.03    |                                 |
| 12:54:58   | 0:14:58      | 0:01:58       | 80.10             | 11.93    |                                 |
| 12:55:09   | 0:15:09      | 0:02:09       | 80.00             | 11.83    |                                 |
| 12:55:18   | 0:15:18      | 0:02:18       | 79.90             | 11.73    |                                 |
| 12:55:25   | 0:15:25      | 0:02:25       | 79.80             | 11.63    |                                 |
| 12:55:35   | 0:15:35      | 0:02:35       | 79.70             | 11.53    |                                 |
| 12:55:47   | 0:15:47      | 0:02:47       | 79.60             | 11.43    |                                 |
| 12:56:00   | 0:16:00      | 0:03:00       | 79.50             | 11.33    |                                 |
| 12:56:12   | 0:16:12      | 0:03:12       | 79.40             | 11.23    |                                 |
| 12:56:26   | 0:16:26      | 0:03:26       | 79.30             | 11.13    |                                 |
| 12:56:41   | 0:16:41      | 0:03:41       | 79.20             | 11.03    |                                 |
| 12:56:54   | 0:16:54      | 0:03:54       | 79.10             | 10.93    |                                 |
| 12:57:10   | 0:17:10      | 0:04:10       | 79.00             | 10.83    |                                 |
| 12:57:26   | 0:17:26      | 0:04:26       | 78.90             | 10.73    |                                 |
| 12:57:41   | 0:17:41      | 0:04:41       | 78.80             | 10.63    |                                 |
| 12:57:56   | 0:17:56      | 0:04:56       | 78.70             | 10.53    |                                 |
| 12:58:12   | 0:18:12      | 0:05:12       | 78.60             | 10.43    |                                 |
| 12:58:27   | 0:18:27      | 0:05:27       | 78.50             | 10.33    |                                 |
| 12:58:44   | 0:18:44      | 0:05:44       | 78.40             | 10.23    |                                 |
| 12:59:01   | 0:19:01      | 0:06:01       | 78.30             | 10.13    |                                 |
| 12:59:20   | 0:19:20      | 0:06:20       | 78.20             | 10.03    |                                 |
| 12:59:39   | 0:19:39      | 0:06:39       | 78.10             | 9.93     |                                 |
| 12:59:58   | 0:19:58      | 0:06:58       | 78.00             | 9.83     |                                 |
| 13:00:17   | 0:20:17      | 0:07:17       | 77.90             | 9.73     |                                 |
| 13:00:35   | 0:20:35      | 0:07:35       | 77.80             | 9.63     |                                 |

| <b>Clock Time</b> | <b>Elapsed Time</b> | <b>Recovery Time</b> | <b>Water Level (BMP)</b> | <b>Drawdown</b> | <b>Comments</b> |
|-------------------|---------------------|----------------------|--------------------------|-----------------|-----------------|
| 13:00:53          | 0:20:53             | 0:07:53              | 77.70                    | 9.53            |                 |
| 13:01:13          | 0:21:13             | 0:08:13              | 77.60                    | 9.43            |                 |
| 13:01:32          | 0:21:32             | 0:08:32              | 77.50                    | 9.33            |                 |
| 13:01:50          | 0:21:50             | 0:08:50              | 77.40                    | 9.23            |                 |
| 13:02:09          | 0:22:09             | 0:09:09              | 77.30                    | 9.13            |                 |
| 13:02:30          | 0:22:30             | 0:09:30              | 77.20                    | 9.03            |                 |
| 13:02:50          | 0:22:50             | 0:09:50              | 77.10                    | 8.93            |                 |
| 13:03:11          | 0:23:11             | 0:10:11              | 77.00                    | 8.83            |                 |
| 13:03:53          | 0:23:53             | 0:10:53              | 76.80                    | 8.63            |                 |
| 13:04:34          | 0:24:34             | 0:11:34              | 76.60                    | 8.43            |                 |
| 13:05:21          | 0:25:21             | 0:12:21              | 76.40                    | 8.23            |                 |
| 13:06:05          | 0:26:05             | 0:13:05              | 76.20                    | 8.03            |                 |
| 13:06:58          | 0:26:58             | 0:13:58              | 76.00                    | 7.83            |                 |
| 13:07:49          | 0:27:49             | 0:14:49              | 75.80                    | 7.63            |                 |
| 13:08:43          | 0:28:43             | 0:15:43              | 75.60                    | 7.43            |                 |
| 13:09:36          | 0:29:36             | 0:16:36              | 75.40                    | 7.23            |                 |
| 13:10:30          | 0:30:30             | 0:17:30              | 75.20                    | 7.03            |                 |
| 13:11:27          | 0:31:27             | 0:18:27              | 75.00                    | 6.83            |                 |
| 13:11:59          | 0:31:59             | 0:18:59              | 74.60                    | 6.43            |                 |
| 13:12:07          | 0:32:07             | 0:19:07              | 74.50                    | 6.33            |                 |
| 13:12:15          | 0:32:15             | 0:19:15              | 74.40                    | 6.23            |                 |
| 13:12:23          | 0:32:23             | 0:19:23              | 74.30                    | 6.13            |                 |
| 13:12:31          | 0:32:31             | 0:19:31              | 74.20                    | 6.03            |                 |
| 13:12:40          | 0:32:40             | 0:19:40              | 74.10                    | 5.93            |                 |
| 13:12:48          | 0:32:48             | 0:19:48              | 74.00                    | 5.83            |                 |
| 13:12:57          | 0:32:57             | 0:19:57              | 73.90                    | 5.73            |                 |
| 13:13:06          | 0:33:06             | 0:20:06              | 73.80                    | 5.63            |                 |
| 13:13:15          | 0:33:15             | 0:20:15              | 73.70                    | 5.53            |                 |
| 13:13:24          | 0:33:24             | 0:20:24              | 73.60                    | 5.43            |                 |
| 13:13:33          | 0:33:33             | 0:20:33              | 73.50                    | 5.33            |                 |
| 13:13:42          | 0:33:42             | 0:20:42              | 73.40                    | 5.23            |                 |
| 13:13:52          | 0:33:52             | 0:20:52              | 73.30                    | 5.13            |                 |
| 13:14:02          | 0:34:02             | 0:21:02              | 73.20                    | 5.03            |                 |
| 13:14:11          | 0:34:11             | 0:21:11              | 73.10                    | 4.93            |                 |
| 13:14:22          | 0:34:22             | 0:21:22              | 73.00                    | 4.83            |                 |
| 13:14:43          | 0:34:43             | 0:21:43              | 72.80                    | 4.63            |                 |
| 13:15:05          | 0:35:05             | 0:22:05              | 72.60                    | 4.43            |                 |
| 13:15:28          | 0:35:28             | 0:22:28              | 72.40                    | 4.23            |                 |
| 13:15:52          | 0:35:52             | 0:22:52              | 72.20                    | 4.03            |                 |
| 13:16:16          | 0:36:16             | 0:23:16              | 72.00                    | 3.83            |                 |
| 13:16:42          | 0:36:42             | 0:23:42              | 71.80                    | 3.63            |                 |
| 13:17:09          | 0:37:09             | 0:24:09              | 71.60                    | 3.43            |                 |
| 13:17:32          | 0:37:32             | 0:24:32              | 71.40                    | 3.23            |                 |
| 13:18:08          | 0:38:08             | 0:25:08              | 71.20                    | 3.03            |                 |
| 13:18:40          | 0:38:40             | 0:25:40              | 71.00                    | 2.83            |                 |
| 13:19:13          | 0:39:13             | 0:26:13              | 70.80                    | 2.63            |                 |
| 13:19:49          | 0:39:49             | 0:26:49              | 70.60                    | 2.43            |                 |
| 13:20:29          | 0:40:29             | 0:27:29              | 70.40                    | 2.23            |                 |
| 13:21:11          | 0:41:11             | 0:28:11              | 70.20                    | 2.03            |                 |
| 13:21:54          | 0:41:54             | 0:28:54              | 70.00                    | 1.83            |                 |
| 13:22:43          | 0:42:43             | 0:29:43              | 69.80                    | 1.63            |                 |
| 13:23:38          | 0:43:38             | 0:30:38              | 69.60                    | 1.43            |                 |
| 13:24:38          | 0:44:38             | 0:31:38              | 69.40                    | 1.23            |                 |
| 13:25:45          | 0:45:45             | 0:32:45              | 69.20                    | 1.03            |                 |
| 13:27:00          | 0:47:00             | 0:34:00              | 69.00                    | 0.83            |                 |
| 13:28:30          | 0:48:30             | 0:35:30              | 68.80                    | 0.63            |                 |
| 13:29:00          | 0:49:00             | 0:36:00              |                          |                 | End of Test #2  |



AGLUS 17 TEST #2

Data Set: Y:\...\AgLUS17\_test2\_03JAN2011.aqt

Date: 01/03/11

Time: 13:47:44

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 17

Test Date: 02/25/2004

AQUIFER DATA

Saturated Thickness: 9.24 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 17)

Initial Displacement: 13.33 ft

Static Water Column Height: 14.92 ft

Total Well Penetration Depth: 9.24 ft

Screen Length: 9.24 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K = 1.841E-6 ft/sec

y0 = 67.92 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_03JAN2011\AgLUS 17\AgLUS17\_test2\_03J  
 Title: AgLUS 17 test #2  
 Date: 01/03/11  
 Time: 13:49:45

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/25/2004  
 Test Well: AgLUS 17

AQUIFER DATA

Saturated Thickness: 9.24 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 17

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 13.33 ft  
 Static Water Column Height: 14.92 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.24 ft  
 Total Well Penetration Depth: 9.24 ft

No. of Observations: 87

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 13.33             | 889.       | 7.63              |
| 53.              | 12.73             | 943.       | 7.43              |
| 75.              | 12.43             | 996.       | 7.23              |
| 84.              | 12.33             | 1050.      | 7.03              |
| 91.              | 12.23             | 1107.      | 6.83              |
| 101.             | 12.13             | 1139.      | 6.43              |
| 110.             | 12.03             | 1147.      | 6.33              |
| 118.             | 11.93             | 1155.      | 6.23              |
| 129.             | 11.83             | 1163.      | 6.13              |
| 138.             | 11.73             | 1171.      | 6.03              |
| 145.             | 11.63             | 1180.      | 5.93              |
| 155.             | 11.53             | 1188.      | 5.83              |
| 167.             | 11.43             | 1197.      | 5.73              |
| 180.             | 11.33             | 1206.      | 5.63              |
| 192.             | 11.23             | 1215.      | 5.53              |
| 206.             | 11.13             | 1224.      | 5.43              |
| 221.             | 11.03             | 1233.      | 5.33              |
| 234.             | 10.93             | 1242.      | 5.23              |
| 250.             | 10.83             | 1252.      | 5.13              |
| 266.             | 10.73             | 1262.      | 5.03              |
| 281.             | 10.63             | 1271.      | 4.93              |
| 296.             | 10.53             | 1282.      | 4.83              |
| 312.             | 10.43             | 1303.      | 4.63              |
| 327.             | 10.33             | 1325.      | 4.43              |
| 344.             | 10.23             | 1348.      | 4.23              |
| 361.             | 10.13             | 1372.      | 4.03              |
| 380.             | 10.03             | 1396.      | 3.83              |
| 399.             | 9.93              | 1422.      | 3.63              |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 418.              | 9.83                     | 1449.             | 3.43                     |
| 437.              | 9.73                     | 1472.             | 3.23                     |
| 455.              | 9.63                     | 1508.             | 3.03                     |
| 473.              | 9.53                     | 1540.             | 2.83                     |
| 493.              | 9.43                     | 1573.             | 2.63                     |
| 512.              | 9.33                     | 1609.             | 2.43                     |
| 530.              | 9.23                     | 1649.             | 2.23                     |
| 549.              | 9.13                     | 1691.             | 2.03                     |
| 570.              | 9.03                     | 1734.             | 1.83                     |
| 590.              | 8.93                     | 1783.             | 1.63                     |
| 611.              | 8.83                     | 1838.             | 1.43                     |
| 653.              | 8.63                     | 1898.             | 1.23                     |
| 694.              | 8.43                     | 1965.             | 1.03                     |
| 741.              | 8.23                     | 2040.             | 0.83                     |
| 785.              | 8.03                     | 2130.             | 0.63                     |
| 838.              | 7.83                     |                   |                          |

SOLUTION

Slug Test

Aquifer Model: Confined

Solution Method: Bouwer-Rice

ln(Re/rw): 2.401

VISUAL ESTIMATION RESULTSEstimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 1.841E-6        | ft/sec |
| y0               | 67.92           | ft     |

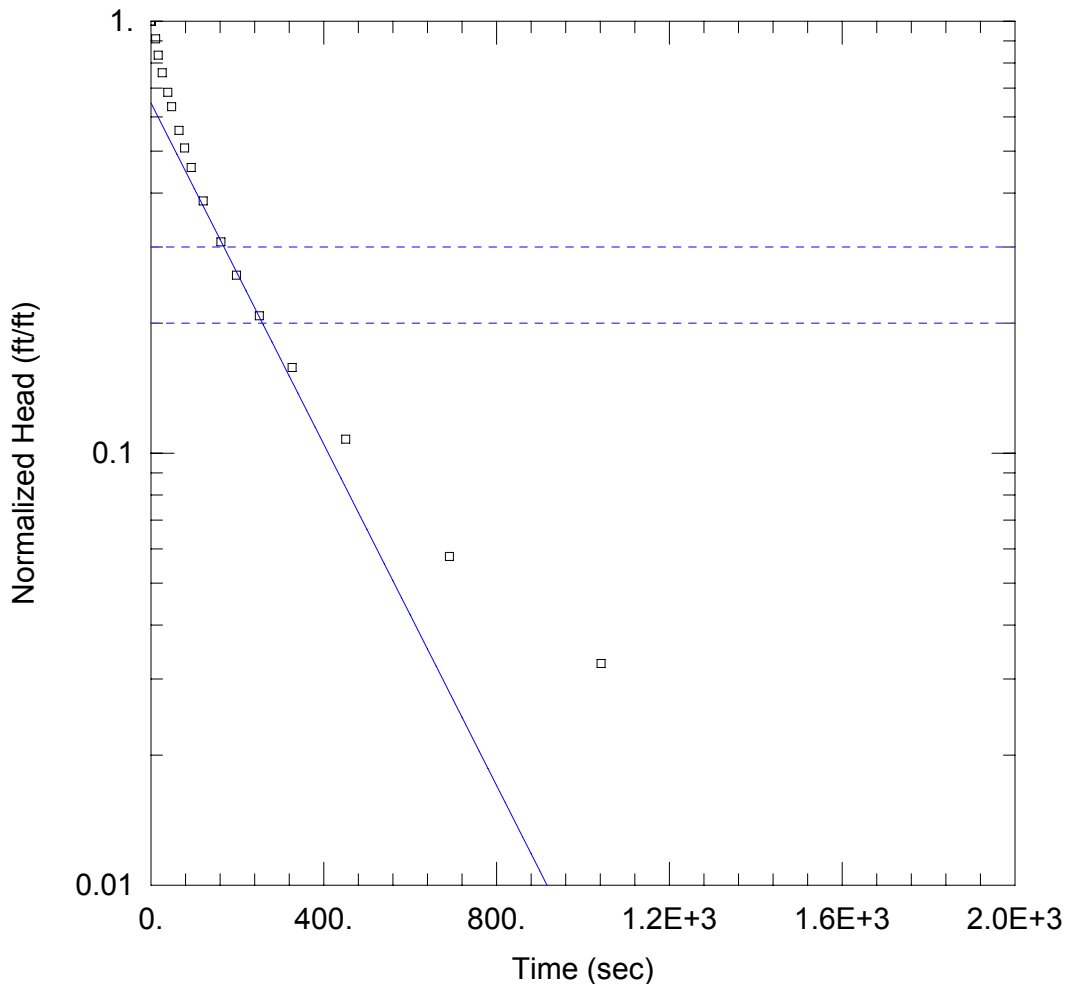
K = 5.612E-5 cm/sec

T = K\*b = 1.701E-5 ft<sup>2</sup>/sec (0.01581 sq. cm/sec)

**Date** 27-Feb-2004  
**Station ID** 39352104302801  
**Location** AGLUS-18, test 1  
**By** SSP, JAB

**Measuring Point** 2.12 ft. above land surface  
**Depth of Pump** 46 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments                                |
|------------|--------------|---------------|-------------------|----------|---|
| 12:04:00   | 0:00:00      |               | 40.97             |          | Static water level before lowering pump |
| 12:07:00   | 0:03:00      |               |                   |          | lower pump to 46 ft BMP                 |
| 12:17:40   | 0:13:40      |               |                   |          | pump on. Pumping rate = 5 gpm           |
| 12:17:53   | 0:13:53      |               | 42.40             | 1.43     |   |
| 12:18:10   | 0:14:10      |               | 43.40             | 2.43     |   |
| 12:18:19   | 0:14:19      |               | 43.90             | 2.93     |   |
| 12:18:24   | 0:14:24      |               | 44.16             | 3.19     |   |
| 12:18:35   | 0:14:35      |               | 44.96             | 3.99     |   |
| 12:18:45   | 0:14:45      | 0:00:00       |                   |          | Pump off. Removed 5 gal.                |
| 12:18:56   | 0:14:56      | 0:00:11       | 44.60             | 3.63     |   |
| 12:19:02   | 0:15:02      | 0:00:17       | 44.30             | 3.33     |   |
| 12:19:11   | 0:15:11      | 0:00:26       | 44.00             | 3.03     |   |
| 12:19:24   | 0:15:24      | 0:00:39       | 43.70             | 2.73     |   |
| 12:19:33   | 0:15:33      | 0:00:48       | 43.50             | 2.53     |   |
| 12:19:50   | 0:15:50      | 0:01:05       | 43.20             | 2.23     |   |
| 12:20:03   | 0:16:03      | 0:01:18       | 43.00             | 2.03     |   |
| 12:20:18   | 0:16:18      | 0:01:33       | 42.80             | 1.83     |   |
| 12:20:46   | 0:16:46      | 0:02:01       | 42.50             | 1.53     |   |
| 12:21:27   | 0:17:27      | 0:02:42       | 42.20             | 1.23     |   |
| 12:22:03   | 0:18:03      | 0:03:18       | 42.00             | 1.03     |   |
| 12:22:56   | 0:18:56      | 0:04:11       | 41.80             | 0.83     |   |
| 12:24:12   | 0:20:12      | 0:05:27       | 41.60             | 0.63     |   |
| 12:26:16   | 0:22:16      | 0:07:31       | 41.40             | 0.43     |   |
| 12:30:16   | 0:26:16      | 0:11:31       | 41.20             | 0.23     |   |
| 12:36:07   | 0:32:07      | 0:17:22       | 41.10             | 0.13     | End of test #1                          |



AGLUS 18 TEST #1

Data Set: Y:\...\AgLUS18\_test1\_03JAN2011.aqt

Date: 01/03/11

Time: 14:27:13

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 18

Test Date: 02/27/2004

AQUIFER DATA

Saturated Thickness: 6.75 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 18)

Initial Displacement: 3.99 ft

Static Water Column Height: 6.75 ft

Total Well Penetration Depth: 9.78 ft

Screen Length: 9.78 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 5.446E-6 ft/sec

y0 = 2.579 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_03JAN2011\AgLUS 18\AgLUS18\_test1\_03J  
 Title: AgLUS 18 test #1  
 Date: 01/03/11  
 Time: 14:27:26

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/27/2004  
 Test Well: AgLUS 18

AQUIFER DATA

Saturated Thickness: 6.75 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 18

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 3.99 ft  
 Static Water Column Height: 6.75 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.78 ft  
 Total Well Penetration Depth: 9.78 ft

No. of Observations: 17

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 3.99              | 121.       | 1.53              |
| 11.              | 3.63              | 162.       | 1.23              |
| 17.              | 3.33              | 198.       | 1.03              |
| 26.              | 3.03              | 251.       | 0.83              |
| 39.              | 2.73              | 327.       | 0.63              |
| 48.              | 2.53              | 451.       | 0.43              |
| 65.              | 2.23              | 691.       | 0.23              |
| 78.              | 2.03              | 1042.      | 0.13              |
| 93.              | 1.83              |            |                   |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 2.347

VISUAL ESTIMATION RESULTSEstimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 5.446E-6 | ft/sec |
| y0        | 2.579    | ft     |

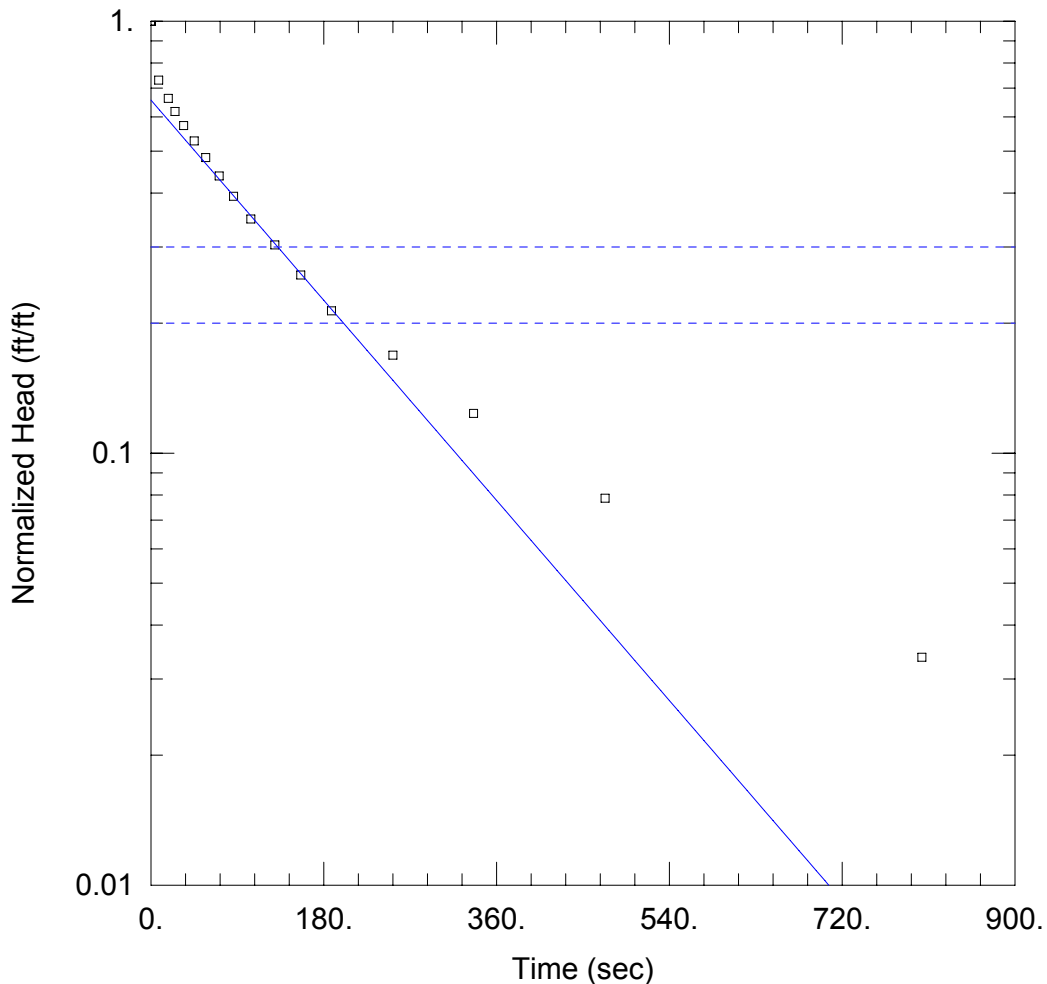
K = 0.000166 cm/sec  
 T = K\*b = 3.676E-5 ft<sup>2</sup>/sec (0.03415 sq. cm/sec)



**Date** 27-Feb-2004  
**Station ID** 39352104302801  
**Location** AGLUS-18, test 2  
**By** SSP, JAB

**Measuring Point** 2.12 ft. above land surface  
**Depth of Pump** 46 ft BMP

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments  |
|------------|--------------|---------------|-------------------|----------|---|
| 12:51:00   | 0:00:00      |               | 41.05             |          | Static water level before starting test #2. Pump at 46 ft BMP |
| 12:51:50   | 0:00:50      |               |                   |          | pump on. Pumping rate =4.5 gpm                                |
| 12:51:55   | 0:00:55      |               | 41.45             | 0.40     |   |
| 12:52:07   | 0:01:07      |               | 42.43             | 1.38     |   |
| 12:52:17   | 0:01:17      |               | 43.10             | 2.05     |   |
| 12:52:24   | 0:01:24      |               | 43.50             | 2.45     |   |
| 12:52:31   | 0:01:31      |               | 43.84             | 2.79     |   |
| 12:52:39   | 0:01:39      |               | 44.28             | 3.23     |   |
| 12:52:54   | 0:01:54      |               | 45.50             | 4.45     |   |
| 12:53:04   | 0:02:04      | 0:00:00       |                   |          | Pump off. Removed 5 gal.                                      |
| 12:53:12   | 0:02:12      | 0:00:08       | 44.30             | 3.25     |   |
| 12:53:22   | 0:02:22      | 0:00:18       | 44.00             | 2.95     |   |
| 12:53:29   | 0:02:29      | 0:00:25       | 43.80             | 2.75     |   |
| 12:53:38   | 0:02:38      | 0:00:34       | 43.60             | 2.55     |   |
| 12:53:49   | 0:02:49      | 0:00:45       | 43.40             | 2.35     |   |
| 12:54:01   | 0:03:01      | 0:00:57       | 43.20             | 2.15     |   |
| 12:54:15   | 0:03:15      | 0:01:11       | 43.00             | 1.95     |   |
| 12:54:30   | 0:03:30      | 0:01:26       | 42.80             | 1.75     |   |
| 12:54:48   | 0:03:48      | 0:01:44       | 42.60             | 1.55     |   |
| 12:55:13   | 0:04:13      | 0:02:09       | 42.40             | 1.35     |   |
| 12:55:40   | 0:04:40      | 0:02:36       | 42.20             | 1.15     |   |
| 12:56:12   | 0:05:12      | 0:03:08       | 42.00             | 0.95     |   |
| 12:57:16   | 0:06:16      | 0:04:12       | 41.80             | 0.75     |   |
| 12:58:40   | 0:07:40      | 0:05:36       | 41.60             | 0.55     |   |
| 13:00:57   | 0:09:57      | 0:07:53       | 41.40             | 0.35     |   |
| 13:06:27   | 0:15:27      | 0:13:23       | 41.20             | 0.15     | End of test #2  |



AGLUS 18 TEST #2

Data Set: Y:\...\AgLUS18\_test2\_03JAN2011.aqt

Date: 01/03/11

Time: 14:25:13

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 18

Test Date: 02/27/2004

AQUIFER DATA

Saturated Thickness: 6.75 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 18)

Initial Displacement: 4.45 ft

Static Water Column Height: 6.75 ft

Total Well Penetration Depth: 9.78 ft

Screen Length: 9.78 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 7.097E-6 ft/sec

y0 = 2.92 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_03JAN2011\AgLUS 18\AgLUS18\_test2\_03J  
 Title: AgLUS 18 test #2  
 Date: 01/03/11  
 Time: 14:25:42

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/27/2004  
 Test Well: AgLUS 18

AQUIFER DATA

Saturated Thickness: 6.75 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 18

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 4.45 ft  
 Static Water Column Height: 6.75 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.78 ft  
 Total Well Penetration Depth: 9.78 ft

No. of Observations: 17

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 4.45              | 104.       | 1.55              |
| 8.               | 3.25              | 129.       | 1.35              |
| 18.              | 2.95              | 156.       | 1.15              |
| 25.              | 2.75              | 188.       | 0.95              |
| 34.              | 2.55              | 252.       | 0.75              |
| 45.              | 2.35              | 336.       | 0.55              |
| 57.              | 2.15              | 473.       | 0.35              |
| 71.              | 1.95              | 803.       | 0.15              |
| 86.              | 1.75              |            |                   |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 2.347

VISUAL ESTIMATION RESULTSEstimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 7.097E-6 | ft/sec |
| y0        | 2.92     | ft     |

K = 0.0002163 cm/sec  
 T = K\*b = 4.79E-5 ft<sup>2</sup>/sec (0.0445 sq. cm/sec)

In-Situ Inc. MiniTroll Pro

Report generated: 4/19/2004 8:51:06  
 Report from file: ...\\SN09731 2004-03-30 121810 AgLUS21\_1.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS21\_1

Test defined on: 3/30/2004 11:44:47  
 Test started on: 3/30/2004 12:18:10  
 Test stopped on: 3/30/2004 12:24:48  
 Test extracted on: N/A N/A

Data gathered using Logarithmic testing  
 Maximum time between data points: 60.0 Seconds.  
 Number of data samples: 93

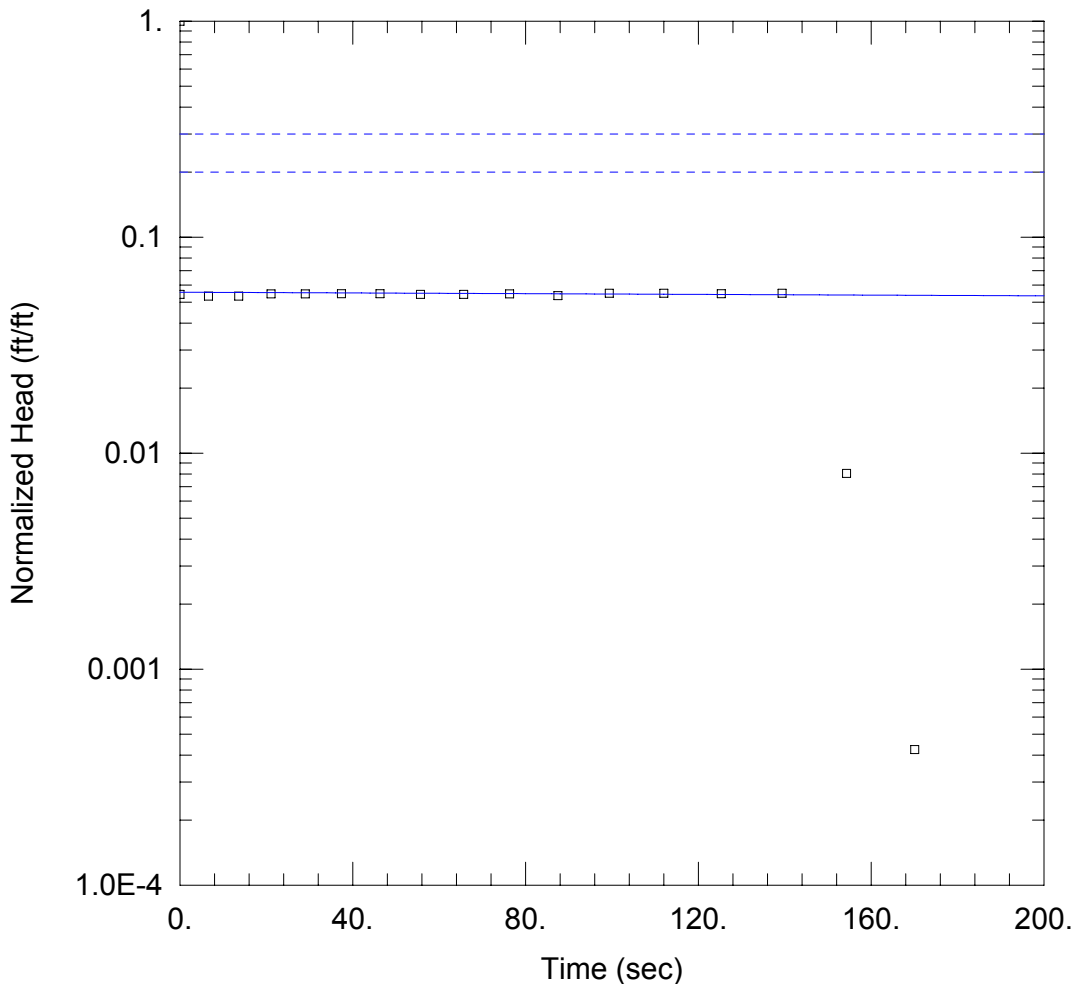
TOTAL DATA SAMPLES 93

Channel number [2]  
 Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1639.824 meters (5380.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 12:18:10 | 0        | 7.074               |
| 3/30/2004 | 12:18:10 | 0.3      | 7.083               |
| 3/30/2004 | 12:18:10 | 0.6      | 7.084               |
| 3/30/2004 | 12:18:10 | 0.9      | 7.086               |
| 3/30/2004 | 12:18:11 | 1.2      | 7.086               |
| 3/30/2004 | 12:18:11 | 1.5      | 7.087               |
| 3/30/2004 | 12:18:11 | 1.8      | 7.089               |
| 3/30/2004 | 12:18:12 | 2.1      | 7.089               |
| 3/30/2004 | 12:18:12 | 2.4      | 7.089               |
| 3/30/2004 | 12:18:12 | 2.7      | 7.089               |
| 3/30/2004 | 12:18:13 | 3        | 7.089               |
| 3/30/2004 | 12:18:13 | 3.3      | 7.091               |
| 3/30/2004 | 12:18:13 | 3.6      | 7.091               |
| 3/30/2004 | 12:18:13 | 3.9      | 7.056               |
| 3/30/2004 | 12:18:14 | 4.2      | 7.009               |
| 3/30/2004 | 12:18:14 | 4.5      | 7.015               |
| 3/30/2004 | 12:18:14 | 4.8      | 7                   |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 12:18:15 | 5.1      | 6.976               |
| 3/30/2004 | 12:18:15 | 5.4      | 6.947               |
| 3/30/2004 | 12:18:15 | 5.7      | 6.919               |
| 3/30/2004 | 12:18:16 | 6        | 6.899               |
| 3/30/2004 | 12:18:16 | 6.4      | 6.884               |
| 3/30/2004 | 12:18:16 | 6.7      | 6.887               |
| 3/30/2004 | 12:18:17 | 7.1      | 6.882               |
| 3/30/2004 | 12:18:17 | 7.5      | 6.872               |
| 3/30/2004 | 12:18:18 | 8        | 6.878               |
| 3/30/2004 | 12:18:18 | 8.4      | 6.87                |
| 3/30/2004 | 12:18:18 | 8.9      | 6.877               |
| 3/30/2004 | 12:18:19 | 9.5      | 6.868               |
| 3/30/2004 | 12:18:20 | 10       | 6.853               |
| 3/30/2004 | 12:18:20 | 10.6     | 6.839               |
| 3/30/2004 | 12:18:21 | 11.3     | 6.829               |
| 3/30/2004 | 12:18:21 | 11.9     | 6.827               |
| 3/30/2004 | 12:18:22 | 12.6     | 6.812               |
| 3/30/2004 | 12:18:23 | 13.4     | 6.814               |
| 3/30/2004 | 12:18:24 | 14.2     | 6.807               |
| 3/30/2004 | 12:18:25 | 15       | 6.805               |
| 3/30/2004 | 12:18:25 | 15.9     | 6.804               |
| 3/30/2004 | 12:18:26 | 16.8     | 6.802               |
| 3/30/2004 | 12:18:27 | 17.8     | 6.797               |
| 3/30/2004 | 12:18:28 | 18.9     | 6.797               |
| 3/30/2004 | 12:18:30 | 20       | 6.793               |
| 3/30/2004 | 12:18:31 | 21.2     | 6.792               |
| 3/30/2004 | 12:18:32 | 22.4     | 6.79                |
| 3/30/2004 | 12:18:33 | 23.8     | 6.786               |
| 3/30/2004 | 12:18:35 | 25.2     | 6.78                |
| 3/30/2004 | 12:18:36 | 26.7     | 6.764               |
| 3/30/2004 | 12:18:38 | 28.2     | 6.739               |
| 3/30/2004 | 12:18:39 | 29.8     | 6.723               |
| 3/30/2004 | 12:18:41 | 31.5     | 6.718               |
| 3/30/2004 | 12:18:43 | 33.3     | 6.715               |
| 3/30/2004 | 12:18:45 | 35.2     | 6.713               |
| 3/30/2004 | 12:18:47 | 37.3     | 6.71                |
| 3/30/2004 | 12:18:49 | 39.5     | 6.707               |
| 3/30/2004 | 12:18:51 | 41.8     | 6.705               |
| 3/30/2004 | 12:18:54 | 44.3     | 6.696               |
| 3/30/2004 | 12:18:56 | 46.9     | 6.701               |
| 3/30/2004 | 12:18:59 | 49.7     | 6.696               |
| 3/30/2004 | 12:19:02 | 52.6     | 6.695               |
| 3/30/2004 | 12:19:05 | 55.7     | 6.693               |
| 3/30/2004 | 12:19:09 | 59       | 6.691               |
| 3/30/2004 | 12:19:12 | 62.5     | 6.692               |
| 3/30/2004 | 12:19:16 | 66.2     | 6.69                |
| 3/30/2004 | 12:19:20 | 70.1     | 6.69                |
| 3/30/2004 | 12:19:24 | 74.3     | 6.69                |
| 3/30/2004 | 12:19:28 | 78.7     | 6.692               |
| 3/30/2004 | 12:19:33 | 83.4     | 6.692               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 12:19:38 | 88.4     | 6.691               |
| 3/30/2004 | 12:19:43 | 93.7     | 6.688               |
| 3/30/2004 | 12:19:49 | 99.3     | 6.688               |
| 3/30/2004 | 12:19:55 | 105.2    | 6.688               |
| 3/30/2004 | 12:20:01 | 111.5    | 6.686               |
| 3/30/2004 | 12:20:08 | 118.1    | 6.693               |
| 3/30/2004 | 12:20:15 | 125.1    | 6.693               |
| 3/30/2004 | 12:20:22 | 132.6    | 6.684               |
| 3/30/2004 | 12:20:30 | 140.5    | 6.684               |
| 3/30/2004 | 12:20:38 | 148.9    | 6.683               |
| 3/30/2004 | 12:20:47 | 157.8    | 6.683               |
| 3/30/2004 | 12:20:57 | 167.2    | 6.686               |
| 3/30/2004 | 12:21:07 | 177.2    | 6.686               |
| 3/30/2004 | 12:21:17 | 187.8    | 6.684               |
| 3/30/2004 | 12:21:29 | 199      | 6.691               |
| 3/30/2004 | 12:21:40 | 210.9    | 6.681               |
| 3/30/2004 | 12:21:53 | 223.5    | 6.681               |
| 3/30/2004 | 12:22:06 | 236.8    | 6.683               |
| 3/30/2004 | 12:22:20 | 250.9    | 6.681               |
| 3/30/2004 | 12:22:35 | 265.8    | 7.013               |
| 3/30/2004 | 12:22:51 | 281.6    | 7.067               |
| 3/30/2004 | 12:23:08 | 298.4    | 7.078               |
| 3/30/2004 | 12:23:26 | 316.2    | 7.083               |
| 3/30/2004 | 12:23:45 | 335      | 7.08                |
| 3/30/2004 | 12:24:04 | 354.9    | 7.076               |
| 3/30/2004 | 12:24:26 | 376      | 7.086               |



### AGLUS 21 TEST #1

Data Set: Y:\...\AgLUS21\_test1\_13JUL2010.aqt

Date: 07/26/10

Time: 15:47:23

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 21

Test Date: 03/30/2004

### AQUIFER DATA

Saturated Thickness: 8.83 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (AgLUS 21)

Initial Displacement: 7.07 ft

Static Water Column Height: 8.83 ft

Total Well Penetration Depth: 9.76 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 1.822E-7 ft/sec

y0 = 0.3931 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 21\AgLUS21\_test1\_13  
 Title: AgLUS 21 test #1  
 Date: 07/26/10  
 Time: 15:47:41

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/30/2004  
 Test Well: AgLUS 21

AQUIFER DATA

Saturated Thickness: 8.83 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 21

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 7.07 ft  
 Static Water Column Height: 8.83 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 9.76 ft

No. of Observations: 17

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 0.384             | 76.3       | 0.386             |
| 6.6              | 0.377             | 87.5       | 0.379             |
| 13.6             | 0.377             | 99.4       | 0.389             |
| 21.1             | 0.386             | 112.       | 0.389             |
| 29.              | 0.386             | 125.3      | 0.387             |
| 37.4             | 0.387             | 139.4      | 0.389             |
| 46.3             | 0.387             | 154.3      | 0.057             |
| 55.7             | 0.384             | 170.1      | 0.003             |
| 65.7             | 0.384             |            |                   |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 2.423

VISUAL ESTIMATION RESULTSEstimated Parameters

| Parameter | Estimate |        |
|-----------|----------|--------|
| K         | 1.822E-7 | ft/sec |
| y0        | 0.3931   | ft     |

K = 5.553E-6 cm/sec  
 T = K\*b = 1.609E-6 ft<sup>2</sup>/sec (0.001495 sq. cm/sec)



In-Situ Inc. MiniTroll Pro  
 Report generated: 4/19/2004 9:03:11  
 Report from file: ...\\SN09731 2004-03-30 123407 AgLUS21\_2.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS21\_2

Test defined on: 3/30/2004 12:33:50  
 Test started on: 3/30/2004 12:34:07  
 Test stopped on: 3/30/2004 12:36:22  
 Test extracted on: N/A N/A

Data gathered using Linear testing  
 Time between data points: 1.0 Seconds.  
 Number of data samples: 135

TOTAL DATA SAMPLES 135

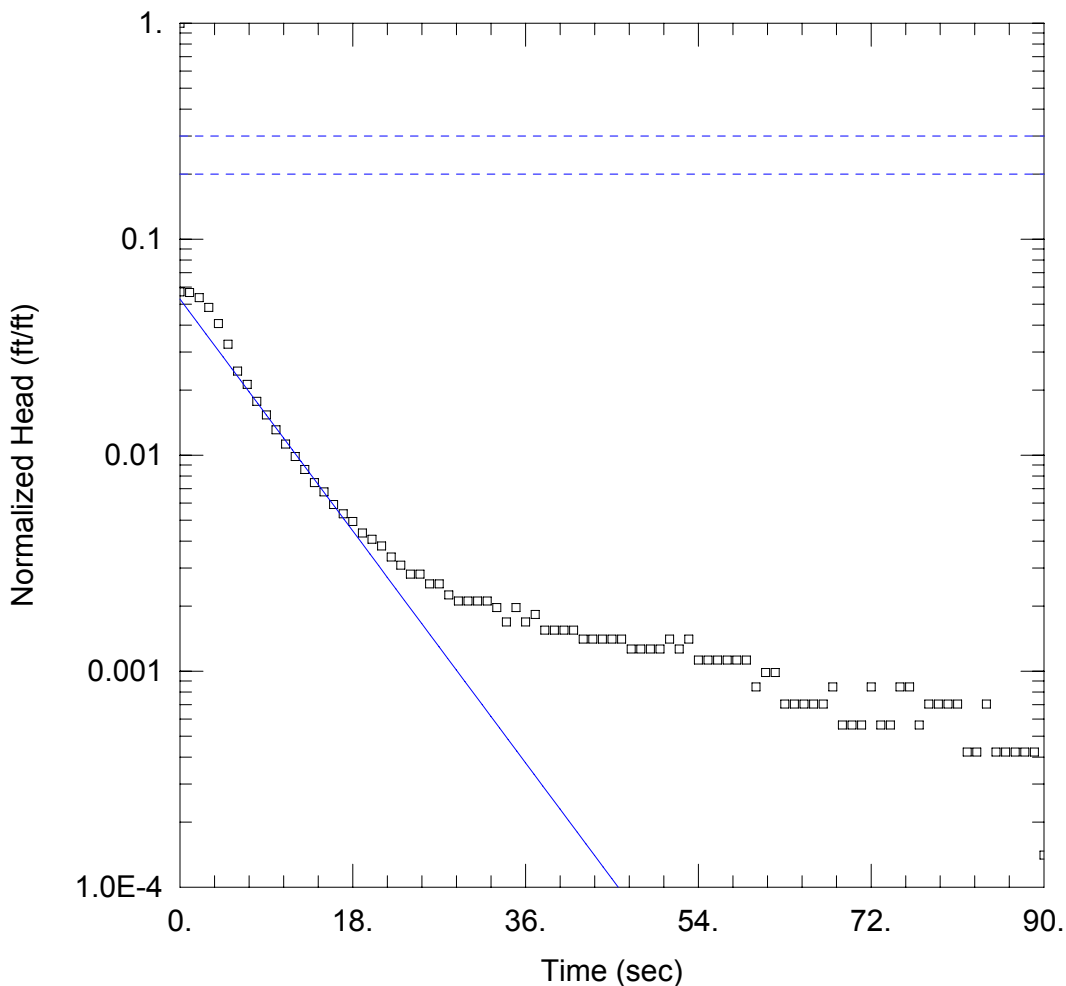
Channel number [2]  
 Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1639.824 meters (5380.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 12:34:07 | 0        | 7.103               |
| 3/30/2004 | 12:34:08 | 1        | 7.104               |
| 3/30/2004 | 12:34:09 | 2        | 7.054               |
| 3/30/2004 | 12:34:10 | 3        | 6.996               |
| 3/30/2004 | 12:34:11 | 4        | 6.924               |
| 3/30/2004 | 12:34:12 | 5        | 6.865               |
| 3/30/2004 | 12:34:13 | 6        | 6.836               |
| 3/30/2004 | 12:34:14 | 7        | 6.819               |
| 3/30/2004 | 12:34:15 | 8        | 6.806               |
| 3/30/2004 | 12:34:16 | 9        | 6.798               |
| 3/30/2004 | 12:34:17 | 10       | 6.789               |
| 3/30/2004 | 12:34:18 | 11       | 6.782               |
| 3/30/2004 | 12:34:19 | 12       | 6.775               |
| 3/30/2004 | 12:34:20 | 13       | 6.769               |
| 3/30/2004 | 12:34:21 | 14       | 6.764               |
| 3/30/2004 | 12:34:22 | 15       | 6.759               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 12:34:23 | 16       | 6.753               |
| 3/30/2004 | 12:34:24 | 17       | 6.748               |
| 3/30/2004 | 12:34:25 | 18       | 6.745               |
| 3/30/2004 | 12:34:26 | 19       | 6.741               |
| 3/30/2004 | 12:34:27 | 20       | 6.738               |
| 3/30/2004 | 12:34:28 | 21       | 6.733               |
| 3/30/2004 | 12:34:29 | 22       | 6.73                |
| 3/30/2004 | 12:34:30 | 23       | 6.728               |
| 3/30/2004 | 12:34:31 | 24       | 6.725               |
| 3/30/2004 | 12:34:32 | 25       | 6.721               |
| 3/30/2004 | 12:34:33 | 26       | 6.72                |
| 3/30/2004 | 12:34:34 | 27       | 6.717               |
| 3/30/2004 | 12:34:35 | 28       | 6.716               |
| 3/30/2004 | 12:34:36 | 29       | 6.714               |
| 3/30/2004 | 12:34:37 | 30       | 6.713               |
| 3/30/2004 | 12:34:38 | 31       | 6.71                |
| 3/30/2004 | 12:34:39 | 32       | 6.707               |
| 3/30/2004 | 12:34:40 | 33       | 6.708               |
| 3/30/2004 | 12:34:41 | 34       | 6.707               |
| 3/30/2004 | 12:34:42 | 35       | 6.708               |
| 3/30/2004 | 12:34:43 | 36       | 6.707               |
| 3/30/2004 | 12:34:44 | 37       | 6.704               |
| 3/30/2004 | 12:34:45 | 38       | 6.705               |
| 3/30/2004 | 12:34:46 | 39       | 6.704               |
| 3/30/2004 | 12:34:47 | 40       | 6.701               |
| 3/30/2004 | 12:34:48 | 41       | 6.699               |
| 3/30/2004 | 12:34:49 | 42       | 6.696               |
| 3/30/2004 | 12:34:50 | 43       | 6.698               |
| 3/30/2004 | 12:34:51 | 44       | 6.695               |
| 3/30/2004 | 12:34:52 | 45       | 6.698               |
| 3/30/2004 | 12:34:53 | 46       | 6.719               |
| 3/30/2004 | 12:34:54 | 47       | 6.757               |
| 3/30/2004 | 12:34:55 | 48       | 6.811               |
| 3/30/2004 | 12:34:56 | 49       | 6.868               |
| 3/30/2004 | 12:34:57 | 50       | 6.926               |
| 3/30/2004 | 12:34:58 | 51       | 6.949               |
| 3/30/2004 | 12:34:59 | 52       | 6.974               |
| 3/30/2004 | 12:35:00 | 53       | 6.991               |
| 3/30/2004 | 12:35:01 | 54       | 7.007               |
| 3/30/2004 | 12:35:02 | 55       | 7.02                |
| 3/30/2004 | 12:35:03 | 56       | 7.03                |
| 3/30/2004 | 12:35:04 | 57       | 7.039               |
| 3/30/2004 | 12:35:05 | 58       | 7.047               |
| 3/30/2004 | 12:35:06 | 59       | 7.052               |
| 3/30/2004 | 12:35:07 | 60       | 7.058               |
| 3/30/2004 | 12:35:08 | 61       | 7.062               |
| 3/30/2004 | 12:35:09 | 62       | 7.065               |
| 3/30/2004 | 12:35:10 | 63       | 7.069               |
| 3/30/2004 | 12:35:11 | 64       | 7.071               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 12:35:12 | 65       | 7.073               |
| 3/30/2004 | 12:35:13 | 66       | 7.076               |
| 3/30/2004 | 12:35:14 | 67       | 7.078               |
| 3/30/2004 | 12:35:15 | 68       | 7.08                |
| 3/30/2004 | 12:35:16 | 69       | 7.08                |
| 3/30/2004 | 12:35:17 | 70       | 7.082               |
| 3/30/2004 | 12:35:18 | 71       | 7.082               |
| 3/30/2004 | 12:35:19 | 72       | 7.084               |
| 3/30/2004 | 12:35:20 | 73       | 7.085               |
| 3/30/2004 | 12:35:21 | 74       | 7.085               |
| 3/30/2004 | 12:35:22 | 75       | 7.085               |
| 3/30/2004 | 12:35:23 | 76       | 7.085               |
| 3/30/2004 | 12:35:24 | 77       | 7.086               |
| 3/30/2004 | 12:35:25 | 78       | 7.088               |
| 3/30/2004 | 12:35:26 | 79       | 7.086               |
| 3/30/2004 | 12:35:27 | 80       | 7.088               |
| 3/30/2004 | 12:35:28 | 81       | 7.087               |
| 3/30/2004 | 12:35:29 | 82       | 7.089               |
| 3/30/2004 | 12:35:30 | 83       | 7.089               |
| 3/30/2004 | 12:35:31 | 84       | 7.089               |
| 3/30/2004 | 12:35:32 | 85       | 7.089               |
| 3/30/2004 | 12:35:33 | 86       | 7.09                |
| 3/30/2004 | 12:35:34 | 87       | 7.09                |
| 3/30/2004 | 12:35:35 | 88       | 7.09                |
| 3/30/2004 | 12:35:36 | 89       | 7.09                |
| 3/30/2004 | 12:35:37 | 90       | 7.09                |
| 3/30/2004 | 12:35:38 | 91       | 7.091               |
| 3/30/2004 | 12:35:39 | 92       | 7.091               |
| 3/30/2004 | 12:35:40 | 93       | 7.091               |
| 3/30/2004 | 12:35:41 | 94       | 7.091               |
| 3/30/2004 | 12:35:42 | 95       | 7.09                |
| 3/30/2004 | 12:35:43 | 96       | 7.091               |
| 3/30/2004 | 12:35:44 | 97       | 7.09                |
| 3/30/2004 | 12:35:45 | 98       | 7.092               |
| 3/30/2004 | 12:35:46 | 99       | 7.092               |
| 3/30/2004 | 12:35:47 | 100      | 7.092               |
| 3/30/2004 | 12:35:48 | 101      | 7.092               |
| 3/30/2004 | 12:35:49 | 102      | 7.092               |
| 3/30/2004 | 12:35:50 | 103      | 7.092               |
| 3/30/2004 | 12:35:51 | 104      | 7.094               |
| 3/30/2004 | 12:35:52 | 105      | 7.093               |
| 3/30/2004 | 12:35:53 | 106      | 7.093               |
| 3/30/2004 | 12:35:54 | 107      | 7.095               |
| 3/30/2004 | 12:35:55 | 108      | 7.095               |
| 3/30/2004 | 12:35:56 | 109      | 7.095               |
| 3/30/2004 | 12:35:57 | 110      | 7.095               |
| 3/30/2004 | 12:35:58 | 111      | 7.095               |
| 3/30/2004 | 12:35:59 | 112      | 7.094               |
| 3/30/2004 | 12:36:00 | 113      | 7.096               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 12:36:01 | 114      | 7.096               |
| 3/30/2004 | 12:36:02 | 115      | 7.096               |
| 3/30/2004 | 12:36:03 | 116      | 7.094               |
| 3/30/2004 | 12:36:04 | 117      | 7.096               |
| 3/30/2004 | 12:36:05 | 118      | 7.096               |
| 3/30/2004 | 12:36:06 | 119      | 7.094               |
| 3/30/2004 | 12:36:07 | 120      | 7.094               |
| 3/30/2004 | 12:36:08 | 121      | 7.096               |
| 3/30/2004 | 12:36:09 | 122      | 7.095               |
| 3/30/2004 | 12:36:10 | 123      | 7.095               |
| 3/30/2004 | 12:36:11 | 124      | 7.095               |
| 3/30/2004 | 12:36:12 | 125      | 7.095               |
| 3/30/2004 | 12:36:13 | 126      | 7.097               |
| 3/30/2004 | 12:36:14 | 127      | 7.097               |
| 3/30/2004 | 12:36:15 | 128      | 7.095               |
| 3/30/2004 | 12:36:16 | 129      | 7.097               |
| 3/30/2004 | 12:36:17 | 130      | 7.097               |
| 3/30/2004 | 12:36:18 | 131      | 7.097               |
| 3/30/2004 | 12:36:19 | 132      | 7.097               |
| 3/30/2004 | 12:36:20 | 133      | 7.097               |
| 3/30/2004 | 12:36:21 | 134      | 7.099               |



### AGLUS 21 TEST #2

Data Set: Y:\...\AgLUS21\_test2\_13JUL2010.aqt

Date: 07/26/10

Time: 15:48:06

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 21

Test Date: 03/30/2004

### AQUIFER DATA

Saturated Thickness: 8.83 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (AgLUS 21)

Initial Displacement: 7.103 ft

Static Water Column Height: 8.83 ft

Total Well Penetration Depth: 9.76 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.0001298 ft/sec

y0 = 0.3749 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 21\AgLUS21\_test2\_13  
 Title: AgLUS 21 test #2  
 Date: 07/26/10  
 Time: 15:48:29

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/30/2004  
 Test Well: AgLUS 21

AQUIFER DATA

Saturated Thickness: 8.83 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 21

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 7.103 ft  
 Static Water Column Height: 8.83 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 9.76 ft

No. of Observations: 91

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 0.405             | 46.        | 0.01              |
| 1.               | 0.402             | 47.        | 0.009             |
| 2.               | 0.381             | 48.        | 0.009             |
| 3.               | 0.343             | 49.        | 0.009             |
| 4.               | 0.289             | 50.        | 0.009             |
| 5.               | 0.232             | 51.        | 0.01              |
| 6.               | 0.174             | 52.        | 0.009             |
| 7.               | 0.151             | 53.        | 0.01              |
| 8.               | 0.126             | 54.        | 0.008             |
| 9.               | 0.109             | 55.        | 0.008             |
| 10.              | 0.093             | 56.        | 0.008             |
| 11.              | 0.08              | 57.        | 0.008             |
| 12.              | 0.07              | 58.        | 0.008             |
| 13.              | 0.061             | 59.        | 0.008             |
| 14.              | 0.053             | 60.        | 0.006             |
| 15.              | 0.048             | 61.        | 0.007             |
| 16.              | 0.042             | 62.        | 0.007             |
| 17.              | 0.038             | 63.        | 0.005             |
| 18.              | 0.035             | 64.        | 0.005             |
| 19.              | 0.031             | 65.        | 0.005             |
| 20.              | 0.029             | 66.        | 0.005             |
| 21.              | 0.027             | 67.        | 0.005             |
| 22.              | 0.024             | 68.        | 0.006             |
| 23.              | 0.022             | 69.        | 0.004             |
| 24.              | 0.02              | 70.        | 0.004             |
| 25.              | 0.02              | 71.        | 0.004             |
| 26.              | 0.018             | 72.        | 0.006             |
| 27.              | 0.018             | 73.        | 0.004             |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 28.               | 0.016                    | 74.               | 0.004                    |
| 29.               | 0.015                    | 75.               | 0.006                    |
| 30.               | 0.015                    | 76.               | 0.006                    |
| 31.               | 0.015                    | 77.               | 0.004                    |
| 32.               | 0.015                    | 78.               | 0.005                    |
| 33.               | 0.014                    | 79.               | 0.005                    |
| 34.               | 0.012                    | 80.               | 0.005                    |
| 35.               | 0.014                    | 81.               | 0.005                    |
| 36.               | 0.012                    | 82.               | 0.003                    |
| 37.               | 0.013                    | 83.               | 0.003                    |
| 38.               | 0.011                    | 84.               | 0.005                    |
| 39.               | 0.011                    | 85.               | 0.003                    |
| 40.               | 0.011                    | 86.               | 0.003                    |
| 41.               | 0.011                    | 87.               | 0.003                    |
| 42.               | 0.01                     | 88.               | 0.003                    |
| 43.               | 0.01                     | 89.               | 0.003                    |
| 44.               | 0.01                     | 90.               | 0.001                    |
| 45.               | 0.01                     |                   |                          |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 2.423

VISUAL ESTIMATION RESULTSEstimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 0.0001298       | ft/sec |
| y0               | 0.3749          | ft     |

K = 0.003956 cm/sec

T = K\*b = 0.001146 ft<sup>2</sup>/sec (1.065 sq. cm/sec)

In-Situ Inc. MiniTroll Pro  
 Report generated: 4/19/2004 9:04:05  
 Report from file: ...\\SN09731 2004-03-30 123921 AgLUS21\_3.bin  
 Win-Situ Version 4.46  
 Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS21\_3

Test defined on: 3/30/2004 12:39:13  
 Test started on: 3/30/2004 12:39:21  
 Test stopped on: 3/30/2004 12:42:49  
 Test extracted on: N/A N/A

Data gathered using Linear testing  
 Time between data points: 1.0 Seconds.  
 Number of data samples: 208

TOTAL DATA SAMPLES 208

Channel number [2]  
 Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1639.824 meters (5380.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 12:39:21 | 0        | 7.111               |
| 3/30/2004 | 12:39:22 | 1        | 7.114               |
| 3/30/2004 | 12:39:23 | 2        | 7.114               |
| 3/30/2004 | 12:39:24 | 3        | 7.114               |
| 3/30/2004 | 12:39:25 | 4        | 7.107               |
| 3/30/2004 | 12:39:26 | 5        | 7.05                |
| 3/30/2004 | 12:39:27 | 6        | 6.99                |
| 3/30/2004 | 12:39:28 | 7        | 6.916               |
| 3/30/2004 | 12:39:29 | 8        | 6.865               |
| 3/30/2004 | 12:39:30 | 9        | 6.839               |
| 3/30/2004 | 12:39:31 | 10       | 6.822               |
| 3/30/2004 | 12:39:32 | 11       | 6.806               |
| 3/30/2004 | 12:39:33 | 12       | 6.798               |
| 3/30/2004 | 12:39:34 | 13       | 6.791               |
| 3/30/2004 | 12:39:35 | 14       | 6.784               |
| 3/30/2004 | 12:39:36 | 15       | 6.778               |

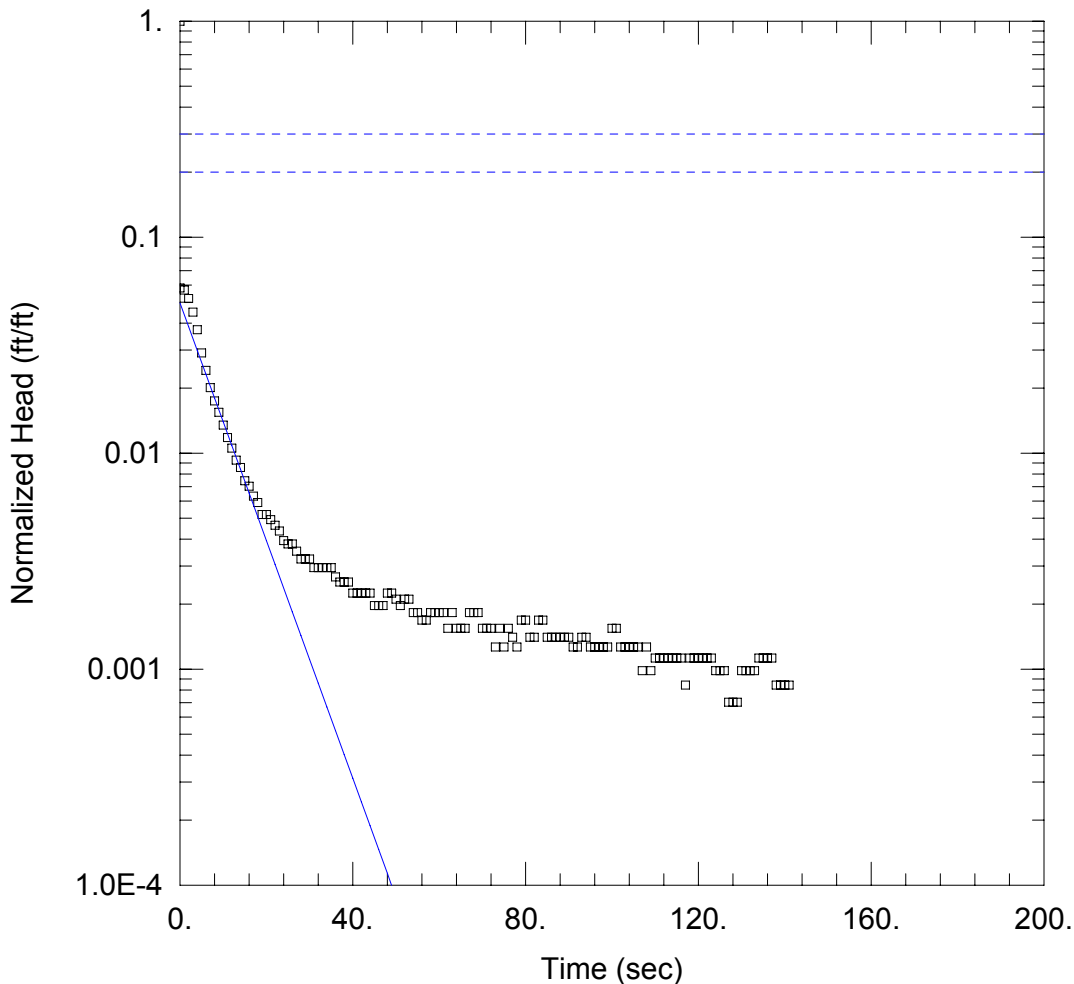


| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 12:39:37 | 16       | 6.771               |
| 3/30/2004 | 12:39:38 | 17       | 6.764               |
| 3/30/2004 | 12:39:39 | 18       | 6.76                |
| 3/30/2004 | 12:39:40 | 19       | 6.757               |
| 3/30/2004 | 12:39:41 | 20       | 6.75                |
| 3/30/2004 | 12:39:42 | 21       | 6.747               |
| 3/30/2004 | 12:39:43 | 22       | 6.743               |
| 3/30/2004 | 12:39:44 | 23       | 6.736               |
| 3/30/2004 | 12:39:45 | 24       | 6.734               |
| 3/30/2004 | 12:39:46 | 25       | 6.729               |
| 3/30/2004 | 12:39:47 | 26       | 6.724               |
| 3/30/2004 | 12:39:48 | 27       | 6.724               |
| 3/30/2004 | 12:39:49 | 28       | 6.719               |
| 3/30/2004 | 12:39:50 | 29       | 6.716               |
| 3/30/2004 | 12:39:51 | 30       | 6.715               |
| 3/30/2004 | 12:39:52 | 31       | 6.714               |
| 3/30/2004 | 12:39:53 | 32       | 6.711               |
| 3/30/2004 | 12:39:54 | 33       | 6.712               |
| 3/30/2004 | 12:39:55 | 34       | 6.709               |
| 3/30/2004 | 12:39:56 | 35       | 6.708               |
| 3/30/2004 | 12:39:57 | 36       | 6.706               |
| 3/30/2004 | 12:39:58 | 37       | 6.706               |
| 3/30/2004 | 12:39:59 | 38       | 6.703               |
| 3/30/2004 | 12:40:00 | 39       | 6.704               |
| 3/30/2004 | 12:40:01 | 40       | 6.703               |
| 3/30/2004 | 12:40:02 | 41       | 6.704               |
| 3/30/2004 | 12:40:03 | 42       | 6.703               |
| 3/30/2004 | 12:40:04 | 43       | 6.7                 |
| 3/30/2004 | 12:40:05 | 44       | 6.7                 |
| 3/30/2004 | 12:40:06 | 45       | 6.699               |
| 3/30/2004 | 12:40:07 | 46       | 6.698               |
| 3/30/2004 | 12:40:08 | 47       | 6.699               |
| 3/30/2004 | 12:40:09 | 48       | 6.694               |
| 3/30/2004 | 12:40:10 | 49       | 6.696               |
| 3/30/2004 | 12:40:11 | 50       | 6.697               |
| 3/30/2004 | 12:40:12 | 51       | 6.697               |
| 3/30/2004 | 12:40:13 | 52       | 6.698               |
| 3/30/2004 | 12:40:14 | 53       | 6.698               |
| 3/30/2004 | 12:40:15 | 54       | 6.697               |
| 3/30/2004 | 12:40:16 | 55       | 6.698               |
| 3/30/2004 | 12:40:17 | 56       | 6.698               |
| 3/30/2004 | 12:40:18 | 57       | 6.7                 |
| 3/30/2004 | 12:40:19 | 58       | 6.699               |
| 3/30/2004 | 12:40:20 | 59       | 6.7                 |
| 3/30/2004 | 12:40:21 | 60       | 6.702               |
| 3/30/2004 | 12:40:22 | 61       | 6.7                 |
| 3/30/2004 | 12:40:23 | 62       | 6.699               |
| 3/30/2004 | 12:40:24 | 63       | 6.699               |
| 3/30/2004 | 12:40:25 | 64       | 6.698               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 12:40:26 | 65       | 6.697               |
| 3/30/2004 | 12:40:27 | 66       | 6.697               |
| 3/30/2004 | 12:40:28 | 67       | 6.706               |
| 3/30/2004 | 12:40:29 | 68       | 6.741               |
| 3/30/2004 | 12:40:30 | 69       | 6.791               |
| 3/30/2004 | 12:40:31 | 70       | 6.846               |
| 3/30/2004 | 12:40:32 | 71       | 6.904               |
| 3/30/2004 | 12:40:33 | 72       | 6.939               |
| 3/30/2004 | 12:40:34 | 73       | 6.968               |
| 3/30/2004 | 12:40:35 | 74       | 6.987               |
| 3/30/2004 | 12:40:36 | 75       | 7.001               |
| 3/30/2004 | 12:40:37 | 76       | 7.015               |
| 3/30/2004 | 12:40:38 | 77       | 7.027               |
| 3/30/2004 | 12:40:39 | 78       | 7.036               |
| 3/30/2004 | 12:40:40 | 79       | 7.045               |
| 3/30/2004 | 12:40:41 | 80       | 7.05                |
| 3/30/2004 | 12:40:42 | 81       | 7.058               |
| 3/30/2004 | 12:40:43 | 82       | 7.061               |
| 3/30/2004 | 12:40:44 | 83       | 7.066               |
| 3/30/2004 | 12:40:45 | 84       | 7.069               |
| 3/30/2004 | 12:40:46 | 85       | 7.074               |
| 3/30/2004 | 12:40:47 | 86       | 7.074               |
| 3/30/2004 | 12:40:48 | 87       | 7.076               |
| 3/30/2004 | 12:40:49 | 88       | 7.078               |
| 3/30/2004 | 12:40:50 | 89       | 7.08                |
| 3/30/2004 | 12:40:51 | 90       | 7.083               |
| 3/30/2004 | 12:40:52 | 91       | 7.084               |
| 3/30/2004 | 12:40:53 | 92       | 7.084               |
| 3/30/2004 | 12:40:54 | 93       | 7.086               |
| 3/30/2004 | 12:40:55 | 94       | 7.088               |
| 3/30/2004 | 12:40:56 | 95       | 7.088               |
| 3/30/2004 | 12:40:57 | 96       | 7.088               |
| 3/30/2004 | 12:40:58 | 97       | 7.09                |
| 3/30/2004 | 12:40:59 | 98       | 7.09                |
| 3/30/2004 | 12:41:00 | 99       | 7.09                |
| 3/30/2004 | 12:41:01 | 100      | 7.09                |
| 3/30/2004 | 12:41:02 | 101      | 7.09                |
| 3/30/2004 | 12:41:03 | 102      | 7.092               |
| 3/30/2004 | 12:41:04 | 103      | 7.093               |
| 3/30/2004 | 12:41:05 | 104      | 7.093               |
| 3/30/2004 | 12:41:06 | 105      | 7.093               |
| 3/30/2004 | 12:41:07 | 106      | 7.095               |
| 3/30/2004 | 12:41:08 | 107      | 7.095               |
| 3/30/2004 | 12:41:09 | 108      | 7.095               |
| 3/30/2004 | 12:41:10 | 109      | 7.095               |
| 3/30/2004 | 12:41:11 | 110      | 7.095               |
| 3/30/2004 | 12:41:12 | 111      | 7.097               |
| 3/30/2004 | 12:41:13 | 112      | 7.097               |
| 3/30/2004 | 12:41:14 | 113      | 7.097               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 12:41:15 | 114      | 7.095               |
| 3/30/2004 | 12:41:16 | 115      | 7.095               |
| 3/30/2004 | 12:41:17 | 116      | 7.096               |
| 3/30/2004 | 12:41:18 | 117      | 7.097               |
| 3/30/2004 | 12:41:19 | 118      | 7.096               |
| 3/30/2004 | 12:41:20 | 119      | 7.096               |
| 3/30/2004 | 12:41:21 | 120      | 7.098               |
| 3/30/2004 | 12:41:22 | 121      | 7.098               |
| 3/30/2004 | 12:41:23 | 122      | 7.099               |
| 3/30/2004 | 12:41:24 | 123      | 7.099               |
| 3/30/2004 | 12:41:25 | 124      | 7.098               |
| 3/30/2004 | 12:41:26 | 125      | 7.098               |
| 3/30/2004 | 12:41:27 | 126      | 7.098               |
| 3/30/2004 | 12:41:28 | 127      | 7.098               |
| 3/30/2004 | 12:41:29 | 128      | 7.1                 |
| 3/30/2004 | 12:41:30 | 129      | 7.098               |
| 3/30/2004 | 12:41:31 | 130      | 7.1                 |
| 3/30/2004 | 12:41:32 | 131      | 7.1                 |
| 3/30/2004 | 12:41:33 | 132      | 7.1                 |
| 3/30/2004 | 12:41:34 | 133      | 7.098               |
| 3/30/2004 | 12:41:35 | 134      | 7.098               |
| 3/30/2004 | 12:41:36 | 135      | 7.098               |
| 3/30/2004 | 12:41:37 | 136      | 7.1                 |
| 3/30/2004 | 12:41:38 | 137      | 7.1                 |
| 3/30/2004 | 12:41:39 | 138      | 7.1                 |
| 3/30/2004 | 12:41:40 | 139      | 7.102               |
| 3/30/2004 | 12:41:41 | 140      | 7.1                 |
| 3/30/2004 | 12:41:42 | 141      | 7.102               |
| 3/30/2004 | 12:41:43 | 142      | 7.1                 |
| 3/30/2004 | 12:41:44 | 143      | 7.101               |
| 3/30/2004 | 12:41:45 | 144      | 7.102               |
| 3/30/2004 | 12:41:46 | 145      | 7.099               |
| 3/30/2004 | 12:41:47 | 146      | 7.099               |
| 3/30/2004 | 12:41:48 | 147      | 7.101               |
| 3/30/2004 | 12:41:49 | 148      | 7.101               |
| 3/30/2004 | 12:41:50 | 149      | 7.099               |
| 3/30/2004 | 12:41:51 | 150      | 7.099               |
| 3/30/2004 | 12:41:52 | 151      | 7.101               |
| 3/30/2004 | 12:41:53 | 152      | 7.101               |
| 3/30/2004 | 12:41:54 | 153      | 7.101               |
| 3/30/2004 | 12:41:55 | 154      | 7.101               |
| 3/30/2004 | 12:41:56 | 155      | 7.101               |
| 3/30/2004 | 12:41:57 | 156      | 7.101               |
| 3/30/2004 | 12:41:58 | 157      | 7.102               |
| 3/30/2004 | 12:41:59 | 158      | 7.102               |
| 3/30/2004 | 12:42:00 | 159      | 7.101               |
| 3/30/2004 | 12:42:01 | 160      | 7.101               |
| 3/30/2004 | 12:42:02 | 161      | 7.102               |
| 3/30/2004 | 12:42:03 | 162      | 7.102               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 12:42:04 | 163      | 7.102               |
| 3/30/2004 | 12:42:05 | 164      | 7.102               |
| 3/30/2004 | 12:42:06 | 165      | 7.102               |
| 3/30/2004 | 12:42:07 | 166      | 7.1                 |
| 3/30/2004 | 12:42:08 | 167      | 7.1                 |
| 3/30/2004 | 12:42:09 | 168      | 7.102               |
| 3/30/2004 | 12:42:10 | 169      | 7.102               |
| 3/30/2004 | 12:42:11 | 170      | 7.102               |
| 3/30/2004 | 12:42:12 | 171      | 7.102               |
| 3/30/2004 | 12:42:13 | 172      | 7.102               |
| 3/30/2004 | 12:42:14 | 173      | 7.104               |
| 3/30/2004 | 12:42:15 | 174      | 7.102               |
| 3/30/2004 | 12:42:16 | 175      | 7.104               |
| 3/30/2004 | 12:42:17 | 176      | 7.103               |
| 3/30/2004 | 12:42:18 | 177      | 7.103               |
| 3/30/2004 | 12:42:19 | 178      | 7.103               |
| 3/30/2004 | 12:42:20 | 179      | 7.103               |
| 3/30/2004 | 12:42:21 | 180      | 7.103               |
| 3/30/2004 | 12:42:22 | 181      | 7.103               |
| 3/30/2004 | 12:42:23 | 182      | 7.103               |
| 3/30/2004 | 12:42:24 | 183      | 7.105               |
| 3/30/2004 | 12:42:25 | 184      | 7.103               |
| 3/30/2004 | 12:42:26 | 185      | 7.103               |
| 3/30/2004 | 12:42:27 | 186      | 7.103               |
| 3/30/2004 | 12:42:28 | 187      | 7.103               |
| 3/30/2004 | 12:42:29 | 188      | 7.103               |
| 3/30/2004 | 12:42:30 | 189      | 7.103               |
| 3/30/2004 | 12:42:31 | 190      | 7.104               |
| 3/30/2004 | 12:42:32 | 191      | 7.104               |
| 3/30/2004 | 12:42:33 | 192      | 7.104               |
| 3/30/2004 | 12:42:34 | 193      | 7.106               |
| 3/30/2004 | 12:42:35 | 194      | 7.106               |
| 3/30/2004 | 12:42:36 | 195      | 7.106               |
| 3/30/2004 | 12:42:37 | 196      | 7.104               |
| 3/30/2004 | 12:42:38 | 197      | 7.104               |
| 3/30/2004 | 12:42:39 | 198      | 7.104               |
| 3/30/2004 | 12:42:40 | 199      | 7.104               |
| 3/30/2004 | 12:42:41 | 200      | 7.103               |
| 3/30/2004 | 12:42:42 | 201      | 7.103               |
| 3/30/2004 | 12:42:43 | 202      | 7.103               |
| 3/30/2004 | 12:42:44 | 203      | 7.103               |
| 3/30/2004 | 12:42:45 | 204      | 7.105               |
| 3/30/2004 | 12:42:46 | 205      | 7.105               |
| 3/30/2004 | 12:42:47 | 206      | 7.105               |
| 3/30/2004 | 12:42:48 | 207      | 7.105               |



### AGLUS 21 TEST #3

Data Set: Y:\...\AgLUS21\_test3\_13JUL2010.aqt

Date: 07/26/10

Time: 15:49:12

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 21

Test Date: 03/30/2004

### AQUIFER DATA

Saturated Thickness: 8.83 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (AgLUS 21)

Initial Displacement: 7.111 ft

Static Water Column Height: 8.83 ft

Total Well Penetration Depth: 9.76 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.0001197 ft/sec

y0 = 0.3527 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 21\AgLUS21\_test3\_13  
 Title: AgLUS 21 test #3  
 Date: 07/26/10  
 Time: 15:49:29

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/30/2004  
 Test Well: AgLUS 21

AQUIFER DATA

Saturated Thickness: 8.83 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 21

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 7.111 ft  
 Static Water Column Height: 8.83 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 9.76 ft

No. of Observations: 142

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 0.414             | 71.        | 0.011             |
| 1.               | 0.405             | 72.        | 0.011             |
| 2.               | 0.37              | 73.        | 0.009             |
| 3.               | 0.32              | 74.        | 0.011             |
| 4.               | 0.265             | 75.        | 0.009             |
| 5.               | 0.207             | 76.        | 0.011             |
| 6.               | 0.172             | 77.        | 0.01              |
| 7.               | 0.143             | 78.        | 0.009             |
| 8.               | 0.124             | 79.        | 0.012             |
| 9.               | 0.11              | 80.        | 0.012             |
| 10.              | 0.096             | 81.        | 0.01              |
| 11.              | 0.084             | 82.        | 0.01              |
| 12.              | 0.075             | 83.        | 0.012             |
| 13.              | 0.066             | 84.        | 0.012             |
| 14.              | 0.061             | 85.        | 0.01              |
| 15.              | 0.053             | 86.        | 0.01              |
| 16.              | 0.05              | 87.        | 0.01              |
| 17.              | 0.045             | 88.        | 0.01              |
| 18.              | 0.042             | 89.        | 0.01              |
| 19.              | 0.037             | 90.        | 0.01              |
| 20.              | 0.037             | 91.        | 0.009             |
| 21.              | 0.035             | 92.        | 0.009             |
| 22.              | 0.033             | 93.        | 0.01              |
| 23.              | 0.031             | 94.        | 0.01              |
| 24.              | 0.028             | 95.        | 0.009             |
| 25.              | 0.027             | 96.        | 0.009             |
| 26.              | 0.027             | 97.        | 0.009             |
| 27.              | 0.025             | 98.        | 0.009             |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 28.               | 0.023                    | 99.               | 0.009                    |
| 29.               | 0.023                    | 100.              | 0.011                    |
| 30.               | 0.023                    | 101.              | 0.011                    |
| 31.               | 0.021                    | 102.              | 0.009                    |
| 32.               | 0.021                    | 103.              | 0.009                    |
| 33.               | 0.021                    | 104.              | 0.009                    |
| 34.               | 0.021                    | 105.              | 0.009                    |
| 35.               | 0.021                    | 106.              | 0.009                    |
| 36.               | 0.019                    | 107.              | 0.007                    |
| 37.               | 0.018                    | 108.              | 0.009                    |
| 38.               | 0.018                    | 109.              | 0.007                    |
| 39.               | 0.018                    | 110.              | 0.008                    |
| 40.               | 0.016                    | 111.              | 0.008                    |
| 41.               | 0.016                    | 112.              | 0.008                    |
| 42.               | 0.016                    | 113.              | 0.008                    |
| 43.               | 0.016                    | 114.              | 0.008                    |
| 44.               | 0.016                    | 115.              | 0.008                    |
| 45.               | 0.014                    | 116.              | 0.008                    |
| 46.               | 0.014                    | 117.              | 0.006                    |
| 47.               | 0.014                    | 118.              | 0.008                    |
| 48.               | 0.016                    | 119.              | 0.008                    |
| 49.               | 0.016                    | 120.              | 0.008                    |
| 50.               | 0.015                    | 121.              | 0.008                    |
| 51.               | 0.014                    | 122.              | 0.008                    |
| 52.               | 0.015                    | 123.              | 0.008                    |
| 53.               | 0.015                    | 124.              | 0.007                    |
| 54.               | 0.013                    | 125.              | 0.007                    |
| 55.               | 0.013                    | 126.              | 0.007                    |
| 56.               | 0.012                    | 127.              | 0.005                    |
| 57.               | 0.012                    | 128.              | 0.005                    |
| 58.               | 0.013                    | 129.              | 0.005                    |
| 59.               | 0.013                    | 130.              | 0.007                    |
| 60.               | 0.013                    | 131.              | 0.007                    |
| 61.               | 0.013                    | 132.              | 0.007                    |
| 62.               | 0.011                    | 133.              | 0.007                    |
| 63.               | 0.013                    | 134.              | 0.008                    |
| 64.               | 0.011                    | 135.              | 0.008                    |
| 65.               | 0.011                    | 136.              | 0.008                    |
| 66.               | 0.011                    | 137.              | 0.008                    |
| 67.               | 0.013                    | 138.              | 0.006                    |
| 68.               | 0.013                    | 139.              | 0.006                    |
| 69.               | 0.013                    | 140.              | 0.006                    |
| 70.               | 0.011                    | 141.              | 0.006                    |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 2.423

VISUAL ESTIMATION RESULTSEstimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 0.0001197       | ft/sec |
| y0               | 0.3527          | ft     |

K = 0.00365 cm/sec

T = K\*b = 0.001057 ft<sup>2</sup>/sec (0.9823 sq. cm/sec)

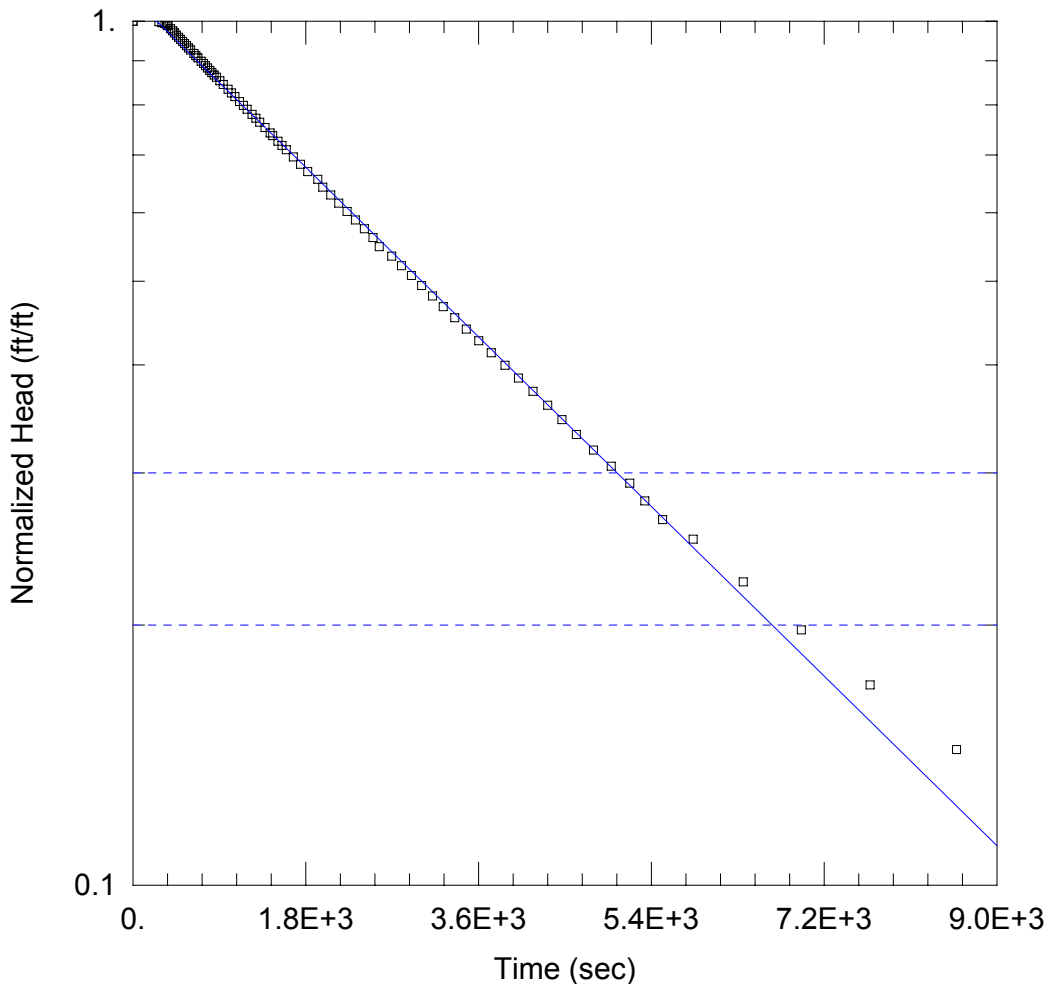
**Date** 23-Feb-2004  
**Station ID** 394339104313601  
**Location** AGLUS-22, test 1  
**By** SSP, LRA

**Measuring Point** 2.30 ft. above land surface  
**Depth of Pump**

| Clock Time | Elapsed Time | Recovery Time | Water Level (BMP) | Drawdown | Comments  |
|------------|--------------|---------------|-------------------|----------|---|
| 9:13:00    | 0:00:00      |               | 55.68             |          | static  |
| 10:01:00   | 0:48:00      |               | 54.25             |          | after lowering pump   |
| 10:04:00   | 0:51:00      |               | 54.30             |          | after lowering transducer                                     |
| 10:12:15   | 0:59:15      |               |                   |          | pump on. Pumping rate = 2 gpm. Removed 9 gal before going dry |
| 10:13:20   | 1:00:20      |               | 71.00             |          |   |
| 10:15:30   | 1:02:30      |               | 92.75             | 37.07    |   |
| 10:16:25   | 1:03:25      | 0:00:00       |                   |          | pump off  |
| 10:17:05   | 1:04:05      | 0:00:40       | 93.60             | 37.92    |   |
| 10:17:45   | 1:04:45      | 0:01:20       | 93.40             | 37.72    |   |
| 10:18:06   | 1:05:06      | 0:01:41       | 93.30             | 37.62    |   |
| 10:18:30   | 1:05:30      | 0:02:05       | 93.20             | 37.52    |   |
| 10:18:55   | 1:05:55      | 0:02:30       | 93.10             | 37.42    |   |
| 10:19:20   | 1:06:20      | 0:02:55       | 93.00             | 37.32    |   |
| 10:19:54   | 1:06:54      | 0:03:29       | 92.90             | 37.22    |   |
| 10:20:24   | 1:07:24      | 0:03:59       | 92.80             | 37.12    |   |
| 10:20:55   | 1:07:55      | 0:04:30       | 92.70             | 37.02    |   |
| 10:21:26   | 1:08:26      | 0:05:01       | 92.60             | 36.92    |   |
| 10:21:59   | 1:08:59      | 0:05:34       | 92.50             | 36.82    |   |
| 10:22:20   | 1:09:20      | 0:05:55       | 92.40             | 36.72    |   |
| 10:22:30   | 1:09:30      | 0:06:05       | 92.30             | 36.62    |   |
| 10:22:58   | 1:09:58      | 0:06:33       | 92.00             | 36.32    |   |
| 10:23:20   | 1:10:20      | 0:06:55       | 91.80             | 36.12    |   |
| 10:23:39   | 1:10:39      | 0:07:14       | 91.60             | 35.92    |   |
| 10:23:59   | 1:10:59      | 0:07:34       | 91.40             | 35.72    |   |
| 10:24:20   | 1:11:20      | 0:07:55       | 91.20             | 35.52    |   |
| 10:24:41   | 1:11:41      | 0:08:16       | 91.00             | 35.32    |   |
| 10:25:02   | 1:12:02      | 0:08:37       | 90.80             | 35.12    |   |
| 10:25:22   | 1:12:22      | 0:08:57       | 90.60             | 34.92    |   |
| 10:25:44   | 1:12:44      | 0:09:19       | 90.40             | 34.72    |   |
| 10:26:06   | 1:13:06      | 0:09:41       | 90.20             | 34.52    |   |
| 10:26:26   | 1:13:26      | 0:10:01       | 90.00             | 34.32    |   |
| 10:27:00   | 1:14:00      | 0:10:35       | 89.70             | 34.02    |   |
| 10:27:20   | 1:14:20      | 0:10:55       | 89.50             | 33.82    |   |
| 10:27:43   | 1:14:43      | 0:11:18       | 89.30             | 33.62    |   |
| 10:28:15   | 1:15:15      | 0:11:50       | 89.00             | 33.32    |   |
| 10:28:40   | 1:15:40      | 0:12:15       | 88.80             | 33.12    |   |
| 10:29:00   | 1:16:00      | 0:12:35       | 88.60             | 32.92    |   |
| 10:29:23   | 1:16:23      | 0:12:58       | 88.40             | 32.72    |   |
| 10:29:45   | 1:16:45      | 0:13:20       | 88.20             | 32.52    |   |
| 10:30:08   | 1:17:08      | 0:13:43       | 88.00             | 32.32    |   |
| 10:30:31   | 1:17:31      | 0:14:06       | 87.80             | 32.12    |   |
| 10:30:55   | 1:17:55      | 0:14:30       | 87.60             | 31.92    |   |
| 10:31:30   | 1:18:30      | 0:15:05       | 87.30             | 31.62    |   |
| 10:32:06   | 1:19:06      | 0:15:41       | 87.00             | 31.32    |   |
| 10:32:55   | 1:19:55      | 0:16:30       | 86.60             | 30.92    |   |
| 10:33:30   | 1:20:30      | 0:17:05       | 86.30             | 30.62    |   |
| 10:34:07   | 1:21:07      | 0:17:42       | 86.00             | 30.32    |   |
| 10:34:56   | 1:21:56      | 0:18:31       | 85.60             | 29.92    |   |
| 10:35:35   | 1:22:35      | 0:19:10       | 85.30             | 29.62    |   |
| 10:36:14   | 1:23:14      | 0:19:49       | 85.00             | 29.32    |   |
| 10:37:05   | 1:24:05      | 0:20:40       | 84.60             | 28.92    |   |
| 10:37:45   | 1:24:45      | 0:21:20       | 84.30             | 28.62    |   |
| 10:38:25   | 1:25:25      | 0:22:00       | 84.00             | 28.32    |   |
| 10:39:20   | 1:26:20      | 0:22:55       | 83.60             | 27.92    |   |
| 10:40:14   | 1:27:14      | 0:23:49       | 83.20             | 27.52    |   |
| 10:40:40   | 1:27:40      | 0:24:15       | 83.00             | 27.32    |   |
| 10:41:35   | 1:28:35      | 0:25:10       | 82.60             | 26.92    |   |
| 10:42:18   | 1:29:18      | 0:25:53       | 82.30             | 26.62    |   |
| 10:43:03   | 1:30:03      | 0:26:38       | 82.00             | 26.32    |   |
| 10:44:15   | 1:31:15      | 0:27:50       | 81.50             | 25.82    |   |
| 10:45:30   | 1:32:30      | 0:29:05       | 81.00             | 25.32    |   |
| 10:46:45   | 1:33:45      | 0:30:20       | 80.50             | 24.82    |   |
| 10:48:30   | 1:35:30      | 0:32:05       | 80.00             | 24.32    |   |
| 10:49:22   | 1:36:22      | 0:32:57       | 79.50             | 23.82    |   |
| 10:50:45   | 1:37:45      | 0:34:20       | 79.00             | 23.32    |   |
| 10:52:09   | 1:39:09      | 0:35:44       | 78.50             | 22.82    |   |
| 10:53:35   | 1:40:35      | 0:37:10       | 78.00             | 22.32    |   |
| 10:55:02   | 1:42:02      | 0:38:37       | 77.50             | 21.82    |   |
| 10:56:35   | 1:43:35      | 0:40:10       | 77.00             | 21.32    |   |
| 10:58:06   | 1:45:06      | 0:41:41       | 76.50             | 20.82    |   |
| 10:59:10   | 1:46:10      | 0:42:45       | 76.00             | 20.32    |   |



| <b>Clock Time</b> | <b>Elapsed Time</b> | <b>Recovery Time</b> | <b>Water Level (BMP)</b> | <b>Drawdown</b> | <b>Comments</b> |
|-------------------|---------------------|----------------------|--------------------------|-----------------|-----------------|
| 11:01:20          | 1:48:20             | 0:44:55              | 75.50                    | 19.82           |                 |
| 11:03:03          | 1:50:03             | 0:46:38              | 75.00                    | 19.32           |                 |
| 11:04:45          | 1:51:45             | 0:48:20              | 74.50                    | 18.82           |                 |
| 11:06:33          | 1:53:33             | 0:50:08              | 74.00                    | 18.32           |                 |
| 11:08:25          | 1:55:25             | 0:52:00              | 73.50                    | 17.82           |                 |
| 11:10:18          | 1:57:18             | 0:53:53              | 73.00                    | 17.32           |                 |
| 11:12:17          | 1:59:17             | 0:55:52              | 72.50                    | 16.82           |                 |
| 11:14:18          | 2:01:18             | 0:57:53              | 72.00                    | 16.32           |                 |
| 11:16:27          | 2:03:27             | 1:00:02              | 71.50                    | 15.82           |                 |
| 11:18:38          | 2:05:38             | 1:02:13              | 71.00                    | 15.32           |                 |
| 11:21:00          | 2:08:00             | 1:04:35              | 70.50                    | 14.82           |                 |
| 11:23:20          | 2:10:20             | 1:06:55              | 70.00                    | 14.32           |                 |
| 11:25:52          | 2:12:52             | 1:09:27              | 69.50                    | 13.82           |                 |
| 11:28:26          | 2:15:26             | 1:12:01              | 69.00                    | 13.32           |                 |
| 11:30:54          | 2:17:54             | 1:14:29              | 68.50                    | 12.82           |                 |
| 11:33:24          | 2:20:24             | 1:16:59              | 68.00                    | 12.32           |                 |
| 11:36:22          | 2:23:22             | 1:19:57              | 67.50                    | 11.82           |                 |
| 11:39:27          | 2:26:27             | 1:23:02              | 67.00                    | 11.32           |                 |
| 11:42:41          | 2:29:41             | 1:26:16              | 66.50                    | 10.82           |                 |
| 11:45:18          | 2:32:18             | 1:28:53              | 66.00                    | 10.32           |                 |
| 11:48:22          | 2:35:22             | 1:31:57              | 65.50                    | 9.82            |                 |
| 11:53:40          | 2:40:40             | 1:37:15              | 65.00                    | 9.32            |                 |
| 12:02:22          | 2:49:22             | 1:45:57              | 64.00                    | 8.32            |                 |
| 12:12:27          | 2:59:27             | 1:56:02              | 63.00                    | 7.32            |                 |
| 12:24:24          | 3:11:24             | 2:07:59              | 62.00                    | 6.32            |                 |
| 12:39:24          | 3:26:24             | 2:22:59              | 61.00                    | 5.32            | End of Test     |



AGLUS 22 TEST #1

Data Set: Y:\...\AgLUS22\_test1\_03JAN2011.aqt

Date: 01/03/11

Time: 14:42:00

PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 22

Test Date: 02/23/2004

AQUIFER DATA

Saturated Thickness: 6.26 ft

Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA (AgLUS 22)

Initial Displacement: 37.07 ft

Static Water Column Height: 46.45 ft

Total Well Penetration Depth: 6.26 ft

Screen Length: 6.26 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K = 2.854E-7 ft/sec

y0 = 39.45 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_03JAN2011\AgLUS 22\AgLUS22\_test1\_03J  
 Title: AgLUS 22 test #1  
 Date: 01/03/11  
 Time: 14:44:03

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 02/23/2004  
 Test Well: AgLUS 22

AQUIFER DATA

Saturated Thickness: 6.26 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 22

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 37.07 ft  
 Static Water Column Height: 46.45 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 6.26 ft  
 Total Well Penetration Depth: 6.26 ft

No. of Observations: 91

| Time (sec) | Observation Data  |            | Displacement (ft) |
|------------|-------------------|------------|-------------------|
|            | Displacement (ft) | Time (sec) |                   |
| 0.         | 37.07             | 1320.      | 28.32             |
| 40.        | 37.92             | 1375.      | 27.92             |
| 80.        | 37.72             | 1429.      | 27.52             |
| 101.       | 37.62             | 1455.      | 27.32             |
| 125.       | 37.52             | 1510.      | 26.92             |
| 150.       | 37.42             | 1553.      | 26.62             |
| 175.       | 37.32             | 1598.      | 26.32             |
| 209.       | 37.22             | 1670.      | 25.82             |
| 239.       | 37.12             | 1745.      | 25.32             |
| 270.       | 37.02             | 1820.      | 24.82             |
| 301.       | 36.92             | 1925.      | 24.32             |
| 334.       | 36.82             | 1977.      | 23.82             |
| 355.       | 36.72             | 2060.      | 23.32             |
| 365.       | 36.62             | 2144.      | 22.82             |
| 393.       | 36.32             | 2230.      | 22.32             |
| 415.       | 36.12             | 2317.      | 21.82             |
| 434.       | 35.92             | 2410.      | 21.32             |
| 454.       | 35.72             | 2501.      | 20.82             |
| 475.       | 35.52             | 2565.      | 20.32             |
| 496.       | 35.32             | 2695.      | 19.82             |
| 517.       | 35.12             | 2798.      | 19.32             |
| 537.       | 34.92             | 2900.      | 18.82             |
| 559.       | 34.72             | 3008.      | 18.32             |
| 581.       | 34.52             | 3120.      | 17.82             |
| 601.       | 34.32             | 3233.      | 17.32             |
| 635.       | 34.02             | 3352.      | 16.82             |
| 655.       | 33.82             | 3473.      | 16.32             |
| 678.       | 33.62             | 3602.      | 15.82             |

| <u>Time (sec)</u> | <u>Displacement (ft)</u> | <u>Time (sec)</u> | <u>Displacement (ft)</u> |
|-------------------|--------------------------|-------------------|--------------------------|
| 710.              | 33.32                    | 3733.             | 15.32                    |
| 735.              | 33.12                    | 3875.             | 14.82                    |
| 755.              | 32.92                    | 4015.             | 14.32                    |
| 778.              | 32.72                    | 4167.             | 13.82                    |
| 800.              | 32.52                    | 4321.             | 13.32                    |
| 823.              | 32.32                    | 4469.             | 12.82                    |
| 846.              | 32.12                    | 4619.             | 12.32                    |
| 870.              | 31.92                    | 4797.             | 11.82                    |
| 905.              | 31.62                    | 4982.             | 11.32                    |
| 941.              | 31.32                    | 5176.             | 10.82                    |
| 990.              | 30.92                    | 5333.             | 10.32                    |
| 1025.             | 30.62                    | 5517.             | 9.82                     |
| 1062.             | 30.32                    | 5835.             | 9.32                     |
| 1111.             | 29.92                    | 6357.             | 8.32                     |
| 1150.             | 29.62                    | 6962.             | 7.32                     |
| 1189.             | 29.32                    | 7679.             | 6.32                     |
| 1240.             | 28.92                    | 8579.             | 5.32                     |
| 1280.             | 28.62                    |                   |                          |

SOLUTION

Slug Test  
 Aquifer Model: Confined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 2.066

VISUAL ESTIMATION RESULTSEstimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 2.854E-7        | ft/sec |
| y0               | 39.45           | ft     |

K = 8.7E-6 cm/sec

T = K\*b = 1.787E-6 ft<sup>2</sup>/sec (0.00166 sq. cm/sec)

In-Situ Inc. MiniTroll Pro

Report generated: 4/28/2004 14:40:09  
 Report from file: ...\\SN09731 2004-03-30 141006 AgLUS26\_1.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS26\_1

Test defined on: 3/30/2004 14:06:10  
 Test started on: 3/30/2004 14:10:06  
 Test stopped on: 3/30/2004 14:15:39  
 Test extracted on: N/A N/A

## Data gathered using Linear testing

Time between data points: Seconds.  
 Number of data samples: 167

TOTAL DATA SAMPLES 167

## Channel number [2]

Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1621.536 meters (5320.000 feet)

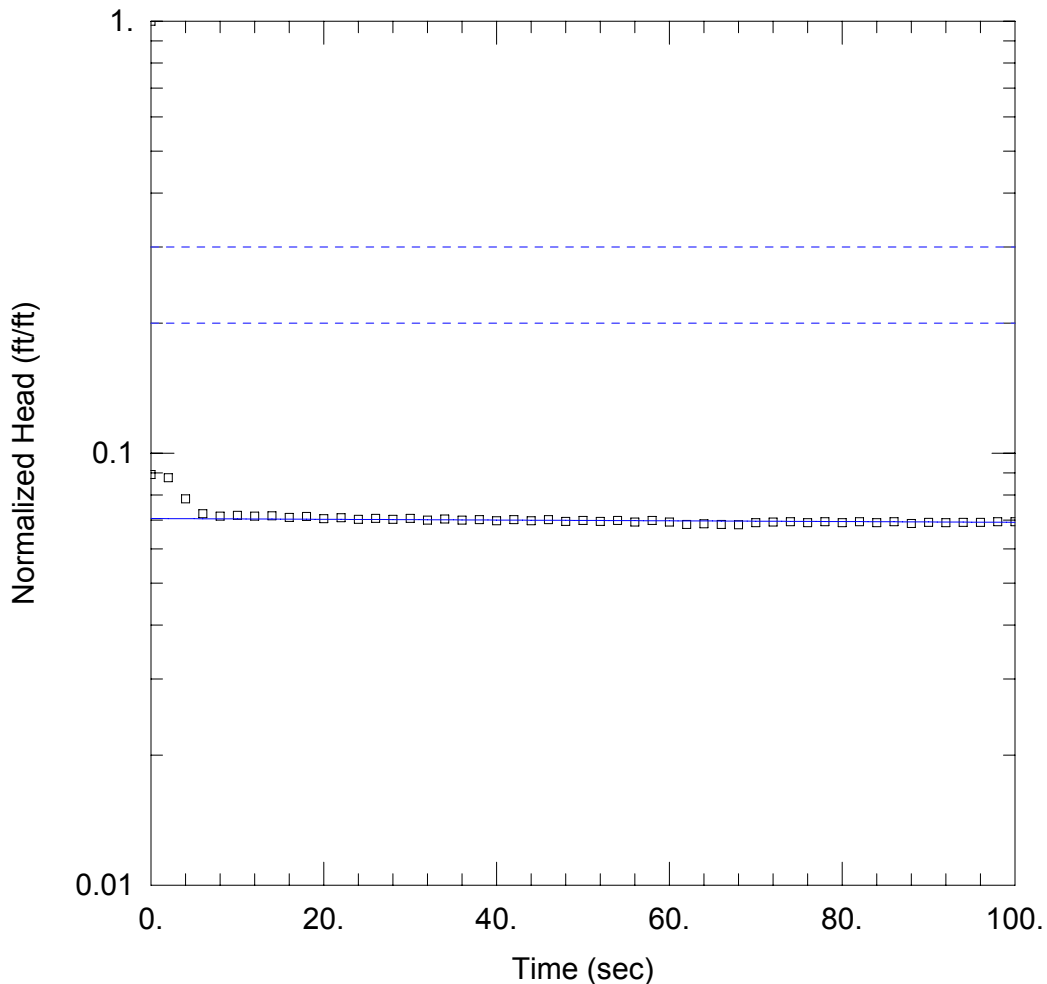
| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:10:06 | 0        | 7.97                |
| 3/30/2004 | 14:10:08 | 2        | 7.97                |
| 3/30/2004 | 14:10:10 | 4        | 7.972               |
| 3/30/2004 | 14:10:12 | 6        | 7.971               |
| 3/30/2004 | 14:10:14 | 8        | 7.974               |
| 3/30/2004 | 14:10:16 | 10       | 7.972               |
| 3/30/2004 | 14:10:18 | 12       | 7.972               |
| 3/30/2004 | 14:10:20 | 14       | 7.873               |
| 3/30/2004 | 14:10:22 | 16       | 8.212               |
| 3/30/2004 | 14:10:24 | 18       | 7.985               |
| 3/30/2004 | 14:10:26 | 20       | 7.979               |
| 3/30/2004 | 14:10:28 | 22       | 7.981               |
| 3/30/2004 | 14:10:30 | 24       | 7.884               |
| 3/30/2004 | 14:10:32 | 26       | 7.911               |
| 3/30/2004 | 14:10:34 | 28       | 7.983               |
| 3/30/2004 | 14:10:36 | 30       | 7.856               |
| 3/30/2004 | 14:10:38 | 32       | 7.983               |
| 3/30/2004 | 14:10:40 | 34       | 8.224               |
| 3/30/2004 | 14:10:42 | 36       | 7.822               |
| 3/30/2004 | 14:10:44 | 38       | 7.984               |
| 3/30/2004 | 14:10:46 | 40       | 7.986               |
| 3/30/2004 | 14:10:48 | 42       | 7.946               |
| 3/30/2004 | 14:10:50 | 44       | 8.006               |
| 3/30/2004 | 14:10:52 | 46       | 8.125               |
| 3/30/2004 | 14:10:54 | 48       | 7.945               |
| 3/30/2004 | 14:10:56 | 50       | 7.988               |
| 3/30/2004 | 14:10:58 | 52       | 7.989               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:11:00 | 54       | 7.99                |
| 3/30/2004 | 14:11:02 | 56       | 7.776               |
| 3/30/2004 | 14:11:04 | 58       | 7.996               |
| 3/30/2004 | 14:11:06 | 60       | 7.987               |
| 3/30/2004 | 14:11:08 | 62       | 7.838               |
| 3/30/2004 | 14:11:10 | 64       | 7.986               |
| 3/30/2004 | 14:11:12 | 66       | 7.987               |
| 3/30/2004 | 14:11:14 | 68       | 7.988               |
| 3/30/2004 | 14:11:16 | 70       | 7.989               |
| 3/30/2004 | 14:11:18 | 72       | 7.83                |
| 3/30/2004 | 14:11:20 | 74       | 7.99                |
| 3/30/2004 | 14:11:22 | 76       | 7.948               |
| 3/30/2004 | 14:11:24 | 78       | 7.737               |
| 3/30/2004 | 14:11:26 | 80       | 7.667               |
| 3/30/2004 | 14:11:28 | 82       | 7.49                |
| 3/30/2004 | 14:11:30 | 84       | 7.449               |
| 3/30/2004 | 14:11:32 | 86       | 7.443               |
| 3/30/2004 | 14:11:34 | 88       | 7.379               |
| 3/30/2004 | 14:11:36 | 90       | 7.675               |
| 3/30/2004 | 14:11:38 | 92       | 7.103               |
| 3/30/2004 | 14:11:40 | 94       | 7.435               |
| 3/30/2004 | 14:11:42 | 96       | 7.412               |
| 3/30/2004 | 14:11:44 | 98       | 7.313               |
| 3/30/2004 | 14:11:46 | 100      | 7.43                |
| 3/30/2004 | 14:11:48 | 102      | 7.432               |
| 3/30/2004 | 14:11:50 | 104      | 7.431               |
| 3/30/2004 | 14:11:52 | 106      | 7.416               |
| 3/30/2004 | 14:11:54 | 108      | 7.416               |
| 3/30/2004 | 14:11:56 | 110      | 7.436               |
| 3/30/2004 | 14:11:58 | 112      | 7.426               |
| 3/30/2004 | 14:12:00 | 114      | 7.423               |
| 3/30/2004 | 14:12:02 | 116      | 7.42                |
| 3/30/2004 | 14:12:04 | 118      | 7.499               |
| 3/30/2004 | 14:12:06 | 120      | 7.382               |
| 3/30/2004 | 14:12:08 | 122      | 7.422               |
| 3/30/2004 | 14:12:10 | 124      | 7.42                |
| 3/30/2004 | 14:12:12 | 126      | 7.421               |
| 3/30/2004 | 14:12:14 | 128      | 7.419               |
| 3/30/2004 | 14:12:16 | 130      | 7.42                |
| 3/30/2004 | 14:12:18 | 132      | 7.42                |
| 3/30/2004 | 14:12:20 | 134      | 7.42                |
| 3/30/2004 | 14:12:22 | 136      | 7.42                |
| 3/30/2004 | 14:12:24 | 138      | 7.42                |
| 3/30/2004 | 14:12:26 | 140      | 7.419               |
| 3/30/2004 | 14:12:28 | 142      | 7.419               |
| 3/30/2004 | 14:12:30 | 144      | 7.419               |
| 3/30/2004 | 14:12:32 | 146      | 7.418               |
| 3/30/2004 | 14:12:34 | 148      | 7.419               |
| 3/30/2004 | 14:12:36 | 150      | 7.421               |
| 3/30/2004 | 14:12:38 | 152      | 7.418               |
| 3/30/2004 | 14:12:40 | 154      | 7.355               |
| 3/30/2004 | 14:12:42 | 156      | 7.312               |
| 3/30/2004 | 14:12:44 | 158      | 7.294               |
| 3/30/2004 | 14:12:46 | 160      | 7.299               |
| 3/30/2004 | 14:12:48 | 162      | 7.292               |
| 3/30/2004 | 14:12:50 | 164      | 7.289               |
| 3/30/2004 | 14:12:52 | 166      | 7.284               |
| 3/30/2004 | 14:12:54 | 168      | 7.284               |
| 3/30/2004 | 14:12:56 | 170      | 7.285               |
| 3/30/2004 | 14:12:58 | 172      | 7.282               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:13:00 | 174      | 7.282               |
| 3/30/2004 | 14:13:02 | 176      | 7.282               |
| 3/30/2004 | 14:13:04 | 178      | 7.282               |
| 3/30/2004 | 14:13:06 | 180      | 7.286               |
| 3/30/2004 | 14:13:08 | 182      | 7.283               |
| 3/30/2004 | 14:13:10 | 184      | 7.283               |
| 3/30/2004 | 14:13:12 | 186      | 7.278               |
| 3/30/2004 | 14:13:14 | 188      | 7.282               |
| 3/30/2004 | 14:13:16 | 190      | 7.267               |
| 3/30/2004 | 14:13:18 | 192      | 7.27                |
| 3/30/2004 | 14:13:20 | 194      | 7.272               |
| 3/30/2004 | 14:13:22 | 196      | 7.273               |
| 3/30/2004 | 14:13:24 | 198      | 7.27                |
| 3/30/2004 | 14:13:26 | 200      | 7.271               |
| 3/30/2004 | 14:13:28 | 202      | 7.268               |
| 3/30/2004 | 14:13:30 | 204      | 7.27                |
| 3/30/2004 | 14:13:32 | 206      | 7.269               |
| 3/30/2004 | 14:13:34 | 208      | 7.267               |
| 3/30/2004 | 14:13:36 | 210      | 7.262               |
| 3/30/2004 | 14:13:38 | 212      | 7.264               |
| 3/30/2004 | 14:13:40 | 214      | 7.263               |
| 3/30/2004 | 14:13:42 | 216      | 7.261               |
| 3/30/2004 | 14:13:44 | 218      | 7.258               |
| 3/30/2004 | 14:13:46 | 220      | 7.265               |
| 3/30/2004 | 14:13:48 | 222      | 7.255               |
| 3/30/2004 | 14:13:50 | 224      | 7.26                |
| 3/30/2004 | 14:13:52 | 226      | 7.257               |
| 3/30/2004 | 14:13:54 | 228      | 7.261               |
| 3/30/2004 | 14:13:56 | 230      | 7.256               |
| 3/30/2004 | 14:13:58 | 232      | 7.259               |
| 3/30/2004 | 14:14:00 | 234      | 7.271               |
| 3/30/2004 | 14:14:02 | 236      | 7.345               |
| 3/30/2004 | 14:14:04 | 238      | 7.393               |
| 3/30/2004 | 14:14:06 | 240      | 7.4                 |
| 3/30/2004 | 14:14:08 | 242      | 7.398               |
| 3/30/2004 | 14:14:10 | 244      | 7.4                 |
| 3/30/2004 | 14:14:12 | 246      | 7.399               |
| 3/30/2004 | 14:14:14 | 248      | 7.404               |
| 3/30/2004 | 14:14:16 | 250      | 7.401               |
| 3/30/2004 | 14:14:18 | 252      | 7.408               |
| 3/30/2004 | 14:14:20 | 254      | 7.405               |
| 3/30/2004 | 14:14:22 | 256      | 7.41                |
| 3/30/2004 | 14:14:24 | 258      | 7.407               |
| 3/30/2004 | 14:14:26 | 260      | 7.41                |
| 3/30/2004 | 14:14:28 | 262      | 7.407               |
| 3/30/2004 | 14:14:30 | 264      | 7.412               |
| 3/30/2004 | 14:14:32 | 266      | 7.409               |
| 3/30/2004 | 14:14:34 | 268      | 7.412               |
| 3/30/2004 | 14:14:36 | 270      | 7.411               |
| 3/30/2004 | 14:14:38 | 272      | 7.414               |
| 3/30/2004 | 14:14:40 | 274      | 7.411               |
| 3/30/2004 | 14:14:42 | 276      | 7.414               |
| 3/30/2004 | 14:14:44 | 278      | 7.411               |
| 3/30/2004 | 14:14:46 | 280      | 7.416               |
| 3/30/2004 | 14:14:48 | 282      | 7.413               |
| 3/30/2004 | 14:14:50 | 284      | 7.416               |
| 3/30/2004 | 14:14:52 | 286      | 7.413               |
| 3/30/2004 | 14:14:54 | 288      | 7.418               |
| 3/30/2004 | 14:14:56 | 290      | 7.413               |
| 3/30/2004 | 14:14:58 | 292      | 7.418               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 14:15:00 | 294      | 7.425               |
| 3/30/2004 | 14:15:02 | 296      | 7.423               |
| 3/30/2004 | 14:15:04 | 298      | 7.425               |
| 3/30/2004 | 14:15:06 | 300      | 7.426               |
| 3/30/2004 | 14:15:08 | 302      | 7.42                |
| 3/30/2004 | 14:15:10 | 304      | 7.418               |
| 3/30/2004 | 14:15:12 | 306      | 7.417               |
| 3/30/2004 | 14:15:14 | 308      | 7.42                |
| 3/30/2004 | 14:15:16 | 310      | 7.417               |
| 3/30/2004 | 14:15:18 | 312      | 7.42                |
| 3/30/2004 | 14:15:20 | 314      | 7.417               |
| 3/30/2004 | 14:15:22 | 316      | 7.42                |
| 3/30/2004 | 14:15:24 | 318      | 7.417               |
| 3/30/2004 | 14:15:26 | 320      | 7.422               |
| 3/30/2004 | 14:15:28 | 322      | 7.419               |
| 3/30/2004 | 14:15:30 | 324      | 7.42                |
| 3/30/2004 | 14:15:32 | 326      | 7.419               |
| 3/30/2004 | 14:15:34 | 328      | 7.419               |
| 3/30/2004 | 14:15:36 | 330      | 7.417               |
| 3/30/2004 | 14:15:38 | 332      | 7.417               |





|   |   |
|---|---|
| <u>AGLUS 26 TEST #1</u>                             |   |
| Data Set: <u>Y:\...\AgLUS26_test1_13JUL2010.aqt</u> | Time: <u>15:52:36</u>                       |
| Date: <u>07/26/10</u>                               |   |
| <u>PROJECT INFORMATION</u>                          |   |
| Company: <u>USGS</u>                                |   |
| Location: <u>Wheat AgLUS</u>                        |   |
| Test Well: <u>AgLUS 26</u>                          |   |
| Test Date: <u>03/30/2004</u>                        |   |
| <u>AQUIFER DATA</u>                                 |   |
| Saturated Thickness: <u>10.08 ft</u>                | Anisotropy Ratio (Kz/Kr): <u>0.01</u>       |
| <u>WELL DATA (AgLUS 26)</u>                         |   |
| Initial Displacement: <u>7.97 ft</u>                | Static Water Column Height: <u>10.08 ft</u> |
| Total Well Penetration Depth: <u>10.08 ft</u>       | Screen Length: <u>9.76 ft</u>               |
| Casing Radius: <u>0.083 ft</u>                      | Well Radius: <u>0.375 ft</u>                |
| <u>SOLUTION</u>                                     |   |
| Aquifer Model: <u>Unconfined</u>                    | Solution Method: <u>Bouwer-Rice</u>         |
| K = <u>3.121E-7 ft/sec</u>                          | y0 = <u>0.5625 ft</u>                       |

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 26\AgLUS26\_test1\_13  
 Title: AgLUS 26 test #1  
 Date: 07/26/10  
 Time: 15:52:51

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/30/2004  
 Test Well: AgLUS 26

AQUIFER DATA

Saturated Thickness: 10.08 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 26

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 7.97 ft  
 Static Water Column Height: 10.08 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 10.08 ft

No. of Observations: 51

| Time (sec) | Observation Data  |            | Displacement (ft) |
|------------|-------------------|------------|-------------------|
|            | Displacement (ft) | Time (sec) |                   |
| 0.         | 0.711             | 52.        | 0.554             |
| 2.         | 0.699             | 54.        | 0.557             |
| 4.         | 0.625             | 56.        | 0.552             |
| 6.         | 0.577             | 58.        | 0.557             |
| 8.         | 0.57              | 60.        | 0.552             |
| 10.        | 0.572             | 62.        | 0.545             |
| 12.        | 0.57              | 64.        | 0.547             |
| 14.        | 0.571             | 66.        | 0.545             |
| 16.        | 0.566             | 68.        | 0.544             |
| 18.        | 0.569             | 70.        | 0.55              |
| 20.        | 0.562             | 72.        | 0.552             |
| 22.        | 0.565             | 74.        | 0.553             |
| 24.        | 0.56              | 76.        | 0.55              |
| 26.        | 0.563             | 78.        | 0.553             |
| 28.        | 0.56              | 80.        | 0.55              |
| 30.        | 0.563             | 82.        | 0.553             |
| 32.        | 0.558             | 84.        | 0.55              |
| 34.        | 0.561             | 86.        | 0.553             |
| 36.        | 0.558             | 88.        | 0.548             |
| 38.        | 0.559             | 90.        | 0.551             |
| 40.        | 0.556             | 92.        | 0.55              |
| 42.        | 0.559             | 94.        | 0.551             |
| 44.        | 0.556             | 96.        | 0.551             |
| 46.        | 0.559             | 98.        | 0.553             |
| 48.        | 0.554             | 100.       | 0.553             |
| 50.        | 0.557             |            |                   |

SOLUTION

Slug Test  
Aquifer Model: Unconfined  
Solution Method: Bouwer-Rice  
In(Re/rw): 4.397

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### VISUAL ESTIMATION RESULTS

#### Estimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 3.121E-7        | ft/sec |
| y0               | 0.5625          | ft     |

K = 9.514E-6 cm/sec

T = K\*b = 3.146E-6 ft<sup>2</sup>/sec (0.002923 sq. cm/sec)

---

In-Situ Inc. MiniTroll Pro  
 Report generated: 4/28/2004 14:42:23  
 Report from file: ...\\SN09731 2004-03-30 141759 AgLUS26\_2.bin  
 Win-Situ Version 4.46  
 Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS26\_2

Test defined on: 3/30/2004 14:17:52  
 Test started on: 3/30/2004 14:17:59  
 Test stopped on: 3/30/2004 14:20:33  
 Test extracted on: N/A N/A

Data gathered using Linear testing  
 Time between data points: 1.0 Seconds.  
 Number of data samples: 154

TOTAL DATA SAMPLES 154

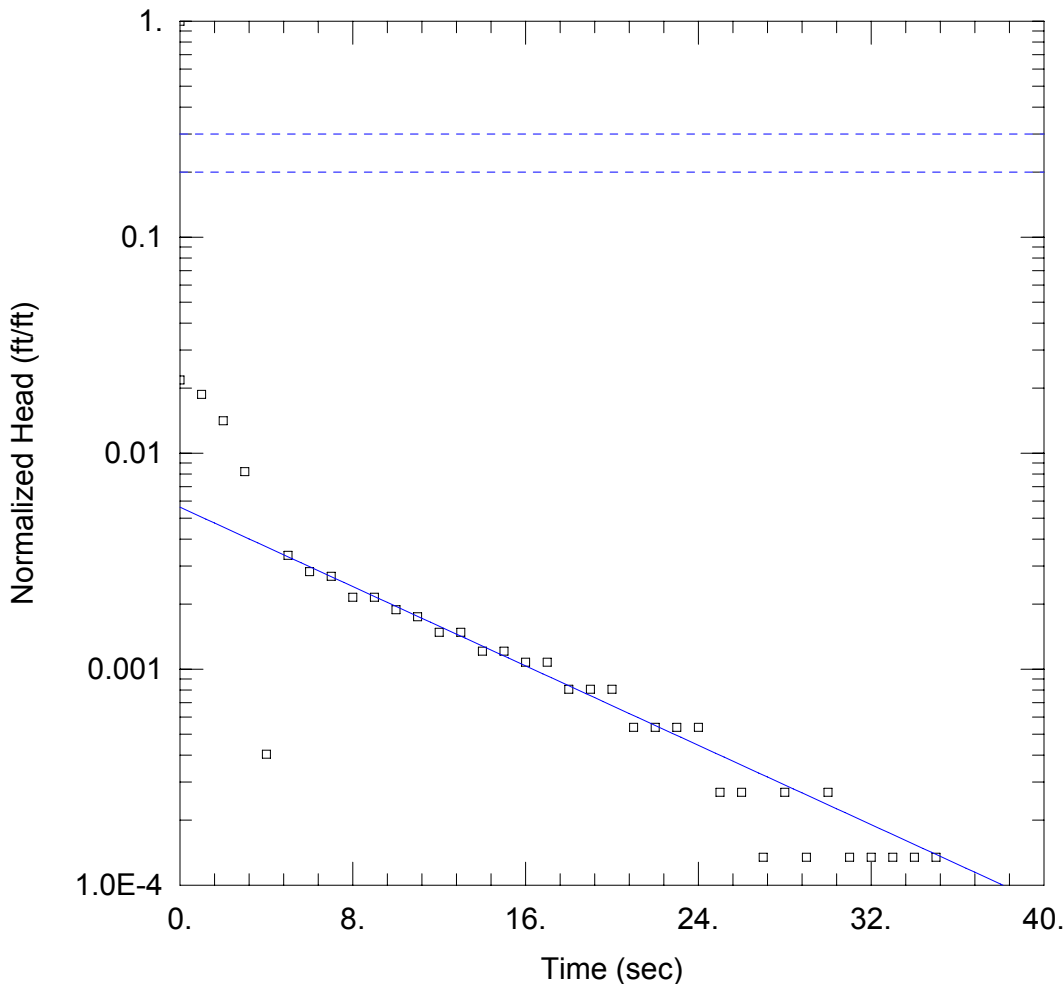
Channel number [2]  
 Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1621.536 meters (5320.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 14:17:59 | 0        | 7.427               |
| 3/30/2004 | 14:18:00 | 1        | 7.428               |
| 3/30/2004 | 14:18:01 | 2        | 7.43                |
| 3/30/2004 | 14:18:02 | 3        | 7.413               |
| 3/30/2004 | 14:18:03 | 4        | 7.338               |
| 3/30/2004 | 14:18:04 | 5        | 7.315               |
| 3/30/2004 | 14:18:05 | 6        | 7.305               |
| 3/30/2004 | 14:18:06 | 7        | 7.298               |
| 3/30/2004 | 14:18:07 | 8        | 7.293               |
| 3/30/2004 | 14:18:08 | 9        | 7.289               |
| 3/30/2004 | 14:18:09 | 10       | 7.288               |
| 3/30/2004 | 14:18:10 | 11       | 7.289               |
| 3/30/2004 | 14:18:11 | 12       | 7.286               |
| 3/30/2004 | 14:18:12 | 13       | 7.286               |
| 3/30/2004 | 14:18:13 | 14       | 7.282               |
| 3/30/2004 | 14:18:14 | 15       | 7.282               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:18:15 | 16       | 7.281               |
| 3/30/2004 | 14:18:16 | 17       | 7.279               |
| 3/30/2004 | 14:18:17 | 18       | 7.281               |
| 3/30/2004 | 14:18:18 | 19       | 7.281               |
| 3/30/2004 | 14:18:19 | 20       | 7.277               |
| 3/30/2004 | 14:18:20 | 21       | 7.272               |
| 3/30/2004 | 14:18:21 | 22       | 7.277               |
| 3/30/2004 | 14:18:22 | 23       | 7.276               |
| 3/30/2004 | 14:18:23 | 24       | 7.274               |
| 3/30/2004 | 14:18:24 | 25       | 7.274               |
| 3/30/2004 | 14:18:25 | 26       | 7.252               |
| 3/30/2004 | 14:18:26 | 27       | 7.281               |
| 3/30/2004 | 14:18:27 | 28       | 7.279               |
| 3/30/2004 | 14:18:28 | 29       | 7.276               |
| 3/30/2004 | 14:18:29 | 30       | 7.276               |
| 3/30/2004 | 14:18:30 | 31       | 7.276               |
| 3/30/2004 | 14:18:31 | 32       | 7.274               |
| 3/30/2004 | 14:18:32 | 33       | 7.277               |
| 3/30/2004 | 14:18:33 | 34       | 7.272               |
| 3/30/2004 | 14:18:34 | 35       | 7.274               |
| 3/30/2004 | 14:18:35 | 36       | 7.274               |
| 3/30/2004 | 14:18:36 | 37       | 7.273               |
| 3/30/2004 | 14:18:37 | 38       | 7.274               |
| 3/30/2004 | 14:18:38 | 39       | 7.281               |
| 3/30/2004 | 14:18:39 | 40       | 7.276               |
| 3/30/2004 | 14:18:40 | 41       | 7.276               |
| 3/30/2004 | 14:18:41 | 42       | 7.276               |
| 3/30/2004 | 14:18:42 | 43       | 7.276               |
| 3/30/2004 | 14:18:43 | 44       | 7.273               |
| 3/30/2004 | 14:18:44 | 45       | 7.274               |
| 3/30/2004 | 14:18:45 | 46       | 7.274               |
| 3/30/2004 | 14:18:46 | 47       | 7.271               |
| 3/30/2004 | 14:18:47 | 48       | 7.273               |
| 3/30/2004 | 14:18:48 | 49       | 7.273               |
| 3/30/2004 | 14:18:49 | 50       | 7.273               |
| 3/30/2004 | 14:18:50 | 51       | 7.271               |
| 3/30/2004 | 14:18:51 | 52       | 7.271               |
| 3/30/2004 | 14:18:52 | 53       | 7.271               |
| 3/30/2004 | 14:18:53 | 54       | 7.273               |
| 3/30/2004 | 14:18:54 | 55       | 7.268               |
| 3/30/2004 | 14:18:55 | 56       | 7.27                |
| 3/30/2004 | 14:18:56 | 57       | 7.27                |
| 3/30/2004 | 14:18:57 | 58       | 7.268               |
| 3/30/2004 | 14:18:58 | 59       | 7.27                |
| 3/30/2004 | 14:18:59 | 60       | 7.273               |
| 3/30/2004 | 14:19:00 | 61       | 7.27                |
| 3/30/2004 | 14:19:01 | 62       | 7.277               |
| 3/30/2004 | 14:19:02 | 63       | 7.275               |
| 3/30/2004 | 14:19:03 | 64       | 7.275               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 14:19:04 | 65       | 7.273               |
| 3/30/2004 | 14:19:05 | 66       | 7.271               |
| 3/30/2004 | 14:19:06 | 67       | 7.273               |
| 3/30/2004 | 14:19:07 | 68       | 7.273               |
| 3/30/2004 | 14:19:08 | 69       | 7.273               |
| 3/30/2004 | 14:19:09 | 70       | 7.272               |
| 3/30/2004 | 14:19:10 | 71       | 7.272               |
| 3/30/2004 | 14:19:11 | 72       | 7.27                |
| 3/30/2004 | 14:19:12 | 73       | 7.27                |
| 3/30/2004 | 14:19:13 | 74       | 7.272               |
| 3/30/2004 | 14:19:14 | 75       | 7.27                |
| 3/30/2004 | 14:19:15 | 76       | 7.27                |
| 3/30/2004 | 14:19:16 | 77       | 7.272               |
| 3/30/2004 | 14:19:17 | 78       | 7.27                |
| 3/30/2004 | 14:19:18 | 79       | 7.273               |
| 3/30/2004 | 14:19:19 | 80       | 7.273               |
| 3/30/2004 | 14:19:20 | 81       | 7.275               |
| 3/30/2004 | 14:19:21 | 82       | 7.27                |
| 3/30/2004 | 14:19:22 | 83       | 7.267               |
| 3/30/2004 | 14:19:23 | 84       | 7.267               |
| 3/30/2004 | 14:19:24 | 85       | 7.268               |
| 3/30/2004 | 14:19:25 | 86       | 7.27                |
| 3/30/2004 | 14:19:26 | 87       | 7.27                |
| 3/30/2004 | 14:19:27 | 88       | 7.268               |
| 3/30/2004 | 14:19:28 | 89       | 7.291               |
| 3/30/2004 | 14:19:29 | 90       | 7.325               |
| 3/30/2004 | 14:19:30 | 91       | 7.369               |
| 3/30/2004 | 14:19:31 | 92       | 7.427               |
| 3/30/2004 | 14:19:32 | 93       | 7.405               |
| 3/30/2004 | 14:19:33 | 94       | 7.409               |
| 3/30/2004 | 14:19:34 | 95       | 7.41                |
| 3/30/2004 | 14:19:35 | 96       | 7.414               |
| 3/30/2004 | 14:19:36 | 97       | 7.414               |
| 3/30/2004 | 14:19:37 | 98       | 7.416               |
| 3/30/2004 | 14:19:38 | 99       | 7.417               |
| 3/30/2004 | 14:19:39 | 100      | 7.419               |
| 3/30/2004 | 14:19:40 | 101      | 7.419               |
| 3/30/2004 | 14:19:41 | 102      | 7.421               |
| 3/30/2004 | 14:19:42 | 103      | 7.421               |
| 3/30/2004 | 14:19:43 | 104      | 7.422               |
| 3/30/2004 | 14:19:44 | 105      | 7.422               |
| 3/30/2004 | 14:19:45 | 106      | 7.424               |
| 3/30/2004 | 14:19:46 | 107      | 7.424               |
| 3/30/2004 | 14:19:47 | 108      | 7.424               |
| 3/30/2004 | 14:19:48 | 109      | 7.426               |
| 3/30/2004 | 14:19:49 | 110      | 7.426               |
| 3/30/2004 | 14:19:50 | 111      | 7.426               |
| 3/30/2004 | 14:19:51 | 112      | 7.426               |
| 3/30/2004 | 14:19:52 | 113      | 7.428               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 14:19:53 | 114      | 7.428               |
| 3/30/2004 | 14:19:54 | 115      | 7.429               |
| 3/30/2004 | 14:19:55 | 116      | 7.428               |
| 3/30/2004 | 14:19:56 | 117      | 7.429               |
| 3/30/2004 | 14:19:57 | 118      | 7.428               |
| 3/30/2004 | 14:19:58 | 119      | 7.429               |
| 3/30/2004 | 14:19:59 | 120      | 7.429               |
| 3/30/2004 | 14:20:00 | 121      | 7.429               |
| 3/30/2004 | 14:20:01 | 122      | 7.429               |
| 3/30/2004 | 14:20:02 | 123      | 7.429               |
| 3/30/2004 | 14:20:03 | 124      | 7.431               |
| 3/30/2004 | 14:20:04 | 125      | 7.431               |
| 3/30/2004 | 14:20:05 | 126      | 7.431               |
| 3/30/2004 | 14:20:06 | 127      | 7.431               |
| 3/30/2004 | 14:20:07 | 128      | 7.433               |
| 3/30/2004 | 14:20:08 | 129      | 7.433               |
| 3/30/2004 | 14:20:09 | 130      | 7.433               |
| 3/30/2004 | 14:20:10 | 131      | 7.433               |
| 3/30/2004 | 14:20:11 | 132      | 7.431               |
| 3/30/2004 | 14:20:12 | 133      | 7.433               |
| 3/30/2004 | 14:20:13 | 134      | 7.435               |
| 3/30/2004 | 14:20:14 | 135      | 7.435               |
| 3/30/2004 | 14:20:15 | 136      | 7.433               |
| 3/30/2004 | 14:20:16 | 137      | 7.435               |
| 3/30/2004 | 14:20:17 | 138      | 7.435               |
| 3/30/2004 | 14:20:18 | 139      | 7.433               |
| 3/30/2004 | 14:20:19 | 140      | 7.433               |
| 3/30/2004 | 14:20:20 | 141      | 7.433               |
| 3/30/2004 | 14:20:21 | 142      | 7.433               |
| 3/30/2004 | 14:20:22 | 143      | 7.433               |
| 3/30/2004 | 14:20:23 | 144      | 7.435               |
| 3/30/2004 | 14:20:24 | 145      | 7.435               |
| 3/30/2004 | 14:20:25 | 146      | 7.435               |
| 3/30/2004 | 14:20:26 | 147      | 7.435               |
| 3/30/2004 | 14:20:27 | 148      | 7.435               |
| 3/30/2004 | 14:20:28 | 149      | 7.436               |
| 3/30/2004 | 14:20:29 | 150      | 7.435               |
| 3/30/2004 | 14:20:30 | 151      | 7.435               |
| 3/30/2004 | 14:20:31 | 152      | 7.436               |
| 3/30/2004 | 14:20:32 | 153      | 7.435               |



### AGLUS 26 TEST #2

Data Set: Y:\...\AgLUS26\_test2\_13JUL2010.aqt

Date: 07/26/10

Time: 15:54:08

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 26

Test Date: 03/30/2004

### AQUIFER DATA

Saturated Thickness: 10.08 ft

Anisotropy Ratio ( $K_z/K_r$ ): 0.01

### WELL DATA (AgLUS 26)

Initial Displacement: 7.43 ft

Static Water Column Height: 10.08 ft

Total Well Penetration Depth: 10.08 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 0.0001641$  ft/sec

$y_0 = 0.04176$  ft



Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 26\AgLUS26\_test2\_13  
 Title: AgLUS 26 test #2  
 Date: 07/26/10  
 Time: 15:54:43

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/30/2004  
 Test Well: AgLUS 26

AQUIFER DATA

Saturated Thickness: 10.08 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 26

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 7.43 ft  
 Static Water Column Height: 10.08 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 10.08 ft

No. of Observations: 36

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 0.162             | 18.        | 0.006             |
| 1.               | 0.139             | 19.        | 0.006             |
| 2.               | 0.105             | 20.        | 0.006             |
| 3.               | 0.061             | 21.        | 0.004             |
| 4.               | 0.003             | 22.        | 0.004             |
| 5.               | 0.025             | 23.        | 0.004             |
| 6.               | 0.021             | 24.        | 0.004             |
| 7.               | 0.02              | 25.        | 0.002             |
| 8.               | 0.016             | 26.        | 0.002             |
| 9.               | 0.016             | 27.        | 0.001             |
| 10.              | 0.014             | 28.        | 0.002             |
| 11.              | 0.013             | 29.        | 0.001             |
| 12.              | 0.011             | 30.        | 0.002             |
| 13.              | 0.011             | 31.        | 0.001             |
| 14.              | 0.009             | 32.        | 0.001             |
| 15.              | 0.009             | 33.        | 0.001             |
| 16.              | 0.008             | 34.        | 0.001             |
| 17.              | 0.008             | 35.        | 0.001             |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 4.397

VISUAL ESTIMATION RESULTS

Estimated Parameters

| <u>Parameter</u> | <u>Estimate</u> |        |
|------------------|-----------------|--------|
| K                | 0.0001641       | ft/sec |
| y0               | 0.04176         | ft     |

K = 0.005001 cm/sec

T = K\*b = 0.001654 ft<sup>2</sup>/sec (1.536 sq. cm/sec)

In-Situ Inc. MiniTroll Pro  
 Report generated: 4/19/2004 9:28:22  
 Report from file: ...\\SN09731 2004-03-30 142404 AgLUS26\_3.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS26\_3

Test defined on: 3/30/2004 14:23:56  
 Test started on: 3/30/2004 14:24:04  
 Test stopped on: 3/30/2004 14:26:52  
 Test extracted on: N/A N/A

Data gathered using Linear testing

Time between data points: 0.5 Seconds.  
 Number of data samples: 336

TOTAL DATA SAMPLES 336

Channel number [2]

Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1621.536 meters (5320.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 14:24:04 | 0        | 7.449               |
| 3/30/2004 | 14:24:05 | 0.5      | 7.455               |
| 3/30/2004 | 14:24:05 | 1        | 7.458               |
| 3/30/2004 | 14:24:06 | 1.5      | 7.458               |
| 3/30/2004 | 14:24:06 | 2        | 7.46                |
| 3/30/2004 | 14:24:07 | 2.5      | 7.458               |
| 3/30/2004 | 14:24:07 | 3        | 7.441               |
| 3/30/2004 | 14:24:08 | 3.5      | 7.4                 |
| 3/30/2004 | 14:24:08 | 4        | 7.368               |
| 3/30/2004 | 14:24:09 | 4.5      | 7.357               |
| 3/30/2004 | 14:24:09 | 5        | 7.342               |
| 3/30/2004 | 14:24:10 | 5.5      | 7.337               |
| 3/30/2004 | 14:24:10 | 6        | 7.332               |
| 3/30/2004 | 14:24:11 | 6.5      | 7.328               |
| 3/30/2004 | 14:24:11 | 7        | 7.326               |
| 3/30/2004 | 14:24:12 | 7.5      | 7.326               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:24:12 | 8        | 7.323               |
| 3/30/2004 | 14:24:13 | 8.5      | 7.321               |
| 3/30/2004 | 14:24:13 | 9        | 7.319               |
| 3/30/2004 | 14:24:14 | 9.5      | 7.319               |
| 3/30/2004 | 14:24:14 | 10       | 7.319               |
| 3/30/2004 | 14:24:15 | 10.5     | 7.316               |
| 3/30/2004 | 14:24:15 | 11       | 7.316               |
| 3/30/2004 | 14:24:16 | 11.5     | 7.316               |
| 3/30/2004 | 14:24:16 | 12       | 7.316               |
| 3/30/2004 | 14:24:17 | 12.5     | 7.314               |
| 3/30/2004 | 14:24:17 | 13       | 7.314               |
| 3/30/2004 | 14:24:18 | 13.5     | 7.312               |
| 3/30/2004 | 14:24:18 | 14       | 7.312               |
| 3/30/2004 | 14:24:19 | 14.5     | 7.311               |
| 3/30/2004 | 14:24:19 | 15       | 7.309               |
| 3/30/2004 | 14:24:20 | 15.5     | 7.311               |
| 3/30/2004 | 14:24:20 | 16       | 7.309               |
| 3/30/2004 | 14:24:21 | 16.5     | 7.307               |
| 3/30/2004 | 14:24:21 | 17       | 7.307               |
| 3/30/2004 | 14:24:22 | 17.5     | 7.311               |
| 3/30/2004 | 14:24:22 | 18       | 7.309               |
| 3/30/2004 | 14:24:23 | 18.5     | 7.307               |
| 3/30/2004 | 14:24:23 | 19       | 7.309               |
| 3/30/2004 | 14:24:24 | 19.5     | 7.307               |
| 3/30/2004 | 14:24:24 | 20       | 7.307               |
| 3/30/2004 | 14:24:25 | 20.5     | 7.306               |
| 3/30/2004 | 14:24:25 | 21       | 7.306               |
| 3/30/2004 | 14:24:26 | 21.5     | 7.306               |
| 3/30/2004 | 14:24:26 | 22       | 7.304               |
| 3/30/2004 | 14:24:27 | 22.5     | 7.306               |
| 3/30/2004 | 14:24:27 | 23       | 7.304               |
| 3/30/2004 | 14:24:28 | 23.5     | 7.304               |
| 3/30/2004 | 14:24:28 | 24       | 7.304               |
| 3/30/2004 | 14:24:29 | 24.5     | 7.304               |
| 3/30/2004 | 14:24:29 | 25       | 7.304               |
| 3/30/2004 | 14:24:30 | 25.5     | 7.304               |
| 3/30/2004 | 14:24:30 | 26       | 7.302               |
| 3/30/2004 | 14:24:31 | 26.5     | 7.304               |
| 3/30/2004 | 14:24:31 | 27       | 7.302               |
| 3/30/2004 | 14:24:32 | 27.5     | 7.304               |
| 3/30/2004 | 14:24:32 | 28       | 7.301               |
| 3/30/2004 | 14:24:33 | 28.5     | 7.301               |
| 3/30/2004 | 14:24:33 | 29       | 7.302               |
| 3/30/2004 | 14:24:34 | 29.5     | 7.302               |
| 3/30/2004 | 14:24:34 | 30       | 7.302               |
| 3/30/2004 | 14:24:35 | 30.5     | 7.302               |
| 3/30/2004 | 14:24:35 | 31       | 7.301               |
| 3/30/2004 | 14:24:36 | 31.5     | 7.301               |
| 3/30/2004 | 14:24:36 | 32       | 7.301               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:24:37 | 32.5     | 7.301               |
| 3/30/2004 | 14:24:37 | 33       | 7.303               |
| 3/30/2004 | 14:24:38 | 33.5     | 7.301               |
| 3/30/2004 | 14:24:38 | 34       | 7.301               |
| 3/30/2004 | 14:24:39 | 34.5     | 7.304               |
| 3/30/2004 | 14:24:39 | 35       | 7.301               |
| 3/30/2004 | 14:24:40 | 35.5     | 7.301               |
| 3/30/2004 | 14:24:40 | 36       | 7.304               |
| 3/30/2004 | 14:24:41 | 36.5     | 7.303               |
| 3/30/2004 | 14:24:41 | 37       | 7.301               |
| 3/30/2004 | 14:24:42 | 37.5     | 7.301               |
| 3/30/2004 | 14:24:42 | 38       | 7.301               |
| 3/30/2004 | 14:24:43 | 38.5     | 7.303               |
| 3/30/2004 | 14:24:43 | 39       | 7.303               |
| 3/30/2004 | 14:24:44 | 39.5     | 7.303               |
| 3/30/2004 | 14:24:44 | 40       | 7.303               |
| 3/30/2004 | 14:24:45 | 40.5     | 7.299               |
| 3/30/2004 | 14:24:45 | 41       | 7.299               |
| 3/30/2004 | 14:24:46 | 41.5     | 7.301               |
| 3/30/2004 | 14:24:46 | 42       | 7.301               |
| 3/30/2004 | 14:24:47 | 42.5     | 7.301               |
| 3/30/2004 | 14:24:47 | 43       | 7.301               |
| 3/30/2004 | 14:24:48 | 43.5     | 7.301               |
| 3/30/2004 | 14:24:48 | 44       | 7.301               |
| 3/30/2004 | 14:24:49 | 44.5     | 7.301               |
| 3/30/2004 | 14:24:49 | 45       | 7.299               |
| 3/30/2004 | 14:24:50 | 45.5     | 7.301               |
| 3/30/2004 | 14:24:50 | 46       | 7.301               |
| 3/30/2004 | 14:24:51 | 46.5     | 7.301               |
| 3/30/2004 | 14:24:51 | 47       | 7.301               |
| 3/30/2004 | 14:24:52 | 47.5     | 7.301               |
| 3/30/2004 | 14:24:52 | 48       | 7.301               |
| 3/30/2004 | 14:24:53 | 48.5     | 7.299               |
| 3/30/2004 | 14:24:53 | 49       | 7.301               |
| 3/30/2004 | 14:24:54 | 49.5     | 7.301               |
| 3/30/2004 | 14:24:54 | 50       | 7.301               |
| 3/30/2004 | 14:24:55 | 50.5     | 7.301               |
| 3/30/2004 | 14:24:55 | 51       | 7.301               |
| 3/30/2004 | 14:24:56 | 51.5     | 7.301               |
| 3/30/2004 | 14:24:56 | 52       | 7.303               |
| 3/30/2004 | 14:24:57 | 52.5     | 7.299               |
| 3/30/2004 | 14:24:57 | 53       | 7.301               |
| 3/30/2004 | 14:24:58 | 53.5     | 7.301               |
| 3/30/2004 | 14:24:58 | 54       | 7.301               |
| 3/30/2004 | 14:24:59 | 54.5     | 7.301               |
| 3/30/2004 | 14:24:59 | 55       | 7.301               |
| 3/30/2004 | 14:25:00 | 55.5     | 7.301               |
| 3/30/2004 | 14:25:00 | 56       | 7.303               |
| 3/30/2004 | 14:25:01 | 56.5     | 7.301               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:25:01 | 57       | 7.299               |
| 3/30/2004 | 14:25:02 | 57.5     | 7.301               |
| 3/30/2004 | 14:25:02 | 58       | 7.301               |
| 3/30/2004 | 14:25:03 | 58.5     | 7.301               |
| 3/30/2004 | 14:25:03 | 59       | 7.301               |
| 3/30/2004 | 14:25:04 | 59.5     | 7.301               |
| 3/30/2004 | 14:25:04 | 60       | 7.301               |
| 3/30/2004 | 14:25:05 | 60.5     | 7.303               |
| 3/30/2004 | 14:25:05 | 61       | 7.305               |
| 3/30/2004 | 14:25:06 | 61.5     | 7.303               |
| 3/30/2004 | 14:25:06 | 62       | 7.303               |
| 3/30/2004 | 14:25:07 | 62.5     | 7.301               |
| 3/30/2004 | 14:25:07 | 63       | 7.301               |
| 3/30/2004 | 14:25:08 | 63.5     | 7.303               |
| 3/30/2004 | 14:25:08 | 64       | 7.305               |
| 3/30/2004 | 14:25:09 | 64.5     | 7.303               |
| 3/30/2004 | 14:25:09 | 65       | 7.303               |
| 3/30/2004 | 14:25:10 | 65.5     | 7.303               |
| 3/30/2004 | 14:25:10 | 66       | 7.303               |
| 3/30/2004 | 14:25:11 | 66.5     | 7.305               |
| 3/30/2004 | 14:25:11 | 67       | 7.305               |
| 3/30/2004 | 14:25:12 | 67.5     | 7.305               |
| 3/30/2004 | 14:25:12 | 68       | 7.307               |
| 3/30/2004 | 14:25:13 | 68.5     | 7.303               |
| 3/30/2004 | 14:25:13 | 69       | 7.305               |
| 3/30/2004 | 14:25:14 | 69.5     | 7.303               |
| 3/30/2004 | 14:25:14 | 70       | 7.303               |
| 3/30/2004 | 14:25:15 | 70.5     | 7.305               |
| 3/30/2004 | 14:25:15 | 71       | 7.303               |
| 3/30/2004 | 14:25:16 | 71.5     | 7.305               |
| 3/30/2004 | 14:25:16 | 72       | 7.305               |
| 3/30/2004 | 14:25:17 | 72.5     | 7.305               |
| 3/30/2004 | 14:25:17 | 73       | 7.305               |
| 3/30/2004 | 14:25:18 | 73.5     | 7.305               |
| 3/30/2004 | 14:25:18 | 74       | 7.305               |
| 3/30/2004 | 14:25:19 | 74.5     | 7.305               |
| 3/30/2004 | 14:25:19 | 75       | 7.305               |
| 3/30/2004 | 14:25:20 | 75.5     | 7.307               |
| 3/30/2004 | 14:25:20 | 76       | 7.307               |
| 3/30/2004 | 14:25:21 | 76.5     | 7.305               |
| 3/30/2004 | 14:25:21 | 77       | 7.303               |
| 3/30/2004 | 14:25:22 | 77.5     | 7.303               |
| 3/30/2004 | 14:25:22 | 78       | 7.305               |
| 3/30/2004 | 14:25:23 | 78.5     | 7.3                 |
| 3/30/2004 | 14:25:23 | 79       | 7.302               |
| 3/30/2004 | 14:25:24 | 79.5     | 7.296               |
| 3/30/2004 | 14:25:24 | 80       | 7.3                 |
| 3/30/2004 | 14:25:25 | 80.5     | 7.308               |
| 3/30/2004 | 14:25:25 | 81       | 7.302               |

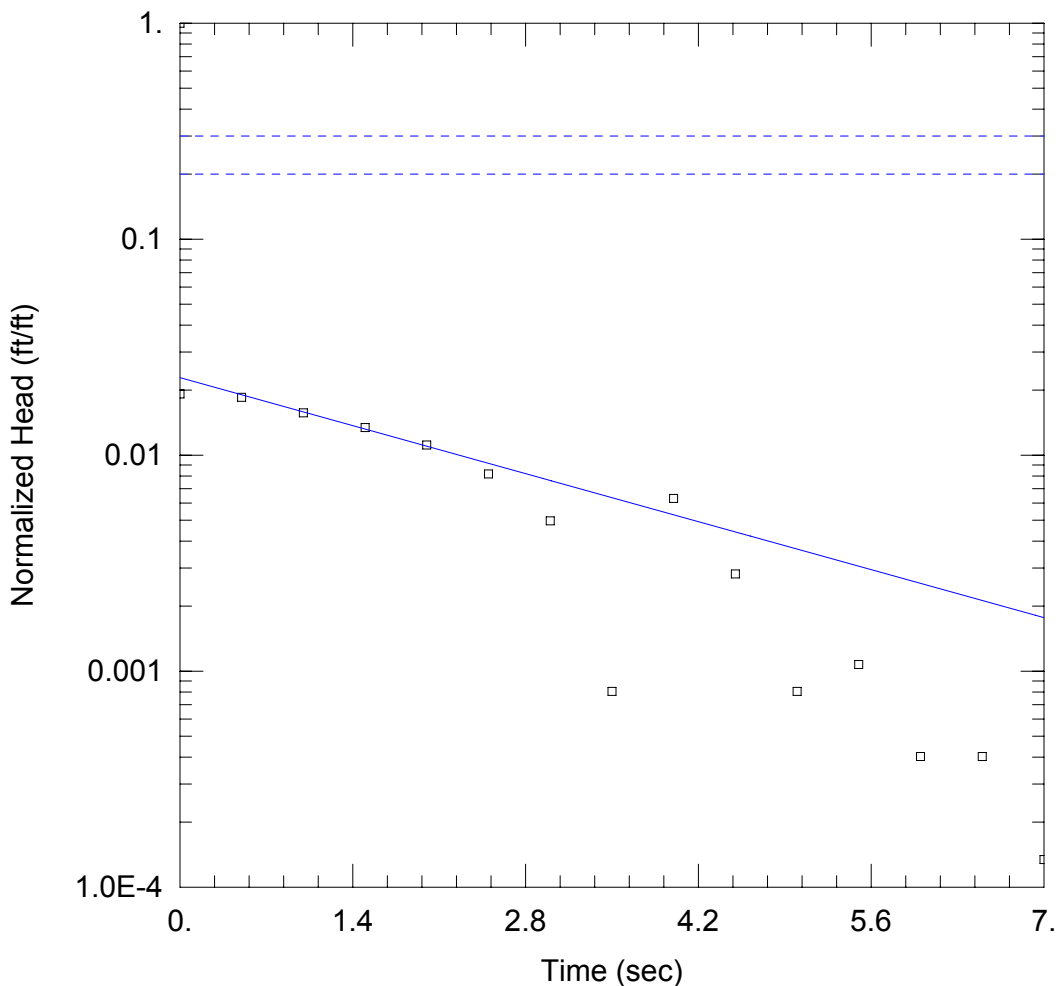
| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:25:26 | 81.5     | 7.303               |
| 3/30/2004 | 14:25:26 | 82       | 7.305               |
| 3/30/2004 | 14:25:27 | 82.5     | 7.3                 |
| 3/30/2004 | 14:25:27 | 83       | 7.3                 |
| 3/30/2004 | 14:25:28 | 83.5     | 7.302               |
| 3/30/2004 | 14:25:28 | 84       | 7.302               |
| 3/30/2004 | 14:25:29 | 84.5     | 7.302               |
| 3/30/2004 | 14:25:29 | 85       | 7.302               |
| 3/30/2004 | 14:25:30 | 85.5     | 7.302               |
| 3/30/2004 | 14:25:30 | 86       | 7.304               |
| 3/30/2004 | 14:25:31 | 86.5     | 7.302               |
| 3/30/2004 | 14:25:31 | 87       | 7.302               |
| 3/30/2004 | 14:25:32 | 87.5     | 7.302               |
| 3/30/2004 | 14:25:32 | 88       | 7.302               |
| 3/30/2004 | 14:25:33 | 88.5     | 7.302               |
| 3/30/2004 | 14:25:33 | 89       | 7.302               |
| 3/30/2004 | 14:25:34 | 89.5     | 7.302               |
| 3/30/2004 | 14:25:34 | 90       | 7.3                 |
| 3/30/2004 | 14:25:35 | 90.5     | 7.302               |
| 3/30/2004 | 14:25:35 | 91       | 7.302               |
| 3/30/2004 | 14:25:36 | 91.5     | 7.302               |
| 3/30/2004 | 14:25:36 | 92       | 7.302               |
| 3/30/2004 | 14:25:37 | 92.5     | 7.3                 |
| 3/30/2004 | 14:25:37 | 93       | 7.302               |
| 3/30/2004 | 14:25:38 | 93.5     | 7.304               |
| 3/30/2004 | 14:25:38 | 94       | 7.31                |
| 3/30/2004 | 14:25:39 | 94.5     | 7.297               |
| 3/30/2004 | 14:25:39 | 95       | 7.297               |
| 3/30/2004 | 14:25:40 | 95.5     | 7.302               |
| 3/30/2004 | 14:25:40 | 96       | 7.302               |
| 3/30/2004 | 14:25:41 | 96.5     | 7.307               |
| 3/30/2004 | 14:25:41 | 97       | 7.3                 |
| 3/30/2004 | 14:25:42 | 97.5     | 7.305               |
| 3/30/2004 | 14:25:42 | 98       | 7.31                |
| 3/30/2004 | 14:25:43 | 98.5     | 7.304               |
| 3/30/2004 | 14:25:43 | 99       | 7.302               |
| 3/30/2004 | 14:25:44 | 99.5     | 7.305               |
| 3/30/2004 | 14:25:44 | 100      | 7.304               |
| 3/30/2004 | 14:25:45 | 100.5    | 7.307               |
| 3/30/2004 | 14:25:45 | 101      | 7.304               |
| 3/30/2004 | 14:25:46 | 101.5    | 7.304               |
| 3/30/2004 | 14:25:46 | 102      | 7.304               |
| 3/30/2004 | 14:25:47 | 102.5    | 7.304               |
| 3/30/2004 | 14:25:47 | 103      | 7.305               |
| 3/30/2004 | 14:25:48 | 103.5    | 7.305               |
| 3/30/2004 | 14:25:48 | 104      | 7.305               |
| 3/30/2004 | 14:25:49 | 104.5    | 7.31                |
| 3/30/2004 | 14:25:49 | 105      | 7.305               |
| 3/30/2004 | 14:25:50 | 105.5    | 7.31                |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:25:50 | 106      | 7.305               |
| 3/30/2004 | 14:25:51 | 106.5    | 7.31                |
| 3/30/2004 | 14:25:51 | 107      | 7.307               |
| 3/30/2004 | 14:25:52 | 107.5    | 7.309               |
| 3/30/2004 | 14:25:52 | 108      | 7.307               |
| 3/30/2004 | 14:25:53 | 108.5    | 7.307               |
| 3/30/2004 | 14:25:53 | 109      | 7.307               |
| 3/30/2004 | 14:25:54 | 109.5    | 7.309               |
| 3/30/2004 | 14:25:54 | 110      | 7.314               |
| 3/30/2004 | 14:25:55 | 110.5    | 7.31                |
| 3/30/2004 | 14:25:55 | 111      | 7.31                |
| 3/30/2004 | 14:25:56 | 111.5    | 7.309               |
| 3/30/2004 | 14:25:56 | 112      | 7.309               |
| 3/30/2004 | 14:25:57 | 112.5    | 7.31                |
| 3/30/2004 | 14:25:57 | 113      | 7.309               |
| 3/30/2004 | 14:25:58 | 113.5    | 7.31                |
| 3/30/2004 | 14:25:58 | 114      | 7.31                |
| 3/30/2004 | 14:25:59 | 114.5    | 7.31                |
| 3/30/2004 | 14:25:59 | 115      | 7.309               |
| 3/30/2004 | 14:26:00 | 115.5    | 7.309               |
| 3/30/2004 | 14:26:00 | 116      | 7.31                |
| 3/30/2004 | 14:26:01 | 116.5    | 7.309               |
| 3/30/2004 | 14:26:01 | 117      | 7.309               |
| 3/30/2004 | 14:26:02 | 117.5    | 7.307               |
| 3/30/2004 | 14:26:02 | 118      | 7.309               |
| 3/30/2004 | 14:26:03 | 118.5    | 7.309               |
| 3/30/2004 | 14:26:03 | 119      | 7.31                |
| 3/30/2004 | 14:26:04 | 119.5    | 7.31                |
| 3/30/2004 | 14:26:04 | 120      | 7.304               |
| 3/30/2004 | 14:26:05 | 120.5    | 7.309               |
| 3/30/2004 | 14:26:05 | 121      | 7.305               |
| 3/30/2004 | 14:26:06 | 121.5    | 7.307               |
| 3/30/2004 | 14:26:06 | 122      | 7.307               |
| 3/30/2004 | 14:26:07 | 122.5    | 7.307               |
| 3/30/2004 | 14:26:07 | 123      | 7.309               |
| 3/30/2004 | 14:26:08 | 123.5    | 7.31                |
| 3/30/2004 | 14:26:08 | 124      | 7.317               |
| 3/30/2004 | 14:26:09 | 124.5    | 7.312               |
| 3/30/2004 | 14:26:09 | 125      | 7.311               |
| 3/30/2004 | 14:26:10 | 125.5    | 7.315               |
| 3/30/2004 | 14:26:10 | 126      | 7.31                |
| 3/30/2004 | 14:26:11 | 126.5    | 7.307               |
| 3/30/2004 | 14:26:11 | 127      | 7.307               |
| 3/30/2004 | 14:26:12 | 127.5    | 7.307               |
| 3/30/2004 | 14:26:12 | 128      | 7.307               |
| 3/30/2004 | 14:26:13 | 128.5    | 7.307               |
| 3/30/2004 | 14:26:13 | 129      | 7.312               |
| 3/30/2004 | 14:26:14 | 129.5    | 7.333               |
| 3/30/2004 | 14:26:14 | 130      | 7.35                |



| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:26:15 | 130.5    | 7.367               |
| 3/30/2004 | 14:26:15 | 131      | 7.389               |
| 3/30/2004 | 14:26:16 | 131.5    | 7.413               |
| 3/30/2004 | 14:26:16 | 132      | 7.444               |
| 3/30/2004 | 14:26:17 | 132.5    | 7.403               |
| 3/30/2004 | 14:26:17 | 133      | 7.429               |
| 3/30/2004 | 14:26:18 | 133.5    | 7.444               |
| 3/30/2004 | 14:26:18 | 134      | 7.442               |
| 3/30/2004 | 14:26:19 | 134.5    | 7.447               |
| 3/30/2004 | 14:26:19 | 135      | 7.447               |
| 3/30/2004 | 14:26:20 | 135.5    | 7.449               |
| 3/30/2004 | 14:26:20 | 136      | 7.451               |
| 3/30/2004 | 14:26:21 | 136.5    | 7.451               |
| 3/30/2004 | 14:26:21 | 137      | 7.452               |
| 3/30/2004 | 14:26:22 | 137.5    | 7.452               |
| 3/30/2004 | 14:26:22 | 138      | 7.454               |
| 3/30/2004 | 14:26:23 | 138.5    | 7.454               |
| 3/30/2004 | 14:26:23 | 139      | 7.456               |
| 3/30/2004 | 14:26:24 | 139.5    | 7.456               |
| 3/30/2004 | 14:26:24 | 140      | 7.456               |
| 3/30/2004 | 14:26:25 | 140.5    | 7.456               |
| 3/30/2004 | 14:26:25 | 141      | 7.458               |
| 3/30/2004 | 14:26:26 | 141.5    | 7.458               |
| 3/30/2004 | 14:26:26 | 142      | 7.458               |
| 3/30/2004 | 14:26:27 | 142.5    | 7.459               |
| 3/30/2004 | 14:26:27 | 143      | 7.459               |
| 3/30/2004 | 14:26:28 | 143.5    | 7.459               |
| 3/30/2004 | 14:26:28 | 144      | 7.459               |
| 3/30/2004 | 14:26:29 | 144.5    | 7.459               |
| 3/30/2004 | 14:26:29 | 145      | 7.461               |
| 3/30/2004 | 14:26:30 | 145.5    | 7.461               |
| 3/30/2004 | 14:26:30 | 146      | 7.461               |
| 3/30/2004 | 14:26:31 | 146.5    | 7.461               |
| 3/30/2004 | 14:26:31 | 147      | 7.461               |
| 3/30/2004 | 14:26:32 | 147.5    | 7.463               |
| 3/30/2004 | 14:26:32 | 148      | 7.461               |
| 3/30/2004 | 14:26:33 | 148.5    | 7.463               |
| 3/30/2004 | 14:26:33 | 149      | 7.463               |
| 3/30/2004 | 14:26:34 | 149.5    | 7.463               |
| 3/30/2004 | 14:26:34 | 150      | 7.463               |
| 3/30/2004 | 14:26:35 | 150.5    | 7.464               |
| 3/30/2004 | 14:26:35 | 151      | 7.464               |
| 3/30/2004 | 14:26:36 | 151.5    | 7.464               |
| 3/30/2004 | 14:26:36 | 152      | 7.464               |
| 3/30/2004 | 14:26:37 | 152.5    | 7.464               |
| 3/30/2004 | 14:26:37 | 153      | 7.464               |
| 3/30/2004 | 14:26:38 | 153.5    | 7.464               |
| 3/30/2004 | 14:26:38 | 154      | 7.464               |
| 3/30/2004 | 14:26:39 | 154.5    | 7.466               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 14:26:39 | 155      | 7.466               |
| 3/30/2004 | 14:26:40 | 155.5    | 7.466               |
| 3/30/2004 | 14:26:40 | 156      | 7.466               |
| 3/30/2004 | 14:26:41 | 156.5    | 7.468               |
| 3/30/2004 | 14:26:41 | 157      | 7.466               |
| 3/30/2004 | 14:26:42 | 157.5    | 7.468               |
| 3/30/2004 | 14:26:42 | 158      | 7.468               |
| 3/30/2004 | 14:26:43 | 158.5    | 7.468               |
| 3/30/2004 | 14:26:43 | 159      | 7.468               |
| 3/30/2004 | 14:26:44 | 159.5    | 7.468               |
| 3/30/2004 | 14:26:44 | 160      | 7.468               |
| 3/30/2004 | 14:26:45 | 160.5    | 7.468               |
| 3/30/2004 | 14:26:45 | 161      | 7.468               |
| 3/30/2004 | 14:26:46 | 161.5    | 7.468               |
| 3/30/2004 | 14:26:46 | 162      | 7.47                |
| 3/30/2004 | 14:26:47 | 162.5    | 7.47                |
| 3/30/2004 | 14:26:47 | 163      | 7.47                |
| 3/30/2004 | 14:26:48 | 163.5    | 7.47                |
| 3/30/2004 | 14:26:48 | 164      | 7.47                |
| 3/30/2004 | 14:26:49 | 164.5    | 7.468               |
| 3/30/2004 | 14:26:49 | 165      | 7.47                |
| 3/30/2004 | 14:26:50 | 165.5    | 7.47                |
| 3/30/2004 | 14:26:50 | 166      | 7.47                |
| 3/30/2004 | 14:26:51 | 166.5    | 7.47                |
| 3/30/2004 | 14:26:51 | 167      | 7.47                |
| 3/30/2004 | 14:26:52 | 167.5    | 7.471               |



### AGLUS 26 TEST #3

Data Set: Y:\...\AgLUS26\_test3\_13JUL2010.aqt

Date: 07/26/10

Time: 15:55:25

### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 26

Test Date: 03/30/2004

### AQUIFER DATA

Saturated Thickness: 10.08 ft

Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (AgLUS 26)

Initial Displacement: 7.45 ft

Static Water Column Height: 10.08 ft

Total Well Penetration Depth: 10.08 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.0005673 ft/sec

y0 = 0.1703 ft

Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 26\AgLUS26\_test3\_13  
 Title: AgLUS 26 test #3  
 Date: 07/26/10  
 Time: 15:55:37

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/30/2004  
 Test Well: AgLUS 26

AQUIFER DATA

Saturated Thickness: 10.08 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 26

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 7.45 ft  
 Static Water Column Height: 10.08 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 10.08 ft

No. of Observations: 15

| Time (sec) | Observation Data  |            | Displacement (ft) |
|------------|-------------------|------------|-------------------|
|            | Displacement (ft) | Time (sec) |                   |
| 0.         | 0.143             | 4.         | 0.047             |
| 0.5        | 0.138             | 4.5        | 0.021             |
| 1.         | 0.117             | 5.         | 0.006             |
| 1.5        | 0.1               | 5.5        | 0.008             |
| 2.         | 0.083             | 6.         | 0.003             |
| 2.5        | 0.061             | 6.5        | 0.003             |
| 3.         | 0.037             | 7.         | 0.001             |
| 3.5        | 0.006             |            |                   |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 ln(Re/rw): 4.397

VISUAL ESTIMATION RESULTSEstimated Parameters

| Parameter | Estimate  |        |
|-----------|-----------|--------|
| K         | 0.0005673 | ft/sec |
| y0        | 0.1703    | ft     |

K = 0.01729 cm/sec

T = K\*b = 0.005718 ft<sup>2</sup>/sec (5.313 sq. cm/sec)

In-Situ Inc. MiniTroll Pro  
 Report generated: 4/19/2004 9:29:25  
 Report from file: ...\\SN09731 2004-03-30 142849 AgLUS26\_4.bin  
 Win-Situ Version 4.46

Serial number: 9731  
 Firmware Version 3.09  
 Unit name: miniTROLL

Test name: AgLUS26\_4

Test defined on: 3/30/2004 14:28:44  
 Test started on: 3/30/2004 14:28:49  
 Test stopped on: 3/30/2004 14:29:46  
 Test extracted on: N/A N/A

Data gathered using Linear testing

Time between data points: 0.5 Seconds.  
 Number of data samples: 113

TOTAL DATA SAMPLES 113

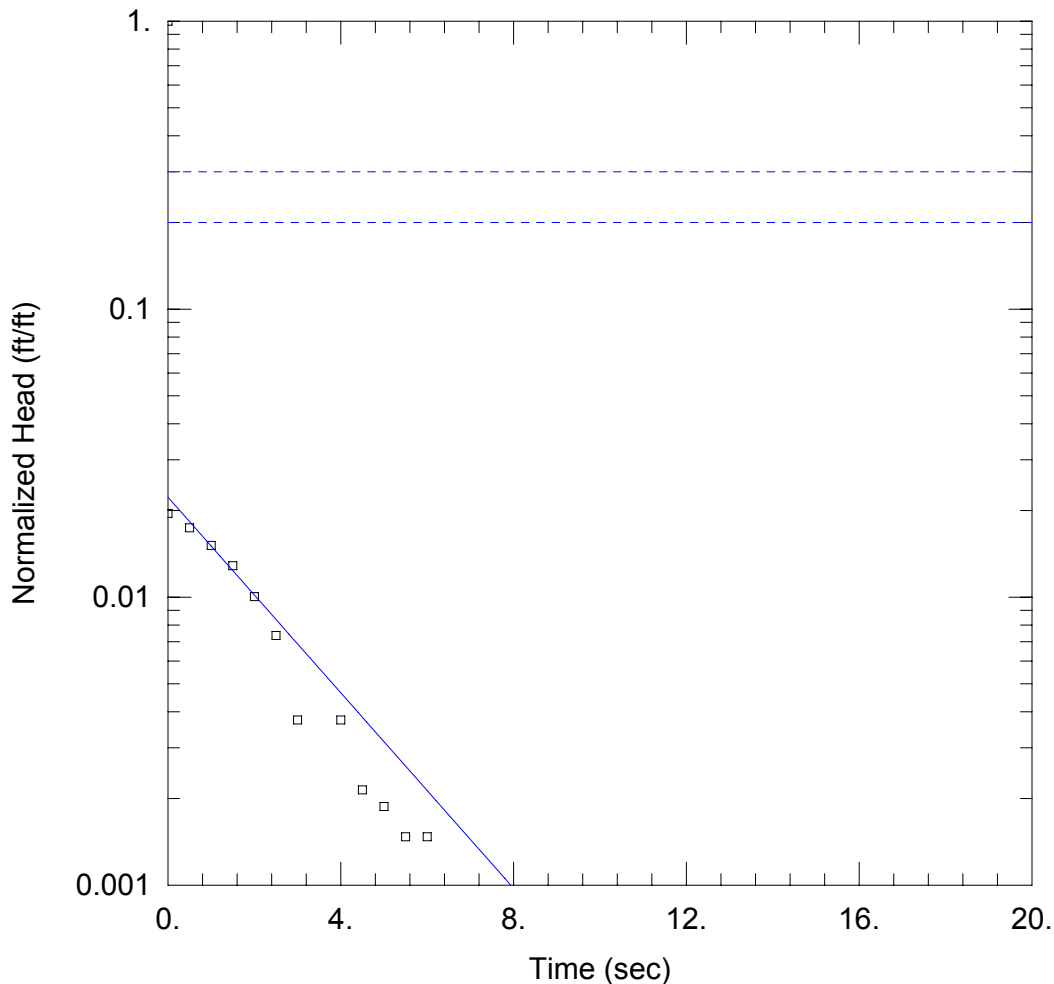
Channel number [2]

Measurement type: Pressure  
 Channel name: OnBoard Pressure  
 Sensor Range: 30 PSIG.  
 Density: 1.000 g/cm3  
 Latitude: 40 degrees  
 Elevation: 1621.536 meters (5320.000 feet)

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:28:49 | 0        | 7.47                |
| 3/30/2004 | 14:28:49 | 0.5      | 7.476               |
| 3/30/2004 | 14:28:50 | 1        | 7.478               |
| 3/30/2004 | 14:28:50 | 1.5      | 7.48                |
| 3/30/2004 | 14:28:51 | 2        | 7.481               |
| 3/30/2004 | 14:28:51 | 2.5      | 7.472               |
| 3/30/2004 | 14:28:52 | 3        | 7.442               |
| 3/30/2004 | 14:28:52 | 3.5      | 7.402               |
| 3/30/2004 | 14:28:53 | 4        | 7.375               |
| 3/30/2004 | 14:28:53 | 4.5      | 7.368               |
| 3/30/2004 | 14:28:54 | 5        | 7.358               |
| 3/30/2004 | 14:28:54 | 5.5      | 7.356               |
| 3/30/2004 | 14:28:55 | 6        | 7.353               |
| 3/30/2004 | 14:28:55 | 6.5      | 7.349               |
| 3/30/2004 | 14:28:56 | 7        | 7.346               |
| 3/30/2004 | 14:28:56 | 7.5      | 7.346               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| 3/30/2004 | 14:28:57 | 8        | 7.344               |
| 3/30/2004 | 14:28:57 | 8.5      | 7.342               |
| 3/30/2004 | 14:28:58 | 9        | 7.342               |
| 3/30/2004 | 14:28:58 | 9.5      | 7.34                |
| 3/30/2004 | 14:28:59 | 10       | 7.34                |
| 3/30/2004 | 14:28:59 | 10.5     | 7.339               |
| 3/30/2004 | 14:29:00 | 11       | 7.339               |
| 3/30/2004 | 14:29:00 | 11.5     | 7.337               |
| 3/30/2004 | 14:29:01 | 12       | 7.335               |
| 3/30/2004 | 14:29:01 | 12.5     | 7.335               |
| 3/30/2004 | 14:29:02 | 13       | 7.335               |
| 3/30/2004 | 14:29:02 | 13.5     | 7.335               |
| 3/30/2004 | 14:29:03 | 14       | 7.333               |
| 3/30/2004 | 14:29:03 | 14.5     | 7.333               |
| 3/30/2004 | 14:29:04 | 15       | 7.332               |
| 3/30/2004 | 14:29:04 | 15.5     | 7.332               |
| 3/30/2004 | 14:29:05 | 16       | 7.332               |
| 3/30/2004 | 14:29:05 | 16.5     | 7.331               |
| 3/30/2004 | 14:29:06 | 17       | 7.33                |
| 3/30/2004 | 14:29:06 | 17.5     | 7.33                |
| 3/30/2004 | 14:29:07 | 18       | 7.328               |
| 3/30/2004 | 14:29:07 | 18.5     | 7.33                |
| 3/30/2004 | 14:29:08 | 19       | 7.328               |
| 3/30/2004 | 14:29:08 | 19.5     | 7.328               |
| 3/30/2004 | 14:29:09 | 20       | 7.33                |
| 3/30/2004 | 14:29:09 | 20.5     | 7.328               |
| 3/30/2004 | 14:29:10 | 21       | 7.328               |
| 3/30/2004 | 14:29:10 | 21.5     | 7.326               |
| 3/30/2004 | 14:29:11 | 22       | 7.326               |
| 3/30/2004 | 14:29:11 | 22.5     | 7.326               |
| 3/30/2004 | 14:29:12 | 23       | 7.325               |
| 3/30/2004 | 14:29:12 | 23.5     | 7.325               |
| 3/30/2004 | 14:29:13 | 24       | 7.325               |
| 3/30/2004 | 14:29:13 | 24.5     | 7.325               |
| 3/30/2004 | 14:29:14 | 25       | 7.325               |
| 3/30/2004 | 14:29:14 | 25.5     | 7.323               |
| 3/30/2004 | 14:29:15 | 26       | 7.325               |
| 3/30/2004 | 14:29:15 | 26.5     | 7.325               |
| 3/30/2004 | 14:29:16 | 27       | 7.323               |
| 3/30/2004 | 14:29:16 | 27.5     | 7.325               |
| 3/30/2004 | 14:29:17 | 28       | 7.325               |
| 3/30/2004 | 14:29:17 | 28.5     | 7.323               |
| 3/30/2004 | 14:29:18 | 29       | 7.323               |
| 3/30/2004 | 14:29:18 | 29.5     | 7.323               |
| 3/30/2004 | 14:29:19 | 30       | 7.323               |
| 3/30/2004 | 14:29:19 | 30.5     | 7.323               |
| 3/30/2004 | 14:29:20 | 31       | 7.321               |
| 3/30/2004 | 14:29:20 | 31.5     | 7.323               |
| 3/30/2004 | 14:29:21 | 32       | 7.323               |

| Date      | Time     | ET (sec) | Chan[2]<br>Feet H2O |
|-----------|----------|----------|---------------------|
| -----     | -----    | -----    | -----               |
| 3/30/2004 | 14:29:21 | 32.5     | 7.324               |
| 3/30/2004 | 14:29:22 | 33       | 7.34                |
| 3/30/2004 | 14:29:22 | 33.5     | 7.357               |
| 3/30/2004 | 14:29:23 | 34       | 7.374               |
| 3/30/2004 | 14:29:23 | 34.5     | 7.395               |
| 3/30/2004 | 14:29:24 | 35       | 7.415               |
| 3/30/2004 | 14:29:24 | 35.5     | 7.442               |
| 3/30/2004 | 14:29:25 | 36       | 7.471               |
| 3/30/2004 | 14:29:25 | 36.5     | 7.442               |
| 3/30/2004 | 14:29:26 | 37       | 7.454               |
| 3/30/2004 | 14:29:26 | 37.5     | 7.456               |
| 3/30/2004 | 14:29:27 | 38       | 7.459               |
| 3/30/2004 | 14:29:27 | 38.5     | 7.459               |
| 3/30/2004 | 14:29:28 | 39       | 7.463               |
| 3/30/2004 | 14:29:28 | 39.5     | 7.463               |
| 3/30/2004 | 14:29:29 | 40       | 7.465               |
| 3/30/2004 | 14:29:29 | 40.5     | 7.465               |
| 3/30/2004 | 14:29:30 | 41       | 7.466               |
| 3/30/2004 | 14:29:30 | 41.5     | 7.466               |
| 3/30/2004 | 14:29:31 | 42       | 7.466               |
| 3/30/2004 | 14:29:31 | 42.5     | 7.468               |
| 3/30/2004 | 14:29:32 | 43       | 7.468               |
| 3/30/2004 | 14:29:32 | 43.5     | 7.47                |
| 3/30/2004 | 14:29:33 | 44       | 7.471               |
| 3/30/2004 | 14:29:33 | 44.5     | 7.47                |
| 3/30/2004 | 14:29:34 | 45       | 7.471               |
| 3/30/2004 | 14:29:34 | 45.5     | 7.471               |
| 3/30/2004 | 14:29:35 | 46       | 7.471               |
| 3/30/2004 | 14:29:35 | 46.5     | 7.473               |
| 3/30/2004 | 14:29:36 | 47       | 7.473               |
| 3/30/2004 | 14:29:36 | 47.5     | 7.473               |
| 3/30/2004 | 14:29:37 | 48       | 7.473               |
| 3/30/2004 | 14:29:37 | 48.5     | 7.473               |
| 3/30/2004 | 14:29:38 | 49       | 7.473               |
| 3/30/2004 | 14:29:38 | 49.5     | 7.473               |
| 3/30/2004 | 14:29:39 | 50       | 7.473               |
| 3/30/2004 | 14:29:39 | 50.5     | 7.475               |
| 3/30/2004 | 14:29:40 | 51       | 7.475               |
| 3/30/2004 | 14:29:40 | 51.5     | 7.475               |
| 3/30/2004 | 14:29:41 | 52       | 7.475               |
| 3/30/2004 | 14:29:41 | 52.5     | 7.475               |
| 3/30/2004 | 14:29:42 | 53       | 7.475               |
| 3/30/2004 | 14:29:42 | 53.5     | 7.475               |
| 3/30/2004 | 14:29:43 | 54       | 7.477               |
| 3/30/2004 | 14:29:43 | 54.5     | 7.477               |
| 3/30/2004 | 14:29:44 | 55       | 7.477               |
| 3/30/2004 | 14:29:44 | 55.5     | 7.477               |
| 3/30/2004 | 14:29:45 | 56       | 7.477               |



#### AGLUS 26 TEST #4

Data Set: Y:\...\AgLUS26\_test4\_13JUL2010.aqt

Date: 07/26/10

Time: 15:56:24

#### PROJECT INFORMATION

Company: USGS

Location: Wheat AgLUS

Test Well: AgLUS 26

Test Date: 03/30/2004

#### AQUIFER DATA

Saturated Thickness: 10.08 ft

Anisotropy Ratio (Kz/Kr): 0.01

#### WELL DATA (AgLUS 26)

Initial Displacement: 7.47 ft

Static Water Column Height: 10.08 ft

Total Well Penetration Depth: 10.08 ft

Screen Length: 9.76 ft

Casing Radius: 0.083 ft

Well Radius: 0.375 ft

#### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.0006066 ft/sec

y0 = 0.1661 ft



Data Set: Y:\GW\SPDSS\_OFR\_2010\SPDSS\_tests\AQTESOLV files\_13JULY2010\AgLUS 26\AgLUS26\_test4\_13  
 Title: AgLUS 26 test #4  
 Date: 07/26/10  
 Time: 15:56:56

PROJECT INFORMATION

Company: USGS  
 Location: Wheat AgLUS  
 Test Date: 03/30/2004  
 Test Well: AgLUS 26

AQUIFER DATA

Saturated Thickness: 10.08 ft  
 Anisotropy Ratio (Kz/Kr): 0.01

SLUG TEST WELL DATA

Test Well: AgLUS 26

X Location: 0. ft  
 Y Location: 0. ft

Initial Displacement: 7.47 ft  
 Static Water Column Height: 10.08 ft  
 Casing Radius: 0.083 ft  
 Well Radius: 0.375 ft  
 Well Skin Radius: 0.375 ft  
 Screen Length: 9.76 ft  
 Total Well Penetration Depth: 10.08 ft

No. of Observations: 23

| Observation Data |                   |            |                   |
|------------------|-------------------|------------|-------------------|
| Time (sec)       | Displacement (ft) | Time (sec) | Displacement (ft) |
| 0.               | 0.146             | 6.         | 0.011             |
| 0.5              | 0.13              | 6.5        | 0.007             |
| 1.               | 0.113             | 7.         | 0.007             |
| 1.5              | 0.096             | 7.5        | 0.005             |
| 2.               | 0.075             | 8.         | 0.005             |
| 2.5              | 0.055             | 8.5        | 0.004             |
| 3.               | 0.028             | 9.         | 0.004             |
| 3.5              | -0.001            | 9.5        | 0.004             |
| 4.               | 0.028             | 10.        | 0.002             |
| 4.5              | 0.016             | 10.5       | 0.002             |
| 5.               | 0.014             | 11.        | 0.                |
| 5.5              | 0.011             |            |                   |

SOLUTION

Slug Test  
 Aquifer Model: Unconfined  
 Solution Method: Bouwer-Rice  
 In(Re/rw): 4.397

VISUAL ESTIMATION RESULTSEstimated Parameters

| Parameter | Estimate  |        |
|-----------|-----------|--------|
| K         | 0.0006066 | ft/sec |
| y0        | 0.1661    | ft     |